



# MONTGOMERY COLLEGE

Facilities Master Plan 2013 - 2023

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# EXECUTIVE SUMMARY

## 0.1 Introduction and Purpose

Montgomery College was founded in 1946 and is Maryland's oldest community college. In 1950 Takoma Park became the College's first campus. The campus name was changed to Takoma Park/Silver Spring soon after the Health Sciences Building opened in 2004 as the first Montgomery College building on the Silver Spring side of the railroad tracks. The Rockville Campus was added in 1965, and the Germantown Campus in 1978. From 1946 to the present, more than a million students have attended classes at Montgomery College. All three campuses have experienced significant increases in enrollment. This comprehensive Facilities Master Plan Update will quantify campus needs and identify solutions within the guidelines established by the State of Maryland.

In order to address new opportunities and challenges, the College undertook a comprehensive update of its college wide Facilities Master Plan to support its increasing enrollment, define space needs, and justify major new facilities initiatives anticipated as a result of this effort. Cho Benn Holback + Associates was commissioned in 2015 to prepare this college wide Facilities Master Plan. The Facilities Master Plan covers the ten year period from 2013 to 2023 and responds to the enrollment growth expected at the College and the capital projects needed to accommodate this growth.

This comprehensive college wide effort includes four plans that describe and illustrate a future vision for the Takoma Park/Silver Spring, Germantown and Rockville Campuses, and for Workforce Development & Continuing Education (WD&CE) locations at the Gaithersburg Business Training Center in Gaithersburg and at the Westfield South Center in Wheaton. In addition to the ten year Facilities Master Plan, the overall planning effort also includes a 20 year land use plan (2013-2033) for the three campuses. The Plan's purpose is to establish a framework for development of these campuses, as well as strategic direction for the off-campus WD&CE facilities and operations of the College, that is cohesive, integrated, and visionary. Some components of a Facilities Master Plan, such as space usage and academic and administrative requirements are readily quantifiable, while other components may be described as quality of life issues, or qualitative components. Equal attention has been given to quantitative and qualitative components in order to develop a Facilities Master Plan that will truly support the role, mission, and educational plans of Montgomery College. The overall plan satisfies the Maryland Higher Education Commission (MHEC) requirements for a Facilities Master Plan to support the capital planning processes and capital funding requests of the College.

This facilities master planning effort updates and replaces the 2006-2016 Facilities Master Plan. The 2006-2016 document included five sections (three campuses plus WD&CE and Central Administration). The 2013-2023 plan includes sections for each campus and for WD&CE, but does not include a separate section for Central Administration (now named Central Services).

## 0.2 Facilities Master Plan Update Summary

The development of the 2013-2023 Facilities Master Plan update for Montgomery College was initiated in 2015 and completed in January of 2016. The Facilities Master Plan analyzes both a ten-year facilities master planning period and a twenty-year land use planning period. The goal of the Facilities Master Plan is to establish a framework for the development of capital projects to support the role, mission, and academic vision of Montgomery College. This Facilities Master Plan addresses the key issues of adequacy of space, density, adjacency, circulation, open space and infrastructure. It also addresses the relationship between the College and adjoining business and residential communities.

Several of the new buildings and building renovations proposed in the 2006-2016 Facilities Master Plan for Montgomery College have been realized. Renovations of the Catherine F. Scott Commons, Pavilion Three and Pavilion Four at the Takoma Park/Silver Spring Campus are complete. At Germantown, the new Bioscience Education Center, the Child Care building, and the Greenhouse are now complete, as are the construction of Parking Lot 4 and the extension of Observation Drive down to Middlebrook Road. At the Rockville campus, the construction of the Science Center is complete, as is the renovation of the Science East building for the Department of Mathematics. The Science East building is adjacent to and now integrated into the Science Center building. The Science West building is currently under renovation and will house the new Judy E. Ackerman STEM Center, a 100-seat lecture hall, and a suite for the Dean and other spaces for the Department of Mathematics. The Garage North project (now North Garage) is under construction and the New Student Services Center is currently in design. While these new and renovated facilities address some of the space deficiencies identified in the 2006-2016 Facilities Master Plan, they do not fulfill the identified needs for academic and student service space. Furthermore, there has been an ongoing loss of “quality of life” spaces for student use. Indoor “quality of life” spaces include meeting breakout areas and lounges and are often the first to be converted into classroom or office use as needs exceed the available space. Outdoor “quality of life” spaces are important for social gathering, and for frequent interaction between faculty and students, resulting in spontaneous learning opportunities.

Vehicular and pedestrian circulation and campus gateways are inadequate. Improved landmark quality gateways, currently under design, will strengthen the individual identity of each campus and that of the institution as a whole.

Other issues identified in the previous Facilities Master Plan are the needs to increase building density and to consolidate student service functions. In addition, all institutions of higher education chronically face the issues of space deficiencies, institutional identity, and imperfect community relations. Montgomery College has been proactive in addressing these issues, and in pursuing its goal of academic excellence; the 2013-2023 Facilities Master Plan continues to build upon this progress.

Since the adoption of the 2006-2016 plan, the Board has approved one amendment (March 2010) that adopted the Germantown Campus Facilities Master Plan (2006-2016) to incorporate plans for a Science and Technology Park, and sections of roadways that were proposed in the Maryland National Capital Park and Planning Commission’s “Germantown Forward, Germantown Employment Area Sector Plan, October 2009.” The Science and Technology Park has recently been renamed the Pinkney Innovation Complex for Science and Technology at Montgomery College (PIC MC).

### **0.3 The Master Planning Process**

With new opportunities and challenges facing the institution, the College undertook a comprehensive update of its college wide Facilities Master Plan to support the planned enrollment growth of the College, define facility needs, and justify major new facility initiatives anticipated as a result of this effort.

Numerous meetings and intensive planning sessions were held throughout the College community with on-campus and off-campus constituent groups to discuss needs and program requirements; to refine enrollment, faculty, and staff projections; and review campus development options. This effort included the compilation, analysis, and confirmation of the Maryland Higher Education Commission (MHEC) endorsed 2023 enrollment projections for the College. These projections were further refined by the College into the three campus components and distributed into discipline and unit levels throughout the College. In addition, the College developed enrollment projections for Workforce Development & Continuing Education, as well as detailed faculty and staff projections

for all College units. This data-driven backbone provides for a well justified plan for the future that identifies significant additional facility needs for instructional and support space to accommodate the College's growth.

The Steering Committee assembled for the purposes of creating the 2013-23 Facilities Master Plan included the following College staff and faculty:

- Dr. Judy Ackerman - Vice President and Provost-Rockville Campus (retired)
- Dr. Monica Brown - Senior Vice President for Student Services
- Ms. Cathy Galasso-Schwartz - Assistant to the Deans
- Ms. Margaret Latimer - Vice President and Provost, Germantown Campus
- Ms. Beatrice Lauman - Academic Operations and Special Projects Director
- Mr. George Payne - Vice President of Workforce Development & Continuing Education
- Dr. Deborah Preston - Instructional and College dean for the arts
- Dr. Sanjay Rai - Senior Vice President for Academic Affairs
- Dr. Rodney Redmond - Acting Instructional Dean
- Mr. Ed Roberts - Instructional Dean, GITE
- Ms. Martha Schoonmaker - Executive Director of the Pinkney Innovation Center for Science and Technology at Montgomery College (PIC MC)
- Mr. David Sears - Vice President of Advancement
- Mr. Jim Sniezek - Instructional Dean for Natural & Applied Sciences, Business, Management, & Information Sciences
- Dr. Brad Stewart - Vice President & Provost-Takoma Park/Silver Spring Campus
- Ms. Dorothy Umans - Dean of Community Education and Extended Learning
- Ms. Jennie Wells - Special Assistant to the Vice President and Provost
- Dr. Janet Wormack - Senior Vice President for Administrative and Fiscal Services

Significant guidance and assistance was provided by Montgomery College facilities staff, including:

- Ms. Sandra Filippi – Acting Director/Campus Planner
- Mr. Jamie Karn - Campus Planner
- Ms. Kerry Norberg - Campus Planner
- Dr. Dewey Yeats - Vice President of Facilities and Security

The current (FY2015) Montgomery College Board of Trustees is pictured below. The members are:

- Ms. Marsha Suggs Smith, Chair
- Dr. DeRionne P. Pollard, Secretary/Treasurer and President of Montgomery College
- Mr. Michael J. Knapp, 1st Vice Chair
- Ms. Gloria Aparicio Blackwell, 2nd Vice Chair
- Dr. Kenneth Hoffman
- Mr. Robert J. Hydorn
- Dr. Leslie Levine
- Mr. Robert F. Levey
- Mr. Michael Priddy
- Mr. Luis D. Rosales
- Dr. Benjamin H. Wu



#### **The FY2015 Board of Trustees.**

Front Row (left to right): Ms. Gloria Aparicio Blackwell, Dr. DeRionne Pollard, Ms. Marsha Suggs Smith  
Mr. Michael Knapp. Second Row: Dr. Leslie Levine, Mr. Robert Levey, Mr. Michael Priddy, Mr. Robert Hydorn,  
Mr. Luis Rosales, Dr. Kenneth Hoffman (Mr. Benjamin Wu does not appear in photo)

The Facilities Master Plan document was presented to the Montgomery College Board of Trustees on December 14, 2015.

### **0.4 Summary of Montgomery College Academic Restructuring - One College**

In March of 2012 Montgomery College convened an “Academic Restructuring Task Force” which was charged with recommending to the President a structure for the academic operations of the College that supports curriculum uniformity, cross-campus leadership for disciplines, and a common student experience. In 2013, the task force issued a recommended model for restructuring of Administrative and Academic operations, and the restructuring was implemented in 2014 with the purpose of creating a “One-College” focus for student success.

The “One-College” structure includes a shift toward cross-campus curriculum uniformity, to the degree that this is feasible. An upcoming Academic Master Plan (AMP) process will further inform the re-alignment of academic programs on all campuses. The new AMP will likely result in decreasing emphasis on some programs, increasing emphasis on others, the addition of new programs and the potential phasing out of others. The specific outcomes, however, are not yet known. From a facilities perspective, the anticipated strategy will be to use funding and space most efficiently for education by balancing curriculum uniformity across campuses with the competing need to avoid unnecessary duplication of high-cost specialized instruction facilities.

In addition to restructuring Administrative and Academic operations to a “One-College” approach, Montgomery College has been exploring other approaches to leveraging resources for College and County benefit. The College has been clarifying and refining a vision for improved integration of the campuses with the local communities and pursuing opportunities for integrated public-private programs and development at the Germantown campus. The commitment to the integration of research and private science enterprises on the campus has been strengthened

by the findings of two studies commissioned by the College.

The “Partnership Program and Integrated Campus for Resident Partners - Strategic Business Plan” (October, 2014) presented a vision for robust integration of the Germantown campus with its surrounding community through a program of academic-industry partnerships with technology research and development businesses “to materially advance our collective goals for individual opportunity, economic growth, and community prosperity.” This study also produced strategies and a site plan for a Germantown Innovation District, which would be “an integrated hub of education, business, and entrepreneurship—and an attractive place for makers and takers of jobs, where educated people live, work, learn, and create, and where industry partners co-locate and actively interact with faculty and students to achieve both educational and economic success.”

In 2014 the College commissioned a “College Town” plan to further study the benefits of and strategies for greater integration with its Montgomery County community.

The planning strategies for creating “integrated campuses” that encourage cross-fertilization and mutual growth for the College and the community will vary between campuses. Each of the three campuses has different building densities and physical characteristics, different border conditions with the adjacent community, and different types of adjacent communities, transportation modes, etc. The specific strategies for integration of each campus with its community are addressed in the relevant campus-specific chapter, and are summarized in the text below in this chapter relating to each campus.

## 0.5 Summary of College Enrollment Projections

The College’s planned enrollment growth is significant over the 2013-2023 period. Overall, the College is projected to experience credit Full Time Equivalent (FTE) enrollment growth of 32% and unduplicated headcount growth of 27% over the 2013 to 2023 period. The distribution of this headcount growth indicates that the Rockville Campus is expected to grow by 4,378 students, the Takoma Park/Silver Spring Campus by 2,065 students and dramatic growth of 1,982 students is projected for the Germantown Campus. The College’s noncredit FTE enrollment in Workforce Development & Continuing Education is also projected to experience substantial growth through 2023. Overall, the College is projecting faculty growth of 13% and staff growth of 3%.

Each year the Maryland community colleges receive updated ten year enrollment estimates from the MHEC. With the anticipated higher growth rate in enrollment at the College, it is expected that a consequent MHEC approved increase in space needs will support the College’s capital requests as individual projects proceed to detailed programming prior to a request for design funding.

## 0.6 Summary of Existing Building Conditions

In 2013, as part of the assessment process supporting the Facilities Master Plan, the College completed a comprehensive facilities conditions assessment that identified significant building condition deficiencies on all three campuses. An engineering consulting firm surveyed the College’s total building space inventory of 2.3 million gross square feet (gsf), and all campus roadways, parking lots and garages, and underground utility systems. This study identified a total replacement value of \$441.3 million for the College’s physical plant and a deferred maintenance backlog of \$141.5 million.

Among the primary conclusions of the condition assessment considered during the master planning process is the fact that a majority of the College’s existing academic buildings are inefficient in size, being smaller than 50,000 GSF. Small buildings are more inefficient to operate and constrain opportunities for growth both

in terms of the land commitment to the building footprint and an inability to renovate for the larger program needs identified by the College. In addition to a high proportion of small buildings, nearly three-quarters of the buildings have significant systemic deficiencies. This condition is exacerbated by the prevalence of a high proportion of 30-year or older buildings, particularly on the Rockville and Takoma Park/Silver Spring Campuses that have not been renovated. The facilities conditions assessment data, information and report was used during the master planning process to evaluate options for new buildings, renovations, and/or recommendations for building demolition and replacement.

The large deferred maintenance and capital renewal need identified by the facilities conditions assessment is used to support the College's recent and upcoming capital requests to Montgomery County for increased funding. With the County's support, the College has started to address this deferred maintenance need.

## **0.7 Functional Adequacy**

The extensive evaluation effort expended during the master planning process has reinforced the anecdotal impression that insufficient space constrains the College's academic programs and services across all campuses and units. The problems range from fragmented support services that reduce department productivity and hinder discipline identity to inflexible teaching environments and physical accessibility issues. To make matters worse, the College's enrollment growth is outstripping the previous plan for new buildings on all three campuses. Even with the completion of the last new building (Cultural Arts Center) on the Takoma Park/Silver Spring Campus and two current projects at the Rockville Campus (Science West and the New Student Services Center,) and the recent completion of the Bioscience Education Center and proposed renovation of the Science and Applied Studies building at Germanton, the College will have a significant space deficiency without the construction of additional facilities.

As mentioned above a primary functional need is for more flexible classroom and laboratory space to accommodate group based learning and collaboration. This includes providing instructional spaces with a larger student station space allocation and flexible furnishings to allow for multiple configurations for small and larger groupings of students to engage and interact. It is also desired that instructional spaces include robust technology and wall writing surfaces to support in-class activities and exercises.

Another functional challenge is to evolve the library on each campus to more effectively serve students, faculty and staff by providing additional instruction space, individual and group study areas and computer stations. In addition, the introduction of faculty and staff technology rich "sand box" spaces, lounges and cafes and larger collaboration zones are desired for the library learning commons of the future on each campus.

## **0.8 Space Needs Assessment**

Based on the State space guidelines, the Facilities Master Plan provides a detailed response that addresses all of the capacity needs of the College. Within the context of accommodating the anticipated growth at each campus, the facility planning goals that guide the master plan include retaining the respective campus character as expansion occurs. The intent is to reinforce the College and campuses as community resources while addressing the current fragmentation of disciplines, programs, and services. Where appropriate, the plan recommends removal and replacement of inefficient and small campus buildings and/or those that are in very poor condition. The sequence of the Facilities Master Plan for each campus begins with the construction of new facilities to provide relief for crowded conditions before proceeding with building renovations. The College's on-going investment in building system upgrades also supports the overall planning goal of improved campus facilities. Finally, the master plans are developed to support the campus communities with adequate learning, working,

recreational and celebratory environments.

Overall, the College faces a significant current space deficit and a future ten year space deficit that, if not addressed, will continue to be a serious constraint on the College's ability to respond to the educational and cultural needs of students and the community. In summary, the College's space deficiencies (net square feet) include:

	Deficit 2013	Deficit 2023
Takoma Park/Silver Spring	92,275	163,318
Germantown	208,327	227,390
Rockville	426,099	439,764
TOTAL	727,151	830,472

Table 1 clearly illustrates a huge projected deficit in space on campus relative to the State guidelines for facilities. The deficits vary from campus to campus. In Takoma Park/Silver Spring the vast majority of the deficit is due to a lack of class lab space. In addition, a deficit of classroom, athletic/recreation, office and study space is notable. In Germantown the primary deficit is also in class lab space and there is a notable deficit of office, study, shop/storage and classroom, and athletics/recreation space.

The Rockville Campus is much larger and the needs are more diverse, but the principal deficit is again in class lab space. Other notable deficits are in offices, study, meeting rooms and lounges, athletics/recreation, media production, food service, shop/storage and central service. In addition, on all three campuses there is a need for more meeting rooms and lounges for students, faculty and staff.

## 0.9 Campus Responses

### 0.9.1 College wide

Each campus of Montgomery College has a distinct history and physical setting that requires a unique planning response. The 2013-2023 Facilities Master Plan has tailored the plan for growth on each campus, setting a framework for development.

Table 2 highlights the strategy for growth on each campus, emphasizing renovation of existing facilities and the construction of new buildings and building additions. The table also documents the amount of space that will be removed through the planned demolition of obsolete buildings. The Net Growth column displays the amount of proposed growth in facilities in the Facilities Master Plan. The last column highlights the percent growth relative to the deficits projected in Table 1.

The Facilities Master Plan provides a framework to guide the physical development of the Takoma Park/Silver Spring, Germantown and Rockville campuses for the next ten years, and identifies the Workforce Development & Continuing Education space needs. The four sections address the need for new buildings, renovations, additions, and site improvements (roads, parking lots, open space improvements, and major utility infrastructure improvements) to accommodate the enrollment increases expected on all three campuses while maintaining and enhancing the unique identity and character of each campus. The specific projects developed as part of this

master plan are reconciled with campus identified needs and may not always match the exact amount of the identified space deficit shown in the above table. More detailed facility programs will be developed in the future for each specific project identified in the following discussion.

**TABLE 2 – MONTGOMERY COLLEGE 2013-2023 PROPOSED BUILDING PROJECTS (NASF)**

	Renovation	New Construction	Demolition	Net Growth
Takoma Park/Silver Spring	9,295	170,532	(113,983)	56,549
Germantown	124,745	221,029	(21,204)	199,825
Rockville	199,180	321,038	(111,035)	210,003
TOTAL	333,220	712,599	(246,222)	466,377

Takoma Park/Silver Spring has the most constrained campus and the greatest number of obsolete or dysfunctional existing structures. New facilities will mostly be built on the site of existing buildings. This explains the high amount of demolition on the campus and the low net growth in facility space. The space that is proposed to be built, mostly new class and science labs and library and study space, cannot be adequately addressed by the renovation and expansion of existing buildings.

The existing buildings at the Germantown Campus afford opportunities for renovation, addition and/or alteration to meet identified program needs. Most of the existing buildings on the campus are slated for renovation, due to their age and condition as well as because in many cases principal uses are being relocated to other buildings. The Germantown campus has more land available for the construction of new buildings and more opportunity to accommodate new students than the Takoma Park/Silver Spring Campus. This helps to explain the larger amount of net growth in facility space on this campus.

The Rockville Campus has a limited capacity to absorb more growth without demolishing existing buildings, substantially changing the character of the campus or altering the amount of surface space devoted to the parking of automobiles. The strategy for the next ten years emphasizes both: creating a denser, livelier campus with the anticipation of providing more structured parking on campus in the following ten years to accommodate the growth.

An estimate of construction costs for this level of development has been created. Table 3 summarizes the proposed building projects on each campus.

**TABLE 3 - MONTGOMERY COLLEGE 2013-23 CONSTRUCTION COSTS (In December 2015 Dollars)**  
(under separate cover)

The specific responses on each campus for managing and establishing a framework for growth are highlighted below.

**0.9.2 The Takoma Park/Silver Spring Campus**

The Takoma Park/Silver Spring Campus of Montgomery College was founded in 1950 and was the College's first campus. The majority of the campus was constructed during the 1970s and these facilities are aging and in need of renovation. Typically the floor configurations and irregular shapes of the academic buildings are not adequate

spaces for learning and instruction. The majority of the original buildings of the campus lie within the City of Takoma Park, but in the last twelve years the campus has expanded west into Silver Spring.

In that twelve years the College has transformed this campus with two strategies: creating and enhancing the west campus in Silver Spring, and consolidating student services into one building. These strategies have been a success and are essentially complete with the addition of the Health Sciences Center, the Cultural Arts Center, the Morris and Gwendolyn Cafritz Foundation Arts Center on the West Campus, and the Charlene R. Nunley Student Services Center on the East Campus.

The 2013-2023 Facilities Master Plan for the Takoma Park/Silver Spring Campus is crafted to support increases in enrollment through the proposed construction of approximately 172,532 NASF of new space, and the renovation and reallocation of additional space in existing campus buildings. The plan seeks to accommodate as much development as is possible given the limited existing land available for development or redevelopment and the constraints of the existing historic neighborhood. The proposed projects seek to provide needed academic space and facilities to meet the ten year growth of the campus. Due to physical constraints, not all of the deficit can be accommodated on the campus, but the new projects will create much needed space improvements for the sciences and math programs and the library, and will address the study space needs of the students.

Proposed projects include four new buildings and two building renovations on the east campus – a Math and Science Center Building, Library Learning Commons, a Health & Fitness Center (potentially with parking below) and a new Math Building. The construction of these buildings will require, over a period of many years, the demolition of Falcon Hall, Science South Building (Planetarium), Science North building, the Mathematics Pavilion, North Pavilion and the Resource Center. Pavilions One and Two are proposed for renovation.

The proposed building projects for the 2013-2023 Facilities Master Plan for the Takoma Park/Silver Spring Campus are listed below:

1. Replace Falcon Hall and Science South Building with a new Math and Science Center Building at 73,555 NASF (134,600 GSF).
2. Construct a new Library Learning Commons at 38,895 NASF (62,734 GSF) to support student study, learning and access to library services.
3. Construct a new Math Building at 27,360 NASF (45,600 GSF)
4. Construct a new Health and Fitness Center at 32,900 NASF (49,230 GSF.) This building is shown located on the site of Science North. However, an optional location in Jesup Blair Park is shown in the 2023-33 Land Use Plan and in fact may be the preferred location for this planning period if feasible. Building in the park would allow the facility to be a connector for the two sides of campus and would be a community amenity. It will help activate and increase security in this underutilized area of the park and would be a beacon of light and a strong visual symbol. It will also screen the tracks and the back of the storage building across the tracks. The campus ramp from the pedestrian bridge can be integrated into the building, which would enhance the ramp and building with views into fitness and other public areas and views out toward the park. A College use facility in this general area of Jesup Blair Park has been proposed in the 2000 City of Takoma Park master plan.
5. Renovate Pavilions One and Two at 9,295 NASF (14,771 GSF) to provide class labs to support the Humanities and Social Science programs.

6. Child Care Center: the future of this building has not yet been determined.

Figure 2 shows the 2013-2023 Building and Site Concept Plan proposed for the Takoma Park/Silver Spring Campus.

The goals of the Facilities Master Plan also include the creation of a campus green that extends south from the Student Services Center between the campus buildings, connecting to the Catherine F. Scott Commons and the new Math and Science Center Building at the south end of campus, and providing a natural gathering space for students within the collegiate setting.

As part of this conceptual framework, the Campus Facilities Master Plan continues the successful design developed for the Student Services Center with the new buildings proposed along both Fenton Street and New York Avenue. Somewhat taller buildings are proposed for the Fenton Street side, opposite the WMATA/CSX tracks, and shorter buildings are proposed for the New York Avenue side of campus.

The remaining campus buildings have been or will be renovated to repurpose the facilities for new uses. Pavilion Three has been renovated for Humanities programs, and Pavilion Four has been renovated for use as a Business & Social Sciences Center. Pavilions One and Two are proposed to be renovated for use as general classrooms and support space for Humanities and Social Sciences. These conversions will co-locate programs that are currently widely distributed on the existing campus.

The plan for development at this campus envisions further growth in the ten to twenty year timeframe. This Facilities Master Plan notes possible development of the remaining building site on the West Campus (currently a parking lot) which could provide an opportunity to support expansion with space for a future academic or mixed use building. This property is currently owned by the Montgomery College Foundation. Property acquisitions are also suggested to the north of the East Campus, along the railroad tracks, that could support the growth of the Takoma Park/Silver Spring Campus and make a stronger connection between the two sides of campus.

### **0.9.3 The Germantown Campus**

The College began offering classes in the up-county area in September 1975, initially holding them in high school classrooms. Three years later, the Germantown Campus opened in its present location in the newly constructed Science & Applied Studies, and Humanities & Social Sciences Buildings. The Germantown Campus is the College's newest campus and is situated on 228.7 acres.

The sprawling scenic campus is located just 30 miles north of Washington, D.C., between Route 355 and Interstate 270. The campus has continued to grow since its origin and today serves over 7,500 full-time and part-time day, evening and weekend students. The faculty and staff work closely with the local community and the businesses on the I-270 high-tech corridor to create mutually beneficial student learning opportunities.

Building on the success of the biotechnology instructional programs, the campus has begun sowing the seeds of the next generation of scientists and laboratory researchers through a collaborative project to construct a life sciences park, a county operated technology incubator and a Bioscience Education Center. In 2014 the new Germantown Holy Cross Germantown Hospital opened on campus and now serves as the anchor tenant for the Pinkney Innovation Center for Science and Technology at Montgomery College (PIC MC). These visionary initiatives and projects have laid a foundation to ensure that the local biotechnology industry continues to thrive to the benefit of the students and the greater community in meeting local and state needs. In addition, the campus hosts a cybersecurity/networking program and is a founding member of CyberWatch, a consortium of over

70 colleges and universities, preparing skilled cybersecurity/networking technicians.

The 2013-23 Facilities Master Plan for the Germantown Campus proposes development with a mind toward creating a campus physically and programmatically integrated with Holy Cross Germantown Hospital and with proposed science and technology-related private development. The proposed plan supports increases in enrollment through construction of approximately 221,029 NASF of new space, and the renovation and reallocation of additional space in existing campus buildings.

Proposed projects include six new buildings and five building renovations – a new Student Services Center, Library Learning Commons, Science / Math / Health Science Building, Arts and Communications Building and a new Parking Garage, coupled with the second phase of renovation for the Science & Applied Studies Building, and renovation of the Humanities and Social Studies Building, the Paul Peck Academic and Innovation Building and the High Technology and Science Center. The Physical Education Complex will be renovated and receive an addition.

The proposed building projects for the 2013-2023 Facilities Master Plan for the Germantown Campus are listed below:

1. Construct a new Student Services Center at 54,150 NASF (95,000 GSF) to support and consolidate student support functions and resources, as well as student activities. The building will also house a new larger cafeteria and bookstore.
2. Complete the second phase of the Science and Applied Studies Building (31,806 NASF, 55,800 GSF) to support current and projected student enrollment growth in the Physics, Engineering and Math disciplines. This phase will replace this inefficient portion of the existing building with a new three-story building.
3. Construct a new Library Learning Commons at 42,120 NASF (70,200 GSF) to house the Reading and Writing Learning Center, the Social Science Learning Center and its media and academic computing functions. General purpose and library learning classrooms will also be included in this new building, along with a student-operated café that will be designed to encourage community use and interactions among College students, PIC MC and Holy Cross Germantown Hospital. This building will act as a connecting hub between the main academic buildings and the future PIC MC buildings.
4. Renovate the Humanities and Social Studies Building 51,601 NASF (75,700 GSF) to accommodate classroom/laboratory, office and conference space for the Humanities and English departments.
5. Construct a new Parking Garage at the north end of campus to house approximately 900 parking spaces.
6. Construct new Science / Math / Health Science at 20,520 NASF (34,200 GSF) buildings. These facilities will house additional space for the Biology, Chemistry, Physics, Engineering, Geosciences and Cybersecurity programs and be sited at the south entrance of the campus where Observation Drive and Goldenrod Lane meet at the roundabout. These buildings have been planned to be built in phases to provide a high degree of flexibility to accommodate space for College programs as well as elements of a public private partnerships that have yet to be defined.
7. Construct a new Arts and Communications Building at 43,200 NASF (72,000 GSF) with new classrooms, laboratories, and performance and support spaces to support the growing arts and communications

programs on campus.

8. Renovate and reallocate space within the High Technology and Science Center (45,492 NASF, 75,542 GSF) to allow its continued use by the Information Technology and Business departments and expansion of Cybersecurity. Built in 1990s, this building requires targeted renovation and reallocation of approximately 10,000 NASF/16,600 GSF of space formerly occupied by the biotechnology lab and support spaces. Information Technology and Business Departments. Building system upgrades will also be required to extend the useful life and accommodate reallocation and alteration of space.
9. Renovate the Paul Peck Academic and Innovation Building (33,684 NASF, 42,637 GSF) to provide general classrooms and faculty offices that are dedicated to serving the Workforce Development & Continuing Education Programs and general education classes. The business incubator (Germantown Innovation Center) will remain on the second floor.
10. Construct an addition to and renovate the Physical Education Building (21,900 NASF, 36,500 GSF Addition and 29,351 NASF, 36,770 GSF Renovation.) The project will involve a comprehensive renovation of the existing Physical Education facility and an addition to the building. The renovation will include extensive building envelope upgrades and repairs along with modernization of building systems. The addition will provide needed programming space to address enrollment growth for the Physical Education and Health programs as well as support campus and community events and recreation spaces. The addition will be located on the north side of the existing building. It will provide an entrance to the new fitness and recreation spaces from the west.

Figure 5 shows the 2013-2023 Building and Site Concept Plan proposed for the Germantown Campus.

A major goal of the Facilities Master Plan is the extension of the existing pedestrian network south towards Holy Cross Germantown Hospital and west across Observation Drive to the Paul Peck Academic and Innovation Building so there is better campus integration. The pedestrian walks and streets should be tree-lined for shade and better visual connections. Walks and hiking trails will connect better to the extensive forested, wetland, open areas and heart of the campus. Also proposed are improvements and greening of the main roadways and the relocation and/or upgrade of transit stops on campus to provide more capacity and improve service and safety. The buildings proposed in the 2013-2023 Facilities Master Plan have been located to reinforce pedestrian and visual connectivity on the core campus, as well as between the core campus and proposed future facilities for the PIC MC. They are also sited to create gateways and enhance the arrival experience to the campus.

#### **0.9.4 The Rockville Campus**

As the largest and most comprehensive campus of Montgomery College, the Rockville Campus welcomes close to 17,000 students each semester. Accessible by all modes of transportation and located about a mile from the vibrant new Rockville Town Center, the campus opened in 1965 with an enrollment of 2,489. In addition to the credit students, the campus also serves a substantial non-credit student body through programs of Work Force Development & Continuing Education (WD&CE). The student body, faculty and staff and a broad range of campus partners come together to form a vibrant and culturally diverse community. This community hosts thousands of visitors to campus each year for art exhibits, concerts and theatrical events, athletic events, conferences and lectures, and other events open to the public.

Although there have been substantial capital improvements at the Rockville Campus in recent years, there is still a significant space deficit in class lab space. Other notable deficits are in offices, study, meeting rooms and

lounges, athletics/recreation, media production, food service, shop/storage and central service as well as a need for more meeting rooms and lounges for students, faculty and staff.

The 2013-23 Facilities Master Plan for the Rockville Campus supports increases in enrollment through construction of approximately 321,038 NASF of new space, and the renovation and reallocation of additional space in existing campus buildings. The plan seeks to accommodate as much development as is possible given the limited existing land available for development or redevelopment and neighbor concerns, in particular on the west side of campus. The proposed projects seek to provide needed academic space and facilities to meet the ten year growth of the campus. Due to physical constraints not all of the deficit can be accommodated on the campus, but the new projects will create much needed improvements in student life and library space, dedicated space for the Workforce Development & Continuing Education programs and proposes additional space to accommodate significant growth in Humanities and Social Sciences, and the arts.

Proposed projects include six new buildings and five building renovations – a new Campus Center, Library Learning Commons, Technical Training Center, Media Arts Building, Humanities and Social Science Center, and a second parking garage for the campus. Renovations are proposed for the South Campus Instruction Building to accommodate Workforce Development & Continuing Education, the Humanities Building, Computer Science building, Physical Education Center, Gordon and Marilyn Macklin Tower and the Mannakee Building. The Robert E. Parilla Performing Arts Center will be renovated and receive an addition.

The proposed building projects for the 2013-2023 Facilities Master Plan for the Rockville Campus are listed below:

1. Renovate the South Campus Instruction Building (17,662 NASF, 29,900 GSF) for WD&CE youth programs, and staff, plus continuation as surge space and renovated facilities for adjunct faculty. Renovation will also renew or replace building MEP systems.
2. Construct a new Campus Center at (72,960 NASF, 128,000 GSF) as a four-story building with highly active student type spaces such as the bookstore and cafeteria dining, the cafeteria kitchen and servery, the Hospitality Management program, conference rooms and general purpose classrooms to support Health and other academic programs. Lobby and lounge space will be situated so as to engage the pedestrian mall on the west side of the building, as well as the New Student Services Center across the pedestrian mall. Inclusion of a large meeting space for up to 500 will also be considered.
3. Construct a new South Garage with 900-1,000 parking spaces at the south end of campus. The program development for the garage and the Library Learning Commons should be coordinated to confirm that the Library Learning Commons will work properly along the west side and north corner of the garage.
4. Construct a new Library Learning Commons at 70,295 NASF (117,158 GSF) and four stories to replace the inadequate facility currently housed on three floors in Macklin Tower. The program development for the garage and the Library Learning Commons should be coordinated to confirm that the Library Learning Commons will work properly along the west side and north corner. The goal is to line the campus mall and arts walk with the new Library Learning Commons.
5. Renovate the Gordon and Marilyn Macklin Tower (44,557 NASF, 63,652 GSF) to alter and reconfigure Library space that will be vacated with the construction of a new Library Learning Commons. The reclaimed space will be allocated for use by Academic Initiatives, expansion of the Reading and Writing Learning Center, general education classrooms for Reading and English, part time faculty and other administrative units. The renovation will also improve and/or reconfigure MEP systems, accessibility

- and life safety systems. The program development should consider a bridge connection to the Computer Science Building as part of the renovation.
6. Construct a new Technical Training Center at 50,400 NASF (84,000 GSF) to accommodate consolidated Technical Training programs and Applied Technology programs currently housed in Technical Center.
  7. Construct a new Media Arts Building at 28,800 NASF (48,000 GSF) to accommodate an expanded Art program that consolidates the Fine Arts and Communication Arts programs along the proposed Arts Walk at the (now) southern end of campus. This building will also provide space for relocation of Graphic Design and Animation from the Technical Center.
  8. Construct a new Humanities and Social Science Building at 81,600 NASF (136,000 GSF) on the approximate footprint of the existing Technical Center, to accommodate both the Humanities and Social Science programs.
  9. Renovate the Humanities Building (49,368 NASF, 73,912 GSF.) The renovation will alter and reconfigure space vacated by construction of the new Humanities and Social Science Building. The renovation will expand the Macklin Business Institute, provide additional space for Business, Information Science and Management, faculty offices, and continued use of classrooms for general education classes scheduling. The renovation will also improve accessibility, life safety systems and the central ice storage facility.
  10. Renovate and add to the Robert E. Parilla Performing Arts Center (16,501 NASF, 28,000 GSF existing + 17,294 NASF, 28,325 GSF addition. This project includes expanding the auditorium and back-of-house spaces including dressing rooms, loading dock and storage spaces, while adding meeting rooms, conference center and catering kitchen.
  11. Renovate the Computer Science Building (12,661 NASF, 20,900 GSF) for general purpose classrooms, computer laboratories, offices and swing space. The program development should consider a bridge connection to Macklin Tower.
  12. Renovate the Physical Education Center and Outdoor Facilities (58,431 NASF, 84,949 GSF) to include a fitness center, weight rooms, locker rooms, academic labs and support spaces for intercollegiate teams. Redevelopment and repurposing of the pool should be considered. Outdoor facilities will be reconfigured, and possibly shifting the baseball field to accommodate future building projects.
  13. Renovate the Mannakee Building (34,359 NASF, 42,102 GSF) and reallocate for the Workforce Development & Continuing Education administration and business training functions, as well as for additional adjunct faculty.

Figure 8 shows the 2013-2023 Building and Site Concept Plan proposed for the Rockville Campus.

The goals of the Facilities Master Plan also include the extension of the existing pedestrian network and enhancements to the green, open space network to complement the existing pedestrian mall in the heart of campus. Of necessity, parking lots are reconfigured and transit stops are relocated and upgraded to provide more capacity and improve service and safety. The buildings proposed in the 2013-2023 Facilities Master Plan have been located to reinforce pedestrian and visual connectivity on the core campus, as well as between the core campus and the Mannakee Building. They are also sited to create gateways and enhance the arrival experience to the campus.

### 0.9.5 Workforce Development & Continuing Education

Workforce Development & Continuing Education is spread among the three Montgomery College campuses. In addition to a physical presence on the Takoma Park/Silver Spring, Germantown, and Rockville campuses, facilities are also located in leased space in Wheaton, Silver Spring at the Westfield Town Shopping Center, and in Gaithersburg at the Gaithersburg Business Training Center. In addition, WD&CE offerings are distributed throughout the county at many business and municipal locations.

With five current locations, the Workforce Development & Continuing Education Facilities Master Plan is coordinated with campus developments for the planned expansion of the programs and services offered by the unit. The unmet space need of the unit is nearly 27,000 NASF. In addition, the plan anticipates that Workforce Development & Continuing Education will continue to expand at its existing off-campus locations and/or develop new sites within new market locations. The underlying assumption of this plan is that all of the existing space leases serving the unit are continued beyond the ten year period. The above space need is therefore for new additional space.

To support the vision for the WD&CE programs and to establish a coherent, logical framework for development of capital projects, the Facilities Master Plan has established goals and priorities. This Master Plan for WD&CE focuses on:

- Consolidating Workforce Development & Continuing Education efforts on the Germantown, Rockville, and Takoma Park/Silver Spring Campuses so that students, visitors, and the College community benefit from the ease, energy, and excitement generated by the synergy of proximity;
- Providing sufficient and adequate space at each location—classrooms, labs, offices, study, and support facilities—based on existing and projected needs;
- Presenting students the needed range of opportunities to study and learn collaboratively in supportive environments with the special assistance of faculty, counselors, and staff;
- Creating a stronger identity for the WD&CE program on each campus and at off-campus locations to enable a broader reach into the community and a clear, welcoming environment for visitors, and new and potential students.

Based on the College's anticipated enrollment growth over the 2013 to 2023 period, and supported by the instructional and other needs identified during the master planning process, the College has identified a number of capital projects for Workforce Development & Continuing Education over the ensuing ten year period. These projects include:

- 1 Reallocation of the Paul Peck Academic and Innovation Building on the Germantown Campus (12,200 NASF)
- 2 Reallocation of a portion of the South Campus Instruction Building to WD&CE at Rockville (6,283 NASF)

- 3 Reallocation of a portion of the Mannakee Building at Rockville for WD&CE (27,366 NASF)
- 4 Alteration of the Homer S. Gudelsky Institute for Technical Education and Replacement of the Interim Technical Training Center at Rockville for continued use by WD&CE.
- 5 Continued leasing of buildings at Westfield South Center (22,500 GSF) over the next 8 years.
- 6 Continued leasing of space at the Gaithersburg Business Training Center (29,600 GSF) for the next 8 years.
- 7 Continue to monitor and study the feasibility of leasing or purchasing space or a building at a location in the East County (10,600 GSF).



**FIGURE 1 – TP/SS CURRENT CAMPUS PLAN**



EXISTING CAMPUS BUILDINGS

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>CF The Morris and Gwendolyn Cafritz Foundation Arts Center</li> <li>CM Catherine F. Scott Commons</li> <li>CU Cultural Arts Center</li> <li>DC Child Care Center</li> <li>EG East Garage (parking)</li> <li>FH Falcon Hall (Physical Education)</li> <li>HC Health Sciences Center</li> <li>MP Mathematics Pavilion</li> <li>NP North Pavilion</li> </ul> | <ul style="list-style-type: none"> <li>P1 Pavilion One</li> <li>P2 Pavilion Two</li> <li>P3 Pavilion Three</li> <li>P4 Pavilion Four</li> <li>RC Resource Center</li> <li>SN Science North Building</li> <li>SS Science South Building</li> <li>ST Charlene R. Nunley Student Services Center</li> <li>WG West Garage (parking)</li> </ul> |
|--|--|



**FIGURE 2 – TP/SS 2013-2023 BUILDING AND SITE CONCEPT PLAN**



<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 15px; background-color: #4F81BD; margin-right: 5px;"></span> EXISTING BUILDING</li> <li><span style="display: inline-block; width: 20px; height: 15px; background-color: #E6D95C; margin-right: 5px;"></span> NEW BUILDING</li> <li><span style="display: inline-block; width: 20px; height: 15px; background-color: #D98C33; margin-right: 5px;"></span> RENOVATION BUILDING</li> </ul>	<ul style="list-style-type: none"> <li>CF The Morris and Gwendolyn Cafritz Foundation Arts Center</li> <li>CM Catherine F. Scott Commons</li> <li>CU Cultural Arts Center</li> <li>DC Child Care Center</li> <li>EG East Garage (parking)</li> <li>HC Health Sciences Center</li> <li>P3 Pavilion Three</li> <li>P4 Pavilion Four</li> <li>ST Charlene R. Nunley Student Services Center</li> <li>WG West Garage (parking)</li> </ul>
--	---

**1 MATH AND SCIENCE CENTER BUILDING**  
FOOTPRINT - 45,000 GSF  
TOTAL(3FL) - 134,600 GSF

**2 LIBRARY LEARNING COMMONS**  
FOOTPRINT - 17,200 GSF  
TOTAL(4FL) - 67,734 GSF

**3 MATH BUILDING**  
FOOTPRINT - 15,200 GSF  
TOTAL(3FL) - 45,600 GSF

**4 HEALTH AND FITNESS CENTER**  
FOOTPRINT - 29,400 GSF  
TOTAL(1-2FL) - 49,230 GSF  
**PARKING GARAGE**  
TOTAL(2FL) - 220 +/- SP

**5 HUMANITIES / BUSINESS & SOCIAL SCIENCE**  
RENOVATE PAVILION 1 + 2

**FIGURE 3 – TP/SS 2013-2023 LANDSCAPE AND OPEN SPACE PLAN**



NEW GATHERING SPACE

STUDENT WALKING RADIUS

EXISTING KEY AREA

MAJOR BUILDING ENTRANCE

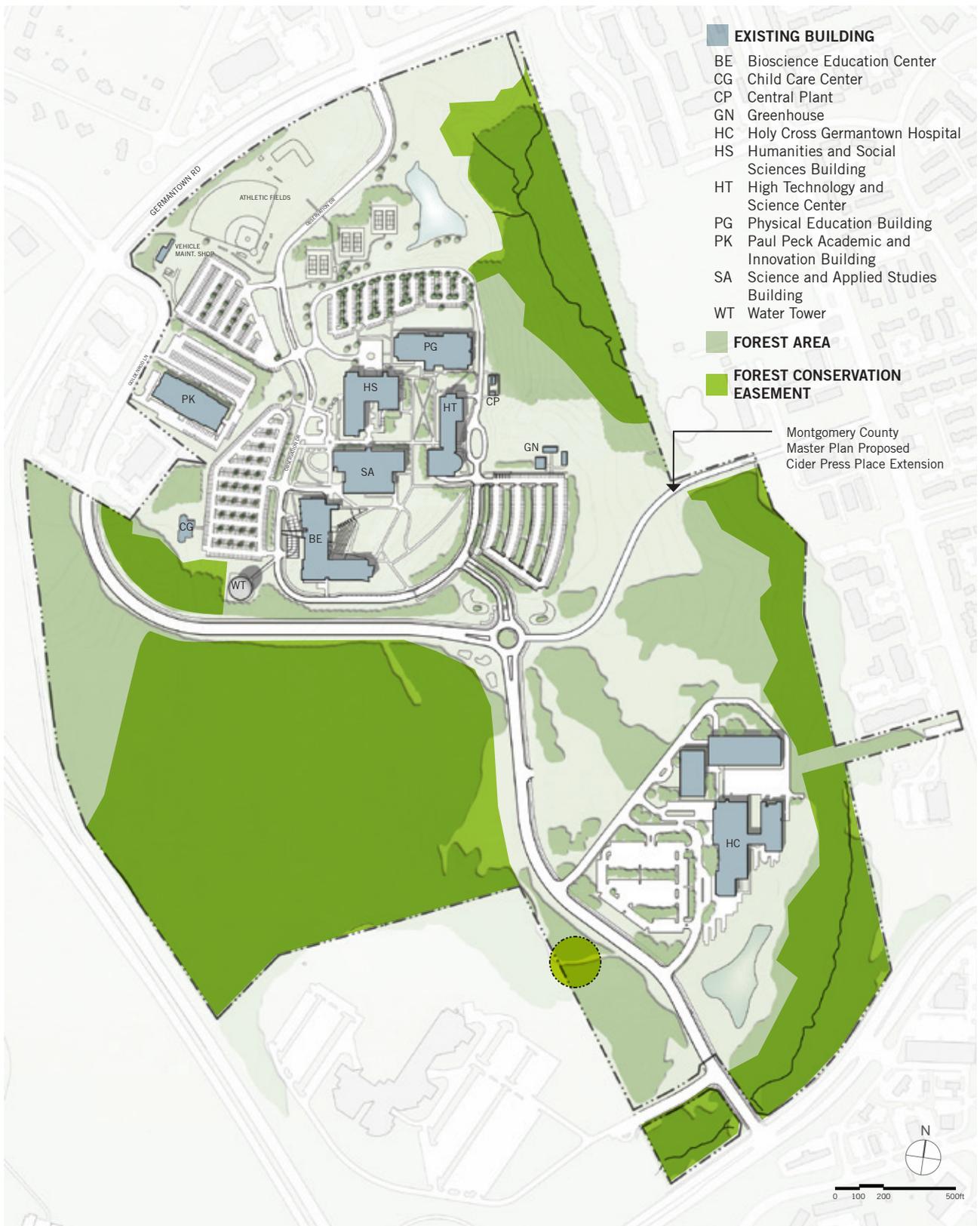
PRIMARY CAMPUS PEDESTRIAN PATH

SECONDARY CAMPUS CIRCULATION AXIS

- CF The Morris and Gwendolyn Cafritz Foundation Arts Center
- CM Catherine F. Scott Commons
- CU Cultural Arts Center
- DC Child Care Center
- EG East Garage (parking)
- HC Health Sciences Center
- P3 Pavilion Three
- P4 Pavilion Four
- ST Charlene R. Nunley Student Services Center
- WG West Garage (parking)

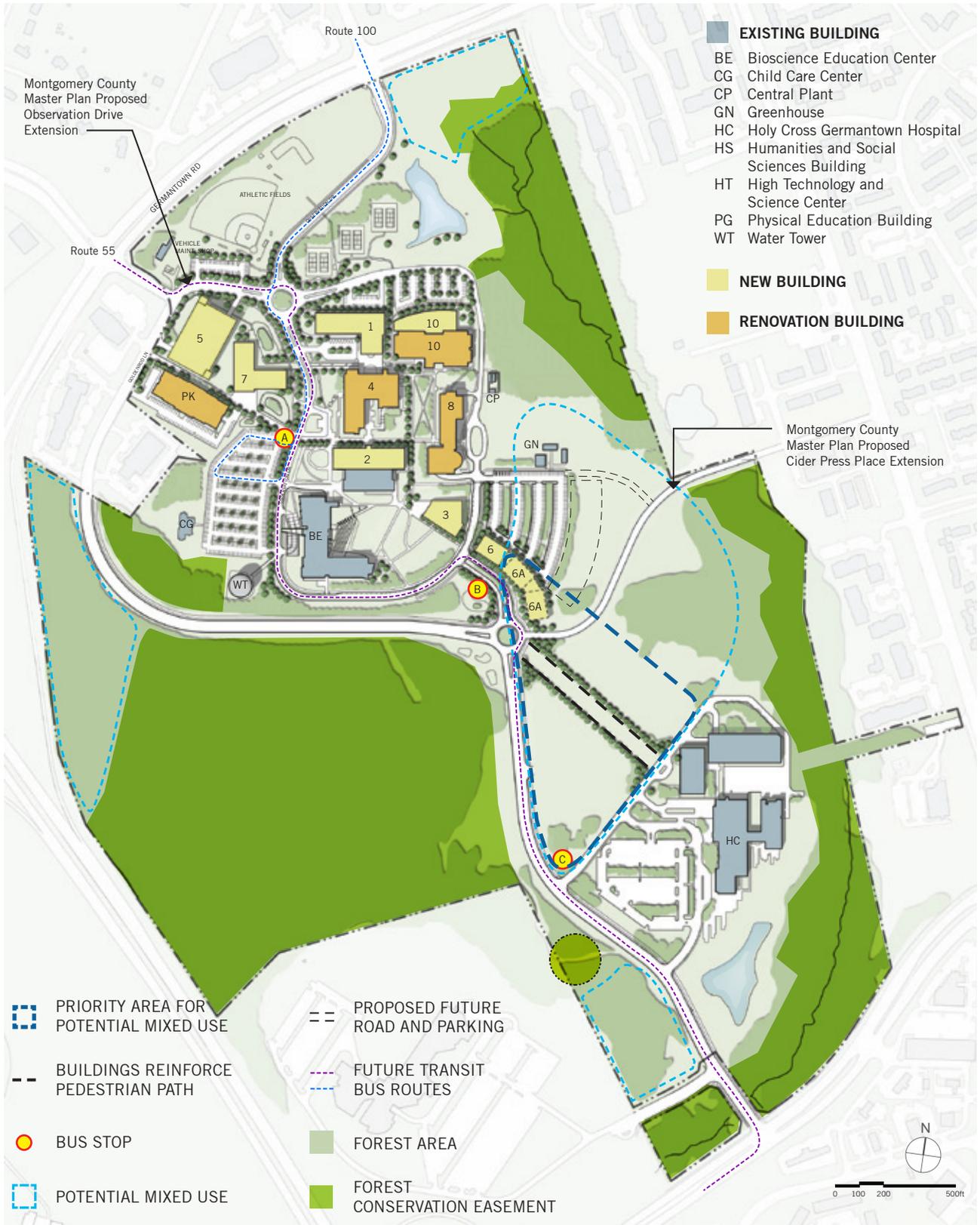
- 1 Create interconnected, landscaped courtyards that:
  - reinforce the building entrances and pedestrian paths between them;
  - create shady areas for study and congregation;
  - provide vistas and transparency from New York Avenue.
- 2 Create a new landscaped courtyard in between the Commons and Math and Science Center Building.
- 3 Enhance the street trees along the edge of all streets.
- 4 Create visual and physical links across New York Avenue between courtyard spaces.

**FIGURE 4 – GERMANTOWN CURRENT CAMPUS PLAN**





**FIGURE 5 – GERMANTOWN 2013-2023 BUILDING AND SITE CONCEPT PLAN**



**1 STUDENT SERVICES CENTER**  
 FOOTPRINT - 33,400 GSF  
 TOTAL(3FL) - 95,000 GSF

**2 SCIENCE AND APPLIED STUDIES BUILDING**  
 PHASE 2  
 FOOTPRINT - 18,600 GSF  
 TOTAL(3FL) - 55,800 GSF

**3 LIBRARY LEARNING COMMONS**  
 FOOTPRINT - 17,550 GSF  
 TOTAL(4FL) - 70,200 GSF

**4 HUMANITIES AND SOCIAL SCIENCES**  
 RENOVATE FOR HUMANITIES,  
 ENG., READING & SOC. SCI

**5 PARKING GARAGE**  
 TOTAL - 800~1,000 SP

**6 SCIENCE / MATH / HEALTH SCIENCE**  
 FOOTPRINT - 9,600 GSF  
 TOTAL(3FL) - 34,200 GSF  
 (6A - FUTURE MIXED USE)

**7 ARTS AND COMMUNICATIONS BUILDING**  
 FOOTPRINT - 24,000 GSF  
 TOTAL(3FL) - 72,000 GSF

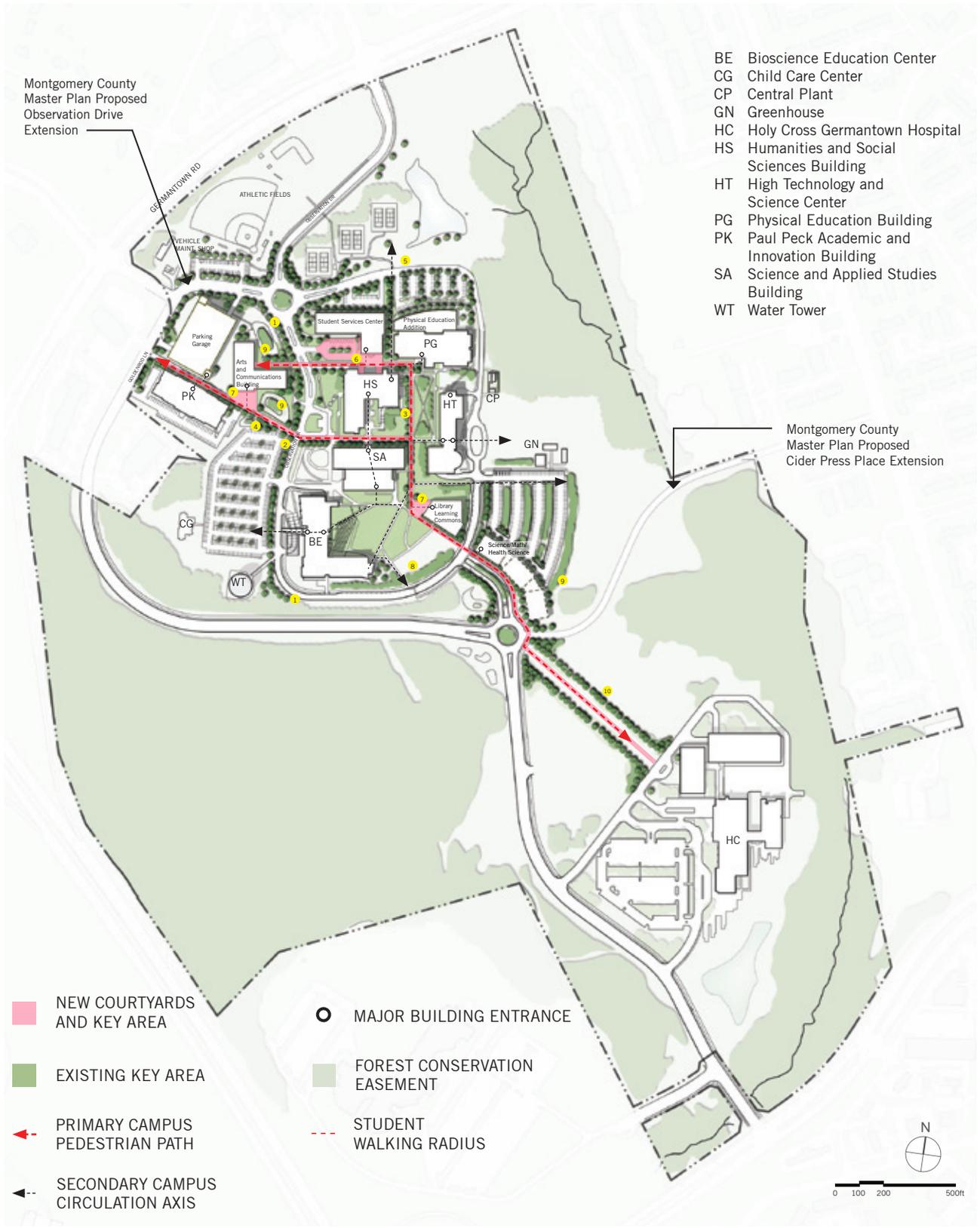
**8 HIGH TECHNOLOGY AND SCIENCE CENTER**  
 RENOVATE

**9 PAUL PECK ACADEMIC AND INNOVATION BUILDING**  
 FOR WD&CE(50%) &  
 COUNTY INCUBATOR(50%)

**10 PHYSICAL ED. ADDITION**  
 FOOTPRINT - 20,900 GSF  
 TOTAL - 68,826 GSF  
 (ADDITION + RENOVATION)

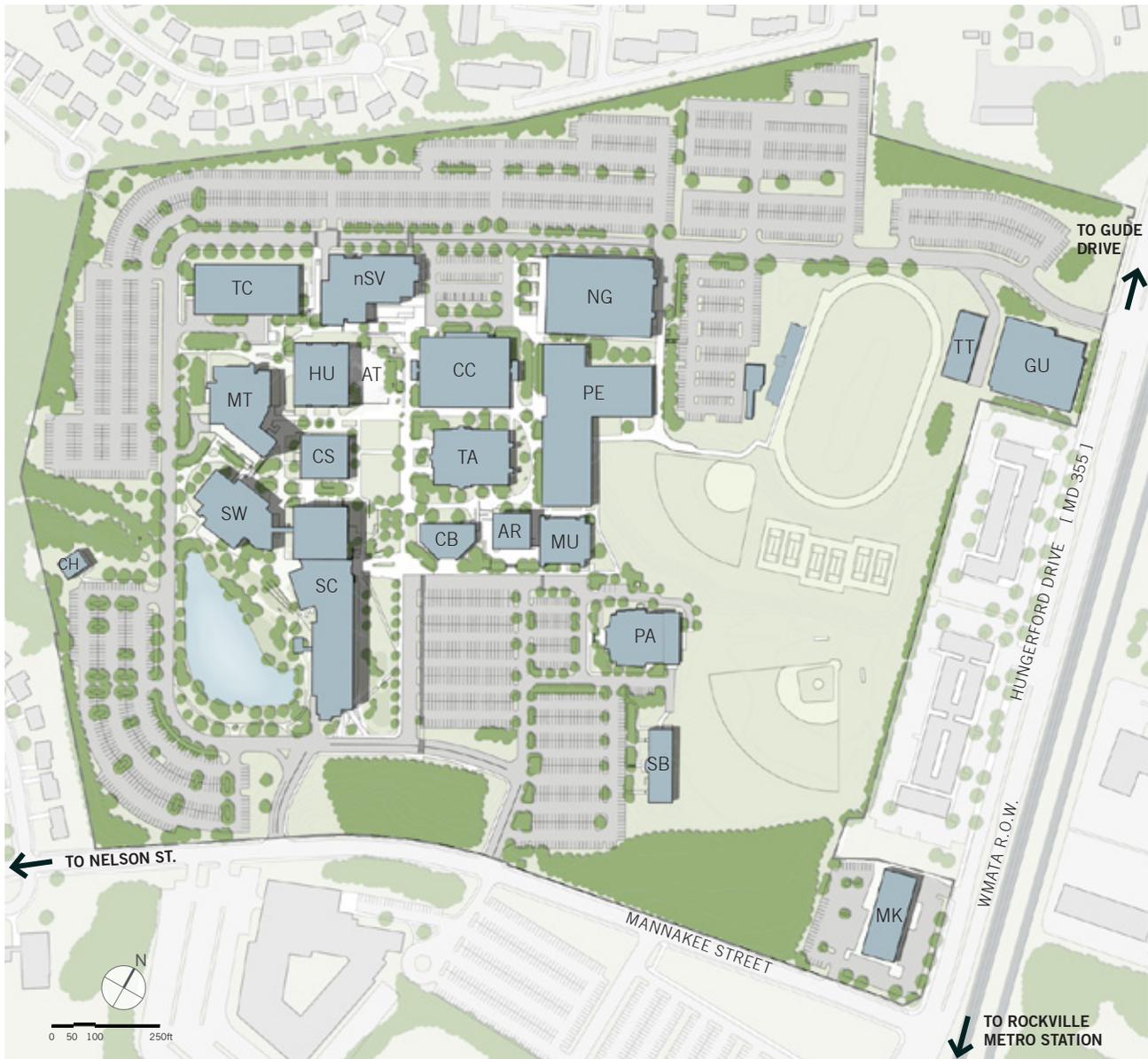
**PHYSICAL EDUCATION**  
 RENOVATE

**FIGURE 6 – GERMANTOWN 2013-2023 LANDSCAPE AND OPEN SPACE PLAN**



- 1 Reinforce the north-south axis and line Observation Drive with street trees
- 2 Relocated transit stop
- 3 Enhance the quad with trees
- 4 Reinforce the East-West axis with landscaping, lighting and paving from the Paul Peck Academic and Innovation Building to the High Technology + Science Center
- 5 Link campus pond to center of campus with a landscaped path
- 6 Create a new student services center courtyard with parking, paving, service access and landscaping
- 7 Open space/ plaza in front of proposed new building entries
- 8 Retain forested buffer and extend up into campus
- 9 Extend forest up into campus. Create swales to handle stormwater
- 10 Create tree-lined pedestrian path to reinforce connections and views to hospital

**FIGURE 7 – ROCKVILLE CURRENT CAMPUS PLAN**

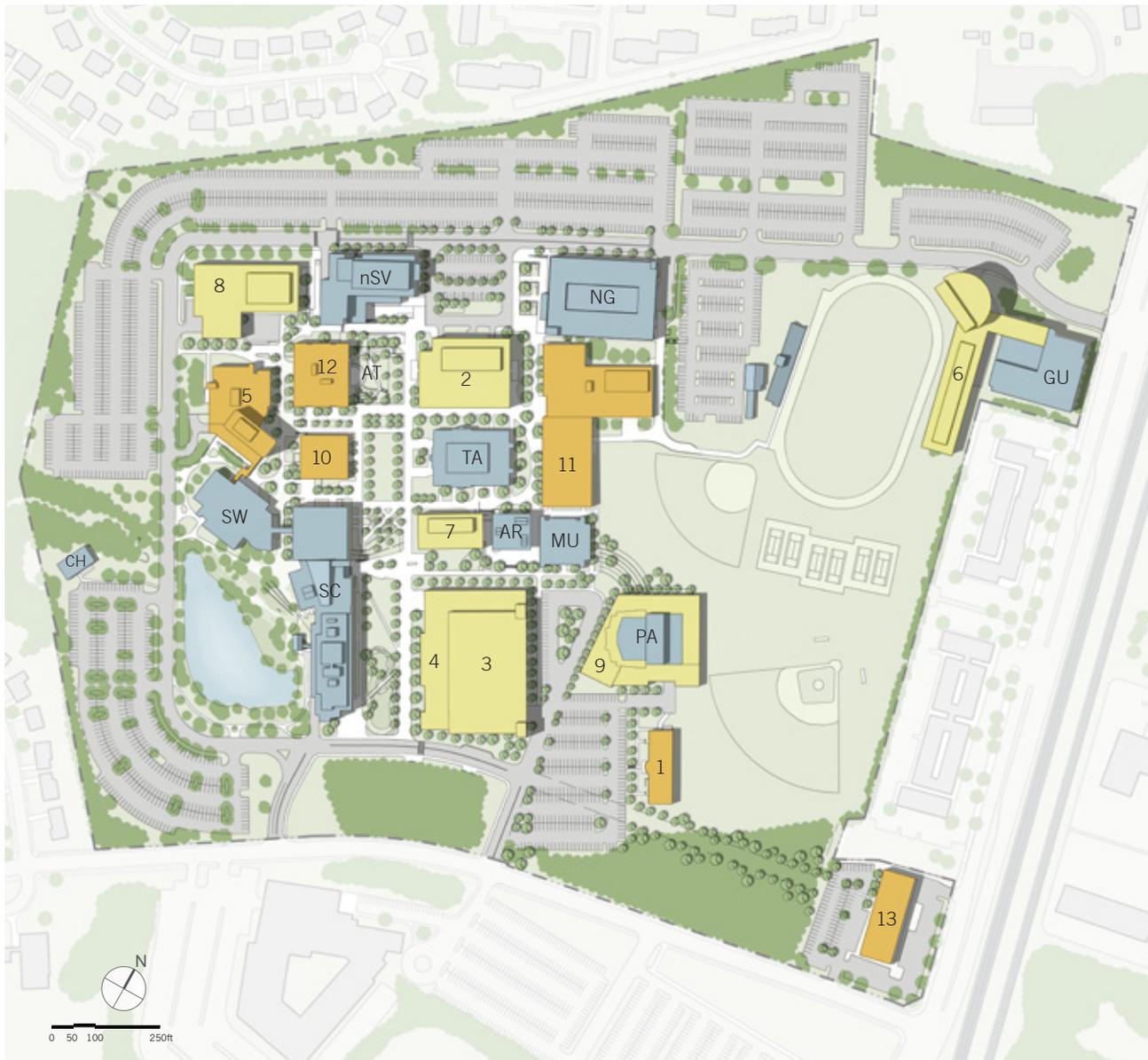


EXISTING BUILDING

- |    |   |     |  |
|----|---|-----|--|
| AR | Paul Peck Art Building                              | MU  | Music Building                           |
| AT | Amphitheatre  | nSV | New Student Services Building            |
| CB | Counseling and Advising Building                    | NG  | North Garage                             |
| CC | Campus Center                                       | PA  | Robert E. Parilla Performing Arts Center |
| CH | Child Care Center                                   | PE  | Physical Education Center                |
| CS | Computer Science Building                           | SB  | South Campus Instruction Building        |
| GU | Homer S. Gudelsky Institute for Technical Education | SC  | Science Center                           |
| NG | North Garage  | SW  | Science West Building                    |
| HU | Humanities Building                                 | TA  | Theatre Arts Building                    |
| MK | Mannakee Building                                   | TC  | Technical Center                         |
| MT | Gordon and Marilyn Macklin Tower                    | TT  | Interim Technical Training Center        |



**FIGURE 8 – ROCKVILLE 2013-2023 BUILDING AND SITE CONCEPT PLAN**



- EXISTING BUILDING
- NEW BUILDING
- RENOVATION BUILDING

- AR Paul Peck Art Building
- AT Amphitheatre
- CH Child Care Center
- GU Homer S. Gudelsky Institute for Technical Education
- nSV New Student Services Building
- NG North Garage
- PA Robert E. Parilla Performing Arts Center
- SC Science Center
- SW Science West Building
- TA Theatre Arts Building

- |  |   |  |
|--|---|--|
| <p><b>1 SOUTH CAMPUS INSTRUCTION BUILDING</b><br/>FOR WD&amp;CE YOUTH PROGRAMS</p>               | <p><b>2 CAMPUS CENTER</b><br/>FOOTPRINT - 32,400 GSF<br/>TOTAL(4FL) - 128,000 GSF</p>                                     | <p><b>3 SOUTH GARAGE</b><br/>FOOTPRINT - 54,000 GSF<br/>TOTAL(6FL) - 900~1000 SP</p>                                 |
| <p><b>4 LIBRARY LEARNING COMMONS</b><br/>FOOTPRINT - 29,300 GSF<br/>TOTAL(4FL) - 117,158 GSF</p> | <p><b>5 GORDON AND MARILYN MACKLIN TOWER</b><br/>RENOVATE FOR READING AND WRITING LEARNING CENTER, GENERAL CLASSROOMS</p> | <p><b>6 TECHNICAL TRAINING CENTER</b><br/>TOTAL - 84,000 GSF</p>   |
| <p><b>7 MEDIA ARTS BUILDING</b><br/>FOOTPRINT - 12,000 GSF<br/>TOTAL(4FL) - 48,000 GSF</p>       | <p><b>8 HUMANITIES AND SOCIAL SCIENCE</b><br/>FOOTPRINT - 34,000 GSF<br/>TOTAL(4FL) - 136,000 GSF</p>                     | <p><b>9 ROBERT E. PARILLA PERFORMING ARTS CENTER ADD.</b><br/>FOOTPRINT - 28,450 GSF<br/>TOTAL(2FL) - 56,900 GSF</p> |
| <p><b>10 COMPUTER SCIENCE BUILDING</b><br/>RENOVATE FOR SWING SPACE</p>                          | <p><b>11 PHYSICAL EDUCATION CENTER</b><br/>RENOVATE PHYSICAL EDUCATION BUILDING</p>                                       | <p><b>12 HUMANITIES BUILDING</b><br/>RENOVATE HUMANITIES BUILDING</p>  |
| <p><b>13 MANNAKEE BUILDING</b><br/>RENOVATE FOR WD&amp;CE BUSINESS USE</p>                       |   |  |

**FIGURE 9 – ROCKVILLE 2013-2023 LANDSCAPE AND OPEN SPACE PLAN**



NEW COURTYARDS AND KEY AREA

EXISTING KEY AREA

PRIMARY CAMPUS PEDESTRIAN PATH

SECONDARY CAMPUS CIRCULATION AXIS

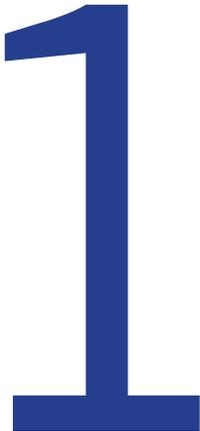
MAJOR BUILDING ENTRANCE

FOREST CONSERVATION EASEMENT

STUDENT WALKING RADIUS

- AR Paul Peck Art Building
- AT Amphitheatre
- CH Child Care Center
- GU Homer S. Gudelsky Institute for Technical Education
- nSV New Student Services Building
- NG North Garage
- PA Robert E. Parilla Performing Arts Center
- SC Science Center
- SW Science West Building
- TA Theatre Arts Building

- 1 Pedestrian mall / major circulation axis
  - a. Lawn
  - b. Stormwater educational landscape
- 2 Hardscape / plaza
- 3 Arts walk
- 4 Arts plaza
- 5 Amphitheater
- 6 Enhance parking area with trees and landscaping
- 7 Extend pedestrian axis through parking lot with trees, pedestrian path and landscaping
- 8 Create tree-lined pedestrian path



# MONTGOMERY COLLEGE



## 1.1 Introduction to Montgomery College

Montgomery College has been changing lives in Montgomery County for more than 60 years. Founded in 1946, Montgomery College began as an evening college at Bethesda-Chevy Chase High School, serving an initial student body of just 186 students. By 1950, the College acquired the buildings and land previously occupied by the Bliss Electrical School. This Takoma Park location became the College's first campus. The Rockville Campus opened in 1965, and the Germantown Campus opened in 1978. Today the College has grown from very humble beginnings to a total of 50 owned buildings and five leased facilities housing more than 2.3 million square feet of facility space in support of the College's educational mission.

The College is an open-access, public education institution dedicated to academic excellence and committed to student success. The College offers a wide range of postsecondary academic programs, career training, and lifelong learning opportunities at moderate cost to residents, businesses, and other organizations within Montgomery County. The College provides an enriching and comprehensive learning experience for students, faculty, staff, and community members who in turn enhance the College with a diversity of ethnicities, cultures, ages, and experiences. This diversity offers opportunities for students to appreciate individual differences and to communicate ideas. As an educational resource center, the College acknowledges its responsibility and participates actively with public and private agencies to search for solutions to community problems.

The Maryland Higher Education Commission (MHEC) has authorized the College to confer the associate of arts, associate of science, associate of applied science, associate of arts in teaching, and associate of fine arts degrees upon its graduates. The College awards diplomas, certificates, and letters of recognition. As a public institution, the College is legally accountable to the state of Maryland and Montgomery County. At the state level, the College reports to the Maryland Higher Education Commission (MHEC). MHEC establishes minimum requirements for associate degree-granting institutions and establishes general policies for the operation of community colleges. The College was first accredited on April 28, 1950, after an evaluation by a committee representing the Commission on Higher Education of the Middle States Association (an institutional accrediting agency recognized by the U.S. Secretary of Education and the Commission on Recognition of Postsecondary Accreditation). It has remained on the accredited list ever since then. The College holds accreditation from the state of Maryland and numerous academic and professional organizations. Examples of accrediting organizations for specific curricula include:

- Diagnostic Medical Sonography, Commission on Accreditation of Allied Health Education Programs
- Health Information Management, Commission on Accreditation for Health Informatics and Information Management Education
- Interior Design, National Kitchen and Bath Association
- Music, National Association of Schools of Music
- Nursing, National League for Nursing Accrediting Commission
- Physical Therapist Assistant, Commission on Accreditation in Physical Therapy Education
- Radiologic Technology, Joint Review Committee on Education in Radiologic Technology
- Surgical Technology, Commission on Accreditation of Allied Health Education Programs

## 1.2 Montgomery College Today

Today, the College is a multi-campus institution that serves nearly 60,000 students annually, through a combination of credit and noncredit continuing education programs. Chartered by the state of Maryland and governed by a 10-member Board of Trustees, Montgomery College is widely recognized for the quality and scope of its academic programs in liberal arts, humanities, sciences, business, and technologies. Campuses are located in Germantown, Rockville, and Takoma Park/Silver Spring, complemented by Workforce Development & Continuing Education centers and other off-campus sites throughout Montgomery County. More than 100 degree and certificate programs prepare students to earn an associate's degree, transfer to a four-year college or university, enter the job market, upgrade career skills, complete an apprenticeship, and enhance life through enrichment experiences. A highly accomplished and innovative faculty provide individualized instruction and a supportive learning environment. Affordable tuition and various extracurricular activities—athletic programs, performing arts, student clubs and multicultural organizations, student government—create a complete college experience for the county's culturally diverse student population. Courses and student services are provided year-round for day, evening, and weekend students.

The diverse student body of the College is reflective of Montgomery County and the greater Washington D.C. area. Currently, nonwhites make up 72.3% of the student body. The mean age of a Montgomery College student is 25.4 years and traditional age students (20 years and under) still lead all age groups comprising 41.4% of the total student body. Approximately 90% of all students reside in Montgomery County and 52% are female. Figures 1.01 through 1.04 provide an overview of the Montgomery College student body.

FIGURE 1.01  
MONTGOMERY COLLEGE DAY/EVENING STUDENTS

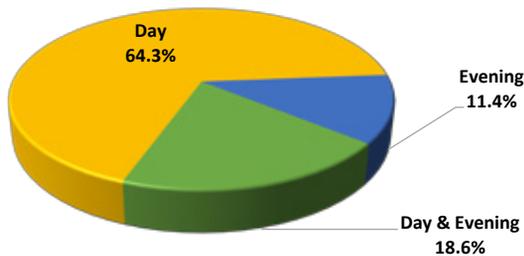


FIGURE 1.02  
MONTGOMERY COLLEGE STUDENTS BY ENROLLMENT STATUS

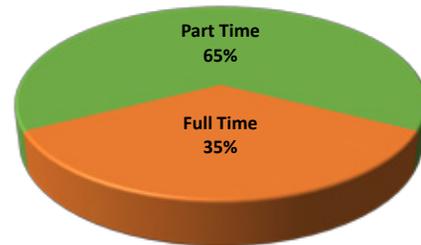


FIGURE 1.03  
MONTGOMERY COLLEGE STUDENTS BY RESIDENCE

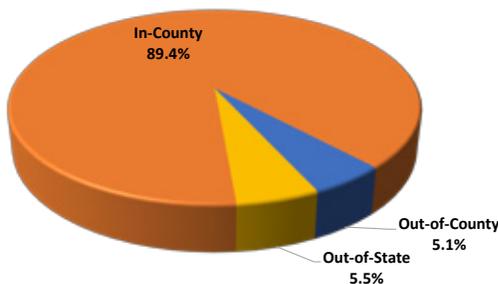
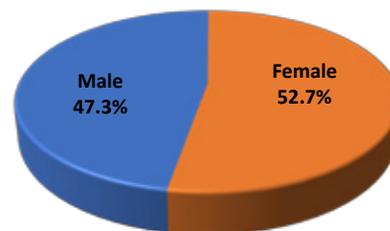


FIGURE 1.04  
MONTGOMERY COLLEGE STUDENTS BY GENDER



### 1.3 College-wide Vision, Goals and Objectives

The vision for academics at Montgomery College is a natural expansion of the institution's student-centered mission of caring, commitment to quality, and service to community that holds the College accountable for key results centered on learning. This vision incorporates clear priorities and the challenges of the future: ongoing access, retention, achievement, and collaborative learning. These priorities are achieved within a framework of service to the community, lifelong learning and professional development.

In keeping with its philosophy, policies, and purposes, the College offers the following high-quality educational opportunities:

- Transfer curricula for students wishing to transfer to upper-division degree studies at four-year colleges and universities;
- Technical and semiprofessional curricula for students wishing to prepare for immediate employment;
- A broad-based general education curriculum upon which students with undecided objectives can build;
- Credit and noncredit courses that may be used for employment, re-entering the workforce, re-training and for exploring interests in professional and technical fields;
- A continuing education program that extends the resources of the College into the community; forums, lectures, short courses, concerts, dramatic productions, art exhibits, athletics, and other activities meant to add balance to the total instructional program of the College;
- Academic, vocational and personal oriented counseling services;
- A program designed to identify and help remedy students' academic deficiencies;
- An early placement program for qualified high school seniors wishing to supplement their secondary school courses and/or accelerate their college studies;
- An honors program for students of outstanding ability; and
- An extensive summer program for current students, for undergraduates from other institutions, and for high school graduates who wish to begin their college studies

## 1.4 College Mission Statement



**MONTGOMERY COLLEGE**

**OUR MISSION**

*We empower*  
our students to change their lives, and  
*We enrich*  
the life of our community.  
*We are accountable*  
for our results.

**OUR VISION**

*With a sense of urgency for the future, Montgomery College will be a national model of educational excellence, opportunity, and student success. Our organization will be characterized by agility and relevance as it meets the dynamic challenges facing our students and community.*

**OUR VALUES**

excellence | integrity | innovation | diversity | stewardship | sustainability

Adopted by the Montgomery College Board of Trustees, June 20, 2011

## 1.5 Montgomery College Academic Restructuring - One College

In March of 2012 Montgomery College convened an “Academic Restructuring Task Force” which was charged with recommending to the President a new structure for the academic operations of the College that would support curriculum uniformity, cross-campus leadership for disciplines, and a common student experience. In 2013, the task force issued a recommendation for a model for restructuring of Administrative and Academic operations, and the restructuring was implemented in 2014 with the purpose of creating a “one-College focus for student success.”

The “one-College” structure includes a shift toward cross-campus curriculum uniformity, to the degree that this is feasible. An upcoming Academic Master Plan (AMP) process will further inform the re-alignment of academic programs on all campuses. The new AMP will likely result in a decreased emphasis on some programs, an increased emphasis on others, the addition of new programs and the potential phasing out of others. The specific outcomes, however, are not yet known. From a facilities perspective, the anticipated strategy will be to use funding and space most efficiently for education by balancing curriculum uniformity across campuses with the competing need for high-cost specialized instruction facilities.

This can be accomplished by concentrating the core spaces for some of the specialized programs in “centers of excellence” on a single campus. To date, the Performing Arts have had strong programs on the Takoma Park/Silver Spring (TP/SS) and Rockville campuses, STEM programs have been strongest on the Rockville campus, and Health Sciences programs have been concentrated on the TP/SS campus, in specialized facilities built for these purposes. However, Health Sciences is an example of a program that may be impacted by enrollment growth. The demand for Health Sciences programs is rising, and the TP/SS Campus may not be able to accommodate enough space to meet the demand, so some of the Health Science programs may be replicated at the Germantown campus.

In addition to restructuring Administrative and Academic operations to a “one College” approach, Montgomery College has been exploring other approaches to leveraging resources for the benefit of the College and Montgomery County. Recent studies commissioned by the College have documented the benefits of aligning the College mission with the broad economic growth goals of Montgomery County, and integrating the campus life more thoroughly with the day-to-day life of the local business and residential communities.

The vision presented in the “Partnership Program and Integrated Campus for Resident Partners - Strategic Business Plan” (October, 2014) for the Germantown Campus provides clear direction that can apply at all campuses:

“We will undertake an enlarged, better-focused program of academic-industry partnerships focused on enhancing and aligning missions of the College and those of technology businesses—to materially advance our collective goals for individual opportunity, economic growth, and community prosperity.

We will develop the Germantown Campus to become increasingly known as the center of a Germantown Innovation District—an integrated hub of education, business, and entrepreneurship—and an attractive place for makers and takers of jobs, where educated people live, work, learn, and create, and where industry partners co-locate and actively interact with faculty and students to achieve both educational and economic success.”

The “Draft College Town Final Report” (7/13/2015) states six high priority recommendations for integration of campuses with the community, supported by extensive detailed recommendations. The highest priority recommendations, quoted here, apply to all campuses:

1. Community Engagement – Facilities & Resource Sharing (Short-term)
2. Physical Improvements – Enhance Public Awareness of Montgomery College (Short-term)

3. Private Sector Engagement – Continue to pursue partnerships with private industry (Short to Medium Term)
4. Improve Pedestrian, Bike and Transit Connections (Short, Medium and Long-Term, based on scope)

The planning strategies for creating “integrated campuses” that encourage cross-fertilization and mutual growth for the College and the community will vary between campuses. Each of the three campuses has different building densities and physical characteristics, different border conditions with the adjacent community, and different types of adjacent communities, transportation modes, etc. The specific strategies for integration of each campus with its community will be addressed in each campus-specific chapter.

The goals established for this Facilities Master Plan (FMP) process are to identify the site and building development priorities for achieving the Montgomery College mission:

1. Guide planning that articulates and supports the College’s institutional vision and identity, and supports integration of the campus life with the day-to-day life of the surrounding communities.
2. Provide a framework for future buildings and site development that will provide for landmark “gateway” entrances (currently under design) at each campus, improved vehicular and pedestrian circulation on campuses, improved outdoor and indoor quality of life space, appropriate building space for effective teaching and learning, the consolidation of Student Service and the clustering of related academic functions on each campus;
3. Continue responsible stewardship of natural and built resources;
4. Build consensus within the campus community, and with its neighbors.

The key objectives of the resulting Facilities Master Plan are to:

1. Identify appropriate sites and provide phasing for potential new buildings, renovation projects, and landscape and infrastructure improvements, including possible Public-Private Partnership (P3) projects. For example, a new Health and PE building at TP/SS campus may be funded as a P3 project;
2. Identify high priority sites for academic, student service and student life buildings;
3. Identify preferred sites and adjacencies for Public-Private Partnership (P3) projects and mixed-use projects, including co-location of academic, student life, private research, and private enterprise functions that will strengthen the College and the County and provide students with better opportunities for learning, internships and employment. This applies primarily to the Germantown campus;
4. Strengthen and improve the unique configuration of each campus. That is, rejuvenate the original campus character and courtyards at Takoma Park/Silver Spring, enhance the hilltop character and green space and indicate preferred locations for future public-private partnership projects at Germantown, and concentrate development and strengthen the hierarchy of spaces at the Rockville campus;
5. Provide signage and beautification of campus gateways to enhance the identity of Montgomery College and of individual campuses.

## 1.6 College Enrollment Projections

The College's planned enrollment growth is significant over the 2013-2023 period. Using MHEC enrollment projections, the College is estimated to increase in both headcount and Full Time Equivalent (FTE) enrollment by 27% and 32% respectively over the planning period (See Tables 1.01 and 1.02). The College's noncredit FTE enrollment in Workforce Development & Continuing Education is also projected to experience substantial growth through 2023. In addition, the College is projecting faculty growth of 13% and staff growth of 3% to support student enrollment growth over the ten year period.

TABLE 1.01 - FALL TERM 2013 MONTGOMERY COLLEGE-WIDE HEADCOUNT STATISTICS

	2008	2013	5 yr % change	Projected 2023	10 yr % change
Takoma Park/Silver Spring	6,586	7,755	18%	9,820	27%
Germantown	6,009	7,441	24%	9,423	27%
Rockville	15,816	16,441	4%	20,819	27%
Total	24,452	31,637	15%	40,062	27%

TABLE 1.02 - FALL TERM 2013 MONTGOMERY COLLEGE FTE ENROLLMENT STATISTICS

	2008	2013	5 yr % change	Projected 2023	10 yr % change
Takoma Park/Silver Spring	3,242	4,487	38%	5,910	32%
Germantown	2,775	3,486	26%	4,590	32%
Rockville	8,410	9,602	14%	12,645	32%
Total	14,427	17,575	26%	23,145	32%

## 1.7 College Space Needs

The need for facility space is driven by student enrollment, faculty and staff counts, and library collections and functions. Each of these is calculated in hours of instruction and the number of students, faculty and staff employees and library volumes and functional space to be accommodated through 2023. Based on the Maryland space guidelines and best planning practice in the absence of guidelines, the FMP documents the existing and projected space needs by type and provides a detailed facility space response.

Within the context of accommodating the anticipated growth at each campus, the planning goals that guide the FMP include retaining the respective campus character as building expansion and site development occurs. The intent is to reinforce the College and campuses as community resources while addressing the current fragmentation of disciplines, programs, and services. Where appropriate, recommendations are made for removal and replacement of inefficient and small campus buildings, most of which have sizeable deferred maintenance backlogs and do not adequately support the desired teaching methodologies of the College.

The proposed strategy on each campus is to begin with the addition of new facilities to provide relief for crowded conditions followed by building renovations. Capital building renovation projects will be coordinated with the College's on-going investment in building system upgrades to optimize facility renewal efforts, address identified program needs and to support the overall planning goal of improved facilities to support the campus communities with adequate learning, working, recreational and collaborative environments.

In total, the College faces a significant current space deficit, which is projected to grow based on planned enrollment growth. If not addressed, the quantitative and qualitative space deficits and deficiencies will continue to be a serious constraint on the College’s ability to respond to the educational and cultural needs of students and the community. In summary, the College’s space deficiencies (net assignable square feet (NASF)) in 2013 and projected for 2023 are documented in Table 1.03:

**TABLE 1.03 - MONTGOMERY COLLEGE NASF SPACE NEEDS**

	<b>Deficit</b>	<b>Deficit</b>
Takoma Park/Silver Spring	92,725	163,318
Germantown	208,327	227,390
Rockville	426,099	439,764
<b>Total</b>	<b>727,151</b>	<b>830,472</b>

This table clearly illustrates a huge projected deficit in space for each campus in comparison to the State guidelines for facilities and to address programmatic space needs. The deficits vary by space type and quantity from campus to campus. In Takoma Park/Silver Spring the vast majority of the projected deficit is in class lab space. In addition, a deficit of classroom, athletic/recreation, office, meeting and study space is notable. At Germantown the primary projected deficit is also in class lab space, along with notable deficits of classroom, athletics/recreation, office, study, lounge and shop/storage space. The Rockville campus is much larger and the needs are more diverse, but the largest projected deficit is also in class lab space. Other notable projected deficits include office, study, meeting, lounge, athletic/recreation, media production, food service, shop/storage and central service space.

### **1.8 Existing Building Conditions**

In 2013, the College completed a comprehensive facilities conditions assessment that identified significant building condition deficiencies on all three campuses. An engineering consultant surveyed the College’s total building space inventory of 2.3 million gross square feet (gsf), and all campus roadways, parking lots and garages, and underground utility systems. This study identified a total replacement value of \$441.3 million for the College’s physical plant and a deferred maintenance and capital renewal backlog of \$141.5 million.

A primary conclusion of the facilities conditions assessment was that a majority of the College’s existing academic buildings are smaller than 50,000 GSF, are inefficient and difficult to modify and renovate to effectively and feasibly address functional inadequacies and program needs. Small buildings are more inefficient to operate and constrain opportunities for growth both in terms of the land commitment to the building footprint and an inability to renovate to address the program needs identified by the College. In addition to numerous small buildings, nearly three-quarters of the buildings have significant systemic deficiencies. This condition is exacerbated by the prevalence of a high proportion of 30-year or older buildings that have not been renovated, particularly on the Rockville and Takoma Park Campuses.

The facilities conditions assessment data, information and report was used to evaluate options for new buildings, capital renovations, and building demolition and replacement recommendations in the FMP. The large deferred maintenance need identified in the facilities conditions assessment has been and will continue to be used to support the College’s recent and future capital budget requests to Montgomery County for increased funding. With the County’s support, the College has started to address this deferred maintenance need.

## 1.9 Functional Adequacy

The extensive evaluation effort expended during the master planning process reinforced the anecdotal impression that insufficient and inadequate space constrains the College's academic programs and services across all campuses and units. The problems range from fragmented support services that reduce department productivity and hinder discipline identity to inflexible and poorly configured instructional environments and physical accessibility issues. Compounding these problems is the College's on-going enrollment growth which has exceeded the capacity planned for in the previous master plan for new buildings on all three campuses. Even with the completion of the last new building (Cultural Arts Center) on the Takoma Park/Silver Spring Campus, the two on-going construction projects at the Rockville campus (Science West and the New Student Services Center), and the recent completion of the Bioscience Education Center and proposed renovation of the Science & Applied Studies building at Germanton, the College will continue to operate with significant space deficits at each campus without the construction of additional facilities.

A primary functional need is for more flexible classroom and laboratory space configured and equipped to support group based learning and collaboration. This requires providing instructional spaces with a larger student station space allocation and flexible furnishings to accommodate multiple teaching configurations for small and larger groups of students to engage and interact. It is also desired that instructional spaces include robust technology and optimized amounts of wall writing surfaces to support in-class activities and exercises. This challenge is exacerbated by the number of existing buildings on each campus that are over 30 years of age and have not been comprehensively renovated or reconfigured to address this issue. Further, many of these facilities have structural constraints that will make renovating these buildings to address this challenge very difficult and in some cases not feasible.

Another functional challenge is to evolve the library on each campus into a learning center to more effectively serve students, faculty and staff by developing additional instruction space, individual and group study areas and computer stations. In addition, the introduction of technology rich "sand box" spaces to faculty and staff, the inclusion of lounges and cafes and more flexible collaboration zones are desired for the library learning commons of the future on each campus.

A third functional challenge on each of the campuses is providing adequate faculty office and conference space. The biggest need is for part-time faculty office space, which is woefully deficient for the current number of part-time faculty employed at each campus. Adequate office space and the supporting conference space is fundamental to supporting the office hours and advising responsibilities required of faculty to support students.

## 1.10 Sustainability Goals

Montgomery College has been actively pursuing sustainability goals over the past twenty-five years, and continues to do so with a high level of commitment. Refer to the Appendix for a copy of the "MC Green Routines" which describes "green" initiatives the college has been implementing and will continue to support and advance as part of the Facilities Master Plan process.

## 1.11 Consistency with State's Smart Growth Policies

The FMP building concept plans for all three of the College's campuses proposes locating future development on disturbed lands, within an already developed area that is served by public water and sewer infrastructure and multiple modes of mass transit service. Each campus plan preserves existing open space and expands it where possible, and steers future development away from environmentally sensitive areas. Each campus plan also proposes improving the walkability and bike friendliness of campus with new and upgraded pathways, connections and infrastructure. As such, the FMP is aligned with the state's Smart Growth Initiative, which has been developed to concentrate new development and redevelopment in areas that have existing or planned infrastructure to avoid sprawl. The Maryland Department of Planning Smart Growth web page describes smart

growth as “sustainable and is characterized by compact, transit-oriented, bicycle-friendly land use, with neighborhood schools, walkable streets, mixed-use development and a wide range of housing choices. Its purpose is to conserve valuable natural resources through the efficient use of land, water and air; create a sense of community and place; expand transportation, employment, and housing choices; distribute the costs and benefits of development in an equitable manner; and promote public health.”

# 2



## TAKOMA PARK/SILVER SPRING CAMPUS



## 2.1 CAMPUS BACKGROUND INFORMATION

### 2.1.1 Introduction

At the northern edge of Washington, D.C., in the midst of tree-lined streets, Victorian houses and developing urban Silver Spring near the Metro rail system, lies the Takoma Park/Silver Spring Campus. Opened in 1950, it is the oldest of Montgomery College’s three campuses.

At the Takoma Park/Silver Spring Campus more than 7,800 students from over 140 different countries take classes in more than 100 disciplines. A wide variety of learning-centered educational offerings are made available in support of the campus commitment to ensure student access, retention and success. Complementing the academic curriculum are the numerous opportunities to gain valuable work experience through internships and volunteer opportunities with many local business and community organization partners.

### 2.1.2 Institutional Characteristics

The Takoma Park/Silver Spring Campus has the second largest enrollment of the College’s three campuses, but only slightly larger than that of Germantown. Takoma Park/Silver Spring is the most urban of the three campuses. The relatively small size and compactness of the Campus enhances the quality of its academic life and promotes a cohesiveness and sense of identity difficult to match on most college campuses.

The Takoma Park/Silver Spring Campus is racially diverse with nonwhites comprising 70.8% of the student body. The mean age of a Campus student is 26.1 years with traditional age students (18-20 years of age) still leading all age groups by comprising 30.2% of the total student body. Approximately 79% of all students reside in Montgomery County, which is the lowest percentage of the three College campuses. In addition, the Campus has the highest percentage of female enrollment at 58.3% as compared to Germantown and Rockville. Figures 2.01 through 2.02 provide an overview and snapshot of the Campus student body as it relates to Enrollment Status and Day and Evening Students.

FIGURE 2.00A  
TP/SS CAMPUS ENROLLMENT STATUS, FALL 2013

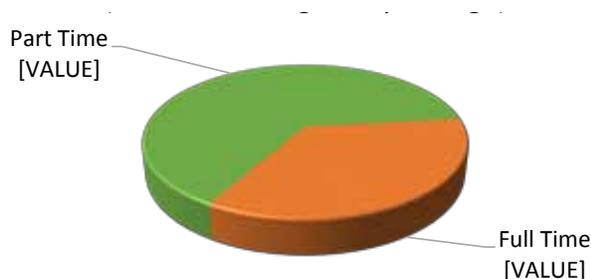
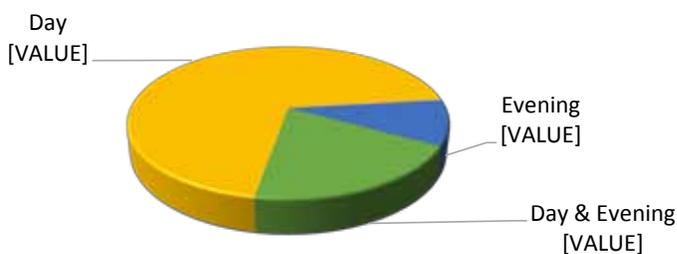


FIGURE 2.00B  
TP/SS CAMPUS DAY AND EVENING STUDENTS, FALL 2013



The Campus' intercollegiate athletic program co-sponsors teams in men's and women's basketball with the Rockville Campus. Campus-based central administration and student support services include the library, information technology, admissions and registration, financial aid, cashiering, physical plant, and auxiliary services, book store, and food services.

The Campus is also dedicated to sustainability and resource conservation and has integrated many of these principles into its daily activities and academic programs. The rooftop solar arrays on two of the newer buildings are a visible example of the College's commitment to renewable energy and sustainability along with the requirement for designing and constructing all new capital building projects to achieve a minimum of LEED Silver certification.

The Takoma Park/Silver Spring Campus, apart from its unique physical setting, distinguishes itself as being the College's focus for programs related to the health sciences. The Health Sciences Center (HC), opened in January 2004, supports the Health Sciences Division, except for the physical education program which is located in Falcon Hall, the Health Sciences Institute of Workforce Development and Continuing Education, and the College's partnership with Holy Cross Hospital. The building includes a functioning health clinic, allowing students to work in the clinic as part of their rotations, thereby gaining much needed practical experience. Holy Cross Hospital personnel serve as clinical adjunct faculty, working with faculty in supervising and evaluating students. Concomitantly, as part of their assignments, faculty spend time in the clinic, thus maintaining currency in their respective disciplines and current clinical practices.

The Campus has also expanded its program offerings in the Visual, Performing, and Communication Arts through the offering of the Associate of Fine Arts degree and the program expansions associated with the Morris and Gwendolyn Cafritz Foundation Arts Center (CF) and the Cultural Arts Center (CU).

This Campus is home to the College's only planetarium, offering astronomical and planetarium shows to College and community constituencies. The 42-seat planetarium has the capacity to project 1,834 naked-eye stars, the Milky Way, and five naked-eye planets—Mercury, Venus, Mars, Jupiter, and Saturn—under a 24-foot dome. A new star projector and seating have been purchased to replace the original equipment and furniture and will be implemented in early 2016. The new equipment will provide upgraded projection capabilities and will add greater flexibility for use of the space.

### **2.1.3 Comparison with 2006-16 FMP**

The 2006-16 Facilities Master Plan described a projected space deficit in 2016 of 152,967 NASF, and proposed to meet that deficit by construction of two new buildings and renovation of three buildings. New projects consisted of a new Science and Math Center and a new Student Resource Center + Library. Renovations were proposed for Pavilion Three (P3), Pavilion Four (P4) and the Catherine F. Scott Commons. All the proposed new buildings and renovations were proposed for the Takoma Park side of campus. Due to the restricted nature of the campus, the new buildings were proposed to be built in the same general area as the existing buildings. This required either phased construction or loss of program space during construction, or both.

The new Science and Math Center was proposed to be built in two phases, with demolition of Science South Building and construction of a four-story building in the first phase, and then demolition of Science North Building (SN) and construction of a three-story building in the second phase. Proposed construction of the new Student Resource Center + Library in the same general area as the existing building meant that the program space would have to be accommodated elsewhere for the construction duration, either on campus or off campus.

Since the 2006-16 Facilities Master Plan was approved, several projects have been completed or are in progress at the Takoma Park/Silver Spring campus. These include renovations of the Catherine F. Scott Commons, Pavilion Three and Pavilion Four.

This 2013-23 Facilities Master Plan describes a similar projected space deficit in 2023 of 163,318 NASF. The space deficit is proposed to be met by construction of four new buildings and renovation of one building. Proposed new construction includes a new Math and Science Center Building, a new library Learning Commons, a new Health and Fitness Center and a new Math Building. P1 and P2 are proposed to be renovated.

Like in the 2006-16 Facilities Master Plan, all the new construction and renovation projects are located on the Takoma Park side of campus. Unlike the 2006-16 Facilities Master Plan however, the new Math and Science Center Building, which is the first building in the queue, is proposed to be built in one phase as a three-story building. This allows the math and science programs to continue functioning on campus while the new building is under construction, and significantly shortens the construction duration as well as the construction cost of the project. Similarly, the new Library Learning Commons is proposed to be built adjacent to the existing Resource Center (RC), allowing that program to continue functioning during construction. A new Health and Fitness Center is necessitated by removal of Falcon Hall (FH) for construction of the new Math and Science Center Building, and a new Math Building is proposed to house program that is not accommodated in the new Math and Science Center Building, along with general purpose instruction and office space to support a variety of academic programs.

### **2.1.4 Academic Programs**

Montgomery College is authorized by the Maryland Higher Education Commission to offer five degrees: the Associate of Arts (A.A.), the Associate of Science (A.S.), the Associate of Arts in Teaching (A.A.T.), the Associate of fine Arts (A.F.A.) for students wanting to transfer to baccalaureate programs and the Associate of Applied Science (A.A.S.) for those seeking immediate employment. The College also awards certificates (Cert) that focus on the development of technical skills, as well as letters of recognition (L of R) for non-degree seeking students who satisfactorily complete certain courses that teach focused skills and competencies.

In addition to General Education, student development, honors, cooperative education, and women's studies courses, the Takoma Park/Silver Spring Campus offers fifty-eight (58) different degree programs, seventeen (17) certificate programs, and eight (8) letter of recognition programs. Academic programs uniquely offered at the Takoma Park/Silver Spring Campus are related to programs in the health sciences including the A.A.S degree in Diagnostic Medical Sonography, the A.A.S degree and certificate in Health Information Management, the A.A.S. degree in Mental Health, the A.S degree in Nursing, the A.A.S. degree in Physical Therapy Assistant, the A.A.S. degree in Radiologic Technology, and the A.A.S. degree in Surgical Technology. In addition, the A.F.A. degree programs in Graphic Design and Studio Art and the A.A.S. degree and certificate programs in Diagnostic Medical Sonography are approved as State-wide programs.

These State-wide programs are available to students from other geographic areas where the local community college does not offer the same program. All of the health programs have also been identified as health manpower shortage programs and have been offered to all Maryland residents at in-county tuition rates.

The College's Cooperative Education Program also finds its home on the Takoma Park/Silver Spring Campus. Serving all Montgomery College students and the County and area's business community, this program matches meaningful work and career experiences with student academic interests and goals. Not included here are the programs offered by Workforce Development and Continuing Education.

Educational programs at Takoma Park/Silver Spring are expected to generate 52,743 student credit hours (SCH)

TABLE 2.01  
TP/SS CAMPUS ACADEMIC PROGRAMS (By Credential and Campus), 2015 - 2106

Program Area	AA	AS	AAT	AFA	AAS	Cert	L of R
Accounting						1GR	
American Sign Language	1R					1R	
Applied Geography					1R	2R	
Architectural & Construction Tech					2R	1R	1R
Art	2GRT			1GRT			
Automotive Technology					1R	4R	
Biotechnology					1G	2G	
Broadcast Media Production					2R	4R	
Building Trades Technology					3R	4R	4R
Business	1GRT						
Communication Studies	1GRT						
Computer Application					2GRT	2GRT	
Computer Gaming & Simulation	3 GRT						
Comp Publishing & Printing Mgmt							1GRT
Computer Science & Technologies	2GRT					1GRT	
Criminal Justice					1R		
Cybersecurity					1G	2G	
Diagnostic Medical Sonography					1T		
Digital Media and Web Technology					1GRT		
Education			7GRT		1R	1GRT	
Emergency Preparedness Management		1RT				1RT	
Engineering Science					12GRT		
Ethnic Social Studies						1GRT	1GRT
Fire Science & Emergency Services					3RT	4R/1T	1RT
General Studies	4GRT						
Graphic Design	4R/2GT			1GRT		3R/2GT	
Health Enhancement, Ex Sci & PE	3R					1R	
Health Information Management					1T		1T
Hospitality Management					3R	3R	3R
Interior Design	1R				2R	3R	
International Studies	1GRT						
Landscape Technology					1G	1G	
Management						1GRT	1GRT
Mental Health Associate					1T		
Music	1R					1R	
Network & Wireless Technologies					1GRT	3G	
Nursing		1T					

Paralegal Studies						1GT	1GT	1GT
Photography						1R	4R	1GRT
Physical Therapist Assistant						1T		
Polysomnography							1T	
Radiologic (X-Ray) Technology						1T		
Science					5GRT			
Surgical Technology						1T		
Technical Writing							1G	
Theatre					3R			
Transfer Studies								1GRT
Web Careers								5R/3GT
Women's Studies								1GRT

Degrees, Certificates, and Letters of Recognition: AA-Associates of Arts; AS-Associate of Science; AAS-Associates of Applied Science; AAT-Associates of Arts in Teaching; AFA-Associate of Fine Arts; Cert-Certificate; and L of R-Letter of Recognition.

Campus: T-Takoma Park/Silver Spring Campus; R-Rockville Campus; and G-Germantown Campus.

Source: Montgomery College

TABLE 2.02  
TP/SS CAMPUS DAY CREDIT AND CONTACT HOURS, 2013 AND 2023

Day, On-Line, and Total Credit Hours													
	2013 Day SCH	2013 On-Line SCH	2013 Total SCH	2013 % Day SCH	2013 % On-Line SCH	2023 Day SCH	10 yr % Chg	2023 On-Line SCH	10 yr % Chg	2023 Total SCH	10 yr % Chg	2023 % Day SCH	2023 % On-Line SCH
TP/SS	37,514	3,372	40,886	92%	8%	48,393	29%	4,350	29%	52,743	29%	92%	8%
College-wide	167,123	11,465	178,588	94%	6%	210,241	26%	14,423	26%	224,664	26%	94%	6%
Day Contact Hour (WSCH) to Day Credit Hour (SCH) Ratio													
	2013 WSCH	2013 SCH	2013 WSCH / SCH	2023 WSCH	10 yr % Chg	2023 SCH	10 yr % Chg	2023 WSCH / SCH	10 yr % Chg				
TP/SS	60,375	40,886	1.48	75,310	25%	52,743	29%	1.43	-3%				
College-wide	260,704	178,588	1.46	314,515	21%	224,664	26%	1.40	-4%				
Day Lecture and Lab Contact Hour													
	2013 Day Lecture WSCH	2013 Day Lab WSCH	2013 Day Total WSCH	2013 Day % Lab WSCH	2023 Day Lecture WSCH	10 yr % Chg	2023 Day Lab WSCH	10 yr % Chg	2023 Day Total WSCH	10 yr % Chg	2023 Day % Lab WSCH		
TP/SS	38,419	21,956	60,375	36%	48,370	26%	26,940	23%	75,310	25%	36%		
College-wide	161,296	99,408	260,704	38%	192,569	19%	121,946	23%	314,515	21%	39%		

Source: Montgomery College Office of Institutional Research, 2015.

in 2023, an increase of 29% over fall 2013 and with 92% being taught during the day. Delivery of Campus programs is expected to change over the next decade. Distance learning alternatives will be more available as options, including both entire and partial course delivery. However, the percentage of SCH taught entirely on-line at the Campus is projected to remain stable at 8% over the ten year planning period. Table 2.02 provides a summary of contact and credit hours for the Campus and the College for 2013 and 2023 and Table 2.03 provides a summary of credit hours by division from 2010-2013 and projected for 2023.

The College has also made significant and substantial investments in its classroom environments to incorporate smart instructional technology and to provide and support technology-based learning centers. In addition to these improvements, the College must also prepare to address other changes in pedagogy, including increased instructional use of specialized learning environments and the development of instructional space that is configured and equipped to support collaborative and group based learning.

### 2.1.5 Enrollment Projections

Over the past five-year period, headcount enrollment has increased by 18%, from 6,586 students in 2008 to 7,755 in 2013. The rate of enrollment growth over the next decade is expected to increase by 27% resulting in a projected headcount of 9,820 students at the Campus by 2023. Commensurate with headcount growth during this period will be an increase in scheduled credit hours (SCH) as discussed in the previous section. Table 2.04 provides a summary of the historical, current and projected headcount and the corresponding Full Time Equivalent (FTE) student calculation for the Campus.

### 2.1.6 Faculty and Staff

During the 2013 to 2023 planning period the Takoma Park/Silver Spring Campus is projected to increase faculty employees by 24 FTE, which equates to a 12% growth. This increase will be comprised of a 9% increase in full-time faculty or a total of 12 headcount and an 18% increase in part-time faculty for a total of 48 headcount. The planned part-time faculty growth will continue to add to the existing space deficit in office and conference space for part-time faculty, if not addressed. Table 2.05 provides a summary of current and projected faculty by division for 2013 and 2023.

The Takoma Park/Silver Spring Campus is anticipating a modest increase in full-time and part-time staff through 2023. In total, the number of Campus staff is expected to increase by 9 FTE positions, which represents a 3% increase. Table 2.06 provides a summary of current and projected staff by division for 2013 and 2023.

TABLE 2.03  
TP/SS CAMPUS CREDIT HOURS By DIVISION FOR FALL TERM, 2010-2013 AND 2023

	2010	2011	2012	2013	5yr % Chg	2023	10 yr % Chg
Student Dev	711	734	715	616	-13%	795	29%
Honors/Other	22	28	33	28	27%	36	29%
AHSS	27,659	28,451	30,295	28,577	3%	36,864	29%
Health Sciences	6,871	7,454	7,124	7,442	8%	9,600	29%
NASBMIS	19,858	19,915	20,469	20,523	3%	26,475	29%
TP/SS	55,121	56,582	58,636	57,186	4%	73,770	29%

Source: Montgomery College

**TABLE 2.04**  
**TP/SS CAMPUS ENROLLMENT STATISTICS FOR FALL TERM, 2008-2013 AND 2023**

	2008	2009	2010	2011	2012	2013	5yr % Chg	2023	10yr % Chg
Headcount	6,586	7,145	7,207	7,449	7,819	7,755	18%	9,820	27%
FTE Students	3,242	3,526	3,663	3,767	3,909	4,487	38%	5,910	32%

Source: Montgomery College

**TABLE 2.05**  
**TP/SS CAMPUS FACULTY POSITIONS BY DIVISION, 2013 AND 2023**

	2013 FT	2013 PT	2013 FTE	2023 FT	10 Yr # % Chg	2023 PT	10 Yr # % Chg	2023 FTE	10 Yr # % Chg
Student Dev	0	16	4	0	0	19	3	5	1
					0%		19%		19%
AHSS	51	137	85	55	4	162	25	96	10
					8%		18%		12%
Health Sciences	48	36	57	52	4	42	6	63	6
					8%		17%		10%
NASBMIS	38	78	58	42	4	92	14	65	8
					11%		18%		13%
TP/SS	137	267	204	149	12	315	48	228	24
					9%		18%		12%

Source: Montgomery College

**TABLE 2.06**  
**TP/SS CAMPUS STAFF POSITIONS BY DIVISION, 2013 AND 2023**

	2013 FT	2013 PT	2013 FTE	2023 FT	10 Yr # % Chg	2023 PT	10 Yr # % Chg	2023 FTE	10 Yr # % Chg
Administrative	11	0	11	13	2	0	0	13	0
					18%		0%		0%
Other Professional	54	8	56	56	2	10	2	59	3
					4%		25%		4%
Clerical and Secretarial	49	11	52	51	2	13	2	54	3
					4%		18%		6%
Technical and Paraprofessional	57	11	60	60	3	13	2	63	3
					5%		18%		5%
Skilled Crafts	18	0	18	19	1	0	0	19	0
					6%		0%		0%
Service and Maintenance	68	0	68	71	3	0	0	71	0
					4%		0%		0%
TP/SS	257	30	265	270	13	36	6	279	9
					5%		20%		3%

Source: Montgomery College





**FIGURE 2.01 CAMPUS CONTEXT**



Image Not to Scale

## 2.2 EXISTING SITE CONDITIONS and ANALYSIS

### 2.2.1 Context and Setting

#### Context

The Takoma Park/Silver Spring Campus is located in the southeastern corner of Montgomery County. It is on the edge of the Washington DC streetcar suburb of Takoma Park and the quickly urbanizing Georgia Avenue corridor, south of downtown Silver Spring. The campus straddles both sides of the WMATA/CSX tracks and is located about equidistant from two Metro stations, Silver Spring and Takoma Park. Of all the Montgomery College campuses, Takoma Park/Silver Spring is the most compact and urban in character.

The original campus location was between Fenton and Philadelphia Streets and dates to the 1950s. Most of the buildings within the area of the original campus, with the exception of SS, were built in the late 1970s. Several buildings are located across New York Avenue within an existing residential neighborhood of early twentieth century homes. This area is referred to as Block 69.

The last ten years has seen an expansion of the campus to the north and west of the WMATA/CSX tracks, within the Silver Spring commercial corridor. These campus buildings adjacent to Georgia Avenue are surrounded by a rapidly changing landscape, from car-oriented uses to more dense and urban mid-rise development. (See Figure 2.03 Campus Context and Figure 2.04 Campus Setting).

#### Setting

The Silver Spring (west) and Takoma Park (east) sides of this campus have a very different identity and character due to their distinctive settings. The Silver Spring side is distinctly urban and the type of development in the surrounding neighborhood is primarily commercial with some older light industrial development. Just south of the campus property is Jesup Blair Park, characterized by mostly green open space, playing fields, tennis courts and mature trees. The Silver Spring side of campus itself is a compact collection of buildings ranging in height from three to four stories. These structures are newer, constructed primarily between 2004 and 2009, except for the original portions of the Morris and Gwendolyn Cafritz Art Center, which began its life as a bakery. Campus buildings located on the Silver Spring side include the two newest buildings – the Cultural Arts Center and the West Parking Garage, plus the Health Sciences Center and Morris and Gwendolyn Cafritz Arts Center. Open space on this west side of campus is limited to hardscape plazas and newly planted small-scale landscape areas.

The Takoma Park side of campus is set in the midst of a single-family residential neighborhood consisting of relatively small gable roof houses. The original campus buildings, designed in the early 1970s by renowned architecture firm Skidmore Owings and Merrill, are small in scale and pavilion-like in character, with open “corridors” and steep sloped roofs. While their size and scale is likely a response to the residential neighborhood surrounding the campus, their openness is not suited for the local climate and their small footprints and odd shapes make them very inefficient buildings for academic use.

The original cluster of buildings between New York Avenue and Fenton Street on the Takoma Park side of campus includes the Mathematics Pavilion (MP), North Pavilion (NP), Science North and South buildings, and the Resource Center, all designed and built in the mid-1970s. Across New York Avenue on a parcel known as Block 69 are two more buildings, from this period - Pavilions One and Two (P1 and P2) (connected) and Pavilion Three (P3.) The original cluster was expanded by two larger buildings in the late 1970s-early 1980s - the Commons and Falcon Hall, and Pavilion Four was built in the same period at the far end of Block 69. In 1980, the East Parking Garage was built on a parcel that is close to, but non-contiguous to campus. The newest and largest building on the Takoma Park side of campus is the Student Services Center, built in the mid 2000s.

**FIGURE 2.02 CAMPUS SETTING**



Image Not to Scale



Landscaped courtyards and walkways separate the original cluster of buildings between Fenton Street and New York Avenue from one another and the buildings are set back from the neighborhood streets with a tree buffer. Landscaping on Block 69 includes a few trees but is mostly lawn.

The primary physical link between the Silver Spring and Takoma Park sides of campus is a pedestrian bridge that crosses over Fenton Street and the WMATA/CSX tracks. The bridge rises from Jesup Blair Park in Silver Spring and lands in a small landscaped area on the Takoma Park side and bridges across the street to the Student Services Building.

As the facilities on the two sides of campus have developed along different trajectories, the academic program has evolved with distinction as well. The Takoma Park side of campus has focused on the natural and physical sciences, humanities and student services, while the Silver Spring side of campus has focused on the strong health sciences and the visual and performing arts programs.

### 2.2.2 Gateways and Views

With the “split personality” of this campus, gateways are especially important to help define the campus boundaries and establish the College identity and presence within the community setting. The original cluster of buildings on the Takoma Park side has traditionally had little visibility from the surrounding neighborhood - the buildings are small and are oriented away from the street. Campus gateway signage is small and sized in keeping with the neighborhood scale.

The newer, larger buildings have created a new gateway experience, increasing visibility and invoking a previously unseen level of change and energy on the campus. The Charlene R. Nunley Student Services Center (ST) on the Takoma Park side has a strong presence on Fenton Street with its circular corner plaza and cylindrical corner element. The Cultural Arts Center on the Silver Spring side of campus has a prominent location at the corner on George Avenue. It not only functions as a gateway building seen from both directions of Georgia Avenue, but College signage is prominently displayed on its façade and in electronic signage at the corner, giving the Campus additional presence within its setting.

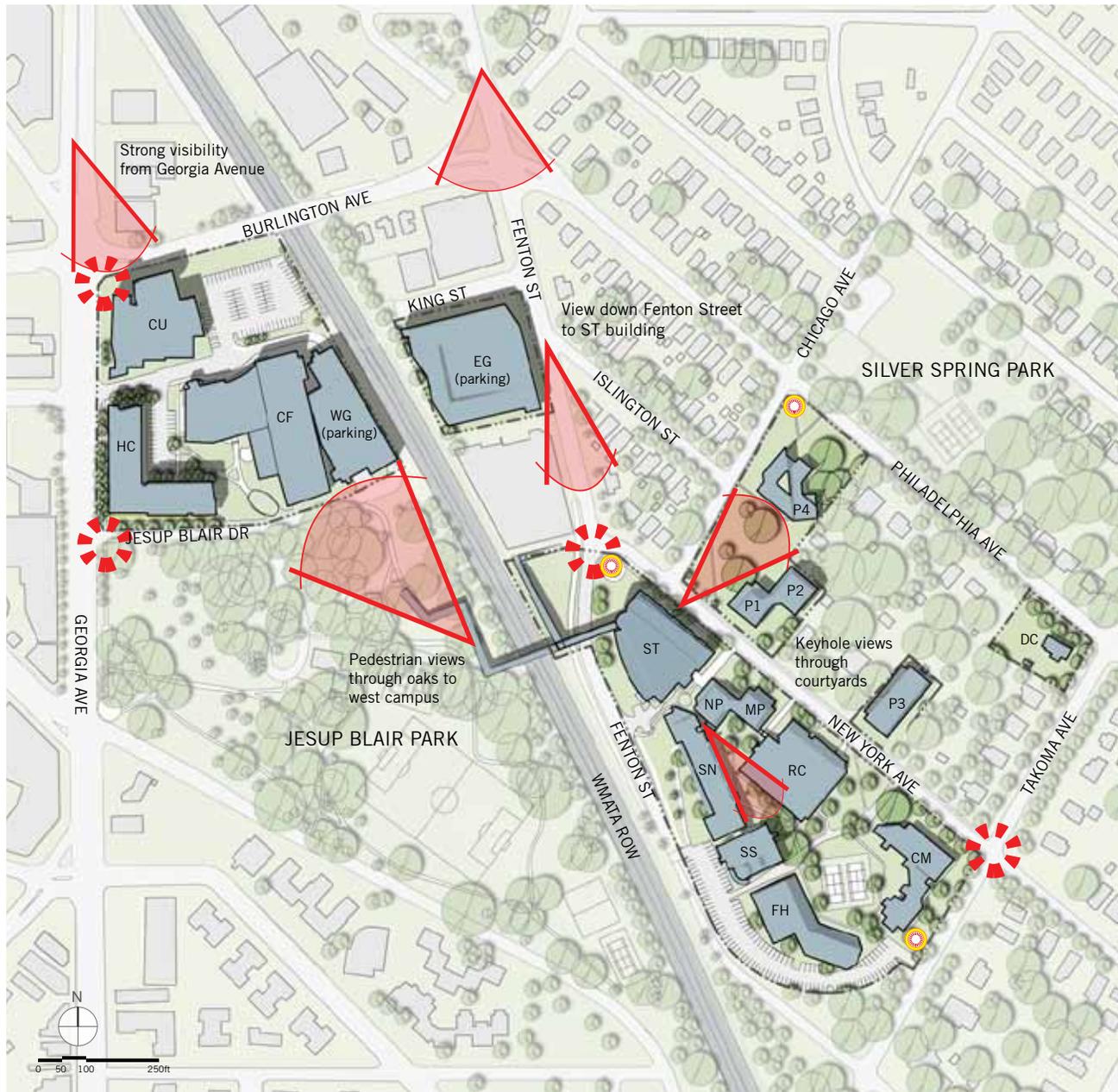
The College has been studying design proposals for gateway signage at all its campuses, and has plans for installing new and upgraded signage in three locations on the Takoma Park side of the TP/SS Campus. (See Figure 2.05 for TP/SS Gateway Signage Locations). Gateway signage should also be considered in additional locations to help identify and anchor the non-contiguous campus boundaries.

Viewsheds to campus from its surroundings are a vital part of establishing the campus presence in its community. Beyond the three locations identified for campus gateway signage, the opportunity exists for creating a strong southern viewshed to campus from just north of the intersection of Burlington Avenue and Fenton Street. The view currently is directed toward the East Garage, but good signage or property acquisition along Burlington Avenue near the intersection of Fenton Street could increase the campus presence from the north. Another important viewshed exists from near the Student Services Building and the original building cluster on the Takoma Park side of campus directly into Block 69. This view currently focuses on Pavilion Four and some trees, but could be enhanced with landscape and open space development in that area. Within the original building cluster between Fenton Street and New York Avenue, limited views exist between courtyards. These should be maintained and even expanded with new development (See Figure 2.05 Gateways and Views).

### 2.2.3 Open Space and Streetscape

The original Takoma Park Campus (east side) was organized around a series of small and irregular courtyards that stepped down with the topography from the north end of Campus to the south end. Entrances to buildings were typically off these courtyards. This organization allowed for the creation of outdoor spaces for mingling of students, to connect buildings with indirect relationships to each other, and to reduce the impact of student

**FIGURE 2.03 GATEWAYS AND VIEWS**



- EXISTING CAMPUS BUILDINGS
- CAMPUS GATEWAYS
- CAMPUS VIEWS
- GATEWAY SIGNAGE

- |    |   |    |  |
|----|---|----|--|
| CF | The Morris and Gwendolyn Cafritz Foundation Arts Center | P1 | Pavilion One                               |
| CM | Catherine F. Scott Commons                              | P2 | Pavilion Two                               |
| CU | Cultural Arts Center                                    | P3 | Pavilion Three                             |
| DC | Child Care Center                                       | P4 | Pavilion Four                              |
| EG | East Garage (parking)                                   | RC | Resource Center                            |
| FH | Falcon Hall (Physical Education)                        | SN | Science North Building                     |
| HC | Health Sciences Center                                  | SS | Science South Building                     |
| MP | Mathematics Pavilion                                    | ST | Charlene R. Nunley Student Services Center |
| NP | North Pavilion  | WG | West Garage (parking)                      |

traffic on the adjacent residential neighborhood. The concrete walls and fence of the tennis courts have reduced the visual connection to the southernmost courtyard. The Miller Memorial Garden occupies a small space in the middle of the Campus and is a key part of the historical legacy of the College.

The hardscape plaza outside the Student Services Building and the hardscape plaza across the street at the bottom of the pedestrian bridge in combination offer an opportunity for better programmed open space at this critical juncture of campus. The Takoma Park side of the pedestrian bridge lands at this plaza, which also accommodates a heavily used Capital Bike Share station.

The green open space at the corner of New York Avenue and Chicago Avenue, on Block 69, is the largest open space available on the campus and has potential to become more activated and better used if improved. The Silver Spring (west) side of campus has a very different organization and relationship of buildings and open space. Due to their large size and specialization, the buildings are not linked around courtyards as on the original campus and are typically entered directly from the street. The only significant open space is between the Morris and Gwendolyn Cafritz Foundation Arts Center and the Health Sciences Center. This space is a pleasant hard paved, landscaped plaza.

Though not technically a part of campus, Jesup Blair Park plays an active role in providing open space for the campus. Students and faculty interact with it each time they cross over the pedestrian bridge, walking through a corner of the park under an oak tree canopy; the pedestrian traffic helps to activate the park as well. (See Figure 2.06 Open Space and Streetscape).

## 2.2.4 Pedestrian and Bicycle Circulation

### Pedestrian Circulation

The campus is compact enough to encourage walking from one end to the other. Most pedestrian circulation occurs on the campus proper and not along neighborhood streets, with the exception of Fenton Street south of the East Parking Garage. The WMATA/CSX railroad tracks splits the campus, creating a significant barrier to cross-campus pedestrian circulation. The pedestrian bridge spanning the tracks from the Charlene R. Nunley Student Services Center to Jesup Blair Park creates the link between the east and west sides of the campus. Pedestrians also circulate along Burlington Avenue which bridges over the WMATA/CSX tracks, making the properties along Burlington Avenue prime opportunities for stronger connectivity between the two sides of campus. An additional pedestrian bridge linking the Campus' two garages and both sides of King Street would facilitate internal connections between the two sides of the campus but would need to be monitored for safety.

The most problematic pedestrian/vehicular conflicts on the east campus occur at the intersections of both Fenton Street and Chicago Avenue with New York Avenue. Pedestrian paths on the Takoma Park side of campus could be better defined, in particular as they relate to the open courtyards on this side of campus. On the west campus, conflicts can occur at Georgia Avenue intersections and the unsignalized crossing at King Street and Jesup Blair Street.

Pedestrian safety is also a concern at King Street. King Street is paved with brick pavers, well lit, contains bike racks and is lined with trees, all of which imply that it is a pedestrian zone. However, the pedestrian/vehicular conflicts occur because King Street is also the entry and drop off point for the Montgomery College Shuttle and a main point of access for the West Garage (WG). Additionally, a primary connection between King Street and Jesup Blair Park is through the drive aisle under the West Garage and parallel to the WMATA/CSX right-of-way. This path is lined with Help Phones, but it is not a defensible space and has generated safety concerns in the past.

Figure 2.07, highlights the pedestrian routes on the campus and the building entries. The plan also references 1/8 and 1/4 mile walking radii from the lobby of the Charlene R. Nunley Student Services Center corresponding to walking times of roughly 5 and 10 minutes.

**FIGURE 2.04 PEDESTRIAN AND BIKE CIRCULATION**



STUDENT WALKING ROUTES	STUDENT WALKING RADIUS	CROSSWALK	PROPOSED MBT TO SILVER SPRING TRANSIT CENTER	METROPOLITAN BRANCH TRAIL(MBT)	TRAFFIC SIGNAL	CF The Morris and Gwendolyn Cafritz Foundation Arts Center	P1 Pavilion One
		PEDESTRIAN SIGNAL		TRAFFIC SIGNAL	PEDESTRIAN SIGNAL	CM Catherine F. Scott Commons	P2 Pavilion Two
		CAPITAL BIKE SHARE STATION		PEDESTRIAN SIGNAL	CAPITAL BIKE SHARE STATION	CU Cultural Arts Center	P3 Pavilion Three
				CAPITAL BIKE SHARE STATION		DC Child Care Center	P4 Pavilion Four
						EG East Garage (parking)	RC Resource Center
						FH Falcon Hall (Physical Education)	SN Science North Building
						HC Health Sciences Center	SS Science South Building
						MP Mathematics Pavilion	ST Charlene R. Nunley Student Services Center
						NP North Pavilion	WG West Garage (parking)

## Bicycle Circulation

Montgomery College encourages bicycle riding to and from campus, though riding on campus proper is discouraged. The College has a bicycle rack selected as part of the standardized site furnishings section of its Landscape Master Plan. Bicycle racks are provided with each building project for the LEED credit. Bicyclists are typically directed to Falcon Hall, the physical education building, to shower for class or work.

The Metropolitan Branch Trail (MBT) of the Montgomery County path system approaches the Takoma Park side of campus from the south, terminating along Fenton Street with a Capital Bike Share station. A proposed extension of the MBT north to the Silver Spring Transit Center is expected to be implemented in 2018. According to data provided by Capital Bike Share, the TP/SS Campus Bike Share station averaged 60 rides per week (total inbound and outbound) for the 38 weeks of available data in January-September 2015. The station ridership has increased compared to ridership in 2014.

While the College acknowledges that many of its students may never commute to campus by bicycle, there is a percentage of students and faculty that could be encouraged to bike to campus if there were more bicycle amenities provided on campus. These could include more bike racks, with a percentage of those covered racks located in the existing parking garages. Additionally, posting clear information on the College's website regarding bicycle regulations, bicycle parking locations and other bicycle amenities could help increase ridership.

Figure 2.08 shows the MBT and location of existing bike racks on campus.

## 2.2.5 Vehicular Circulation and Parking

### Vehicular Circulation

Regional and local access to the Campus is provided by Georgia Avenue and Philadelphia Avenue. Other roadways providing local access include Fenton Street as well as Chicago, New York and Takoma Avenues. Figure 2.09 illustrates the existing campus access and circulation network. This figure also shows the key locations of off-street parking and public transportation facilities within the campus area.

The Campus traffic is well distributed on the regional street network, minimizing the impact of traffic patterns on the adjacent roadway network. The campus vehicle trip distribution pattern from the Montgomery College 2006-2016 FMP is as follows:

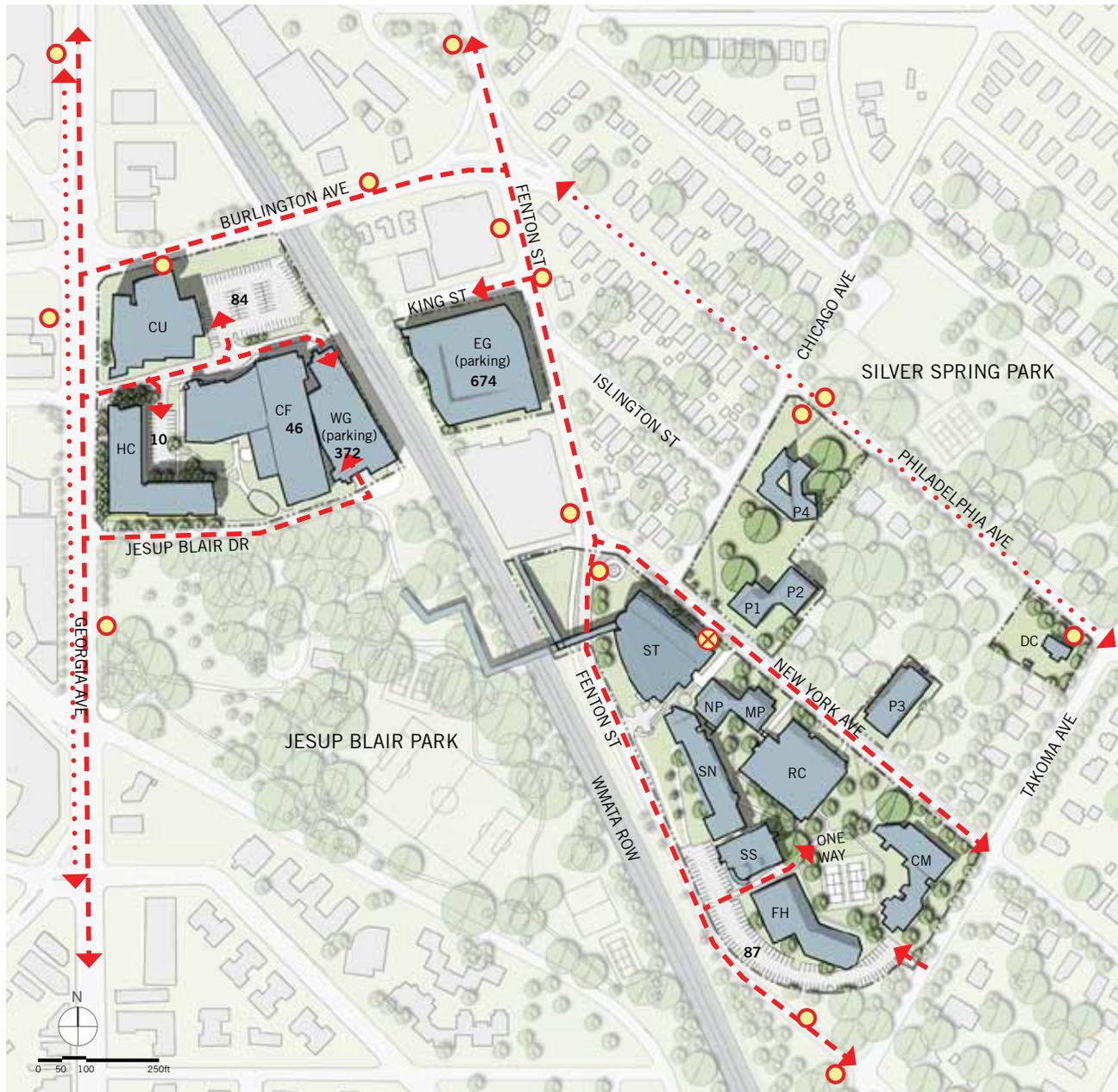
TABLE 2.07  
LOCAL ACCESS DISTRIBUTION

Roadway Approach Distribution from the North on Georgia Avenue and Fenton St.	50%
From the West on Philadelphia Ave.	10%
From the South on Georgia Ave.	5%
From the South on Takoma Ave.	20%
From the North on Takoma Ave and Chicago Ave, and East on Philadelphia Ave.	15%

### Mode Share

A survey of students and faculty/staff taken in March 2015 for the College Town Plan obtained information on commuting mode share. The faculty/staff commute by driving is 85%. Information for student mode share and overall mode share to the Takoma Park/Silver Spring campus is shown in table 2.07 below.

**FIGURE 2.05 PARKING AND VEHICULAR CIRCULATION**



	EXISTING BUILDINGS		VEHICULAR CIRCULATION	CF	The Morris and Gwendolyn Cafritz Foundation Arts Center	P1	Pavilion One
	PARKING FACILITIES		METRO BUS TRANSIT CORRIDOR	CM	Catherine F. Scott Commons	P2	Pavilion Two
	SHUTTLE BUS STOP		BUS STOP	CU	Cultural Arts Center	P3	Pavilion Three
<b>01</b>	# PARKING SPACES			DC	Child Care Center	P4	Pavilion Four
				EG	East Garage (parking)	RC	Resource Center
				FH	Falcon Hall (Physical Education)	SN	Science North Building
				HC	Health Sciences Center	SS	Science South Building
				MP	Mathematics Pavilion	ST	Charlene R. Nunley Student Services Center
				NP	North Pavilion	WG	West Garage (parking)

**TABLE 2.08**  
**TP/SS CAMPUS STUDENT AND TOTAL MODE SHARE, 2015**

	Drove	Dropped	Carpool	Transit	Walk	Bike	Other
Students	40%	2%	4%	46%	7%	1%	-
Total	57%	-	2%	33%	4%	1%	3%

Note: 10% of student trips are comprised of auto drop off and pickup. A convenient drop off location is needed on the campus.

Drop off and pickup activity on New York Avenue is a source of neighbor complaints. Since New York Avenue is less than 24 feet wide, stopped vehicles interfere with traffic flow. New York Avenue is posted with “No Parking or Standing” signs. The 55-foot long recessed curb at the Charlene R. Nunley Student Services Center used by the Montgomery College shuttle and other vehicles is not sufficient for all passenger loading that occurs.

### Parking

The current off-street parking supply on the Campus is 1,273 spaces of which 674 are located in the East Garage and 372 in the West Garage. This inventory includes 46 spaces in an underground facility beneath Morris and Gwendolyn Cafritz Arts Center. Note that this inventory does not include on-street spaces within the area as these spaces are not owned/operated by the College.

On-street spaces located on Chicago Avenue and Takoma Avenue along the Campus boundaries are metered with a 2-hour time limit. There are 34 metered spaces and they are available to both College and non-College patrons. Other on-street parking east of Georgia Avenue in proximity of the Campus is signed for municipal permit parking only. Parking for the Cultural Arts Center, a facility that hosts numerous cultural activities in the evenings, is accommodated adequately and conveniently by the adjacent off-street West Campus parking spaces. Parking usage surveys conducted annually by the College indicate that approximately 50% of the West Campus parking is available in the evening.

(See Figure 2.09 Parking and Vehicular Circulation).

Montgomery College completed its annual survey of parking occupancy in September, 2014 and identified a 91% overall usage of off-street spaces at the peak period of 11 am. Occupancy of student spaces was 97% while occupancy of faculty/staff spaces was 87%.

Established guidelines for computing parking requirements are provided by the Maryland Higher Education Commission (MHEC.) MHEC standards for community college parking require 0.75 space for each FTDE student and 0.75 space per FT Faculty and FT Staff. In addition, visitor parking in the amount of 2% of the total student/faculty/staff spaces is required. Finally, the Americans with Disabilities Act (ADA) requires reserved accessible spaces in the amount of 20 for the first 1,000 spaces plus 1 space for each 100 spaces over 1,000. The Takoma Park/Silver Spring Campus provides more than the minimum number of accessible spaces required. The East and West Campuses need to provide separately for their accessible space demands because of the barrier created by the WMATA/CSX Red Line.

Using MHEC standards, the total required number of spaces for existing conditions would be 2,465, or almost twice the current inventory of 1,273 spaces. Although parking is tight, it appears that there is not a deficit of almost 1,200 spaces as the state standards would suggest. The actual existing deficit based on the College's annual survey is estimated at between 80 and 100 spaces. The main reason for the difference is that a high percentage of students arrive via mass transit and non-auto modes.

Another method for calculating parking needs involves modification of the MHEC requirements and considers a more realistic figure for calculating student parking requirements. Students are by far the largest part of the

FIGURE 2.06 TRANSIT

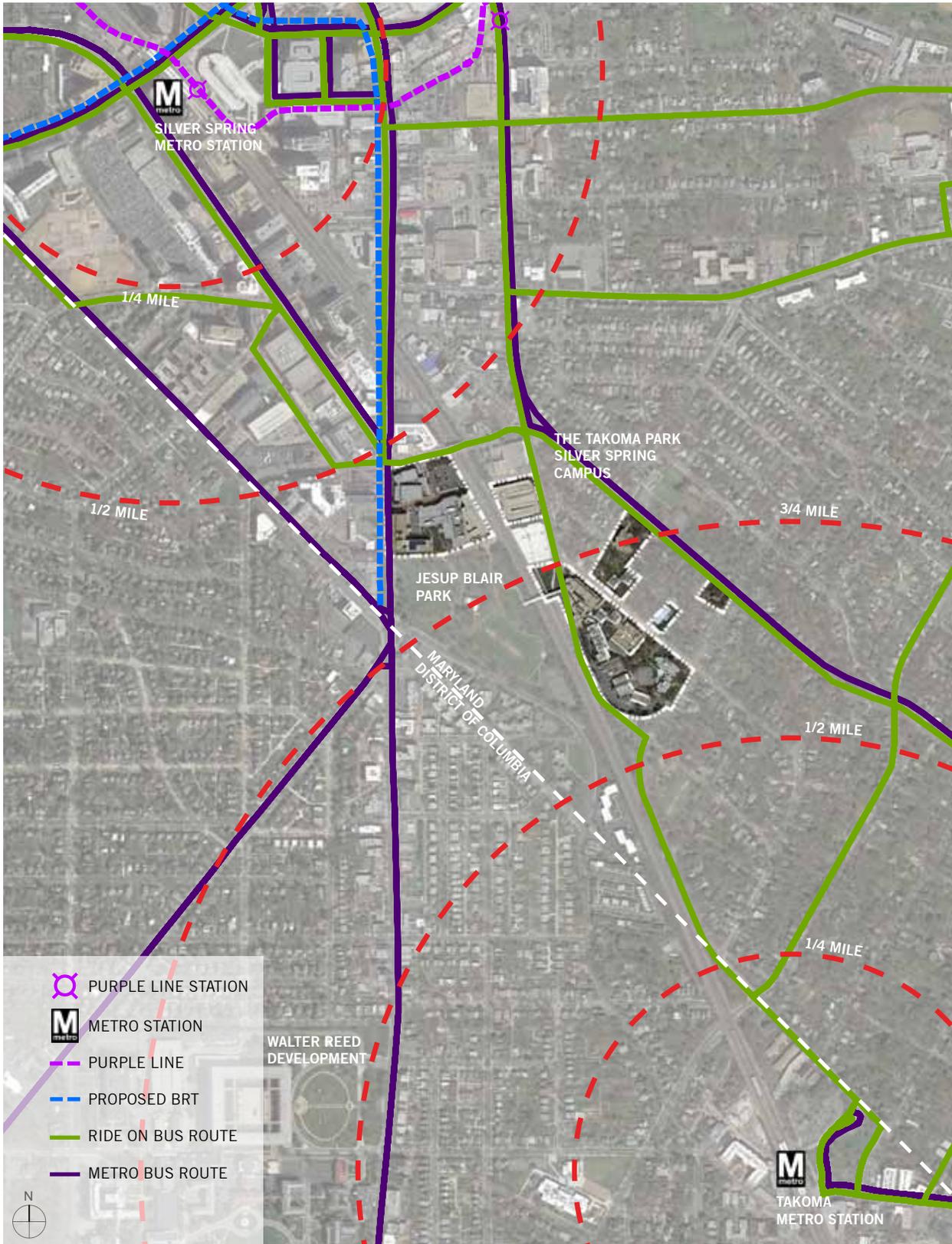


Image Not to Scale

campus population, with more than 6 Full Time Day Equivalent (FTDE) students for each Full Time (FT) Faculty and Staff member. In addition, the number of FTDE students is expected to increase by 30% by 2023, whereas FT Faculty and Staff will increase by approximately 7%.

Based on actual counts from the 2014 parking survey, peak student parking demand is accommodated with 95% of student spaces occupied by using a ratio of 0.35 for student spaces. This ratio is consistent with the current student auto mode share of 44% (drive-alone and carpool) at the campus. Using a student parking ratio of 0.35 prevents an overestimation of the parking deficit. Building an oversupply of parking would be costly and encourage more driving and less use of transit.

By using the MHEC standards of 0.75 space per FT Faculty and FT Staff coupled with a parking ratio of 0.35 for FTDE students, the estimated parking space deficit in 2023 is 375 spaces as summarized in Table 2.08.

TABLE 2.09  
TP/SS CAMPUS PARKING NEEDS, 2023

Parking Supply 2013	Parking Deficit 2023 using MHEC standards	Parking Deficit 2023 using modified MHEC standards
1,273	1,192	375

Note: 10% of student trips are comprised of auto drop off and pickup. A convenient drop off location is needed on the campus.

### 2.2.6 Transit

The campus is well served by public transportation. The Washington Metropolitan Area Transit Authority (WMATA) and Montgomery County Ride-On operate bus services that include links from the campus to two Metro stations along the Red Line. Figure 2.10 illustrates the various stations and routes that serve the campus.

While the vast majority of Takoma Park/Silver Spring students are concentrated within a 10-mile radius (see Figure 2.11), and therefore are within reasonable proximity to public transit alternatives, faculty and staff are distributed over a broader geographic area. Over 50% of students but only 15% of faculty and staff arrive to the campus via bus, light rail, walking or biking. As a consequence, it is unlikely that transportation demand management strategies will have much effect on reducing the demand for faculty and staff parking. Nonetheless, given this Campus’ urban environs and the strength of the public transit infrastructure that serves the student population, incentives to public transit and disincentives to single occupant vehicle travel will have a greater impact on this campus than the other more suburban campuses.

Table 2.09 presents the peak frequency of public bus service, average weekday riders and the percentage of the routes’ users that utilize the Montgomery College Pass.

TABLE 2.10  
TP/SS CAMPUS BUS RIDERSHIP, 2014

Bus Service	Peak Frequency	Average Weekday Riders	% Montgomery College Pass
70 - Georgia Avenue	12	10,625	n/a
F4 - New Carrollton	13	1,320	n/a
17 - Langley Park / Maple Ave	20	1,279	12.8%
18 - Langley Park / Takoma Park	30	798	6.0%
28 - VanGo Shuttle	12	678	1.3%

Source: WMATA; RideOn.

**FIGURE 2.07 TRANSIT**



- — PROPOSED BRT
- RIDE ON BUS ROUTE
- METRO BUS ROUTE
- BUS STOP

- |    |   |    |  |
|----|---|----|--|
| CF | The Morris and Gwendolyn Cafritz Foundation Arts Center | P1 | Pavilion One                               |
| CM | Catherine F. Scott Commons                              | P2 | Pavilion Two                               |
| CU | Cultural Arts Center                                    | P3 | Pavilion Three                             |
| DC | Child Care Center                                       | P4 | Pavilion Four                              |
| EG | East Garage (parking)                                   | RC | Resource Center                            |
| FH | Falcon Hall (Physical Education)                        | SN | Science North Building                     |
| HC | Health Sciences Center                                  | SS | Science South Building                     |
| MP | Mathematics Pavilion                                    | ST | Charlene R. Nunley Student Services Center |
| NP | North Pavilion  | WG | West Garage (parking)                      |

Montgomery College contracts for a shuttle service between the Takoma Park/Silver Spring campus and Rockville Campus. Shuttle stops are located on New York Avenue at the Charlene R. Nunley Student Services Center and on King Street at the Morris and Gwendolyn Cafritz Foundation Arts Center . Shuttle service starts at 9:00 am and runs approximately every 45 minutes until 5:15 pm. The shuttle greatly decreases the travel time between campuses compared to using public transportation.

## 2.2.7 Major Utilities

The existing central plant and utility distribution infrastructure is a critical underpinning that supports the Campus' built environment. The College is in the process of developing a separate Utility Master Plan that identifies and documents existing and proposed utility infrastructure needs and recommendations.

The latest Utilities Master plan for the Campus was completed in 2012 and includes an overview of the existing utilities infrastructure systems as well as a detailed assessment of their condition and ability to meet future demand. This plan is currently being updated in coordination with this Facilities Master Plan. An inventory of major utilities infrastructure is illustrated on Figure 2.12.

### Mechanical

There are central heating and cooling plants located in the Student Services Building and the Morris and Gwendolyn Cafritz Arts Building. Thermal ice storage has been installed in the Student Services building with additional modules located in the West Garage and connected to the Morris and Gwendolyn Cafritz central plant. Existing buildings with local DX cooling units are being connected to the central plants as those buildings are renovated. The cooling and heating capacity of the existing central plants is anticipated to be adequate for the future demand on the systems, as is the existing Washington Gas and Light natural gas distribution system.

### Electrical

The Campus is served by the Potomac Electric Power Company (Pepco) from a combination of overhead and underground medium voltage lines. Most of the buildings have separate utility meters and local step down transformer to distribute 480/277 volt, 3 phase, 4 wire system in the building except for the Student Services Pavilion and the Mathematics Pavilion which are being fed from other buildings. The existing Pepco feeders have adequate capacity to accommodate planned campus expansion.

### Natural Gas

Natural gas is provided by Washington Gas and the existing service currently meets the Campus needs.

### Water and Sanitary

Water and sanitary sewer service is provided by WSSC, with all Campus buildings being served directly from public mains. There is no private "on-site" system for domestic/fire water service and sanitary sewer on this campus. The public systems have adequate capacity to serve the campus' needs.

## 2.2.8 Information Technology Systems

The main point of presence (MPOP) for the campus is in the Morris and Gwendolyn Cafritz Arts Center. Each of the existing buildings is connected via a ductbank system back to CF, and is fed with optical fiber cabling. The existing information technology infrastructure is a critical underpinning that supports the Campus' built environment. The College is in the process of a series of separate planning activities compiled in an Information Technology Master Plan that identifies these information technology resources.

**FIGURE 2.08 MAJOR SITE UTILITIES**



- CHILLED AND HOT WATER SUPPLY AND RETURN
- 8"-12" WATER LINE
- SANITARY LINE
- 5"-8" NATURAL GAS LINE
- CENTRAL PLANT

- |    |   |    |  |
|----|---|----|--|
| CF | The Morris and Gwendolyn Cafritz Foundation Arts Center | P1 | Pavilion One                               |
| CM | Catherine F. Scott Commons                              | P2 | Pavilion Two                               |
| CU | Cultural Arts Center                                    | P3 | Pavilion Three                             |
| DC | Child Care Center                                       | P4 | Pavilion Four                              |
| EG | East Garage (parking)                                   | RC | Resource Center                            |
| FH | Falcon Hall (Physical Education)                        | SN | Science North Building                     |
| HC | Health Sciences Center                                  | SS | Science South Building                     |
| MP | Mathematics Pavilion                                    | ST | Charlene R. Nunley Student Services Center |
| NP | North Pavilion  | WG | West Garage (parking)                      |

## 2.2.9 Natural Systems and Sustainability

### Stormwater Management

The Campus occupies 19.5 acres consisting of an urban landscape environment around a built environment that is largely impervious and consisting of buildings, roads, sidewalks, and parking lots. Approximately 70% of the total Campus area is an impervious built environment.

On the east campus, the on-site drainage flows from the Charlene R. Nunley Student Services Center connect into the storm drainage system located in Fenton Street where it flows south and connects to a storm drainage system located at the intersection of Fenton Street, New York Avenue and Juniper Street. With the exception of the college buildings located east of New York Avenue, all of the college buildings outfall into a series of on-site storm drainage system including leaching or infiltration trenches. All of the on-site storm drain systems flow to the south where they combine into a single municipal system just south of the Catherine F. Scott Commons. This combined system flows to the east where it connects to the municipal storm drainage system located in New York Avenue.

Based on the 2006 & 2012 Utilities Master Plans, the existing leaching fields are failing. The exact cause for the failing leaching fields is not known and both Master Plans call for further investigation.. Typically, the capacity of the leaching or infiltration trench could diminish over time due to sediment and debris accumulation as well as generally poor draining soils in the area. In the short-term, investigation should be conducted and remediation measures developed to resolve the failing leaching field situation.

On the west campus, the Health Science Center, Morris and Gwendolyn Cafritz Arts Center, West Garage, Jesup Blair Drive, and the parking lot located north of the West Garage drain through a series of storm drain pipes and flow to the east where they ultimately connect into an existing storm drainage system located within the CSX Right-of-way. The Cultural Arts Center drains to the north and connects into a storm drainage system located in Georgia Avenue and Burlington Avenue.

All of the development that occurred on the west campus has been considered redevelopment. Additionally, the west campus is located within the Silver Spring Central Business District, therefore, a waiver for Channel Protection Volume was requested in accordance with Montgomery County Water Resources Technical Policy for Redevelopment, dated September 18, 2003 which waives Channel Protection Volume for sites within the Central Business District when there is less than a 10% increase in impervious area and the site is 2 acres or less.

Stormwater Management Water Quality Volume for all buildings with the exception of the Morris and Gwendolyn Cafritz Arts Center has been treated using underground proprietary filtering device(s) such as StormFilters and Baysavers. The Morris and Gwendolyn Cafritz Arts Center project removed a sufficient amount of pavement to meet its Stormwater Management Water Quality Requirements.

Pavilion Three, with its renovation under construction as of November 2015, was subject to the requirements of the Stormwater Act of 2007 and included a single micro-bioretenion facility at the rear of the building. The bioretention facility was also strategically located to minimize the amount of run-off discharging onto the adjacent residential properties.

### Forest Conservation

The original eastern portion of the campus has maintained a shady feel by the planting and maintenance of trees along the street edge and in the courtyards. The buildings in the eastern portion of the campus are nestled among mature hardwoods, allowing them to successfully knit into the residential neighborhood. The City of Takoma Park has a stringent tree preservation and reforestation program with which the Campus complies.

The forest conservation requirements for the west campus are currently being met by approved Forest Conserva-

**FIGURE 2.09 OPEN SPACE AND STREETScape**



- ACTIVATED OPEN SPACE WITH SEATING AND PEDESTRIAN AMENITIES
- RESIDUAL OPEN SPACE CREATED BY BUILDING SETBACKS
- EXISTING CAMPUS BUILDINGS
- STREETSCAPES WITH PLEASANT RESIDENTIAL AND PEDESTRIAN CHARACTER

CF	The Morris and Gwendolyn Cafritz Foundation Arts Center	P1	Pavilion One
CM	Catherine F. Scott Commons	P2	Pavilion Two
CU	Cultural Arts Center	P3	Pavilion Three
DC	Child Care Center	P4	Pavilion Four
EG	East Garage (parking)	RC	Resource Center
FH	Falcon Hall (Physical Education)	SN	Science North Building
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MP	Mathematics Pavilion	ST	Charlene R. Nunley Student Services Center
NP	North Pavilion	WG	West Garage (parking)

tion Plans # MR-04105-M-1 (Approved February 24, 2005), # MR-05106-M-1 (Approved March 23, 2006), and the Final Forest Conservation Plan Amendment #MR2008108-M-1 (Approved September 16, 2009). Under the approved plans, 1.33 acres of afforestation were required and 1.37 acres of afforestation were provided, leaving a surplus of 0.04 acres.

A comprehensive forest conservation plan does not exist for the east campus. No forest exists on the approximately 11 acre east campus. The renovation work on the Catherine F. Scott Commons was exempt from M-NCPPC forest conservation requirements, but tree protection measures were still required. In addition, the City of Takoma Park Arborist had jurisdiction over tree removal on the east campus and did require replacement tree planting for the trees removed during construction. M-NCPPC has reviewed and approved forest conservation exemptions for improvement projects at Pavilion Three (April 2013) and Pavilion Four (December 2012).



## 2.3 EXISTING BUILDING CONDITIONS and ANALYSIS

### 2.3.1 Building Usage

#### Campus-wide

The 1970s era buildings have functional problems that are inherent in their small size and informal organization. Several buildings on the east side of campus have very small floor plates (less than 2,500 net assignable square feet, or NASF), small bay sizes and irregular shapes. These characteristics constrain the use of the space.

The buildings were designed with outdoor corridors and stairs, and elevators shared between buildings that result in a sacrifice of comfort and energy efficiency, and are ill-suited to the hot and cold weather prevalent in this area. In addition, the circulation network into and through buildings does not adequately address the accessibility challenges of some students and faculty and are not compliant with basic regulations of the Americans with Disabilities Act (ADA). Most HVAC and building automation control systems are beyond their useful life and should be replaced.

The newer buildings have addressed many of these issues. Still, the College finds itself deficient in both the size and quantity of classrooms and class laboratories, office, study and meeting rooms, support spaces and relevant classroom inventory. Below is a list of the buildings on campus and an assessment of the adequacy of the facilities to support the programs and functions. (See Figure 2.13 Building Usage). The functional adequacy assessments are based on visual inspections and a more comprehensive study of campus assets conducted by Vanderweil Facility Advisors (VFA) in 2015.

#### East Campus

**Charlene R. Nunley Student Services Center (ST) (110,504 GSF)** is a three-level building completed in 2007, providing for the successful consolidation of student services and activities. The building houses Admissions and Records, the International Student Coordinator's Office, the Counseling Center, the Assessment Center, Financial Aid, MC Books & More (the bookstore), MC Copies (graphics and copy shop), MC Munchies (candy and snack shop), the Office of Student Life, the Cashier's Office, the cafeteria, the mailroom, the Office of Safety and Security, computer equipped classrooms and open labs. This building is referred to as the 'one stop shop' for student services. In addition, the facility houses a high performance central heating and cooling plant and distribution system for the East Campus. The building is in good condition.

**Resource Center (RC) (44,906 GSF)** is a two-story structure constructed in 1978 and houses the Campus library collection, study and support space, the Writing, Reading and Language Center, the Career/Transfer Center, a 90 seat lecture room, several classrooms and some faculty offices.

There is insufficient study (especially group study rooms), and support space for the campus library collection. Circulation throughout the building is indirect and confusing. In addition, access to the Resource Center by individuals who require an elevator is extremely difficult. The building is in poor condition and has a substantial deferred maintenance backlog.

**The Catherine F. Scott Commons (CM) (25,070 GSF)** is a two-story structure constructed in 1978, that was comprehensively renovated and reopened in 2010. The building houses classrooms, a lecture hall, the Social Sciences Computer Center, the Bliss Exhibition Hall, conference rooms and offices. The building is in good condition.

**Falcon Hall (FH) (39,063 GSF)** is a two-story structure built in 1978 that houses the Physical Education Department and includes a gymnasium, a pool, locker rooms, a classroom and racquetball courts. Additionally, two outdoor tennis courts are located adjacent to the building.

**FIGURE 2.10 BUILDING MASSING AND MATERIALS**



Image Not to Scale

- Open Pavilions**
  - Built in late 1975-1978
  - Typically one story with mansard roofs and few windows
  - Materials include: steel frame and cementitious panels
  
- 2 to 3 Story Buildings set back from the street edge**
  - Built in 1978-1980, except SS (1968)
  - Materials include: brick or concrete panels and stucco

- 3-4 Story Buildings with urban character**
  - Built from 2004-2008, except parking garage (1980)
  - Materials include: buff and red brick, grey block and blue metal panels, dark glass

- CF The Morris and Gwendolyn Cafritz Foundation Arts Center
- CM Catherine F. Scott Commons
- CU Cultural Arts Center
- DC Child Care Center
- EG East Garage (parking)
- FH Falcon Hall (Physical Education)
- HC Health Sciences Center
- MP Mathematics Pavilion
- NP North Pavilion
- P1 Pavilion One
- P2 Pavilion Two
- P3 Pavilion Three
- P4 Pavilion Four
- RC Resource Center
- SN Science North
- SS Science South
- ST Charlene R. Nunley Student Services Center
- WG West Garage (parking)

The classroom is not acoustically separated from the gym. The gym floor has recently been refinished and is now air-conditioned, but suffers from condensation accumulating on the court(s) from uninsulated piping under the floor and the fitness center is undersized to meet demand. The tennis courts see little use by students and faculty and better facilities are located nearby in Jesup Blair Park. The pool is rarely used by students, faculty or staff, though some members of the Takoma Park community use it occasionally. Although some reinvestment has recently been made in the building, it is generally in poor condition and has a substantial deferred maintenance backlog.

**Science North Building (SN) (39,950 GSF)** is a two-story building constructed in 1978 that houses science laboratories for biology, chemistry and physics, two lecture halls, the Math/Science Learning Center and associated faculty and staff offices. Additionally, it houses shops and storage space for facilities operations and maintenance.

There is a shortage of laboratory and support space (especially isolated experimentation prep areas), access to elevators is not easy for service to all floors, classrooms are under-sized and not configured or equipped to provide flexibility to support desired teaching methodologies or support group learning, and there is insufficient storage space and shop space for facilities operations and maintenance. The building is in very poor condition and has a substantial deferred maintenance backlog.

**Science South Building (SS) (23,757 GSF)** is a three-story structure with a partial lower level and attached planetarium, built in 1962. It houses the Mathematics Interactive Computing Laboratory, biology and physical science departments and laboratories, faculty offices, the planetarium, and a greenhouse.

There is a shortage of laboratory and laboratory prep space, elevators do not service all floors, classrooms are under-sized and not configured or equipped to provide flexibility for desired teaching pedagogy or support group learning and there is insufficient storage space. The building is in very poor condition and has a substantial deferred maintenance backlog.

**North Pavilion (NP) (6,942 GSF)** is a two-story structure built in 1975, housing offices for faculty and staff and a general-purpose classroom.

The building occupies a small footprint in a very central location of campus and delivers very little programmable area. The classroom sizes and number are insufficient to meet most proposed programs. The building is in very poor condition and has a substantial deferred maintenance backlog.

**Mathematics Pavilion (MP) (6,942 GSF)** is a two-story structure built in 1975 and houses classrooms, the Math Tutoring Center and faculty offices.

The building occupies a small footprint in a very central location of campus and delivers very little programmable area. The building also lacks an internal stair linking the two levels. Many spaces are irregular and difficult to program. The building is in fair condition, but poorly designed to support academic programs and desired teaching methodologies.

**East Garage (EG) (224,310 GSF)** is located on Fenton Street and was built in 1980, it has 665 parking spaces for faculty, staff and students. The facility is in fair condition and is generally well maintained.

**Pavilion Three (P3) (15,013 GSF)** is a two-story structure constructed in 1975 and is undergoing a comprehensive renovation to be completed in early 2016. When renovated the building will house general use classrooms and offices supporting the Humanities program. The building will be in excellent condition after renovation and spatially reconfigured and equipped to serve the campus well.

**FIGURE 2.11 BUILDING USAGE**



Image Not to Scale

- |   |  |
|---|--|
| <span style="display:inline-block; width:15px; height:15px; background-color:orange; border:1px solid black;"></span> ACADEMIC          | <span style="display:inline-block; width:15px; height:15px; background-color:lightgrey; border:1px solid black;"></span> PARKING   |
| <span style="display:inline-block; width:15px; height:15px; background-color:yellow; border:1px solid black;"></span> STUDENT SERVICES  | <span style="display:inline-block; width:15px; height:15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, yellow 2px, yellow 4px); border:1px solid black;"></span> MIXED USE WITH STUDENT SERVICES         |
| <span style="display:inline-block; width:15px; height:15px; background-color:teal; border:1px solid black;"></span> ADMINISTRATIVE      | <span style="display:inline-block; width:15px; height:15px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, teal 2px, teal 4px); border:1px solid black;"></span> MIXED USE WITH ADMINISTRATIVE AND ACADEMIC |
| <span style="display:inline-block; width:15px; height:15px; background-color:green; border:1px solid black;"></span> PHYSICAL EDUCATION | <span style="display:inline-block; width:15px; height:15px; border: 2px solid black; border-radius: 50%;"></span> WD&CE DEDICATED SPACE  |

- CF The Morris and Gwendolyn Cafritz Foundation Arts Center
- CM Catherine F. Scott Commons
- CU Cultural Arts Center
- DC Child Care Center
- EG East Garage (parking)
- FH Falcon Hall (Physical Education)
- HC Health Sciences Center
- MP Mathematics Pavilion
- NP North Pavilion
- P1 Pavilion One
- P2 Pavilion Two
- P3 Pavilion Three
- P4 Pavilion Four
- RC Resource Center
- SN Science North
- SS Science South
- ST Charlene R. Nunley Student Services Center
- WG West Garage (parking)

**Pavilion One (P1) (7,385 GSF)** is a two-story structure constructed in 1975 and houses the Business, Management and Information Sciences Department, including the Math Learning Center computer laboratory. There is insufficient space resulting from small sizes of both teaching and open laboratories. Some spaces are accessed directly from outdoor hallways, which results in occupant comfort issues and energy inefficiency. The building is in poor condition and has a substantial deferred maintenance backlog.

**Pavilion Two (P2) (7,385 GSF)** is a two-story structure constructed in 1975 and houses faculty and staff offices, as well as Facilities Operations and Maintenance staff offices. Some spaces are accessed directly from outdoor hallways, which results in occupant comfort issues and energy inefficiency. The building is in poor condition and has a substantial deferred maintenance backlog.

**Pavilion Four (P4) (15,873 GSF)** is a three-story building constructed in 1980 and houses general-purpose classrooms and faculty offices used by English, Reading and other academic programs. The HVAC system was recently renovated and the former black box theater was converted to large lecture style classrooms. Most classrooms are accessed directly from the courtyard or outdoor hallways, which results in occupant comfort issues and energy inefficiency. The classrooms are all irregular in shape and very small and inefficient. The building is in good condition, but has spatial and functional compromises.

**Child Care Center (DC) (3, 310 GSF)** is a two-story former residence, built in 1924 and renovated in 1994. The building is in moderate condition, but use will be discontinued based on a recent policy decision by the College to relocate all childcare and early childhood education program applied observations to the new childcare facility at the Germantown Campus. The College anticipates they will close this facility in the summer of 2016.

### West Campus

**Health Sciences Center (HC) (98,038 GSF)** is a four-story building completed in 2004 housing the Health Sciences and Nursing programs. The facility includes classrooms and laboratories and offices for faculty and the Dean of Health Sciences. In addition, the building houses a community health center operated by Holy Cross Hospital that offers applied learning experiences for student nurses. The building is in good condition.

**The Morris and Gwendolyn Cafritz Foundation Arts Center (CF) (134,748 GSF)** is a three-story former industrial building that was renovated in 2007. The home of the College's arts program, it now includes the School of Art + Design at Montgomery College. The building houses ceramic, sculpture, printmaking, drawing, painting, and photography laboratories, general-purpose classrooms, and computer labs. The facility also includes a public gallery, lecture hall and a catering kitchen for receptions. The building also includes the Educational Opportunity Center, the Refugee Training Center and Workforce Development & Continuing Education classrooms and offices.

In addition, the facility houses the College's central computer operations, referred to as the Network Operating Center (NOC), and a high-performance central heating and cooling plant and distribution system for the west campus. The building is in good condition.

**Cultural Arts Center (CU) (57,243 GSF)** is a performing arts building that was opened in 2010. It houses a 500 seat performing arts proscenium theater, supported by a scene shop, changing rooms, rehearsal space and classrooms. In addition, the facility houses a 116 seat studio theater, a 16-station piano laboratory, classrooms, faculty and staff offices and a dance studio. The building is in very good condition.

**West Garage (WG) (151,490 GSF)** is a parking garage for 357 vehicles on four levels adjacent to the Arts Center. The structure was opened in 2010. The facility is in good condition.

**FIGURE 2.12 GENERAL BUILDING CONDITIONS**



	0.30 +	POOR
	0.10 – 0.30	FAIR
	0.05 – 0.10	GOOD
	0.00 – 0.05	😊

CF	The Morris and Gwendolyn Cafritz Foundation Arts Center	P1	Pavilion One
CM	Catherine F. Scott Commons	P2	Pavilion Two
CU	Cultural Arts Center	P3	Pavilion Three
DC	Child Care Center	P4	Pavilion Four
EG	East Garage (parking)	RC	Resource Center
FH	Falcon Hall (Physical Education)	SN	Science North Building
HC	Health Sciences Center	SS	Science South Building
MP	Mathematics Pavilion	ST	Charlene R. Nunley Student Services Center
NP	North Pavilion	WG	West Garage (parking)

### 2.3.2 Building Conditions and Deficiencies

In August, 2015, the College updated the facilities condition assessment for buildings and site infrastructure components including: electrical utilities, storm sewer, sanitary sewer, parking lots, etc. at each of its three campuses. The goals of this effort were to:

- Develop a baseline condition assessment of each facility including related infrastructure components and building systems;
- Provide budget estimates to address required safety improvements and deferred maintenance backlogs for planning purposes;
- Identify building code and accessibility issues and compliance needs to ensure that the facilities are operated as required;
- Utilize facility assessment findings to inform the development, prioritization, budgeting and scheduling of capital and maintenance/repair projects to address facility deficiencies.

The facilities condition assessment process included the following:

- A Current Condition Analyses of existing facility deficiencies including deferred maintenance, deferred renewal, near-term anticipated renewal, recommended discretionary improvements, and code non-compliance issues was completed.
- Anticipated capital renewal analyses developed projections of ongoing degradation of facilities' components and costs associated with renewal or replacement of these components as they reach the end of their useful life.
- Capital funding analyses involved formulation of scenario comparisons showing various funding levels and the effect of each on the condition and value of the building.

Information developed as part of the Facilities Assessment provided information for the development of a Facilities Condition Index (FCI) rating for each building on campus.

#### Facility Condition Index (FCI)

The FCI is a standard process for assessing the relative condition of buildings and site infrastructure components, facilitating comparison both within and among the campuses was established. For each building or site component, the Facility Condition Index (FCI) was developed which measures the relative amount of current deficiencies in the building including recommended improvements and grandfathered issues. The total value of recommended repairs is divided by current replacement value for the building or site component resulting in the FCI. The higher the FCI, the poorer the condition of the facility or system component. The FCI ranges for the standard of services for each building or site component are:

Good: .00 to .05  
Fair: .05 to .10  
Poor: Greater than .10

FCI is a standard measure used throughout the country; it is recommended by both the National Association of College Business Officers (NACUBO) and the Association of Higher Education Facility Officers (APPA). Table 2.11 summarizes the findings from the 2015 assessment of buildings on the Campus.

TABLE 2.11  
TP/SS CAMPUS TOTAL REPLACEMENT AND FCI VALUES FOR BUILDINGS, 2015

	Building Name	Use	Age/Year Built	Size	RV	FCI Cost	FCI
P4	Pavilion Four	Classroom Theater	1980	15,873	3,221	368	0.11
CF	Morris and Gwendolyn Cafritz Foundation Arts Center	Classroom Studios	2007	139,320	36,425	2,861	0.08
CM	Catherine F. Scott Commons	Classroom Office	1978	25,070	5,422	441	0.08
DC	Child Care Center	Child Care	1924	3,310	538	193	0.36
CU	Cultural Arts Center	Theater/Dance Classroom	2009	57,243	16,020	812	0.05
FH	Falcon Hall*	Athletics Recreation	1978	39,063	9,275	4,451	0.48
HC	Health Sciences Center	Classroom	2004	98,038	20,770	2,338	0.11
MP	Mathematics Pavilion	Offices	1975	6,942	759	202	0.27
NP	North Pavilion	Offices	1975	6,942	1,162	603	0.52
P1	Pavilion One	Classroom Student Services	1975	7,386	1,189	548	0.46
P2	Pavilion Two	Offices	1975	7,385	1,376	652	0.47
P3	Pavilion Three	Classrooms	1975	15,013	3,113	360	0.12
RC	Resource Center*	Library Offices	1978	44,906	9,166	4,788	0.52
ST	Charlene R. Nunley Student Services Center	Student Services	2007	110,504	25,803	1,850	0.07
SN	Science North Building	Classrooms	1978	39,950	8,335	3,432	0.41
SS	Science South Building	Classrooms	1962	23,575	5,272	3,140	0.60

Buildings with an FCI rating of “Poor” should receive highest consideration for renovation through a capital project. For those buildings with an FCI rating of 0.60 or higher more study should be completed to determine if comprehensive renovation or demolition is the most feasible option.

The following table provides a summary of the building deficiency amount by FCI range.

TABLE 2.12

BUILDING DEFICIENCY FOR CATEGORY AMOUNT AND % OF TOTAL BUILDING DEFICIENCY

Less than 25% deficiency (7 buildings)	\$9,039,136	32%
26% to 50% deficiency (6 buildings)	\$9,478,863	35%
51% or greater Deficiency (3 buildings)	\$8,531,266	33%
TOTAL	\$27,049,265	100%



## 2.4 FACILITIES PROGRAM

### 2.4.1 Campus Space Planning Factors

There are many planning factors that contribute to the dynamic and shifting landscape of today's higher education institutions. Some of the key planning factors to be considered in campus master planning that are anticipated to influence and drive the demand for higher education programs and the supporting facilities at Montgomery College are discussed in this section.

#### Past and Projected Enrollment and Program Growth

Montgomery College overall has experienced significant enrollment growth over the past five years. The Takoma Park/Silver Spring campus has grown by 38% in total student FTE enrollment since 2008 and is projected to increase FTE enrollment by 32% by 2023. During this same planning period, Maryland is expected to see high growth in middle and high skill jobs requiring a 2 year or 4 year degree. This increase in jobs, along with the planned enrollment growth, will be a major factor driving the demand for access to educational programs and the supporting facilities.

Other drivers of enrollment growth at Montgomery College and its campuses are anticipated to include state incentive programs such as Dual Enrollment (Maryland's College and Career Readiness and College Completion (CCRCC) legislation) and the Dream Act (Chapter 191 of 2011, Senate Bill 167 Public Institutions of Higher Education – Tuition Rates – Exemptions). In addition, an on-going national trend of escalation in increasing tuition costs and associated fees at four-year institutions continues to make affordability a primary issue for many students. This trend is expected to continue into the foreseeable future resulting in expanded demand for more affordable access at community colleges.

#### Changes to Teaching Pedagogy

Teaching pedagogy in the 21st Century is focused on providing students with experiential and group based learning activities that promote learning for practical application in the work environment. Teaching methodologies and pedagogy are undergoing transformation and no longer are four walls and a chalkboard sufficient to provide the instructional environment and tools that students and faculty need to be successful. Classrooms must be configured and furnished for flexibility and equipped with robust instructional technology to be adaptable to new teaching methodologies grounded in student-centered and group learning activities. Flexible spaces, both inside and outside of the formal classroom, are needed to support student collaboration, practice, and group work. In addition, more curriculums are requiring laboratory classes. These factors typically require a higher space allocation per student station in instructional spaces and more informal student study spaces outside of the classroom.

### 2.4.2 Space Utilization

Building space is a valuable institutional resource and is an important asset in supporting teaching and learning, and student development and success. Enrollment management and space scheduling are significant components that impact facilities usage and master planning. Class scheduling directly impacts the utilization of space. To most efficiently use instructional space, class sizes need to be aligned with desired class size cohorts. In this regard, Maryland has established standards for classroom and class laboratory room and student station utilization for community colleges, which is used as the basis for the fall 2014 "utilization snapshot" assessment of campus.

In accordance with MHEC goals, Montgomery College would ideally schedule classrooms from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 27 of the 45 day hours per week or at a 60% utilization rate for credit instruction. In addition, the College would fill a minimum of 66.7% of the student stations for each classroom scheduled.

TABLE 2.13 TP/SS CAMPUS SPACE UTILIZATION, FALL 2015

		Room Utilization	Student Station Utilization
	Actual Fall 2013	2006 FMP Projected Fall 2023	% Change Fall 2013
<b>The Morris and Gwendolyn Cafritz Foundation Arts Center (CF)</b>			
FL 1	Lecture	49.26%	60.51%
FL 2	Lecture	52.91%	78.48%
<b>Catherine F. Scott Commons (CM)</b>			
FL 1	Lecture	54.81%	45.75%
FL 2	<b>Lecture</b>	<b>54.56%</b>	<b>66.41%</b>
<b>Cultural Arts Center (CU)</b>			
*FL 1	Lecture	3.11%	100.00%
	Lab	4.00%	100.00%
*FL 2	Lecture	32.28%	48.40%
	Lab	3.11%	40.40%
<b>Falcon Hall Physical Education (FH)</b>			
FL 1	Lecture	25.22%	85.66%
FL 2	<b>Lecture</b>	<b>7.22%</b>	<b>98.33%</b>
Gym	Lecture	9.56%	49.52%
Pool	Lecture	11.11%	35.56%
<b>Health Sciences Center</b>			
*FL 1	Lecture	39.30%	64.74%
	Labs	1.11%	38.37%
*FL 2	Lecture	22.64%	66.09%
	Labs	17.85%	72.05%
FL 3	Lecture	37.56%	64.77%
	Labs	14.00%	68.75%
*FL 4	Lecture	19.04%	66.46%
	Labs	35.11%	68.79%
HEBR - N/A			
<b>Mathematics Pavilion (MP)</b>			
FL 1	Lecture	59.58%	68.60%

\*Spaces on this floor are used for both lecture and lab

TABLE 2.13 TP/SS CAMPUS SPACE UTILIZATION, FALL 2015 cont'd

		<b>Room Utilization</b>	<b>Student Station Utilization</b>
	<b>Actual Fall 2013</b>	<b>2006 FMP Projected Fall 2023</b>	<b>% Change Fall 2013</b>
<b>OC</b>			
OC	Lecture	100.00%	23.60%
<b>Pavilion One (P1)</b>			
FL 1	Lecture	29.83%	78.81%
FL 2	Lecture	30.67%	65.42%
<b>Pavilion Three (P3) - N/A</b>			
<b>Pavilion Four (P4)</b>			
FL 1	Lecture	41.96%	69.34%
<b>Resource Center (RC)</b>			
*FL 1	Lecture	7.33%	83.33%
	Lab	7.33%	66.67%
FL 2	Lecture	43.33%	38.37%
<b>Science North Building (SN)</b>			
*FL 1	Lecture	26.89%	45.97%
	Labs	29.44%	53.33%
*FL 2	Lecture	26.22%	63.59%
	Labs	61.11%	72.99%
*FL 3	Lecture	29.11%	52.71%
	Labs	22.22%	75.90%
<b>Science South Building (SS)</b>			
FL 1	Lecture	37.39%	62.03%
*FL 2	Lecture	30.74%	60.20%
	Labs	76.44%	62.80%
FL 3	Lecture	37.31%	49.79%
<b>Charlene R. Nunley Student Services Center (ST)</b>			
FL 3	Lecture	51.33%	54.78%

Source: Montgomery College, Fall 2015 Schedule Data

In accordance with MHEC goals, Montgomery College would ideally schedule class laboratories from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 18 of the 45 day hours per week or at a 40% utilization rate or credit instruction. In addition, the College would fill a minimum of 60% of the student stations for each class laboratory scheduled.

A general campus-wide analysis of average room and station utilization by academic building for the fall 2014 semester for this campus was completed with the results summarized in Table 2.12. Observations can be made from the snapshot analysis that may identify opportunities to better utilize space and seating capacity as well as physical constraints limiting the better use of space. However, these observations and any subsequent recommendations must be developed with caution, since both quantitative and qualitative issues can affect scheduling and utilization of rooms.

A general assessment by academic building, based on fall 2014 scheduling data from the College for credit classes during day hours from Monday through Friday, yielded the following observations.

- Classrooms in some buildings have capacity to accommodate additional classes based on room utilization data.
- Laboratories in some buildings have capacity to accommodate additional classes based on room utilization data.
- The campus is meeting or exceeding the Maryland student station utilization rates for classes and class laboratories that are scheduled, with a few exceptions.
- Some classes and class laboratories are scheduled outside of or overlap the typical scheduling matrix hours used for Monday, Wednesday and Friday and Tuesday and Thursday, creating inefficiency. In some cases this may be unavoidable due to curriculum requirements.
- Late afternoon hours in some buildings appear to be under-scheduled on Fridays.

### Qualitative Assessment

At the heart of determining the quality of space, and more specifically instructional space, is an analysis of how effectively space is meeting the intended function. General observations can be made based on the age, condition, and general utilization of the building, and input from campus staff as to how effectively space is being used. Observations about the quality of existing space include:

- Eleven of the thirteen academic and academic support buildings on the Campus were designed and constructed more than 30 years ago. Although some have been renovated, the instructional space configuration of these buildings has not changed, except Pavilion Three, and most do not fully support the desired teaching pedagogy. Classrooms in these buildings and others are designed primarily for a lecture set up to support the “Sage on the Stage” teaching style. These spaces typically do not provide flexibility for reconfiguring furniture and using instructional technology to support group and collaborative learning.
- Most of the older academic buildings have little or no informal/social student study and learning space for use in student-to-student, student-to-faculty and/or small groups outside of the classroom or laboratory.

### 2.4.3 Campus Space Needs

Assessments of the current and projected facilities space needs at the Takoma Park/Silver Spring Campus are generated by applying current and projected planning data related to enrollment, instructional delivery, library collections, faculty, and staff to the State of Maryland guidelines for facilities at community colleges. The planning data referenced above and used to compute current and projected space needs is documented in Table 2.14.

Current and projected space needs are then computed for each space type in the Campus inventory for which a guideline is available. Comparisons are made between the current inventory of the Campus and the inventory planned for the ten-year planning period, given approved capital projects and surpluses or deficiencies relative to the respective space categories are identified. Table 2.14 documents the results of this analysis and breakdown by Room Use category.

**TABLE 2.14**  
TP/SS CAMPUS SPACE NEEDS ASSESSMENT PLANNING DATA, FALL 2013 AND 2023

	<b>Actual Fall 2013</b>	<b>2006 FMP Projected Fall 2023</b>	<b>% Change Fall 2013</b>
<b>FTDE</b>	<b>2,567</b>	<b>3,334</b>	<b>30%</b>
FTDE (inc on line)	2,792	3,626	30%
Day SCH	41,880	54,390	30%
Day WSCH-Lec	38,419	48,370	26%
Day WSCH-Lab	21,956	26,940	23%
Day WSCH	60,375	75,310	25%
<b>FTE</b>	<b>4,487</b>	<b>5,910</b>	<b>32%</b>
Credit Hours (SCH)	57,186	73,770	29%
Bound Volume Equivalents	102,595	110,802	8%
FTEF	197	219	11%
FT fac	139	152	9%
PT fac	232	266	15%
FTES	254	266	5%
FT staff	246	257	4%
PT staff	30	36	20%
Planning Head Count	1,618	2,051	27%
<b>Headcount Student (HCS)</b>	<b>7,755</b>	<b>9,820</b>	<b>27%</b>

Source: Montgomery College Office of Institutional Research, 2015

Current and projected space needs are then computed for each type of space in the campus inventory for which a guideline is available. Comparisons with the campus' current inventory and the one planned for the ten year planning period, given approved capital projects, are made, and surpluses or deficiencies relative to the respective space categories are identified. Table 4.15 documents the results of this analysis and breakdown by ROOM USE category.

TABLE 2.15  
TP/SS CAMPUS COMPUTATION OF SPACE NEEDS, FALL 2023

HEGIS CODE	ROOM USE CATEGORY	NEED 2023	PROJECTED INVENTORY	SURPLUS (DEFICIT)
<b>100</b>	<b>CLASSROOM</b>	<b>56,309</b>	<b>40,616</b>	<b>(15,693)</b>
<b>200</b>	<b>LABORATORY</b>	<b>179,673</b>	<b>75,033</b>	<b>(104,640)</b>
210	Class Laboratory	164,721	55,665	(109,056)
220	Open Laboratory	14,952	19,368	4,416
<b>300</b>	<b>OFFICE</b>	<b>84,824</b>	<b>79,778</b>	<b>(5,046)</b>
310-350	Office/ Conf. Room	82,294	75,391	(6,903)
320	Testing/Tutoring	2,530	4,387	1,857
<b>400</b>	<b>STUDY</b>	<b>37,639</b>	<b>19,437</b>	<b>(18,202)</b>
410	Study	22,250	11,126	(11,124)
420-30	Stack/Study	10,992	7,293	(3,699)
440-55	Processing/Service	4,397	1,018	(3,379)
<b>500</b>	<b>SPECIAL USE</b>	<b>61,320</b>	<b>29,441</b>	<b>(31,879)</b>
520-23	Athletic	54,600	25,645	(28,955)
530	Media Production	5,720	3,796	(1,924)
580	Greenhouse	1,000	0	(1,000)
<b>600</b>	<b>GENERAL USE</b>	<b>52,365</b>	<b>51,532</b>	<b>(833)</b>
610	Assembly	16,120	18,012	1,892
620	Exhibition	2,530	5,058	2,528
630	Food Facility	17,010	12,689	(4,321)
640	Childcare	No Allowance	No Allowance	No Allowance
650	Lounge	6,075	9,004	2,929
660	Merchandising	2,630	4,991	2,361
670	Recreation Space	No Allowance	No Allowance	No Allowance
680	Meeting Room	8,000	1,778	(6,222)
<b>700</b>	<b>SUPPORT</b>	<b>26,066</b>	<b>39,953</b>	<b>13,887</b>
710	Data Processing	2,500	1,196	(1,304)
720-740	Shop/ Storage	19,182	37,343	18,161
750	Central Service	4,000	1,414	(2,586)
760	Chemical Storage	384	0	(384)
<b>800</b>	<b>HEALTH CARE</b>	<b>912</b>	<b>0</b>	<b>(912)</b>
<b>900</b>	<b>RESIDENTIAL</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
<b>050-090</b>	<b>ALTERATIONS/ IND USE</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
	<b>Total NASF:</b>	<b>499,108</b>	<b>335,790</b>	<b>(163,318)</b>

Source: Montgomery College

Based on the computation of space needs in Table 2.14, the Campus is projected to need an additional 163,318 NASF of space to accommodate the planned enrollment growth. Major deficits in academic and academic support space categories are projected in class laboratory, library and study, classroom and faculty/staff offices especially for part time faculty). These needs will be specifically addressed in Section 2.5.4.

In addition to the quantitative space needs identified in this section, there are several programmatic and qualitative space issues and challenges that need to be addressed.

There is a need for more flexible classroom and laboratory space on campus to accommodate group based learning and collaboration that is central to the desired teaching methodology. This includes providing instructional spaces with a larger student station space allocation and flexible furnishings to allow for multiple configurations for small and larger groupings of students to engage and interact. It is also desired that instructional spaces include robust technology and wall writing surfaces to support in-class activities and exercises.

Redevelopment of the library facilities on each campus is paramount to the evolution of these resources into a true learning commons that provides additional and appropriately configured and equipped instructional spaces, individual and group study areas and computer stations. In addition, the introduction of faculty and staff technology rich “sand box” spaces, lounges and cafes and expanded collaboration zones are desired for the library learning commons on each campus.

The last Facilities Master Plan identified the significant challenge posed by the poor condition of older buildings on the East Campus. With the exception of minor renovations in the Catherine F. Scott Commons and Pavilion Four, as well as a major renovation of Pavilion Three, most of these concerns have not been addressed. The majority of the East Campus was constructed during the mid to late 1970s. Most of these facilities are more than 30 years old and have not been renovated, resulting in building systems that have reached the end of their useful life. In addition, most of the floor configurations in these buildings contain irregularly shaped instructional and meeting spaces that are not ideal for teaching and learning. Often floor plates are very small and inefficient. Academic space should be flexible to respond to and adapt to rapidly changing technological and pedagogical shifts in education, which is not the case in many of these facilities.



## 2.5 FACILITIES MASTER PLAN

### 2.5.1 Campus Master Plan Guiding Principles

A series of guiding principles were developed to assist in the preparation of the Facilities Master Plan, which include.

#### 1. Develop new and renovated facilities to support academic and student programming in support of the College Mission

- Support the College's goal of establishing and nurturing unique roles and partnerships for the Takoma Park/Silver Spring Campus in meeting the educational, economic, and work force development needs of Montgomery County as they relate to the health sciences, the arts and STEM disciplines;
- Provide sufficient and adequate space—classrooms, labs, offices, study, meeting rooms, and support facilities—based on existing and projected needs, so that each and every area can contribute creatively and productively in supporting students;
- Co-locate departments and functions rationally, to optimize functional efficiency and provide the ease, energy, and excitement generated by the synergy of proximity;
- Present students the needed range of opportunities to study and learn collaboratively in supportive environments with assistance of faculty, librarians, counselors, and staff;
- Afford students opportunities to meet and develop socially through formal programs of leadership, recreation, and athletics, and informally in inviting indoor and outdoor spaces;
- Maximize the use of land resources available to the Campus while retaining its unique character, quality, and setting; and
- Invite students, faculty, staff, community members, and visitors to participate in the varied Campus and College activities by organizing the buildings, parking, outdoor athletic facilities, and circulation for pedestrians, the disabled and elderly, to make their experience pleasant and successful.

#### 2. Rejuvenate and focus new development for the East Campus

- Replace obsolete buildings as soon as is feasible; in particular, replace Science South Building and Science North Building, along with Falcon Hall, the Resource Center, and the North and Mathematics Pavilions.
- Retain an appropriate scale of development adjacent to residences along New York Avenue (two stories) while proposing larger scale structures closer to Fenton Street and the center of campus. Third floor setbacks are feasible along New York Avenue.
- Prioritize retention of existing programs while facilities are being renovated or constructed. This principle points to building new program facilities in a location other than where they are currently located. Providing temporary facilities is an option, but space constraints on this campus are significant and might preclude this option.
- Enhance the character and landscaping of the courtyards within the east campus. Provide high quality, linked open space and accommodate the memorial garden that is currently located in the campus

**FIGURE 2.13 EXPANSION OPPORTUNITIES**



<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #4F81BD; border: 1px solid black; margin-right: 5px;"></span> EXISTING BUILDING</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #FFD700; border: 2px dashed red; margin-right: 5px;"></span> CAMPUS EXPANSION OPPORTUNITIES</li> <li><span style="display: inline-block; width: 20px; height: 10px; border: 2px dashed red; margin-right: 5px;"></span> OFF-CAMPUS EXPANSION OPPORTUNITIES</li> </ul>	<ul style="list-style-type: none"> <li>CF The Morris and Gwendolyn Cafritz Foundation Arts Center</li> <li>CM Catherine F. Scott Commons</li> <li>CU Cultural Arts Center</li> <li>DC Child Care Center</li> <li>EG East Garage (parking)</li> <li>FH Falcon Hall (Physical Education)</li> <li>HC Health Sciences Center</li> <li>MP Mathematics Pavilion</li> <li>NP North Pavilion</li> <li>P1 Pavilion One</li> <li>P2 Pavilion Two</li> <li>P3 Pavilion Three</li> <li>P4 Pavilion Four</li> <li>RC Resource Center</li> <li>SN Science North Building</li> <li>SS Science South Building</li> <li>ST Charlene R. Nunley Student Services Center</li> <li>WG West Garage (parking)</li> </ul>
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courtyards. Encourage pedestrian circulation through the interior courtyards and buildings of the East Campus to minimize impact on the surrounding neighborhood.

### 3. Preserve the Existing Character of the Historic Neighborhood Adjacent to the East Campus

- Utilize the four existing pavilion buildings on the east side of New York Avenue as appropriate until renovations are deemed necessary. These pavilions are needed to respond to the Campus' overall space need and for academic swing space during construction of new buildings on campus. Landscape the sites so that they respect the historic character of the community and encourage student use within these green spaces. Pavilion Three is currently being fully renovated, and Pavilion Four has recently had its HVAC systems renovated, leaving P1 and P2 in need of significant renovation.
- Vacate the existing Child Care Center at the corner of Pennsylvania Avenue and Takoma Street.

### 4. Implement the Facilities Master Plan to advance the sustainability and resource conservation objectives and programs of the College.

- Extend the existing high performance central plant distribution system to new and renovated buildings on the Campus. Building designs for new and renovated facilities should be undertaken in an environmentally sensitive manner that responds to the sustainability and resource conservation programs for the College. Building designs for new and renovated facilities should be completed to achieve Leadership in Energy and Environmental Design (LEED) Silver Certification.
- Look to improve operating efficiencies and energy conservation by replacing rather than renovating some of the oldest and outdated facilities on campus.

### 5. Investigate Opportunities for Future Campus Growth

- Look for opportunities to acquire and develop adjacent properties on Burlington Avenue and Fenton Street. This is a potential key gateway for the Takoma Park side of campus and a connector across to the Silver Spring side.
- Coordinate with Montgomery County regarding possible opportunities to develop facilities in Jesup Blair Park. Locating a structure in the park alongside the WMATA/CSX tracks and physically connected to the pedestrian bridge could:
  - o Strengthen the connection between the two sides of campus. This could be accomplished by building a new facility (potentially the Health and Fitness Center Building described in Section 2.5.4) in Jesup Blair Park rather than on the Takoma Park side of campus.
  - o Increase safety along the pedestrian bridge. This could be accomplished by incorporating the pedestrian bridge into a new building that is largely transparent to the outside.
  - o Enhance the views from the Silver Spring side of campus toward the Takoma Park side of campus by creating a visual barrier to the WMATA/CSX tracks and storage facilities across the tracks.
  - o Activate the connection between the East and West Campuses. If a College building such as a new Health and Fitness Center Building were located in the park, this type of facility could act as a well-lit, active space beacon that would facilitate a stronger connection and outreach to the Takoma Park and Silver Spring communities.

The long-term future development of the Campus should respond to the fact that the Campus straddles the WMA-

**FIGURE 2.14 COLLEGE TOWN ANALYSIS**

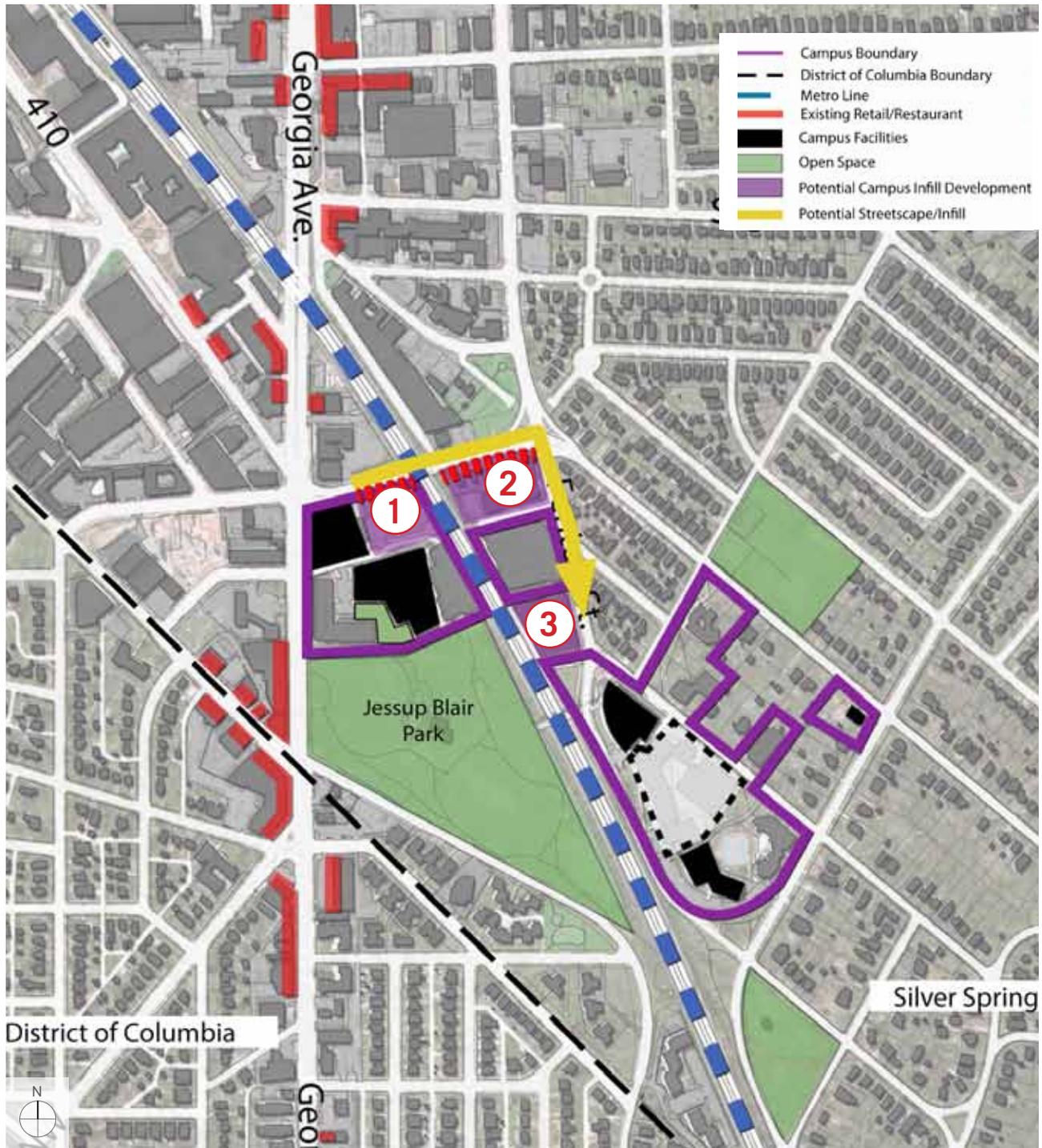


Image Not to Scale

- 1 - Montgomery College Foundation property
  - Will require negotiations etc.
  - Footprint is small and building on it will reduce parking
- 2 - Potential streetscape improvements and/or property acquisition would also benefit the College
- 3 - High-value Storage building - good location for College expansion

TA/CSX tracks and is sandwiched between a historic residential neighborhood in the City of Takoma Park (East Campus) and the high-density commercial area of the Silver Spring Central Business District (West Campus). The small parcels and the proximity of the residential neighborhood is a constraint on the intensity of development on the Takoma Park side. The presence of Georgia Avenue as a barrier and Jesup Blair Park limit expansion of the Campus to the west.

A possible scenario for future growth could be expansion along Fenton Street adjacent to the existing East Parking Garage. Acquisition and development of these parcels would allow for higher density development adjacent to both sides of the Campus. The opportunity to acquire available parcels should be considered in the future to support the long-range growth and development of the Campus. Further, acquisition and expansion along Burlington Street would strengthen the connection between the two sides of campus.

The Campus currently has one parcel possibly available to it for future development. This parcel is the existing surface parking lot located immediately east of the Cultural Arts Center. This property is currently owned by the Montgomery College Foundation, a non-profit organization which supports the College, but is not controlled by the College. While the future of the parcel's redevelopment is not identified with a programmed use at this time, the College anticipates that this site could provide the Campus with a unique opportunity for future growth and expansion.

## 2.5.2 Response to External Planning Factors

### College Town Plan

In the fall of 2014, Montgomery College, led by its Department of Advancement and Community Engagement, engaged a team led by U3 Advisors to create a College Town plan for Montgomery College.

The College Town Plan makes a range of programmatic and planning recommendations, many of which align with some of the goals of this Facilities Master Plan. They include recommendations as follows:

#### Short Term:

- Enhance gateways intersections with signage and landscape improvements at these intersections:
  - o Fenton St and Takoma Ave
  - o New York Ave and Takoma Ave
  - o Fenton St and New York Ave
  - o Georgia Ave and Burlington Avenue
- Implement interior signage and way finding
  - o Build on proposed improvements for campus edges and gateways.
  - o Improve signage and wayfinding between east and west campus.
- Identify interior building spaces and outdoor spaces that could host public events.
  - o Market the potential spaces to the surrounding community and local organizations.
  - o Investigate possibility and feasibility of hosting events in Jesup Blair Park
  - o Begin hosting public events.

**FIGURE 2.15 CURRENT CAMPUS PLAN**



EXISTING CAMPUS BUILDINGS

- |    |   |    |  |
|----|---|----|--|
| CF | The Morris and Gwendolyn Cafritz Foundation Arts Center | P1 | Pavilion One                               |
| CM | Catherine F. Scott Commons                              | P2 | Pavilion Two                               |
| CU | Cultural Arts Center                                    | P3 | Pavilion Three                             |
| DC | Child Care Center                                       | P4 | Pavilion Four                              |
| EG | East Garage (parking)                                   | RC | Resource Center                            |
| FH | Falcon Hall (Physical Education)                        | SN | Science North Building                     |
| HC | Health Sciences Center                                  | SS | Science South Building                     |
| MP | Mathematics Pavilion                                    | ST | Charlene R. Nunley Student Services Center |
| NP | North Pavilion  | WG | West Garage (parking)                      |

**Medium Term:**

- Prepare a feasibility study for building renovations.
- Identify sites, along campus edge, for potential acquisition or investment, such as properties along Georgia Avenue adjacent to Jesup Blair Park

**Long Term:**

- Implement building renovation plans, in phases
- If feasible, acquire and redevelop properties along campus edge
- Focus on properties along Georgia Avenue

**City of Takoma Park and Montgomery County Concerns**

Montgomery College and the City of Takoma Park have established an agreement regarding College development on the Takoma Park side of campus. This document, the Agreement between the City of Takoma Park, Montgomery College, Historic Takoma Inc and Montgomery County, dated July 30, 2002 essentially states that Montgomery College will:

- Submit plans for review of any of College property that is in the Takoma Park Historic District and adhere to the Montgomery County Code Historic Preservation Ordinance for those properties (note that only the College's Child Care Center Facility is in the Takoma Park Historic District;)
- Consult with the City of Takoma Park and the local community regarding substantial changes to any of their buildings;
- Will seek and obtain all local permit review required in the Takoma Park Historic District

The City of Takoma Park Master Plan, approved and adopted in 2000, acknowledges the College's need for expansion and identifies expansion opportunities on the Takoma Park and Silver Spring sides of campus, as well as in Jesup Blair Park.

**Neighbors**

Some neighbors on the Takoma Park side of campus have continuously opposed the College's development of their property, including renovations and new construction. The College has accommodated many of the neighbor requests for reducing massing of new buildings (for example, reducing massing of the Charlene R. Nunley Student Services Building along New York Avenue, reducing massing of the renovated Pavilion Three, and allowing one of the neighbors to have purview of exterior color selection on the renovated building.) New development proposals on the Takoma Park side of campus are nonetheless still opposed by a vocal minority of neighbors, who insist that the College shift all development to the Silver Spring side of campus, or acquire new properties along Fenton Street and locate College programs there.

While the College is also interested in growing the campus in these areas, there is currently no property readily available to the College on the Silver Spring side of campus or along Fenton Street, and acquisition of new properties for development is outside the purview of the ten-year planning period. Both these options are described above in Section 2.5.1, and also below in Section 2.6.3.

### 2.5.3 Proposed Campus Structure and Character

New construction over the last fifteen years on the Takoma Park/Silver Spring Campus, with the exception of the Student Services Center, has been on the Silver Spring (West) Campus. This area bounded by Georgia Avenue and the WMATA/CSX tracks has seen a transformation during this time, establishing a strong presence in the Silver Spring community along George Avenue, doubling academic space and creating 372 new parking spaces on the campus.

For the 2013-23 planning period, it is anticipated that the Campus renewal will focus on the East Campus. In consideration of the existing space constraints, the goal is to develop a higher density core along Fenton Street, while maintaining the scale of the existing structures along the edge of the residential community. Obsolete buildings for the sciences, math and the library are proposed to be replaced with new structures. Renovations of P1, P2 and P4 should maintain the general small scale of those structures.

#### Gateways and Views:

Proposed new construction along Fenton Street at Takoma Avenue, replacing Falcon Hall and Science South Building, will offer the opportunity to enhance the Campus gateway at that location. At the same time, new construction and building additions along New York Avenue should maintain a porous edge and continue to maintain and encourage views from New York Avenue into the Campus interior courtyards.

#### Open Space and Streetscape:

The outdoor spaces on the East Campus are critical components of the functioning of the adjoining buildings. Most buildings in the original campus currently open onto these landscaped spaces. The courtyards provide the little on-campus open space available to students.

Within the original campus the existing landscaped courtyards should be restored and retained. The plan proposes improving these spaces, with enhanced landscaping, pedestrian paths and amenities. The landscaping should reinforce the building entrances and pedestrian paths between them, while creating pockets of shady areas for study and congregation of students.

A new landscaped courtyard will be created as an integral part of the new Math and Science Center Building. This space could function as an outdoor classroom as part of the science teaching curriculum, and should be visually interconnected with the other courtyards. The redevelopment of this space should be phased with the construction of the new Math and Science Center Building. An existing memorial garden will be displaced during construction and replaced in a prominent location and integrated into the design and construction of the new courtyard.

The paths through the courtyards on Chicago Avenue and to the south of the Charlene R. Nunley Student Services Center should allow for strong visual and physical connections across New York Avenue.

#### Streetscapes

It is critical to maintain the streetscape along New York Avenue at a residential scale in keeping with the immediate neighbors across the street. On the other hand, Fenton Street faces the WMATA/CSX tracks and offers an opportunity for a taller, more dense streetscape. Where Fenton Street meets Takoma Avenue, the streetscape scale should be reduced to be a better fit with the neighborhood. This approach might manifest itself with four-story structures fronting Fenton Street, stepping down to two-story structures as they near Takoma Avenue or maintaining setbacks. Proposed new construction along New York Avenue should maintain a two-story height, but could step up to three stories toward the campus interior, similar to the massing of the Student Services Center.

Street trees are both an amenity to the Campus and serve to reinforce the existing character of the historic neighborhoods of Takoma Park. Trees should line all of the streets along the campus edges. The landscaped setback and mature trees along Philadelphia Avenue should be retained when Pavilion Four is renovated. In consideration of views from streets and courtyards, all loading areas, mechanical equipment and service areas should be screened from the street and pedestrian paths.

## 2.5.4 Proposed Building Projects

### Building Projects Summary

The 2013-2023 Building and Site Concept Plan is included as Figure 2.15, which documents the proposed location, footprint and height of proposed new buildings on Campus. The 2013-2023 Building and Site Concept Plan is in response to the space needs by academic grouping documented in Figure 2.14.

Below is a summary description of the proposed projects recommended in the 2013-2023 Building and Site Concept Plan. These summary project descriptions, along with additional work proposed in the 2013-2023 Landscape and Open Space Plan (See Figure 2.16), and recommendations from the utility and information technology infrastructure, environmental and sustainability, and circulation and parking sections will be used to develop responsive capital projects that address the identified facility needs through 2023. These projects will be the basis of the Facilities Master Plan.

#### 1. Math and Science Center Building (73,555 NASF 134,600 GSF)

This new facility is proposed to include: laboratories and prep rooms, classrooms, a Math and Science Learning Center, faculty and staff offices, a greenhouse, a planetarium and support space for the math and science programs on the Campus, including Math, Biology, Chemistry, Engineering, Geology, Meteorology, Astronomy, Computer Science and Physics. The new building has been developed to accommodate growth of existing programs and provide opportunities for new offerings to meet demand, such as cybersecurity classes. The building will be located on the site currently occupied by Science South Building and Falcon Hall.

The Math and Science Center Building will be completed in one phase, beginning with the demolition of Science South Building and Falcon Hall. This will permit academic programs to continue operation during construction in Science North Building, the Mathematics Pavilion and the Resource Center. Both buildings are far beyond their useful life and were assessed to have extremely high FCI ratings according to the VFA assessment completed in August 2015. Demolition of both structures will provide a significant footprint that can accommodate a new Math and Science Center Building.

#### Massing and Materials:

The new building will be constructed up against the setbacks for Fenton Street and Takoma Avenue. The building will be three stores in height, plus a mechanical penthouse. The proposed building forms a courtyard in the open space that is currently occupied by the tennis courts. The landscaped courtyard should be integrated into the new facility and possibly provide an outdoor classroom.

The northern edge of the proposed building will stop prior to Science North Building, allowing that building to remain and the science programs to continue to function during construction. Once the new Math/Science Center is complete, Science North Building could have minor renovations completed to allow temporary use as surge space or to accommodate overflow general classrooms.

#### 2. New Library Learning Commons (38,895 NASF 62,734 GSF)

This project replaces the existing Resource Center with a new Library Learning Commons, This new facility is pro-

**FIGURE 2.16 2013-2023 BUILDING AND SITE CONCEPT PLAN**



<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #4F81BD; margin-right: 5px;"></span> EXISTING BUILDING</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #F0E68C; margin-right: 5px;"></span> NEW BUILDING</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #D9534F; margin-right: 5px;"></span> RENOVATION BUILDING</li> </ul>	<ul style="list-style-type: none"> <li>CF The Morris and Gwendolyn Cafritz Foundation Arts Center</li> <li>CM Catherine F. Scott Commons</li> <li>CU Cultural Arts Center</li> <li>DC Child Care Center</li> <li>EG East Garage (parking)</li> <li>HC Health Sciences Center</li> <li>P3 Pavilion Three</li> <li>P4 Pavilion Four</li> <li>ST Charlene R. Nunley Student Services Center</li> <li>WG West Garage (parking)</li> </ul>
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**1 MATH AND SCIENCE CENTER BUILDING**  
FOOTPRINT - 45,000 GSF  
TOTAL(3FL) - 134,600 GSF

**2 LIBRARY LEARNING COMMONS**  
FOOTPRINT - 17,200 GSF  
TOTAL(4FL) - 67,734 GSF

**3 MATH BUILDING**  
FOOTPRINT - 15,200 GSF  
TOTAL(3FL) - 45,600 GSF

**4 HEALTH AND FITNESS CENTER**  
FOOTPRINT - 29,400 GSF  
TOTAL(1-2FL) - 49,230 GSF  
**PARKING GARAGE**  
TOTAL(2FL) - 220 +/- SP

**5 HUMANITIES / BUSINESS & SOCIAL SCIENCE**  
RENOVATE PAVILION 1 + 2

**FIGURE 2.17 2013-2023 LANDSCAPE AND OPEN SPACE PLAN**



- |   |  |  |
|---|--|--|
| <span style="display: inline-block; width: 20px; height: 10px; background-color: #f08080; border: 1px solid black;"></span> NEW GATHERING SPACE   | <span style="display: inline-block; width: 20px; border-bottom: 2px dashed red;"></span> STUDENT WALKING RADIUS                              | CF The Morris and Gwendolyn Cafritz Foundation Arts Center |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: #90ee90; border: 1px solid black;"></span> EXISTING KEY AREA   | <span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%;"></span> MAJOR BUILDING ENTRANCE | CM Catherine F. Scott Commons                              |
| <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black; clip-path: polygon(50% 0%, 61% 35%, 98% 35%, 68% 57%, 98% 57%, 79% 91%, 50% 70%, 21% 91%, 32% 57%, 2% 57%, 39% 35%, 6% 35%);"></span> PRIMARY CAMPUS PEDESTRIAN PATH |  | CU Cultural Arts Center                                    |
| <span style="display: inline-block; width: 10px; height: 10px; border-bottom: 2px dashed black;"></span> SECONDARY CAMPUS CIRCULATION AXIS  |  | DC Child Care Center                                       |
|   |  | EG East Garage (parking)                                   |
|   |  | HC Health Sciences Center                                  |
|   |  | P3 Pavilion Three  |
|   |  | P4 Pavilion Four   |
|   |  | ST Charlene R. Nunley Student Services Center              |
|   |  | WG West Garage (parking)                                   |

- 1 Create interconnected, landscaped courtyards that:
  - reinforce the building entrances and pedestrian paths between them;
  - create shady areas for study and congregation;
  - provide vistas and transparency from New York Avenue.
- 2 Create a new landscaped courtyard in between the Commons and Math and Science Center Building.
- 3 Enhance the street trees along the edge of all streets.
- 4 Create visual and physical links across New York Avenue between courtyard spaces.

posed to include: student study space (group and individual), space to access library services, stack and library processing and service space, a Computer Training Center and both a Social Sciences Learning Center and a Reading and Writing Learning Center, instructional space as well as a Media Resources Facility, offices and support space. The building will be located on the site currently occupied by the North and Mathematics Pavilions and will require the demolition of the North and Mathematics Pavilions.

The new building could physically link with the Student Services Center, continuing the interior pedestrian connections there and forming another lobby/atrium space for campus assembly uses and as a hub for connections to future buildings, such as the new Health and Fitness Center Building on the site of Science North Building.

This project has been sequenced to allow the existing Resource Center to remain functional during construction of the new building. The proposed demolition of the two pavilions and the existing Resource Center is supported by their functional inadequacy and the poor condition of the buildings as reflected in their low FCI ratings. Taken together, demolition and replacement is appropriate given the need to also provide for additional space to support program growth.

Careful planning of this project will be required to ensure that existing adjacent facilities are minimally disrupted during the construction process. Functional requirements will require that a single access point to the Library Learning Commons is provided for appropriate management of the collection, and that building support functions are appropriately aligned with the processing and collection management functions.

#### Massing and Materials:

The new Library Learning Commons should be designed to minimize its apparent size along New York Avenue. Design strategies that will be employed in the design of the building include stepping back the third floor along New York Avenue to reduce its height from the street, allow for transparency through the building to the campus courtyards, and articulating the building mass in keeping with the small scale of the adjoining residential neighborhood. There is a possibility, because of the existing topography to step down the Library Learning Commons with the slope or to partially bury one floor on the north side to help reduce the scale of the building.

Upon the completion of the Library Learning Commons, the outdoor areas that served as staging areas for the construction of this building and the Math and Science Center Building can be developed and landscaped. The design and quality of the outdoor spaces in the central core of the campus will be critical to the functioning of these buildings and the image of the campus.

### 3. New Math Building (27,360 NASF, 45,600 GSF)

This new facility is proposed to meet the total enrollment projections for the Math program that will not be able to be accommodated in the new Math and Science Center Building. It is intended to foster interdisciplinary collaboration between programs and is planned to include: general use classrooms, computer laboratories, meeting space, faculty and staff offices and support space.

Massing and Materials: Situated along New York Avenue, this building should be designed to minimize its apparent size along New York Avenue. It is proposed as a 2-3 story building, with the 2-story portion fronting New York Avenue, stepping up to three stories toward the campus center.

### 4. Health and Fitness Center (32,900 NASF 49,230 GSF)

This project replaces Falcon Hall and provides for structured parking partially below grade.

The new facility will be in response to demolishing Falcon Hall and Science South Building to provide an adequate site for the new Math and Science Center Building and to address the very poor condition of and substantial deferred maintenance backlog in both buildings. The new Health and Fitness Center will be located on the

site currently occupied by Science North Building and will house the Physical Education program and supporting activities including large multi-purpose athletic training and activity spaces, office, general classrooms and support spaces. This facility will be used for multiple purposes including academic instruction, student, faculty, staff and community recreation and wellness, as well as for campus and community events. The new facility is proposed at 32,200 NASF (49,230 GSF). This project will also include the construction of an underground parking structure with a capacity of about 220 spaces.

This project will require demolition of Science North Building, which, until its demolition, will very likely continue to be used for Math and Science instruction and support space until funding for the Health and Fitness Center has been secured. Science North Building will be demolished and redeveloped for the Health and Fitness Center. Future investment in the building will be limited to the minimum to keep it in operating condition to support Math and Science.

The proximity of the new Health and Fitness Center to the existing Charlene R. Nunley Student Services Center and the proposed new Library/Learning Commons creates an opportunity to physically link the three buildings, possibly with an extension of the large atrium already existing in the Student Services Center. This building is proposed at two stories, with the expectation that some of the interior spaces such as gymnasiums will be double-height spaces.

**Parking Garage:** The Health and Fitness Center is proposed to be built over a two-level underground parking structure. This parking structure would have to be built before the Health and Fitness Center. Entry and exit for cars would be from Fenton Street.

While the campus is significantly limited in outdoor athletic facilities, nearby public parks provide space for athletic facilities, including tennis courts and ball fields. The College will coordinate with the appropriate public agencies for use of nearby public park athletic facilities for soccer, softball and tennis.

Note that an alternative location for this building in Jesup Blair Park is shown in the 2023-33 Land Use Plan and in fact may be the preferred location for this planning period if feasible. Building in the park would allow the facility to serve as a connector for the two sides of campus and as a community amenity. It would help activate and increase security in this underutilized area of the park and could be a beacon of light and a strong visual symbol. It would also screen the tracks and the back of the storage building across the tracks from view from Jesup Blair Park. The campus ramp from the pedestrian bridge can be integrated into the building, which would enhance the ramp and building with views into fitness and other public areas and views out toward the park. A College use facility in this general area of Jesup Blair Park has been proposed in the 2000 City of Takoma Park master plan.

## **5. Renovation of Pavilion One and Pavilion Two: (9,295 NASF, 14,771 GSF):**

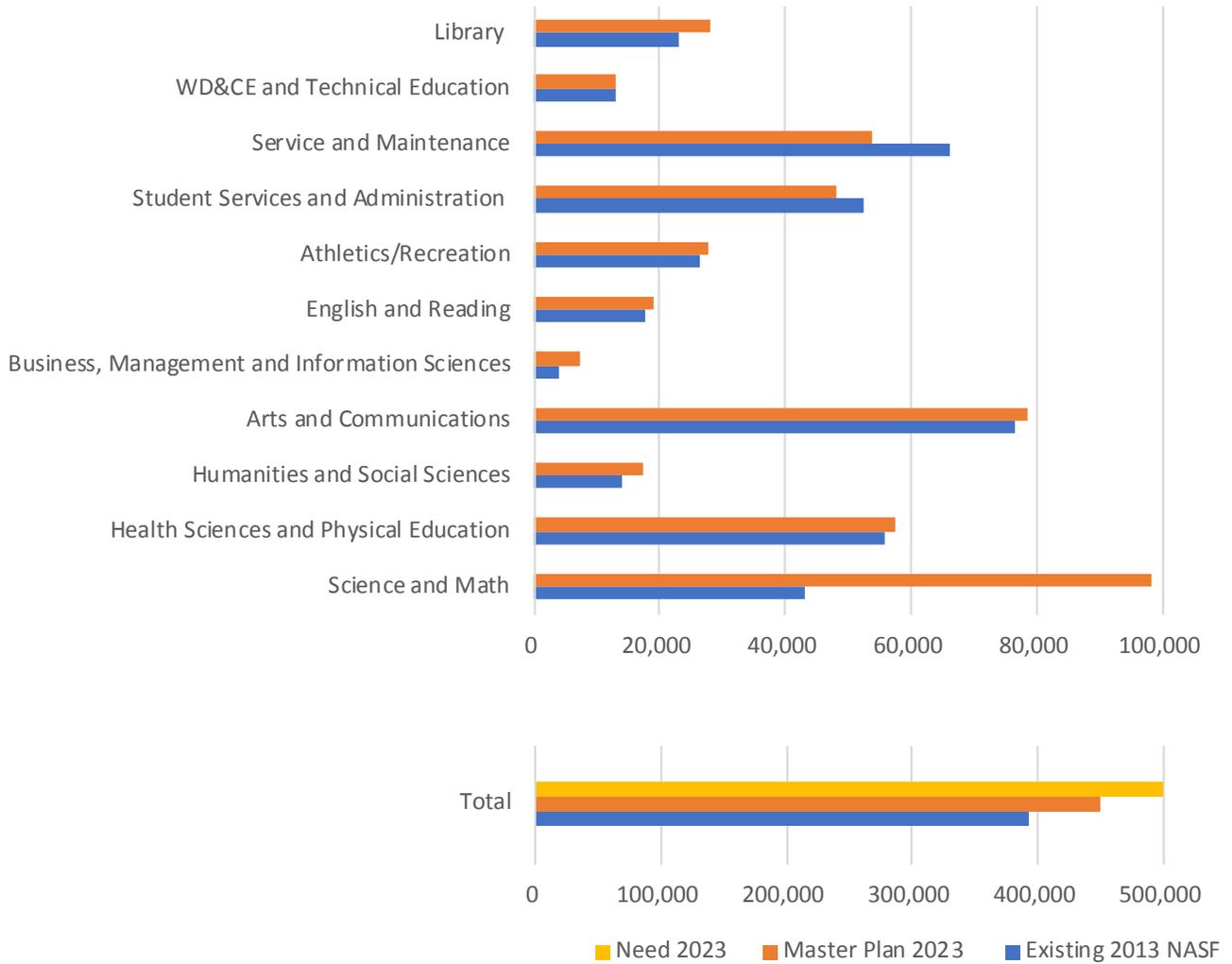
Both pavilions will be renovated to support humanities and social sciences as well as general instructional space for campus. Because of the relatively high FCI rating and deferred maintenance backlog, each of these buildings will need significant renovation and reinvestment in the future to ensure they continue to function to support the programs in the buildings and the campus in general.

## **6. Child Care Center:**

The existing Child Care Center located on the corner of Philadelphia and Takoma Avenues will be vacated and is not yet scheduled for repurposing or reuse. The College has decided to discontinue offering childcare at the Takoma Park/Silver Spring campus.

Figure 2.13 illustrates how the proposed projects described in this section will address space guideline needs projected for 2023.

**FIGURE 2.18 PROPOSED PROJECTS IMPACT ON PROJECTED SPACE NEEDS, FALL 2023**



### 2.5.5 Proposed Pedestrian and Bike Circulation

Pedestrian desire lines on the Takoma Park/Silver Spring Campus are very clear, due to the concentration of parking and the limited crossings of the railroad tracks linking the east and west sides of the Campus. The Charlene R. Nunley Student Services Center is a meeting point where the pedestrian desire lines connect. One guiding principal of the Facilities Master Plan is to reinforce and enhance the pedestrian connections on the Campus.

The plan makes adjustments to the existing courtyards and proposes a new courtyard in the central core of the Campus, providing clear paths between the entrances of new and existing buildings. In addition, the Facilities Master Plan seeks to enhance pedestrian movement between the two portions of the Campus by proposing improved landscaping, wayfinding signage and paving at the pedestrian plaza just across the street from the Student Services Center.

The plan also proposes landscape improvements to the open green space between P1, P2 and P4. This is in fact the largest open space on this side of campus and its use and appearance could be enhanced significantly.

### 2.5.6 Proposed Vehicular Circulation and Parking

The key proposals and potential transportation impacts and needs are discussed below. Note that vehicular and pedestrian circulation, which includes both the volume and distribution of traffic, is dictated to a significant degree by the location, capacity and management of parking facilities. As such, the analysis of future parking demand, and the supply that will be available to meet that demand, is presented first.

#### Parking

- According to MHEC standards, the parking requirement for the 2023 campus population is 3,128 spaces.
- An alternative method for calculating the 2023 parking requirement is described in section 2.2.5.
- The existing parking supply is 1,273 spaces.
- The 10-year change in parking supply resulting from the projects indicated in the proposed Facilities Master Plan includes loss of 87 existing spaces in the Falcon Hall lot and construction of 220 new garage spaces under the proposed Health and Fitness Center.
- The resulting 2023 parking supply is 1,406 spaces. Compared with the parking requirement, the deficit is 1,722 spaces using the MHEC standards and 242 spaces using the alternative requirement.
- In summary, using MHEC ratios, the 2023 parking requirement (demand) is for 3,128 parking spaces. With a 2023 parking supply of 1,406 spaces, including 220 spaces under the proposed Health and Fitness Center, that leaves the campus with a 2023 deficit of approximately 1,722 spaces per MHEC standards.

The recommendation is for the College to continue to closely monitor enrollment growth and parking demand on an annual basis. If enrollment grows as planned or faster, the College should consider enlarging the proposed Health and PE Building parking structure, evaluate other options to build or lease more parking and/or take actions to incentivize and encourage increased use of mass transit, biking and walking to address and manage demand.

#### Vehicular Access

Parking for the West Campus is accessed off Georgia Avenue via King Street and Jesup Blair Drive. Both access points are currently unsignalized. The King Street access point also provides access to commercial developments and public parking located along this roadway to the west of Georgia Avenue. Jesup Blair Drive also provides primary vehicular access to the adjacent Jesup Blair Park. Based on these considerations, signalization, geometric and pedestrian crossing improvements should be considered at these intersections with Georgia Avenue.

In order to address concerns about vehicle drop off and pick up, it is suggested that a new passenger drop off/pick up area be established on Fenton Street in the vicinity of the new Health and Fitness Center. Signage and pedestrian walkway improvements are needed to support and encourage use of this new drop off/pick up area. This improvement should be designed to set back curb line to allow vehicles stopped to be out of the driving lane and not impede traffic flow.

### **Vehicle Trip Generation Impacts**

The impact associated with the Facilities Master Plan is driven by the location and capacity of the Campus parking facilities. Since the new parking spaces are located on the east side of the WMATA tracks, new trips and traffic impacts would be focused on the East Campus. The net increase in parking is 133 spaces. Additional trips generated by this new parking were estimated using information from a 2005 traffic study completed by Wells & Associates that assessed the impact of planned development of the West Campus. That study estimated the number of vehicle trips generated by additional on-site parking (440 spaces in a structure and surface parking lot) based on 2005 traffic surveys of inbound/outbound trips and the previously-existing parking supply. Using that information, it is estimated that 133 new spaces on East Campus would generate an additional 46 a.m. peak hour vehicle trips (total inbound and outbound) and 28 additional p.m. peak hour trips. Those trips would be dispersed over several streets and directions, and are not likely to cause additional congestion.

If more parking ends up being provided than what is proposed above, then the traffic impact of those additional spaces should be analyzed at that time.

### **2.5.7 Transit Recommendations**

The Takoma Park / Silver Spring campus is well served by existing Metro Bus and Ride On services. A high level of transit mode share has been achieved through the Montgomery College Transit Pass program that allows Montgomery College students to use the Ride On bus service free of charge.

Without assuming the cost and management burden of expanded transit services, Montgomery College should continue to support and promote transit commuting and carpooling. Specific recommendations applicable to the Takoma Park / Silver Spring campus are:

1. Conduct annual staff Commuter Surveys through Montgomery County Commuter Services program.
2. Participate in Metro's SmartBenefits Transit Benefits Program.
3. Promote transit and ridesharing options for students during fall and spring semester registration.
4. Establish and maintain a Montgomery College Ridesharing App similar to the Montgomery County Community College, Pennsylvania program that can be found at <https://www.zimride.com/mc3/>.
5. Provide priority parking for carpools and vanpools.
6. Work with the Montgomery County Department of Transportation Bus Stop Improvement Program to enhance passenger shelters and amenities at Ride On and Metro Bus stops serving the Takoma Park /

### Silver Spring Campus.

7. Develop specific transit wayfinding maps and signs on the Campus that guide new students, visitors and occasional transit users to available transit services. These transit wayfinding maps should show bicycle and pedestrian routes along with local and regional transit services. The transit wayfinding maps may be incorporated into existing wayfinding maps. The graphics should be updated regularly and posted in gateway locations, key buildings and on the Montgomery College website.
8. The Office of Facilities - Transportation webpage should be updated to provide transit, bicycling and carpooling maps and information that are tailored to each campus so that facility and current and prospective students can easily identify alternative transportation services.

## 2.5.8 Major Utility Recommendations

Coordinating future utility and information technology infrastructure is an integral part of a successful planning process. The College's Utility Master Plan update is being prepared as part of a separate, but coordinated effort, to optimize the use of utility resources while minimizing potential disruptions, as well as costs. As part of this planning process, the 2006 Utilities Master Plan and 2012 Utilities Master Plan Update for the Takoma Park/Silver Spring Campus were reviewed to determine the adequacy of existing systems and to ascertain the potential for future expansion. As the current Facilities Master Plan is implemented there will be a series of on-going evaluations and analyses undertaken to determine a more complete picture of the utility and information technology infrastructure impacts.

### Mechanical

The existing central chilled water and heating plants have adequate capacity to meet the current and projected future demands. District heating and cooling mains will be extended to new building sites as those buildings are constructed. The most significant mechanical issue is the age of many of the HVAC systems in existing buildings, which have exceeded their expected life and rely on older technology. There is an ongoing effort already in place to replace those systems with more efficient equipment and connect buildings to the central plants. As each building is renovated, the local DX units will be replaced with connections to the central heating and cooling plants.

Future renovations should target LEED Gold Certification to achieve a high level of cost effective energy efficiency. Energy benchmarks should be established for each major building compared to equivalent, energy efficient buildings to document potential savings that could be achieved with systemic renovation of HVAC and electrical systems. The results of the benchmarking effort will assist allocation of capital resources to renovation of buildings with the greatest potential for energy savings.

### Electrical

The existing Pepco feeders have adequate capacity to accommodate planned campus expansion. The existing 13.2 KV overhead and underground medium voltage lines will be extended in concrete encased ductbank to serve new pad mounted step down transformers for new buildings in the future. The existing feeders should be upgraded with 15 kV loop switches to provide loop distribution system to distribute electrical service in two directions to increase the reliability.

### Civil

The majority of the proposed building projects will not impact major utilities. The existing chilled and hot water supply/return lines along New York Avenue will likely be impacted by construction of the new Library Learning Commons. In addition, the existing 6" natural gas line along Fenton Street may be impacted by construction of

the new Health and Fitness Center. Careful coordination will be required during construction to minimize disruption to service during any relocation of utilities.

It is recommended that all future projects maintain existing drainage patterns in order to avoid possible, otherwise unnecessary, upgrades to downstream public storm drain systems.

### 2.5.9 Information Technology Recommendations

The addition of new buildings in the Facilities Master Plan will require extending the ductbank system from the nearest available telecommunications manhole to the new building locations. Four (4) new buildings are planned for the TP/SS Campus, and will require sitework/infrastructure to be extended as follows:

TABLE 2.16  
TP/SS CAMPUS INFORMATION TECHNOLOGY DUCTBANK RECOMMENDATIONS

Bldg #	Name	Ductbank	Fed From
1	Math and Science Center Building	Four (4) 4" Conduits	Manhole near CM Bldg
2	Library Learning Commons	Four (4) 4" Conduits	Extend from ST Bldg
3	Math Building	Three (3) 4" Conduits	Manhole near CM Bldg
4	Health and Fitness Center	Five (5) 4" Conduits	Extend from ST Bldg

Source: Montgomery College Office of Institutional Research, 2015

The college is currently in the process of completing a New Information Technology Master Plan, addressing major issues such as a transition to cloud based services in lieu of campus data centers. If and when this transition occurs, the existing data centers will be abandoned and repurposed. Typical building telecom rooms will need to be slightly larger than in the past. Connectivity requirements between buildings will remain unchanged.

### 2.5.10 Natural Systems and Sustainability Recommendations

#### Stormwater Management

Stormwater Management is governed by the State of Maryland Stormwater Management Act of 2007, which requires the development of a stormwater management plan that implements Environmental Site Design (ESD) to the “maximum extent practical” and ensuring that structural best management practices are only used where absolutely necessary.

ESD is defined as using small-scale stormwater management practices, non-structural techniques, and better site planning to mimic natural hydrologic run-off characteristics and minimize the impact of land development on water resources. ESD includes conserving natural resources (drainage patterns, soil and vegetation); minimizing impervious surfaces (roads, walks, roofs) to increase infiltration and evapotranspiration; and using other non-structural practices and innovative technologies.

Moving forward, to ensure ESD SWM requirements are met, site planning should make every effort to maximize green roofs on future buildings and also allow for adequate green space directly adjacent to buildings for the implementation of micro-bioretenion facilities either in the form of at-grade planting beds or concrete planters.

## Forestation Update

Due to the compilation of all of the previous forest conservation plans, all existing and future development for the West Campus will fall under one forest conservation plan. Although amendments may need to be made to the plan, all five parcels of the West Campus can be developed under the currently approved plan.

If the entire East Campus area were to be “disturbed” during future construction operations, the required afforestation would be approximately 1.65 acres. Actual afforestation requirements will likely be less, particularly if the proposed development meets the requirements to be exempt from forest conservation requirements. The Commons, Pavilion Three, and Pavilion Four renovation projects have all been exempt from forest conservation requirements. City of Takoma Park tree replacement requirements will be addressed on a project by project basis depending on which trees are removed. Coordination efforts between M-NCPPC and the City of Takoma Park Arborist for forest conservation, tree protection and tree replacement requirements must be taken into account with future development of the East Campus.

## Sustainability and Smart Growth

The Facilities Master Plan for the Campus evokes Smart Growth philosophies of renovation of existing structures and, when not possible, intensification of development on existing parcels. The Campus remains compact and intensely developed. Parking is primarily located in two centralized garages and walkability is emphasized in the design of all buildings.

In addition, all new structures will strive to meet the LEED silver rating for new construction and renovations. Strategies for increasing the sustainability of the new facilities include:

- Incorporating innovative waste water technologies;
- Reducing building water use through high-efficiency fixtures and collection / reuse of stormwater;
- Optimizing energy performance of buildings through cost effective energy efficient measures including on-site renewable energy, and high-efficiency lighting and HVAC systems;
- Connecting to existing high performance central plants for energy efficiency, demand management and economies of scale;
- Incorporating sustainable construction waste management;
- Building with materials with recycled content, manufactured regionally, and/or manufactured using renewable resources;
- Maintaining healthy environments through increased ventilation, thermal comfort and clean air; and
- Providing interior spaces with daylight.

Site based strategies for increasing the sustainability of the new facilities include:

- Creating density of structures leaving land for open space;
- Selection of appropriate native or adapted plant materials requiring minimal or no irrigation;
- Creating and maintaining habitats that promote biodiversity;

- Managing stormwater quality and quantity through green roof systems and rain gardens;
- Reducing the heat island effect by providing trees for shading paved surfaces and by using open grid or light-reflective material for hardscape;
- Creating cool roofs by using high-reflective roofing materials in conjunction with green roof systems; and
- Limiting light pollution with dark sky fixtures.

Currently, a majority of students arrive to the campus by mass transit or ride sharing. The College is committed to continuing to encourage alternative modes of transportation to the Campus, coordinating with County bus services, providing transit facilities on Campus, and providing students with education and incentives to reduce automobile usage.

**FIGURE 2.19 2023-2033 LAND USE PLAN**



<div style="display: flex; align-items: center; margin-bottom: 10px;"> <div style="width: 20px; height: 20px; background-color: #4f81bd; margin-right: 5px;"></div> <span>EXISTING BUILDING</span> </div> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; border: 2px dashed red; margin-right: 5px;"></div> <span>POTENTIAL EXPANSION OPPORTUNITY</span> </div>	<table border="0"> <tr> <td style="padding-right: 10px;">CF</td> <td>The Morris and Gwendolyn Cafritz Foundation Arts Center</td> <td style="padding-left: 20px;">P3</td> <td>Pavilion Three</td> </tr> <tr> <td>CM</td> <td>Catherine F. Scott Commons</td> <td>P4</td> <td>Pavilion Four</td> </tr> <tr> <td>CU</td> <td>Cultural Arts Center</td> <td>ST</td> <td>Charlene R. Nunley Student Services Center</td> </tr> <tr> <td>DC</td> <td>Child Care Center</td> <td>WG</td> <td>West Garage (parking)</td> </tr> <tr> <td>EG</td> <td>East Garage (parking)</td> <td></td> <td></td> </tr> <tr> <td>HC</td> <td>Health Sciences Center</td> <td></td> <td></td> </tr> </table>	CF	The Morris and Gwendolyn Cafritz Foundation Arts Center	P3	Pavilion Three	CM	Catherine F. Scott Commons	P4	Pavilion Four	CU	Cultural Arts Center	ST	Charlene R. Nunley Student Services Center	DC	Child Care Center	WG	West Garage (parking)	EG	East Garage (parking)			HC	Health Sciences Center		
CF	The Morris and Gwendolyn Cafritz Foundation Arts Center	P3	Pavilion Three																						
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EG	East Garage (parking)																								
HC	Health Sciences Center																								



## 2.6 IMPLEMENTATION

### 2.6.1 Projected Costs

An estimate of project costs for the design, construction and furnishing of the various projects included in the 2013-2023 Facilities Master Plan is illustrated below.

TABLE 2.16 TP/SS CAMPUS COST ESTIMATE

### 2.6.2 Project Sequencing

Project sequencing is identified in Figure 2.15 with building projects numbered according to their proposed sequence.

### 2.6.3 Land Use Plan 2023-33

This Facilities Master Plan proposes some strategies for managing growth on this campus beyond 2023. By the time the building projects represented on this plan have been completed, most, if not all of the developable parcels owned by the College will be developed with new buildings or substantially renovated. If the College is to grow either in student body or facilities, new off-campus sites will need to be acquired.

There remains one developable parcel in the West Campus, adjacent to the Cultural Arts Center on Burlington Avenue. This site could be developed in the future and would make an ideal location for an academic building associated with the Arts or with Health Sciences. There are no vacant parcels owned by the College available for development on the East Campus.

To knit the West and East Campuses together, development of existing properties along Fenton Street and Burlington Avenue should be pursued. These sites include two self-storage facilities, an automobile repair shop and several former residential properties now used as car dealerships. Future campus uses for these sites would range from expansion of the East Garage to construction of a four or five story academic building. Development of these properties may allow for opportunities to span across the WMATA/CSX tracks with pedestrian bridges and/or academic structures. (See Figure 2.17 2023 to 2033 Land Use Plan).

- Coordinate with Montgomery County regarding possible opportunities to develop facilities in Jesup Blair Park, in particular the proposed Health and Fitness Center described in Section 2.5.4.
- Increase safety along the pedestrian bridge. This could be accomplished by incorporating the pedestrian bridge into a new building that is largely transparent to the outside.
- Enhance the views from the Silver Spring side of campus toward the Takoma Park side of campus by creating a visual barrier to the WMATA/CSX tracks and storage facilities across the tracks.
- Activate the connection between the East and West Campuses. If a College building such as a new Health and Fitness Center were located in the park, this type of facility could act as a well-lit, active space beacon that would facilitate a stronger connection and outreach to the Takoma Park and Silver Spring communities.

**FIGURE 2.20 2013-2023 AERIAL VIEW**







# 3



## GERMANTOWN CAMPUS



## 3.1 CAMPUS BACKGROUND INFORMATION

### 3.1.1 Introduction

The College began offering classes in the up-county in September 1975, initially holding them in high school classrooms. Three years later in 1978, the Germantown Campus opened in its present location in the newly constructed Science & Applied Studies, and Humanities & Social Sciences buildings. The Germantown Campus is the College’s newest campus and is located just 30 miles north of Washington, D.C. The Campus has continued to grow since its origin and today serves over 7,500 full-time and part-time day, evening and weekend students.

Building on the success of the biotechnology instructional programs, the Campus has begun sowing the seeds of the next generation of scientists and laboratory researchers through a collaborative project to construct a life sciences park, a County operated technology incubator and a Bioscience Education Center. In 2014 the new Holy Cross Germantown Hospital opened on campus and serves as the anchor tenant for the Pinkney Innovation Center for Science and Technology at Montgomery College (PIC MC). The faculty and staff work closely with the businesses on the I-270 high-tech corridor to create mutually beneficial student learning opportunities. In addition, the campus hosts a cybersecurity/networking program and is a founding member of CyberWatch, a consortium of over 70 colleges and universities, preparing skilled cybersecurity/networking technicians. These visionary initiatives and projects have laid a foundation to ensure that the local biotechnology industry continues to thrive to the benefit of the students and the greater community in meeting local and state needs.

### 3.1.2 Institutional Characteristics

The Germantown Campus is the most suburban of the three campuses and has the smallest student body, but only slightly smaller than that of the Takoma Park/Silver Spring Campus. However, it is anticipated that the Germantown Campus is positioned to potentially grow at a considerably faster rate over the next decade in comparison to the two other campuses.

Currently, the Campus is diverse with nonwhites representing 68.2% of the student body. The mean age of a Germantown student is 25.5 years with traditional age students (18-20 years of age) still leading all age groups comprising 35.0% of the total student enrollment. Approximately 94% of all students reside in Montgomery County, which is the highest percentage of the three College campuses. In addition, the Campus has the second highest percentage of female enrollment at 54.3% behind Takoma Park/Silver Spring. Figures 3.01 through 3.02 provide an overview and snapshot of the Germantown Campus student body as it relates to Enrollment Status and Day/Evening Students.

FIGURE 3.01 GERMANTOWN CAMPUS ENROLLMENT STATUS, FALL 2013

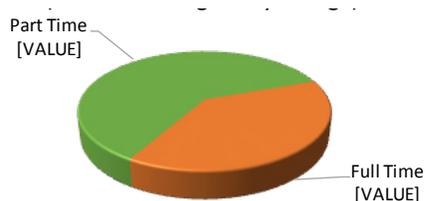
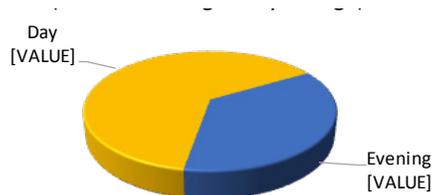


FIGURE 3.02 GERMANTOWN CAMPUS DAY AND EVENING STUDENTS, FALL 2013



The Campus' intercollegiate athletic program sponsors a men's baseball team. Campus-based central administration and student support services include the library, information technology support, admissions and registration, financial aid, cashiering, physical plant, and auxiliary services. The latter includes the Child Care Center, book store, and food services.

The Germantown Campus has always made a special commitment to community use of its library, swimming pool, and other College facilities for club, association, or civic activities. This commitment is taking on a new and dynamic perspective as the campus envisions having a "world class" bio-technology program attracting students, faculty, sponsors, and corporate partners from around the world and serving the needs of the bio-technology industry in Montgomery County. The College commissioned two planning studies to create a framework for the development of life sciences programs and bio-technology park. In October 2014, Montgomery College published the Strategic Business Plan, Partnership Program and Integrated Campus for Resident Partners. It guides the planning and physical development of the Life Sciences Park at the Germantown campus. In May 2015, Montgomery College published another master plan, The College Town Plan. Like the plan for the Germantown campus, it too creates a framework for development. The College Town Plan focuses on all three Montgomery College Campuses, and it develops strategies for integrating each of the campuses into the surrounding communities. Part of this vision entails providing a "one-stop" shop for industry looking for employee training and for students seeking an excellent education or training in specific science and technology skills. Both non-credit and credit programs through the baccalaureate degree and beyond are expected to be offered by the College. In August of 2014, the Bioscience Education Center opened. This new facility supports both the College's instructional and workforce development programs.

### **3.1.3 Comparison with 2006-16 FMP**

The 2006-2016 Facilities Master Plan focused campus development on the north with the relocation of the future Student Services Center to a site alongside the new northern entrance of the Campus. The 2006-2016 Facilities Master Plan also added two new building on the Campus, the Goldenrod Building located on an adjacent parcel that was purchased by the College in 2011, and a future Art & Humanities Building to be located along the north edge of the Campus. The 2006-2016 Facilities Master Plan indicated an approximately 40-acre bioscience and technology business park for the Germantown Campus (referred to then as the Life Sciences Park.) The updated 2013-2023 Facilities Master Plan continues to call for more compact campus development of new buildings on the northern edge of the Campus. This approach will preserve portions of the Campus to the southeast for long-term development opportunities for the Pinckney Innovation Center for Science and Technology at Montgomery College (PIC MC - the current name for the Life Sciences Park). Overall the 2006-2016 Facilities Master Plan took into account Montgomery County's plan for supporting the development of the PIC MC, providing for the extension of Observation Drive along and through the western side of the Campus, providing new campus entrances to the north and south, and ensuring the preservation of a significant forest conservation area that includes both the Gunners Branch stream valley and the forest stand on the west side of the Campus. In addition, the 2006-2016 Facilities Master Plan provided for compliance with the new State regulations for storm water management with the provision of a pond to be located at the southern end of the Campus that could also serve the Science & Technology Park.

Since the 2006-16 Facilities Master Plan was approved, several projects have been completed or are in progress at the Germantown Campus. These include completion of the new Bioscience Education Center, the Child Care building, and the Greenhouse. The construction of Parking Lot 4 and the extension Observation Drive down to Middlebrook Road are also complete. In 2013, Holy Cross Germantown Hospital opened, completing the first component of the Pinckney Innovation Center for Science and Technology at Montgomery College (PIC MC). Both the 2006-2016 and 2013-2023 Facilities Master Plans proposed new projects on the Germantown

Campus, adding to the Campus net assignable square foot space inventory and responding to the ten year space deficiencies of each plan. The near term projects in both plans include new buildings – Student Services Center, Library Learning Commons, Arts Communications and additional Science and Math Buildings – and renovations to Physical Education, Science & Applied Studies, Humanities & Social Sciences, High Technology & Science Center.

### 3.1.4 Academic Programs

Montgomery College is authorized by the Maryland Higher Education Commission to offer five degrees: the Associate of Arts (A.A.), the Associate of Science (A.S.), the Associate of Arts in Teaching (A.A.T.), the Associate of Fine Arts (A.F.A.) for students wanting to transfer to baccalaureate programs and the Associate of Applied Science (A.A.S.) for those seeking immediate employment. The College also awards certificates (Cert) that focus on the development of technical skills, as well as letters of recognition (L of R) for non-degree seeking students who satisfactorily complete certain courses that teach focused skills and competencies.

In addition to general education and honors courses, the Germantown Campus offers fifty (50) different degree programs, twenty-four (24) certificate programs, and six (6) letter of recognition programs. Table 3.01 inventories the academic programs on the Campus. Academic programs uniquely offered at the Germantown Campus include the A.A.S degree and certificate in Biotechnology, the certificate in Technical Writing, the A.A.S degree and certificate in Landscape Technology and an A.A.S. degree and certificate in Cybersecurity. Further, the A.A.S. degree program in Biotechnology and the certificate program in Technical Writing are approved as State-wide programs. These State-wide programs are available to students from other geographic areas where the local community college does not offer the same program. The non-credit programs offered on the Germantown Campus by Workforce Development & Continuing Education are not included in these counts.

The Germantown Campus, augmented by the PIC MC and the Montgomery County Business Innovation Center, is poised to play a critical role in addressing workforce shortages in Science, Technology, Engineering and Mathematics (STEM) and health care fields as well as the statewide need for teachers in related subject areas, while simultaneously providing students unique and vital opportunities for applied and experiential learning.

From its inception, the PIC MC has been seen as a way to ensure that the supply of well trained and educated workers in Life Science and STEM fields meets the growing demand for these skills in Montgomery County. The integration of PIC MC with the academic campus will facilitate the alignment of academic programs with workforce needs. Industry, viewed as an extension of the academic program, becomes a true partner, defining competencies, articulating standards, and providing relevance to the curriculum.

The mutual benefits of aligning academic programs with the requirements of the industry for which course work and programs are preparing students have been cited for the past decade. The rapid pace at which technological advances occur challenges academic curricula to stay current with the best workplace practices. Only after a practice is refined does it become part of the curriculum. By integrating academics and the workplace, faculty stay current and the curriculum relevant; students have the opportunity for real, experiential learning, often with industry mentors; members of industry may teach, guest-lecture or otherwise actively participate in development and evaluation of curricula; clear career pathways are established for students and competent, trained workers are career ready. Due to the demand for qualified workers in the Life Science and STEM fields, the synergy of academic and industry collaboration continues to be a critical factor to student success.

TABLE 3.01  
GERMANTOWN CAMPUS ACADEMIC PROGRAMS (By Degree and Campus) 2015-2016

Program Area	AA	AS	AAT	AFA	AAS	Cert	L of R
Accounting						1GR	
American Sign Language	1R					1R	
Applied Geography					1R	2R	
Architectural & Construction Tech					2R	1R	1R
Art	2GRT			1GRT			
Automotive Technology					1R	4R	
Biotechnology					1G	2G	
Broadcast Media Production					2R	4R	
Building Trades Technology					3R	4R	4R
Business	1GRT						
Communication Studies	1GRT						
Computer Application					2GRT	2GRT	
Computer Gaming & Simulation	3 GRT						
Comp Publishing & Printing Mgmt							1GRT
Computer Science & Technologies	2GRT					1GRT	
Criminal Justice					1R		
Cybersecurity					1G	2G	
Diagnostic Medical Sonography					1T		
Digital Media and Web Technology					1GRT		
Education			7GRT		1R	1GRT	
Emergency Preparedness Management		1RT				1RT	
Engineering Science					12GRT		
Ethnic Social Studies						1GRT	1GRT
Fire Science & Emergency Services					3RT	4R/1T	1RT
General Studies	4GRT						
Graphic Design	4R/2GT			1GRT		3R/2GT	
Health Enhancement, Ex Sci & PE	3R					1R	
Health Information Management					1T		1T
Hospitality Management					3R	3R	3R
Interior Design	1R				2R	3R	
International Studies	1GRT						
Landscape Technology					1G	1G	
Management						1GRT	1GRT
Mental Health Associate					1T		
Music	1R					1R	
Network & Wireless Technologies					1GRT	3G	
Nursing		1T					

Paralegal Studies						1GT	1GT	1GT
Photography						1R	4R	1GRT
Physical Therapist Assistant						1T		
Polysomnography							1T	
Radiologic (X-Ray) Technology						1T		
Science					5GRT			
Surgical Technology						1T		
Technical Writing							1G	
Theatre					3R			
Transfer Studies								1GRT
Web Careers								5R/3GT
Women's Studies								1GRT

Degrees, Certificates, and Letters of Recognition: AA-Associates of Arts; AS-Associate of Science; AAS-Associates of Applied Science; AAT-Associates of Arts in Teaching; AFA-Associate of Fine Arts; Cert-Certificate; and L of R-Letter of Recognition.

Campus: T-Takoma Park/Silver Spring Campus; R-Rockville Campus; and G-Germantown Campus.

Source: Montgomery College 2015-2016 Catalog

**TABLE 3.02  
GERMANTOWN CAMPUS CREDIT AND CONTACT HOURS, FALL 2013 AND 2023**

Day, On-Line, and Total Credit Hours													
	2013 Day SCH	2013 On-Line SCH	2013 Total SCH	2013 % Day SCH	2013 % On-Line SCH	2023 Day SCH	10 yr % Chg	2023 On-Line SCH	10 yr % Chg	2023 Total SCH	10 yr % Chg	2023 % Day SCH	2023 % On-Line SCH
Germantown	31,547	5,435	36,982	85%	15%	45,743	45%	7,881	45%	53,624	45%	85%	15%
College-wide	167,123	11,465	178,588	94%	6%	210,241	26%	14,423	26%	224,664	26%	94%	6%
Day Contact Hour (WSCH) to Day Credit Hour (SCH) Ratio													
	2013 WSCH	2013 SCH	2013 WSCH / SCH	2023 WSCH	10 yr % Chg	2023 SCH	10 yr % Chg	2023 WSCH / SCH	10 yr % Chg				
Germantown	51,031	36,982	138	7,402	50%	53,624	45%	142	3%				
College-wide	260,704	178,588	146	314,515	21%	224,664	26%	140	-4%				
Day Lecture and Lab Contact Hour													
	2013 Day Lecture WSCH	2013 Day Lab WSCH	2013 Day Total WSCH	2013 Day % Lab WSCH	2023 Day Lecture WSCH	10 yr % Chg	2023 Day Lab WSCH	10 yr % Chg	2023 Day Total WSCH	10 yr % Chg	2023 Day % Lab WSCH		
Germantown	30,594	20,437	51,031	40%	46,564	52%	29,838	46%	76,402	50%	39%		
College-wide	161,296	99,408	260,704	38%	192,569	19%	121,946	23%	314,515	21%	39%		

Source: Montgomery College

## Experiential Learning Opportunities

Montgomery College will expand its existing programs and offerings, based on regional workforce needs and student interest, and offer all of the Life Science and STEM programs at the Germantown Campus. Industry collaboration generates internships, research opportunities, clinical rotations, co-op experiences, and volunteer opportunities for students in these programs. Virtual and simulation labs provide increasing flexibility for teaching science courses. The planned physical expansion will permit academic program development that incorporates, from the outset, best practices in teaching and learning. For example, the Bioscience Education Center will offer students the opportunity to learn in a bio-manufacturing suite that closely models those found in the biotechnology industry. A School of Engineering proposal is under consideration, and Engineering offerings have already been enhanced at the campus. Further additions in the area of Bioengineering and Biomedical Engineering may be considered.

The Campus' vision is to provide students with experiential learning opportunities, including undergraduate research and internship experiences that are critical and often required in STEM education. The connection between the classroom and the workplace is forged through internships, co-op programs, and student research. The benefits of experiential learning and internships are many and include:

- Students gaining valuable practical work experience and exposure to the workplace.
- Independent, critical thinking is learned.
- Written and oral communication skills are developed.
- Curriculum is reinforced and seen as relevant and applicable.
- Employers have access to motivated and knowledgeable student workers.
- Students clarify their interests and goals.
- Internships are often a pathway to a job.

The College considers the PIC MC integral to the academic mission, particularly in providing students with skills to compete in the emerging global, knowledge-based economy. Potential tenants will be selected on the basis of their ability to provide experiential learning opportunities for our students in the areas discussed above or to act as a catalyst in bringing other tenants who could provide these opportunities.

College academic and workforce development programs have also integrated environmental and sustainability concepts into their curricula and both credit and non-credit sustainability courses are offered. For this reason, the College has become a resource for the community in providing educational opportunities for those wanting to transition to the “green collar” economy. The College is also partnering with other state and county agencies and is the educator for “green business” certification programs and other environmental initiatives. Volunteer activities such as faculty and staff participation in professional societies and the College’s Speakers Bureau also extend the College’s influence into the community.

Table 3.01 provides an inventory of all academic credit programs offered at the Germantown Campus.

Educational programs at Germantown are expected to generate 53,624 student credit hours (SCH) in 2023, an increase of 45% over fall 2013 and with 85% being taught during the day. Delivery of Campus programs is expected to change over the next decade. Distance learning alternatives will be more available as options, including both entire and partial course delivery. However, the percentage of SCH taught entirely on-line at Germantown is projected to remain stable at 15% over the ten year planning period. Table 3.02 provides a summary of contact and credit hours for the Campus and the College for 2013 and 2023 and Table 3.03 provides a summary of credit hours by division from 2010-2013 and projected for 2023.

These instructional delivery changes, together with the increases projected for enrollment, can be expected to have impact on Germantown's contact hour productions. The ratio of contact hours (WSCH) to credit hours (SCH), which shows the extent to which time scheduled in class is greater than the credit hours earned, is expected to increase at Germantown from 1.38 in 2013 to 1.42 in 2023, primarily because of increased availability of labs and lab courses.

The College has also made significant and substantial investments in its classroom environments to incorporate smart instructional technology and to provide and support technology-based learning centers. In addition to these improvements, the College must also prepare to address other changes in pedagogy, including increased instructional use of specialized learning environments and the development of instructional space that is configured and equipped to support collaborative and group based learning.

**TABLE 3.03 GERMANTOWN CAMPUS TOTAL CREDIT HOURS BY DIVISION, FALL 2010-2013 AND 2023**

	2010	2011	2012	2013	5yr % Chg	2023	10 yr % Chg
Student Dev	659	641	782	626	-5%	908	45%
Honors/Other	68	64	31	36	-47%	52	45%
BSMT	23,248	23,981	24,376	23,258	0%	33,724	45%
HSSE	24,839	25,093	27,359	26,402	6%	38,283	45%
Germantown	48,814	49,779	52,548	50,322	3%	72,967	45%

Source: Montgomery College

### 3.1.5 Enrollment Projections

Over the past five-year period, headcount enrollment has increased 24%, from 6,009 students in 2008 to 7,441 in 2013. The rate of enrollment growth over the next decade is expected to increase by 27% resulting in a projected headcount of 9,423 students at the Campus by 2023. Commensurate with headcount growth during this period will be an increase in scheduled credit hours (SCH) as discussed in the previous section. Table 3.03 provides a summary of the historical, current and projected headcount and the corresponding Full Time Equivalent (FTE) student calculation for the Campus.

**TABLE 3.04 GERMANTOWN CAMPUS ENROLLMENT STATISTICS, FALL 2008-2013 AND 2023**

	2008	2009	2010	2011	2012	2013	5yr % Chg	2023	10yr % Chg
Headcount	6,009	6,571	6,819	7,154	7,739	7,441	24%	9,423	27%
FTE Students	2,775	2,896	3,304	3,372	3,503	3,486	26%	4,590	32%

Source: Montgomery College

### 3.1.6 Faculty and Staff

Faculty supporting the Campus will increase by 14%, from 151 FTE faculty to 171 through 2023. The number of full-time faculty will increase by 8 positions or 10%, while the number of part-time faculty will increase by 50 positions or 18% over the planning period. Growth in faculty positions is evenly distributed across instructional divisions with very modest growth in Student Development. The planned part-time faculty growth will continue to add to the existing space deficit in office and conference space for part time faculty, if not addressed. Table 3.05 provides a summary of current and projected faculty by division for 2013 and 2023.

The Germantown Campus is anticipating an increase in full-time and part-time staff through 2023. In total, the number of Campus staff is expected to increase by 10 FTE positions, which represents a 5% increase. Table 3.06 provides a summary of current and projected staff by division for 2013 and 2023.

**TABLE 3.05  
GERMANTOWN CAMPUS FACULTY POSITIONS BY DIVISION, 2013 AND 2023**

	2013 FT	2013 PT	2013 FTE	2023 FT	10 Yr # % Chg	2023 PT	10 Yr # % Chg	2023 FTE	10 Yr # % Chg
Student Development	0	18	5	0	0	21	3	5	1
					0%		17%		17%
BSMT	39	116	68	43	4	137	21	77	9
					10%		18%		14%
HSSE	43	140	78	47	4	166	26	89	11
					9%		19%		13%
Germantown	82	274	151	90	8	324	50	171	21
					10%		18%		14%

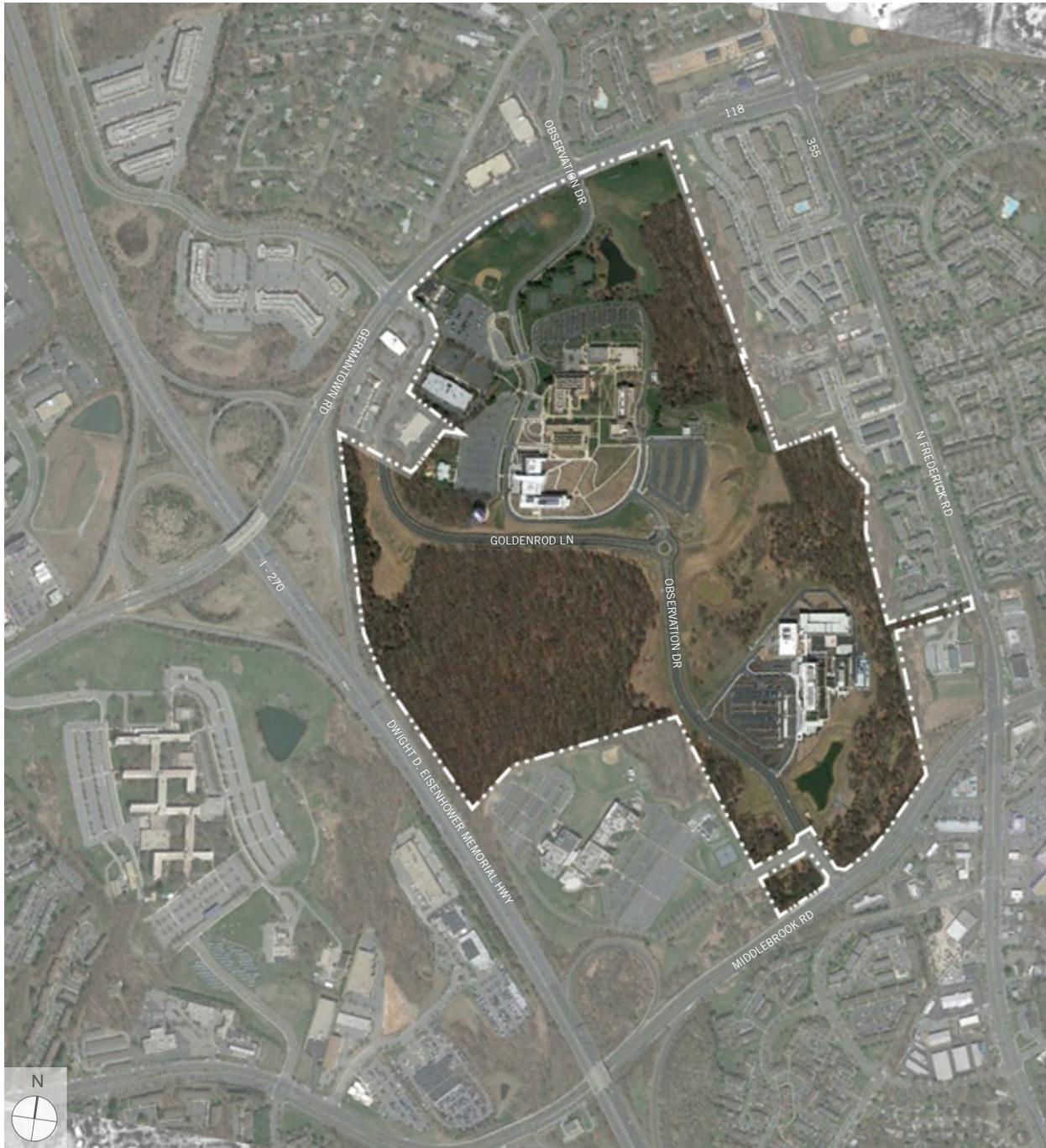
Source: Montgomery College

TABLE 3.06  
GERMANTOWN CAMPUS STAFF POSITIONS, 2013 AND 2023

Administrative	11	0	11	14	3	0	0	14	0
					27%		0%		0%
Other Professional	54	17	58	60	6	20	3	65	5
					11%		18%		8%
Clerical and Secretarial	33	6	35	37	4	9	3	39	2
					12%		50%		6%
Technical and Paraprofessional	47	4	48	52	5	7	3	54	2
					11%		75%		3%
Skilled Crafts	12	0	12	13	1	0	0	13	0
					8%		0%		0%
Service and Maintenance	33	2	34	37	4	5	3	38	1
					12%		150%		3%
Germantown	190	29	197	213	23	41	12	223	10
					12%		41%		5%

Source: Montgomery College

FIGURE 3.03 **CAMPUS CONTEXT**



## 3.2 EXISTING SITE CONDITIONS and ANALYSIS

### 3.2.1 Context and Setting

#### Context

The Germantown Campus was established in 1978 on 208 wooded acres. The property is bounded by MD-118 (Germantown Road) to the north, I-270 to the west, and Middlebrook Road to the south. Multi-family residential properties bound the Campus to the east with MD-355 (Frederick Road) to their east and connecting to MD-118 and Middlebrook Road to the north and south, respectively. In addition, three existing commercial buildings and a hotel are located to the west of the Campus and a corporate research facility (Hughes Network) is to the southwest.

Along the eastern edge of the Campus there is a stream and a narrow wooded buffer to the multi-family residential development. The south and southwest of the parcel consists of sloping fields and wooded areas, and the site of the PIC MC. In 2014, Holy Cross Germantown Hospital opened on one of the south parcels along Observation Drive. It is the first development within the planned PIC MC. The complex includes the main hospital building, garage, and a professional office building that will house physician offices and research laboratories. The remaining land between the hospital and the campus will house the PIC MC. The park will contain space for research laboratories, office and retail.

#### Setting

The Germantown Campus is characterized by the combination of a relatively compact composition of academic buildings organized around a quadrangle, the sloping wooded topography, and sweeping vistas to the southeast. The topography of the campus is generally in the range of 10% or greater. The ground drops nearly 200 feet from the highest point of the site (existing academic quadrangle) to the lowest point along Middlebrook Road to the south. This sharp drop helps to define the character and afford views, but also creates a challenge to maintaining strong connections between buildings as the campus expands.

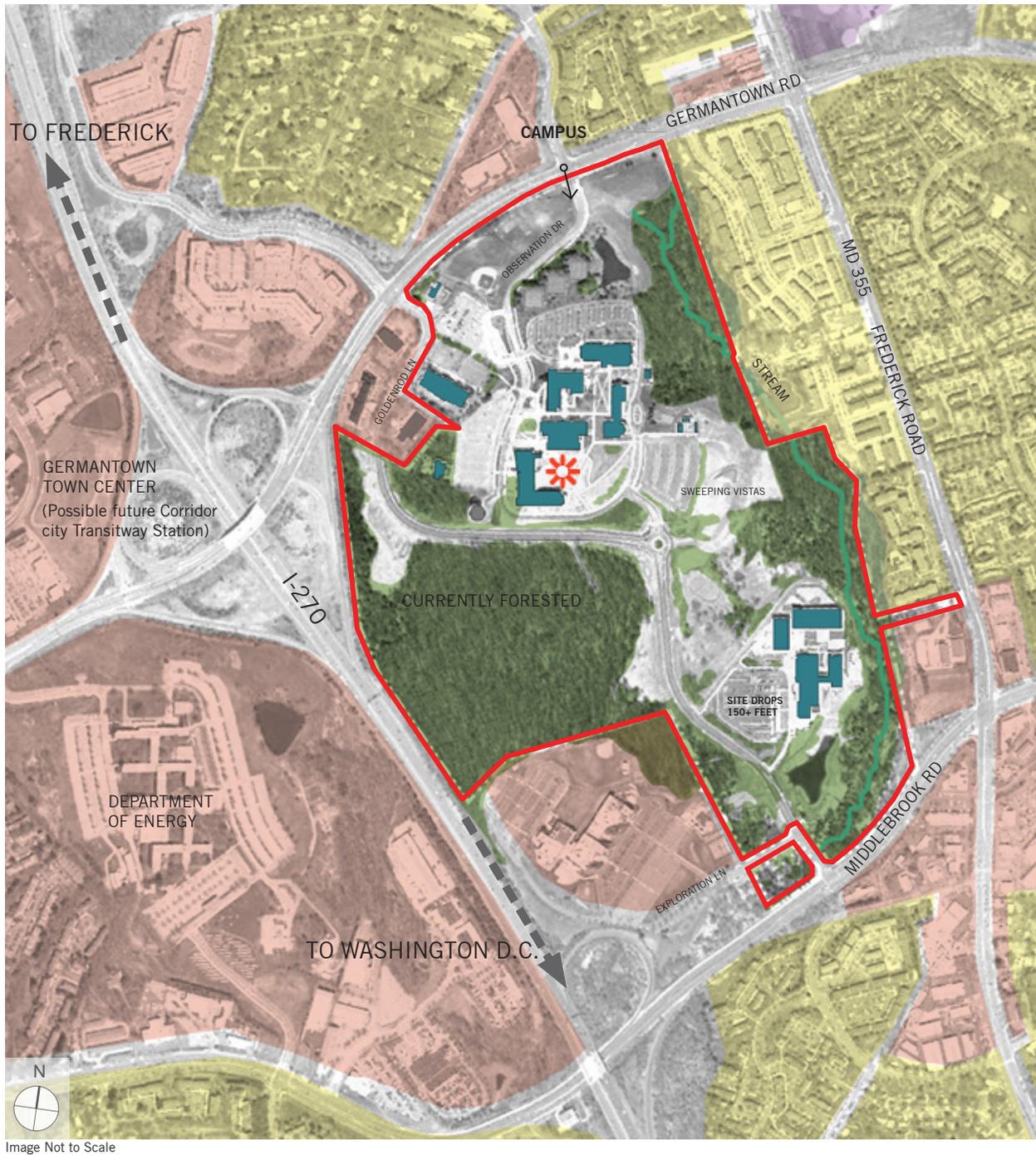
The three original buildings, Humanities & Social Studies (HS), Science and Applied Sciences (SA) and Physical Education (PG) share a common architectural vocabulary. All three buildings are one to two stories in height, with strong horizontal elements of ribbon windows or crisp, white concrete planes. The buildings are oriented toward the quadrangle.

The High Technology & Science Center (HT), built in 1996, shares some of the horizontal elements of the original buildings, while adding architectural elements like towers to mark the entries, articulation of the facades and the warmth and scale of buff colored brick. The building is also four stories in height on an otherwise low-scale campus.

The College purchased a two-story building on Goldenrod Lane that was originally designed as an office building. It is clad with a brown brick and dark tinted windows. The building has been renovated and serves as the Paul Peck Academic and Innovation Building. It is physically separated from the rest of the Campus by the main parking lots and is oriented with its service areas toward the Campus. (See Figure 3.13 Building Massing and Materials).

In September 2014, the Bioscience Education Center (BE) opened. It is sited immediately south of the Applied Sciences Building on the highest point of campus. It forms the western edge of a new quad south of the original quad. To the east of the Biology Education Center are sweepings views of the new Holy Cross Germantown Hospital and south towards Rockville. The Center is a modern steel frame building clad in iron-spot brick, precast concrete accents and light grey metal panels. Ribbon windows set with the horizontal arrangement of the panels

FIGURE 3.04 **CAMPUS SETTING**



mimic the architectural language of the original campus buildings. Large full height oriel windows take advantage of the views that the site offers. A series of terraces that step down towards the new quad create a place for students to gather. The terraces are integrated with the building's storm water management facilities – small environmental site design (ESD) elements and storm water retention ponds.

### 3.2.2 Gateways and Views

#### Visibility and Identity

Arrival on the Campus from the north occurs after turning off MD-118 (Germantown Road) and heading south on Observation Drive. Germantown Road connects to MD-355 (Frederick Road) to the east and I-270 and the Germantown Town Center to the west. The entry sequence, signage and landscaping do little to reinforce the sense of arrival or reinforce the identity of the Campus.

The approach road eventually climbs a slight rise where the Campus views are of the Campus buildings, a storm water management pond, and parking lots. The parking lots dominate the view. Once on the Campus the general architectural consistency of the buildings, the spherical water tower, and the views of the adjacent woods and stream valley provide the basis for creating and reinforcing the sense of place unique to the Germantown Campus. (See Figure 3.05 Gateways and Views).

From the south, the Campus is accessed from Middlebrook Road by the new extension of Observation Drive. The south entrance to the Campus is defined by the traffic circle at the intersection of Observation Drive and Goldenrod Lane. A large sign welcomes visitors to Montgomery College. From the circle, the approach to campus is up a steep drive to a loop road that defines the south eastern edges of the Bioscience Education Quad. To the left, the loop road travels past and to the west of the High Technology Center towards the pond and baseball fields. To the east, the loop road travels south of the new Bioscience Education Center towards the globe water tower. The globe dominates the view until the road curves north where parking lots dominate.

#### Access

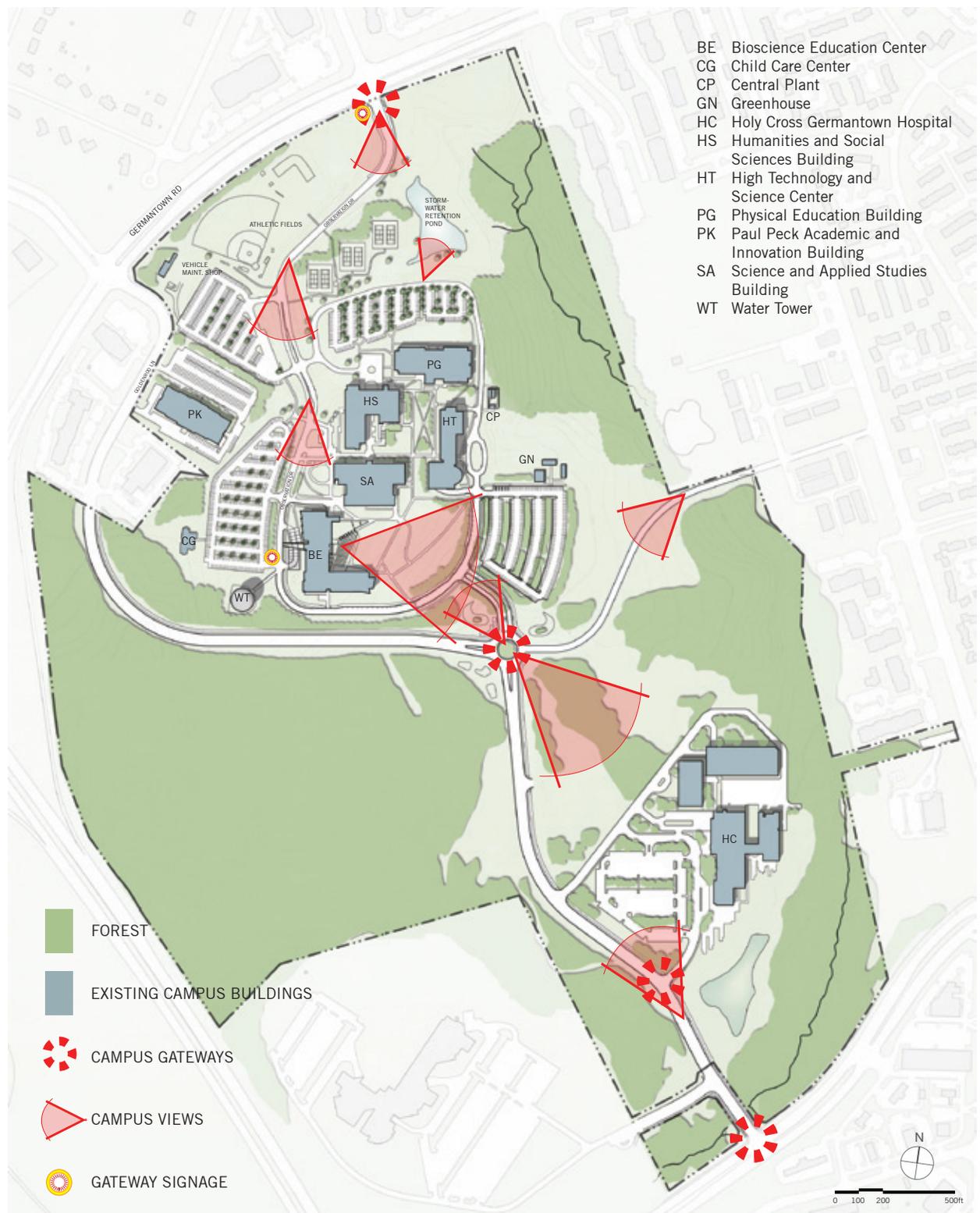
Upon arriving on the Campus, Observation Drive provides access to parking areas and a view of the spherical water tower with its planet earth graphic. Observation Drive separates the majority of the parking from the academic buildings, creating several points of potential conflict for pedestrians crossing the roadway on their way to the buildings.

A secondary road currently wraps around the four Campus buildings to the east providing a lower-level entrance into the High Technology & Science Center. This road continues to the south and west to form an internal loop road wrapping the main academic quad of the campus.

The College has developed a second point of access onto Campus to improve connections. Observation Drive was extended to Middlebrook Road as a part of the Bioscience Education Center project. It connects Middlebrook Road to Goldenrod Lane at a new traffic circle southeast of the new Bioscience Education Center. The College is currently coordinating with Montgomery County on County plans for an eastern entrance that will extend Cider Press Mill Road from Frederick Road (Md. Rte. 355) to the new traffic circle. The College is also coordinating with the County on the County's proposal to connect Observation Drive with Goldenrod Lane to the northwest of the Paul Peck Academic and Innovation Building. Montgomery County agencies and the Maryland national Capital Planning Commission are working with the College to develop the connections.

The College plans to develop the land southeast of the Campus into the PIC MC. The connections required by this commercial development, as well as other development to the north of the College, will allow for additional vehicular and pedestrian connections to be made over time at the Campus.

# FIGURE 3.05 GATEWAYS AND VIEWS



### 3.2.3 Open Space

The Campus is organized around a large, L-shaped quadrangle. The entrances to four of the existing academic buildings on the campus are organized around this quadrangle. This creates strong pedestrian connections between buildings and provides for an organizational cohesiveness.

With the focus of building entrances onto the space within this quadrangle there is a challenge in how to expand the campus beyond the quadrangle, to the new quadrangle fronted by the Bioscience Education Center and to the southeast through the sites of the proposed PIC MC and the Holy Cross Germantown Hospital . An emphasis on improved pedestrian paths to the south from the main quad, and a change to the interior circulation of the Science & Applied Studies Building allowing access from the south will improve connections from the quad to the Bioscience Education Center and the new Campus entrance.

The College should develop a landscape master plan that prioritizes connections between the original campus quad and the new south quad fronting the Bioscience Education Center, and enhances the sweeping views from it.

### 3.2.4 Pedestrian and Bicycle Circulation

#### Pedestrian Circulation

The main campus pedestrian spine runs east-west between the Humanities & Social Sciences Building and Science & Applied Studies building. The spine links the parking lots across Observation Drive and the High Technology & Science Center. A north-south path borders the main quadrangle, and connects to the new Bioscience Education Center Quad (BEC Quad). It is a weak connection that should be enhanced with new landscaping. (Refer to Figure 3.06 Pedestrian and Bike Circulation). Stronger pedestrian connections need to be developed from the main quadrangle south to the outdoor space defined to the west and south by the Bioscience Education Center.

Observation Drive loops around the campus core with the parking lots located on the outside of the loop. Sidewalks are provided from the lots to designated crossings of Observation Drive. A sidewalk is provided along the entire length of Observation Drive on the building side.

A goal of this Plan is to develop connections with the planned PIC MC to the south. In addition to programmatic connections, the development of the PIC MC is anticipated to provide clear pedestrian links to the Campus and the Bioscience Education Center.

#### Bicycle Circulation

A ten-foot wide shared use path has been constructed on the west side of Observation Drive from Middlebrook Road to the circle at Goldenrod Lane. The shared use path continues from the circle along the new connector to the campus loop of Observation Drive. A shared use path is also constructed along the north side of Goldenrod Lane from the circle to the edge of the College's property, leaving a gap of about 1,100 feet from the end of the path to MD 118.

Some bicycle facilities exist on roadways in the vicinity of the Campus which include:

To the north:

- Off-road path on Observation Drive starting one block north of MD 118 and continuing north
- Off-road path on Seneca Meadows Parkway from MD 118 to MD 355

To the south:

FIGURE 3.06

# PEDESTRIAN and BIKE CIRCULATION



- On-road bicycle lanes striped on Middlebrook Road starting at MD 355, going southwest past Observation Drive and the I-270 interchange, ending at Great Seneca Highway.
- Off-road path on the west side of Great Seneca Highway from Middlebrook Road to Wisteria Drive
- Off-road path on Wisteria Drive from Waring Station Road west to Walter Johnson Rd (one block shy of MD 118)

The Countywide Bikeways Functional Master Plan (2005) proposed bike facilities on Germantown Road and Frederick Road. The Montgomery County Planning Department began an update to the bicycle master plan in July 2015.

At present few bicycles are observed on the Germantown Campus. Bicycle riding may in part be inhibited by the presence of steep slopes at the south side of the main campus. However, with the shared use path bicycling can be a convenient way to travel between the Germantown Campus and the Holy Cross Germantown Hospital complex.

### 3.2.5 Vehicular Circulation and Parking

The Campus is bounded generally by Germantown Road (MD 118) to the north, Interstate 270 to the west, Middlebrook Road to the south and Frederick Road (MD 355) to the east, although there are townhouse neighborhoods and small shopping areas within those bounds as well. Regional access is provided by I-270 and Frederick Road. The Germantown Road and Observation Drive intersection is signalized and serves as the main access point for the Campus from the north. The intersection of Middlebrook Road and Observation Drive is signalized and is the point of access from the south. The Campus can also be accessed from Goldenrod Lane via a traffic circle with Observation Drive. Goldenrod Lane also has direct driveways to Parking Lot 2 and the Paul Peck Academic and Innovation Building.

Observation Drive is the “roadway spine” of the campus. On-campus vehicle access and circulation are provided by minor roadways that connect Observation Drive with the parking lots and loading areas. The Campus access and circulation situation is illustrated in Figure 3.07. This figure also shows the parking facilities currently serving the Campus.

Turning movement counts were conducted in September 2014 at the three intersections providing access to the Campus for a traffic study of expansion of the Science and Applied Studies building. Counts were performed at the Observation Drive and Goldenrod Lane intersections on Germantown Road and the Observation Drive intersection on Middlebrook Road.

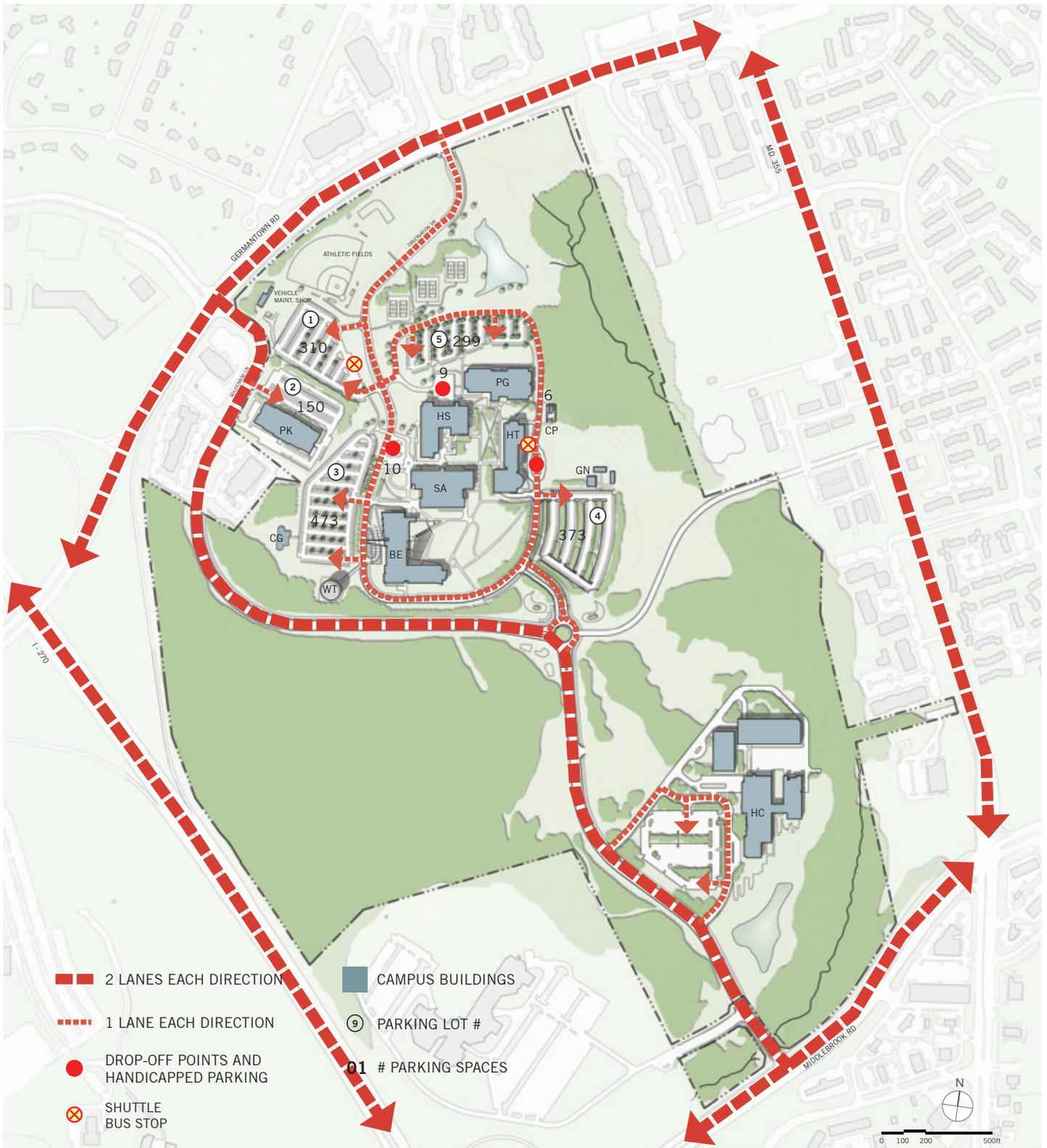
The counts recorded 1085 inbound and 221 outbound vehicles during the a.m. peak hour (8:30-9:30 a.m.) and 320 inbound /662 outbound vehicles during the p.m. peak hour (5:00-6:00 p.m.). Not all of this traffic is attributed to Montgomery College since these intersections also provide access to some other non-College offices. At the time of the counts the Holy Cross Germantown Hospital was not yet open but some staff would have been present. Traffic analysis of projected volumes indicated the intersections operate within the acceptable level-of-service planning standards.

The data also indicated the following trip distribution:

Roadway Approach	Distribution
• From the north on Observation Drive	7%
• From the east on Germantown Road and Middlebrook Road (MD-355)	36%
• From the west on Germantown Road and Middlebrook Road (I-270)	57%

FIGURE 3.07

# PARKING AND VEHICULAR CIRCULATION



The main existing vehicular and pedestrian operational and safety problems include:

- Speeding (both ways) along Observation Drive between the two sharp turns as you enter the campus from Rt.118;
- Speeding by drivers heading north from the 4-way stop at the entrances to the Physical Education Building and Parking Lot 1 towards the sharp turn at the corner of the athletic field; and
- Poor line of sight at each of these sharp turns, reducing the driver's awareness of pedestrians.

### Mode Share

A survey of students and faculty/staff taken in March 2015 for the College Town Plan obtained information on commuting mode share. The faculty /staff commute by driving is 85%. Information for student mode share and overall mode share to Germantown campus is shown in Table 3.07 below. Germantown Campus has a far higher percentage of students driving and far lower transit usage than the Rockville or the TP/SS Campuses.

TABLE 3.07 GERMANTOWN CAMPUS STUDENT AND TOTAL MODE SHARE, 2015

	Drove	Dropped	Carpool	Transit	Walk	Bike	Other
Students	56%	9%	6%	26%	2%	1%	-
Overall	73%	-	3%	20%	<1%	<1%	3%

Source: College Town Plan

### Parking

The Campus has 1,659 spaces distributed among five surface lots and four small parking areas. Montgomery College's annual September survey of parking activity in 2014 counted a peak of 1,298 vehicles, a parking utilization rate of 78% overall.

The Maryland Higher Education Commission (MHEC) standards for community college parking require 0.75 space for each FTDE student and 0.75 space per FT Faculty and FT Staff. In addition, visitor parking in the amount of 2% of the total student/faculty/staff spaces is required. Finally, the Americans with Disabilities Act (ADA) requires reserved accessible spaces in the amount of 20 for the first 1,000 spaces plus 1 space for each 100 spaces over 1,000.

Using MHEC standards, the total required number of spaces for existing conditions would be 2,126, meaning a current deficit of 869 spaces. Based on the parking survey conducted in 2014 when the existing 1,659-space supply was only 78% occupied, it is clear there is no parking deficit. The actual existing condition is a small surplus. The main reason for the difference is that almost 40% of students arrive using a non-auto mode or are dropped off, and therefore do not use a parking space.

It is most important to use a realistic parking space requirement for students because they are by far the largest part of the Campus population, with 9 FTDE students for each FT Faculty and Staff member. In addition, the number of FTDE students is expected to increase by 60% by 2023, whereas FT Faculty and Staff will increase by 13%.

Based on actual counts from the 2014 parking survey, peak student parking demand is accommodated by using a modified ratio of 0.55 for student spaces. This ratio is consistent with the current student driving mode share of 56%. Using this alternative student parking ratio of 0.55 prevents an overestimation of parking deficit.

FIGURE 3.08

# TRANSIT

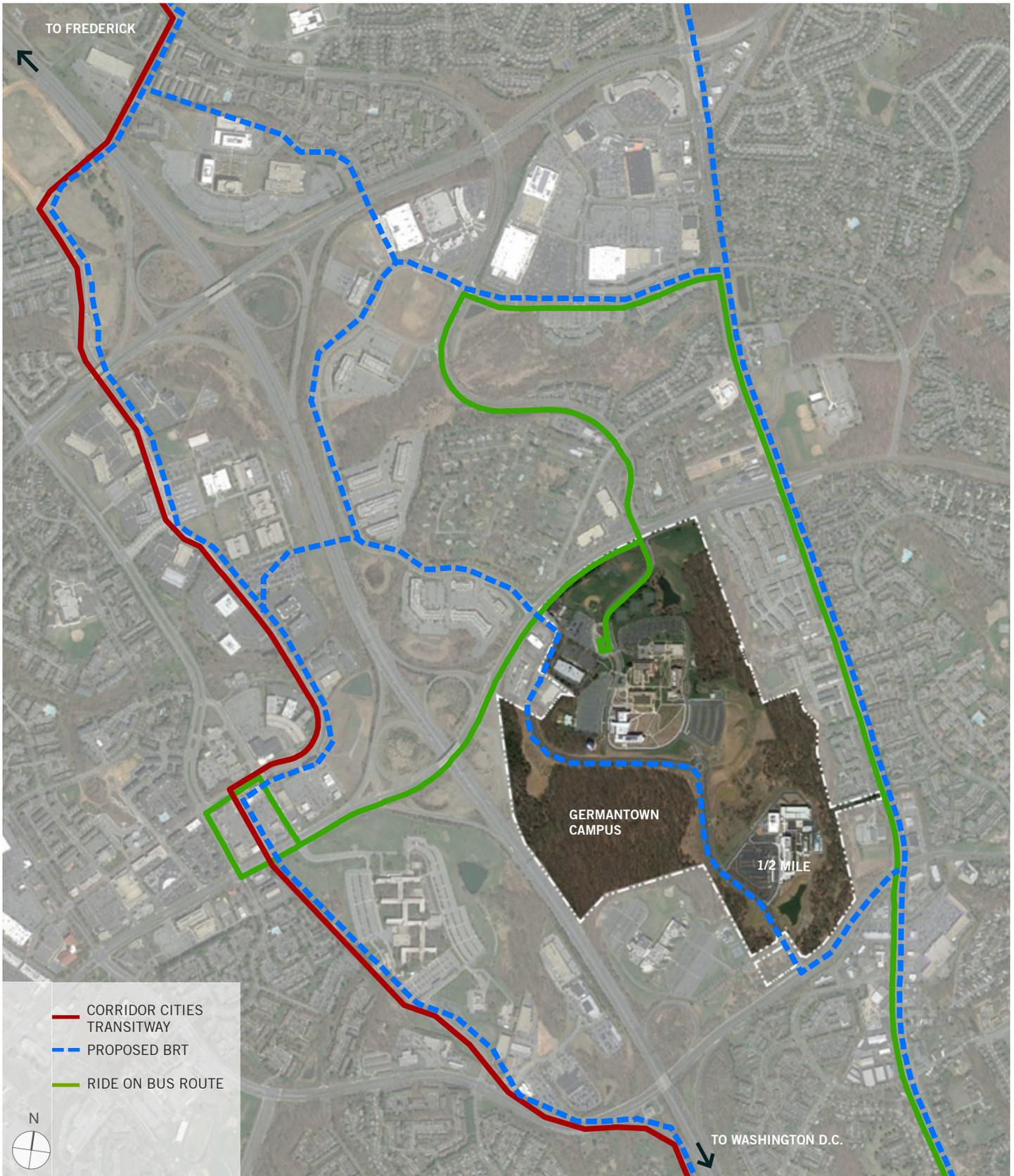


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By using the MHEC standards with the exception of a modified parking ratio of 0.55 for FTDE students, the estimated space deficit in Year 2023 compared with existing supply is 833 spaces as summarized in Table 3.08.

**TABLE 3.08**  
**GERMANTOWN CAMPUS PARKING NEEDS, 2023**

Parking Supply 2013	Parking Deficit 2023 using MHEC standards	Parking Deficit 2023 using modified MHEC standards
1,659	1,648	833

Source: Montgomery College and WRA

### 3.2.6 Transit

Montgomery County Ride-On Route 55 (Rockville-Germantown Transit Center) provides service directly into the Germantown Campus, Monday-Sunday. During the weekdays service to the campus runs from approximately 5:00 a.m. until 1:00a.m.

The table below presents the peak frequency, average weekday riders and the percentage of the routes users that utilize the Montgomery College Pass.

**TABLE 3.09 GERMANTOWN CAMPUS BUS RIDERSHIP, 2014**

Bus Service	Peak Frequency	Average Weekday Riders	% Montgomery College Pass
55 - Germantown /Rockville	10	8,083	9.9%

Source: Montgomery County Ride On

Two other Montgomery County Ride-On bus routes currently provide transit services along roadways bordering the Montgomery College Germantown Campus. Using these routes involves a longer walk from campus to the stops: Route 70 (Germantown-Bethesda Express) and Route 79 (Shady Grove –Germantown).

The existing bus stop on Campus is located in Lot 1. Another public transportation facility that will serve the Campus in the long term is the proposed Corridor Cities Transitway (CCT), the Red-Line Extension that connects the Shady Grove Metro Station to Clarksburg. The closest CCT stop to the Campus will be located within the Germantown Town Center on the west side of I-270. Figures 3.08 and 3.09 illustrate public transportation serving the Germantown Campus.

Though the Campus is located within a rural to suburban transition zone the existing and planned transit routes and Maryland Transportation Authority's (MTA) MARC Rail station in the Germantown Town Center are well positioned to meet current and future needs. The positive impact of public transit service is due to the fact that the Campus' population base is remarkably concentrated within a 12 mile radius. Based on ridership surveys completed in the fall of 2007, between 30-40% of faculty/staff and 45-50% of students live within an even more concentrated 5 mile radius.

However, at present only 15% of faculty and staff and 30% of students arrive to the Germantown Campus via bus, shuttle, walking or biking. This suggests that there is significant potential to reduce single- occupant automobile travel by implementing such Transportation Demand Management (TDM) techniques as a parking-transit incentive program and/or a parking disincentive program.

FIGURE 3.09 **TRANSIT**

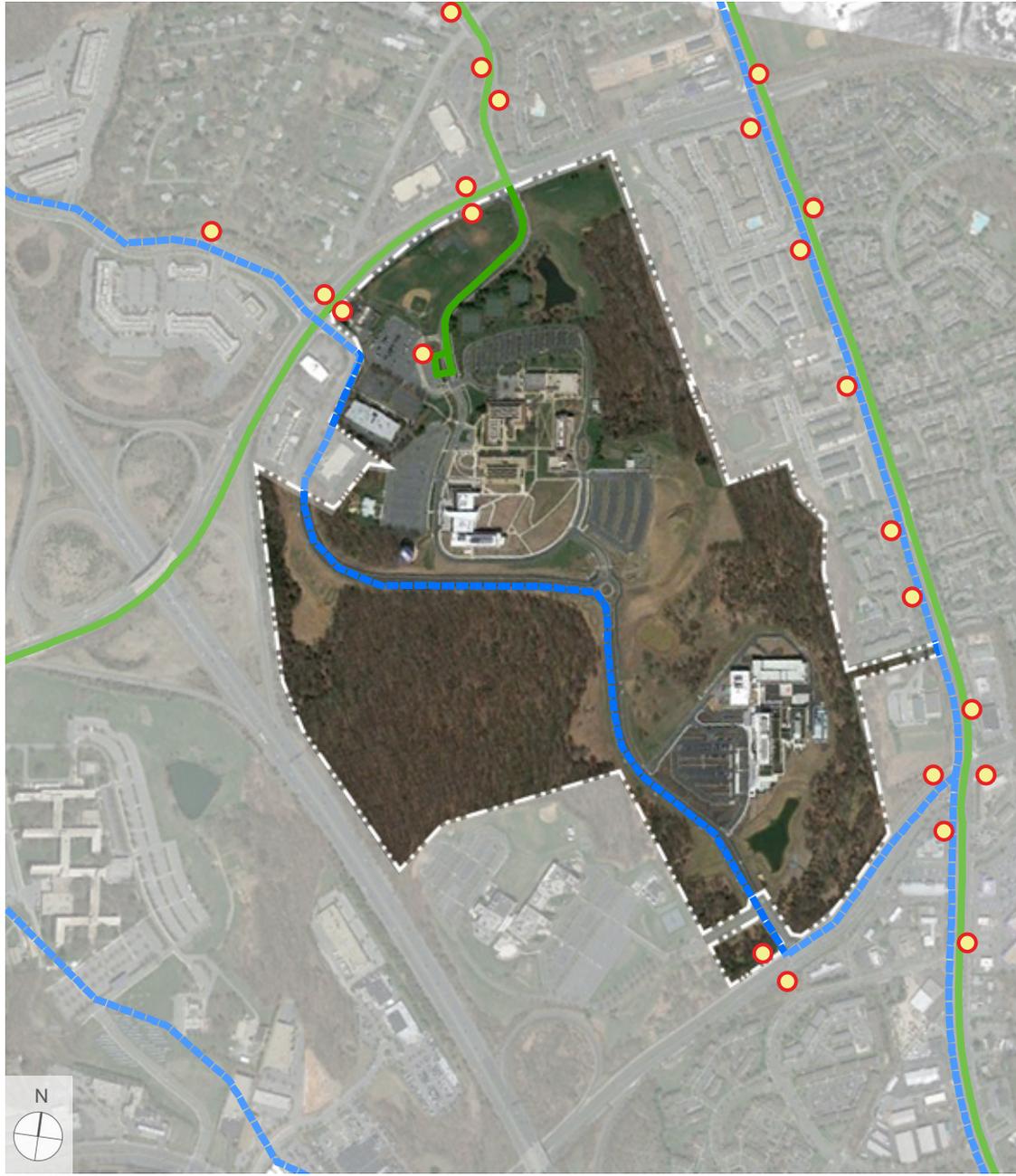


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- - - PROPOSED BRT
- RIDE ON BUS ROUTE
- BUS STOP

The transit challenges for the Germantown Campus include:

- The bus ride on the existing Route 355 takes 45 minutes between the Shady Grove Metro Rail Station and the Germantown Campus. A direct express bus connection between the Germantown Campus and the Shady Grove Metro Rail station could reduce the transit trip time to 15 minutes.

At the Germantown Campus bus stop issues include:

- Passengers must board from the parking lot – there is no curb or passenger platform;
- Wheelchair customers are unable to board at current transit stop;
- The bus stop and shelter are too small for passenger volumes; and
- The bus path through the parking lot creates conflicts with pedestrians and vehicles

Montgomery College contracts for shuttle service between the Rockville Campus and the Germantown Campus. Shuttle stops at Germantown are located at the bus stop in Parking Lot 1 and at the circle in front of the High Technology and Science Center. Shuttle service from Rockville starts at 7:00 a.m. and runs every hour until 6:00 p.m. The shuttle from Germantown to Rockville runs every hour from 6:30 a.m. to 6:30 p.m. The shuttle greatly decreases the travel time between campuses compared with using public transportation, reducing travel time from 90 minutes to 45 minutes.

### 3.2.7 Major Utilities

The existing central plant and utility distribution infrastructure is a critical underpinning that supports the Campus' built environment. The College is in the process of developing a separate Utility Master Plan that identifies and documents existing and proposed utility infrastructure needs and recommendations.

The latest Utilities Master plan for the Campus was completed in 2012 and includes an overview of the existing utility infrastructure systems as well as a detailed assessment of their condition and ability to meet future demand. This plan is currently being updated in coordination with this Facilities Master Plan. An inventory of major utilities infrastructure is illustrated on Figure 3.10.

#### Mechanical

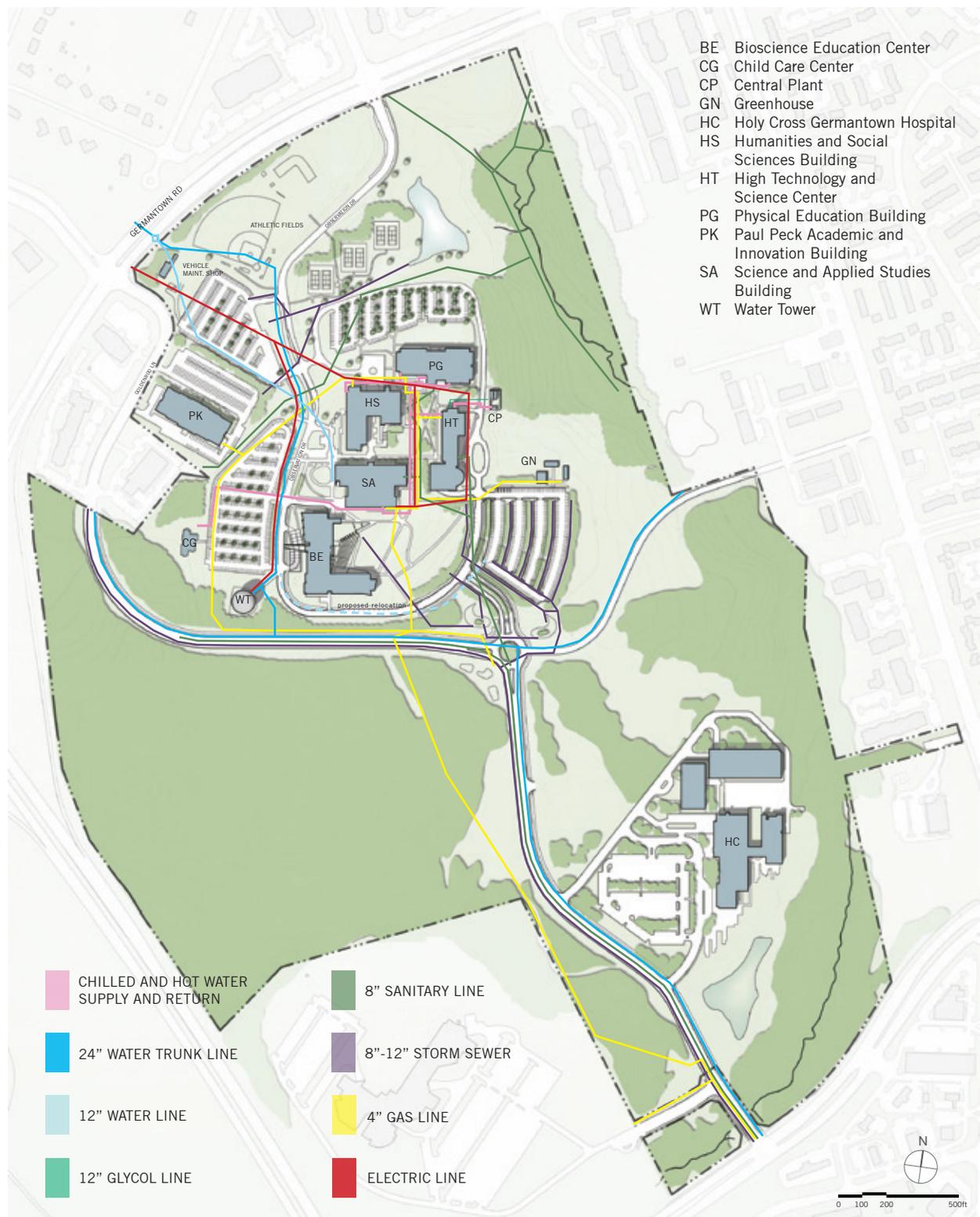
Most campus buildings are currently heated with modular, gas fired boilers located in those individual buildings. The Physical Education Building is heated by boilers in the Humanities and Social Sciences Building through an underground hot water distribution system. A new central boiler plant was constructed in the Bioscience Education Center to support creation of a district heating water loop as buildings are renovated or constructed. Additional capacity will be required as the campus is further expanded. The existing natural gas service provided by Washington Gas is adequate for current demand, but may need to be increased for later construction projects.

A central cooling plant is located in the basement of the High Technology and Science Center. The plant currently serves Humanities and Social Sciences Building, the Physical Education Complex, and the Science and Applied Studies Building. A cooling plant was installed in the Bioscience Education Center to supplement the High Technology and Science Center Plant and was connected to the campus chilled water distribution network. The combined capacity of the cooling plants will have to be increased as the campus is further expanded.

#### Electrical

The Campus is served by the Potomac Electric Power Company (Pepco) from looped underground medium volt-

FIGURE 3.10 MAJOR SITE UTILITIES



- BE Bioscience Education Center
- CG Child Care Center
- CP Central Plant
- GN Greenhouse
- HC Holy Cross Germantown Hospital
- HS Humanities and Social Sciences Building
- HT High Technology and Science Center
- PG Physical Education Building
- PK Paul Peck Academic and Innovation Building
- SA Science and Applied Studies Building
- WT Water Tower

- CHILLED AND HOT WATER SUPPLY AND RETURN
- 24" WATER TRUNK LINE
- 12" WATER LINE
- 12" GLYCOL LINE
- 8" SANITARY LINE
- 8"-12" STORM SEWER
- 4" GAS LINE
- ELECTRIC LINE

age lines which serve the Campus at the intersection of Route 118 and Goldenrod Road. Most of the buildings have separate utility meters and a local step down transformer to distribute 480/277 volt, 3 phase, 4 wire system in the building except for the Physical Education building which is being fed from the Humanities and social Sciences Building. The existing Pepco feeders have adequate capacity to accommodate planned campus expansion.

### **Natural Gas**

Natural gas is provided by Washington Gas and the existing service currently meets the Campus needs.

### **Water and Sanitary**

The Campus has a private on-site domestic/fire water and sanitary sewer system. The on-site systems are currently adequate for the Campus needs. There are public mains of adequate capacity, operated by WSSC, adjacent to the Campus; public water mains are located Germantown Road to the north and Goldenrod Lane to the south. WSSC sanitary sewer mains cross the Campus from the northern portion of Goldenrod Lane, running east to the Campus' east property boundary and then following said boundary line south toward Middlebrook Road, the majority of the campus sanitary lines feed into a WSSC public main located within the Goldenrod Lane/Observation Drive traffic circle, then running south to Middlebrook Road.

## **3.2.8 Information Technology Systems**

The existing utility and information technology infrastructure is a critical underpinning that supports the Campus' built environment. The College has undertaken a series of separate planning activities compiled in a Utility Master Plan that identifies these various resources. The Appendix includes an overview of the existing Campus utility and information technology infrastructure.

The main point of presence (MPOP) for the campus is currently the Bioscience Education Center Building. Each of the eleven (11) existing buildings is connected via a duct-bank system back to BE, and is fed with optical fiber cabling to the Main Distribution Frame (MDF) of each building, respectively. Exact fiber counts between buildings can be verified, but are currently adequate to support existing and future demands of the existing buildings.

## **3.2.9 Natural Systems and Sustainability**

### **Stormwater Management**

The Campus occupies 228.7 acres consisting of woodlands, meadows and a built environment consisting of buildings, roads, sidewalks, and parking lots. At approximately seven percent of the total Campus area, the built environment is largely impervious.

The Campus property is divided into six major drainage areas. The high point of the college is located at the WSSC water tower. In general, all of the existing Campus development to the north of the water tower (approximately 37 acres), plus the Goldenrod Building site, drains to the existing stormwater management pond located at the northeast portion of the Campus. This pond also provides treatment for approximately 32 acres of off-site area to the north – storm drainage for MD-118 (Germantown Road) and the residential and business properties located to the north of the Campus. An additional 90+/- acres of the property, including the new Bioscience Education Building and Holy Cross Germantown Hospital, drain to the recently constructed stormwater management pond located to the south, near Middlebrook Road. The remaining acreage of the Campus discharges to various tributaries. All of the run-off from the built-up portions of the Campus drainage areas combine in the Gunners Branch stream valley prior to flowing west underneath I-270.

The commercial properties along Goldenrod Lane drain into a stormwater management “dry” pond located to the east of the parking lot associated with the Goldenrod Building. This existing pond provides water quality control

FIGURE 3.11 **NATURAL SYSTEMS**



as well as quantity control for its respective drainage area. The discharge from this “dry” pond is into the Campus storm drain system which ultimately discharges into the existing storm water management pond located in the northeast portion of the Campus.

The existing north stormwater management pond provides water quality and 2-yr, 10-yr and 100-yr quantity control for its respective drainage area. The pond was designed to the storm water management regulations in use in 1993. The stormwater management regulations in 1993 required water quality treatment for a half-inch of run-off over the impervious area. The wet pool in the pond provides this required water quality treatment. The pond was enlarged in 1995 to provide compensating water quantity control for the approximately 3 acres associated with the High Technology & Science Center itself. As part of this pond retrofit, an enlarged embankment was provided to accommodate a future roadway. The existing road and site improvements east of the High Technology & Science Center are the only portion of the Campus not managed by the existing pond. A surface sand filter provides the water quality control for the approximately 3 acres associated with the High Technology & Science Center.

The existing south stormwater management pond, built as part of Observation Drive extension, provides channel protection volume and 10-yr quantity control for its respective 81.42 acre drainage area, including a projected future build-out of the southern portion of the property beyond that of Holy Cross Germantown Hospital. The pond was designed assuming 55% of its drainage area is impervious area for the ultimate built out condition. The pond is also designed to allow safe conveyance of a 100-yr storm event.

While the southern stormwater management pond provides the required quantity control treatment for Bioscience Education Center, stormwater management water quality treatment is provided via three bioretention facilities directly adjacent to the building and surrounded by planter walls, each of these facilities receives and treats runoff from the Bioscience Education Center roof top. A green roof is also provided on a portion of the Bioscience Education Center. Another large planter-style bioretention was constructed adjacent to the new open plaza area directly north of BE, west of SA. Parking Lot #4 to the southeast of BE contains roughly 30 separate micro-bioretention facilities within the lot's landscaped islands. Four surface sand filters were also constructed as part of Bioscience project, one directly northwest of the traffic circle, one northeast of the circle, one directly east of the green house and a fourth located between the south pond and Observation Drive. Three modified surface sand filters combined with recharge trenches were also constructed in this area along the west side of Observation Drive, within County right-of-way.

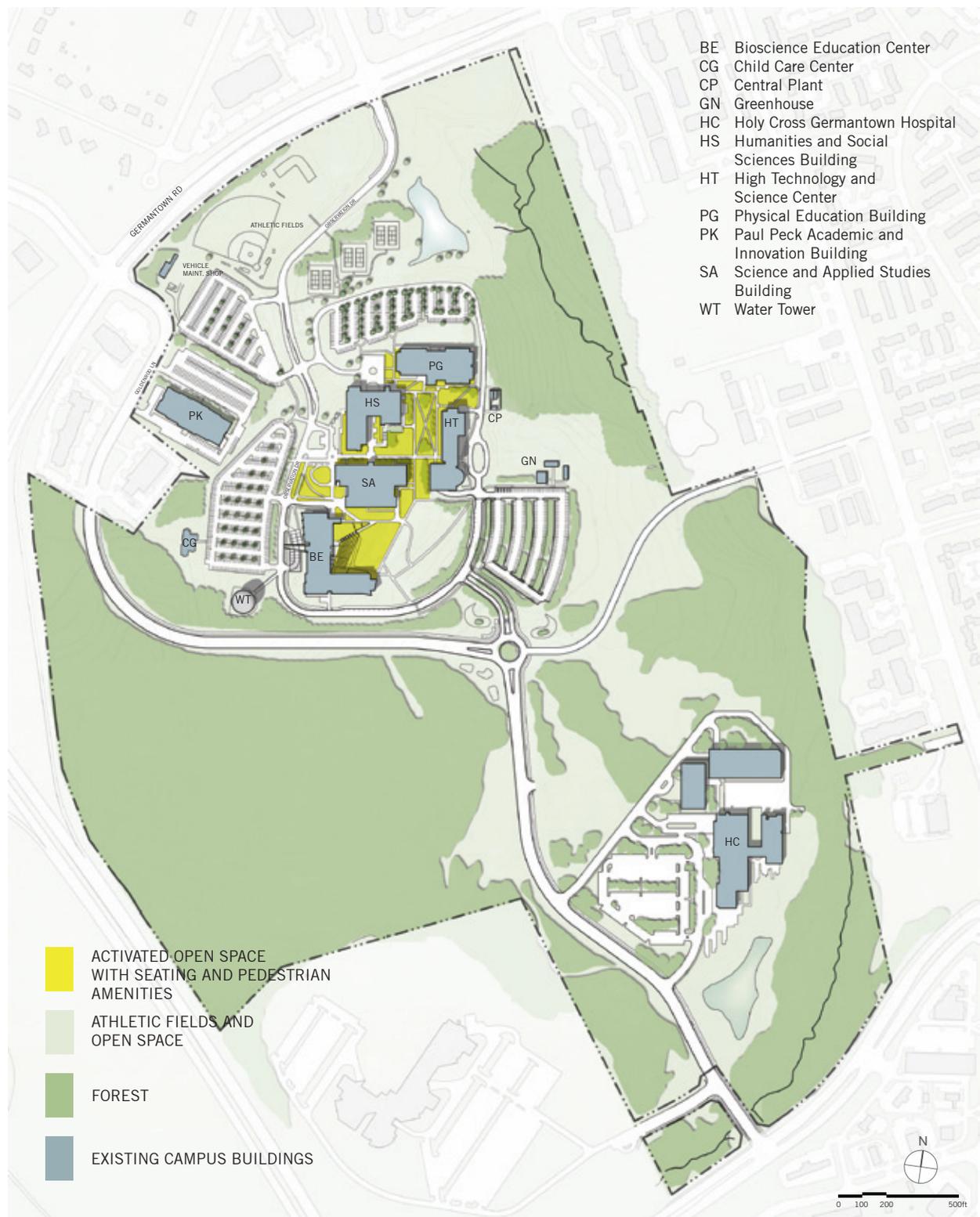
In 2009, State of Maryland Stormwater Management Act of 2007 was passed, requiring the development of a stormwater management plan that implements Environmental Site Design (ESD) to the “maximum extent practicable” and ensures that structural best management practices are only used where absolutely necessary.

ESD is defined as using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic run-off characteristics and minimize the impact of land development on water resources. ESD includes conserving natural resources (drainage patterns, soil and vegetation; minimizing impervious surfaces (roads, walks, roofs) and increasing infiltration and evapotranspiration; and using other non-structural practices and innovative technologies.

The extension of Goldenrod Lane was the first campus project to require MDE Chapter 5 (Environmental Site Design) treatments. The drainage from Goldenrod Lane flows into 2 separate drainage areas, one to the west towards I-270 and one to the east towards Observation Drive. The high point of Goldenrod Lane is located directly south of the water tower, from this point east stormwater management is provided by three separate bioretention facilities located southwest of the traffic circle; to the west of the high point, located southwest of the large “bend” in the road stormwater management is provided by a bioretention as well as three separate micro-bioretention facilities. Another bioretention facility is located just west of the tie-in point to the existing portion of Goldenrod Lane (just south of the hotel).

FIGURE 3.12

# OPEN SPACE



The renovation to the Science and Applied Studies (SA) building, under design as of November 2015, will provide the required stormwater management treatment via 2 micro-bioretenion facilities. One facility will be a planter box facility located at the southeast corner of the building and will capture and treat run-off from the building's roof. The other bioretention will be located at southwest corner of the High Technology and Science Center building and will capture and treat run-off from adjacent sidewalks.

The undeveloped portion of the campus located south of the Goldenrod Lane extension drains to the south via two drainage areas. The first drainage area is located to the southwest of the water tower and collects at a drainage system where it crosses under I-270. The second drainage area is located north of the adjacent Hughes Network property. The run-off from this area collects into a storm drain system that conveys the run-off through the Hughes Network property.

### **Forest Conservation**

A Natural Resource Inventory and Forest Stand Delineation plan was prepared by Ecotone for the Foulger Pratt Companies and Montgomery College and is shown in Figure 3.11 Natural Systems. A Forest Conservation Plan tracked under Plan MR 2009720 covering the entire Campus was approved in June 2010 by the Maryland-National Capital Park & Planning Commission and includes the implementation of a forest conservation area of approximately 71 acres in conformance with the State of Maryland Forest Conservation Act. Approximately 25 acres of the protected forest lies within the Gunners Branch stream buffer and wetland areas along the eastern and southern edge of the Campus. The remaining 46 acres lie to the south of the water tower and preserve an existing Priority 1 forest within the forest conservation easement. The approved forest conservation plan has been amended and updated for ongoing projects (Goldenrod Lane Extension, Holy Cross Germantown Hospital, SAS Building Improvements) since the original approval. The most recent amendment was approved in late 2015.



## 3.3 EXISTING BUILDING CONDITIONS and ANALYSIS

### 3.3.1 Building Usage

The Campus has six academic buildings of which four are grouped around a large quadrangle developed with the origination of the Campus. These include the Science and Applied Studies Building, the Humanities and Social Sciences Building, the High Technology and Science Center and the Physical Education Center. Supplementing these buildings are the Paul Peck Academic and Innovation Building, a renovated office building to the west of the original large quadrangle, the Child Care Center that was built in 2012, and the Bioscience Education Center which opened in September 2014 south of the Science and Applied Studies Building.

Buildings on the Campus generally fall into one or more of the following categories: academic, administrative, service (student, faculty, and staff focused), recreational, and facilities operations. Figure 3.14 illustrates the building usage categories.

**Science & Applied Studies Building (SA) (65,146 GSF)**, is a two-story structure constructed in 1978 with partial renovations in the late 1990s, and formerly contained general classrooms, computer-equipped classrooms, lecture halls, a large interdisciplinary science laboratory and related support functions, and the Science Learning Center. In addition, the Campus Safety and Security Office (open 24 hours a day) was housed in a portion of the upper floor, while part of the lower level houses the Admissions and Records Office, the Assessment Center, the Counseling and Advising Office, the Financial Aid Office, the International and Multicultural Student Center, the Student Employment Services Office, the Student Life Office, and the Student Success Center, with faculty and administrative offices located throughout the building.

The building is currently undergoing a two phase renovation and addition project to convert and reconfigure the building to house the Department of Physics, Engineering and Math along with the Math, Physics and Engineering Learning (MAPEL) Center. Upon completion of renovation/addition project the building will be in excellent condition.

**Humanities & Social Sciences Building (HS) (75,700 GSF)**, is a two-story building constructed in 1978, contains general classrooms, computer-equipped classrooms, the Writing Center and Language Lab, the library, MC Books & More (the bookstore), the cafeteria, and administrative and faculty offices. The library houses a variety of resources that support the curricula and programs on the Campus, including circulation stacks, group study areas, and computers for general student use and resources access. The building is in poor condition and has a substantial deferred maintenance backlog.

**Physical Education Center (PG) (36,770 GSF)**, is a one story building with partial basement constructed in 1983, contains two general purpose classrooms, a gymnasium, a swimming pool, a weight room, locker rooms, and faculty offices for the Health and Physical Education Department. In addition to supporting the Physical Education program the building is used by students, faculty and staff as well as the community for recreational purposes. The building is in poor condition including substantial envelope issues and has a substantial deferred maintenance backlog.

**High Technology & Science Center (HT) (75,542 GSF)**, is a four story structure constructed in 1995, contains general classrooms, computer-equipped classrooms, specialized technology labs for Cybersecurity, a Technology Center, a Math and Accounting Learning Center, a teleconferencing room, the Globe Hall auditorium with seating for 517, and faculty offices. The high performance central chilled water plant is located in the basement of this building and distributes chilled water to other campus buildings except the Paul Peck Academic and Innovation Center. The plant was designed to be expanded to increase capacity and to serve other buildings on the Campus. The building is in fair to poor condition and has a substantial deferred maintenance backlog. This building currently has one elevator that was modernized in 2015. A second ADA passenger elevator should be considered.

# FIGURE 3.13 BUILDING MASSING AND MATERIALS



- Modern Vocabulary**
  - Built in late 1970s- early 1980s
  - One - three stories. Horizontal lines, ribbon windows, and solar collectors on the roofs.
  - Typically white painted concrete and dark windows

- Renovated Office Building**
  - Physically removed from the campus
  - Flat roofs, red brick and dark ribbon windows

- Neo-Traditional Vocabulary**
  - Built in 1995
  - Sloping roofs, vertical tower element and punched windows
  - Buff and light red brick exterior

- Surrounding Non-Campus Buildings**

- BE Bioscience Education Center
- CG Child Care Center
- CP Central Plant
- GN Greenhouse
- HS Humanities and Social Sciences Building
- HT High Technology and Science Center
- PG Physical Education Building
- PK Paul Peck Academic and Innovation Building
- SA Science and Applied Studies Building
- WT Water Tower

**Paul Peck Academic and Innovation Center (PK) (68,826 GSF)**, is a recently purchased two story building containing classrooms and administrative, faculty and staff offices of the English Department. The first floor includes Distance Education and Learning Technologies and the Center for Teaching and Learning. The building is used for credit and non-credit education and training activities. The second floor is being utilized by Montgomery County for a bioscience and technology incubator, the Germantown Innovation Center. The building is in good condition.

**Bioscience Education Center (BE) (126,900 GSF)**, is a four story building, opened in 2014, that forms part of the new Science quadrangle and houses the Biology, Biotechnology, and Chemistry Departments and the office of the Dean of Business, Science, Math and Technology. A high performance central hot water and chilled water plant is located in the basement of this building. The plant serves the building and a direct buried piping distribution system that sends hot water and chilled water to the Science and Applied Studies Building and to proposed future buildings to the south. The chilled water distribution system will also connect to the existing Campus chilled water distribution system forming a redundant network for Campus cooling. The building is in excellent condition.

**Child Care Center (CG) (5,535 GSF)**, is an accredited childcare facility constructed in 2012 and licensed to enroll up to 40 children. The building supports the elementary education program with applied observation capabilities and other experiential opportunities. The building is in excellent condition.

The state-of-the-art Germantown Early Learning Center (ELC) will soon be fully integrated into the Education and Social Science Department. The Center will continue to serve as an observation and practicum site for the Early Childhood Education program, and will be accessible to all disciplines providing opportunities for research and learning. As a dedicated laboratory for the Education Program, the ELC at Germantown will serve as an applied learning environment for students. This is an important expansion for the Education Program as applied learning experiences are a critical element of learning in many disciplines.

Additional benefits of the academic alignment include enhanced grant funding opportunities and greater opportunities to establish partnerships with the higher education community, the public school system, and the private sector. Growth in the Germantown area, the need to accommodate special programs in Montgomery County, and the availability of on-site child care for resident partners in the Hercules Pinkney Life Sciences Park are factors anticipated to drive the need for increased capacity at the Germantown ELC. In addition, we foresee a need to add a college classroom to support the education program, and accommodate real-time observation and analysis, which would greatly enhance the experience and learning of Montgomery College students.

**Greenhouse (GN) (4,562 GSF)**, constructed in 2012, supports the Landscape Technology program. It is used to support classroom and lab instruction and serves as a plant material storage building and nursery. The building is in excellent condition.

**Support Buildings**, There are a number of other small buildings and structures on the Campus that provide support to activities and programs, including: a Baseball Storage Shed, two baseball dugouts, dugout storage shed, and a press box that supports the baseball program, as well as storage sheds for landscape materials, greenhouse materials, tennis activities and the Child Care Center operation. These facilities vary in condition, but all are serviceable at the present time. The Campus also contains the collegewide fleet management operations and a vehicle service garage.

### 3.3.2 Building Conditions and Deficiencies

In August, 2015, the College updated the facilities condition assessment for buildings and site infrastructure components including: electrical utilities, storm sewer, sanitary sewer, parking lots, etc. at each of its three campuses. The goals of this effort were to:

FIGURE 3.14 **BUILDING USAGE**



Image Not to Scale

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #e67e22; margin-right: 5px;"></span> ACADEMIC</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #f1c40f; margin-right: 5px;"></span> STUDENT SERVICES</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #34495e; margin-right: 5px;"></span> ADMINISTRATIVE</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #27ae60; margin-right: 5px;"></span> PHYSICAL EDUCATION</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #7f7f7f; margin-right: 5px;"></span> SURROUNDING NON-CAMPUS BUILDINGS</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #a6a6a6; margin-right: 5px;"></span> OPERATIONS</li> <li><span style="display: inline-block; width: 15px; height: 15px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, #f1c40f 2px, #f1c40f 4px); margin-right: 5px;"></span> MIXED USE WITH STUDENT SERVICES</li> <li><span style="display: inline-block; width: 15px; height: 15px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, #34495e 2px, #34495e 4px); margin-right: 5px;"></span> MIXED USE WITH ADMINISTRATIVE AND STUDENT SERVICES</li> <li><span style="display: inline-block; width: 15px; height: 15px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, #a6a6a6 2px, #a6a6a6 4px); margin-right: 5px;"></span> MIXED USE WITH OPERATIONS</li> </ul>	<ul style="list-style-type: none"> <li>BE Bioscience Education Center</li> <li>CG Child Care Center</li> <li>CP Central Plant</li> <li>GN Greenhouse</li> <li>HS Humanities and Social Sciences Building</li> <li>HT High Technology and Science Center</li> <li>PG Physical Education Building</li> <li>PK Paul Peck Academic and Innovation Building</li> <li>SA Science and Applied Studies Building</li> <li>WT Water Tower</li> </ul>
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- Develop a baseline condition assessment of each facility including related infrastructure components and building systems;
- Provide budget estimates to address required safety improvements and deferred maintenance backlogs for planning purposes;
- Identify building code and accessibility issues and compliance needs to ensure that the facilities are operated as required; and
- Utilize facility assessment findings to inform the development, prioritization, budgeting and scheduling of capital and maintenance/repair projects to address facility deficiencies.

The facilities condition assessment process involved the following:

- A Current Condition Analysis of existing facility deficiencies including deferred maintenance, deferred renewal, near-term anticipated renewal, recommended discretionary improvements, and code non-compliance issues was completed.
- Anticipated capital renewal analyses developed projections of ongoing degradation of facilities' components and costs associated with renewal or replacement of these components as they reach the end of their useful life.
- Capital funding analyses involved formulation of scenario comparisons showing various funding levels and the effect of each on the condition and value of the building.

Information developed as part of the Facilities Assessment provided information for the development of a Facilities Condition Index (FCI) rating for each building on campus.

### Facility Condition Index (FCI)

TABLE 3.10 GERMANTOWN CAMPUS TOTAL REPLACEMENT AND FCI VALUES FOR BUILDINGS, 2015

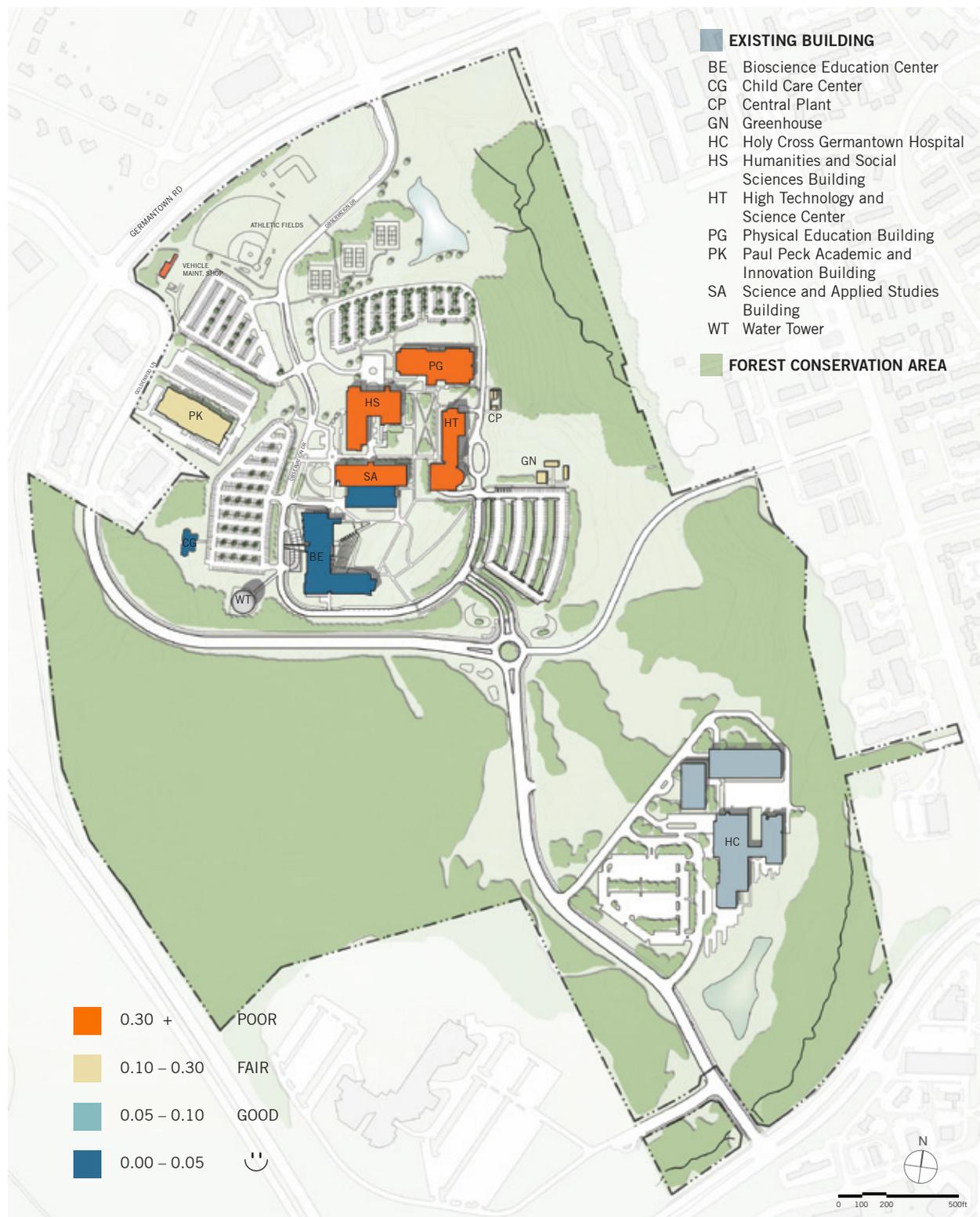
	Building Name	Use	Age/Year Built	Size	RV	FCI Cost	FCI
CG	Child Care Center	Day Care	2012	5,535	1,493	0	0.00
HT	High Technology and Science Center	Classroom Office	1995	75,542	16,263	6,741	0.41
HS	Humanities and Social Sciences	Classroom/Library Cafeteria	1978	75,700	16,930	9,739	0.58
PG	Physical Education	Athletic Recreation	1983	36,770	8,937	5,759	0.64
SA	Science and Applied Studies Building	Classroom Student Services	1978	65,146	14,905	8,388	0.56
PK	Paul Peck Academic and Innovation Building	Classroom	1988	68,826	12,199	2,736	0.22
	Grounds Storage Building	Storage Vehicles	1980	4,295	459	142	0.31

\* The 2015 VFA facility assessment excluded the Bioscience Education Center opened in 2014 and the Greenhouse opened in 2012. Both are in excellent condition and are assumed to have an FCI rating of under 0.10.

Source: VFA Report, 2015 and Montgomery College Facilities Office

FIGURE 3.15

# GENERAL BUILDING CONDITIONS



The FCI is a standard process for assessing the relative condition of buildings and site infrastructure components, facilitating comparison both within and among the campuses. For each building or site component, the Facility Condition Index (FCI) was developed which measures the relative amount of current deficiencies in the building including recommended improvements and grandfathered issues. The total value of recommended repairs is divided by current replacement value for the building or site component resulting in the FCI. The higher the FCI, the poorer is the condition of the facility or system component.

The FCI ranges for the standard of services for each building or site component are:

Good: .00 to .05  
 Fair: .05 to .10  
 Poor: Greater than .10

FCI is a standard measure used throughout the country; it is recommended by both the National Association of College Business Officers (NACUBO) and the Association of Higher Education Facility Officers (APPA).

Table 3.10 summarizes the findings from the 2015 assessment of buildings on the Campus. Buildings with an FCI rating of “Poor” should receive highest consideration for renovation through a capital project. For those buildings with an FCI rating of 0.60 or higher more study should be completed to determine if comprehensive renovation or demolition is the most feasible option. Buildings constructed in the late 1970s and early 1980s, that have not had capital renovation, are all in need of major systems upgrade or replacement in the future.

The following table provides a summary of the building deficiency amount by FCI range.

**TABLE 3.11 BUILDING DEFICIENCY FOR CATEGORY AMOUNT AND % OF TOTAL BUILDING DEFICIENCY**

<b>Deficiency</b>	<b>FCI Cost</b>	<b>Percent of FCI Cost</b>
Less than 25% deficiency (1 buildings)	\$2,736,000	8%
26% to 50% (3 buildings)	\$6,883,000	21%
51% or greater Deficiency (3 buildings)	\$23,886,000	71%
<b>TOTAL</b>	<b>\$33,505,000</b>	<b>100%</b>

Note: Does not include the Bioscience Education Center, the Greenhouse and small support buildings.  
 Source: VFA Report, 2015 and Montgomery College Facilities Office

TABLE 3.12 GERMANTOWN CAMPUS SPACE UTILIZATION, FALL 2015

		Room Utilization	Student Station Utilization
	Actual Fall 2013	2006 FMP Projected Fall 2023	% Change Fall 2013
<b>High Technology and Science Center (HT)</b>			
*FL 1	Lecture	50.93%	65.92%
	Labs	7.33%	94.44%
*FL 2	Lecture	48.72%	66.49%
	Labs	1.11%	83.33%
*FL 3	<b>Lecture</b>	<b>29.37%</b>	<b>57.81%</b>
	Labs	18.15%	61.81%
*FL 4	Lecture	43.52%	66.29%
	Labs	15.78%	63.89%
<b>Humanities and Social Sciences Building (HS)</b>			
FL 0	Lecture	61.44%	72.94%
FL 1	Lecture	43.74%	72.48%
FL 2	<b>Lecture</b>	<b>50.80%</b>	<b>69.63%</b>
<b>Paul Peck Academic and Innovation Building (PK)</b>			
FL 1	Lecture	43.60%	66.57%
<b>Physical Education Building (PG)</b>			
FL 1	Lecture	22.15%	64.89%
Pool	Lecture	17.78%	20.50%
<b>Science and Applied Studies Building (SA)</b>			
*FL 1	Lecture	43.28%	45.52%
	Labs	4.44%	57.61%
*FL 2	Lecture	12.84%	65.42%
	Labs	23.16%	69.13%

\*Spaces on this floor are used for both lecture and lab  
 Source: Montgomery College, Fall 2015 Schedule Data

## 3.4 FACILITIES PROGRAM

### 3.4.1 Campus Space Planning Factors

There are many planning factors that contribute to the dynamic and shifting landscape of today's higher education institutions. Some of the key planning factors to be considered in campus master planning that are anticipated to influence and drive the demand for higher education programs and the supporting facilities at Montgomery College are discussed in this section.

#### Past and Projected Enrollment and Program Growth

Montgomery College overall has experienced significant enrollment growth over the past five years. The Germantown campus has grown in total student FTE enrollment since 2008 and is projected to increase FTE enrollment by 32% by 2023. During this same planning period, Maryland is expected to see high growth in middle and high skill jobs requiring a 2 year or 4 year degree. This increase in jobs, along with the planned enrollment growth, will be a major factor driving the demand for access to educational programs and the supporting facilities.

Other drivers of enrollment growth at Montgomery College and its campuses are anticipated to include state incentive programs such as Dual Enrollment (Maryland's College and Career Readiness and College Completion (CCRCC) legislation) and the Dream Act (Chapter 191 of 2011, Senate Bill 167 Public Institutions of Higher Education – Tuition Rates – Exemptions). In addition, an on-going national trend of increasing escalation of tuition costs and associated fees at four-year institutions continues to make affordability a primary issue for many students. This trend is expected to continue into the foreseeable future resulting in expanded demand for more affordable access at community colleges.

#### Changes to Teaching Pedagogy

Teaching pedagogy in the 21st Century is focused on providing students with experiential and group based learning activities that promote learning for practical application in the work environment. Teaching methodologies and pedagogy are undergoing transformation and no longer are four walls and a chalkboard sufficient to provide the instructional environment and tools that students and faculty need to be successful. Classrooms must be flexibly configured and furnished, and equipped with robust instructional technology to be adaptable to new teaching methodologies grounded in student-centered and group learning activities. Flexible spaces, both inside and outside of the formal classroom, are needed to support student collaboration, practice, and group work. In addition, more curriculums are requiring laboratory classes. These factors typically require a higher space allocation per student station in instructional spaces and more informal student study areas outside of the classroom.

### 3.4.2 Space Utilization

Building space is a valuable institutional resource and is an important asset in supporting teaching and learning, and student development and success. Enrollment management and space scheduling are significant components that impact facilities usage and master planning. Class scheduling directly impacts the utilization of space. To most efficiently use instructional space, class sizes need to be aligned with desired class size cohorts. In this regard, Maryland has established standards for classroom and class laboratory room and student station utilization for community colleges, which is used as the basis for the fall 2014 "utilization snapshot" assessment of campus.

In accordance with MHEC goals, Montgomery College would ideally schedule classrooms from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 27 of the 45 day hours per week or at a 60% utilization rate for credit instruction. In addition, the College would fill a minimum of 66.7% of the student stations for each classroom scheduled.



In accordance with MHEC goals, Montgomery College would ideally schedule class laboratories from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 18 of the 45 day hours per week or at a 40% utilization rate or credit instruction. In addition, the College would fill a minimum of 60% of the student stations for each class laboratory scheduled.

A general campus-wide analysis of average room and station utilization by academic building for the fall 2014 semester for the Campus was completed with the results summarized in Table 3.12. Observations can be made from the snapshot analysis that may identify opportunities to better utilize space and seating capacity as well as physical constraints limiting the better use of space. However, these observations and any subsequent recommendations must be developed with caution, since both quantitative and qualitative issues can affect scheduling and utilization of rooms.

A general assessment by academic building, based on fall 2014 scheduling data from the College for credit classes during day hours from Monday through Friday, yielded the following observations.

- Classrooms in most buildings have capacity to accommodate additional classes based on room utilization data.
- Laboratories in most buildings have capacity to accommodate additional classes based on room utilization data.
- The campus is meeting or exceeding the Maryland student station utilization rates for classes and class laboratories that are scheduled, with a very few exceptions
- Some classes and class laboratories are scheduled outside of or overlap the typical scheduling matrix hours used for Monday, Wednesday and Friday and Tuesday and Thursday, creating inefficiency. In some cases, this may be unavoidable due to curriculum requirements.
- Late afternoon hours in some buildings appear to be under-scheduled on Fridays.

### Qualitative Assessment

At the heart of determining the quality of campus space, and more specifically instructional space, is an analysis of how effectively space is meeting the intended function. General observations can be made based on the age, condition, and general utilization of the building and input from campus staff as to how effectively space is being used. Observations about the quality of existing space include:

- Five of the academic and academic support buildings on the Campus were designed and constructed more than 30 years ago with the High Tech and Science Center constructed more than 20 years ago. The instructional space configuration in many of these buildings has not changed and most do not fully support the desired teaching pedagogy. Classrooms in these buildings and others are designed primarily for a lecture set up to support the “Sage on the Stage” teaching style. These spaces typically do not provide flexibility for reconfiguring furniture and using instructional technology to support group and collaborative learning.
- Most of the older academic buildings have little or no informal/social student study and learning space for use in student-to-student, student-to-faculty and/or small groups outside of the classroom or laboratory.

### 3.4.3 Campus Space Needs

The current and projected facilities space needs assessment at the Germantown Campus is generated by applying current and projected planning data related to enrollment, instructional delivery, library collections, faculty, and staff to the State of Maryland Guidelines for facilities at community colleges. The planning data referenced above and used to compute current and projected space needs is documented in Table 3.13.

TABLE 3.13  
GERMANTOWN CAMPUS SPACE NEEDS ASSESSMENT PLANNING DATA, FALL 2013 AND 2023

	Actual Fall 2013	2006 FMP Projected Fall 2023	% Change Fall 2013
<b>FTDE</b>	<b>2,107</b>	<b>3,385</b>	<b>61%</b>
FTDE (inc on line)	2,469	3,968	61%
Day SCH	37,035	59,520	61%
Day WSCH-Lec	30,594	46,564	52%
Day WSCH-Lab	20,437	29,838	46%
Day WSCH	51,031	76,402	50%
<b>FTE</b>	<b>3,486</b>	<b>4,590</b>	<b>32%</b>
Credit Hours (SCH)	50,322	72,967	45%
Bound Volume Equivalents	91,048	101,974	12%
FTEF	150	176	17%
FT fac	90	104	16%
PT fac	239	286	20%
FTES	186	209	12%
FT staff	179	199	11%
PT staff	29	41	41%
Planning Head Count	1,399	2,172	55%
<b>Headcount Student (HCS)</b>	<b>7,441</b>	<b>9,423</b>	<b>27%</b>

Source: Montgomery College

Current and projected space needs are then computed for each type of space in the Campus inventory for which a guideline is available. Comparisons with the current inventory of the Campus and the one planned for the ten year planning period, given approved capital projects, are made, and surpluses or deficiencies relative to the respective space categories are identified. Table 3.14 documents the results of this analysis and breakdown by ROOM USE category.

TABLE 3.14 GERMANTOWN CAMPUS COMPUTATION OF SPACE NEEDS, FALL 2023

HEGIS CODE	ROOM USE CATEGORY	NEED 2023	PROJECTED INVENTORY*	SURPLUS (DEFICIT)
<b>100</b>	<b>CLASSROOM</b>	<b>55,908</b>	<b>31,536</b>	<b>(24,372)</b>
<b>200</b>	<b>LABORATORY</b>	<b>203,938</b>	<b>96,058</b>	<b>(107,880)</b>
210	Class Laboratory	188,163	86,503	(101,660)
220	Open Laboratory	15,775	9,555	(6,220)
<b>300</b>	<b>OFFICE</b>	<b>63,010</b>	<b>58,192</b>	<b>(4,818)</b>
310-350	Office/ Conf. Room	60,382	55,416	(4,966)
320	Testing/Tutoring	2,628	2,776	148
<b>400</b>	<b>STUDY</b>	<b>37,583</b>	<b>16,010</b>	<b>(21,573)</b>
410	Study	23,475	5,528	(17,947)
420-30	Stack/Study	10,077	10,035	(42)
440-55	Processing/Service	4,031	447	(3,584)
<b>500</b>	<b>SPECIAL USE</b>	<b>63,672</b>	<b>33,747</b>	<b>(29,925)</b>
520-23	Athletic	56,560	27,798	(28,762)
530	Media Production	6,112	1,578	(4,534)
580	Greenhouse	1,000	4,371	3,371
<b>600</b>	<b>GENERAL USE</b>	<b>53,318</b>	<b>26,880</b>	<b>(26,438)</b>
610	Assembly	16,512	9,983	(6,529)
620	Exhibition	2,628	0	(2,628)
630	Food Facility	17,279	6,163	(11,116)
640	Childcare	No Allowance	No Allowance	No Allowance
650	Lounge	6,171	4,001	(2,170)
660	Merchandising	2,728	1,553	(1,175)
670	Recreation Space	No Allowance	No Allowance	No Allowance
680	Meeting Room	8,000	5,180	(2,820)
<b>700</b>	<b>SUPPORT</b>	<b>26,283</b>	<b>14,850</b>	<b>(11,433)</b>
710	Data Processing	2,500	289	(2,211)
720-740	Shop/ Storage	19,395	13,177	(6,218)
750	Central Service	4,000	1,018	(2,982)
760	Chemical Storage	388	366	(22)
<b>800</b>	<b>HEALTH CARE</b>	<b>951</b>	<b>0</b>	<b>(951)</b>
<b>900</b>	<b>RESIDENTIAL</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
<b>050-090</b>	<b>ALTERATIONS/ IND USE</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
	<b>Total NASF:</b>	<b>504,663</b>	<b>277,273</b>	<b>(227,390)</b>

\* Projected Inventory includes existing space in 2013 plus approved development projects including those in design or construction.

Source: Montgomery College

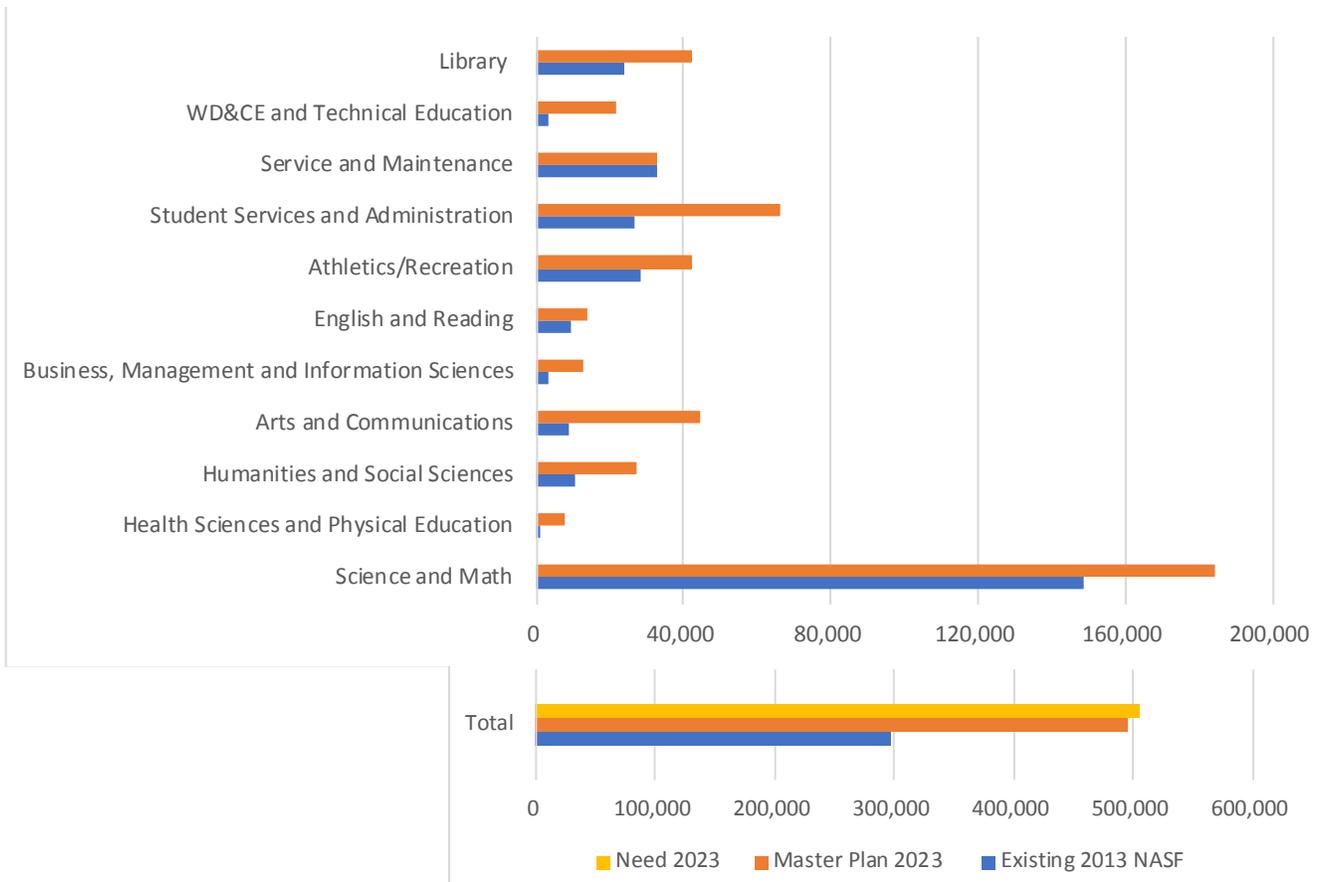
Based on the computation of space needs in Table 3.14, the Campus is projected to need an additional 227,390 NASF of space to accommodate the planned enrollment growth. Figure 3.16 provides a graphical comparison of the space needs computed for 2013 and projected for 2023. Major deficits in academic and academic support space categories are projected in class laboratory, classroom, library and study, faculty/staff offices (especially for part time faculty) and assembly. These needs will be specifically addressed in Section 3.5.4.

In addition to the quantitative space needs identified in this section, there are also several programmatic and qualitative space issues and challenges that need to be addressed.

A primary challenge for the College will be the development of the PIC MC. This initiative is to form a synergy that benefits students, faculty, the County, and the businesses that locate within the Life Sciences Park. There is a need for more flexible classroom and laboratory space to accommodate group based learning and collaboration. This includes providing instructional spaces with a larger student station space allocation and flexible furnishings allow for multiple configurations for small and larger groupings of students to engage and interact. It is also desired that instructional spaces include robust technology and wall writing surfaces to support in-class activities and exercises.

Redevelopment of the library facilities on each campus is essential to the evolution of these resources into a true learning commons that provides additional and appropriately configured and equipped instructional spaces, individual and group study areas and computer stations. In addition, the introduction of faculty and staff technology rich “sand box” spaces, lounges and cafes and louder collaboration zones are desired for the library learning commons on each campus.

**FIGURE 3.16**  
**GERMANTOWN CAMPUS PROPOSED PROJECTS IMPACT ON PROJECTED SPACE NEEDS, FALL 2023**



## 3.5 FACILITIES MASTER PLAN

### 3.5.1 Campus Master Plan Guiding Principles

As part of the master plan process, a series of guiding principles were developed to assist in the preparation of the Facilities Master Plan which include:

#### 1. Develop new and renovated facilities to support academic and student programming in support of the College Mission.

- Support the College's goal of establishing and nurturing a unique role for the Germantown Campus in meeting the multi-level science and technology educational, economic, and work force development needs of Montgomery County.
- Provide sufficient and adequate space — classrooms, labs, offices, study, meeting rooms, and support facilities — based on existing and projected needs, so that each and every area can contribute creatively and productively every day to helping students.
- Co-locate departments and functions rationally so that students, visitors, and the College community itself benefit from the ease, energy, and excitement generated by proximity.
- Present students with the needed range of opportunities to study and learn collaboratively in supportive environments with the special assistance of faculty, librarians, counselors, and staff, and tenants of the Life Sciences Park.
- Afford students opportunities to meet and develop socially through formal programs of leadership, recreation, and athletics, and informally in inviting indoor and outdoor spaces.
- Maximize the land resources available on the campus while retaining its unique character, quality, and setting, and yet meeting the needs of the students, faculty, staff, community members, and visitors who come to the campus every day.
- Invite students, faculty, staff, community members, and visitors to participate in the varied campus and College activities by organizing the campus—including buildings, parking, outdoor athletic facilities, and circulation for pedestrians, the disabled and elderly - to make their experience pleasant and successful.
- Support the development of the PIC MC.

#### 2. Guide future development of buildings, landscapes, pedestrian and vehicular circulation so as to physically integrate the Campus core with Holy Cross Germantown Hospital .

- Prioritize building development sites in the south area between the hospital and the science quad.
- Create strong tree lined pedestrian paths. Make the most of forest conservation, wetlands and stream areas with hiking trails connected back to the developed areas of campus.
- Retain strong, clear views between the campus core and the hospital/future development sites, and retain expansive views to Germantown from campus.
- Implement traffic calming measures on campus roads to reinforce gateways, enhance views and provide safe connections for both vehicles and pedestrians.

- Landscape should reinforce visual and pedestrian connections throughout the Campus; environment site design elements should be amenities that enhance Campus character.
- Enhance the hilltop character of the Campus.
- Site buildings carefully to preserve distant views.
- Preserve and enhance the green space, views, and pedestrian connections that radiate out from the center of the Campus.
- Site the new Student Services Center and Arts and Communications buildings to serve as new gateway facilities when entering the Campus from the north.

### 3. Concentrate academic and student services development on the Campus.

- Concentrate new campus development and locate entrances to ensure walkability and accessibility for all students and faculty.
- Site new buildings and renovate existing buildings to encourage proximity of departments and programs. Create proximity of the Science, Engineering and Math departments, cluster the Humanities, Social Sciences & Arts programs, and consolidate the Student Services functions.

### 4. Consolidate Student Services and Enhance Student Life.

- Combine Student Services in one distinctive, highly engaging building.
- Develop new outdoor spaces and student connections between the Physical Education Building, the Humanities and Social Sciences Building, the new Student Services Center and Arts and Communications buildings.
- Encourage pedestrian access to the existing storm water management pond located in the northern portion of the Campus and develop appropriate amenities to enhance this asset.

### 5. Develop the Roadway System to strengthen campus gateways and Provide Better Access and Safety.

- Combine Student Services in one distinctive, highly engaging building. Provide a new plaza that provides good transit and drop off locations adjoining the center of campus.
- Roadways should not become a barrier to campus development. They should be designed with pedestrian crossings and circulation in consideration. Appropriate traffic calming measures should be employed to slow all campus traffic and discourage through-traffic.
- Allow for the future connection of Observation Drive to Goldenrod Lane, with accommodation for traffic calming at the campus turnoff near the new Student Services building.

### 6. Provide Appropriate Parking Facilities to Handle Future Parking Demands.

- Provide a new parking garage adjoining the north campus gateway to allow for development of surface parking lots and expansion.
- Incorporate planted swales that become a landscape amenity into the design of new surface parking lots.

- Encourage transit and carpool use with coordinated programs, shuttles, and improved facilities to reduce the dependence on the automobile and the need for more parking. Enhance the pedestrian facilities around the transit hub.

#### 7. Strengthen Pedestrian Connections.

- Develop pedestrian connections through existing buildings. Both the High Technology & Science Center and the future Physics, Engineering & Mathematics Center should have clear student circulation paths that accommodate the change in levels.
- Encourage pedestrian paths as part of a radiating system of green fingers leading from the Campus' central quadrangle particularly providing for direct connection to the Holy Cross Hospital and sites between. Also provide a strong connection to the Paul Peck building and future adjoining building sites.
- Site the Social Sciences & Art Building to reinforce the pedestrian connection to the Goldenrod Building.
- Outdoor green and hardscape space should be enhanced in a purposeful way, with shade trees, seating and other amenities coordinated with each other.

#### 8. Enhance the Natural Systems of the Site.

- Utilize semi-pervious pavers and grassy swales where possible to reduce storm water impacts.
- Combine grass-lined swales with wooded buffers to treat run-off in an attractive and coordinated manner.
- Enhance views, increase buffers and support the existing natural systems of the site through reforestation. Treat the environmental constraints on the site as an opportunity to create a better Campus and learning environment.
- Make the most of forest conservation, wetlands and stream areas with hiking trails connected back to the developed areas of campus.

#### 9. Incorporate Sustainable Building and Site Strategies.

- Achieve the LEED silver rating for new construction and renovations on Campus.
- Incorporate building strategies that incorporate use of recycled and local materials, green roofs to mitigate heat gain and control storm water run-off, and more efficient and intelligent lighting systems and HVAC systems.
- Incorporate strategies that include installing dark sky light fixtures, landscaping with native plants and incorporating rain gardens and landscaped swales to aid in storm water quality control.

### 3.5.2 Response to External Planning Factors

#### College Town Plan Summary and Analysis

In the fall of 2014, Montgomery College, led by its Department of Advancement and Community Engagement, engaged a team led by U3 Advisors to create a College Town plan for Montgomery College. The College Town Plan makes a range of programmatic and planning recommendations, many of which align with some of the goals of this Facilities Master Plan. They include recommendations as follows:

- Community engagement – Facilities and resource sharing (Short-term)
- Physical Improvements – Enhance public awareness of Montgomery College via coordinated signage initiatives at key intersections and gateways (Short-term)
- Private sector engagement – Continue to pursue partnerships with private industry (Short to Medium Term)
- Improve Pedestrian, Bike, and Transit Connections (Short, Medium and Long-Term, based on scope)
- Implement Germantown Campus Framework Plan (Short, Medium and Long-Term, based on scope)
- Pursue larger presence in East County (Medium to Long-Term, based on scope)

Source: Montgomery College, College Town Plan

#### Pinkney Innovation Center for Science and Technology at Montgomery College Summary and Analysis

In October 2014, Montgomery College published a strategic business plan for the “Partnership Program and Integrated Campus for Resident Partners.” The Germantown Campus will develop into an integrated hub of education business and entrepreneurship. It will be a place where industry partners actively interact with faculty and students to achieve academic and economic success. The vision of this plan focuses on two intertwined elements of program and place.

Strategic Plan Goals:

- Strengthening Education Outcomes. Use increasing company engagement and real-world business settings to inform curriculum development, to produce graduates who will succeed in their careers and serve human resources needs of the tech industries.
- The Partnership Program. Expand and improve management of a program to establish, sustain, and monitor outcomes of College partnerships with businesses and other organizations in the County.
- Mixed Community of College Programs and Tech Businesses—as Resident Partners. Develop the Germantown Campus as a mixed college and private tech business community, in which both programs of activities and design of the physical environment promote mutually productive relationships.
- College Space Expansion and Private Use Space Targets. Ultimately provide at least 1 M SF of College space and at least 330,000 SF of private use space in an urbanist concept plan, all in addition to the HCGH development.
- An Urban, Walkable, Place and Wise Land Use. Achieve this increased capacity, maximize land use, and make a walkable, urban campus / place by planning significant densities and (ultimately) structured parking.

- **Market Positioning to Attract Smart People.** Define and market the area (Campus plus adjacent, neighboring uses) as an epicenter of innovation in the County—a place in which highly-skilled people, including young professionals and entrepreneurs, like to live, work, learn, prosper, and enjoy a high quality of life.
- **Creative Development and Financing Strategies.** With the LSF Park Foundation serving as Development Manager of private and mixed-use elements, and fully engaging the approvals of county and state authorities and sponsors, use a range of creative development and financing approaches to carry out the physical model.

This Conceptual Land Plan aims, over time, to transform the existing Germantown Campus into a highly-integrated network of flexible facilities that advance the following best practices in place-making:

- **Mixed Uses:** Ultimately, the Campus will be composed of buildings intended to accommodate academic programs or college offices, or Resident Partners, or a mix of both. They also may include street-level retail.
- **Compact, Walkable Footprints:** The Campus will consciously evolve with a more urban character—encouraging pedestrian links between the College and its Resident Partners, including the HCGH and Hughes campuses.
- **Community-Building Infrastructure:** The Campus will provide public, highly-visible, programmed event spaces that draw together on-site occupants and off-site community members to the Campus.
- **Enhanced Mobility + Connectivity:** The Campus will provide complete streets, shuttles, additional direct access to local and regional roads, and potential links to future transit corridors; along with intra-connected site strategies that tie to HCGH and Hughes, as major Resident Partner anchors.
- **Compelling Public Spaces:** The Campus will foster a rich pedestrian environment, featuring a continuous network of plazas, streetscapes and landscape amenities, incorporating nature and demonstrating sustainability—with view-sheds into surrounding forests and with new campus front doors.

Source: Montgomery College, Partnership Program and Integrated Plan for Resident Partners: Strategic Business Plan

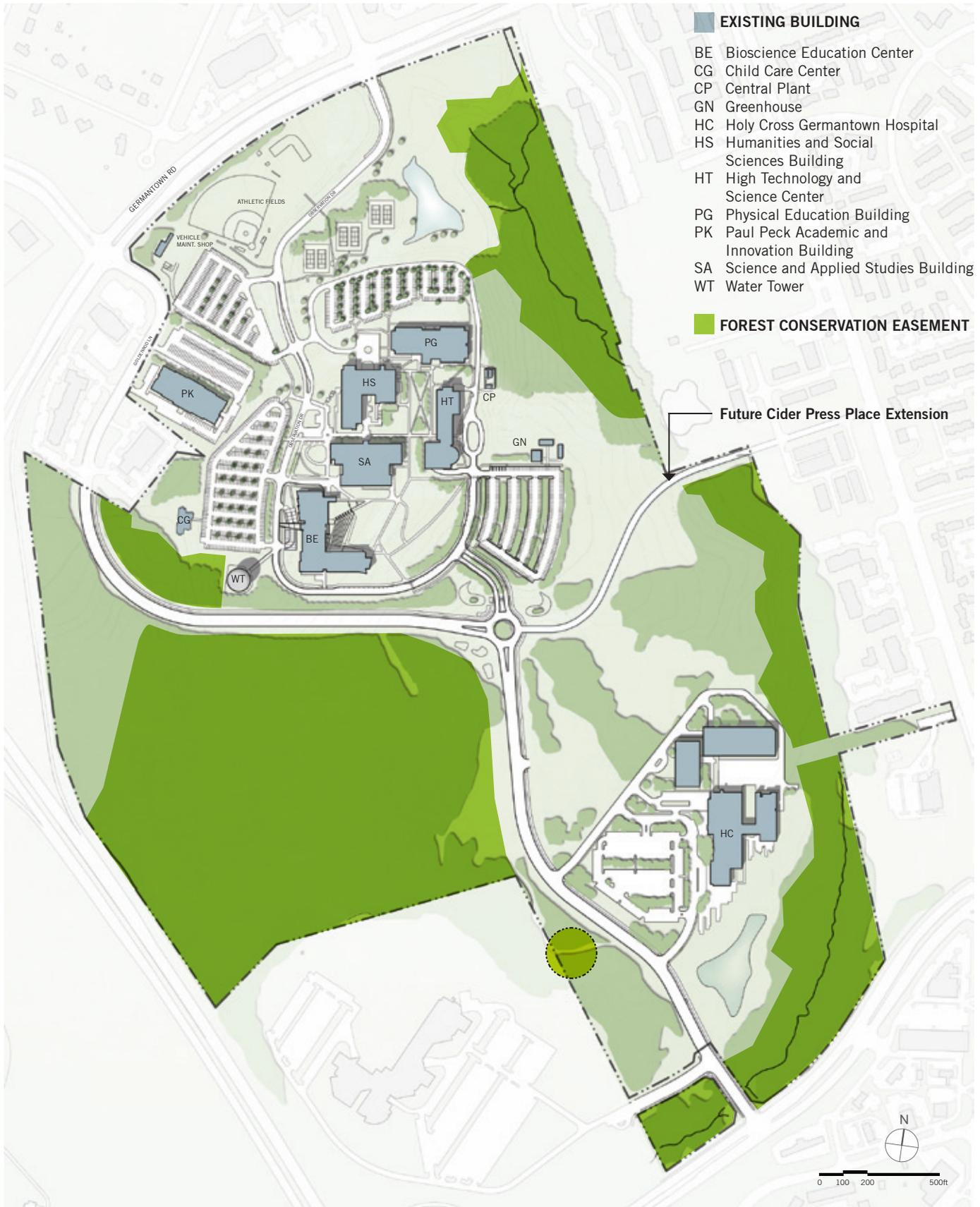
Both the College Town and Strategic Plans establish a dense urban walkable framework that will transform the Germantown Campus into a hub for the Germantown Innovation District. Since the plans were published, the Campus has continued to make improvements to its road network and utility infrastructure to accommodate the development the plans envision. Some of the new infrastructure impacts the framework established by the Strategic and College Town Plans.

Montgomery County and the Maryland National Capital Planning Commission have reviewed and approved plans for two road projects that will affect the framework. In the near future, the proposed County plan will connect the Campus to Frederick Road (Route 355) by way of Cider Press Mill Place. The proposed new road will terminate the traffic circle where Observation Drive and Goldenrod Lane Intersect. The County also proposes that Goldenrod Lane will be extended to Observation Drive; and the intersection of Goldenrod Lane and Germantown Road will be eliminated. Access to the campus from the north would remain at the current location of Observation Drive and Germantown Road.

Other site constraints impact the framework established in the Strategic and College Town Plans. Both plans place some building footprints on sites where major utilities are located, roads and parking have been con-

FIGURE 3.17

# CURRENT CAMPUS PLAN



structed and grades are in excess of twenty percent. All of this is costly and problematic so needs to be carefully considered. Placing buildings on some of these sites will impact the views and connections from the hilltop existing campus buildings to the Hospital and development sites. There are also conflicts between the plans and the forest conservation easements on the site.

### 3.5.3 Proposed Campus Structure and Character

The original design for the Campus focused the buildings inward, toward a grassy quadrangle, which helped to lend the small campus a sense of unity and interconnectivity. The Bioscience Education Center was the first building planned to be located beyond the original quadrangle. The size of the new Bioscience Education Center and its siting on the sloping site creates a large open space to the south of the existing campus. The location of the building is oriented as much to the new southern entrance to the Campus as to the existing Campus buildings. The buildings proposed in the 2013-2023 Facilities Master Plan have been located to reinforce pedestrian and visual connectivity on the core campus.

Following the guiding principles listed in Section 3.5.1, the 2013-2023 Facilities Master Plan proposes to physically alter the arrival experience to the Campus. It sites new buildings to serve as both a gateway to the Campus and an extension of the existing pedestrian paths. The proposed Student Services Center will guide and orient visitors to the Campus and will help create a connection to the pond to the north of the existing development. The proposed Arts and Communications Building located on the west side of Observation Drive will break up the large areas of parking and define a clear pedestrian path to the Paul Peck Academic and Innovation Building. This building will also serve as part of the northern gateway to the Campus, together with the Student Services Center, as one approaches from Germantown Road up Goldenrod Lane.

The outdoor spaces on the Germantown Campus are critical components of the functioning of the adjoining buildings. Most buildings in a campus setting open onto these landscaped spaces. Following is a list of landscape projects envisioned for the Germantown campus. Reference Figures 3.18 and 3.19.

1. Utilize landscaping, pedestrian paths and view sheds to strengthen the connection between the campus core and future Life Science Park developments.
2. Line Observation Drive with street trees, pedestrian scaled lighting and sidewalks. In addition it will have one lane of parallel parking. Link the drive through extensive landscaping/ raingardens and walkway from the north gateway to the forest conservation area to the south
3. Modify the current vehicular drop-off to allow for a more spacious pedestrian entry into the Campus. Landscape the area of the outdoor play yard vacated by the relocation of the Child Care Center.
4. Enhance the campus quadrangles with groupings of trees to help define edges, reinforce pedestrian walking paths and create more shade and amenities.
5. Reinforce the east-west pedestrian axis from the east of the High Technology & Science Center to the Paul Peck innovation Center and adjoining development.
6. Link the existing Campus pond, a natural amenity, to the center of the Campus with a landscaped path.
7. Retain the forested buffers to the east of campus, extending ribbons of green up into the Campus with appropriate landscaping and pedestrian connections.
8. Protect critical views out from the center of Campus, especially to the south and east. Define locations for future buildings to ensure that these view corridors will be respected and protected.



### 3.5.4 Proposed Building Projects

The 2013-2023 Building Concept Plan is included as Figure 3.18 which documents the proposed location, footprint and height of proposed new buildings on Campus. The Building Concept Plan is in response to the space needs by academic grouping documented in Figure 3.16.

Below is a summary description of the proposed projects recommended in the Building Concept Plan. These summary project descriptions, along with additional work proposed in the Landscape and Open Space Plan (See Figure 3.19), and recommendations from the utility and information technology infrastructure, environmental and sustainability, and circulation and parking sections will be used to develop responsive capital projects that address the identified facility and space needs through 2023. These projects will be the basis of the Facilities Master Plan.

A phasing strategy for the Facilities Master Plan has been developed to ensure an efficient and effective implementation of the proposed capital project improvements. This strategy is included in Section 3.6, Implementation of the Master Plan.

#### 1. New Student Services Center (54,150 NASF, 95,000 GSF)

The Student Services Center will consolidate student support functions and resources, as well as student activities, which have traditionally been spread throughout the Campus. It will relocate the Admissions, Registration and Records; and Student Development and Student Life offices from the Social Science & Applied Studies Building and create substantially more space for study and student interaction to support a growing Campus. In addition the building will house a new larger cafeteria and bookstore.

The Student Services Center has been strategically sited to create a new gateway into the Campus. The building will be visible from the north as part of the Campus entrance from Germantown Road, affording an immediate orientation for visitors and serving as a gateway image for the College. The building will be located adjacent to the Physical Education Center which will have a new fitness addition in the future. A new outdoor plaza on the south side of the building will include an area for vehicular drop off and a transit stop, as well as a small outdoor plaza connecting this building with its neighbors.

#### 2. Science & Applied Studies Building Phase 2 Addition (31,806 NASF, 55,800 GSF)

This project is the second phase of an on-going project to renovate and expand the Science and Applied Studies Building to develop a larger Physics, Engineering and Math Center to support current and projected student enrollment growth. The Phase 2 project will involve demolition of the existing two story wing on the south and redevelop it with a bigger three story addition. The proximity to the Bioscience Education Center will allow for shared use of facilities within both buildings, such as the Mathematics and Accounting Learning Center in the Physics, Engineering & Mathematics Center and the Science Learning Center in the Bioscience Education Center.

The building is currently entered from the lower floor of the north side. There is no access on the south side of the building. To facilitate access to the Bioscience Education Center and the new quadrangle to the south, the circulation pattern will need to be reconfigured to provide for a new entrance from the second floor with egress to the south as part of the Phase 2 project. This new southern entrance provides a design opportunity to incorporate a student lounge or similar use to help activate the new quadrangle.

#### 3. Library Learning Commons Building (42,120 NASF, 70,200 GSF)

This building will act as a connecting hub between the main academic buildings and the future PIC MC buildings. It has been located to establish a new campus focal point/center between the campus core and the Holy Cross Germantown Hospital. The building is proposed to be angled and set down into the hillside so that it minimizes blocked views from the High Technology and Science Center, or the Science and Applied Studies Building

FIGURE 3.18

# 2013-2023 BUILDING AND SITE CONCEPT PLAN



- 1 STUDENT SERVICES CENTER**  
 FOOTPRINT - 33,400 GSF  
 TOTAL(3FL) - 95,000 GSF
- 2 SCIENCE AND APPLIED STUDIES BUILDING**  
 PHASE 2  
 FOOTPRINT - 18,600 GSF  
 TOTAL(3FL) - 55,800 GSF
- 3 LIBRARY LEARNING COMMONS**  
 FOOTPRINT - 17,550 GSF  
 TOTAL(4FL) - 70,200 GSF
- 4 HUMANITIES AND SOCIAL SCIENCES**  
 RENOVATE FOR HUMANITIES, ENG., READING & SOC. SCI
- 5 PARKING GARAGE**  
 TOTAL - 800~1,000 SP
- 6 SCIENCE / MATH / HEALTH SCIENCE**  
 FOOTPRINT - 9,600 GSF  
 TOTAL(3FL) - 34,200 GSF  
 (6A - FUTURE MIXED USE)
- 7 ARTS AND COMMUNICATIONS BUILDING**  
 FOOTPRINT - 24,000 GSF  
 TOTAL(3FL) - 72,000 GSF
- 8 HIGH TECHNOLOGY AND SCIENCE CENTER**  
 RENOVATE
- 9 PAUL PECK ACADEMIC AND INNOVATION BUILDING**  
 FOR WD&CE(50%) & COUNTY INCUBATOR(50%)
- 10 PHYSICAL ED. ADDITION**  
 FOOTPRINT - 20,900 GSF  
 TOTAL - 68,826 GSF  
 (ADDITION + RENOVATION)

**PHYSICAL EDUCATION**  
 RENOVATE

and frames the view down to the proposed sites of the PIC MC and Holy Cross Germantown Hospital . It is also positioned to avoid existing utilities adjoining the loading area for the High Technology Center.

The new Library/Learning Commons will house the Reading and Writing Learning Center, the Social Science Learning Center and its media and academic computing functions. General purpose and library learning classrooms will also be included in this new building.

In addition to library and learning functions, the building will house a café that has good public access for future PIC MC occupants as well as students, faculty and staff. It should be a highly visible and active space that provides opportunities for informal interactions.

#### **4. Renovation of the Humanities & Social Studies Building (51,061 NASF, 75,700 GSF)**

The library space within the Humanities & Social Studies Building will be relocated to a new Library Learning Commons building and the cafeteria will be relocated to the new Student Services building. Subsequent to these relocations, the building will be comprehensively renovated and vacated space will be altered and converted to classroom/laboratory, office and conference space for the Humanities and English departments. The English Department Offices currently located in the Paul Peck Academic and Innovation Center will be relocated to the newly renovated space. The space vacated by this move will be reallocated for dedicated use by WD&CE.

#### **5. Parking Garage (800-1,000 spaces)**

A nine hundred space parking garage is proposed for a site near Observation Drive adjoining the new connection to Goldenrod. It is north of the Paul Peck Academic and Innovation Center and to the west of the new Arts and Communications Building. It will alleviate the anticipated XXX parking space deficit and replace spaces lost to the construction of the New Student Services Center and Arts and Communications Building.

#### **6. Science / Math / Health Science (20,250 NASF, 34,200 GSF)**

This is one of three buildings of similar size facilities and will house additional space for the Biology, Chemistry, Physics, Engineering, Geosciences and Cybersecurity programs and be sited at the south entrance of the campus where Observation Drive and Goldenrod Lane meet at the roundabout. The new buildings have been planned to be built in phases to provide a high degree of flexibility to accommodate space for College programs as well as elements of public-private partnerships that have yet to be defined. These partnerships may include incubator space for emerging bio-technology and life science start-ups or facility space for mature and established corporate and non-profit partners that will create a mutually beneficial synergy by being located proximate to the College and its students, faculty and academic programs. The buildings will form a physical link to the proposed Life Sciences Park, and frame the views from the south campus quad to Holy Cross Germantown Hospital .

#### **7. New Arts and Communications Building (43,200 NASF, 72,000 GSF)**

Together with the new Student Services Center the new Arts and Communications Building will help define a new north gateway to the Campus. A new outdoor plaza on the north side of the building will visually connect the building with the new Student Services Center located across Observation Drive. This new building will also serve to better connect the campus to the Paul Peck Academic and Innovation Building.

The building will provide new classrooms, laboratories, and performance and support spaces to support the growing arts and communications programs on campus. These programs will be relocated from the Humanities and Social Sciences building to allow for backfill of that space as described previously.

## **8. Reallocation of Space with the High Technology & Science Center (45,492 NASF, 75,542 GSF)**

This building, built in the 1990s, requires targeted renovation and reallocation of space as the existing biotechnology lab and related uses have been relocated to the new Bioscience Education Center. The relocation of functions from this building will allow its reuse to focus on the Information Technology and Business departments. Building system upgrades will be required to extend useful life and accommodate reallocation and alteration of space.

## **9. Paul Peck Academic and Innovation Building (54,052 NASF, 68,826 GSF)**

The Paul Peck Academic and Innovation Center was an existing commercial building, located adjacent to the Campus, which was purchased by the College to accommodate growing enrollments. This building is currently occupied on the first floor by occupants including English Department faculty and the Provost's Office that will be relocated to other buildings. After these relocations the first floor space (27,026 NASF, 34,413 GSF) will be renovated and reconfigured for additional general classrooms and faculty offices that are dedicated to serving the Workforce Development and Continuing Education Programs. The second floor of the building is currently leased to Montgomery County for use by its business incubator (Germantown Innovation Center – Montgomery County Department of Economic Development). Since this lease is long term this space is planned to remain in use for the business incubator of the ten year planning period.

## **10. Addition to and Renovation of the Physical Education Complex (41,295 NASF, 68,826 GSF)**

This project will involve a comprehensive renovation of the existing Physical Education facility and an addition to the building. The renovation will include extensive building envelope upgrades and repairs along with modernization of building systems. The addition will provide needed programming space to address enrollment growth for the Physical Education and Health programs as well as support campus and community events and recreation spaces. The addition will be located on the north side of the existing building. It will provide an entrance to the new fitness and recreation spaces from the west.

### **3.5.5 Proposed Pedestrian and Bike Circulation**

The Facilities Master Plan proposes the extension of the existing pedestrian network to connect with the new Bioscience Education Center, the Student Services Center, Arts and Communications and the Paul Peck Academic and Innovation Building to the existing Campus facilities and parking lots. These pedestrian pathways are the arteries for student circulation and are critical to the functioning of the campus. The 2013-2023 Land Use Plan addresses many of these new connections.

In addition, important connections within buildings should be maintained or strengthened to allow for circulation through these buildings. The renovation of the Humanities & Social Sciences Building and the Science & Applied Studies Building should create strong north-south circulation paths with new entrances, hallways and stairs. A new entrance on the south side of the Science & Applied Studies Building at the second floor level will provide access to the Bioscience Education Center and the BEC Quad.

ADA compliant curb ramps should be installed where they are currently missing. Curb ramps at intersections should be placed such that crosswalks are in the proper location. New curb ramps and a relocated crosswalk are needed at the crossing at the Lot 3 driveway and the Bioscience Education Center.

A fire hydrant poorly located in the center of the main walkway at Humanities and Social Sciences Building should be relocated.

Complete the shared use path along Goldenrod Lane to complete the connection between Middlebrook Road and Germantown Road. Create a path for bikes from Goldenrod Lane into the campus through the vicinity of Lot 1 or 2. Install bicycle parking at the eastern and western sides of the main building cluster, so that walkways through

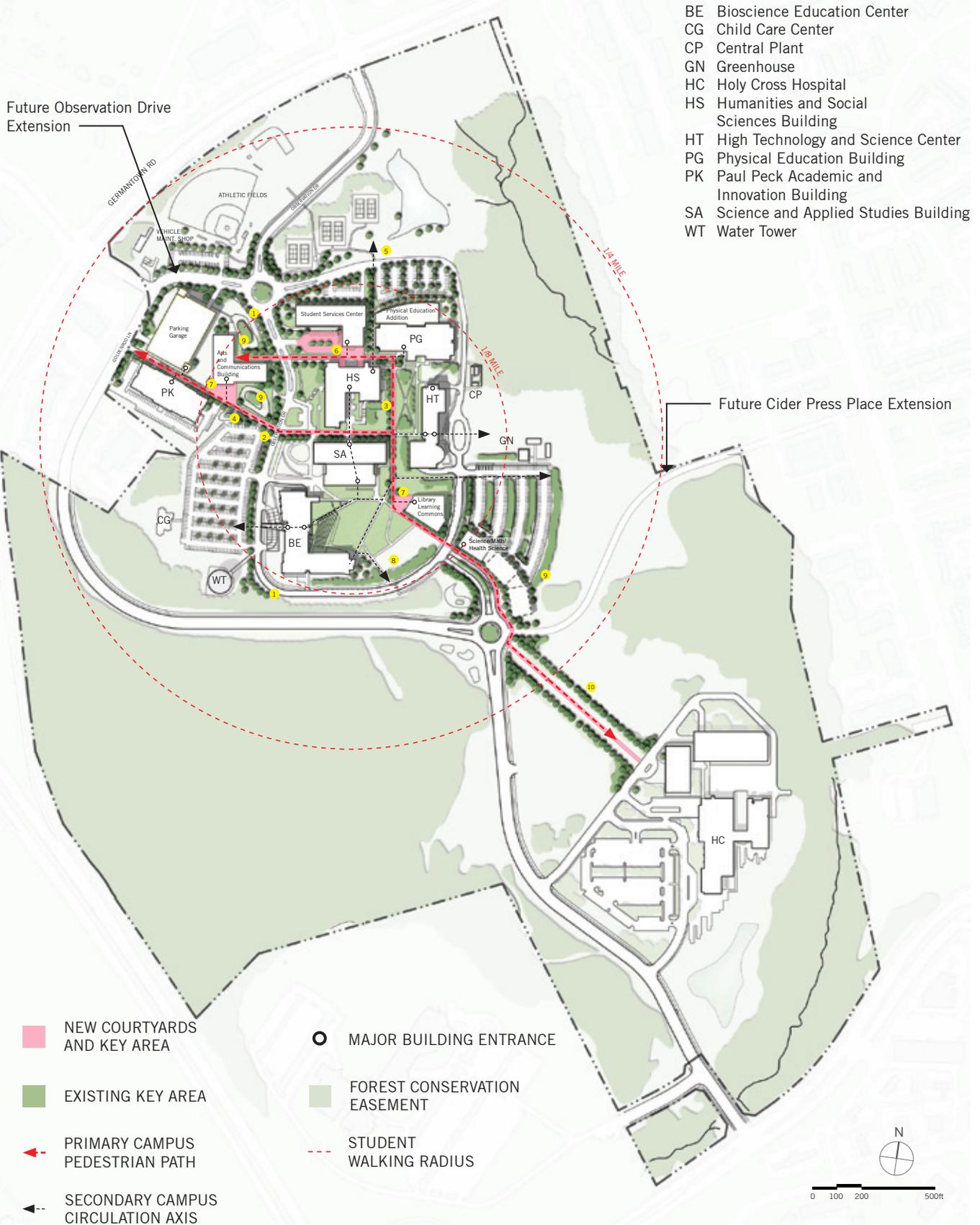
FIGURE 3.19

# 2013-2023 LANDSCAPE AND OPEN SPACE PLAN

- BE Bioscience Education Center
- CG Child Care Center
- CP Central Plant
- GN Greenhouse
- HC Holy Cross Hospital
- HS Humanities and Social Sciences Building
- HT High Technology and Science Center
- PG Physical Education Building
- PK Paul Peck Academic and Innovation Building
- SA Science and Applied Studies Building
- WT Water Tower

Future Observation Drive Extension

Future Cider Press Place Extension



NEW COURTYARDS AND KEY AREA

MAJOR BUILDING ENTRANCE

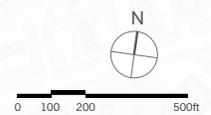
EXISTING KEY AREA

FOREST CONSERVATION EASEMENT

PRIMARY CAMPUS PEDESTRIAN PATH

STUDENT WALKING RADIUS

SECONDARY CAMPUS CIRCULATION AXIS



- 1 Reinforce the north-south axis and line Observation Drive with street trees
- 2 Relocated transit stop
- 3 Enhance the quad with trees
- 4 Reinforce the East-West axis with landscaping, lighting and paving from the Paul Peck Academic and Innovation Building to the High Technology + Science Center
- 5 Link campus pond to center of campus with a landscaped path
- 6 Create a new student services center courtyard with parking, paving, service access and landscaping
- 7 Open space/ plaza in front of proposed new building entries
- 8 Retain forested buffer and extend up into campus
- 9 Extend forest up into campus. Create swales to handle stormwater
- 10 Create tree-lined pedestrian path to reinforce connections and views to hospital

the center of campus are preserved for pedestrians.

Provide tree lined walks from the center of campus to the many campus landscape amenities such as the pond, stream and forest conservation areas. Hiking trails inside these natural areas should be developed.

### 3.5.6 Proposed Vehicular Circulation and Parking

This section presents a generalized assessment of the Facilities Master Plan from a transportation perspective. The key proposals and potential transportation impacts and needs associated with those changes are discussed and evaluated below.

#### Vehicular Access

The County's proposed master plan for highways shows Observation Drive from Germantown Road being realigned to connect to Goldenrod Lane. Observation Drive/Goldenrod Lane/Observation Drive proposes a 4-lane arterial roadway in an 80' right of way from Germantown Road to Middlebrook Road. This roadway would be expected to carry through traffic. If implemented, Germantown Campus parking should remain on the Campus side of this arterial roadway because of its greater road width and expected higher traffic volumes, so that pedestrians will not need to cross. Campus parking would continue to be served by the two-lane Observation Drive loop, which would intersect the 4-lane road at a proposed circle at the northern end of Campus and at the existing circle at the southern end. The proposed circle at the northern entrance to the Campus will reduce speeds that presently cause a safety concern.

A planned new roadway connecting Cider Press Place at Frederick Road to Observation Drive is shown on the County's Highway Master Plan as a 2-lane minor arterial in a 70' right of way. This proposed roadway would create a fourth access point to the Campus and allow traffic to distribute to the roadways in the most efficient manner.

#### Vehicle Trip Generation Impacts

Campus growth will result in an increase in the volume of vehicular traffic. The amount of increase could be reduced by implementing Transportation Demand Management innovations that are accepted by students, faculty and staff.

Future development will require a traffic impact study under the Local Area Transportation Review and Transportation Policy Area Review Guidelines procedures established by the Maryland-National Capital Park and Planning Commission. According to the most recent traffic study, the Campus entrance intersections all operate efficiently with significant reserve capacity. However, the intersections of MD 355 at Germantown Road and Middlebrook Road are nearing the critical lane volume threshold limits during the p.m. peak hour.

#### Parking

- According to MHEC standards, the parking requirement for the 2023 campus population is 3,307 spaces.
- An alternative method for calculating the 2023 parking requirement is described in section 3.2.5.
- The existing parking supply is 1,659 spaces.
- The ten year estimated change in parking supply resulting from the projects indicated in the proposed master plan includes loss of 725 existing parking spaces as follows: loss of Lot 1 (310 spaces); loss of approximately 140 spaces in Lot 2; loss of approximately 45 spaces in Lot 3; loss of approximately 60

spaces in Lot 4 from the proposed Science / Math / Health /Science buildings; and loss of approximately 170 spaces in Lot 5.

- The ten year estimated change in parking supply includes up to 1,040 new parking spaces as follows: a new parking garage with 900 – 1,000 spaces north of the Paul Peck Building; and a surface lot of approximately 40 spaces off the future Observation Drive Extension near the baseball field.
- The net gain in parking supply is 315 spaces.
- The resulting ten year parking supply is 1,974 spaces. Compared with the parking requirement, the deficit is 1,333 spaces per MHEC standards and 518spaces using the alternative requirement.

### 3.5.7 Transit Recommendations

The Germantown Campus has good local bus services with Ride On Route 55 serving the Campus as frequently as every 10 minutes during peak periods. A high level of transit mode share has been achieved through the Montgomery College Transit Pass program that allows Montgomery College students to use the Ride On bus service free of charge.

Without assuming the cost and management burden of expanded transit services, Montgomery College should continue to support and promote transit commuting and carpooling. Specific recommendations applicable to the Germantown Campus are:

1. Work with the Montgomery County Department of Transportation Division of Transit Services (Ride On) to initiate an express bus route that would directly connect the Germantown Campus with the Shady Grove Metro Station.
2. Work with the Montgomery County Department of Transportation Bus Stop Improvement Program to relocate and improve the bus stop in Lot 1 to minimize pedestrian vehicular conflicts and provide for ADA accessibility for boarding buses.
3. Considering proposed changes in the Campus roadway network, work with the Montgomery County Department of Transportation Division of Transit Services (Ride On) to revise local bus routes. This may include changing the bus stop location(s) to minimize walking distances.
4. Conduct annual staff Commuter Surveys through the Montgomery County Commuter Services program.
5. Participate in Metro's SmartBenefits Transit Benefits Program.
6. Promote transit and ridesharing options for students during fall and spring semester registration.
7. Establish and maintain a Montgomery College Ridesharing App similar to the Montgomery County Community College, Pennsylvania program that can be found at <https://www.zimride.com/mc3/>.
8. Provide priority parking for carpools and vanpools.
9. Develop specific transit wayfinding maps and signs on the Campus that guide new students, visitors and occasional transit users to available transit services. These transit wayfinding maps should show bicycle and pedestrian routes along with local and regional transit services. The transit wayfinding maps may be incorporated into existing wayfinding maps. The graphics should be updated regularly and posted in gateway locations, key buildings and on the Montgomery College website.

10. The Office of Facilities - Transportation webpage should be updated to provide transit, bicycling and carpooling maps and information that are tailored to each campus so that faculty and current and prospective students can easily identify alternative transportation services.
11. Continue the shuttle bus service as discussed in Section 3.2.6.

### 3.5.8 Major Utility Recommendations

Coordinating future utility and information technology infrastructure is an integral part of a successful planning process. The College's Utilities Master Plan was prepared to optimize the use of utility resources while minimizing potential disruptions, as well as costs. As part of this planning process, the 2012 Utilities Master Plan for the Germantown Campus was reviewed to determine the adequacy of existing systems and to ascertain the potential for future expansion. As the current Facilities Master Plan is implemented there will be a series of on-going evaluations and analyses undertaken to determine a more complete picture of the utility and information technology infrastructure impacts. It is recommended that all future projects maintain existing drainage patterns in regards to which of the two campus ponds (north and south) receive runoff from which portions of the campus.

Utility improvements likely required for Master Planned projects are as follows:

- 1. Student Services** – The 33,000+/- SF footprint of this building would require the relocations of a small water line currently serving the tennis court area as well as a small section of 36" storm drain, this storm drain conveys a large amount of water from the campus and Goldenrod Lane to the existing stormwater pond on the north side of campus. Additionally, the construction of a building in this location would force the relocation of approximately 500 LF of an 8" WSSC public sewer main, contained within a 20-ft wide WSSC right-of-way. The sewer main currently carries flows from all four existing properties on Goldenrod Lane, the flow of sewage from other properties across the College campus requires this line remains within a right-of-way.
- 2. Library Learning Commons** – The 17,500+/- SF footprint of this proposed building would require minimal utility relocations, if any. The conceptual layout of the building impacts a short run of 15" storm drain but this could be avoided with minor adjustments. Although not utility related, the more critical impact of this building would be a loss of an ADA accessible path leading from parking lot #4 to the east side of the Bioscience building.
- 3. Parking Garage** – The proposed 1,000+/- space parking garage would require the relocation of an existing 12" water main. This main is currently the only feed of domestic water to the campus from a WSSC public line (in Germantown Rd). The completion of the 2nd (redundant) feed originally proposed to be constructed with the Goldenrod Lane extension project greatly diminish the impacts to the campus of moving this line. The proposed garage footprint also shows impacts on the north side to existing campus electrical lines, presumably for primary electrical service, however, minor modifications to the conceptual footprint could avoid these lines. Finally, although not utility related, the garage is proposed to span the property line between the campus proper and the Paul Peck building, the Paul Peck property would need to be legally annexed to the campus proper in order to construct this building.
- 4. Science/Math/Health Science** – The 9,600+/- SF footprint of this building proposes major impacts to existing storm drain and stormwater management systems within and adjacent to parking lot #4. In addition to relocating storm drain lines this project would force the removal of an existing surface sand filter SWM facility. That SWM facility would need to be either replaced in-kind or replaced by a more currently accepted type of facility.
- 5. Arts/Communications** – The 24,000+/- SF footprint of this building would have major impacts to campus utilities. First, the 12" domestic water service previously mentioned would need to be relocated.

Secondly, the also previously mentioned 8" WSSC sanitary sewer line within the WSSC right-of-way would need to be relocated. Minor storm drain lines would have to be removed or relocated. An existing SWM facility (dry pond) located on the Paul Peck building site would be removed and another facility would need to be retrofit into the campus to maintain that treatment. Finally, as mentioned above with the parking garage, this building's footprint also crosses property lines.

**6. Physical Education Addition** – The 36,000+/- SF footprint of this building addition conceptually shows minimal impacts to existing campus utilities. There are storm drain lines which convey runoff from the existing Physical Education building that would need to be required but it appears nothing more substantial than that.

The Appendix includes a synopsis of the planned Campus utility and information technology infrastructure. The proposed buildings have been located to avoid impacts to any major electrical or mechanical utilities. Careful coordination will be required during construction to minimize service disruption to individual buildings.

The separate Utilities Master plan for this campus completed in 2012 includes an overview of the existing Campus utility and information technology infrastructure as well as a detailed assessment of their condition and ability to meet future demand.

## **Mechanical**

The existing central chilled water and heating plants have adequate capacity to meet current demands, but will need to be expanded as future construction is implemented and existing buildings are connected to the district heating and cooling plants as they are renovated. The intent is to convert the Campus from individual boiler plants serving each building to a Campus district heating network that serves the Campus from two central heating water plants.

District heating mains will be extended to new building sites as those buildings are constructed. The new heating water plant in the Bioscience Education building will serve as the basis of a central district heating system and a new boiler plant should be constructed in the new Student Services building to provide additional heating water capacity to the district heating system.

The combined cooling capacity of the central cooling plants in the Bioscience Education building and the High Technology and Science Center Building have adequate capacity to meet current demands, but will need to be expanded to meet future demand. District cooling mains will be extended to new building sites as those buildings are constructed. The existing central plant in the High Technology Building should be renovated and expanded to provide the additional capacity or a new plant should be constructed as part of the Student Services Building.

The most significant remaining mechanical issue is the age of many of the HVAC systems in existing buildings, many of which were constructed in the 1970's and 1980's and which are reaching their expected life and rely on older technology. Mechanical systems should be replaced with more efficient systems as the buildings they serve are renovated as part of the Facilities Master Plan.

Although state law requires renovations and new buildings to achieve LEED Silver certification, new renovations should be targeted to achieve LEED Gold Certification to achieve a high level of cost effective energy efficiency.

# FIGURE 3.20 2023-2033 LAND USE PLAN



- 1 STUDENT SERVICES CENTER
- 2 SCIENCE AND APPLIED STUDIES BUILDING
- 3 LIBRARY LEARNING COMMONS
- 4 HUMANITIES AND SOCIAL SCIENCES
- 5 PARKING GARAGE
- 6 SCIENCE / MATH / HEALTH SCIENCE (6A - FUTURE MIXED USE)
- 7 ARTS AND COMMUNICATIONS BUILDING
- 8 HIGH TECHNOLOGY AND SCIENCE CENTER
- 9 PAUL PECK ACADEMIC AND INNOVATION BUILDING
- 10 PHYSICAL ED. & ADDITION

Energy benchmarks should be established for each major building compared to equivalent, energy efficient buildings to document potential savings that could be achieved with systemic renovation of HVAC and electrical systems. The results of the benchmarking effort will assist allocation of capital resources to renovation of buildings with the greatest potential for energy savings.

**Electrical**

The existing Pepco feeders have adequate capacity to accommodate planned expansion. The existing 13.2 KV underground medium voltage lines will be extended in concrete encased duct-bank to serve new pad mounted step down transformers for new buildings in the future.

**3.5.9 Information Technology Recommendations**

The addition of new buildings in the Masterplan will require extending the duct-bank system from the nearest available telecommunications manhole to the new building location. Four (4) new buildings are planned for the Germantown Campus, and will require site work/infrastructure to be extended as follows:

TABLE 3.15 GERMANTOWN CAMPUS INFORMATION TECHNOLOGY DUCTBANK RECOMMENDATIONS

Bldg #	Name	Ductbank	Fed From
1	Student Services	Four (4) 4" Conduits	Manhole near Humanities Bldg
3	Library Learning Commons	Four (4) 4" Conduits	Manhole between Science/Applied Studies and High Tech/Science
5	Parking Garage	Three (3) 4" Conduits	Manhole near Paul Peck Academic and Innovation Building
6	Science/Math/Health Science	Five (5) 4" Conduits	Manhole near Library Learning Commons
7	Arts/Communications	Four (4) 4" Conduits	Manhole near Paul Peck Academic and Innovation Building
10	Physical Ed Addition	N/A	Fed from Existing PE

The college is currently in the process of completing a New IT Masterplan, addressing major issues such as a transition to Cloud Based services in lieu of campus data centers. If and when this transition occurs, the existing data centers will be abandoned and repurposed. Typical building telecom rooms will need to be slightly larger than in the past. Connectivity requirements between buildings will remain unchanged.

**3.5.10 Natural Systems and Sustainability Recommendations**

**Stormwater Management**

Stormwater management activities are governed by the State of Maryland Stormwater Management Act of 2007, which requires the development of a stormwater management plan that implements Environmental Site Design (ESD) features to the “maximum extent practical” that ensure that structural best management practices are only used where absolutely necessary.

ESD is defined as using small-scale stormwater management practices, nonstructural techniques, and appropriate site planning to mimic natural hydrologic run-off characteristics and minimize the impact of land develop-

ment on water resources. ESD includes conserving natural resources (drainage patterns, soil and vegetation), minimizing impervious surfaces (roads, walks, roofs) to increase infiltration and evapotranspiration, and using other non-structural practices and innovative technologies prior to consideration of structural stormwater management solutions.

In general, utilizing green roofs on future buildings and locating bioretention areas adjacent to buildings will minimize the impact on any undeveloped open space of future Campus development. Consistent with this approach, new parking lots should be designed to incorporate bioretention facilities and retrofitting existing parking lots may also be considered. Sidewalks should be designed to allow run-off to sheet flow over grass to utilize the disconnection of non-rooftop run-off whenever possible. Any future development within the Campus may also require the existing stormwater management pond to the north to be upgraded to meet current regulations.

The removal of any existing SWM facilities will need to be studied in great detail to determine an acceptable method of replacement. Most facilities on the campus were not designed and constructed with the current MDE guidelines in mind, but the replacement of these facilities may require compliance with those current standards.

### **Forestation Update**

A Forest Conservation Plan tracked under Plan MR 2009720 covering the entire Campus was approved in June 2010 by the Maryland-National Capital Park & Planning Commission and includes the implementation of a forest conservation area of approximately 71 acres in conformance with the State of Maryland Forest Conservation Act. The approved forest conservation plan is required to be amended each time a new development project is undertaken on the campus. These amendments track limits of disturbance and tree clearing on the campus, and ensure no development will take place within the forest conservation easement areas.

TABLE 3.16 GERMANTOWN CAMPUS COST ESTIMATE

## 3.6 IMPLEMENTATION

### 3.6.1 Projected Costs

An estimate of project costs for the design, construction and furnishing of the various projects included in the 2013-2023 Facilities Master Plan is illustrated in Table 3.16.

### 3.6.2 Project Sequencing

A phasing strategy for the Facilities Master Plan has been developed to ensure an efficient and effective implementation of the proposed capital project improvements. Project sequencing is identified in Figure 3.18 with building projects numbered according to their proposed sequence.

### 3.6.3 Land Use Plan 2023-33

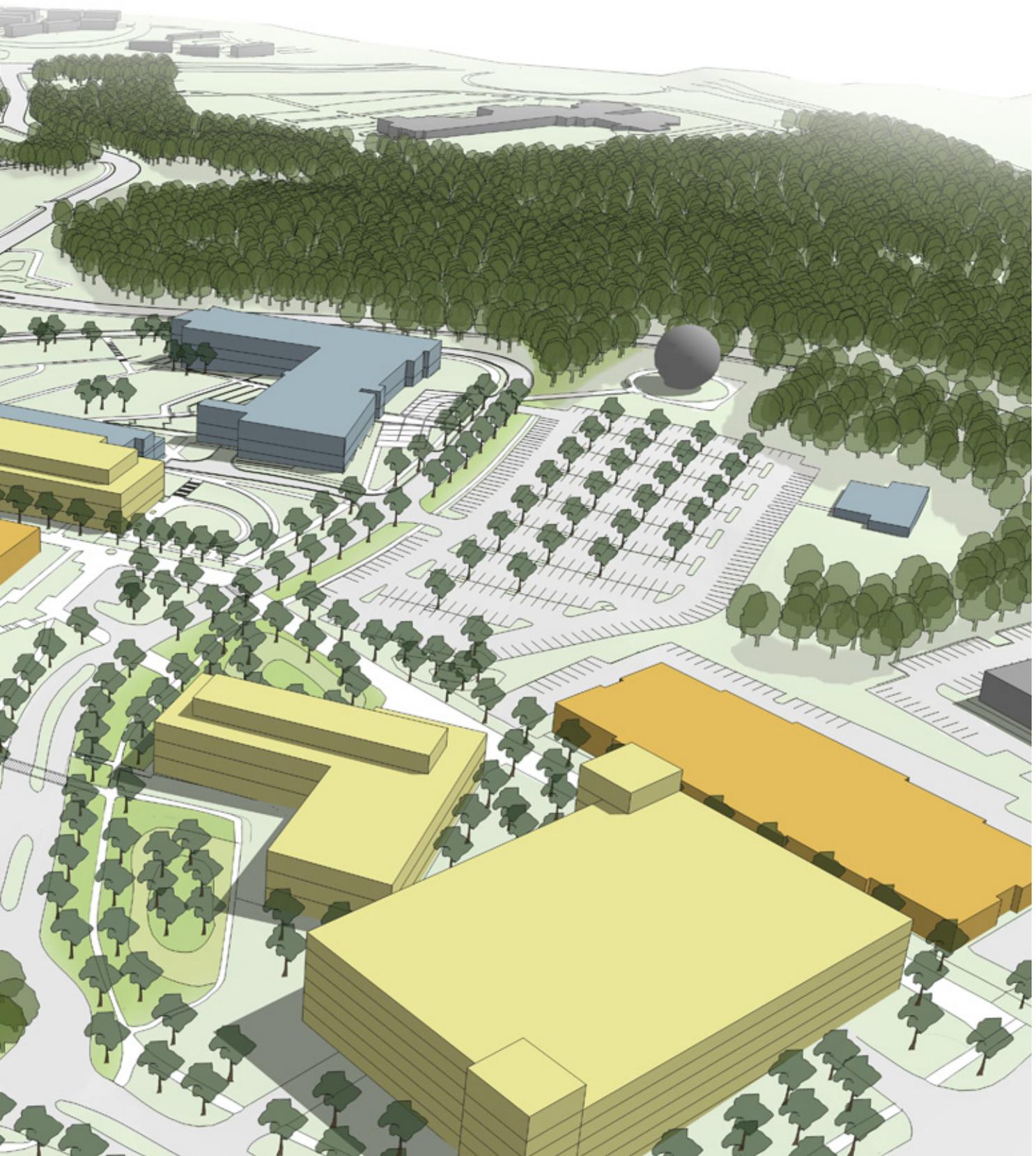
This Facilities Master Plan proposes strategies for managing growth on this campus beyond 2023. When the building projects represented on this plan have been completed, there will be multiple parcels available for future growth of the Campus and PIC MC. Beyond 2023, the Campus the plan will focus on developing and integrating the PIC MC into the original academic campus.

The strategy developed in the plan will create an integrated campus using the physical framework established in both the Strategic and College Town Plans. The framework for future buildings and site development will provide landmark “gateway” entrances, improved vehicular and pedestrian circulation on campuses, improved outdoor and indoor quality of life space, appropriate building space for effective teaching and learning, the consolidation of Student Service and clustering of related academic functions. The framework includes an open space plan illustrating enhancements to existing quads and development of new quads, improvements to existing pedestrian paths and the creation of new ones, measures to provide a better traffic network. The specific site and building priorities for achieving the Montgomery College mission include:

- **Hilltop Hub:** The Hilltop Hub is the new south quad that is framed by the recently completed Bioscience Education Center on the west. The Hub capitalizes on the expansive views to the east and towards Holy Cross Germantown Hospital . The views will be maintained and enhanced by limiting new construction parcels to the proposed Library site and the periphery of Observation Drive.
- **South Gateway:** The South Gateway is defined by the traffic circle at the intersection of Observation Drive and Goldenrod Lane, Observation Drive on the west, Holy Cross Germantown Hospital to the south, and the forest conservation buffer to the east. The plan proposes a direct pedestrian/ view connector from the circle to Holy Cross Germantown Hospital . Though no specific building footprints have been proposed, the plan specifies that the building line fronting both sides of the connector be maintained as the priority build-to line. The elevation of the site consistently slopes toward Holy Cross Germantown Hospital , presenting the opportunity to tuck parking into the hillside and underneath the proposed building sites. The buildings on this site will be a mixture of uses including co-location of academic, student life, private research, and private enterprise functions that will strengthen the College and the County and provide students with better opportunities for learning, internships and employment. The Strategic and College Town Plans as well as this plan recommend creating public private partnerships to fund their construction.
- **Other Sites:** There are other potential sites on the periphery of the campus that are also potential mixed use sites. The Kay property site sits between Goldenrod Lane and I-270. Another site is located on Observation Drive adjoining the Hughes Network Systems and Holy Cross Germantown Hospital with a champion tree to the north.

FIGURE 3.21 **2013-2023 AERIAL VIEW**





# 4



## ROCKVILLE CAMPUS



## 4.1 CAMPUS BACKGROUND INFORMATION

### 4.1.1 Introduction

As the largest and most comprehensive campus of Montgomery College, the Rockville Campus welcomes close to 17,000 students each semester. Accessible by all modes of transportation and located about a mile from the vibrant Rockville Town Center, the Campus opened in 1965 with an enrollment of 2,489. In addition to the credit students, the Campus also serves a substantial non-credit student body through programs of Work Force Development and Continuing Education (WD&CE). The student body, faculty and staff and a broad range of campus partners come together to form a vibrant and culturally diverse community. The Campus hosts thousands of visitors each year for art exhibits, concerts and theatrical events, athletic events, conferences and lectures, and other events open to the public and takes great pride in serving as a long standing community resource.

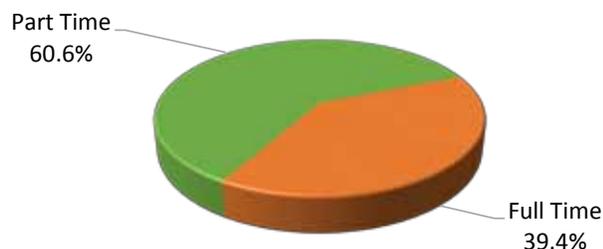
### 4.1.2 Institutional Characteristics

The Rockville Campus has the largest enrollment of the College's three campuses and is almost double the student body of Germantown and Takoma Park/Silver Spring. The Campus sits on approximately 82 acres and has a physical plant of almost 1 million square feet of space.

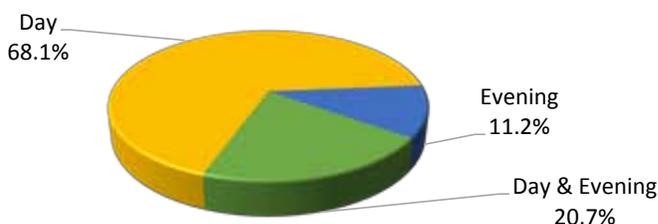
The Rockville Campus is racially diverse with nonwhites comprising 70.8% of the student body. The mean age of a Campus student is 24.9 years with traditional age students (18-20 years of age) still leading all age groups by comprising 37.9% of the total student body. Approximately 92% of all students reside in Montgomery County, and the female enrollment is 50.3%. Figures 4.00A and 4.00B provide an overview and snapshot of the Campus student body as it relates to Enrollment Status and Day and Evening Students.

The instructional divisions are extended and supported by the Student Development Division, with the Office of the Vice President and Provost providing campus leadership and management. In addition to these units, the Rockville Campus is home to the Paul Peck Humanities Institute, the Gordon and Marilyn Macklin Business Institute, and the Arts Institute, each with special programs for the College and outreach to the community. The Robert E. Parilla Performing Arts Center not only supports the College's academic theatre and dance programs but also serves as a community resource for professional productions by local and national arts organizations. The Campus' intercollegiate athletic program sponsors teams in men's and women's basketball, cross country, indoor and outdoor track, soccer and women's softball and volleyball. Campus-based central administration services include the library, information technology support, admissions and registration, financial aid, cashiering, physical plant, and auxiliary services, book store, and food services.

**FIGURE 4.00A**  
**ROCKVILLE CAMPUS ENROLLMENT STATUS, FALL 2013**



**FIGURE 4.00B**  
**ROCKVILLE CAMPUS DAY AND EVENING STUDENTS, FALL 2013**



### 4.1.3 Comparison with 2006-16 FMP

Similar to the 2006-16 Facilities Master Plan, this 2013-23 Facilities Master Plan also calls for continuing the strong emphasis on outdoor space with a central green mall and proposes another large parking structure at the south side of campus.

The 2006-16 Facilities Master Plan described a projected space deficit in 2016 of 414,121 NASF, and proposed to meet that deficit by construction of ten new buildings and eight building renovations. New projects included buildings for Student Services, Humanities & Social Sciences, Art (2), Library, Technical Training, and Facilities building. To accommodate the projected enrollment growth as well as the loss of parking spaces to new construction, two new parking garages were proposed at the north and south sides of campus. Renovations were proposed for the Performing Arts building, which was also slated to receive an addition, the South Campus Instruction Building, Physical Education Center, Campus Center, Humanities Building, Gordon and Marilyn Macklin Tower and the Computer Science Building.

Since the 2006-16 Facilities Master Plan was approved, several projects have been completed or are in progress at the Rockville campus. These include completion of the Science Center and renovation of the Science East building for use as the Math Center. The Science West Building is currently under renovation as the second phase of the Math Center. The Garage North project (now North Garage) is under construction, and the New Student Services Center is currently in design. Also well underway is the green pedestrian mall that was started during construction of the Science Center and will be extended with construction of the new Student Services Center.

This 2013-23 Facilities Master Plan describes a slightly larger space deficit in 2023 of 439,764 NASF. The space deficit is proposed to be met by construction of six new buildings and five building renovations – a new Campus Center, Library Learning Commons, Technical Training Center, Media Arts Building, Humanities and Social Science Center, and a second parking garage for the campus. Renovations are proposed for the South Campus Instruction Building to accommodate Workforce Development & Continuing Education, the Humanities Building, Computer Science Building, Physical Education Center, Gordon and Marilyn Macklin Tower and the Mannakee Building. The Performing Arts building will be renovated and receive an addition. Continuation of the green pedestrian mall and recommendations for pedestrian circulation and open space improvements are also proposed in the 2013-23 Facilities Master Plan.

### 4.1.4 Academic Programs

Montgomery College is authorized by the Maryland Higher Education Commission to offer five degrees: the Associate of Arts (A.A.), the Associate of Science (A.S.), the Associate of Arts in Teaching (A.A.T.), the Associate of Fine Arts (A.F.A.) for students wanting to transfer to baccalaureate programs and the Associate of Applied Science (A.A.S.) for those seeking immediate employment. The College also awards certificates (Cert) that focus on the development of technical skills, as well as letters of recognition (L of R) for non-degree seeking students who satisfactorily complete certain courses that teach focused skills and competencies.

In addition to General Education, student development, and honors courses, the Rockville Campus offers 80 different degree programs, 51 certificate programs, and 15 letter of recognition programs. The Rockville Campus offers the highest number of academic programs offered at the College. Academic programs uniquely offered at the Rockville Campus are related to the fine and performing arts, with two A.A.S degrees and two certificates in Graphic Design, the A.A. degree in Dance, the A.A. degree and certificate in Music, the A.A.S. degree and 5 certificates in Photography, two A.A. degrees in Theatre, and two A.A.S. degrees and four certificates in Communication and Broadcasting Technology; technical education, including two A.A.S. degrees and two

certificates in Architecture and Construction Technology, the A.A.S degrees and four certificates in Automotive Technology, the A.A.S. degree, two certificate, and 4 letter of recognition programs in Building Trades Technology, the A.A.S. degree and certificate in Fire Science, the A.A. and A.A.S. degrees and 2 certificates in Interior Design, and the A.A.S. degree and two certificates in Computer Publishing and Printing Management; and management, including the A.A.S. degree in Hospitality Management, 3 certificate, 3 letter of recognition programs. Other programs only offered at the Rockville campus include the A.A.S. degree in Criminal Justice, the A.A.S. degree and two certificates in Applied Geography, and the four A.A. degrees and certificate in Health and Physical Education. In addition, the A.A.S. degree in Fire Science and Fire Service Management and the certificate program in Fire and Arson Investigation are approved as State-wide programs. These State-wide programs are available to students from other geographic areas where the local community college does not offer the same program. The College's Center for Teaching and Learning also finds its primary home on the Rockville Campus. Not included here are the programs offered by WDCE.

Educational programs at the Rockville Campus are projected to generate 117,842 student credit hours (SCH) in 2023, an increase of 17% over fall 2013 and with 97% being taught during the day. Delivery of programs is expected to change over the next decade. Distance learning alternatives will be more available as options, including both entire and partial course delivery. Although this instructional delivery method will provide more options to students it is projected to continue to account for only 3% of the total SCH. Table 4.02 provides a summary of contact and credit hours for the Campus and the College for 2013 and 2023 and Table 4.03 provides a summary of credit hours by division from 2010-2013 and projected for 2023.

The College has also made significant and substantial investments in its classroom environments to incorporate smart instructional technology and to provide and support technology-based learning centers. To complement these improvements the College must also prepare to address other changes in pedagogy, including increased instructional use of specialized learning environments and a continued emphasis on collaborative and group learning.

#### **4.1.5 Enrollment Projections**

Over the past five-year period, headcount enrollment has increased 4%, from 15,816 students in 2008 to 16,441 in 2013. Over this same period, however, the average student credit hour load has decreased from 8.2 credits to 7.9 credits, while during the same period the FTE student enrollments have increased by 14%. Both statistics are projected to continue on the same trend with total headcount planned to increase by 27% to 20,819 and credit load to decrease to 7.3 at Rockville through 2023. Table 4.04 provides a summary of the historical, current and projected headcount and the corresponding Full Time Equivalent (FTE) student calculation for the Campus.

TABLE 4.01  
2015-16 ACADEMIC PROGRAMS AT MONTGOMERY COLLEGE BY DEGREE AND CAMPUS

Program Area	AA	AS	AAT	AFA	AAS	Cert	L of R
Accounting						1GR	
American Sign Language	1R					1R	
Applied Geography					1R	2R	
Architectural & Construction Tech					2R	1R	1R
Art	2GRT			1GRT			
Automotive Technology					1R	4R	
Biotechnology					1G	2G	
Broadcast Media Production					2R	4R	
Building Trades Technology					3R	4R	4R
Business	1GRT						
Communication Studies	1GRT						
Computer Application					2GRT	2GRT	
Computer Gaming & Simulation	3 GRT						
Comp Publishing & Printing Mgmt							1GRT
Computer Science & Technologies	2GRT					1GRT	
Criminal Justice					1R		
Cybersecurity					1G	2G	
Diagnostic Medical Sonography					1T		
Digital Media and Web Technology					1GRT		
Education			7GRT		1R	1GRT	
Emergency Preparedness Management		1RT				1RT	
Engineering Science					12GRT		
Ethnic Social Studies						1GRT	1GRT
Fire Science & Emergency Services					3RT	4R/1T	1RT
General Studies	4GRT						
Graphic Design	4R/2GT			1GRT		3R/2GT	
Health Enhancement, Ex Sci & PE	3R					1R	
Health Information Management					1T		1T
Hospitality Management					3R	3R	3R
Interior Design	1R				2R	3R	
International Studies	1GRT						
Landscape Technology					1G	1G	
Management						1GRT	1GRT
Mental Health Associate					1T		
Music	1R					1R	
Network & Wireless Technologies					1GRT	3G	
Nursing		1T					

Paralegal Studies					1GT	1GT	1GT
Photography					1R	4R	1GRT
Physical Therapist Assistant					1T		
Polysomnography						1T	
Radiologic (X-Ray) Technology					1T		
Science				5GRT			
Surgical Technology					1T		
Technical Writing						1G	
Theatre				3R			
Transfer Studies						1GRT	
Web Careers						5R/3GT	
Women's Studies						1GRT	

Degrees, Certificates, and Letters of Recognition: AA-Associates of Arts; AS-Associate of Science; AAS-Associates of Applied Science; AAT-Associates of Arts in Teaching; AFA-Associate of Fine Arts; Cert-Certificate; and L of R-Letter of Recognition.

Campus: T-Takoma Park/Silver Spring Campus; R-Rockville Campus; and G-Germantown Campus.

Source: Montgomery College

TABLE 4.02 ROCKVILLE CAMPUS CREDIT AND CONTACT HOURS, FALL 2013 AND 2023

Day, On-Line, and Total Credit Hours													
	2013 Day SCH	2013 On-Line SCH	2013 Total SCH	2013 % Day SCH	2013 % On-Line SCH	2023 Day SCH	10 yr % Chg	2023 On-Line SCH	10 yr % Chg	2023 Total SCH	10 yr % Chg	2023 % Day SCH	2023 % On-Line SCH
Rockville	98,062	2,658	100,720	97%	3%	114,733	17%	3,110	17%	117,842	17%	97%	3%
College-wide	167,123	11,465	178,588	94%	6%	210,241	26%	14,423	26%	224,664	26%	94%	6%
Day Contact Hour (WSCH) to Day Credit Hour (SCH) Ratio													
	2013 WSCH	2013 SCH	2013 WSCH / SCH	2023 WSCH	10 yr % Chg	2023 SCH	10 yr % Chg	2023 WSCH / SCH	10 yr % Chg				
Rockville	149,298	100,720	1.48	162,803	9%	117,842	17%	1.38	-7%				
College-wide	260,704	178,588	1.46	314,515	21%	224,664	26%	1.40	-4%				
Day Lecture and Lab Contact Hour													
	2013 Day Lecture WSCH	2013 Day Lab WSCH	2013 Day Total WSCH	2013 Day % Lab WSCH	2023 Day Lecture WSCH	10 yr % Chg	2023 Day Lab WSCH	10 yr % Chg	2023 Day Total WSCH	10 yr % Chg	2023 Day % Lab WSCH		
Rockville	92,283	57,015	149,298	38%	97,635	6%	65,168	14%	162,803	9%	40%		
College-wide	161,296	99,408	260,704	38%	192,569	19%	121,946	23%	314,515	21%	39%		

Source: Montgomery College

TABLE 4.03 ROCKVILLE CAMPUS CREDIT HOURS BY DIVISION , FALL 2010-2013 AND 2023

	2010	2011	2012	2013	5yr % Chg	2023	10 yr % Chg
<b>Student Dev</b>	1,340	1,270	1,178	1,057	-21%	1,237	17%
<b>Honors</b>	95	75	71	47	-51%	55	17%
<b>BMIS</b>	13,683	13,457	13,341	11,828	-14%	13,839	17%
<b>FPA</b>	30,114	31,383	30,825	28,229	-6%	33,028	17%
<b>H</b>	43,721	45,739	44,943	41,573	-5%	48,640	17%
<b>SEM</b>	37,129	37,202	38,280	37,432	1%	43,795	17%
<b>SHHPE</b>	5,306	5,501	5,673	5,736	8%	6,711	17%
<b>GITE</b>	5,148	5,477	5,015	4,728	-8%	5,532	17%
<b>Rockville</b>	136,536	140,104	139,326	130,630	-4%	152,837	17%

Source: Montgomery College

TABLE 4.04 ROCKVILLE CAMPUS ENROLLMENT STATISTICS, FALL 2008-2013 AND 2023

	2008	2009	2010	2011	2012	2013	5yr % Chg	2023	10yr % Chg
<b>Headcount</b>	15,816	17,028	16,682	17,292	17,495	16,441	4%	20,819	27%
<b>FTE Students</b>	8,410	8,864	10,375	10,098	9,288	9,602	14%	12,645	32%

Source: Montgomery College Office of Institutional Research, 2015.

#### 4.1.6 Faculty and Staff

Faculty FTE's supporting the Campus are planned to increase by 12%, from 401 FTE faculty to 449 through 2023. The number of full-time faculty will increase by 25 positions, or 9%, while the number of part-time faculty will increase by 92 positions, or 17%. Growth in faculty positions is evenly distributed across instructional divisions with very modest growth in Student Development. The planned part-time faculty growth will continue to add to the existing space deficit in office and conference space for part time faculty, if not addressed. Table 4.05 provides a summary of current and projected faculty by division for 2013 and 2023.

The College expects its overall numbers of full-time, part-time, and FTE staff to increase from 2013 to 2023 resulting in an FTE staff increase of 2% during the planning period. This increase is projected to include an additional 73 full-time staff or a 9% increase and 14 part-time staff, which is a 26% increase. Table 4.06 provides a summary of current and projected staff by division for 2013 and 2023.

TABLE 4.05 ROCKVILLE CAMPUS FACULTY POSITIONS BY DIVISION, 2013 AND 2023

	2013 FT	2013 PT	2013 FTE	2023 FT	10 Yr # % Chg	2023 PT	10 Yr # % Chg	2023 FTE	10 Yr # % Chg
Student Dev	0	24	6	0	0	28	4	7	1
					0%		17%		17%
BMIS	24	40	34	26	2	47	7	38	4
					8%		18%		11%
FPA	75	126	107	82	7	148	22	119	13
					9%		17%		12%
H	69	156	108	75	6	183	27	121	13
					9%		17%		12%
SEM	67	137	101	74	7	161	24	114	13
					10%		18%		13%
SHHPE	15	25	21	16	1	29	4	23	2
					7%		16%		9%
GITE	18	24	24	20	2	28	4	27	3
					11%		17%		13%
Rockville	268	532	401	293	25	624	92	449	48
					9%		17%		12%

Source: Montgomery College

TABLE 4.06 ROCKVILLE CAMPUS STAFF POSITIONS, 2013 AND 2023

	2013 FT	2013 PT	2013 FTE	2023 FT	10 Yr # % Chg	2023 PT	10 Yr # % Chg	2023 FTE	10 Yr # % Chg
Administrative	62	1	62	74	12	1	0	74	0
					19%		0%		0%
Other Professional	237	14	241	255	18	19	5	260	5
					8%		36%		2%
Clerical and Secretarial	191	20	196	208	17	24	4	214	6
					9%		20%		3%
Technical and Paraprofessional	218	15	222	233	15	18	3	238	5
					7%		20%		2%
Skilled Crafts	30	0	30	32	2	0	0	32	0
					7%		0%		0%
Service and Maintenance	114	3	115	123	9	5	2	124	1
					8%		67%		1%
Rockville	852	53	865	925	73	67	14	942	17
					9%		26%		2%

Source: Montgomery College

**FIGURE 4.01 CAMPUS CONTEXT**



Image Not to Scale

## 4.2 EXISTING SITE CONDITIONS and ANALYSIS

### 4.2.1 Context and Setting

#### Context

The Rockville Campus is the largest and most centrally located of the three Montgomery College campuses. It is located in a suburban setting north of the city center of Rockville, between the Rockville and Shady Grove Metro stations.

Although situated just off and accessed from MD 355/Hungerford Drive, the Campus has little frontage on this major thoroughfare. Along its southern edge, across Mannakee Street, the Campus faces a large property owned by the Montgomery County Public School system, the Carver Educational Services Center (CESC) which offers potential future expansion space for the Campus. Further west along Mannakee Street is the residential neighborhood of Anderson Park, primarily consisting of single-family homes. Directly north of the Campus is the College Gardens apartment complex. The eastern edge of the Campus is bordered by residential scale office buildings fronting MD 355. The Williams Companies owns the property adjacent to the northeast corner of the campus, with utilities easements running across the northern side of the Campus. (See Figure 4.03 Campus Setting).

The Campus is characterized by a relatively dense core of low-rise buildings that were constructed in the 1960s and 70s. They are consistent in character and appearance; most are clad in a sand-colored brick. The spaces between buildings are pleasant in scale although disjointed in appearance and use. Signage is minimal and not well coordinated. These core buildings and open spaces project an image of a campus that is utilitarian and outdated. (See Figure 4.04)

A handful of newer and/or comprehensively renovated buildings has recently been completed at the southwest corner of the Campus and is in progress at the north edge of the Campus. At the southwest corner, the Science Center and its renovated wing (formerly Science East) and the renovated Science West Building are generally larger in scale than the core buildings and utilize a wider variety of architectural materials, including varying shades of brick, metal panels and generous windows. On the north side of campus, the North Garage is under construction; this will be a seven-level structure when complete. Adjacent to the North Garage, the new Student Services Center is in design and is anticipated to be four stories tall.

A few buildings are located just outside the campus core – including the Robert E. Parilla Performing Arts Center and the South Campus Instruction Building. At the far northeast corner of the Campus along MD 355 are the Homer S. Gudelsky Institute for Technical Education and the Interim Technical Training Center. The Mannakee Building occupies the southeast corner of campus. These three buildings have a different architectural character from the core of campus, utilizing more brick and generally darker colors.

Large parking lots surround the campus core on three sides, with minimal landscape screening. The extensive parking lots convey an image of a commuter campus.

### 4.2.2 Gateways and Views

Although fronting along a major thoroughfare in Rockville, MD 355 (Hungerford Drive), the campus is barely visible from that street. It is slightly more visible from Mannakee Street but mostly concealed behind a fairly dense tree stand. There are no major gateways to the campus and gateway signage is minimal; however, the College has been studying design proposals for gateway signage at all its campuses, and has plans for installing signage in two locations on the Rockville Campus. (See Figure 4.2.3 Open Space, Gateways and Views). For cars, the major entrances to campus are one driveway off MD 355 and two driveways off Mannakee Street.

FIGURE 4.02 CAMPUS SETTING



Both these entrances open to and give views toward large parking lots. The arrival experience by foot or public transit generally requires traversing the wide and extensive parking lots in order to reach the core of the Campus.

Views into the Campus proper from the perimeter parking lots is slowly developing into a more “collegiate” appearance. With the recent construction of the Science Center and its renovated wing (formerly Science East) and the renovation and enlargement of Science West Building, the southern end of campus has increased in density and scale. Views along North Campus Drive toward the campus interior are in the process of changing as well with the larger scale new Student Services building due to start construction in 2016 and the construction of the seven-level North Garage already underway.

### 4.2.3 Open Space

The Campus is organized in a loose grid of buildings, with the open spaces between buildings being primarily linear in character. The major exceptions to these are a large landscaped amphitheater just east of the Humanities building at the north side of the Campus and a small landscaped plaza with fountain between the Theatre Arts Building and existing Student Services buildings. Many of the linear spaces between buildings seem “left over” and are haphazardly landscaped and furnished. A strong, landscaped north-south axis has begun to be implemented at the south edge of the Campus, adjacent to the Science Center. It is currently interrupted by the existing one-story Student Services building; however, this building will be demolished as part of the new Student Services building construction, and the north-south axis will be further landscaped and extend all the way to the north edge of the Campus, past the amphitheater and culminating in a new plaza to be built alongside the new Student Services Building. The north-south axis will incorporate the small plaza outside the Theatre Arts Building building.

While the campus slopes gradually upward from south to north, there are significant grade changes in some locations such that accessibility between some buildings on the west side of the Campus is achieved via exterior bridges, with interior vertical circulation.

Additional green open space exists in the form of wooded parcels along the southern edge of the Campus along Mannakee Street and at the stormwater pond, which fronts a landscaped area at the west side of the Science Center. The woods form a visual barrier along the south edge of the Campus. There are also groupings of mature oak trees surrounding Gordon and Marilyn Macklin Tower on the west end of the Campus. (See Figure 4.05 Open Space, Gateways and Views)

### 4.2.4 Pedestrian and Bicycle Circulation

#### Pedestrian Circulation

The Rockville Campus is a very walkable campus. Most buildings are within a ¼ mile radius walking circle, or about a 10-minute walk, which is considered walkable by most people. Two areas of campus fall outside the ¼ -mile radius - the Homer S. Gudelsky Institute for Technical Education (GU) and the adjacent Interim Technical Training Center (TT), and the Mannakee Building.

The east-west walking route through the center of campus (between the Humanities Building and the Computer Science Building, and between the Campus Center and the Theatre Arts Building) is congested during peak class times. This space is poorly defined and, especially to the east, broken into separate sections with stairs and ramps. The main pedestrian connections should be improved.

There is a worn path, but no sidewalk, connecting the southwest corner of the Mannakee Building parking lot with the sidewalk along Mannakee Street. There is no sidewalk along the east side of the eastern campus entrance from Mannakee Street. There is no sidewalk on the south side of the central portion of North Campus Drive. This sidewalk is planned to be completed as part of the North Garage project and the subsequent Student

**FIGURE 4.03 GATEWAYS AND VIEWS**



- TREES
- RESIDUAL OPEN SPACE
- PLAYING FIELD
- EXISTING CAMPUS BUILDINGS
- IN DESIGN OR CONSTRUCTION
- CAMPUS BOUNDARY

- CAMPUS GATEWAYS
- CAMPUS VIEWS
- GATEWAY SIGNAGE
- ACTIVATED SPACE
- WATER FEATURE

- AR Paul Peck Art Building
- AT Amphitheatre
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
- NG North Garage
- HU Humanities Building
- MK Mannakee Building
- MT Gordon and Marilyn Macklin Tower
- MU Music Building
- nSV New Student Services Building
- PA Robert E. Parilla Performing Arts Center
- PE Physical Education Center
- SB South Campus Instruction Building
- SC Science Center
- SW Science West Building
- TA Theatre Arts Building
- TC Technical Center
- TT Interim Technical Training Center

Services Building project.

There is no sidewalk along the parking lot sides of North Campus Drive or West Campus Drive, and none is planned. Therefore pedestrians tend to cross Campus Drive wherever they emerge from the parking lots. Pedestrian/Vehicular conflicts are focused in areas where pedestrians are crossing from parking lots outside the Campus Drive loop into campus. Speeding is a concern on Campus Drive.

Pedestrians crossing Mannakee Street to and from student Parking Lot 13 posed a particular safety concern until 2015. However Lot 13 will no longer be available to the College for parking after the summer of 2016. The pedestrian crosswalk and warning flasher installed at the Mannakee Street pedestrian crossing by the College and the City of Rockville should be reexamined to determine whether they are still warranted.

Pedestrian safety is a concern at the crossing of South Campus Drive to the bus stop. This is detailed further in the Transit section.

### **Bicycle Circulation**

The Rockville Campus is situated along the City of Rockville's bikeway path along Mannakee Street. Campus bicycle circulation is provided on Campus roads and perimeter sidewalks. However, due to the high level of vehicular traffic on the Campus and significant amount of pedestrian activity, the potential for conflict among the various modes of movement is high and limited space constrains the College's opportunity for providing dedicated bike pathways. Shared road signage ("sharrows") may be added to increase awareness of bicycle use at the campus roads.

As part of its goal to increase sustainability on the Campus, the College encourages bicycle transportation by providing bicycle racks at several locations on Campus. Quality stainless steel bike racks that allow two points of contact for locking are provided at a number of buildings. The only bike rack location that was observed to be more than half full was at the Science Center. During the late morning, all other locations had one or no bikes.

A Capital Bike Share Station with 21 docks is located at West Campus Drive east of Parking Lot 10. According to data provided by Capital Bike Share, the Rockville Campus Bike Share station averaged 12 rides per week (total inbound and outbound) for the 38 weeks of available data in January-September 2015. The station ridership has remained the same compared with 2014. The asphalt sidewalk leading to the station is in need of replacement, regrading, and widening. The surrounding Rockville / Shady Grove / Life Sciences Center area has 20 other bike share stations including at Rockville and Shady Grove Metrorail stations.

Fences on the north and west perimeters of campus prevent bicycle access from local streets. A gate in the fence at Princeton Place was permanently closed in response to neighbors' concerns.

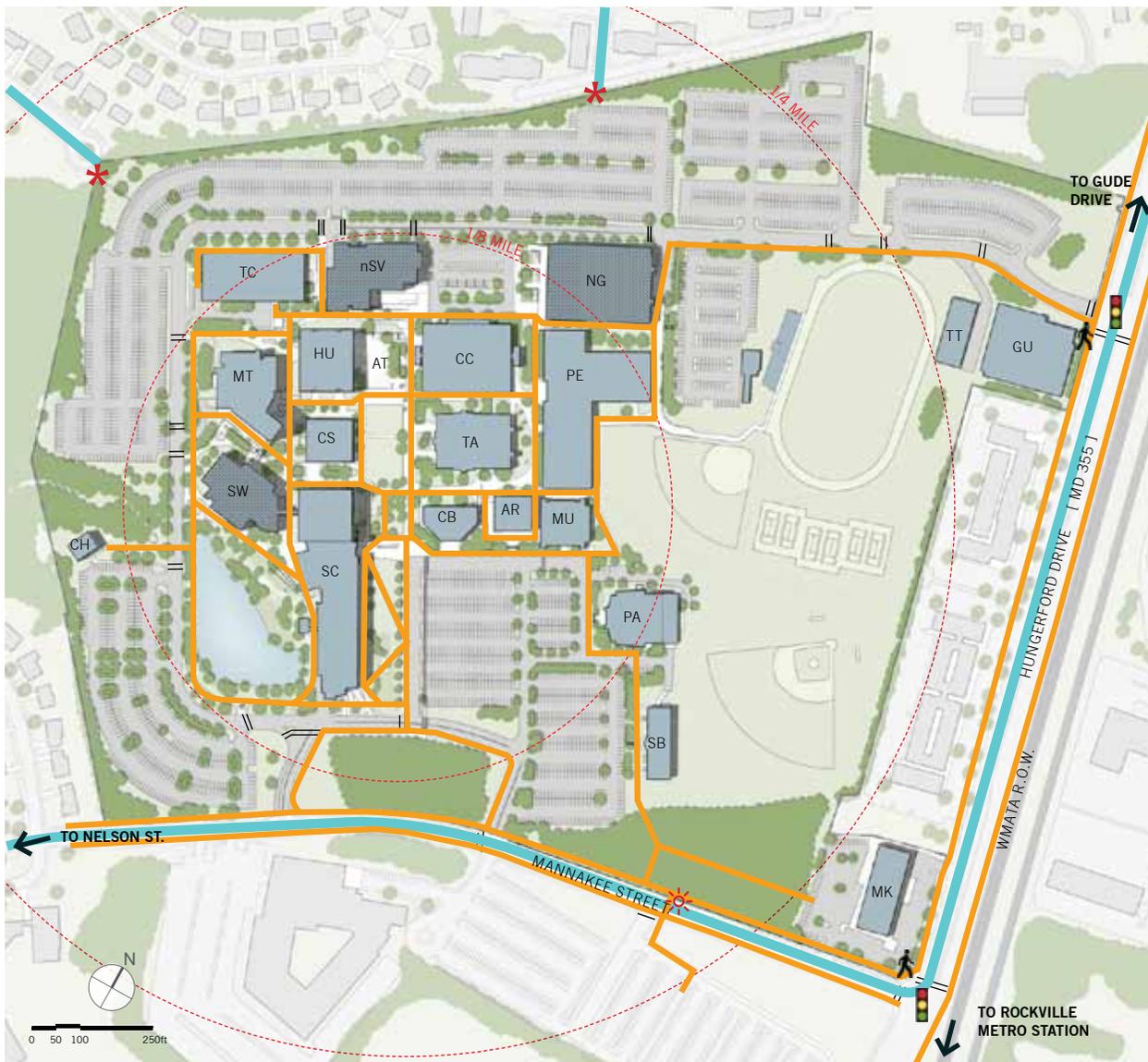
Bicycle racks and storage space will be incorporated into the new North Garage.

### **4.2.5 Vehicular Circulation and Parking**

The Rockville Campus is bounded by a major arterial, MD 355 (Hungerford Drive) to the east, and a "primary" residential street, Mannakee Street, to the south. Direct access to the Campus is provided via a signalized entranceway intersection along Hungerford Drive at North Campus Drive and two unsignalized entranceway intersections along Mannakee Street at South Campus Drive. The eastern intersection of South Campus Drive and Mannakee Street is controlled with Stop signs on all approaches.

The intersection of South Campus Drive and the west entrance from Mannakee Street is poorly aligned, creating a very wide intersection. As a result, crosswalks are longer than necessary and both drivers and people walking have trouble understanding what the other will do. There is an opportunity to reshape this intersection so it is more comfortable for all travelers.

**FIGURE 4.04 PEDESTRIAN AND BIKE CIRCULATION**



- PEDESTRIAN WALKING ROUTES
- - - PEDESTRIAN WALKING RADIUS
- PROPOSED SHARED-USE BIKEWAY
- CAMPUS BOUNDARY
- CROSSWALK
- PEDESTRIAN WARNING FLASHER
- EXISTING CAMPUS BUILDINGS
- IN DESIGN OR CONSTRUCTION
- PEDESTRIAN SIGNAL
- CLOSED ACCESS GATE
- TRAFFIC SIGNAL

- AR Paul Peck Art Building
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Survey data collected in January and February of 2014 identified the entranceway traffic volumes and trip distribution percentages for campus vehicle trips are shown in Figure 4.06.

The significant percentage indicated in the figure above for Mannakee Street (from the west) is primarily due to this roadway's connection to the I-270/MD 28 Interchange to the southwest, via Nelson Street. This percentage is part of the two-way "cut-through" traffic along Mannakee Street that has been identified as a key concern in the City of Rockville's Comprehensive Plan (January 2002), as well as a concern of local residents.

Traffic counts conducted in 2014 and illustrated on Table 4.07 indicates that the largest volume of a.m. and p.m. peak hour traffic enters and exits the Campus from MD 355 at its intersection with North Campus Drive. During the peak a.m. hour a total of 1,303 vehicles enter the Campus while the peak outbound period (midday) surveyed some 958 exiting vehicle trips. Traffic studies have also shown that the two major intersections along MD 355 which are used to funnel drivers onto the Campus are still operating acceptably, despite the perception by some that the wait times at these intersections are too long.

**TABLE 4.07 ROCKVILLE CAMPUS INBOUND AND OUTBOUND PEAK HOUR TRAFFIC VOLUMES**

Intersection	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
MD 355/North Campus Drive	504	165	391	629	267	316
Mannakee St/S Campus Drive East	324	167	198	216	165	161
Mannakee St/S Campus Drive West	475	138	369	312	276	243
Total	1,303	470	958	1,157	708	720

Source: Montgomery College

Inside the Campus is a U-shaped ring road, Campus Drive, which serves the main parking lots on the north, west and south sides of campus. Minor internal vehicular circulation deficiencies include over-long wait times to exit campus from North Campus Drive onto MD 355/Hungerford Drive in the afternoons and circulation of vehicles "searching" for more convenient parking space increases traffic volumes along Campus Drive and within surface lots. (See Figure 4.07 Parking and Vehicular Circulation).

### Mode Share

A survey of students and faculty/staff taken in March 2015 for the College Town Plan obtained information on commuting mode share. The faculty /staff commute by driving is 85%. Information for student mode share and overall mode share to Rockville campus is shown in the table below.

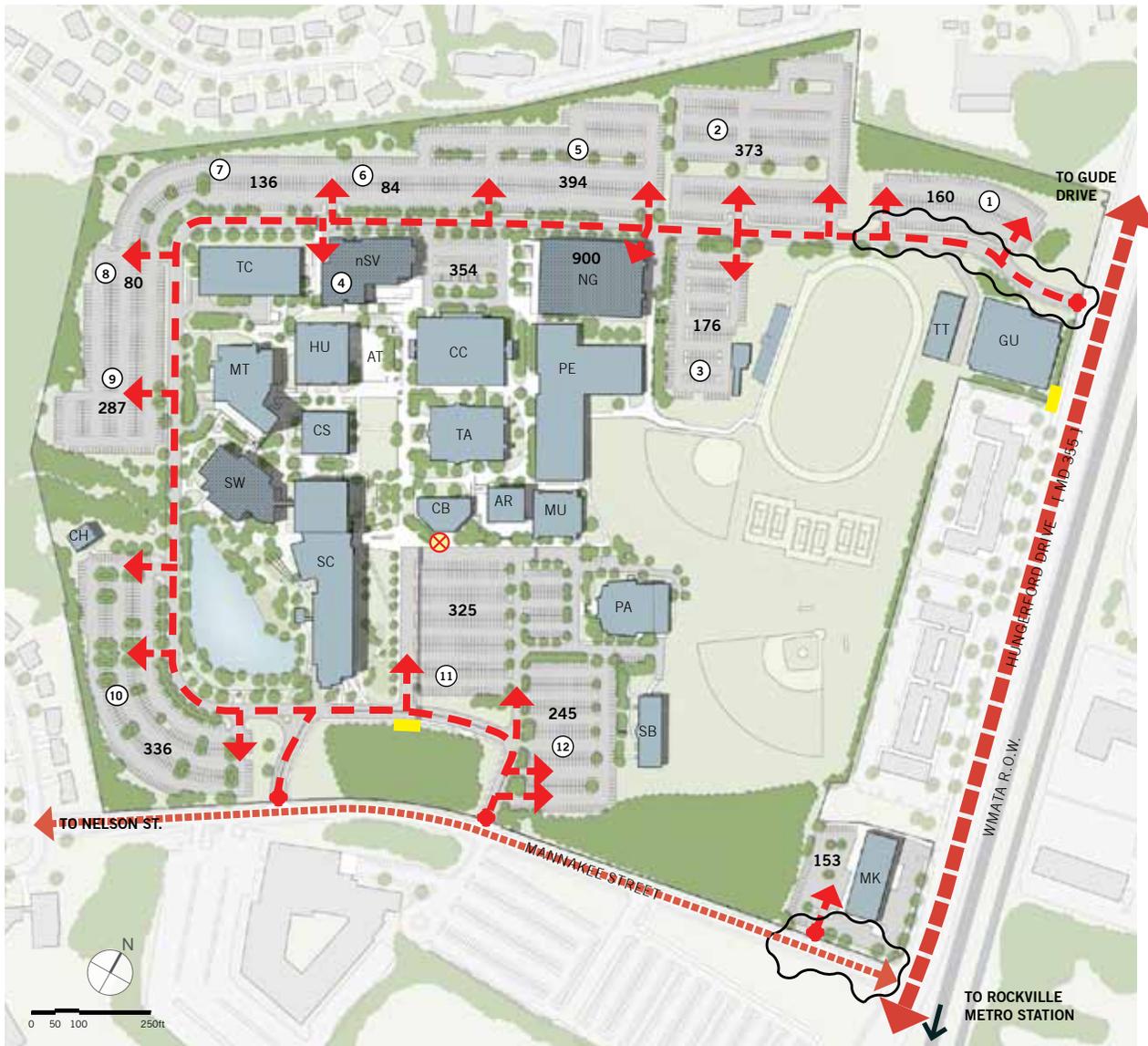
**TABLE 4.08 ROCKVILLE CAMPUS STUDENT AND TOTAL MODE SHARE**

	Drove	Dropped	Carpool	Transit	Walk	Bike	Other
Students	42%	10%	5%	39%	3%	1%	-
Overall	65%	-	3%	28%	1%	1%	2%

### Parking

The current parking capacity on the Rockville Campus for purposes of this FMP is the supply in effect after completion of two scheduled building projects: the North Garage and the Student Services Center. The current parking capacity also assumes the loss of surface Parking Lot 13, a 407-space leased overflow lot across Mannakee Street. The total parking capacity is 3,794 spaces.

**FIGURE 4.05 PARKING AND VEHICULAR CIRCULATION**



- ▬▬▬ 3 LANES EACH DIRECTION
- - - - 1 LANE EACH DIRECTION
- ▬ CAMPUS ROADWAY
- CAMPUS ENTRANCE
- BUS STOP
- ⊗ SHUTTLE BUS STOP

- TRAFFIC STACKING
- 01** # PARKING SPACES
- EXISTING CAMPUS BUILDINGS
- IN DESIGN OR CONSTRUCTION
- CAMPUS BOUNDARY
- ⑨** PARKING LOT #

- AR Paul Peck Art Building
- AT Amphitheatre
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
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Montgomery College’s annual September survey of parking activity in 2014 counted a peak of 3,134 vehicles in what was then a total parking supply of 3,491 spaces, a parking utilization rate of 90% overall. Occupancy of faculty/staff spaces was 82%. However, student parking in the loop road lots was close to 100 percent full, and most available student spaces were in remote Lot 13.

Parking utilization greater than 95% is a major issue, as it does not allow for efficient vehicle access, circulation and overall quality of service, whereby a parker is not required to search for the last available space. Best planning and design practice suggests that an operational surplus of 5-10% above peak utilization is required for operational efficiency and safe circulation and turnover. Supplying adequate parking for commuting students, faculty and staff is a major concern for the Rockville campus, and one which may restrict future growth.

The Maryland Higher Education Commission (MHEC) guidelines for community college parking require 0.75 space for each FTDE student and 0.75 space per FT Faculty and FT Staff. In addition, visitor parking in the amount of 2% of the total student/faculty/staff spaces is required. Finally, the Americans with Disabilities Act (ADA) requires reserved accessible spaces in the amount of 20 for the first 1,000 spaces plus 1 space for each 100 spaces over 1,000.

Using MHEC standards, the total required number of spaces for existing conditions would be 6,061. Based on the parking survey conducted in 2014 when a peak of 3,134 parked vehicles was counted, it is clear that there is not as large a deficit as the state standards would suggest. The actual existing condition with a 3,794-space parking supply is a surplus of 162 spaces. The main reason for the difference is the high percentage of students that arrive via non-auto modes.

It is most important to use a realistic parking space requirement for students because they are by far the largest part of the campus population, with 6 Full Time Day Equivalent (FTDE) students for each Full Time (FT) Faculty and Staff member. In addition, the number of FTDE students is expected to increase by 28% by 2023, whereas FT Faculty and Staff will increase by 6%.

Based on actual counts from the Year 2014 parking survey, peak student parking demand is accommodated with 95% of student spaces occupied by using a modified ratio of 0.40 for student spaces. This ratio is consistent with the current student driving mode share of 42% at Rockville. Using an alternative student parking ratio of 0.40 prevents an overestimation of parking deficit. Building an oversupply of parking would encourage more driving and discourage use of transit.

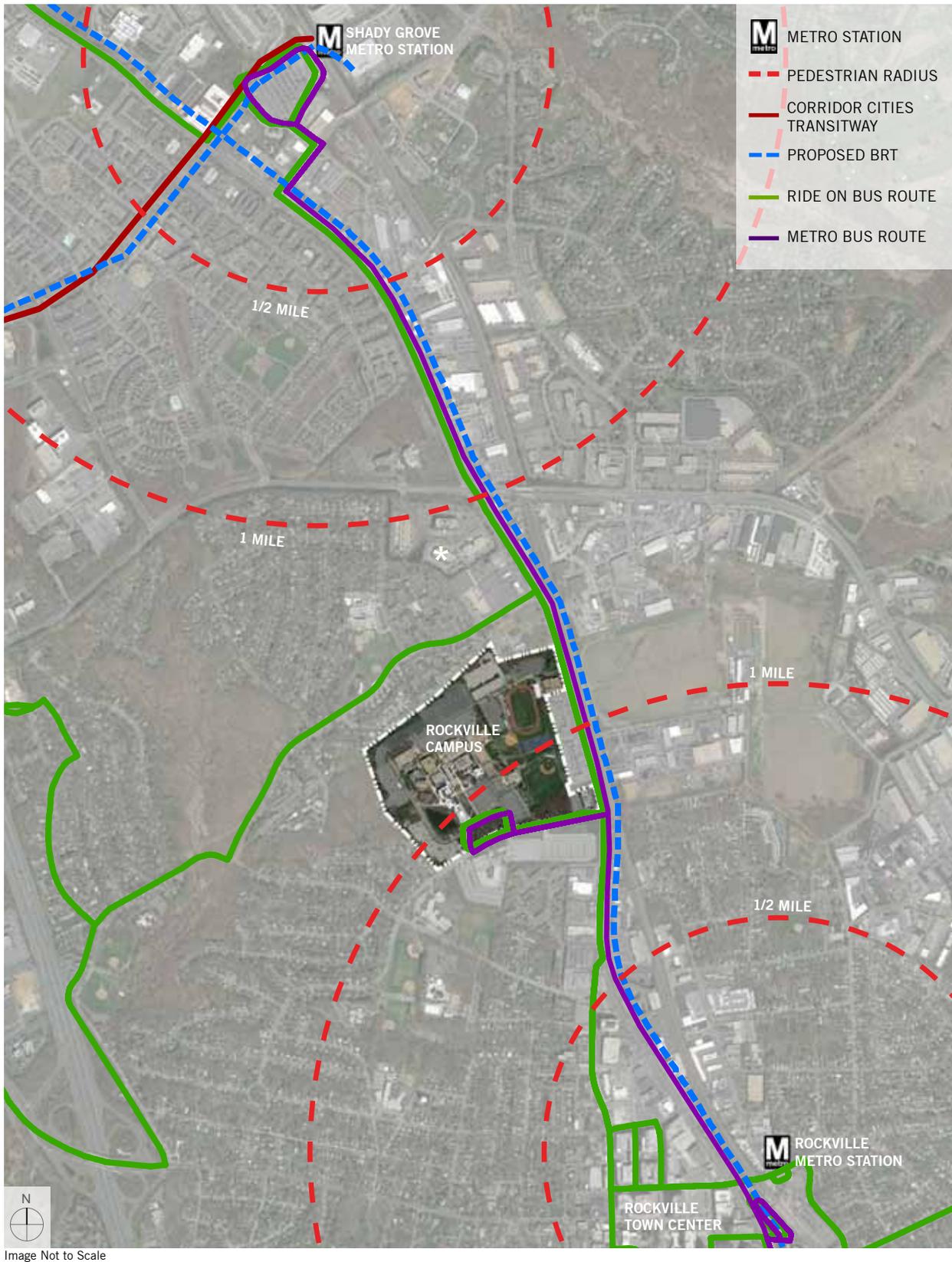
By using modified MHEC standards of 0.75 space per FT Faculty and FT Staff coupled with a parking ratio of 0.40 for FTDE students, the estimated space deficit in 2023 is reduced to 674 spaces. This information is summarized in the table below.

TABLE 4.09 ROCKVILLE CAMPUS PARKING NEEDS 2023

Parking Supply 2013	Parking Deficit 2023 using MHEC standards	Parking Deficit 2023 using modified MHEC standards
3,794	3,782	674

Note: 10% of student trips are comprised of auto drop off and pickup. A convenient drop off location is needed on the campus.

**FIGURE 4.06 TRANSIT**



## 4.2.6 Transit

The Campus is served by public transportation both on and off-campus. These services include a Washington Metropolitan Area Transit Authority (WMATA) Metrobus Q route and Montgomery County Ride-On bus routes 46 and 55 that provide connections to the Shady Grove and Rockville stations on the WMATA Red Line. Bus stops and shelters are provided on the Campus for these transit systems. The table below presents the peak frequency, average weekday riders and the percentage of the routes users that utilize the Montgomery College Pass.

TABLE 4.10 ROCKVILLE CAMPUS BUS RIDERSHIP 2014

Bus Service	Peak Frequency	Average Weekday Riders	% Montgomery College Pass
Q - Veirs Mill Road	10	9,335	n/a
46 - Shady Grove / Rockville	15	3,719	25.7%
55 - Germantown / Rockville	10	8,083	9.9%

Source: WMATA; RideOn.

A survey of travel mode characteristics for the campus suggests there is significant potential to increase public transit utilization as auto utilization is relatively high and faculty, staff, and students' trip origins are quite concentrated. At present, almost 50% of students and 85% of faculty/staff either drive and park a vehicle on the Campus or arrive as a passenger in a vehicle that is parked. Figures 4.08 and 4.09 illustrate the results of an origin and destination survey that was completed in the Fall of 2007, noting the residential zip code of faculty/staff and student respondents respectively. This concentration of residential origins presents an opportunity for the College and local transit agencies to "target market" alternative public transit incentives and/ or single auto occupant disincentives. Though the campus is not located close enough to a Metro station that a student could walk, public bus routes and services are well positioned to meet both Metro rail and other public transportation ridership needs. Figure 4.10 identifies the routes that currently serve the Rockville campus.

The transit challenges for the Rockville Campus include:

- There is heavy traffic congestion at Mannakee Street and South Campus Drive
- Bus stops on Mannakee Street contribute to traffic congestion
- There is a high volume of buses serving the campus with approximately 30 buses per hour at transit stop on South Campus Drive and 60 buses per hour along Mannakee Street
- The transit passenger waiting facilities are inadequate for passenger volumes
- There are transit passenger pedestrian safety conflicts with traffic on South Campus Drive. The bus stop is located on the south side of South Campus drive and passengers must cross two-way traffic and often cross behind stopped buses.
- Beginning fall semester 2016, MCPS plans to operate a temporary bus depot from Lot 13. MCPS has indicated that a minimum of 100 full-size school buses will be stored and operated Monday through Friday from Lot 13. The only means of ingress and egress is Mannakee Street. This will further compound traffic congestion.

**FIGURE 4.07 TRANSIT**

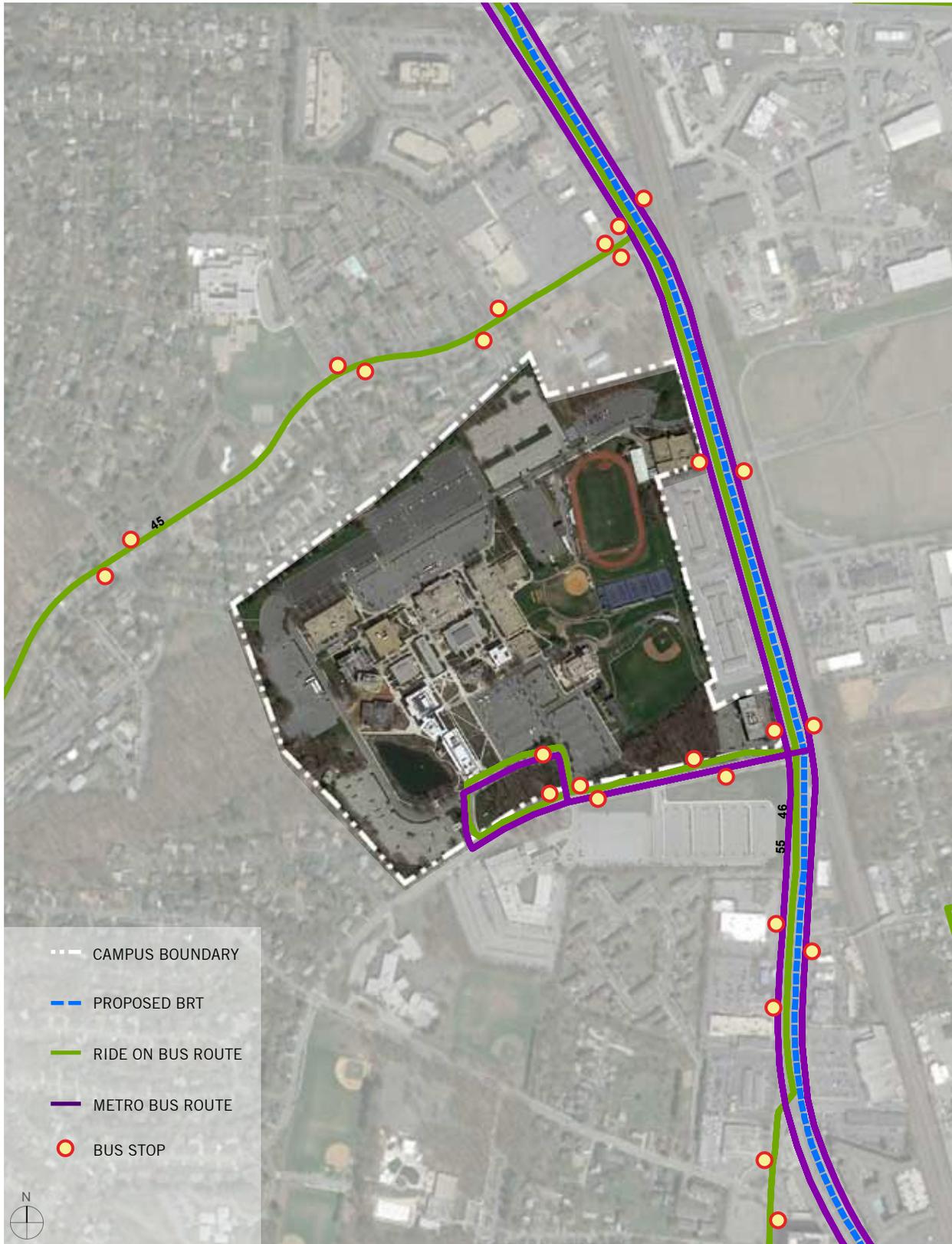


Image Not to Scale

Montgomery College contracts for shuttle services between the Rockville Campus and the Takoma Park/Silver Spring and between Rockville Campus and Germantown Campus. Shuttle stops are located in front of the Counseling and Advising Building and at the Physical Education Center. Shuttle service for TP/SS starts at 7:00 am and runs approximately every 45 minutes until 7:15 pm. Shuttle service to Germantown starts at 7:00 am and runs every hour until 6:00 pm. The shuttle from Germantown to Rockville runs every hour from 6:30 am to 6:30 pm. The shuttles greatly decrease the travel time between campuses compared with using public transportation. The travel time between Rockville and Germantown is reduced from 90 minutes to 45 minutes.

#### 4.2.7 Major Utilities

The existing central plant and utility distribution infrastructure is a critical underpinning that supports the Campus' built environment. The College is in the process of developing a separate Utility Master Plan that identifies and documents existing and proposed utility infrastructure needs and recommendations.

The latest Utilities Master plan for this Campus was completed in 2012 and includes an overview of the existing Campus utility infrastructure systems as well as a detailed assessment of their condition and ability to meet future demand. This plan is currently being updated in coordination with this Facilities Master Plan. An inventory of major utilities infrastructure is illustrated in Figure 4.11.

The College is in the process of a series of separate planning activities compiled in a Utility Master Plan that identifies utility improvements. Locations and capacities of existing utilities will be considered for any proposed building or facility improvements proposed in this Facilities Master Plan to take advantage of existing infrastructure and minimize disruption of service.

##### Mechanical

A central heating water plant is located in the Humanities Building, with a satellite heating water plant located in the Science Center Building. The Science Center Plant was designed to support installation of two additional boilers in the future as campus heating demand grows. It is connected to the campus distribution system when the Science East Renovation is completed. Several buildings are not currently connected to the campus heating water system including the Child Care Center, Interim Technical Training Center, Maintenance Shops, and the Mannakee Building.

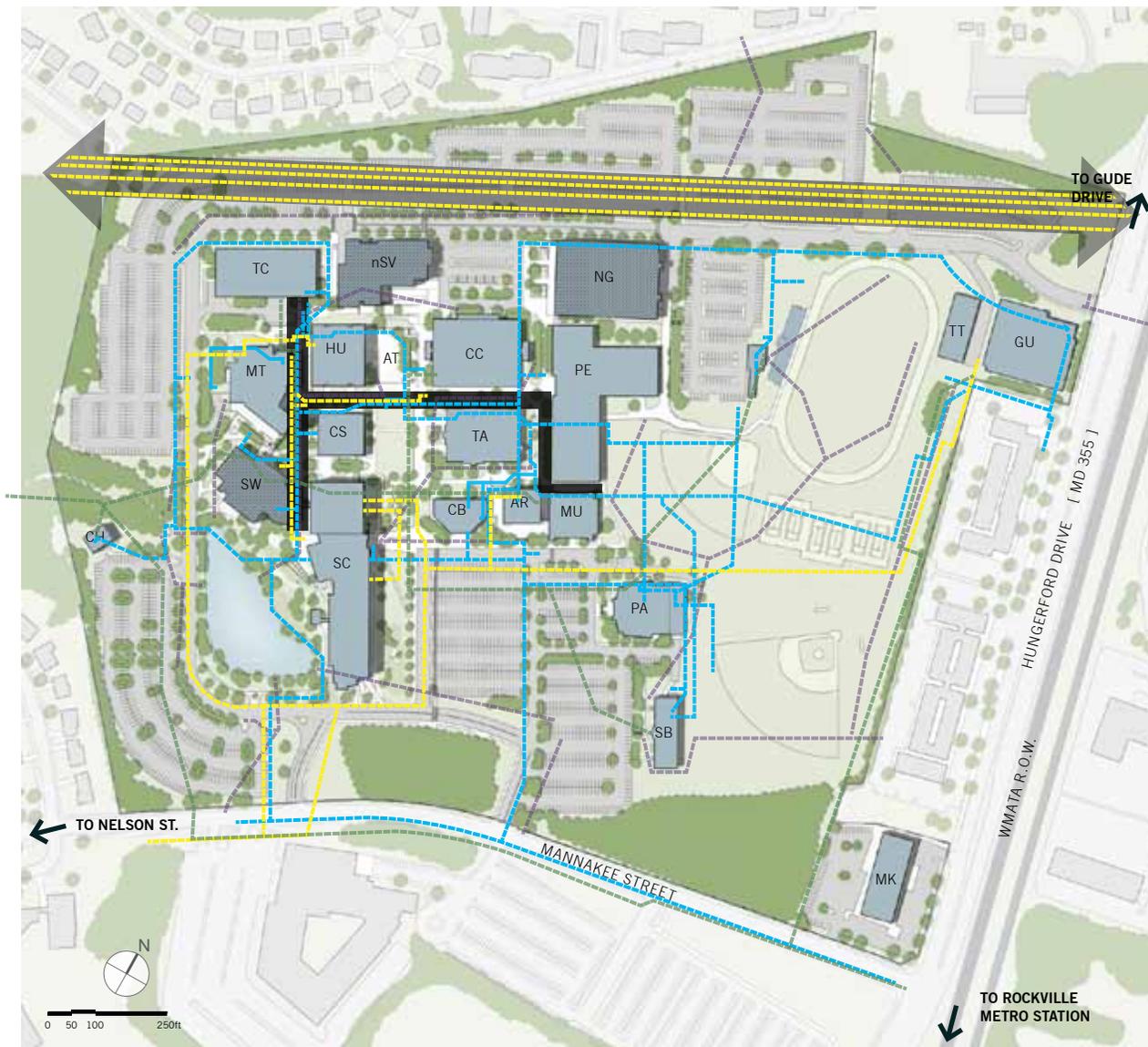
The main central chilled water plant is located in the Humanities Building and it supplies a campus distribution loop. Satellite plants are located in the Science Center Building and Campus Center Building and they can supplement the distribution system. A chiller plant was installed in the Science Center Building; this facility is connected to the distribution system and will also support the renovated and enlarged Science West Building.

The total capacity of the chilled water system is expected to meet current and future demands and the heating system has adequate current capacity and expansion provisions in place to enable the capacity to be increased as required to meet future loads and improve redundancy. However, both the heating and cooling plants in the Humanities Building have reached the end of their expected life. The natural gas system provided by Washington Gas is adequate to meet current demand, but a new gas service will be required to support a new heating plant in the Student Services Building in the future.

##### Electrical

The Campus is served by the Potomac Electric Power Company (Pepco) from two (2) 13.2 kV overhead medium voltage lines loop around the campus. There are two other 13.2 kV feeder in the vicinity which are interconnected to the two existing Pepco feeders serving the campus. Most of the buildings have separate utility meters and local step down transformer to distribute 480/277 volt, 3 phase, 4 wire system in the building except for the Child Care Center which is being fed from the Science West Building. The existing Pepco feeders have adequate capacity to accommodate planned campus expansion.

**FIGURE 4.08 MAJOR SITE UTILITIES**



- MAJOR CAMPUS UTILITY SPINE
- CENTRAL PLANT
- WATER LINE (TRUNK | SUPPLY + RETURN)
- UG NATURAL GAS LINE (NATURAL | RIGHT-OF-WAY)
- SANITARY LINE
- STORM SEWER
- EXISTING CAMPUS BUILDINGS
- IN DESIGN OR CONSTRUCTION
- UTILITY RIGHT OF WAY
- CAMPUS BOUNDARY

- AR Paul Peck Art Building
- AT Amphitheatre
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
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## Civil

The College owns the sanitary sewer collection system (piping, manholes, etc) and is responsible for all maintenance. Actual sewage treatment is the responsibility of the City of Rockville. The existing City of Rockville sanitary outfall from campus is near capacity, and will likely require upgrades for any future projects beyond the Student Services Center. The City of Rockville public water mains, located in Hungerford Drive and Mannakee Street, have adequate capacity to serve the campus.

Natural gas is provided by Washington Gas and the existing service currently meets the Campus needs.

### 4.2.8 Information Technology Systems

The main point of presence (MPOP) for the campus is currently the Humanities Building. Each of the existing buildings is connected via a ductbank system back to the Humanities Building, and is fed with optical fiber cabling.

The existing information technology infrastructure is a critical underpinning that supports the Campus' built environment. The College is in the process of a series of separate planning activities compiled in an Information Technology Master Plan that identifies these information technology resources.

### 4.2.9 Natural Systems and Sustainability

#### Stormwater Management

The Campus site is approximately 85 acres, and consists of grass, woods, and impervious area, with a total site imperviousness of approximately 50%. A series of existing storm drain systems is located throughout the campus. The majority of the storm drainage systems outfall into the existing stormwater management pond with the exception of the parking lots L10, L9, L8, L7, L6, L5, L2 and L1. Parking lot L10 drains to a storm drain system that outfalls on the south side stormwater management (SWM) pond outfall channel. Parking Lot L9 drains to a storm drain system that outfalls on the north side of the SWM pond outfall channel.

Parking Lots L8, L7, L6 and L5 drain to a storm drain system that outfalls into the wooded area to the west of Lot L9. Parking Lot L2 and a portion of L1 drain to a storm drain system that outfalls into a public storm drainage system located on the north side of Lot 2. The remaining area of Lot 1 and a portion of North Campus Drive drain into a separate storm drain system that drains across MD 355.

The College also receives drainage from off-site storm drain systems that enter the campus at two points along Mannakee Street. The first location is just east of the eastern access point onto the college from Mannakee Street. This off-site storm drainage system collects run-off from the parking lot located on the south side of Mannakee Street and the Ivy League town home community.

The Campus is serviced by a major stormwater management pond located west of the Science Center and South of Science East. The pond was constructed in the mid 1960s and provided for both quantity and quality control for all existing buildings, parking and access roads within its drainage area. The campus area draining into the stormwater pond is approximately 60 acres, with about 35 acres of impervious area. The pond also collects drainage from 62-acres of off-site area to include a portion of Mannakee Street and the Board of Education property located east of Mannakee Street. The pond was retrofitted and enlarged in 1992 to provide water quantity control for the Homer S. Gudelsky Institute for Technical Education (GU) project site. In addition to the GU building site, stormwater management was provided for the seven future projects anticipated at that time. As part of the retrofit, a channel was added on the downstream side of Campus Drive to provide a 100-year overland flood path. The pond was once again upgraded as part of the construction of the Science Center in 2009. The 2009 pond retrofit upgraded the pond to meet then-current State and City of Rockville stormwater management requirements which included Water Quality Control, Channel Protection Volume and the 10-year Overbank Flood

**FIGURE 4.09 OPEN SPACE AND STREETScape**



- TREES
- TREE STAND
- STORMWATER POND
- EXISTING CAMPUS BUILDINGS
- IN DESIGN OR CONSTRUCTION
- CAMPUS BOUNDARY

- AR Paul Peck Art Building
- AT Amphitheatre
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
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Control Volume. The pond was sized to provide 100% treatment for the college area that currently drains to it. Further detailed information regarding the analysis and design of the pond is located in the Stormwater Management Final Report, Montgomery College Rockville Science Center and tracked under the City of Rockville Stormwater Management Permit SMP 2007-00025. The pond was also classified as a Significant Hazard Facility by the Maryland Department of Dam Safety and tracked under Permit Number 09-MR-0023, MDE Dam # 469. Since the pond is considered a Significant Hazard Facility, the College is responsible to maintain and update, on a yearly basis, an Emergency Action Plan. The purpose of the Emergency Action Plan is to safeguard lives and secondarily to reduce property damage in the event that the dam should fail. The Emergency Action Plan contains a dam failure inundation map and required notification contacts and associated process.

In 2009, State of Maryland Stormwater Management Act of 2007 was passed, requiring the development of a stormwater management plan that implements Environmental Site Design (ESD) to the “maximum extent practicable” and ensuring that structural best management practices are only used where absolutely necessary.

ESD is defined as using small-scale stormwater management practices, nonstructural techniques, and better site planning to mimic natural hydrologic run-off characteristics and minimize the impact of land development on water resources. ESD includes conserving natural resources (drainage patterns, soil and vegetation; minimizing impervious surfaces (roads, walks, roofs) and increasing infiltration and evapotranspiration; and using other non-structural practices and innovative technologies.

Stormwater management permitting review and approval for the Rockville Campus is conducted by the City of Rockville. The City’s stormwater management requirements are provided in Chapter 19 of the City Code. The majority of the development on the Campus would be considered as “Redevelopment” since the amount of existing impervious area would be above 40% of the project area. The City Code does not provide credit for “redevelopment” unless a project shows it can reduce existing impervious cover by 50% or more. The City Code for Redevelopment projects, allows the City to permit treatment from less than 1-inch of rainfall if it can be demonstrated to the City’s satisfaction that full treatment is not feasible. This approach is project specific and subject to the City’s interpretation.

ESD treatment to the maximum extent practical was provided for both the Science East and Science West Building renovations, in both cases several micro-bioretenion facilities were provided, each sized to only treat one inch of runoff falling short of the total required ESD volume according to the MDE Chapter 5 computations. However, this shortfall was compensated for by using the treatment and storage in the regional pond.

For the construction of the tennis courts and Parking Lot 3, stormwater management was treated by the regional pond, however, an infiltration trench was provided at the tennis courts to provide the required Recharge Volume treatment.

For the North Garage, 2 micro-bioretenion facilities will be constructed to the west of the garage and 2 micro-bioretenion facilities will be constructed southeast of the Physical Education Center. Due to site limitations, the 4 micro-bioretenion facilities will only provide 40.5% of the total Environmental Site Design treatment volume.

As of November 2015, the new Student Service Center is under design and the A/E is coordinating the stormwater management approach with the City of Rockville. During the SWM Concept Review, the City had indicated that the College must provide SWM facilities to provide treatment of 40.5% of the ESD volume. Again due to site constraint, the project will not be able to provide treatment facilities for the full ESD treatment volumes. The College and the City are coordinating to determine an acceptable solution for ESD treatment.

## Forest Conservation

The Campus is intensively developed, with a core of buildings surrounded on three sides - south, west and north - by parking lots. East of these core buildings are athletic fields that lie between the campus and the commercial strip along MD 355. As shown on the NRI/FSD plan, narrow strips of trees, most of which are white pines, provide screening between parts of the campus and adjacent uses. Some of these areas are candidates for additional tree planting to meet future forest conservation and significant tree replacement requirements.

Below the stormwater management pond in the southwestern part of the Campus, between West Campus Drive and the western edge of campus, a stream flows through a small parcel of forest, 38,500 sf in size. This riparian forest is contiguous with the forest in Pollinger Park. It is moderately well stratified, dominated by tulip poplar, oaks and maples, and has a mixed understory of small trees, shrubs and herbaceous cover. Invasive species (e.g. honeysuckle, grape, briars, poison ivy) are common in some areas and the intensity of surrounding development has adversely affected the overall condition of the forest. Since it lies within the stream buffer and is part of the headwaters of Watts Branch, the forest is a high priority for retention.

There are two other areas of tree cover on the southern side of the campus. One is located south of the athletic fields and adjacent to the commercial strip along MD 355. It is approximately 125,835 sf in size. The understory has been cleared occasionally. The understory remnants include many low-quality invasive species such as Japanese honeysuckle. Another stand of trees approximately 63,015 sf in size is to the west of the first stand. It is a somewhat smaller island of trees surrounded by Mannakee Street, Campus Drive, and two vehicular entrances to the campus. This area is the main arrival point of the campus and has a high level of traffic from private vehicles, trucks, buses and pedestrians. The understory of this stand of trees is mowed periodically. It has been maintained to provide visibility and a sense of safety to people who frequent the campus.

The remainder of the Campus has an urban character, with trees situated in planting areas adjacent to buildings and roads, plazas, parking lot islands, etc. The area around the stormwater pond is park-like, with scattered trees and other ornamental plantings in a continuous lawn to the water's edge. As a whole this variety of plantings enhances the aesthetics of the campus and provides other benefits typical of urban trees. (See Figure 4.12 Natural Systems)





## 4.3 EXISTING BUILDING CONDITIONS and ANALYSIS

### 4.3.1 Building Usage

Buildings on the Campus generally fall into six categories of use: Academic, Student Services, Administrative, Operations, Recreational/Physical Education, and Community. (See Figure 4.13 Building Usage)

#### Academic

**Science West Building (SW): 27,855 NASF; 41,988 GSF** originally a two-story structure, Science West Building is currently being completely renovated and a third floor is being added. The completed building will house the Mathematics Department. For the purposes of this Facilities Master Plan, this building project is complete.

**Science Center (SC): 84,690 NASF; 140,700 GSF (SE: 39,069 NASF 53,737 GSF)** is a large four-story structure completed in 2014 and an attached building, formerly known as Science East, that was renovated in 2014. The building houses the Biology, Chemistry, and Physics, Engineering, and Geosciences programs that were relocated from their current homes in Science East and Science West Building. The Science Center also includes an Observatory that was relocated from Gordon and Marilyn Macklin Tower. The building includes class laboratories, greenhouse, and most of the classrooms required to support science instruction. The most prominent space is large central atrium that culminates the west end of the proposed Arts Walk on campus, and opens onto an outdoor classroom adjacent to the stormwater pond. Also included in the building are a series of heavily used large group meeting rooms.

**Paul Peck Art Building (AR): 14,414 NASF; 25,594 GSF** is a four-story structure constructed in 1971 and renovated in 2000 that includes two general purpose classrooms and Art studios (sculpture, drawing, ceramics, jewelry, printmaking, and painting), support spaces (plaster room, kiln room, acid room, welding room, solvent room, and storage), a slide library, gallery, faculty offices and open computer laboratory.

Insufficient space is available for ceramics, sculpture, jewelry, printmaking, locker rooms for students, lobby and lounge space. In addition, there is a need for an Art student study area and additional faculty offices.

**Music Building (MU): 10,221 NASF; 20,499 GSF** is a two-story structure constructed in 1971 and renovated in 2002. The building includes a recital hall for 118, a rehearsal hall for 110, teaching studios and laboratories, faculty and staff offices, and three general purpose classrooms for use by the Music Department. As the scope of the 2002 project was limited to renovation of the existing structure, there are still some existing deficiencies in the size and capacities of the teaching laboratories and in future flexibility to accommodate additional full-time staff and support.

**Computer Science Building (CS): 12,520 NASF; 20,900 GSF** is a two story building constructed in 1966 and houses two general purpose classrooms, three teaching computer laboratories and four open computer laboratories, the campus-based Instructional Technology staff offices, and the College's central computer center. The existing two-story facility has been partially renovated to provide teaching, open laboratories, and will continue to house the Campus' main administration computer center.

**Theatre Arts Building (TA): 20,118 NASF; 35,032 GSF** is a two story structure with an inaccessible partial basement that was constructed in 1966 and renovated in the mid 1990s. It houses five general purpose classrooms, a 60-seat lecture hall, class laboratories, offices for Speech, Dance and Theater staff and faculty, and a 500-seat arena and stage with support facilities. Classes in speech, dance and theater are taught primarily in this building.

Functional issues include insufficient public space for performances, lack of storage space, questionable ac-

**FIGURE 4.10 BUILDING MASSING AND MATERIALS**



Image Not to Scale

- 1-3 STORY BUILDINGS
- 4+ STORY BUILDINGS

- NON-CAMPUS BUILDINGS
- CAMPUS BOUNDARY
- # # STORIES

- AR Paul Peck Art Building
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
- NG North Garage
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cessibility at the first and second floor levels, undersized and inadequate number of offices, and minimal back-of-house space (scene shop, costume construction, workspace and storage.)

**Gordon and Marilyn Macklin Tower (MT): 81,800 NASF; 117,282 GSF** is a four story base plate and an additional three story office tower above that was constructed in 1971. The building accommodates the Mathematics and Science Center, the Computer Writing and Language Laboratory, the Provost's offices, Dean's offices, the television studio, the campus library (stack space, study space, and offices/support space) and offices and support spaces for the Departments of Computer Applications, Computer Sciences, English, Humanities Institute, Information Technology, Psychology, Reading, English as a Second Language (ESL), Foreign Languages, and Philosophy.

There is inadequate library study space including group study rooms and lounge space. Departmental collections, for example, the Education Department collection, need to be centralized. There is insufficient space to consolidate, either in this building location or other campus locations, departmental administrative and faculty offices, resulting in departmental location fragmentation. Further, there is a need to add additional vertical (ADA) accessibility.

**Humanities (HU): 49,368 NASF; 73,912 GSF** was constructed in 1966 with a ground floor and an additional three floors above ground, and renovated in the 1990s. The building houses a majority of the general purpose classrooms on the campus; computer teaching laboratories and open computer laboratories, Development Math Laboratory, Writing and Reading Center, and faculty and staff offices for the Departments of Anthropology, Criminal Justice, Sociology, Business Administration and Economics, Computer Applications, History and Political Science, and the Macklin Business Institute and Center for Teaching and Learning. In addition, the campus' Central Plant, and central telecommunications and mail facility are located in this building.

Although the Humanities Building was recently renovated, the social sciences departments are still fragmented. In addition, there is insufficient space to accommodate the consolidation of the English and Reading Departments and the Writing Center which is split between this building and the Gordon and Marilyn Macklin Tower.

**Robert E. Parilla Performing Arts Center (PA): 16,501 NASF; 28,000 GSF** is a two-story structure with a partial basement constructed in 1984. The building has a 500 seat theater and is the site for both campus academic productions and community performances. Campus student productions are presented here as are events in the College's professional theater series. This facility is also used extensively by the public. Support spaces include stage, orchestra pit, scene shop, storage, green rooms, dressing rooms, box office and storage.

Current needs include a campus meeting room suite, expansion of performance support spaces (storage of portable tables and chairs, audio-visual storage, scene shop and property storage, costume storage/fitting/repair/laundry, lighting shop/storage, tool/paint rooms), provision of a catering kitchen, additional restrooms, an improved loading dock, and additional offices to support the functions of the Performing Arts Center. There is an additional desire to expand the seating in the center to attract a broader range of performance groups to serve the Montgomery County community.

**South Campus Instruction Building (SB): 17,765 NASF; 29,900 GSF** is a two story-plus ground floor that was constructed in 1996 to provide flexible space for classrooms, laboratories and faculty offices during renovations of other campus structures. It is a modular building and was not originally intended to serve as a permanent academic structure.

This facility has served the original intent despite pressures to utilize this facility for permanent occupancy due to significant space deficiencies throughout the campus.

**Technical Center (TC): 40,250 NASF; 55,908 GSF** is a two-story structure built in 1966 and houses eight general purpose classrooms, a 72-seat lecture hall, career oriented programs, laboratories, support spaces, and

**FIGURE 4.11 BUILDING USAGE**

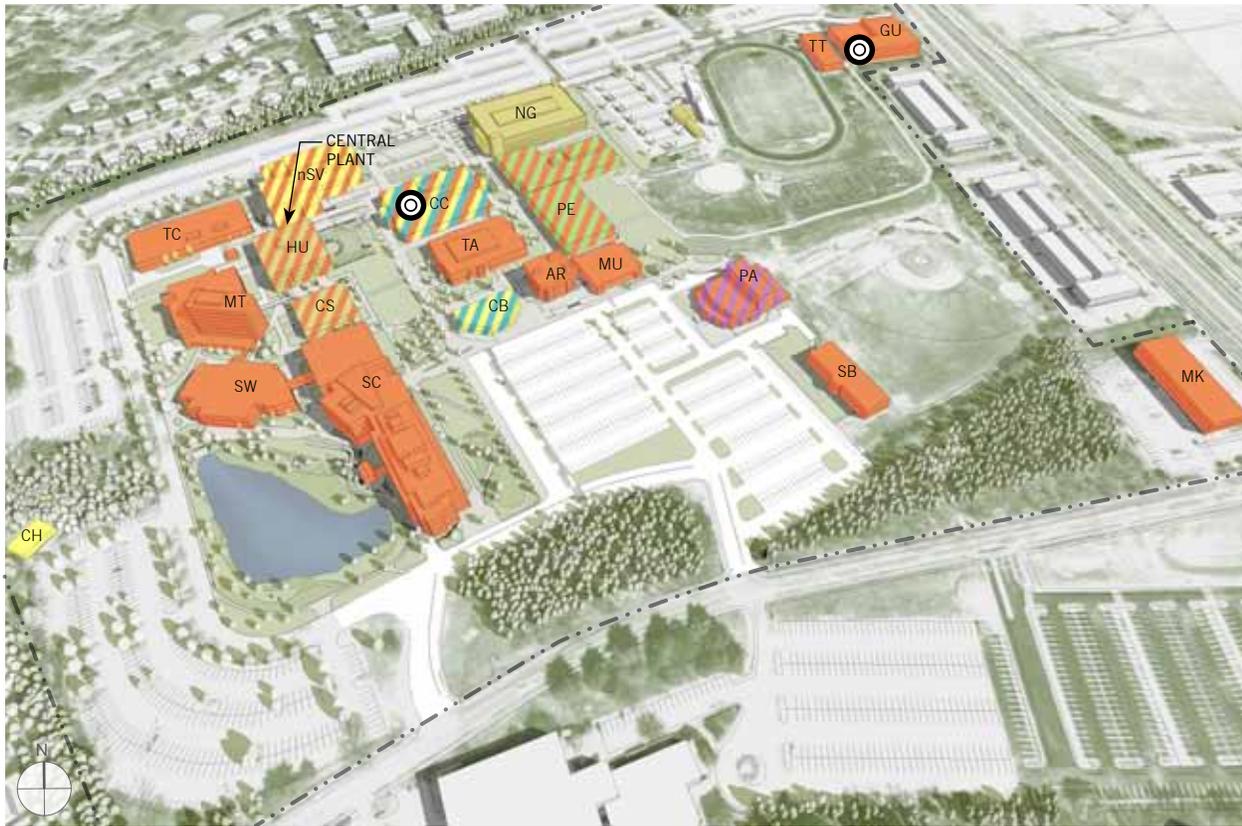


Image Not to Scale

- ACADEMIC
- STUDENT SERVICES
- OPERATIONS
- ADMINISTRATIVE
- PHYSICAL EDUCATION
- COMMUNITY

- NON-CAMPUS BUILDINGS
- CAMPUS BOUNDARY
- # # STORIES
- ◎ WORK FORCE DEVELOPMENT DEDICATED SPACE

- AR Paul Peck Art Building
- CB Counseling and Advising Building
- CC Campus Center
- CH Child Care Center
- CS Computer Science Building
- GU Homer S. Gudelsky Institute for Technical Education
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offices under the Departments of Communications Arts Technologies and Applied Technology (such as graphic arts, professional photography, radio/television, applied geography (GIS), architectural technology, interior design, construction management, fire science, and computer-aided design and graphics.) In addition, the building includes a small gallery and faculty and staff offices for the Department of Management.

Current deficiencies include undersized laboratories and classrooms, insufficient support spaces, lack of technology for instruction, inadequate lounge space and undersized and inadequate number of offices for faculty and staff.

**Homer S. Gudelsky Institute for Technical Education (GU): 49,895 NASF; 64,000 GSF** is a two story structure constructed in 1992 as a state-of-the-art technical training facility offering instructional programs in four primary areas: automotive, building and construction, manufacturing and fabrications, and printing management. The facility provides 18 instructional laboratories and support facilities, eight classrooms, (three of which serve as a conference center) and faculty and staff offices. In addition, Central Administration's Response Center and Workforce Development and Continuing Education occupy space in this building.

In addition to the need to relocate the CA and WD&CE functions from the building and acknowledging that on-going space modifications are necessary to meet changes in market technical training opportunities/requirements, the current need is for storage.

**Interim Technical Training Center (TT): 6,025 NASF; 9,360 GSF** was constructed in 1988 and houses two corporate classrooms, Building Trades and Sheet metal and Plumbing Laboratories, four vehicle storage bays, a corporate laboratory, storage, a machine shop and staff/corporate offices.

This pre-engineered one story structure does not fulfill the space needs and functions of the Homer S. Gudelsky Institute for Technical Education.

### Student Services

**Campus Center (CC): 44,580 NASF; 74,300 GSF** is a two-story structure with a ground floor constructed in 1966 and partially renovated in 2001. The building accommodates the bookstore, the MC Café, a full commercial kitchen, MC Copies (graphics and copy shop), dining rooms for students, faculty and staff, student lounge, MC Munchies (candy and snack shop), and a recreation center. The Campus Center also houses Workforce Development and Continuing Education classrooms and offices, English Department faculty offices, the Trio and Project Success programs, the Department of Management's Hospitality Management food laboratory and support facilities, the Office of Student Life, the Assessment Center, Central Administration's Auxiliary staff offices, and Central Receiving and Warehousing.

Campus Center is the only building that serves student life on campus and severely lacks adequate lobby and lounge space for this purpose. There is a need to substantially enhance the quality of life on campus for commuting students with recreation activities and with facilities to support their total development. There is also a need to substantially enhance the quality of life for the entire campus community with a wider range of services and merchandising venues. This will require relocation of non-campus student related functions as well as Central Services functions which currently occupy approximately 42% of the available building NASF.

**Counseling and Advising Building (CB): 10,271 NASF; 17,6976 GSF** a two- story structure built in 1969 that houses Disability Support Services including the Learning Center, Counseling, Student Employment Services, Career/ Transfer Center, Dean of Student Development, and the Safety and Security Office.

**New Student Services Center (nSV): 71,500 NASF; 127,200 GSF** is currently in design and, when complete, will replace the existing one-story Student Services Building. The new building will be four stories tall and be located at the northern edge of campus, terminating the pedestrian mall. The building will house the campus offices of Admissions, Academic Vice President and Provost, Assessment, Cashier, Career Services, Counseling and Advising, Dean of Students, Disability Services, Enrollment, Financial Aid Scholarship, Student Life and Veteran Affairs. The building will also house academic and support functions including classrooms and offices for

**FIGURE 4.12 GENERAL BUILDING CONDITIONS**



Image Not to Scale

FACILITIES CONDITION INDEX:

	0.30 +	POOR
	0.10 – 0.30	FAIR
	0.05 – 0.10	GOOD
	0.00 – 0.05	😊

	IN DESIGN OR CONSTRUCTION
	NON-CAMPUS BUILDINGS
	CAMPUS BOUNDARY

AR	Paul Peck Art Building
CB	Counseling and Advising Building
CC	Campus Center
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the department of Education, Assessment, ACES and TRIO. Student Service functions and spaces in the building will include a Multicultural Student Center. Other functions and support spaces in the building include a Café, Operations and Maintenance space and the Safety and Security Office.

**Child Care Center (CH):** 2,344 NASF; 2,498 GSF) constructed in 1986, is licensed to enroll up to 40 children. The pre-engineered, one story structure includes a staff office, two play areas, a kitchen, storage area and toilets.

The current facility is inadequate as it relates to square footage of play space per student, storage, preparation and office space, and meeting space with parents. In addition, the current arrangement does not provide a medium for parents and teachers to observe classroom and social behaviors of children so that appropriate intervention strategies can be planned and implemented. The College anticipates they will close this facility in the summer of 2016.

### Recreational

**Physical Education Center (PE):** 58,767 NASF; 84,949 GSF) is a two-story structure that was constructed in two phases, beginning in 1966 and includes a swimming pool with a separate diving area, two all-purpose gymnasiums, a fitness center, a weight room, multi-purpose room, two dance studios, a Body Density Laboratory, faculty, staff, and student and team locker and shower facilities, training room, nine general purpose classrooms, and faculty and staff offices for the Department of Health and Exercise Science, and Physical Education and Athletics.

Current deficiencies in support of the Health Enhancement, Exercise Science and Physical Education Department include the need for Health Assessment, Health Education and Movement assessment laboratories, expanded Fitness Center, Weight room, Multi-purpose Room, Sports Medicine Facility and Aerobics/Combatant Arts Room, redistribution of locker and shower facilities to accommodate students and changes in athletic programs, and “right-sizing” of offices of both faculty and staff.

### Operations

**Maintenance Shop (4,028 NASF; 4,720 GSF)** is a “temporary” wood structure housing equipment and supplies to support maintenance of the campus buildings. The building has inadequate storage capacity and insufficient space for offices and equipment. In addition, there are a few out buildings that do not contribute to the NASF of the campus, but provide valuable support. These include:

- Canoe Trailer Shed (420 GSF, constructed in 1990)
- Concession Stand/Toilet (240 GSF, constructed in 1994)
- Football Shed (600 GSF, constructed in 1997)
- Tennis Shed (120 GSF, constructed in 2013)

TABLE 4.11 ROCKVILLE CAMPUS TOTAL REPLACEMENT AND FCI VALUES FOR BUILDINGS, 2015

	Building Name	Use	Age/Year Built	Size	RV	FCI Cost	FCI
CC	Campus Center	Multi-use	40/1966	74,302	15,328	6,358	0.41
	Central Plant	Infrastructure		4,700	897	2,300	0.59
CH	Child Care Center	Day Care	20/1986	2,498	605	183	0.30
CS	Computer Science Building	Classroom/Office	40/1966	20,862	4,601	3,094	0.67
CB	Counseling and Advising	Office	37/1969	17,696	3,559	1,875	0.53
GU	Homer S. Gudelsky Institute	Classroom/Training	14/1992	64,000	14,085	5,272	0.37
HU	Humanities	Classroom	40/1966	73,912	12,564	4,575	0.36
TT	Interim Tech Training Center	Classroom	18/1988	9,360	1,382	606	0.44
MT	Gordon and Marilyn Macklin Tower	Multi-use	35/1971	117,282	22,680	4,153	0.18
MK	Mannakee Building*			42,102	7,369	2,326	0.32
MU	Music Building	Classroom	35/1971	20,499	2,763	488	0.18
PA	Robert E Parilla Perf. Arts Center	Auditorium	22/1984	28,000	8,716	3,091	0.35
AR	Paul Peck Arts Building	Classroom	35/1971	25,594	5,749	1,627	0.28
PE	Physical Education Center	Athletic	40/1966	84,949	20,166	12,423	0.62
SC	Science Center	Classroom		140,700	34,430	5	0.00
SE	Science East*	Classroom		53,737	13,902	2,252	0.16
SW	Science West Building	Classroom		41,988	10,391	1,726	0.17
SB	So Campus Instruct Bldg	Classroom	10/1996	29,900	5,447	1,584	0.29
SV	Student Services Building	Student Center	40/1966	10,448	2,021	1,291	0.64
TC	Technical Center	Classroom	40/1966	55,908	10,015	5,901	0.59
TA	Theatre Arts Building Building	Multi-use	40/1966	35,032	7,411	2,428	0.31

TABLE 4.12 BUILDING DEFICIENCY FOR CATEGORY AMOUNT AND % OF TOTAL BUILDING DEFICIENCY

Less than 25% deficiency (5 buildings)	\$8,624,822	14%
26% to 50% (10 buildings)	\$28,049,876	44%
51% or greater Deficiency (6 buildings)	\$26,884,729	42%
TOTAL	\$63,559,427	100%

### 4.3.2 Building Conditions and Deficiencies

In August, 2015, the College updated the facilities condition assessment for buildings and site infrastructure components including: electrical utilities, storm sewer, sanitary sewer, parking lots, etc. at each of its three campuses. The goals of this effort were to:

- Develop a baseline condition assessment of each facility including related infrastructure components and building systems.
- Provide budget estimates to address required safety improvements and deferred maintenance backlogs for planning purposes.
- Identify building code and accessibility issues and compliance needs to ensure that the facilities are operated as required.
- Utilize facility assessment findings to inform the development, prioritization, budgeting and scheduling of capital and maintenance/repair projects to address facility deficiencies.

The facilities condition assessment process included the following:

- A Current Condition Analyses of existing facility deficiencies including deferred maintenance, deferred renewal, near-term anticipated renewal, recommended discretionary improvements, and code non-compliance issues was completed.
- Anticipated capital renewal analyses developed projections of ongoing degradation of facilities' components and costs associated with renewal or replacement of these components as they reach the end of their useful life.
- Capital funding analyses involved formulation of scenario comparisons showing various funding levels and the effect of each on the condition and value of the building.

Information developed as part of the Facilities Assessment provided information for the development of a Facilities Condition Index (FCI) rating for each building on campus.

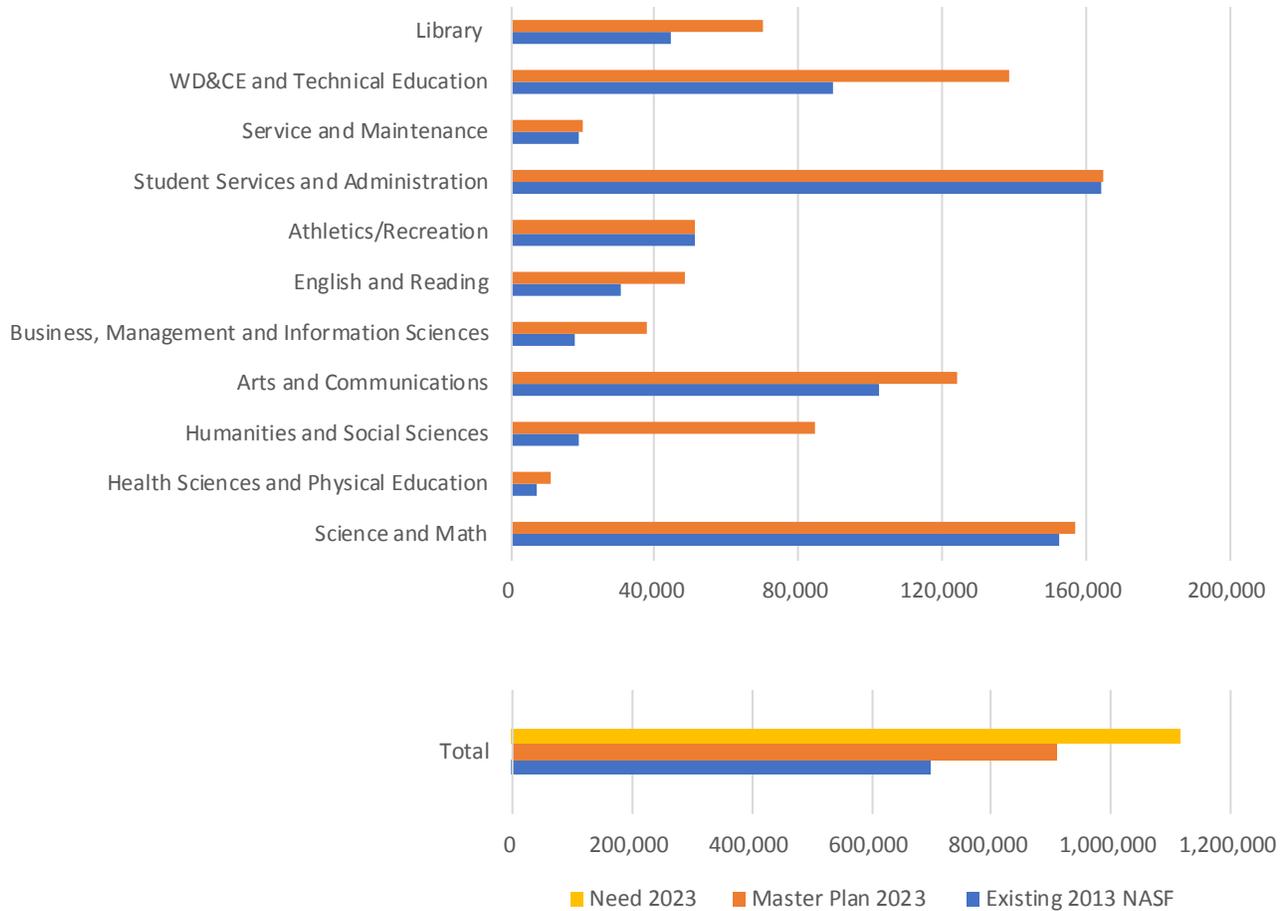
#### Facility Condition Index (FCI)

The FCI is a standard process for assessing the relative condition of buildings and site infrastructure components, facilitating comparison both within and among the campuses. For each building or site component, the Facility Condition Index (FCI) was developed which measures the relative amount of current deficiencies in the building including recommended improvements and grandfathered issues. The total value of recommended corrections is divided by current replacement value for the building or site component resulting in the FCI. The higher the FCI, the poorer the condition of the facility or system component. The FCI ranges for the standard of services for each building or site component are:

Good: .00 to .05  
Fair: .05 to .10  
Poor: Greater than .10

FCI is a standard measure used throughout the country; it is recommended by both the National Association of College Business Officers (NACUBO) and the Association of Higher Education Facility Officers (APPA). Table 4.11 summarizes the findings from the 2015 assessment of buildings on the Campus.

**FIGURE 4.13 ROCKVILLE CAMPUS PROPOSED PROJECTS  
IMPACT ON PROJECTED SPACE NEEDS, FALL 2023**



Buildings with an FCI rating of “Poor” should receive highest consideration for renovation through a capital project. For those buildings with an FCI rating of 0.60 or higher more study should be completed to determine if comprehensive renovation or demolition is the most feasible option. Buildings constructed in the late 1970s and early 1980s, that have not had capital renovation, are all in need of major systems upgrade or replacement in the future.

Buildings with an FCI rating of “Poor” should receive highest consideration for renovation through a capital project. For those buildings with an FCI rating of 0.60 or higher more study should be completed to determine if comprehensive renovation or demolition is the most feasible option.

Table 4.11 provides a summary of the building deficiency amount by FCI range.

## 4.4 FACILITIES PROGRAM

### 4.4.1 Campus Space Planning Factors

There are many planning factors that contribute to the dynamic and shifting landscape of today's higher education institutions. Some of the key planning factors to be considered in campus master planning that are anticipated to influence and drive the demand for higher education programs and the supporting facilities at Montgomery College are discussed in this section.

#### Past and Projected Enrollment and Program Growth

Montgomery College overall has experienced significant enrollment growth over the past five years. The Rockville campus has grown by 14% in total student FTE enrollment since 2008 and is projected to increase FTE enrollment by 32% by 2023. During this same planning period, Maryland is expected to see high growth in middle and high skill jobs requiring a 2 year or 4 year degree. This increase in jobs, along with the planned enrollment growth, will be a major factor driving the demand for access to educational programs and the supporting facilities.

Other drivers of enrollment growth at Montgomery College and its campuses are anticipated to include state incentive programs such as Dual Enrollment (Maryland's College and Career Readiness and College Completion (CCRCC) legislation) and the Dream Act (Chapter 191 of 2011, Senate Bill 167 Public Institutions of Higher Education – Tuition Rates – Exemptions). In addition, an on-going national trend of escalating increases in tuition costs and associated fees at four-year institutions continues to make affordability a primary issue for many students. This trend is expected to continue into the foreseeable future resulting in expanded demand for more affordable access at community colleges.

#### Changes to Teaching Pedagogy

Teaching pedagogy in the 21st Century is focused on providing students with experiential and group based learning activities that promote learning for practical application in the work environment. Teaching methodologies and pedagogy are undergoing transformation and no longer are four walls and a chalkboard sufficient to provide the instructional environment and tools that students and faculty need to be successful. Classrooms must be flexibly configured and furnished, and equipped with robust instructional technology to be adaptable to new teaching methodologies grounded in student-centered and group learning activities. Flexible spaces, both inside and outside of the formal classroom, are needed to support student collaboration, practice, and group work. In addition, more curriculums are requiring laboratory classes. These factors typically require a higher space allocation per student station in instructional spaces and more informal student study spaces outside of the classroom.

### 4.4.2 Space Utilization

Building space is a valuable institutional resource and is an important asset in supporting teaching and learning, and student development and success. Enrollment management and space scheduling are significant components that impact facilities usage and master planning. Class scheduling directly impacts the utilization of space. To most efficiently use instructional space, class sizes need to be aligned with desired class size cohorts. In this regard, Maryland has established standards for classroom and class laboratory room and student station utilization for community colleges, which will be used as the basis for the fall 2014 "utilization snapshot" assessment of campus.

In accordance with MHEC goals, Montgomery College would ideally schedule classrooms from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 27 of the 45 day hours per week or at a 60% utilization rate for credit instruction. In addition, the College would fill a minimum of 66.7% of the student sta-

tions for each classroom scheduled.

In accordance with MHEC goals, Montgomery College would ideally schedule class laboratories from Monday through Friday, during day hours of 8 a.m. to 5 p.m., at a minimum of 18 of the 45 day hours per week or at a 40% utilization rate or credit instruction. In addition, the College would fill a minimum of 60% of the student stations for each class laboratory scheduled.

A general campus-wide analysis of average room and station utilization by academic building for the fall 2014 semester for this campus was completed with the results summarized in Table 4.13. Observations can be made from the snapshot analysis that may identify opportunities to better utilize space and seating capacity as well as physical constraints limiting the better use of space. However, these observations and any subsequent recommendations must be developed with caution, since both quantitative and qualitative issues can affect scheduling and utilization of rooms.

A general assessment by academic building, based on fall 2014 scheduling data from the College for credit classes during day hours from Monday through Friday, yielded the following observations.

- Classrooms in most buildings have capacity to accommodate additional classes based on room utilization data.
- Laboratories in some buildings have capacity to accommodate additional classes based on room utilization data.
- The campus is meeting or exceeding the Maryland student station utilization rates for classes that are scheduled, with very few exceptions.
- Some classes and class laboratories are scheduled outside of or overlap the typical scheduling matrix hours used for Monday, Wednesday and Friday and Tuesday and Thursday, creating inefficiency. This may be unavoidable due to curriculum requirements.
- Late afternoon hours in some buildings appear to be under-scheduled on Fridays.

### Qualitative Assessment

At the heart of determining the quality of campus space, and more specifically instruction space, is an analysis of how effectively space is meeting the intended function. General observations can be made based on the age, condition, general utilization of the building and input from campus staff as to how effectively space is being used. Observations about the quality of existing space include:

- Eleven of the fifteen academic and academic support buildings on the Campus were designed and constructed more than 25 years ago. Although some have been renovated, the instructional space configuration of these buildings has generally not changed, except for Science East and West, and most do not fully support the desired teaching pedagogy. Classrooms in these buildings and others are designed primarily for a lecture set up to support the “Sage on the Stage” teaching style. These spaces typically do not provide flexibility for reconfiguring furniture and using instructional technology to support group and collaborative learning.
- Most of the older academic buildings have little or no informal/social student study and learning space for use in student-to-student, student-to-faculty and/or small groups outside of the classroom or laboratory (flipped classrooms.)

TABLE 4.13 ROCKVILLE CAMPUS SPACE UTILIZATION, FALL 2015

		Room Utilization	Student Station Utilization
<b>Paul Peck Art Building (AR)</b>			
FL 1	Lecture	58.00%	72.16%
FL 2	Lecture	46.67%	65.91%
FL 3	Lecture	70.37%	77.60%
FL 4	Lecture	52.22%	80.89%
<b>Campus Center (CC)</b>			
*FL 2	Lecture	46.05%	72.97%
	Lab	3.11%	70.00%
<b>Computer Science Building (CS)</b>			
FL 0	Lecture	42.37%	64.66%
FL 1	Lecture	47.17%	66.25%
<b>Homer S. Gudelsky Institute for Technical Education (GU)</b>			
*FL 1	Lecture	35.73%	66.16%
	Lab	54.78%	71.67%
*FL 2	Lecture	39.28%	70.63%
	Lab	16.00%	93.33%
<b>Humanities Building (HU)</b>			
FL 0	Lecture	44.56%	39.61%
FL 1	Lecture	56.48%	54.58%
FL 2	Lecture	64.21%	58.39%
FL 3	Lecture	55.92%	63.77%
<b>Gordon and Marilyn Macklin Tower (MT)</b>			
FL 2	Lecture	16.56%	87.33%
<b>Music Building (MU)</b>			
FL 1	Lecture	30.48%	59.12%
FL 2	Lecture	40.07%	82.07%
<b>Physical Education Center (PE)</b>			
FL 1	Lecture	30.60%	61.25%
FL 2	Lecture	53.56%	40.00%
Pool	Lecture	19.56%	52.78%

\*Spaces on this floor are used for both lecture and lab

TABLE 4.13 ROCKVILLE CAMPUS SPACE UTILIZATION, FALL 2015 cont'd

		Room Utilization	Student Station Utilization
	Actual Fall 2013	2006 FMP Projected Fall 2023	% Change Fall 2013
<b>South Campus Instruction Building (SB)</b>			
FL 0	Lecture	51.25%	81.32%
FL 1	Lecture	83.04%	64.15%
FL 2	Lecture	54.44%	61.21%
<b>Science Center (SC)</b>			
*FL 1	Lecture	31.44%	61.62%
	Lab	27.39%	47.42%
*FL 2	Lecture	11.56%	67.50%
	Lab	35.25%	70.37%
*FL 3	Lecture	6.00%	75.42%
	Lab	25.85%	80.98%
*FL 4	Lecture	20.94%	65.09%
	Lab	15.88%	67.34%
<b>Science West Building (SW)</b>			
FL 0	Lecture	49.21%	52.44%
FL 1	Lecture	48.32%	43.82%
<b>Theatre Arts Building (TA)</b>			
*FL 1	Lecture	29.83%	76.70%
	Lab	21.56%	86.11%
*FL 2	Lecture	48.81%	56.88%
	Lab	4.00%	100.00%
<b>Technical Center (TC)</b>			
*FL 1	Lecture	30.63%	73.82%
	Lab	20.89%	72.05%
*FL 2	Lecture	30.68%	61.64%
	Lab	12.03%	55.03%
<b>Interim Technical Training Center (TT)</b>			
FL 1	Lecture	58.00%	64.44%

Source: Montgomery College, Fall 2015 Schedule Data

### 4.4.3 Campus Space Needs

Assessments of the current and projected facilities space needs at the Rockville Campus are generated by applying current and projected planning data related to enrollment, instructional delivery, library collections, faculty, and staff to the State of Maryland Guidelines for facilities at community colleges. The planning data referenced above and used to compute current and projected space needs is documented in Table 4.14.

TABLE 4.14 ROCKVILLE CAMPUS SPACE NEEDS ASSESSMENT PLANNING DATA, 2013 AND 2023

	Actual Fall 2013	2006 FMP Projected Fall 2023	% Change Fall 2013
<b>FTDE</b>	<b>6,555</b>	<b>8,415</b>	<b>28%</b>
FTDE (inc on line)	6,732	8,642	28%
Day SCH	100,980	129,630	28%
Day WSCH-Lec	92,283	97,635	6%
Day WSCH-Lab	57,015	65,168	14%
Day WSCH	149,298	162,803	9%
<b>FTE</b>	<b>9,602</b>	<b>12,645</b>	<b>32%</b>
Credit Hours (SCH)	130,628	152,835	17%
Bound Volume Equivalents	216,708	234,045	8%
FTEF	504	559	11%
FT fac	307	325	6%
PT fac	788	936	19%
FTES	803	850	6%
FT staff	790	833	5%
PT staff	52	66	27%
Planning Head Count	4,013	5,017	25%
<b>Headcount Student (HCS)</b>	<b>16,441</b>	<b>20,819</b>	<b>27%</b>

Source: Montgomery College Office of Institutional Research, 2015

Current and projected space needs are then computed for each type of space in the campus inventory for which a guideline is available. Comparisons with the campus' current inventory and the one planned for the ten year planning period, given approved capital projects, are made, and surpluses or deficiencies relative to the respective space categories are identified. Table 4.15 documents the results of this analysis and breakdown by ROOM USE category.

Currently the Rockville Campus, excluding space supporting Central Administration and Workforce Development & Continuing Education, indicates a projected campus deficit of 439,764 NASF through 2023.

TABLE 4.15 ROCKVILLE CAMPUS COMPUTATION OF SPACE NEEDS, 2023

HEGIS CODE	ROOM USE CATEGORY	NEED 2023	PROJECTED INVENTORY	SURPLUS (DEFICIT)
<b>100</b>	<b>CLASSROOM</b>	<b>110,515</b>	<b>84,827</b>	<b>(25,688)</b>
<b>200</b>	<b>LABORATORY</b>	<b>420,059</b>	<b>227,618</b>	<b>(192,441)</b>
210	Class Laboratory	387,433	177,152	(210,281)
220	Open Laboratory	32,626	50,466	17,840
<b>300</b>	<b>OFFICE</b>	<b>240,312</b>	<b>185,661</b>	<b>(54,651)</b>
310-350	Office/ Conf. Room	235,678	179,026	(56,652)
320	Testing/Tutoring	4,634	6,635	2,001
<b>400</b>	<b>STUDY</b>	<b>81,057</b>	<b>44,513</b>	<b>(36,544)</b>
410	Study	48,550	13,612	(34,938)
420-30	Stack/Study	23,219	27,575	4,356
440-55	Processing/Service	9,288	3,326	(5,962)
<b>500</b>	<b>SPECIAL USE</b>	<b>111,816</b>	<b>58,079</b>	<b>(53,737)</b>
520-23	Athletic	96,680	50,345	(46,335)
530	Media Production	14,136	6,220	(7,916)
580	Greenhouse	1,000	1,514	514
<b>600</b>	<b>GENERAL USE</b>	<b>94,241</b>	<b>59,391</b>	<b>(34,850)</b>
610	Assembly	24,536	28,204	3,668
620	Exhibition	4,634	2,013	(2,621)
630	Food Facility	38,564	12,634	(25,930)
640	Childcare	No Allowance	No Allowance	No Allowance
650	Lounge	13,773	6,948	(6,825)
660	Merchandising	4,734	7,320	2,586
670	Recreation Space	No Allowance	No Allowance	No Allowance
680	Meeting Room	8,000	2,272	(5,728)
<b>700</b>	<b>SUPPORT</b>	<b>56,866</b>	<b>16,767</b>	<b>(40,099)</b>
710	Data Processing	5,326	1,360	(3,966)
720-740	Shop/ Storage	42,914	14,830	(28,084)
750	Central Service	7,768	267	(7,501)
760	Chemical Storage	858	310	(548)
<b>800</b>	<b>HEALTH CARE</b>	<b>1,754</b>	<b>0</b>	<b>(1,754)</b>
<b>900</b>	<b>RESIDENTIAL</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
<b>050-090</b>	<b>ALTERATIONS/ IND USE</b>	<b>No Allowance</b>	<b>No Allowance</b>	<b>No Allowance</b>
	<b>Total NASF:</b>	<b>1,116,620</b>	<b>676,856</b>	<b>(439,764)</b>

Source: Montgomery College

Montgomery College has two approved facility projects on this campus that are currently under construction or in design. The chart above includes these planned facilities, which include:

- A new Student Services Center
- A new North Garage

Based on the computation of space needs in Table 4.13, the Campus is projected to need an additional 439,794 NASF of space to accommodate the planned enrollment growth. Major deficits in academic and academic support space categories are projected in class laboratory, classroom, library and study and faculty/staff offices (especially for part time faculty). These needs will be specifically addressed in Section 4.5.4.

In addition to the quantitative space needs identified in this section, there are several programmatic and qualitative space issues and challenges that need to be addressed.

There is a need for more flexible classroom and laboratory space on the Campus to accommodate group based learning and collaboration that is central to supporting the desired teaching methodology. This includes providing instructional spaces with a larger student station space allocation and flexible furnishings allow for multiple configurations for small and larger groupings of students to engage and interact. It is also desired that instructional spaces include robust technology and wall writing surfaces to support in-class activities and exercises.

Redevelopment of the library facilities on each campus is paramount to the evolution of these resources into a true learning commons that provides additional and appropriately configured and equipped instructional spaces, individual and group study areas and computer stations. In addition, the introduction of faculty and staff technology rich “sand box” spaces, lounges and cafes and expanded collaboration zones are desired for the library learning commons on each campus.

The last Facilities Master Plan identified the significant challenge posed by the poor condition of older buildings. Many of the facilities that are more than 30 years old and have not been renovated have resulted in building systems that have reached the end of their useful life and are not reliable or efficient. In addition, instructional space configuration and equipment in these buildings do not adequately support the group based and collaborative learning activities desired to be incorporated into many of the academic course offerings. Academic space should be flexible to respond to and adapt to rapidly changing technological and pedagogical shifts in education, which is not the case in many of these facilities.





## 4.5 FACILITIES MASTER PLAN

### 4.5.1 Campus Master Plan Guiding Principles

A series of guiding principles was developed to assist in the evaluation of master plan alternatives which include:

#### 1. Develop new and renovated facilities to support academic and student programming in support of the College Mission

- Support the College's goal of establishing and nurturing unique roles and partnerships for the Rockville Campus in meeting the educational, economic, and work force development needs of Montgomery County;
- Provide sufficient and adequate space—classrooms, labs, offices, study, meeting rooms, and support facilities—based on existing and projected needs, so that each and every area can contribute creatively and productively in supporting students;
- Co-locate departments and functions rationally so that students, faculty, and staff benefit from the ease, energy, and excitement generated by the synergy of proximity and to optimize functional efficiency;
- Present students the needed range of opportunities to study and learn collaboratively in supportive environments with assistance of faculty, librarians, counselors, and staff;
- Afford students opportunities to meet and develop socially through formal programs of leadership, recreation, and athletics, and informally in inviting indoor and outdoor spaces;
- Maximize the use of land resources available to the Campus while retaining its unique character, quality, and setting; and
- Invite students, faculty, staff, community members, and visitors to participate in the varied Campus and College activities by organizing the buildings, parking, outdoor athletic facilities, and circulation for pedestrians, the disabled and elderly,—to make their experience pleasant and successful.

#### 2. Enhance Campus Gateways

- Enhance the experience of entering a campus environment when approaching from the north and south via automobile;
- Enhance pedestrian experience and the walkability of campus and through parking areas;
- Site new academic buildings to further the campus gateway principle;
- Design and locate the new Library Learning Commons so it has a major presence at the south edge of campus;
- Design and site the new Technical Training Center so it acts as gateway building and a beacon at the north vehicular entrance to campus;
- Design new parking structures with attractive facades, or screen them from immediate view with new buildings and landscape elements.

**FIGURE 4.14 EXPANSION OPPORTUNITIES**



EXISTING BUILDING

CAMPUS EXPANSION OPPORTUNITIES

OFF-CAMPUS EXPANSION OPPORTUNITIES

AR	Paul Peck Art Building
AT	Amphitheatre
CB	Counseling and Advising Building
CC	Campus Center
CH	Child Care Center
CS	Computer Science Building
GU	Homer S. Gudelsky Institute for Technical Education
HU	Humanities Building
MK	Mannakee Building
MT	Gordon and Marilyn Macklin Tower

MU	Music Building
nSV	New Student Services Building
NG	North Garage
PA	Robert E. Parilla Performing Arts Center
PE	Physical Education Center
SB	South Campus Instruction Building
SC	Science Center
SW	Science West Building
TA	Theatre Arts Building
TC	Technical Center
TT	Interim Technical Training Center

3. Create a hierarchical armature of outdoor space. This is described further in section 4.5.3.
4. Concentrate Development on the Campus
  - Co-locate academic programs which are currently scattered throughout campus
  - Replace the existing Campus Center with a new facility that accommodates more generous cafeteria, bookstore and student activity, office and meeting spaces, in particular lobby and lounge spaces
5. Concentrate Parking to Allow for Academic Expansion (See Figure 4.14)
  - Construct a second parking structure at the south edge of campus in order to maximize land area for academic buildings;
  - Locate and build the next parking structure so as to reduce its apparent size and bulk. Sandwich the next parking structure between or behind buildings, design with attractive facades, or screen from campus by use of land- scape planting and/or screens along the facades;
  - Activate the parking structure along major walks with at least ground level program space;
  - Manage parking operations so that the most transient parkers are directed toward the parking structures on the north and south sides of campus, closest to the campus entries/exits;
  - Retain the general campus vehicular circulation loop.
6. Investigate Opportunities for Sensitive Future Growth off Campus
  - Develop the south side of campus to accommodate possible future acquisition of the Carver Educational Services Center (MCPS BOE) site.
7. Implement the facilities master plan with regard to the sustainability and resource conservation programs of the College.
  - Extend the existing high performance central plant distribution system to new and renovated buildings on the Campus. Building designs for new and renovated facilities should be undertaken in an environmentally sensitive manner that responds to the sustainability and resource conservation programs for the College. Building designs for new and renovated facilities must be seek Leadership in Energy and Environmental Design (LEED) Silver Certification as the means of responding to this desired outcome.

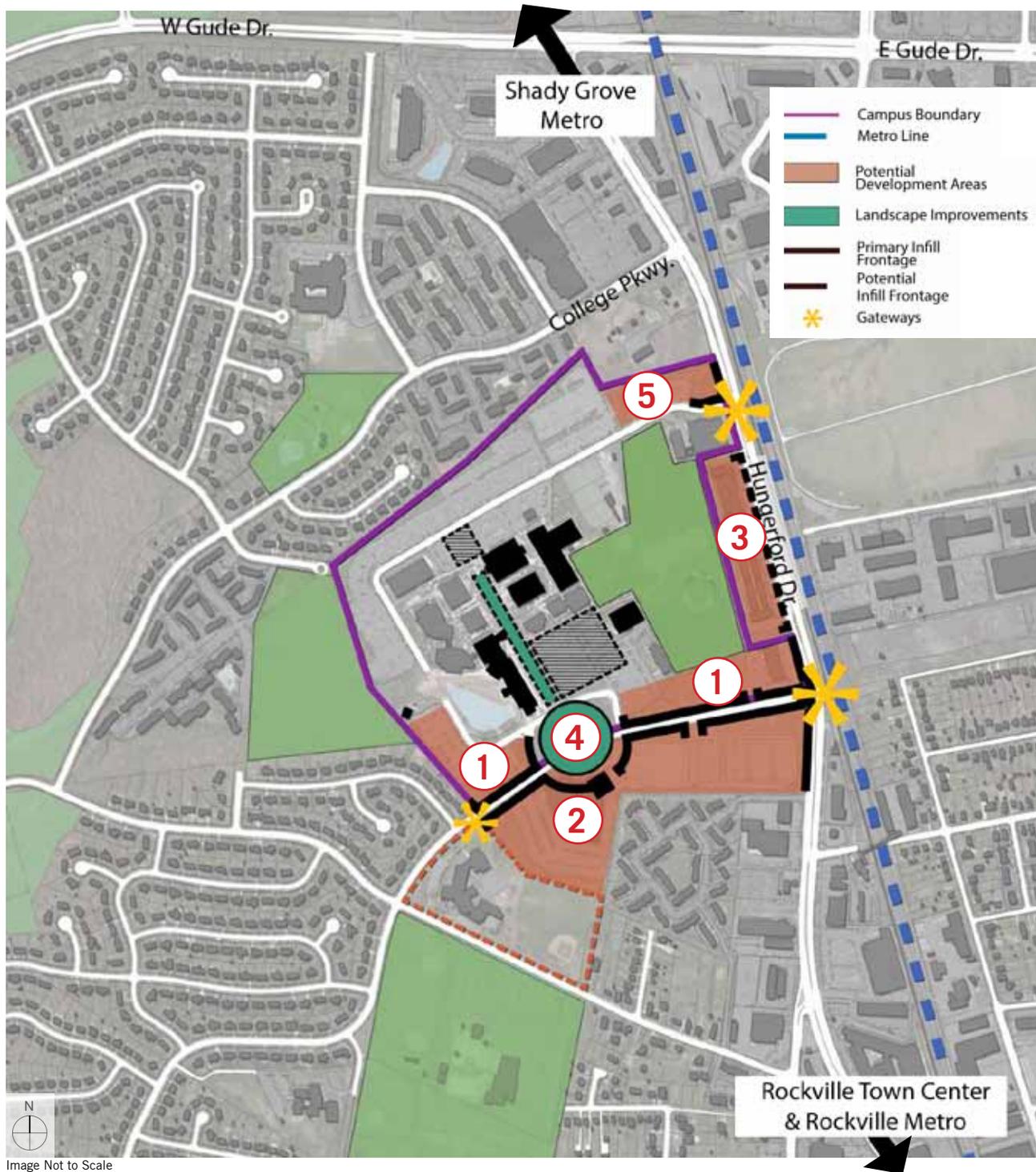
## 4.5.2 Response to External Planning Factors

### Various outside pressures impact the proposed Facilities Master Plan.

Property owners in the adjacent residential developments have consistently expressed their concern over potential increased vehicular traffic, both along adjacent MD 355 intersections and along Mannakee Street. Additionally, there is concern from these same neighbors about building any structures along the west and north edges of campus, particularly parking structures. The campus has indicated they will attempt to minimize future development along the campus north and west edges.

The City of Rockville is the agency having authority over forest conservation and stormwater management. The City has a bikeways master plan. The City has also recently amended its Zoning Code to allow a building height

FIGURE 4.15 COLLEGE TOWN ANALYSIS



- 1 - Potential development areas conflict with tree buffer
- 2 - Ongoing political issue associated with potential acquisition or use of MCPS property
- 3 - Multiple property owners would make acquisition expansion very difficult
- 4 - Proposed traffic circle encroaches on MCPS property and MC frontage
- 5 - Adjacent transcontinental Natural Gas lines prevent building structures in this area

up to 75 feet for an institution of higher learning in the R-200 Zone, which will be the new zoning district for the Rockville campus, but the building heights are subject to the layback slope requirement of 30 degrees from the common property line.

Montgomery County Public Schools, the owner of the adjacent Carver Educational Services Center (CESC) property to the south of campus, has expressed interest in divesting itself of this property, provided they are able to secure alternative accommodations. Once the CESC property is available, the College has agreed to pursue acquiring it and plan for future development at that location. The property would not only add land for future buildings, but could accommodate additional parking as well.

### College Town Plan

In the fall of 2014, Montgomery College, led by its Department of Advancement and Community Engagement, engaged a team led by U3 Advisors to create a College Town plan for Montgomery College.

While some of these recommendations align with some of the goals of this Facilities Master Plan, others are infeasible or simply not recommended by this FMP. Both are noted below:

#### Short Term:

- Enhance gateway intersections with signage and landscape improvements at these intersections
  - o North Campus Drive and Hungerford Road
  - o Mannakee Street and Hungerford Road
  - o Mannakee Street and South Campus Drive
- Implement interior signage and way finding
  - o Identify interior building spaces and outdoor spaces that could host public events
  - o Market potential spaces to surrounding community and local organizations

#### Medium Term

- Complete new open space, student service building, and infill development of surface parking lots utilizing “Town Center” principles
- Prepare a feasibility study for building renovations
- Renovate existing common spaces so that they are more visible from the exterior and help to activate sidewalks and the quad
- Identify sites along the campus edge for potential acquisition

#### Long Term

- Implement building renovation plans, in phases
- If feasible, acquire properties along campus edge
- Focus on properties along Mannakee Street. Note that while good planning principles, College priorities for this campus may not be aligned with this particular recommendation. The preference is to maintain



visibility and porosity along Mannakee Street. Further, there is a significant tree buffer lining the campus along Mannakee Street, which should be maintained.

- Pursue public-private development structures, where feasible
- Reinforce connections to campus from Hungerford Drive with “edge” development that activates the pedestrian environment. Note that while this Facilities Master Plan agrees with the concept of developing this edge, the College would have to acquire over 90 properties along Hungerford Drive between the College’s two main entrance points, which would likely be difficult and time consuming

### 4.5.3 Proposed Campus Structure and Character

Given the limited building area available, new development will likely displace existing parking lots or be built as replacement of existing, smaller and/or dysfunctional buildings. Of necessity, new development of academic buildings on existing parking lots will need to occur in conjunction with development of additional structured parking. The core campus, currently consisting of mostly low-rise buildings, will slowly become a taller and denser campus. While the central core buildings will remain fairly low (up to 3 stories typically), new buildings located just outside the core will be taller and larger. This will both maximize the limited building area available and allow for the development of signature buildings in key locations.

In addition to the six new buildings proposed (including a new parking structure), seven existing buildings will be renovated, and three of those will be reallocated to new use.

New buildings will be situated around the major pedestrian pathways on campus, in particular the pedestrian mall and proposed Arts Walk. Both of these are discussed further in section 4.4.4 below. Existing buildings will be renovated to have a direct connection to the mall and/or other adjacent pedestrian circulation paths.

#### Gateways and Views:

Every effort should be made to strengthen gateways and enhance views into campus proper from the perimeter parking lots. The recent construction of the Science Center helps establish a signature view into campus and up along the pedestrian mall. Proposed construction at this end of campus, including the proposed Library Learning Commons and South Garage, should be designed to strengthen this developing gateway and give the south side of campus a strong collegiate image.

Views along the north edge of campus should continue to improve with the construction of the new Student Services Center and North Garage. The new Humanities and Social Science building proposed in this FMP for the northwest corner of the core campus should maintain the views into campus between buildings and act as a gateway from that corner of the campus.

The proposed Technical Training Center, situated along North Campus Drive, presents an opportunity to create a gateway at this primary campus entry from Hungerford Road, a major thoroughfare. Renovation of the Mannakee Building at the southeast corner of campus also offers an opportunity for a stronger presence for the campus.

Along Mannakee Street, the forest canopy could be limbed up so that views into and out of campus along this edge are reinforced, while still maintaining the tree coverage in the area.

#### Open Space and Streetscape:

While the existing grid of outdoor spaces is ample in quantity, it is not especially pleasant and does not offer much beyond “the space between buildings.” Given the quantity of existing and proposed buildings, it is important to continue and build on the outdoor space improvements so they continue to provide an organizational

armature for the campus, focused around the large north-south mall or “spine.” The mall creates a hierarchy of spaces and provides orientation and an open-space heart for the campus. While key aspects of the landscape and open space plan are listed below, a more detailed landscape master plan is required to develop these concepts into a comprehensive plan. See Figure 4.15.

Goals include:

- Reinforcing the main north-south mall through campus, with minor green axes in the east/west directions and major building entries located along the spine;
- Developing the Arts Walk proposed in the previous Master Plan as a key secondary axis, and improving other cross-axes, in particular the one between the Physical Education Center and Gordon and Marilyn Macklin Tower;
- Enhancing the design and use of the existing amphitheater space;
- Creating a smaller amphitheater space marking the east end of the Arts Walk, oriented toward the film-projection wall that will be part of the Robert E. Parilla Performing Arts Center addition;
- Reinforce inside/outside spaces in both new and renovated buildings, particularly at major entry lobbies, and at the mall-side of buildings;
- Allowing and encouraging views into and out of the mall from the minor axes;
- Including a variety of open/lawn type areas mixed with large shade trees, as well as more intimate outdoor spaces;
- Create a new plaza and drop-off in front of the Performing Arts Center that will also provide access to the Arts Walk, center of campus, and service and emergency vehicles.
- Provide a pedestrian and potentially vehicular connection between Manatee Building and the central campus to the west. This tree lined connector could become the framework for future development in this area.
- Making a park setting along South Manatee Street of the existing woods so that area is more of an amenity. Increase the views into and out of this area by limbing the tree canopy and provide better access through with some seating and gathering spaces.
- Utilizing landscape elements through parking areas to reinforce pedestrian access and to screen parking lots from campus. Improving and thickening existing landscape buffers around the north and west edges of campus to screen the campus from adjacent properties
- Simplifying site furniture throughout the campus. There are currently too many types of benches, hand-rails, cans, etc. fragmenting the open spaces. The campus should utilize simple, well designed furnishings and light fixtures located at key nodes. Site walls could also be utilized for seating. Neutral-color furnishings and fixtures should be selected; black is preferred as it becomes a background color.
- Provide a tree lined pedestrian corridor extending north from the green space fronting the new north garage to the parking areas and gate from the adjoining north apartments.

## 4.5.4 Proposed Building Projects

### Building Projects Summary

The 2013-2023 Building and Site Concept Plan is included as Figure 4.17, which documents the proposed location, footprint and height of proposed new buildings on Campus. The 2013-2023 Building and Site Concept Plan is in response to the space needs by academic grouping documented in Figure 4.16. The 2012-2023 Landscape and Open Space Plan, shown in Figure 4.18 has been coordinated with and complements the 2012-2023 Building and Site Concept Plan.

Below is a summary description of the proposed projects recommended in the 2013-2023 Building and Site Concept Plan. These summary project descriptions, along with additional work proposed in the 2012-2023 Landscape and Open Space Plan and recommendations in the utility and information technology infrastructure, environmental and sustainability, and circulation and parking sections will be used to develop responsive capital projects that address the identified facility needs through 2023. These projects will be the basis of the Facilities Master Plan.

#### 1. South Campus Instruction Building (17,662 NASF, 29,900 GSF):

This project involves the renovation of the building for WD&CE youth programs, and staff, plus continued function as surge space and provide renovated facilities for adjunct faculty. Since this building is projected for demolition in future development, the renovations should be kept minor.

#### 2. Campus Center (72,960 NASF, 128,000 GSF):

This project involves demolition of the existing Campus Center and replacing it with a new four-story building. Highly active student type spaces such as the bookstore and cafeteria dining, as well as the cafeteria kitchen and server, the Hospitality Management program, conference rooms and general purpose classrooms to support Health and other academic programs will be included. Lobby and lounge space will be situated so as to engage the pedestrian mall on the west side of the building, as well as the new Student Services building across the pedestrian mall. Inclusion of a large dividable, flexible use, instructional/meeting space for up to 500 will also be considered.

#### 3. South Garage:

This project is for construction of a new parking structure with a capacity of 900-1,000 new parking spaces. The structure is proposed at seven levels, located across from the Robert E. Parilla Performing Arts Center and adjacent to the proposed Media Arts building. The new Library Learning Commons is proposed to be constructed immediately after the garage is built, wrapping the north and west sides of the garage, and leaving just the south and east walls exposed. These elevations will be screened with plantings and architectural elements. The program development for the garage and the Library Learning Commons should be coordinated to confirm that the Library Learning Commons will work properly along the west side and north corner of the garage.

#### 4. Library Learning Commons (70,295 NASF, 117,158 GSF):

This project is for the construction of a new 4-story Library to replace the inadequate facility currently housed on three floors in Gordon and Marilyn Macklin Tower. The building will be located at the southern end of the Campus, opposite the Science Center and serving as a “wrapper” to the new South Garage. The west side of the building will be designed to engage the Mall and the new arts walk. The program development for the garage and the Library Learning Commons should be coordinated. The programming and design of this should be coordinated with the garage as much as possible.

### **5. Gordon and Marilyn Macklin Tower Renovation (44,557 NASF, 63,652 GSF):**

This project involves the alteration and reconfiguration of Library space (44,557 NASF) that will be vacated with the construction of a new Library Learning Commons. The reclaimed space will be allocated for use by Academic Initiatives, expansion of the Reading and Writing Learning Center, general education classrooms for Reading and English, part time faculty and other administrative units. The renovation will also improve and/or reconfigure MEP systems, accessibility and life safety systems. The program development should consider a bridge connection to the Computer Science Building as part of the renovation. While programming, consider bridging / combining with the computer science building adjoining.

### **6. Technical Training Center (50,400 NASF, 84,000 GSF):**

This project replaces and expands on the current Interim Technical Training Center, and also serves to consolidate the Technical Training programs and Applied Technology programs currently housed in Technical Center. The building is proposed as a low 2-story mass housing the high bay automotive classrooms/labs, with a 4-story mass fronting toward North Campus Drive. The 2-story building will be situated parallel to the track, and could possibly incorporate bleacher seating.

### **7. Media Arts Building (28,800 NASF, 48,000 GSF):**

This building expands the current Art program and consolidates the Fine Arts and Communication Arts programs along the proposed Arts Walk and the campus mall. The building will include space for Communication Arts vacated from the Technical Center, and to address existing space deficits in and an expansion of the fine and performing arts programs. Construction of this building will require demolition of the Counseling and Advising Building. The building is proposed at four stories and will include spaces for graphic design, music and art class labs, a dance studio and offices.

### **8. Humanities and Social Science Building (81,600 NASF, 136,000 GSF):**

This new building will be built on the approximate footprint of the demolished Technical Center, and will accommodate both the Humanities and Social Science programs as well as provide general purpose classrooms. The building site design should incorporate a plaza to the pedestrian node south and east and open/ green space to the south and towards the new Student Services Center.

### **9. Humanities Building Renovation (49,368 NASF, 73,912 GSF):**

Completion of the new Humanities and Social Science Building will allow for renovation of this building to expand the Macklin Business Institute, provide additional space for Business, Information Science and Management, faculty offices, and continued use of classrooms for general education classes. The renovation will also improve accessibility, life safety systems and the central ice storage facility.

### **10. Robert E. Parilla Performing Arts Center (16,501 NASF, 28,000 GSF existing + 17,294 NASF, 28,325 GSF addition):**

This building has a strong presence in the Montgomery County community, and will undergo a two-part renovation to maximize and improve its appeal to that constituency. The renovation consists of an expansion of the auditorium and back-of-house spaces, life safety and accessibility improvements, and additions at the front, rear and sides to accommodate needed program space. The auditorium will be expanded from 500 seats up to 1,000 seats, with the addition of a balcony, upper level lobby and ancillary spaces. The dressing rooms, loading dock and storage spaces will be renovated, and an addition will be built to house meeting rooms, conference center and catering kitchen.

The additions will wrap the existing building and be designed to respond to their immediate context: the front, or west elevation, will respond to the proposed plaza/ road reconfiguration; the north elevation will respond to the proposed Arts Walk and amphitheater at the end of the Arts Walk, while the the others will include loading dock and service space.

#### **11. Computer Science Building (12,661 NASF, 20,900 GSF):**

This building will be renovated. Classrooms, computer laboratories and offices will be refurbished and continue to provide support to all academic disciplines, general student support and swing space. The main entry will continue to be located on the east side of the building so as to connect to the new Mall. The program development should consider a bridge connection to Gordon and Marilyn Macklin Tower.

#### **12. Physical Education Center and Outdoor Facilities (58,431 NASF, 84,949 GSF):**

This project consists of a renovation of existing spaces including a fitness center, weight rooms, locker rooms, academic labs and support spaces for intercollegiate teams. Redevelopment and repurposing of the pool should be considered. Outdoor facilities will be reconfigured, and possibly shifting the baseball field to accommodate future building projects. In addition, the women's grass turf soccer field is in need of replacement or renewal. The swimming pool area should be reconsidered for other uses.

#### **13. Mannakee Building (34,359 NASF, 42,102 GSF):**

This building will be renovated and reallocated to Workforce Development and Continuing Education for administration functions and business training and for adjunct faculty offices.

### **4.5.5 Proposed Pedestrian and Bike Circulation**

Improve the main pedestrian connections through the center of campus to eliminate overcrowding at class change times and provide for increased pedestrian traffic. Complete the missing links in sidewalk.

Pedestrian-vehicle conflicts result from pedestrians crossing North and West Campus Drives to and from the parking lots outside the loop road. Pedestrian safety can be promoted in the following ways:

- Channel pedestrians to a limited number of highly visible, well marked crosswalks. On the parking lot side, this should be done within the lot since there is no sidewalk along the parking lot side of the Campus Drives. Vertical features such as an archway or simple wayfinding feature would help parkers identify and navigate within the lot from their parked car to the nearest crosswalk.
- Use 'Yield to Pedestrians in Crosswalk' signs on the loop road.
- Use traffic calming measures on the loop road to reduce vehicle speed.

The access to the Capital Bike Share station should be regraded and widened.

Regarding pedestrian and bicycle access to local streets, it is important for the College to be responsive to the legitimate concerns of neighbors that have resulted in a closed perimeter fence. At the same time, the closed access points should be kept on campus planning maps and recognized as a possible future opportunity for pedestrian and bicycle access. Individuals and circumstances change over time, so the issue could be revisited in a future FMP update. A bicycle route between College Parkway and campus is proposed for study by the City of Rockville Bicycle Master Plan.

Montgomery College should continue to support the City of Rockville's efforts to implement its Bicycle Master Plan.

**FIGURE 4.17 2013-2023 BUILDING AND SITE CONCEPT PLAN**

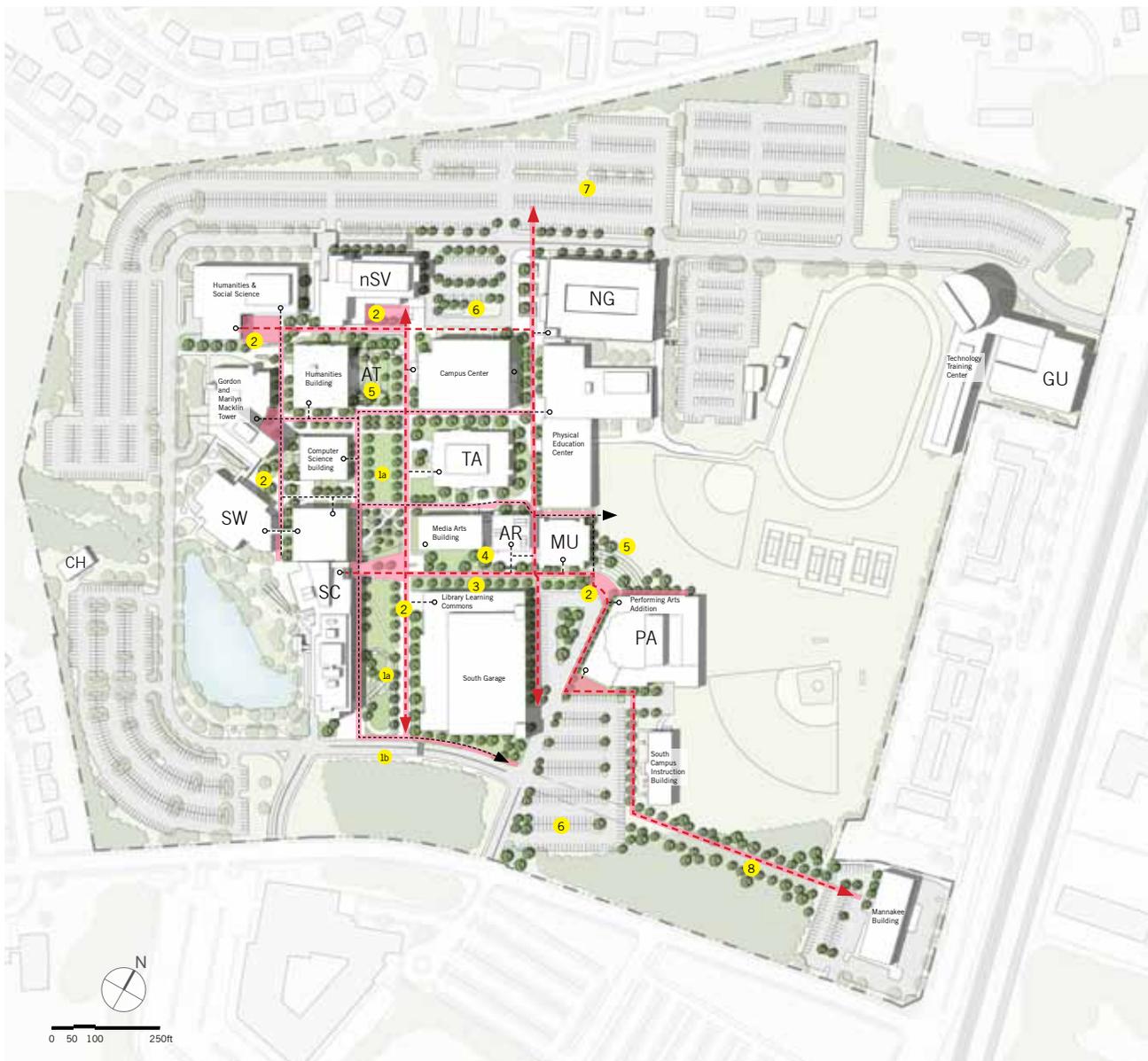


- EXISTING BUILDING
- NEW BUILDING
- RENOVATION BUILDING

- AR Paul Peck Art Building
- AT Amphitheatre
- CH Child Care Center
- GU Homer S. Gudelsky Institute for Technical Education
- nSV New Student Services Building
- NG North Garage
- PA Robert E. Parilla Performing Arts Center
- SC Science Center
- SW Science West Building
- TA Theatre Arts Building

- |           |   |           |   |           |   |
|-----------|---|-----------|---|-----------|---|
| <b>1</b>  | <b>SOUTH CAMPUS INSTRUCTION BUILDING</b><br>FOR WD&CE YOUTH PROGRAMS                  | <b>2</b>  | <b>CAMPUS CENTER</b><br>FOOTPRINT - 32,400 GSF<br>TOTAL(4FL) - 128,000 GSF                                      | <b>3</b>  | <b>SOUTH GARAGE</b><br>FOOTPRINT - 54,000 GSF<br>TOTAL(6FL) - 900~1000 SP                                 |
| <b>4</b>  | <b>LIBRARY LEARNING COMMONS</b><br>FOOTPRINT - 29,300 GSF<br>TOTAL(4FL) - 117,158 GSF | <b>5</b>  | <b>GORDON AND MARILYN MACKLIN TOWER</b><br>RENOVATE FOR READING AND WRITING LEARNING CENTER, GENERAL CLASSROOMS | <b>6</b>  | <b>TECHNICAL TRAINING CENTER</b><br>TOTAL - 84,000 GSF  |
| <b>7</b>  | <b>MEDIA ARTS BUILDING</b><br>FOOTPRINT - 12,000 GSF<br>TOTAL(4FL) - 48,000 GSF       | <b>8</b>  | <b>HUMANITIES AND SOCIAL SCIENCE</b><br>FOOTPRINT - 34,000 GSF<br>TOTAL(4FL) - 136,000 GSF                      | <b>9</b>  | <b>ROBERT E. PARILLA PERFORMING ARTS CENTER ADD.</b><br>FOOTPRINT - 28,450 GSF<br>TOTAL(2FL) - 56,900 GSF |
| <b>10</b> | <b>COMPUTER SCIENCE BUILDING</b><br>RENOVATE FOR SWING SPACE                          | <b>11</b> | <b>PHYSICAL EDUCATION CENTER</b><br>RENOVATE PHYSICAL EDUCATION BUILDING  | <b>12</b> | <b>HUMANITIES BUILDING</b><br>RENOVATE HUMANITIES BUILDING  |
| <b>13</b> | <b>MANNAKEE BUILDING</b><br>RENOVATE FOR WD&CE BUSINESS USE                           |           |   |           |   |

**FIGURE 4.18 2013-2023 LANDSCAPE AND OPEN SPACE PLAN**



NEW COURTYARDS AND KEY AREA

EXISTING KEY AREA

PRIMARY CAMPUS PEDESTRIAN PATH

SECONDARY CAMPUS CIRCULATION AXIS

MAJOR BUILDING ENTRANCE

FOREST CONSERVATION EASEMENT

STUDENT WALKING RADIUS

- AR Paul Peck Art Building
- AT Amphitheatre
- CH Child Care Center
- GU Homer S. Gudelsky Institute for Technical Education
- nSV New Student Services Building
- NG North Garage
- PA Robert E. Parilla Performing Arts Center
- SC Science Center
- SW Science West Building
- TA Theatre Arts Building

- 1 Pedestrian mall / major circulation axis
  - a. Lawn
  - b. Stormwater educational landscape
- 2 Hardscape / plaza
- 3 Arts walk
- 4 Arts plaza
- 5 Amphitheater
- 6 Enhance parking area with trees and landscaping
- 7 Extend pedestrian axis through parking lot with trees, pedestrian path and landscaping
- 8 Create tree-lined pedestrian path

### 4.5.6 Proposed Vehicular Circulation and Parking

This section presents a generalized assessment of the Facilities Master Plan from a parking and access perspective. As noted in earlier sections, the plan proposes several land use initiatives for the 2023 horizon period. The key proposals and potential transportation impacts and needs associated with those changes are discussed and evaluated below.

#### Vehicular Circulation

A traffic study conducted in 2014 found that intersections of campus access drives and public streets would operate acceptably with construction of the North Garage. It found that the intersection of MD 355 and Mannakee Street experiences delays and long queues on southbound MD 355 and on eastbound Mannakee Street during peak hours. A new South Garage will trigger a new traffic study. It is anticipated that additional traffic to the South Garage may require right-turn lanes for westbound traffic on Mannakee Street at the two intersections with the campus drives. This may require the widening of Mannakee Street between MD 355 and the western end of the Campus.

The western campus entrance from Mannakee Street should be realigned to eliminate the skew and provide a better design for the internal intersection of the entrance with West Campus Drive and South Campus Drive. Circulation on South Campus Drive between the east and west drives to Mannakee Street may need to be revised in order to provide an improved transit stop, as discussed in the Transit section.

A convenient drop off/pickup location is needed to serve the 10% of students that are dropped off. This drop off might be incorporated into the design of Lot 4.

#### Parking Demand Management

The College realizes that parking demand will continue to grow as enrollment increases. Encouraging greater use of public transit is a strong desire on the part of the College. Further, the Rockville Campus can encourage greater use of the City of Rockville bike paths that abut the Campus. In addition to encouraging increased use of public transit and bicycling, the College is looking at ways to reduce parking demand. The College is also planning to work with the County to coordinate their plans for a new Bus Rapid Transit (BRT) route that will be routed near campus. Neither the route nor the stop locations for the BRT are certain and the project may not come to fruition.

#### Parking

- The parking requirement for the 2023 campus population according to MHEC standards is 7,576 spaces.
- An alternative method for calculating the 2023 parking requirement is described in section 4.2.5.
- The existing net parking supply, after loss of remote Lot 13, reduction in size of Lot 4 with the new Student Services Building, and completion of the North Garage, is 3,794 spaces.
- The 10-year change in parking supply resulting from the projects indicated in the proposed Facilities Master Plan includes loss of Lot 11 (325 spaces) and loss of an estimated 45 spaces in Lot 12 for construction of the South Garage, Library Learning Commons and the Performing Arts Center addition.
- The resulting 2023 parking supply, not including new spaces in the South Garage, is 3,424 spaces. Compared with the 2023 parking requirement, the deficit is 4,152 spaces using the MHEC standards and 1,044 spaces using the alternative parking requirement.
- The South Garage is proposed to provide 900 - 1,000 new spaces in a six-story structure. The new drop

off loop between the garage and the Performing Arts Center can provide approximately 25 spaces.

- In summary, using MHEC ratios, the 2023 parking requirement (demand) is for 7,576 parking spaces. With a 2023 parking supply of 4,400 spaces, including 950 spaces in the new South Garage, that leaves the campus with a 2023 deficit of approximately 3,176 spaces.

TABLE 4.16 PARKING TRIGGERS

1	South Campus Instruction Building	NA	---	---	---	---
2	Campus Center	NA	---	---	---	---
3a	South Garage construction	Lot 11	325	-325	3,444	-350
		Lot 12	245	-25	---	---
3b	South Garage Drop-off Loop	NA	---	975	4,419	625
4	Library Learning Commons	NA	---	---	---	---
5	Gordon and Marilyn Macklin Tower Renovation	NA	---	---	---	---
6	Technical Training Center	NA	---	---	---	---
7	Media Arts Building	NA	---	---	---	---
7a	Mall Phase 2	NA	---	---	---	---
8	Humanities and Social Science Building	NA	---	---	---	---
9	Humanities Building	NA	---	---	---	---
10	Performing Arts Center addition	Lot 12	---	-20	4,399	605
11	Computer Science Building	NA	---	---	---	---
12	Physical Education Center and Outdoor Facilities	NA	---	---	---	---
13	Mannakee Building	NA	---	---	---	---

### 4.5.7 Transit Recommendations

The Rockville campus has good local bus services with three local bus routes providing very frequent bus services. A high level of transit mode share has been achieved through the Montgomery College Transit Pass program that allows Montgomery College students to use the Ride On bus service free of charge. Without assuming the cost and management burden of expanded transit services, Montgomery College should continue to support and promote transit commuting and carpooling. Specific recommendations applicable to the Rockville Campus are:

1. Work with the Montgomery County Department of Transportation Division of Transit Services (Ride On) to come up with a solution to relocate some of the bus stops along Mannakee Street, while still maintaining convenient access for workers at the Carver Educational Services Center. These stops are very close to the main campus stop and contribute to traffic congestion and pedestrian safety conflicts.
2. Work with the Montgomery County Department of Transportation Bus Stop Improvement Program to relocate and improve the main campus bus stop to provide adequate facilities for waiting customers and minimize pedestrian vehicular conflicts. Moving the bus stop to the north side of South Campus Drive

and reversing the direction of bus circulation on the South Campus Drive loop would eliminate the need for Rockville Campus bus passengers to cross the street.

3. Continue to monitor the possible development of a future BRT route and stops on 355 for impact to and benefit of the Campus
4. Conduct annual staff Commuter Surveys through the Montgomery County Commuter Services program.
5. Participate in Metro's SmartBenefits Transit Benefits Program.
6. Promote transit and ridesharing options for students during fall and spring semester registration.
7. Establish and maintain a Montgomery College Ridesharing App similar to the Montgomery County Community College, Pennsylvania program that can be found at <https://www.zimride.com/mc3/>.
8. Provide priority parking for carpools and vanpools.
9. Develop specific transit wayfinding maps and signs on the Campus that guide new students, visitors and occasional transit users to available transit services. These transit wayfinding maps should show bicycle and pedestrian routes along with local and regional transit services. The transit wayfinding maps may be incorporated into existing wayfinding maps. The transit wayfinding graphics should be updated regularly and posted in gateway locations, key buildings and on the Montgomery College website.
10. The Office of Facilities - Transportation webpage should be updated to provide transit, bicycling and carpooling maps and information that are tailored to each campus so that facility and current and prospective students can easily identify alternative transportation services.

#### 4.5.8 Major Utility Recommendations

Coordinating future utility infrastructure is an integral part of a successful campus planning process. The College's Utilities Master Plan was prepared to optimize the use of utility resources while minimizing potential disrupts, as well as costs. As part of this planning process, the 2012 Utilities Master Plan for the Rockville Campus was reviewed to determine the adequacy of existing systems and to determine the potential for future expansion. As the current Facilities Master Plan is implemented there will be a series of on-going evaluations and analyses undertaken to determine a more complete picture of the utility and information technology infrastructure impacts.

The separate Utilities Master plan for this campus completed in 2012 includes an overview of the existing Campus utility and information technology infrastructure as well as a detailed assessment of their condition and ability to meet future demand.

##### Mechanical

The existing heating water plants have adequate capacity to meet current demands, but will need to be expanded to meet future demand as the campus grows by expanding the Science Center heating plant and providing a new heating plant in the new Student Services Building to replace the plant in the Humanities Building and increase overall capacity. Further in the future, a new satellite heating plant will be required in the new Library Learning Commons building. The Campus heating mains will be extended to new building sites as those buildings are constructed. The natural gas system provided by Washington Gas is adequate to meet current demand, but a new gas service will be required to support new heating plants in the Student Services Building and Library Learning Commons in the future.

The existing chilled water and ice storage plant in the Humanities Building has adequate capacity for the current cooling demands when combined with the capacity of the cooling plant in the Science Center, but will need to be expanded to meet future demand. The Science Center chilled water system was connected to the Campus distribution loop during the Science East Building renovation. A new chilled water plant will be installed in the new Student Services Building to replace the aging chilled water plant in the Humanities Building and increase overall capacity. Further in the future, a new cooling plant will be required in the new Library Building to provide additional cooling as the campus grows. District cooling mains will be extended to new building sites as those buildings are constructed.

The most significant remaining mechanical issue is the age of many of the HVAC systems in existing buildings, many of which were constructed in the 1960's and 1970's and which are reaching their expected life and rely on older technology. Mechanical systems should be replaced with more efficient buildings as the buildings they serve are renovated as part of the Facilities Master Plan.

Future renovations should target LEED Gold Certification to achieve a high level of cost effective energy efficiency. Energy benchmarks should be established for each major building compared to equivalent, energy efficient buildings to document potential savings that could be achieved with systemic renovation of HVAC and electrical systems. The results of the benchmarking effort will assist allocation of capital resources to renovation of buildings with the greatest potential for energy savings.

## Electrical

The existing Pepco feeders have adequate capacity to accommodate planned campus expansion. The existing 13.2 KV overhead medium voltage lines will be extended to serve new pad mounted step down transformers for new buildings in the future.

## Civil

The majority of the proposed improvements will not impact major utilities. Depending on the actual field location, the 4" gas line located east of the Science Center may be impacted by construction of the combined Library/Resource Center and Garage South. In addition, the chilled and hot water supply/return lines in the vicinity of the Performing Arts Center will likely be impacted and require relocation. Careful coordination will be required during construction to minimize disruption to service during any relocation of utilities.

- 1. Campus Center** – The 32,400+/- SF footprint is proposed to largely, if not entirely, overlap the footprint of the existing Campus Center. For this reason there should be no major utility impacts or relocations required for this project.
- 2. South Garage** – The garage proposes a conceptual footprint of 54,000+/- SF and is also proposed to be directly adjacent to the (4) Library Learning Commons with a footprint of 29,300+/- SF. The construction of both of these projects is proposed within an existing parking lot but would likely require the relocation of both an 8" sanitary main and an 8" domestic water main.
- 3. Tech Training Center** – The proposed 84,000+/- SF footprint of this building would require the likely relocation of a 12" domestic water main. The footprint also appears to impact existing electric and communications lines in this area of the campus.
- 4. Media Arts Building** – The 12,000+/- SF footprint of this building is proposed to fall within the approximate footprint of the existing Counseling & Advising Building, which lends to minor, if any, utility impacts. Storm drain piping along the south edge of the building will likely need to be relocated but the site appears to be free of any other utility impacts.

**5. Humanities & Social Sciences** – This 34,000+/- SF footprint is proposed to replace the existing Technical Center at the northwest corner of the campus. Once again, falling in place of an existing building greatly diminishes the chances of impacting existing utilities, and at this point in the planning process this building appears to have no major utility concerns.

**6. Performing Arts Addition** – This 28,450+/- SF addition to the existing Performing Arts building could have several major utility impacts. Available survey information indicates a possible impact to and relocation of an existing 24” storm drain pipe located just east of the existing building, campus steam lines (4-pipe system) is also located in this area, though possibly far enough away from the existing building to avoid conflicts. On the north side, relocations of existing domestic water and sanitary lines will be necessary.

### 4.5.9 Information Technology Recommendations

The main point of presence (MPOP) for the campus is currently the Humanities Building. Each of the existing buildings is connected via a ductbank system back to Humanities, and is fed with optical fiber cabling. The addition of new buildings in the Masterplan will require extending the ductbank system from the nearest available telecommunications manhole to the new building location. Seven (7) new buildings are planned for the Rockville Campus, and will require sitework/infrastructure to be extended as follows:

TABLE 4.17 ROCKVILLE CAMPUS INFORMATION TECHNOLOGY DUCTBANK RECOMMENDATIONS

Bldg #	Name	Ductbank	Fed From
8	Humanities + Soc. Science	Four (4) 4" Conduits	Existing Humanities
2	Campus Center	Four (4) 4" Conduits	Existing Humanities
7	Media Arts Building	Three (3) 4" Conduits	Manhole at Theatre Arts Building
6	Tech Training Center	Five (5) 4" Conduits	GU Building
9	Performing Arts Addition	N/A	Fed from Existing PA
4	Library Learning Commons	Four (4) 4" Conduits	Manhold near Science Center
3	South Garage	N/A	Connected to Bldg 4

Source: Montgomery College Office of Institutional Research, 2015

The college is currently in the process of completing a New IT Masterplan, addressing major issues such as a transition to Cloud Based services in lieu of campus data centers. If and when this transition occurs, the existing data centers will be abandoned and repurposed. Typical building telecom rooms will need to be slightly larger than in the past. Connectivity requirements between buildings will remain unchanged.

### 4.5.10 Natural Systems and Sustainability Recommendations

#### Stormwater Management

The existing stormwater pond is adequate to serve the quality and quantity needs of the Campus for all projects proposed in the 2016 to 2026 period that are located within the pond’s drainage area. For projects outside of the pond’s drainage area, stormwater management requirements will need to be reviewed and coordinated with

the City of Rockville. The existing pond, however, does not meet the requirements for ESD (Environmental Site Design). To meet these requirements, each project moving forward should make a conscientious effort to maximize the use of green roofs while also striving to provide open spaces adjacent to any proposed buildings for small-scale stormwater practices such as a planter boxes for micro-bioretenion. A retrofit of existing parking lots to provide additional ESD SWM practices may become necessary as open space becomes more limited within the campus' center. It is recommended that the College work with the City of Rockville to develop and agree upon an overall plan for all future campus development as currently interpretation of codes and project requirements appear to vary.

All existing storm drain systems should be analyzed to determine if any of the storm drain systems will need to be upsized to accommodate drainage pattern modifications.

**Forestation Update**

Future development of the campus will require addressing forest conservation requirements of the City of Rockville. As future projects cause land disturbance totaling 50% of the acreage of the campus (approximately 43.29 acres), a forest conservation plan must be completed for the entirety of the 86.58 acre campus. Until that threshold is crossed, forest conservation requirements will be addressed by each individual project. A portion of this requirement has been addressed with previous development projects (Science Center, Tennis Courts/Parking Lot, Science West Building, and Parking Garage). Approximately 28,300 square feet of forest is protected by forest conservation easement below the stormwater management facility outfall on the western edge of the campus. Approximately 105,792.75 square feet of critical root zone credit and 8,400 square feet of landscape credit have been provided to date. Total forest conservation credit provided to date is approximately 142,492.75 square feet, or 3.27 acres. 218 replacement trees, for the development projects mentioned above, have been provided to date.

Additional critical root zone credit can be provided by the tree stands on the southeastern portion of the campus. The exact amount of available critical root zone credit in these areas is unknown at present, but could be quantified by a field survey of each stand. Critical root zone credit may also be taken for individual trees in the landscape.

In addition to forest conservation requirements, significant tree replacement requirements will need to be addressed for each individual project. The exact number of required replacement trees will be different for each project, however the replacement requirements are as follows (example calculations for the central portion of the campus are shown in parenthesis):

**TABLE 4.18 ROCKVILLE CAMPUS TREE REPLACEMENT REQUIREMENTS**

<b>Size of Significant Tree Removed</b>	<b>Minimum 2-1/2" Caliper Tree Replacement</b>
12-18" d.b.h.	1 tree (90 trees removed = 90 replacements req.) greater
than 18-24" d.b.h.	2 trees (50 trees removed = 100 replacements req)
greater than 24" d.b.h.	3 trees (10 trees removed = 30 replacements req.)
Replacement of a specimen or champion tree	6 trees

Source: City of Rockville

## Sustainability and Smart Growth

The Facilities Master Plan for the campus evokes Smart Growth philosophies of renovation of existing structures and when not possible, intensification of development on existing parcels. The campus remains compact and intensely developed, and walkability is emphasized in the design of all buildings.

In addition, all new structures will strive to meet the LEED silver rating for new construction and renovations. Strategies for increasing the sustainability of the new facilities include:

- Incorporating innovative waste water technologies;
- Reducing building water use through high-efficiency fixtures and collection / reuse of stormwater;
- Optimizing energy performance of buildings, through cost effective energy efficient measures including on-site renewable energy, high-efficiency lighting and HVAC systems;
- Connecting to existing high performance central plants for energy efficiency, demand management, and economies of scale;
- Incorporating sustainable construction waste management;
- Building with materials with recycled content, manufactured regionally, and/or manufactured using renewable resources;
- Maintaining healthy environments through increased ventilation, thermal comfort and clean air; and
- Providing interior spaces with daylight.

Site based strategies for increasing the sustainability of the new facilities include:

- Creating density of structures leaving land for open space;
- Including selection of appropriate native or adapted plant materials requiring minimal or no irrigation;
- Creating and maintaining habitats that promote biodiversity;
- Managing stormwater quality and quantity through green roof systems and rain gardens;
- Reducing the heat island effect by providing trees for shading paved surfaces and by using open grid or light-reflective material for hardscape;
- Creating cool roofs by using high-reflective roofing materials in conjunction with green roof systems; and,
- Limiting light pollution with dark sky fixtures.

While currently a majority of students arrive to the Campus by private automobile, the College is committed to continuing to encourage alternative modes of transportation to the Campus, coordinating with County bus services, providing transit facilities on Campus, and providing students with education and incentives to reduce automobile usage.





## 4.6 IMPLEMENTATION

### 4.6.1 Projected Costs

An estimate of project costs for the design, construction and furnishing of the various projects included in the 2013-2023 Facilities Master Plan is illustrated below.

TABLE 4.19 ROCKVILLE CAMPUS COST ESTIMATE

### 4.6.2 Project Sequencing

Project sequencing is identified in Figure 4.17 with building projects numbered according to their proposed sequence.

### 4.6.3 Land Use Plan 2023-33

This Facilities Master Plan also takes a look at a time beyond the planning year 2023 and proposes some strategies for managing growth in the future on this campus. See Figure 4.19 2023-2033 Land Use Plan. Five key strategies are proposed:

1. On the campus proper, continue to building larger, taller buildings at the perimeter of the core campus as proposed in this Facilities Master Plan for the 2023 period.
2. Increase the density of buildings at the south edge of campus by extending South Campus Drive to the Mannakee Building giving it a much stronger connection to the core campus. This extension provides the opportunity for new buildings to be built between the South Campus Instruction Building and the new Library Learning Commons, as well as along the South Campus Drive extension. An additional building site is proposed south of the Science Center, which would be ideally suited to strengthen the connection to the south. New buildings that extend the campus to the south at the entrances also act as gateways to the campus from Manakee.
3. Acquire the Carver Educational Services Center (CESC) property across Mannakee Street and expand the campus to the south. As part of this strategy, extend the pedestrian network and mall towards Mannakee.
4. Demolish outdated, small, low buildings in the core campus and build taller (three to four stories) buildings in their place. Take care not to dwarf open space.
5. Consider demolition of outdated buildings which received a high FCI rating as described in Table 4.2.1.

**FIGURE 4.19 2013-2023 AERIAL VIEW**





# 5

## WORKFORCE DEVELOPMENT & CONTINUING EDUCATION



## 5.1 CAMPUS BACKGROUND INFORMATION

### 5.1.1 Facilities Master Plan

This chapter focuses on the Workforce Development & Continuing Education (WD&CE) programs at each campus and at the two primary off-site locations in Gaithersburg and Wheaton. The over-arching goal of the Facilities Master Plan is to establish a framework for the development of capital projects and strategies to support the role, mission, and academic vision for WD&CE.

### 5.1.2 Institutional Characteristics

Workforce Development and Continuing Education (WD&CE) provides a unique instructional function on each of the three College's campuses, as well as separate sites at Westfield South in Wheaton and the Business Training Center in Gaithersburg. The WD&CE supports the College's mission of meeting multi-leveled educational, economic, and work force development needs by providing non-credit instruction, workforce training, and contract training. To support this effort, the Facilities Master Plan focuses on:

- Providing sufficient and adequate space at each location—classrooms, labs, offices, study, and support facilities—based on existing and projected needs;
- Consolidating and coordinating the WD&CE efforts on the Germantown, Rockville, and Takoma Park/Silver Spring campuses so that students, visitors, and the College community benefit from a consistent, responsive and high-quality experience at each location: and
- Presenting students the needed range of opportunities to study and learn collaboratively in supportive environments with the special assistance of faculty, counselors, and staff.

### 5.1.3 Academic Programs

The WD&CE programs at the College provide a wide range of non-credit and credit educational offerings and services designed to meet the needs of County residents and businesses. Individuals in career transitions, those reentering the workforce, and those maintaining current technical skills, as well as those seeking lifelong educational enrichment experiences, are among the more than 25,000 enrollees of WD&CE programs each year.

The educational offerings of WD&CE to residents, employees, and employers are organized into six program areas:

- Community Education and Extended Learning Services;
- Business, Information Technology and Safety;
- Gudelsky Institute for Technical Education;
- Health Sciences Institute;
- School of Art and Design (non-credit); and
- Adult ESOL and Literacy-GED programs.

Courses in these program areas are offered at each of the three campuses and at other community sites, including the Westfield South Center in Wheaton and the Business Training Center in Gaithersburg. In addition,

programs are offered at numerous schools, churches, community facilities, and places of business throughout Montgomery County.

Many WD&CE courses are delivered in response to the customized training program needs of business and community organizations. Contract training partnerships align College education and training resources with the demands of the workplace and are tailored to each business partner's requirements. Employer-sponsored training programs have grown significantly in recent years and are frequently delivered on-site at the business location.

More than 1,700 courses are offered each year through the six organizational units of WD&CE and reflect more than 25 program areas, including information technology, small business and management, technical training, certification and licensure preparation, financial planning, real estate, child care, health sciences, personal development, career development, writing, American English, cultural diversity, customer service, quality management, and leadership development. They are offered during the day, in the evening, and on weekends to meet the needs of the students being served. Following are descriptions of these six program areas that are encompassed within WD&CE at Montgomery College.

### **Community Education and Extended Learning Services**

Community Education and Extended Learning Services (CEELS) offers programs in six areas. Academic Pre-Credit Programs focus on assisting individuals to get ready for college and careers. The Pathways to Success program gives students who score below 52 on the College's entrance exam an opportunity to begin their education at Montgomery College by providing a fifteen week session in reading, writing, and life skills and career planning, including meeting with a Job Specialist to explore realistic career paths. Also offered is Fast Track Math, a two-week intensive review of pre-algebra and elementary algebra. The Foundation Skills programs connect reading and writing and enhance preparation of students for college-level placement. Extended Learning Services options include off-campus courses and Assessment of Prior Learning, whereby students may be able to obtain college credit for prior learning experiences. Foreign Language Programs offer non-credit language training and education to residents, employees, and employers, including a full range of English as a Second Language, conversational Spanish, and TOFEL preparation, as well as instruction of American Sign Language.

The Lifelong Learning Institute offers many courses for County residents 50 years and older at campus and community locations and sponsors several Elder Hostels each year with people from all over the United States. Personal Finance and Investing offers courses related to the management of personal finances and investment options. Through programs in Professional Certifications and Training adults are helped to get a job, keep a job, or be promoted. The Alternative Certification for Effective Teachers program prepares accomplished, talented individuals for teaching positions within the Montgomery County Public Schools. The Early Childhood Education programs offer classes designed for teachers, child care providers, and parents and award Continuing Education Units satisfying the State of Maryland annual staff training requirements. Developmental Disabilities Administration Training, which satisfies the State of Maryland Developmental Disabilities Administration, provides up-to-date human services training through recertification training courses for employees who currently work with individuals with disabilities.

Additional programs are offered in Food Safety and Hospitality and Real Estate/Mortgage Loan and Insurance Training. Professional Development courses focus on skills important for career advancement, especially communication skills. Programs for Adults with Developmental Disabilities include the Graduate Transition Program, the Challenge Program, and the Transitions Training for Independence. The Graduate Transition Program, resulting from a partnership with Target Community and Educational Services and Potomac Community Resources, assists students with special needs who are exiting from high school to make the transition to greater independent living through functional education, residential, vocational, and life skills services. Similarly the Challenge Program provides unique courses for adults with developmental disabilities function more independently in their homes, at work, and in

the community. The Transitions Training for Independence class is designed to allow students of ages 19 and 20 enrolled in Montgomery County Public Schools to complete their public education on a college campus. Test Preparation programs assist individuals in preparing for such standardized test as the SATs, while Writing programs involve courses for writing for business, writing for pleasure, and on appreciating literature, film and music. The College, through its Youth Programs and in cooperation with Montgomery County Public Schools, many private schools, and community organizations, offers a large summer program, school-year enrichment programs, and after-school and weekend programs for students in grades 3-12.

### **Business, Information and Safety**

Business, Information and Safety (BITS) offers courses and programs in Management Development, including project management, supervision, and team building, as well as courses leading to the AMA Certificate in Management; Sales and Marketing and Small Business, including customer service, sales success, marketing for managers, and selling and promoting products; and Biotechnology, assisting businesses in this expanding industry in Montgomery County with such courses as Cell Culture Basics, Essential DNA and RNA Technology, Good Laboratory Practice, and Teams and Team Building. The Instituto Hispano de Negocios (Hispanic Business Institute) offers bilingual training and education for this business sector in such areas as small business development, food safety certification, OSHA safety, QuickBooks, and legal office assistant. The Information Technology Institute specializes in information technology and responds to the rapidly expanding need for skilled workers in high technology companies. It offers cutting edge high technology courses at all three campuses, as well as at strategic off-campus sites, and provides customized training at business and government sites throughout the region. In addition to credit and non-credit courses, special programs include: Tech LEAP/Web LEAP, which is intended to retrain individuals for new careers in the information technology field, summer programs for high school students, and a program developed in partnership with Montgomery County Public Schools to train information technology teachers. The Hospitality and Food Safety programs provide training and certification in the fields of restaurant, hotel, event management, and customer service industries. Real Estate Professional Licensure and Certification Program offers approved licensure and certification courses for insurance and real estate and training as a mortgage loan officer. Transportation Safety Institute offers approved courses related to boating safety, driver education, motorcycle safety, truck driver (CDL), and sport pilot. Finally the Advanced Placement Institute is an intensive four-day professional development opportunity designed to provide AP teachers with the strategies and tools to engage students in active, high-level learning which results in academic success.

### **Homer S. Gudelsky Institute for Technical Education**

The Homer S. Gudelsky Institute for Technical Education (GITE) is a public-private joint venture providing state-of-the-art technical education and training opportunities in automotive education, building and construction technology, computer publishing and printing technologies, and fabrication and manufacturing technology. Eight different instructional delivery options are available—customized contract training, distance education, apprenticeship-related instruction, on-site training, long- or short-term training, certificate programs, Associate of Applied Science degree programs, and credit and continuing education courses.

### **Health Sciences Institute**

The Health Sciences Institute (HSI) WD&CE, provides non-credit programs for adult education and workforce development in health related fields, including entry level and advancement health career training, CPR and first aid, health information, nursing, and wellness. Located in the Health Sciences Center at the Takoma Park/Silver Spring Campus, programs and courses are offered in a variety of health careers and human service related fields that can increase the expertise of trained healthcare professionals and lead to entry-level positions for those new to the industry. Specially designed curricula offer practical, real world training to build professional skills in a variety of healthcare and human service fields.

**School of Art and Design**

WD&CE offers student-focused non-credit art and design (NC A & D) classes for ages 6 and older in an art college setting that provides a supportive community for artists at all levels. Classes for age 6 to 15 are offered by age groups and type of art to be explored, and a pre-college program for high school students and adults is available for those who wish to develop a portfolio for college admissions or for professional growth. Adult classes in fine arts range from very beginning levels to drawing and painting classes at the advanced levels. Digital design and multi-media classes for adults are for artists and photographers to expand their artistic skills while other adults are enhancing their digital design skills for job change or promotion.

**Adult ESOL and Literacy-GED**

The Adult ESOL and Literacy-GED Programs (AELG) are grant-funded programs offering a variety of classes for newcomers, refugees, those who wish to become U.S. citizens, and those who wish to take the General Educational Development (GED) examination. The Adult English for Speakers of Other Languages (ESOL) has six levels and provides basic English language and life skills instruction to county residents. Classes are also available in English in civic participation and U.S. citizenship preparation. The Refugee Training Program is a grant-funded program that offers classes in English for documented refugees and political asylees in the American workplace, basic life skills, computer literacy, and pre-vocational training in health care and other fields. The Literacy-GED Program serves those who have not obtained a high school diploma and need to improve their literacy, writing, numeracy, and other content area skills, to earn a GED. It also offers a GED Practice Test and community orientations on the GED test and program.

**5.1.4 Enrollment**

Growth has occurred in both WD&CE program offerings since 2008 with total student enrollment declining slightly during that same period. WD&CE enrolled more than 46,000 students in 2013, a 2% decrease over its 2008 enrollments, and it offered 4,573 sections of courses, an 8% increase over the number of sections offered in FY 2008. Annual FTE enrollments grew by 8% since 2008 and State funded FTE grew by 20% during the same period.

TABLE 5.1.1 WD&CE ANNUAL ENROLLMENT, 2008 AND 2013

	2008	2013	% CHANGE
Annual Total Students	46,807	46,077	-2%
Annual No. of Sections	4,248	4,573	8%
Annual Total FTE	3,955	4,286	8%
Annual State FTE	2,675	3,219	20%
% Annual State FTE	68%	75%	7%

WD&CE is also projecting growth in its programs, although much less than in its recent past. Annual funded course FTE enrollments are expected to increase 41% to 4,505 FTE in fall 2023. Not all of these enrollments will be delivered on-campus or at off-campus locations in leased facilities. Those courses offered off-campus or on-line are expected to increase by 42% while on-campus enrollments or those at the College's leased sites are expected to increase at 42%. These enrollments translate into a projected fall term, on-campus/leased location enrollment of 1,647 FTE, an increase of 42% through 2023.

TABLE 5.1.2 WD&amp;CE ANNUAL AND FALL TERM FTE ENROLLMENT, 2013 AND 2023

	2008	2013	% CHANGE
Annual State FTE	3,210	4,550	41%
Annual Off-campus/On-line FTE	1,575	2,230	42%
Annual On-campus/site FTE	1,635	2,320	42%
Fall On-campus/site FTE	1,157	1,647	42%
% Annual State FTE	68%	75%	7%

Focusing on WD&CE's fall term enrollment, Community Education and Extended Learning (CEEL) and the AELG Programs represent more than 60% of WD&CE FTE enrollment, and this is expected to continue over the planning period. All of the WD&CE programs are projected to experience growth through 2023 with CEEL, AELG, Business, IT & Safety (BITS) and the Gudelsky Institute for Technical Education (GITE) experiencing the greatest increase in total students. Offerings by the School of Art and Design (non-credit) are expected to grow the most—182%, but enrollments will only represent 6% of the total FTE enrollments.

TABLE 5.1.3 WD&amp;CE FALL TERM ON-CAMPUS/SITE FTE BY PROGRAM AREA, 2013 AND 2023

	2013	% TOTAL	2013	% TOTAL	10 YR. % CHANGE
Community Ed & Ext Learning	462	40%	627	38%	36%
Business, IT, & Safety	150	13%	214	13%	43%
Gudelsky Institute Technical Ed	197	17%	263	16%	33%
Health Sciences Institute	58	5%	66	4%	14%
Non-credit Art + Design	35	3%	99	6%	182%
AELG Programs	255	22%	3787	23%	48%
Fall On-campus/site FTE	1,157	100%	1,647	100%	29%

Where the growth in WD&CE enrollments will occur is also of importance to the College's planning, especially for facilities. Rockville will continue to serve the greatest numbers of FTE WD&CE students, with 675 FTE WD&CE enrollment projected in the fall of 2023, which represents a 27% growth over fall 2013 levels. The largest growth in enrollment is expected at the Germantown campus (287%) with the planned emphasis on biotechnology, and on the Takoma Park/Silver Spring Campus (71%) with highest growth occurring in the arts programs. The Gaithersburg Business Training Center is also expected to grow modestly by 3%, and the Westfield South Center at 29%. The Takoma Park/Silver Spring Campus' FTE enrollments will continue to represent the second largest share of enrollments with 24% of the WD&CE FTE enrollments. Finally, WD&CE continues to study opportunities for and the feasibility of establishing a presence in an area of the East County.

TABLE 5.1.4 WD&CE FALL TERM ON-CAMPUS/SITE FTE ENROLLMENT BY LOCATION, 2013 AND 2023

	2013	% TOTAL	2013	% TOTAL	10 YR. % CHANGE
Germantown	46	4%	132	8%	287%
Rockville	532	46%	675	41%	27%
Takoma Park / Silver Spring	231	20%	395	24%	71%
Gaithersburg Business Training Ctr	208	18%	215	13%	3%
Westfield South Center	139	12%	180	11%	29%
East County	-	-	48	3%	n/a
Fall On-campus/site FTE	1,157	100%	1,647	100%	

### 5.1.5 Faculty and Staff

While the College projects that its overall number of FTE faculty will increase at 12%, faculty supporting WD&CE will remain at approximately 33.5 FTE faculty through 2023. This no growth projection in WD&CE faculty illustrates that most of the growth in WD&CE programs over the planning period will not require support from traditional faculty sources, but rather will rely on professionals from the respective fields.

In terms of staff, the College expects its overall numbers of full-time, part-time, and FTE staff to increase 6% from fall 2013 to fall 2023. In contrast WD&CE is anticipating a 13% increase in staff to support projected enrollment growth and expanded outreach, particularly in the health sciences and art at the Takoma Park/Silver Spring Campus and biotechnology at the Germantown Campus.

TABLE 5.1.5 WD&CESTAFF POSITIONS BY AREA, 2013 AND 2023

	2013 FT	2013 PT	2013 FTE	2013 FT	10 YR. % CHANGE	2023 PT	10 YR. % CHANGE	2023 FTE	10 YR. % CHANGE
<b>Vice President</b>	51	40	61.00	39	-12	30	-10	-10	-15
					(-8%)		(-25%)	(-25%)	(-24%)
<b>CEELS</b>	13	5	14.25	39	+26	16	+11	+11	+29
					(200%)		(220%)	(220%)	(202%)
<b>BITS</b>	8	3	8.75	18	+10	4	+1	+1	+10
					(138%)		(33%)	(33%)	(117%)
<b>GITE</b>	3	1	3.25	5	+2	4	+3	+3	+3
					(67%)		(300%)	(300%)	(85%)
<b>HSI</b>	3	1	3.25	5	+2	0	-1	-1	+20
					(67%)		(-100%)	(-100%)	(54%)
<b>NC A+D</b>	1	0	1	2	+1		0	0	1a
						0	(0%)	(0%)	100%
<b>AELG</b>	22	0	22.00	23	+1	(100%)	8	8	3.00
					(5%)	8			(14%)
<b>TOTAL WD&amp;CE</b>	100	50	113.50	131	30		12	12	33
					(32%)	62	(24%)	(24%)	(30%)

TABLE 5.1.6 WD&CE STAFF POSITIONS BY LOCATION, 2013 AND 2023

	2013 FT	2013 PT	2013 FTE	2013 FT	10 YR. % CHANGE	2023 PT	10 YR. % CHANGE	2023 FTE	10 YR. % CHANGE
<b>Germantown</b>	3	2	3.50	13	10	4	+2	14.00	+10.50
					(233%)		(100%)		(300%)
<b>Rockville</b>	22	3	30.50	24	2	32	-2	32.00	+1.50
					(9%)		(-6%)		(5%)
<b>Takoma Park/ Silver Spring</b>	10	2	10.50	27	17	6	4	28.50	+1.50
					(70%)		(200%)		(171%)
<b>Gaithersburg</b>	43	10	45.50	40	-3	10	0	42.50	-3.00
					(-7%)		(0%)		(-7%)
<b>Westfield</b>	22	3	22.75	21	-1	6	3	22.50	-0.25
					(-5%)		(100%)		(-1%)
<b>East County</b>	--	--	--	8	n/a	4	n/a	9.00	n/a
<b>Total WD&amp;CE</b>	100	51	112.75	133	33	62	11	148.50	35.75
					(33%)		(22%)		(32%)

## 5.2 EXISTING CONDITIONS

### 5.2.1 Location

Work Force Development & Continuing Education is spread among the three College campuses and is also located in leased space in Wheaton at the Westfield South Center, and in Gaithersburg at the Gaithersburg Business Training Center. In addition, WD&CE offerings are distributed throughout the County at many business and municipal locations.

Table 5.2.1 illustrates the distribution and location of course offerings.

TABLE 1.3 - MONTGOMERY COLLEGE NASF SPACE NEEDS

	2013 % OF TOTAL
Takoma Park / Silver Spring	11%
Germantown	2%
Rockville	29%
Westfield South Center	9%
Gaithersburg Business Training Center	7%
Other (community)	35%
On-Line Courses	6%
Total	100%

### 5.2.2 Program Identity and Image

In general, WD&CE lacks an identity of its own within Montgomery College. Currently the space utilized at each of the campuses is dispersed which does not allow students, visitors, and the College community to benefit from the ease, energy, and excitement generated by the synergy of proximity and consolidation of like functions.

### 5.2.3 Building Usage / Functional Adequacy of Facilities

Workforce Development & Continuing Education (WD&CE) occupies space at each of the campuses, and also manages two off-campus leased locations, Gaithersburg Business Training Center in Gaithersburg and Westfield South Center in Wheaton.

Currently WD&CE occupies 14,554 NASF on the Takoma Park/Silver Spring Campus, 1,062 NASF on the Germantown Campus and 11,436 NASF on the Rockville Campus for a total of 27,052 NASF on the three campuses.

Descriptions of the programs and functions at the Westfield and Gaithersburg Business Training Centers are included below. The general adequacy of each building to support these programs and functions is also presented.

At the Takoma Park/Silver Spring Campus, WD&CE's Customer Services and other programs are located in the Cafritz Foundation Arts Center.

At the Germantown Campus, the WD&CE program is currently distributed throughout the Campus. The recently acquired Paul Peck Academic and Innovation Building serves as the consolidated location for the Germantown

WD&CE programs, housing offices and classrooms.

The Rockville Campus houses the largest concentration of WD&CE administrative staff. These spaces are located primarily on the upper floor of Campus Center, along with a few dedicated offices in the Gudelsky Institute for Technical Education.

The Westfield Shopping Town in Wheaton (9,749 NASF) was originally occupied in 1999 and expanded in 2000 and 2010. The College occupies a portion of the second and third floors of the building. The space includes ten classrooms ranging in capacity from 20 to 40, one computer lab, reception areas, private offices for administrative staff and associated workspace, a small lounge, coat storage, and IT support space serving primarily the AELP and ESL programs. WD&CE programs are split between two floors which create redundancies in student services and reception, and conflicts between the college and other tenants leasing the remaining space on floors two and three. There is insufficient classroom space, study space and meeting space for informal gathering. The classrooms are renovated office space; rooms are oddly proportioned and not conducive to instruction. There are no offices for faculty, or spaces for faculty to meet students for counselling and advisement. The lease arrangement leaves the college with little control over security and maintenance of the facility. The building is accessible. ADA Access to the building is adjacent to the dumpster bay/loading dock, and there is only one ADA restroom on the fourth floor of the building. There is no room in the building to lease additional space.

The Gaithersburg Business Training Center at 12 S. Summit Avenue, Gaithersburg (14,347) was leased in 2013 for a period of 10 years. Occupying all of the fourth and half of the third floors of the building, the renovated space provides WD&CE with five computer classrooms, three general purpose classrooms, the WD&CE administrative suite, and staff offices that include space for the Information Technology Institute, a reception/registration area, testing area, and lounge. Programs vary; Cyber Security and Life Learning have the largest enrollment. Courses range from full semester to contract courses that may last a week to several weeks. Contract classes often take place off site at the businesses of institutes where the instruction is needed.

The instructional space needs are inadequate to meet the current programmatic requirements; classrooms and computer labs are at capacity in the morning and near capacity in the evening. Administrative offices are undersized; there is insufficient space for staging and work areas. There are no offices for faculty, or spaces for faculty to meet students for counselling and advisement. There is no room to accommodate growth without leasing additional space. There is also insufficient space for study and for informal meeting and relaxing.

#### 5.2.4 Building Conditions

In 2015, the College updated the facilities condition assessment for each of its three campuses, including buildings and site infrastructure components. The primary focus of this effort was to:

- Provide a baseline condition assessment of the College's facilities to include infrastructure components and building systems.
- Provide the College with budget estimates for funding required safety improvements and reducing the deterioration of campus buildings and infrastructure components.
- Assist the College with building code and accessibility compliance and to ensure that the facilities are operated as required.
- Utilize the assessment in the implementation of an ongoing process of the identification and prioritization of maintenance and capital repair projects.
- Provide decision support capabilities with VFA's facility management software solutions.

A facilities condition assessment was not performed for the leased space at the Westfield and Gaithersburg Business Training Centers. The facilities conditions assessments summaries for the Takoma Park/Silver Spring, Germantown and Rockville Campuses, sections 2.2.6, 3.2.6 and 4.2.6, respectively.

### **5.2.5 Parking and Vehicular Circulation**

This section presents the parking, access and pedestrian issues dealing specifically with WD&CE uses at each of the campuses, including Wheaton and Gaithersburg.

#### **Takoma Park/Silver Spring Campus**

Students and faculty that are part of the WD&CE program on this campus can use both the East and West Parking Garage facilities. Parking is generally adequate to serve the courses offered by the Health Sciences Institute and other WD&CE programs on the Takoma Park/Silver Spring Campus. Campus-wide issues of access and circulation are addressed in Section 2.2.9 Parking and Circulation.

#### **Germantown Campus**

The Paul Peck Academic and Innovation Building is served by an adjacent parking lot. Campus-wide issues of access and circulation are addressed in Section 3.2.9 Parking and Circulation.

#### **Rockville Campus**

Currently faculty, staff and students in the WD&CE programs park throughout the available Campus parking. Because classes are spread throughout the campus, it is assumed that the response to parking is also spread evenly throughout the perimeter parking lots.

#### **Westfield South Center**

The Westfield facility is located in the Westfield shopping mall, with ample parking adjacent to the WD&CE offices and program spaces. The shopping mall is also well served by mass transit. The Wheaton Metro (WMATA) Station is a short distance away on Viers Mill Road. It is a transfer point between Metro, Metrobus and Ride On. Despite the short distance, there is no direct pedestrian access between the station and Center. Pedestrians must share the loop road surrounding the mall with vehicles.

#### **Gaithersburg Business Training Center**

The Gaithersburg facility is served by an adjacent parking structure which offers ample parking for faculty and staff. It is also located in historic downtown Gaithersburg, which is served by the MARC trains; the Gaithersburg station is across the street from the GBTC. Ride On serves the train station.



## 5.3 FACILITIES PROGRAM

### 5.3.1 Space Needs

Assessments of the current and projected facilities needs for Workforce Development & Continuing Education are generated by applying current and projected planning data related to enrollment, instructional delivery, library collections, faculty, and staff to the State of Maryland Guidelines for facilities at community colleges, as well as guidelines developed by the College specifically for Workforce Development & Continuing Education. Separate planning data and needs assessments are done for non-credit programs offered on-campus, whether at the Germantown, Rockville, and Takoma Park/Silver Spring Campuses, and for those offered off-campus, at either the Gaithersburg or Westfield South Centers. Refer to Table 5.3.1 for the planning data for on-campus WD&CE functions, and Table 5.3.2 for the planning data for the off-campus WD&CE functions.

TABLE 5.3.1 WD&CE NEEDS ASSESSMENT PLANNING DATA, 2013 AND 2023

	Actual 2013 Fall	Projected Fall 2023	% Change
<b>FTDE-Noncredit</b>	452	717	59%
<b>WSCH-Lecture-Noncredit</b>	5,288	8,392	59%
<b>WSCH-Lab-Noncredit</b>	1,482	2,351	59%
<b>FTE Students</b>	733	1,162	59%
<b>FTE Faculty</b>	4.50	4.50	0%
<b>FT-Faculty</b>	4	4	0%
<b>PT-Faculty</b>	2	2	0%
<b>FT-Staff</b>	36	64	78%
<b>Planning Head Count</b>	184	299	60%

Source: Montgomery College

TABLE 5.3.2 WD&CE NEEDS ASSESSMENT PLANNING DATA, 2013 AND 2023

	Actual 2013 Fall	Projected Fall 2023	% Change
<b>FTDE-Noncredit</b>	176	280	59%
<b>WSCH-Lecture-Noncredit</b>	2,061	3,276	59%
<b>WSCH-Lab-Noncredit</b>	577	918	59%
<b>FTE Students</b>	285	453	59%
<b>FTE Faculty</b>	2.00	2.00	0%
<b>FT-Faculty</b>	2	2	0%
<b>PT-Faculty</b>	0	0	0%
<b>FT-Staff</b>	65	69	6%
<b>Planning Head Count</b>	122	176	27%

Source: Montgomery College

Current and projected space needs for each type of space in the respective on-campus or off-campus inventories for which a guideline is available were then computed. Comparisons with the respective current inventories and the ones planned for 10 years later, given approved capital projects, were made, and surpluses or deficiencies relative to the respective space categories were identified. Table 5.3.3 presents the computation of space needs for the Germantown, Rockville, and Takoma Park/Silver Spring on-campus delivery of WD&CE programs, while Table 5.3.4 shows similar computation for the off-campus centers, including the Gaithersburg Business Training Center, and Westfield South.

Currently WD&CE's on-campus delivery of programs at the College's Germantown, Rockville, and Takoma Park/Silver Spring Campuses shows an overall deficiency of 35,130 NASF, a significant amount of space.

Currently WD&CE's off-campus delivery of programs shows a deficiency of 11,843 NASF. WD&CE has no approved facility projects for its off-campus centers over the planning period; the key decision will be whether to lease, construct or purchase space at a location in East County to expand to address unmet demand.

One of the priorities for WD&CE is to ensure that sufficient and adequate space is available among its various locations and buildings, including dedicated space. As WD&CE seeks to support the College's mission with non-credit and workforce development training, there is a need to closely monitor enrollment and program changes to determine WD&CE's evolving facility needs.

In addition to the proposed projects to allocate dedicated space to WD&CE programs noted below, it is critical that the WD&CE programs be given fair consideration along with for-credit courses, when scheduling use of on-campus space. An important component of the WD&CE programs is their integration with and use of the various, often specialized facilities currently existing on each campus.

A description of the programs located within proposed building projects for dedicated WD&CE space follows. The physical aspects of these projects will be discussed in section 5.4, Facilities Master Plan.

#### **Renovation of the Paul Peck Academic and Innovation Building for WD&CE at Germantown Campus**

Currently WD&CE staff are housed in available offices in the Humanities and Social Sciences Building but without a specific location to provide a point of presence. Ultimately, the location in the Humanities and Social Sciences Building is required to support the Germantown Campus's credit programs. It is anticipated that at some point in time the WD&CE presence should be completely relocated to the Paul Peck Academic and Innovation Building where the program can be consolidated and provided with dedicated space and an identifiable presence.

#### **Reallocation of South Campus Instructional and Mannakee Buildings to WD&CE at Rockville Campus**

A portion of the South Campus Instruction Building and the Mannakee Building should be reallocated for use by WD&CE activities at the Rockville Campus. WD&CE programs are currently housed at the Campus Center and elsewhere. The relocation of WD&CE into these buildings will make possible the consolidation of Rockville Campus in-take functions and student support spaces in the Student Services Center.

#### **Alteration of Gudelsky Institute for Technical Education and Replacement of the Interim Technical Training Center at Rockville Campus**

There is an on-going need to reconfirm WD&CE's program needs within the Homer S. Gudelsky Institute for Technical Education (GU) and reallocate space for new program initiatives and growth of existing activities. The Interim Technical Training Center (TT) should be replaced with a facility that is better integrated with the needs and functions of the Institute, including supplies storage for GU. This project is accounted for in the Rockville Campus Facilities Master Plan.

#### **Continued Leasing of Westfield South Center**

The College is in the second year of a ten year lease of this facility and should continue to honor that

TABLE 5.3.3 WD&CE COMPUTATION OF SPACE NEEDS, 2023

HEGIS CODE	ROOM USE CATEGORY	NEED 2023	PROJECTED INVENTORY*	SURPLUS (DEFICIT)
<b>100</b>	<b>CLASSROOM</b>	<b>12,587</b>	<b>16,393</b>	<b>3,806</b>
<b>200</b>	<b>LABORATORY</b>	28,563	5,545	(23,018)
210	Class Laboratory	25,552	5,545	(20,007)
220	Open Laboratory	3,011	0	(3,011)
<b>300</b>	<b>OFFICE</b>	<b>12,911</b>	<b>4,672</b>	<b>(8,239)</b>
310-350	Office/ Conf. Room	11,371	4,672	(6,699)
320	Testing/Tutoring	1,540	0	(1,540)
<b>400</b>	<b>STUDY</b>	<b>1,200</b>	<b>240</b>	<b>(960)</b>
410	Study	1,050	240	(810)
420-30	Stack/Study	0	0	0
440-55	Processing/Service	150	0	(150)
<b>500</b>	<b>SPECIAL USE</b>	<b>0</b>	<b>0</b>	<b>0</b>
520-23	Athletic	0	0	0
530	Media Production	0	0	0
580	Greenhouse	0	0	0
<b>600</b>	<b>GENERAL USE</b>	<b>4,458</b>	<b>738</b>	<b>(3,720)</b>
610	Assembly	0	0	0
620	Exhibition	600	0	(600)
630	Food Facility	2,128	0	(2,128)
640	Childcare (N/A)			
650	Lounge	1,130	738	(392)
660	Merchandising	600	0	(600)
670	Recreation Space (N/A)			
680	Meeting Room	8,000	5,180	(2,820)
<b>700</b>	<b>SUPPORT</b>	<b>3,481</b>	<b>482</b>	<b>(2,999)</b>
710	Data Processing	600	482	(118)
720-740	Shop/ Storage	2,431	0	(2,431)
750	Central Service	450	0	(450)
760	Hazmat Storage	0	0	0
<b>800</b>	<b>HEALTH CARE</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>900</b>	<b>RESIDENTIAL (N/A)</b>			
<b>050-090</b>	<b>ALTERATIONS/ IND USE (N/A)</b>			
	<b>Total NASF:</b>	<b>504,663</b>	<b>277,273</b>	<b>(227,390)</b>

\* Projected Inventory includes existing space in 2013 plus approved development projects including those in design or construction. Source: Montgomery College

TABLE 5.3.4 WD&amp;CE COMPUTATION OF SPACE NEEDS FOR OFF-CAMPUS, 2023

HEGIS CODE	ROOM USE CATEGORY	NEED 2023	PROJECTED INVENTORY*	SURPLUS (DEFICIT)
<b>100</b>	<b>CLASSROOM</b>	<b>4,910</b>	<b>5,680</b>	<b>770</b>
<b>200</b>	<b>LABORATORY</b>	<b>7,602</b>	<b>3,193</b>	<b>(4,409)</b>
210	Class Laboratory	6,426	3,052	(3,374)
220	Open Laboratory	1,176	141	(1,035)
<b>300</b>	<b>OFFICE</b>	<b>12,836</b>	<b>9,132</b>	<b>(3,704)</b>
310-350	Office/ Conf. Room	11,786	9,132	(2,654)
320	Testing/Tutoring	1,050	0	(1,050)
<b>400</b>	<b>STUDY</b>	<b>1,200</b>	<b>365</b>	<b>(835)</b>
410	Study	1,050	365	(685)
420-30	Stack/Study	0	0	0
440-55	Processing/Service	150	0	(150)
<b>500</b>	<b>SPECIAL USE</b>	<b>0</b>	<b>0</b>	<b>0</b>
520-23	Athletic	0	0	0
530	Media Production	0	0	0
580	Greenhouse	0	0	0
<b>600</b>	<b>GENERAL USE</b>	<b>2,000</b>	<b>188</b>	<b>(1,812)</b>
610	Assembly	0	0	0
620	Exhibition	400	0	(400)
630	Food Facility	400	0	(400)
640	Childcare (N/A)			
650	Lounge	600	188	(412)
660	Merchandising	600	0	(600)
670	Recreation Space (N/A)			
680	Meeting Room	0	0	0
<b>700</b>	<b>SUPPORT</b>	<b>2,250</b>	<b>397</b>	<b>(1,853)</b>
710	Data Processing	600	397	(203)
720-740	Shop/ Storage	1,200	0	(1,200)
750	Central Service	450	0	(450)
760	Hazmat Storage	0	0	0
<b>800</b>	<b>HEALTH CARE</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>900</b>	<b>RESIDENTIAL (N/A)</b>			
<b>050-090</b>	<b>ALTERATIONS/ IND USE (N/A)</b>			
	<b>Total NASF:</b>	<b>504,663</b>	<b>277,273</b>	<b>(227,390)</b>

\* Projected Inventory includes existing space in 2013 plus approved development projects including those in design or construction. Source: Montgomery College

lease for the duration of its term through 2023.

**Continued Leasing of Gaithersburg Business Training Center**

The College is in the second year of a ten year lease of this facility and should continue to honor that lease for the duration of its term through 2023.

**Future East County Location**

Given the growth in program offerings in the east County area, the College should continue to monitor and study the feasibility of leasing or purchasing a facility to house WD&CE programs in this part of the County.

Table 5.3.5 lists the WD&CE projects included in this 10-Year Facilities Master Plan. Section 5.4.7 Projected Costs summarizes the cost estimates for completing this work.

TABLE 5.3.5 WD&amp;CE EXISTING AND PROPOSED DEDICATED SPACE, 2023

	Existing NASF 2013	Master Plan 2023	NASF Change
<b>ON-CAMPUS</b>			
<b>Takoma Park/Silver Spring Campus</b>			
Morris and Gwendolyn Cafritz Foundation Arts Center	11,709	11,709	0
Resource Center	54	0	(54)
Pavilion One	1,243	0	(1,243)
<b>Germantown Campus</b>			
Humanities and Social Sciences Building	3,327	3,327	0
Physical Education Building	90	0	(90)
Paul Peck Academic and Innovation Building	0	18,380	18,380
<b>Rockville Campus</b>			
Campus Center	10,787	0	(10,787)
Homer S. Gudelsky Institute for Technical Education	incl. in MCR	incl. in MCR	incl. in MCR
Humanities Building	2,181	2,181	(2,181)
Interim Technical Training Center	incl. in MCR	incl. in MCR	incl. in MCR
South Campus Instruction Building	10,887	17,160	6,273
Mannakee Building	0	27,366	27,366
<b>TOTAL ON-CAMPUS</b>	<b>40,278</b>	<b>80,123</b>	<b>39,845</b>
<b>OFF-CAMPUS</b>			
Westfield South Center	9,749	9,749	0
Gaithersburg Business Training Center	14,347	14,347	0
East County - TBD	0	0	0
<b>TOTAL OFF-CAMPUS</b>	<b>24,096</b>	<b>24,096</b>	<b>0</b>
<b>TOTAL WD&amp;CE</b>	<b>64,374</b>	<b>104,219</b>	<b>39,845</b>

\* Projected Inventory includes existing space in 2013 plus approved development projects including those in design or construction. Source: Montgomery College

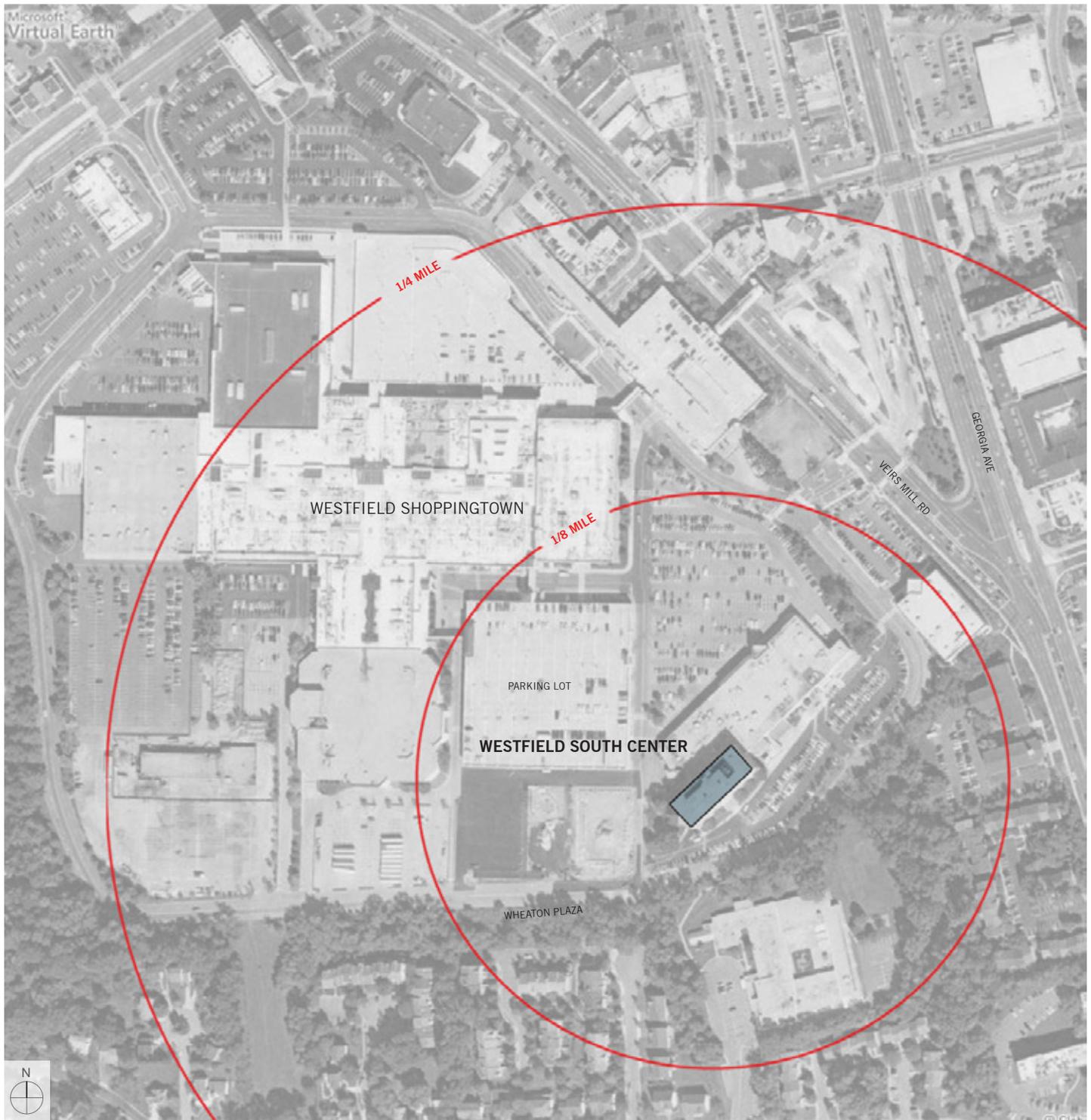
**Figure 5.01 GBTC LOCATION. WD&CE**



 BUILDING PARTIALLY OCCUPIED BY WDCE

 STUDENT WALKING RADIUS

**Figure 5.02 WESTFIELD SOUTH CENTER LOCATION. WD&CE**



 BUILDING PARTIALLY OCCUPIED BY WDCE

 STUDENT WALKING RADIUS

## 5.4 2013-2023 FACILITIES MASTER PLAN

### 5.4.1 Campus Facilities Master Plan Guiding Principles

As part of the planning process, a series of guiding principles were developed to assist in the evaluation of master plan alternatives. These guiding principles are presented below, and are reflected in the 2013-2013 Facilities Master Plan. This Master Plan for WD&CE focuses on:

- Consolidating Workforce Development & Continuing Education efforts on the Germantown, Rockville, and Takoma Park/Silver Spring Campuses so that students, visitors, and the College community benefit from the ease, energy, and excitement generated by the synergy of proximity (see Figures 5.4.1 through 5.4.3);
- Providing sufficient and adequate space at each location—classrooms, labs, offices, study, and support facilities—based on existing and projected needs;
- Presenting students the needed range of opportunities to study and learn collaboratively in supportive environments with the special assistance of faculty, counselors, and staff;
- Creating a stronger identity for the WD&CE program on each campus and at off-campus locations to enable a broader reach into the community and a clear, welcoming environment for visitors, and new and potential students.

### 5.4.2 Regional or Local Issues

The College is constantly reassessing the breadth of community outreach as embodied in the WD&CE program. They have identified a growing population in the east Montgomery County area which is currently underserved by the community college network.

### 5.4.3 Program Identity and Image

In order to strengthen the identity and image of the College's WD&CE programs, an approach similar to that of retail establishments is recommended. This approach will entail developing a standard welcoming configuration and design for public entry space of each WD&CE on-campus and off-campus location. The design would include standard materials for flooring, walls, ceiling and lighting, as well as furniture and signage. The graphics developed for signage should be coordinated with the printed material that WD&CE distributes. The College should expend some effort to develop a design concept that is consistent with the WD&CE mission and will serve the program for the next five to ten years.

### 5.4.4 Proposed Land and Building Use

Based on the College's anticipated enrollment growth over the 2013-2023 period, and supported by the instructional and other needs identified during the master planning process, the College has identified a number of capital projects for Workforce Development & Continuing Education (WD&CE). Implementation of these projects will allow the College to provide for the physical space needs of WD&CE over the ensuing 10-year period. Detailed facility programs will be prepared for each project as the College's capital funding requests are developed for submission to the State of Maryland and Montgomery County.

Below are listed the WD&CE projects included in this 10-Year Facilities Master Plan. Section 5.4.7 Projected Costs summarizes the cost estimates for completing this work.

**Reallocation of The Paul Peck Academic and Innovation Building on the Germantown Campus (18,380 NASF)**

The Paul Peck Academic and Innovation Building is a former office building on Goldenrod Lane that was purchased by the College in 2011 and renovated for academic space.

**Reallocation of South Campus Instruction Building to WD&CE at Rockville (17,160 NASF)**

This building will be reallocated to support WD&CE activities that are currently housed in the Campus Center. Renovations will be required.

**Alteration of the Homer S. Gudelsky Institute for Technical Education and Replacement of tThe Interim Technical Training Center at Rockville**

There is an on-going need to reconfirm WD&CE's program needs within the Gudelsky Institute for Technical Education (GU) and reallocate space for new program initiatives and growth of existing activities.

This project replaces and expands on the current Interim Technical Training Center, and also serves to consolidate the Technical Training programs and Applied Technology programs currently housed in Technical Center. The building is proposed as a low, 2-story mass housing the high bay automotive classrooms/labs, with a 6-story tower fronting toward North Campus Drive, and marking the north vehicular entry to campus. The 2-story building will be situated parallel to the track, and could possibly incorporate bleacher seating.

**Continued Leasing of Facilities at Westfield South Center (9,749 NASSF)**

To enlarge the WD&CE program in Wheaton, the College will lease or acquire if possible a new building within Westfield South Center to expand this campus. An alternative would be to acquire land and develop a new purpose-built facility of at least 22,500 GSF.

**Continued Leasing of Facilities at Gaithersburg Business Training Center (14,347 NASF)**

To enlarge the WD&CE program in Gaithersburg, the College will lease or acquire if possible a new building within Gaithersburg Business Training Center to expand this campus. An alternative would be to acquire land and develop a new purpose-built facility of at least 28,500 GSF.

## 5.4.5 Proposed Circulation and Parking

This section presents the parking, access and pedestrian issues dealing specifically with WD&CE uses at each of the campuses, including Wheaton, Gaithersburg and White Oak.

**Takoma Park / Silver Spring Campus**

With the completion of the West Garage, parking is generally adequate to serve the courses offered by the Health Sciences Institute and other WD&CE programs on campus. No new changes are proposed.

**Germantown Campus**

Since the Paul Peck Academic and Innovation Building is served by an adjacent parking lot, parking is considered to be generally adequate to serve the courses offered by the WD&CE programs on campus. No new changes are proposed.

**Rockville Campus**

With the relocation of the main WD&CE programs to the South Campus Instructional Building (SCIB) and Mannakee buildings, the parking situation will improve for a good portion of WD&CE program students, faculty and staff. The SCIB is served by an adjacent parking lot, and is also quite close to the leased lot across Mannakee Street. No new changes are proposed.

**Westfield South Center**

With ample parking in the adjacent parking garage also serving the WD&CE programs located here, no new changes to parking are proposed. The College will continue to encourage the use of mass transit to this location.

**Gaithersburg Business Training Center**

With parking for the shopping center also serving the WD&CE programs located here, no new changes are proposed. The College will continue to encourage the use of mass transit to this location.

**5.4.6 Implementation of the Facilities Master Plan**

With regard to implementing the proposed WD&CE projects, the College prioritized the sequence based on current plans. Changes in program priorities may lead to changes in the implementation plan.

PHASE 1 - project whose need is immediate and will be developed for approval in the near term

- Reallocation of South Campus Instruction Building to WD&CE at Rockville. This project depends on existing functions there being relocated.

PHASE 2 - project whose needs have been identified but will be developed for approval in the long-term

- Reallocation of the Paul Peck Academic and Innovation Building on the Germantown Campus;
- Alteration of the Homer S. Gudelsky Institute for Technical Education and Replacement of the Interim Technical Training Center at Rockville. This project depends on existing functions there being relocated;
- Acquisition and Renovation of buildings at Westfield South Center;
- Acquisition and Renovation of buildings at Gaithersburg Business Training Center;

**5.4.7 Projected Costs**

TABLE 5.4.1

**CAPITAL PROJECTS FOR WORKFORCE DEVELOPMENT & CONTINUING EDUCATION****5.4.8 2023 - 2033**

The WD&CE program is intended to adjust flexibly to the continuing education needs of the community workforce. Further development will be part of ongoing monitoring of needs, as well as population fluctuations in Montgomery County.

