Montgomery College Facilities Master Plan

2023 - 2033

January 31, 2024

CANNONDESIGN

Approved and Adopted on January 24, 2024
by the Board of Trustees
BOT Resolution No. 24-01-035

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Montgomery College
Facilities Master Plan 2023 — 2033

CHAPTER 1

Executive Summary

CANNONDESIGN

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1.1 Montgomery College

1.1.1 INTRODUCTION TO MONTGOMERY COLLEGE

On September 16, 1946, the first Montgomery College classes were held in the evenings at Bethesda-Chevy Chase High School with a student body of 186 men and women with an eight person faculty. Today, the College has grown to a multi-campus institution and serves nearly 60,000 students a year, through both credit and noncredit programs, in more than 100 areas of study. Montgomery College is a public, fully accredited institution which consistently achieves high rankings and national recognition including:

- Ranked Top in the U.S. for Student-Parents by Generation Hope (2023-2026)
- Ranked #1 Best Community College in Maryland by Niche (2023)
- Ranked #7 in 10 Best Community Colleges for International Students in 2023 by Study International (2023)
- Ranked #10 (out of 688) in 2023 Best Community Colleges in the U.S. (and #1 in Maryland) by WalletHub (2023)
- Ranked in *Newsweek*'s Top Online College list for MC's online degree and course offerings
- Ranked as a Top Degree Producer by Diverse Issues in Higher Education (2022)
- Ranked #7 Best Community College in the U.S. by WalletHub (2022)
- Ranked one of the year's best schools for online degrees in public service by STEPS (Student Training & Education in Public Service), including one of the Best Online Criminal Justice Associate Degree Programs (2022)

– Ranked #3 in Best Associate Degrees in Maryland and #9 in Best Online Associate's Degree in Cybersecurity by University HQ (2022)

– Ranked #1 in Best Community Colleges in Maryland and Best Online Associate in Computer Science Programs by Intelligent.com (2022)

1.1.2 MONTGOMERY COLLEGE TODAY

Montgomery College is Maryland's largest community college with over 40,000 credit and noncredit students. The student body includes individuals from over 150 countries, 21% of whom receive Federal Pell Grants with an average household income of $28,052. The average age of degree-seeking students is 23, while the average age of students seeking training and certificates is 39. Part-time students comprise 66% of the student body.

The college is comprised of three campuses, two training sites, two community engagement centers and will open the East County Education Center in 2024. The college offers a broad range of online courses in addition to the physical locations. With 193 degree, certificate and licensure programs, the College offers a wide range of opportunities supporting workforce demands in the county including mechanics, engineers, cyber techs, lab bench workers and nurses among others. The college has granted 700 simultaneous degrees and high school diplomas since 2018 in the dual degree program with Montgomery County Public Schools. Graduates, 79% of whom stay on campus, add a billion dollars to the Montgomery County economy.

1.1.3 COLLEGEWIDE VISION, GOALS AND OBJECTIVES

Mission Statement

Montgomery College is where students discover their passions and unlock their potential to transform lives, enrich the community, and change the world.

Vision Statement

Montgomery College will serve as the community's institution of choice to transform the lives of students and Montgomery County.

Values Statement

At our core, we believe in welcoming all students and all employees into a community that emphasizes belonging. We believe in giving every individual what they need to succeed (Equity and Inclusion). We believe in conducting our teaching and service duties with distinction (Excellence) in an ethical and trustworthy manner (Integrity). We are dedicated to being a transformational institution seeking social justice and are continuously updating and improving all our learning environments, the curriculum and student services (Innovation) to meet the changing needs of our community (Adaptability). We make decisions about our operations in a way that respects and sustains the environment (Sustainability). We conduct ourselves with civility, courtesy and professionalism in all our interactions (Respect).

1.2 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 over the course of their history, although the past decade has seen this growth slow and ultimately decline. Since the pandemic, defining the future enrollment and needs for facilities has required consideration of trends including shifts in employment and online capabilities. This comprehensive Facilities Master Plan Update will quantify campus needs and identify solutions within the guidelines established by the State of Maryland.

The College undertook a comprehensive update of its collegewide Facilities Master Plan to align the College's facilities with dynamic changes caused by broader forces in the economy of the County and the impact of the pandemic. The Facilities Master Plan covers the ten-year period from 2023 to 2033 and responds to the significant changes in student needs, academic delivery and enrollment that have occurred at the College, in the County and across the State over the course of the past decade. CannonDesign was commissioned in 2022 to prepare this collegewide Facilities Master Plan.

This comprehensive collegewide effort includes five plans that describe and illustrate a future vision for the Takoma Park/Silver Spring, Germantown and Rockville Campuses, the future East County Campus 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 longer-term land use plan for the four 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 2013-2023 Facilities Master Plan. The 2013-2023 document included four sections (three campuses plus WD&CE and Central Administration). The 2023-2033 plan includes a placeholder section for the eventual development of a campus in East County.

1.3 Academic

1.3.1 ACADEMIC PROGRAMS

The College offers a wide range of credit and non-credit courses many of which are available across multiple campus locations. The College is organized into the following Academic Units and Program Areas:

Arts, Business, Education, English and Social Sciences

- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies (BEACAHMPS)
- Education and Social Sciences
- English and Reading
- Visual, Performing and Media Arts

Science, Technology, Engineering and Mathematics

- Chemical and Biological Sciences
- Science, Engineering and Technology
- Mathematics, Statistics and Data Science

Communications, Health Sciences, Health and Physical Education, and Humanities

- Health Sciences, Health and Physical Education
- English Language for Academic Purposes (ELAP), Linguistics and Communication Studies
- Humanities

Applied Technologies, Gudelsky Institute for Technical Education, and Workforce Development and Continuing Education

- Applied Technologies and Gudelsky Institute
- Workforce Development and Continuing Education

The National Center for Education Statistics Integrated Postsecondary Education Data System (IPEDS) report on degrees conferred for 2021-2022 is found summarized in Table 1.1 on the following page.

1.3.2 FACULTY AND STAFF

Montgomery College employs 1,727 benefits-eligible employees that are in budgeted, “regular” positions. This group consists of administrator, full-time faculty, and full and part-time staff positions. The 1,573 non-budgeted employees (generally referred to as “contingent” or “seasonal” employees) primarily consist of part-time/adjunct faculty, temporary staff (e.g., administrative/clerical, short-term grant, ASL interpreters, art models) and student workers.

Total Employee Headcount as of November 2023:

- Administrators: 80
- Casual Temporary: 145
- Department Chairs: 37
- Full-time Faculty: 494
- Full-time Staff: 1,091
- Part-time Faculty (credit): 780
- Part-time Staff: 24
- Student Aides: 360
- Temporary with Benefits: 34
- WD&CE Faculty (non-credit): 435
- Work-study Students: 62

Table 1.1: Completions (Number of Awards Conferred) 2021-2022
Completions are the number of awards conferred by program and award level

Program	12 week to <1 year certificate	1 to <2 year certificate	Associate
Agricultural/Animal/Plant/Veterinary Science and Related Fields	5	0	5
Area, Ethnic, Cultural, Gender and Group Studies	4	0	-
Biological and Biomedical Sciences	37	0	454
Business, Management, Marketing and Related Support Services	37	0	454
Communication, Journalism and Related Programs	-	-	45
Communications Technologies/Technicians and Support Services	12	3	9
Computer and Information Sciences and Support Services	20	0	344
Construction Trades	5	0	12
Culinary, Entertainment and Personal Services	1	0	0
Education	-	0	99
Engineering	-	-	92
Engineering/Engineering-related Technologies/Technicians	7	5	98
English Language and Literature/Letters	2	0	
Family and Consumer Sciences/Human Sciences	-	14	18
Foreign Languages, Literatures and Linguistics	2	0	7
Health Professions and Related Programs	19	1	265
Homeland Security, Law Enforcement, Firefighting and Related Protective Services	6	0	24
Legal Professions and Studies	3	0	23
Liberal Arts and Sciences, General Studies and Humanities	-	4	1,127
Mechanic and Repair Technologies/Technicians	7	0	9
Multi/Interdisciplinary Studies	-	0	0
Parks, Recreation, Leisure, Fitness and Kinesiology	4	0	0
Physical Sciences	-	-	0
Science Technologies/Technicians	24	0	15
Social Sciences	6	0	3
Visual and Performing Arts	7	4	128
Grand total	**171**	**31**	**2,778**

Data shown are for first majors
(-) Program is not offered at this award level

1.4 Facilities Master Plan Summary

The development of the 2023-2033 Facilities Master Plan update for Montgomery College was initiated in 2022 with a period of Discovery starting in the Spring semester of 2023. This period included the review of existing documents, data analysis, student and faculty surveys, in-person student engagement and a series of virtual workshops.

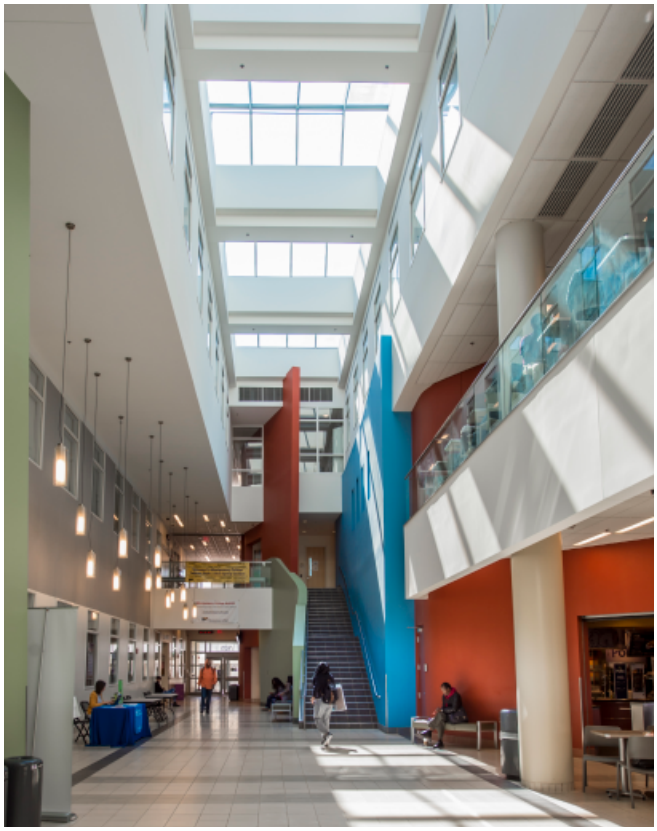
The plan focuses on addressing key issues facing the institution today, which are different from those addressed in the previous master plan:

Enrollment: Enrollment peaked in 2012 and has declined over the past decade before stabilizing and growing modestly over the past several semesters. Enrollment is anticipated to grow over the next decade, but not exceed the 2012 peak.

Virtual Environments: The echoes of the pandemic persist both in how students engage in learning and how staff and faculty accomplish their work.

Space Utilization: The demand for classrooms and labs has shifted. The plan identifies areas for targeted investment leading to increased utilization of these assets.

Student Success: The perspective on student success to the institution has evolved beyond academic success to address the whole student. The plan identifies areas where support of students could be expanded through access to services and amenities.



Wayfinding: The Campuses, and the College as an institution, require a focus on seamless navigation. The composition of the campuses, the landscapes and the environmental graphics should support natural, logical wayfinding.

Belonging: Seen as a barrier to the mission of the institution, providing an environment that welcomes all students and allows them to identify their place in the campus is critical to allowing each student a path to a successful educational outcome.

Access: Providing broad and deep access to the educational offerings of the College is a critical underpinning of the plan. Making the campuses accessible and removing barriers, such as those noted above, is one component of supporting the College's goals.

The Facilities Master Plan analyzes both a ten-year period and a longer-term 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. The plan also identifies logical planning sequences and small, near-term investments to begin enacting the goals of the plan.

1.5 Facilities Master Plan Process

Being the first exhaustive update of the collegewide Facilities Master Plan following a global pandemic that altered space needs and modes of enrollment in nearly all aspects of higher education, this effort specifies post-pandemic facility needs and anticipates the demand of new facilities and renovation efforts, as well as compact interventions.

An extensive sequence of visioning and planning sessions was facilitated across the College community, including focus groups, specific to campus location and departments, students, campus neighbors and the broader Montgomery College community. Throughout these sessions and activities, discussions of enrollment, faculty, staff projections, academic program projections, student life, facility conditions and space needs occurred to focus the goals of this master planning effort. This was paired with the Maryland Higher Education Commission (MHEC)-endorsed 2033 enrollment projections for Montgomery College to perform a holistic analysis of the data. The analysis was broken down in accordance with the academic structure of the college, by campus and department, to provide specific outlooks for the demand of specific space typologies at defined locations. The compilation of the significant anecdotal and quantitative data delivers a vindicated development plan for the future, which includes a demand for several additional facilities, and large and small-scale renovations of existing facilities, to ultimately meet the College's needs for instructional, recreational, social and support spaces.

The Steering Committee assembled for the purposes of creating the 2023-33 Collegewide Facilities Master Plan included the following College staff and faculty:	**Ms. Lisa Burl**, *IT Communications Director* **Mr. Sherwin Collette,** *Senior Vice President for Administrative and Fiscal Services* **Ms. Yuling Mei***, College Architect* **Mr. Marvin Mills,** *VP of Facilities and Security* **Ms. Kerry Norberg***, Planning and Design Director* **Ms. Kristina Schramm,** *Director of Capital Planning, Design and Engineering*
Significant guidance was provided by the Montgomery College Cabinet, including:	**Dr. Monica Brown,** *Senior Vice President for Student Affairs* **Mr. Stephen Cain,** *Chief of Staff/ Chief Strategy Officer* **Mr. Sherwin Collette,** *Senior Vice President for Administrative and Fiscal Services* **Ms. Michelle Campbell,** *Vice President of Development and Alumni Relations, Executive Director of the Montgomery College Foundation* **Dr. Jermaine F. Williams,** *President of Montgomery College*
The current members of the Montgomery College of Trustees are:	**Dr. Michael A. Brintnall,** *Chair* **Dr. Frieda K. Lacey,** *First Vice Chair* **Ms. Gloria Aparicio Blackwell,** *Second Vice Chair* **Dr. Sheryl Brissett Chapman** **Ms. Annice Cody** **Dr. Judith Docca** **Mr. Oman A. Lazo** **Mr. Robert F. Levey** **Ms. Maricé I. Morales** **Mr. Rishi G. Nixon** **Dr. Jermaine F. Williams,** *Secretary/Treasurer — President of Montgomery College*

1.6 Summary of College Enrollment Projections

According to the Official Spring Enrollment: 12-Year Trend developed by College's Office of Institutional Research and Effectiveness in April 2022, the College has seen a decline in enrollment over the past 10 years, with a peak enrollment of 25,513 in 2012. Compared to the Spring of 2022, where enrollment was 15,584, this represents a decline of 37.6%.

The College's planned enrollment growth is modest over the 2022-2032 period. Overall, the College is projected to experience Full Time Equivalent (FTE) enrollment growth of 41% and unduplicated headcount growth of 30% over this period. The Projected Enrollment Total Headcount of 22,292 for Fall of 2032 represents 87% of the peak enrollment in 2012. The table below shows the projected enrollment from the Enrollment Projections 2022-2032 Maryland Public Colleges and Universities, published in May 2023 by MHEC.

Since many students take courses on multiple campuses, the distribution of the growth may vary as program offerings are adjusted. In particular, the development of the East County Education Center due to open in 2024 will impact where growth may occur across all campuses. In the Fall of 2022, 37% of students took courses on the Germantown campus, 69% of students took courses at Rockville and 33% of students took courses at Takoma Park/Silver Spring.

Table 1.2 - Overall College Enrollment Projections

	Fall 2022 — Actual	Fall 2032 — Projected	% Change
Full-Time	5,620	7,911	41%
Part-Time	11,517	14,381	25%
Total Headcount	**17,137**	**22,292**	**30%**

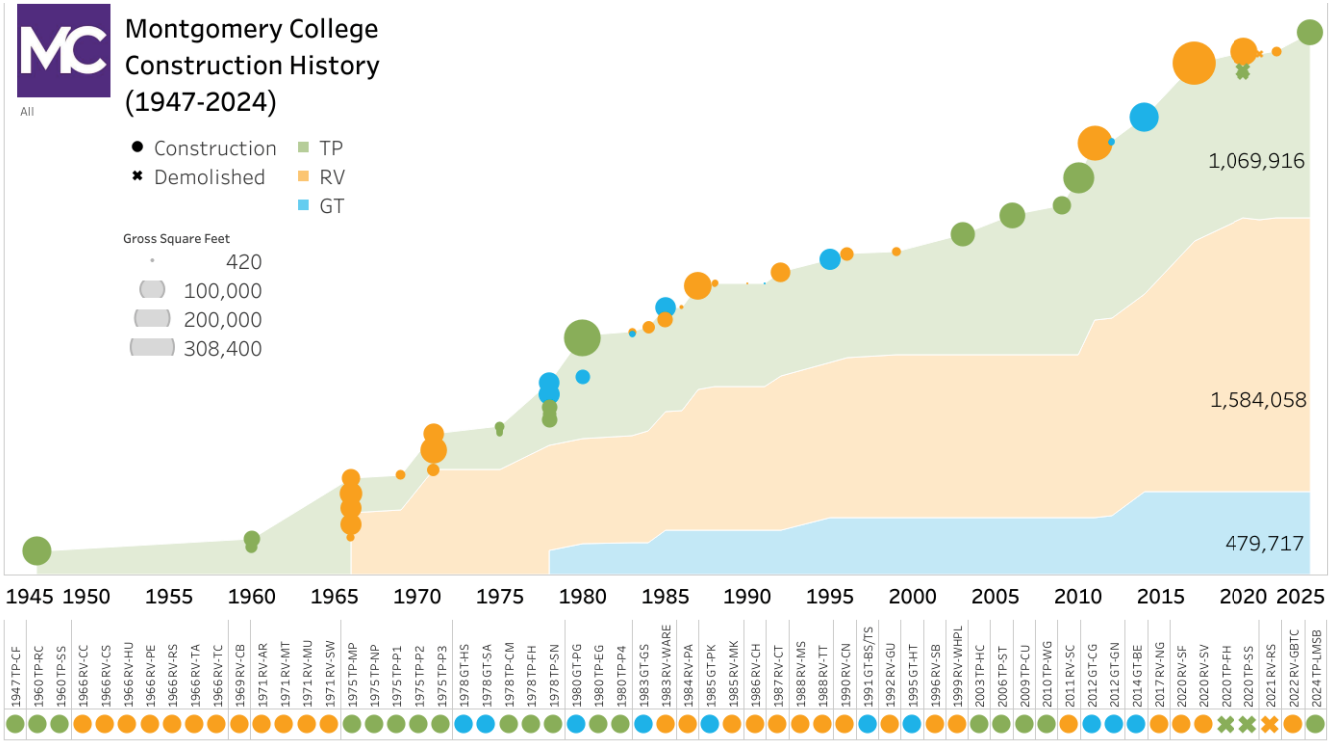
1.7 Summary of Existing Building Conditions

The 2013-2023 Facilities Master Plan identified a significant backlog of deferred maintenance across the College's building portfolio. Additionally, it noted that many of the College's buildings were constructed during periods where smaller footprints and lower floor-to-floor heights were common. The plan noted that the smaller, less-efficient building should be replaced, as well as the buildings which had significant renewal needs.

Over the past decade, the College has built six new buildings, undertaken significant renovations of two additional buildings and demolished two buildings. These projects, along with systemic upgrades in other buildings, have helped improve the overall stock of buildings across the College's campuses.

In 2022, the College conducted a comprehensive building assessment across each campus. The reports

Figure 1.1 - Overall College Space Growth



The chart above tracks the total square footage of space on the College's three current campuses starting with its founding in 1945 in Takoma Park (shown in green), the opening of the Rockville Campus (shown in tan) in 1966 and the expansion into the Germantown Campus (shown in blue) in 1978. The circles indicate the relative size of projects and when they came on line impacting the total campus building areas.

projected Facilities Condition Index scores at three, five and 10-year intervals, covering the period of this Facilities Master Plan. Despite investments across the building portfolio for HVAC upgrades related to COVID, there are still a number of buildings projected to be 'Nearing the End of Serviceable Life' (deferred maintenance over 10% of replacement value) or 'Renewal Necessary' (deferred maintenance over 30% of replacement value). Twelve significant buildings fall into the 'Renewal Necessary' category across the three main campuses, while an additional 20 significant buildings fall into the 'Nearing the End of Serviceable Life.'

The Facilities Master Plan identifies potential renovation projects to extend the life of several of these buildings, but also identifies buildings for replacement in the later years of the planning period. The goal of these projects is to repurpose the facilities for modern uses, reduce energy consumption and lower operating costs.

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 access to technology. The addition of technology-rich amenities, including experimental technology such as AR/VR, lounges, cafes and collaboration zones are desired to support the library of the future on each campus.

Table 1.3 - Overall College Building Condition Count

Campus	Renewal Necessary	Nearing the End of Serviceable Life
Germantown	2	3
Rockville	5	11
Takoma Park/Silver Spring	5	6

An overview of the current and projected space needs from the Fall Inventory 2021 dataset reflects several trends across the College:

- *There is currently a surplus of classrooms and a deficit of labs. This deficit in labs grows significantly by 2031 to 254,369 NASF. The classroom surplus is projected to be 70,635 NASF.*
- *There is a projected deficit of 53,254 NASF. The deficit indicated for office may not reflect new or future working models. The development of remote and hybrid working options made possible during the pandemic could potentially impact the demand for office space as new policies and possibilities are entertained for faculty and staff.*
- *There is an opportunity to invest in athletics, recreation and food service across the College's campuses. The athletic space reflects a demand for an additional 82,316 NASF and an additional 21,026 for dining facilities.*
- *There is a need to provide study space dedicated to accommodate student remote learning opportunities and to support the academic needs of students who work or are parents.*

1.8 Space Needs Assessment

In the previous master plan, the College had projected a significant space deficit and undertook several significant projects to alleviate those needs. Since peak enrollment in 2012, the College has seen a decline in enrollment of 37.6% and while there is projected growth over the next decade, the current projection does not exceed the 2012 enrollment. Additionally, the pandemic resulted in changes in how students engage with learning. More opportunities have been provided for virtual and hybrid learning which have impacted classroom utilization.

During the Facilities Master Plan process, an analysis of classroom utilization was undertaken to understand the current academic space needs. The result of the analysis indicated that for classroom and laboratory space, there are buildings and individual rooms that are highly utilized, while others have capacity. The goal of the plan is to re-distribute teaching space to better serve and support students' needs.

Trends within the data indicate:

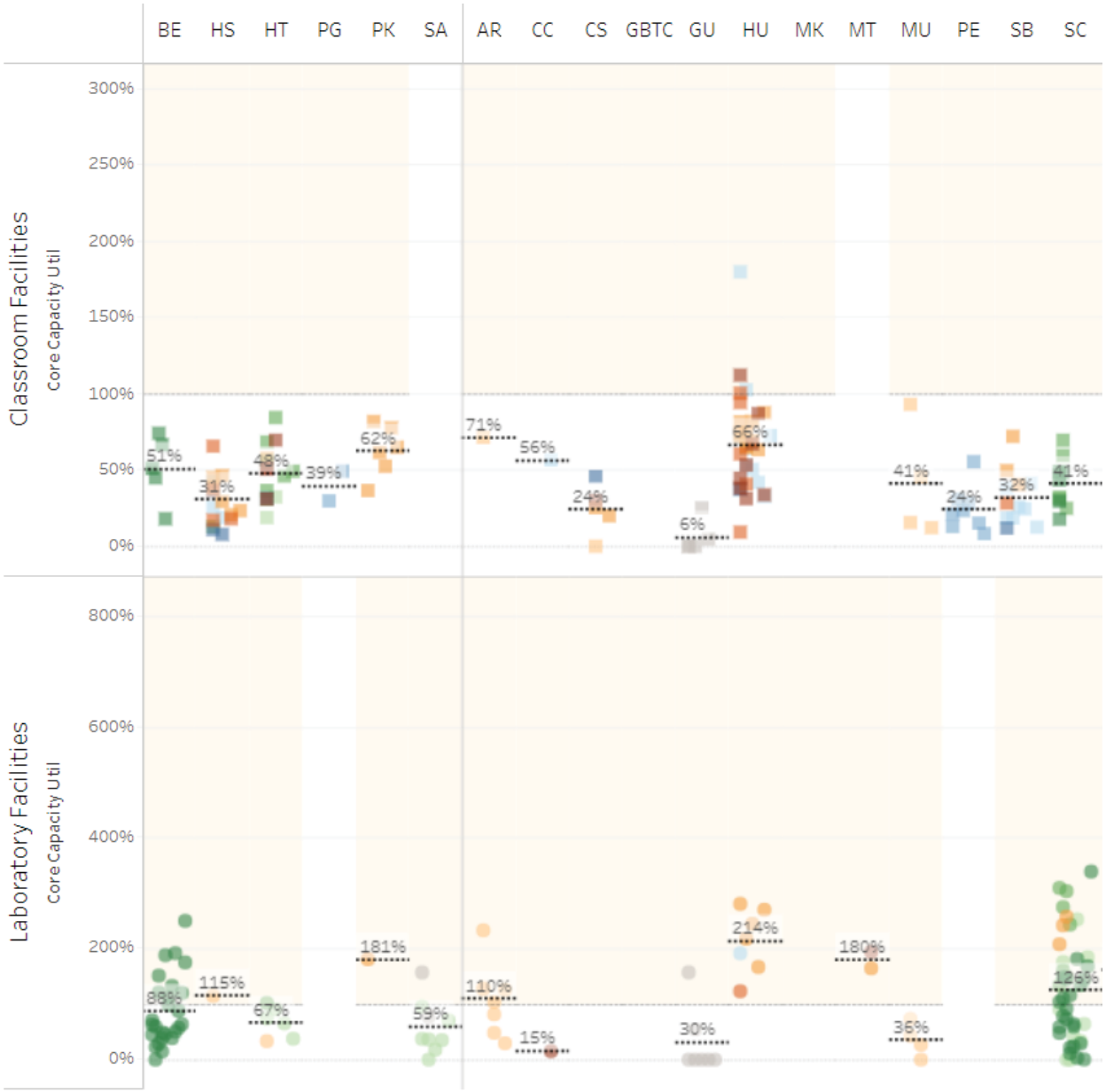
- Computer classrooms are in high demand, while some standard classrooms have significant capacity
- Labs and spaces with particular equipment, including art, computer science and health sciences spaces, are in high demand
- Classrooms utilized for STEM, art, business and English courses tended to be highly utilized

Addressing the quality of the College's facilities is more pressing than creating more quantity in the early part of the planning period. Repositioning existing buildings in support of current and projected needs is the focus of the Facilities Master Plan. Additionally, realigning office needs in the post-pandemic, hybrid working environment creates the opportunity to meet student and faculty needs through renovation and strategic investment, rather than significant capital projects.

There are several projects underway which will have a near term impact on utilization. First, the College is currently upgrading a series of standard classrooms to a HyFlex model with a robust technology package that supports hybrid learning modalities. Second, the opening of the East County Education Center and the Leggett Math & Science Building will provide additional classrooms that are within the high demand types noted in the Space Utilization analysis. These projects are helping to align available facilities with the academic needs of the College.

In contrast to the potential to advance academic spaces through renovation and technology upgrades, addressing qualitative issues with student services, auxiliary services, athletics and wellness requires additional space in addition to improvements of existing facilities. This is also true for spaces with particular needs, such as theater and music, that require significant investment.

Figure 1.2 - Utilization Lab by Academic Unit



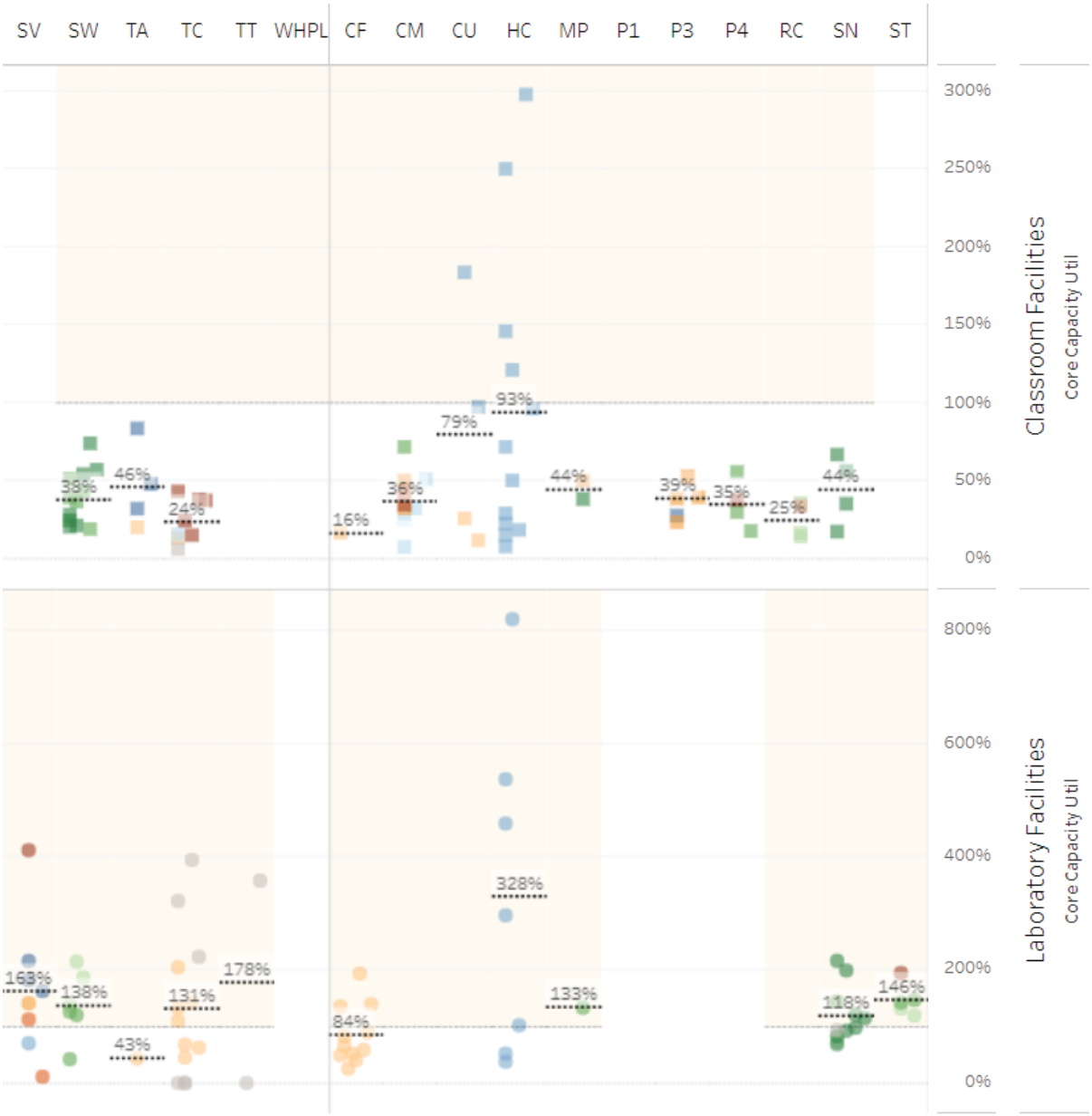
PREDOMINANT AREA

- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

ROOM USE CATEGORY

- Classroom Facilities
- Laboratory Facilities

Figure 1.2 - Utilization Lab by Academic Unit



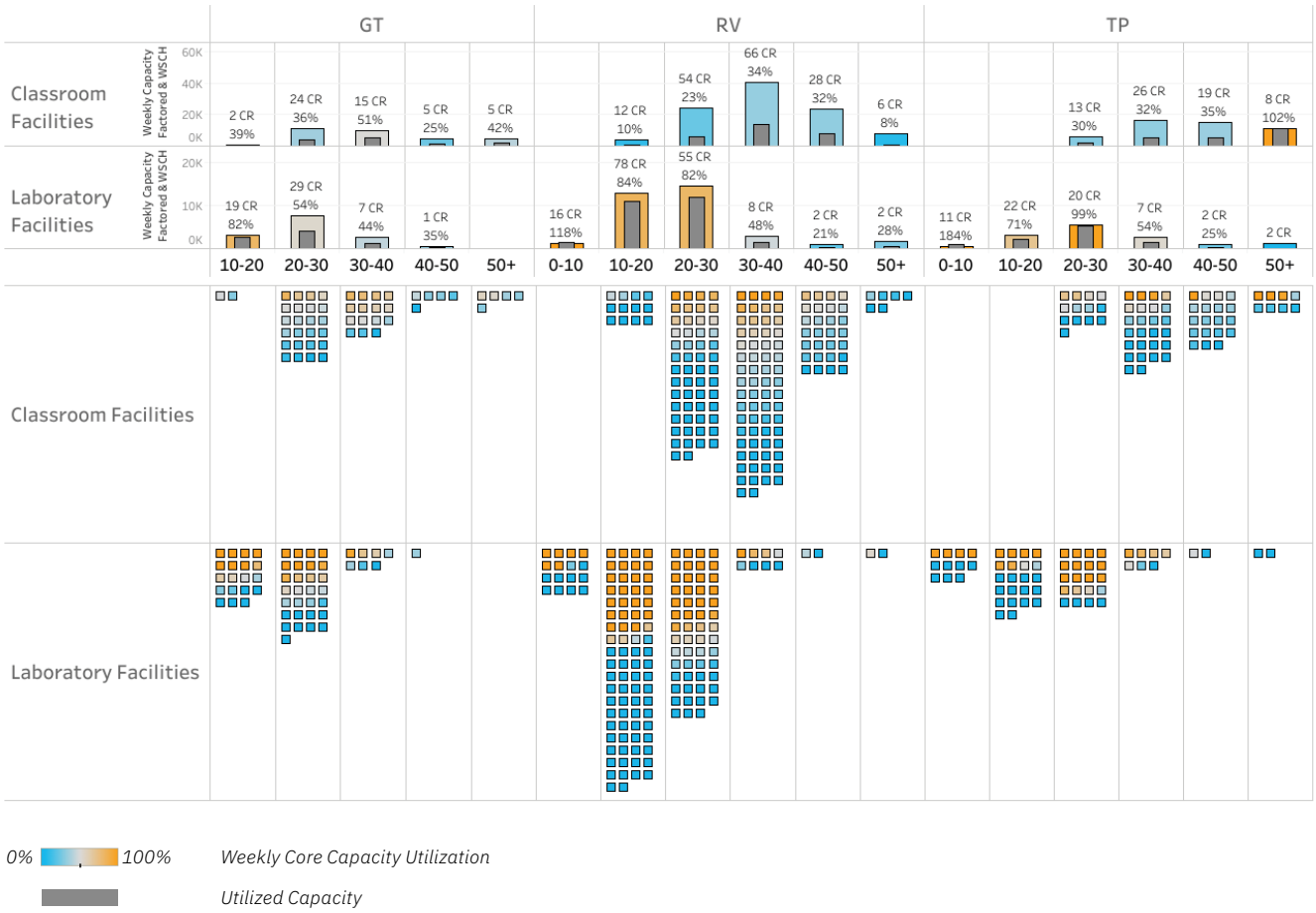
The chart above indicates the utilization of classrooms and laboratories in each building. Each square indicates a classroom and each circle represents a lab. The position on the vertical axis of the dot indicates its utilization, while the color indicates the predominant academic unit that uses the space. General trends show:

- *Newer buildings have higher utilization*
- *Laboratories have greater utilization than classrooms*
- *The sciences and health sciences have high utilization, particularly for lab spaces*

Items of note:

- *The Health Sciences building on the Takoma Park/Silver Spring campus is very highly utilized across both classrooms and lab spaces*
- *The Humanities Building on the Rockville campus is highly utilized, despite its age*

Figure 1.3 - Utilization Lab by Academic Unit



The chart above indicates the utilization of classroom and laboratory facilities by seat count and campus. Across the chart, the number of classrooms and labs are broken down by seat count categories in brackets of ten. The utilization for each category is depicted on the top of the chart. Along the bottom of the chart, spaces that are blue have lower utilization, while spaces that are orange have higher utilization. General trends show:

- *Higher utilization for labs than classrooms across all campuses for seat counts lower than 40*
- *Classroom utilization is generally higher in classrooms of 20-30 and 30-40 seats*
- *Higher utilization of 0-10, 10-20 and 20-30 seats for labs across most campuses*

A few exceptions to note:

- *Large classrooms of 50+ seats on the Takoma Park / Silver Spring campus have a utilization exceeding 100%*
- *Large classrooms of 50+ seats at Germantown have a slightly higher utilization than the norm at 42%*

Table 1.4 - Space Inventory and Need by Hegis Code

HEGIS CODE	HEGIS CATEGORY	NEED %	NEED 2021	INV %	INV 2031	2021 DELTA
100 (110-115)	**CLASSROOM**	**7%**	**83,674**	**14%**	**190,952**	**107,278**
200	**LABORATORY**	**25%**	**438,275**	**28%**	**372,817**	**(63,458)**
210-15	Class Laboratory		408,463		358,931	(49,532)
220-25	Open Laboratory		29,812		15,886	(13,926)
300	**OFFICE**	**25%**	**313,271**	**28%**	**373,148**	**59,877**
310-15	Office/Conf. Room		307,472		360,901	53,429
320-25	Testing/Tutoring		5,799		12,247	6,448
400	**STUDY**	**5%**	**62,841**	**7%**	**86,620**	**23,779**
410-15	Study		44,363		32,307	(12,056)
420-30	Stack/Study		13,199		48,039	34,840
440-55	Processing/Service		5,379		6,274	995
500	**SPECIAL USE**	**11%**	**140,642**	**8%**	**100,080**	**(40,562)**
520-23	Athletic		127,980		83,454	(44,526)
530-35	Media Production		9,662		11,034	1,372
580-85	Greenhouse		3,000		5,592	2,592
600	**GENERAL USE**	**10%**	**127,659**	**10%**	**126,208**	**(1,451)**
610-15	Assembly		41,196		50,920	9,724
620-25	Exhibition		5,799		6,346	547
630-35	Food Facility		41,167		26,730	(14,437)
640-45	No Allowance					
650-55	Lounge		13,398		26,831	13,433
660-65	Merchandising		6,099		1,180	(4,919)
670-75	No Allowance					
680-85	Meeting Room		20,000		13,201	(5,799)
700	**SUPPORT**	**5%**	**67,965**	**5%**	**71,561**	**3,596**
710-15	Data Processing		7,500		19,354	11,854
720-25	Shop/Storage		47,515		47,068	(447)
750-55	Central Service		12,000		4,931	(7,069)
760-65	Hazmat Storage		950		208	(742)
800	**HEALTH CARE**	**0%**	**2,020**	**0%**	**0**	**(2,020)**
Total NASF	**Net Assignable Square Feet**		**1,236,347**		**1,323,386**	**87,039**

Table 1.4 (Continued) - Space Inventory and Need by Hegis Code

HEGIS CODE	HEGIS CATEGORY	NEED %	NEED 2031	INV %	INV 2031	2031 DELTA
100 (110-115)	**CLASSROOM**	**7%**	**128,655**	**14%**	**199,280**	**70,625**
200	**LABORATORY**	**37%**	**673,899**	**29%**	**419,530**	**(254,369)**
210-15	Class Laboratory		628,060		401,983	(226,077)
220-25	Open Laboratory		45,839		17,547	(28,292)
300	**OFFICE**	**26%**	**479,022**	**29%**	**425,768**	**(53,254)**
310-15	Office/Conf. Room		471,314		410,174	(61,140)
320-25	Testing/Tutoring		7,708		15,594	7,886
400	**STUDY**	**5%**	**92,405**	**7%**	**103,741**	**11,336**
410-15	Study		68,213		34,995	(33,218)
420-30	Stack/Study		17,280		62,014	44,734
440-55	Processing/Service		6,912		6,732	(180)
500	**SPECIAL USE**	**10%**	**184,320**	**7%**	**101,004**	**(83,316)**
520-23	Athletic		166,140		83,454	(82,686
530-35	Media Production		15,180		10,682	(4,498)
580-85	Greenhouse		3,000		6,868	3,868
600	**GENERAL USE**	**9%**	**168,444**	**10%**	**150,893**	**(17,551)**
610-15	Assembly		48,828		53,556	4,728
620-25	Exhibition		7,708		6,346	(1,362)
630-35	Food Facility		63,299		42,273	(21,026)
640-45	No Allowance					
650-55	Lounge		20,601		32,524	11,923
660-65	Merchandising		8,008		1,180	(6,828)
670-75	No Allowance					
680-85	Meeting Room		20,000		15,014	(4,986)
700	**SUPPORT**	**5%**	**94,275**	**5%**	**69,367**	**(24,908)**
710-15	Data Processing		8,906		19,354	10,448
720-25	Shop/Storage		70,093		43,439	(26,654)
750-55	Central Service		13,874		6,204	(7,670)
760-65	Hazmat Storage		1,402		370	(1,032)
800	**HEALTH CARE**	**0%**	**2,783**	**0%**	**0**	**(2,783)**
Total NASF	**Net Assignable Square Feet**		**1,823,803**		**1,469,583**	**(354,220)**

An overview of the current and projected space needs from the Fall Inventory 2021 dataset reflects several trends across the College:

- *There is currently a surplus of classrooms and a deficit of labs. This deficit in labs grows significantly by 2031 to 254,369 NASF. The classroom surplus is projected to be 70,625 NASF.*
- *There is a projected deficit of 53,254 NASF. The deficit indicated for office may not reflect new or future working models. The development of remote and hybrid working options made possible during the pandemic could potentially impact the demand for office space as new policies and possibilities are entertained for faculty and staff.*
- *There is an opportunity to invest in athletics, recreation and food service across the College's campuses. The athletic space reflects a demand for an additional 83,316 NASF and an additional 21,026 for dining facilities.*
- *There is a need to provide study space dedicated to accommodate student remote learning opportunities and to support the academic needs of students who work or are parents.*

Each campus also has specific needs that must be addressed. An overview of the current and projected space needs indicates several needs on each of these campuses:

Takoma Park/Silver Spring Campus:

- Deficit of labs reaches 78,680 NASF by 2031, however the Legget Math and Science Building and the East County Education Center will resolve some of this demand
- With less than 1,000 NASF of current space, there is a need for recreation of some form and a projected deficit of 42,766 NASF by 2031
- Despite the space deficits, growth must be addressed with limited footprint

Germantown Campus:

- No net change for classrooms but a deficit of 47,331 NASF in lab space by 2031
- This is the only campus with a surplus of office space totaling 20,471 NASF, based on current models.
- A need for 16,629 NASF for athletics and recreational space over the planning period

Rockville Campus:

- Largest deficit of lab spaces of any campus, totaling 128,358 NASF despite the completion of recent projects
- Deficit of athletics (23,142 NASF), food facilities (20,467 NASF) and study (13,954 NASF) may provide an opportunity to give existing resources some attention

Table 1.5 - Developable Area by Campus

Campus	Total Area	Developable Area
Germantown	228.7 acres	Regular: 14.2 acres RISE zone: 36.1 acres
Rockville	84.6 acres	17 acres
Takoma Park/Silver Spring	19.5 acres	1.8 acres

1.9 Campus Responses

The overall Facilities Master Plan leveraged a series of guiding principles to shape the decision-making process. These planning principles were established in connection with the Mission and Vision of the College, focusing on the success of students and the impact of their success on Montgomery County. They also took into account both long- and short-term goals with the lens of maintaining the effectiveness of capital investments. These principles include:

Prioritize Student Success — through expanded spaces that support student wellness, informal learning/study, dining and amenities, branding and intuitive wayfinding.

Reinvent Existing Facilities — through renovation and strategic interventions, right-size classroom and lab spaces, create faculty hubs, repurpose underutilized square footage.

Expand Access — provide a touchdown for county services, nonprofits and businesses, enhance childcare options, and consider both physical and virtual environments.

Plan Prudently — each campus has land use constraints, limiting future development. Project development should consider maximizing future development potential while continuing to create activated, green campuses.

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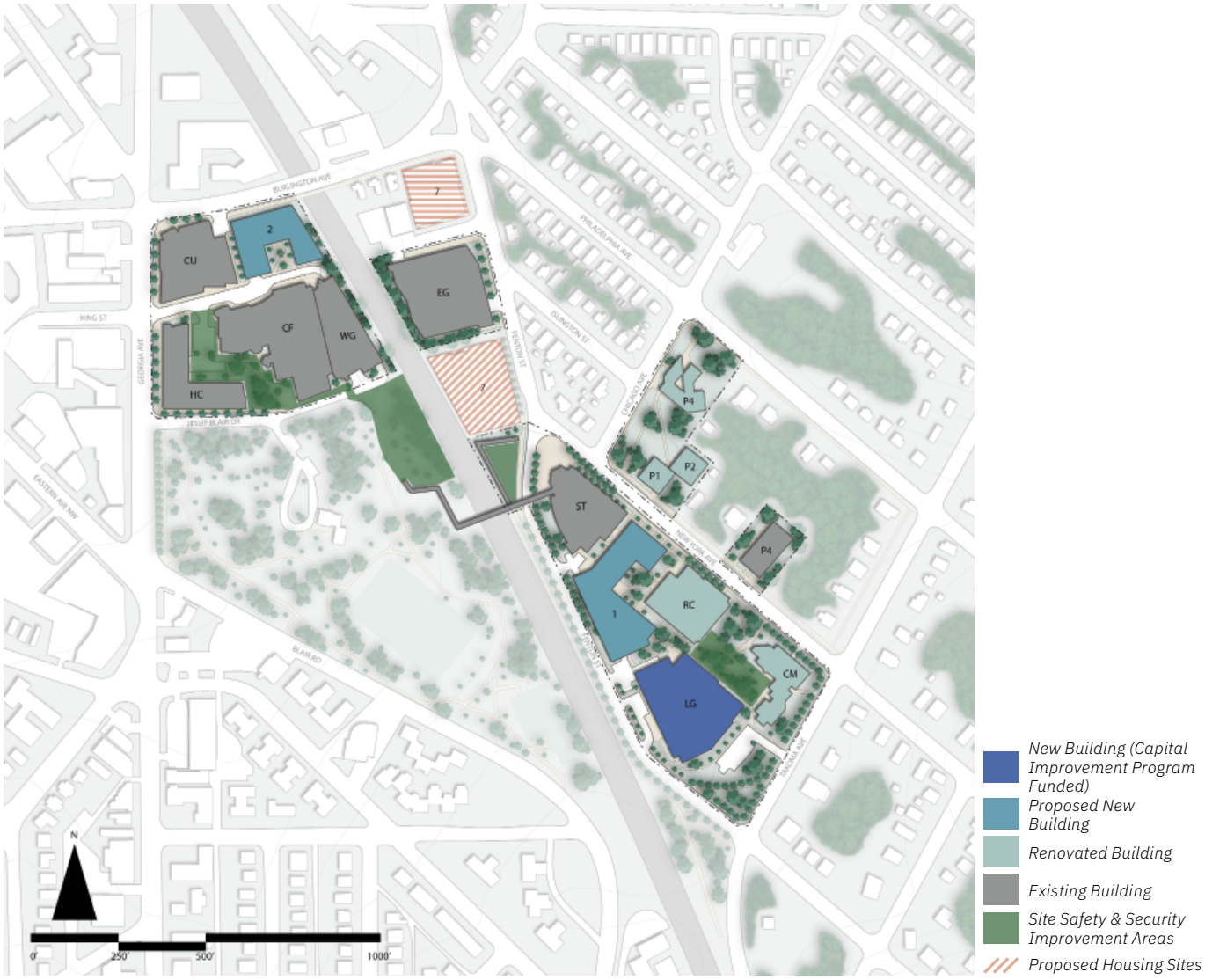
1.9.1 — TAKOMA PARK/SILVER SPRING CAMPUS

Figure 1.4 - Takoma Park/Silver Spring Campus Final Phase 2023-33 Facilities Master Plan



BUILDING KEY

East Campus

- **ST** Charlene R. Nunley Student Services Center
- **RC** Resource Center
- **CM** Catherine F. Scott Commons
- **SN** Science North Building
- **NP** North Pavilion
- **MP** Mathematics Pavilion
- **EG** East Garage
- **P3** Pavilion Three
- **P1** Pavilion One
- **P2** Pavilion Two
- **P4** Pavilion Four
- **LG** Catherine & Isiah Leggett Math & Science Building

West Campus

- **HC** Health Sciences Center
- **CF** Morris & Gwendolyn Cafritz Foundation Arts Center
- **CU** Cultural Arts Center
- **WG** West Garage

Key Issues

The Takoma Park/Silver Spring Campus has the least amount of developable land at 1.8 acres and it will also potentially be more significantly impacted by the development of the East County Campus. The classroom utilization is high on the campus, particularly in the Health Sciences Center (HC) and in the buildings on East campus where the development of the Catherine and Isiah Leggett Math and Science Building (LB) will provide much needed lab and classroom space when it opens in 2024. Additionally, athletics, recreation and wellness opportunities are limited on this campus due to the demolition of Falcon Hall to make way for LB. The campus is lacking a cohesive sense of place, with a variety of landscape spaces developed over a period of time and no comprehensive wayfinding system in place. The East County Campus can help fulfill expansion needs for academic space on the campus, but recreational and athletic space has been missing from the campus since the demolition of Falcon Hall.

In response to these issues, additional planning principles were established for the Takoma Park/ Silver Spring Campus, including:

Enhance Takoma Park Campus Core — Improving internal circulation and open space on the Takoma Park campus to provide a cohesive sense of place.

Focus on Student Amenities — Provide the breadth of student-oriented spaces that make the campus attractive to students and enhance student persistence and success.

Connect to Silver Spring — Leverage the adjoining commercial district to enhance the experience for students and faculty.

Planned Projects

Academic and Wellness Building — In order to address the lack of athletic, recreation and wellness opportunities on campus, a new Academic and Wellness Facility is planned for the current sites of Science North (SN), Math Pavilion (MP) and North Pavilion (NP). This project will include athletic and recreational space currently unavailable on the campus and support academic programs and student wellbeing programs. The Academic and Wellness Facility will be on the SN, MP and NP sites. This facility will be at a residential scale along New York Avenue and have a stronger presence along Fenton Street. Limited underground parking with active large spaces that can buffer the train noise that affects the site will be facing and will be accessed from Fenton Street. Interior campus access through these two wings of this new facility will be a design directive.

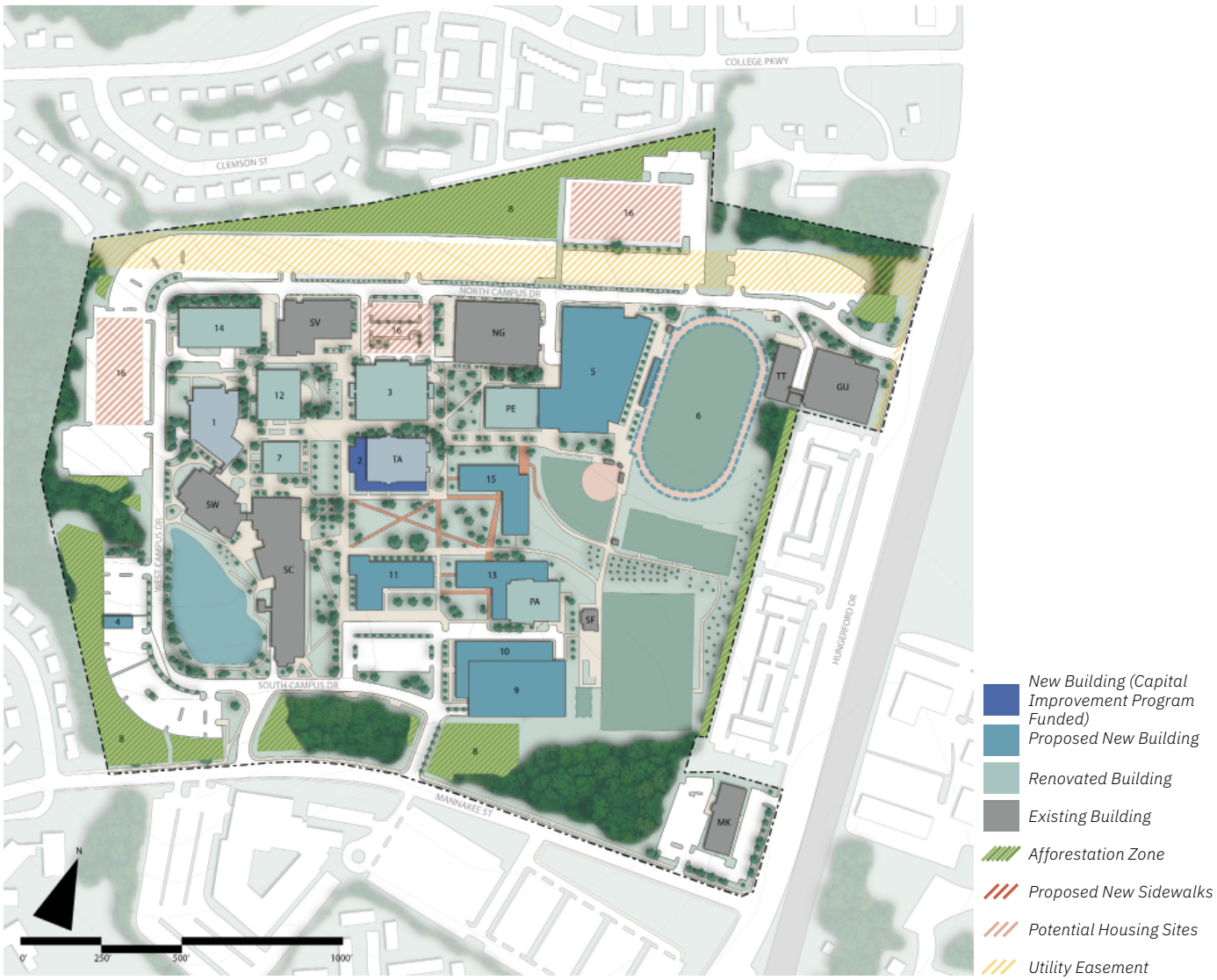
Mixed-Use Building — The only developable parcel is the current parking lot W1, which has the flexibility to serve multiple needs, but is the likely location for a future academic facility and parking. The demand for this space will be determined in part by the programming that occurs at the East County Education Center and, ultimately, the development of the East County Campus.

Campus Safety & Security — These two major projects are augmented by a comprehensive site improvement project that will enhance safety, provide usable outdoor gathering space, wayfinding and space for public art.

Small-Scale Interventions — Lastly, a series of modest renovations are intended to provide additional student collaboration, study and social space. These renovations include projects in Pavilions 1,2 & 4 (P1, P2, P4) and The Catherine F. Scott Commons (CM).

1.9.2 – ROCKVILLE CAMPUS

Figure 1.5 - Rockville Campus Final Phase 2023-33 Facilities Master Plan



BUILDING KEY

SW Science West Building
SC Science Center
AR Paul Peck Art Building
MU Music Building
CS Computer Science Building
TA Theatre Arts Building
MT Gordon and Marilyn Macklin Tower
HU Humanities Building
PA Robert E. Parilla Performing Arts Center
SB South Campus Instruction Building
TC Technical Center
GU Homer S. Gudelsky Institute for Technical Education
TT Interim Technical Training Center
CC Campus Center
CB Academic Annex
SV Long Nguyen & Kimmy Duong Student Services Center
CH Child Care Center
PE Physical Education Center
NG North Garage
MK Center for Training Excellence & ignITe Hub
MS Maintenance Shop
SF Soccer Field Concession Building

Key Issues

The Rockville campus has a number of smaller buildings that have significant maintenance issues, have small, inefficient footprints and limit the opportunities for the campus to evolve. While recent projects have improved the classroom offerings around the sciences, several types of classroom spaces are still overutilized, including computer classrooms, particularly in the Humanities Building (HU), and space for the arts in several buildings across the campus. This campus has been noted as challenging to navigate and in need of welcoming grounds, although the creation of the central campus greenspace has helped students orient themselves on campus and is a source of social connection for students.

In response to these issues, additional planning principles were established for the Rockville Campus, including:

Enhance the Pedestrian Core — Create a cohesive, easily navigable and logical campus that enhances outdoor activities and makes the campus accessible to students, staff and community.

Enhance Arrival and Frontage — Provide a stronger presence for the college on Hungerford Drive while enhancing the sequence of arrival to the campus in the transition from vehicular to pedestrian modes.

Expand Development Potential — Provide opportunity for the campus to grow efficiently within its constraints.

Planned Projects

The Rockville Campus will undergo a transition over the next several decades, continuing the process of creating modern facilities with adequate footprints for efficient use initiated under the previous master plan. The campus forest conservation plan will be revised providing a more robust wooded perimeter on the campus and freeing the campus core for redevelopment. The major projects will renovate the library within Gordon and Marilyn Macklin Tower (MT), the Theatre Arts Building (TA) and the Physical Education Building (PE), while smaller-scale renovations will enhance the Computer Science Building (CS) and the Campus Center (CC).

Gordon and Marilyn Macklin Tower Library Renovation — The library renovation in Gordon and Marilyn Macklin Tower (MT) will support student academic needs.

Theatre Arts Renovation and Addition — Renovation and expansion of the TA building will expand academic offerings within the performing arts, add cultural opportunities for the community and resolve internal space issues and a backlog of deferred maintenance.

Physical Education Center Renovation and Expansion — The PE renovation and expansion will create modern athletic, recreation and academic space. This project may be combined with the track and field renovation needed to make the venue suitable for expanded uses. The demolition of a portion of the PE building will create a campus open space connecting the CC, PE and TA buildings and provide an opportunity for student gathering.

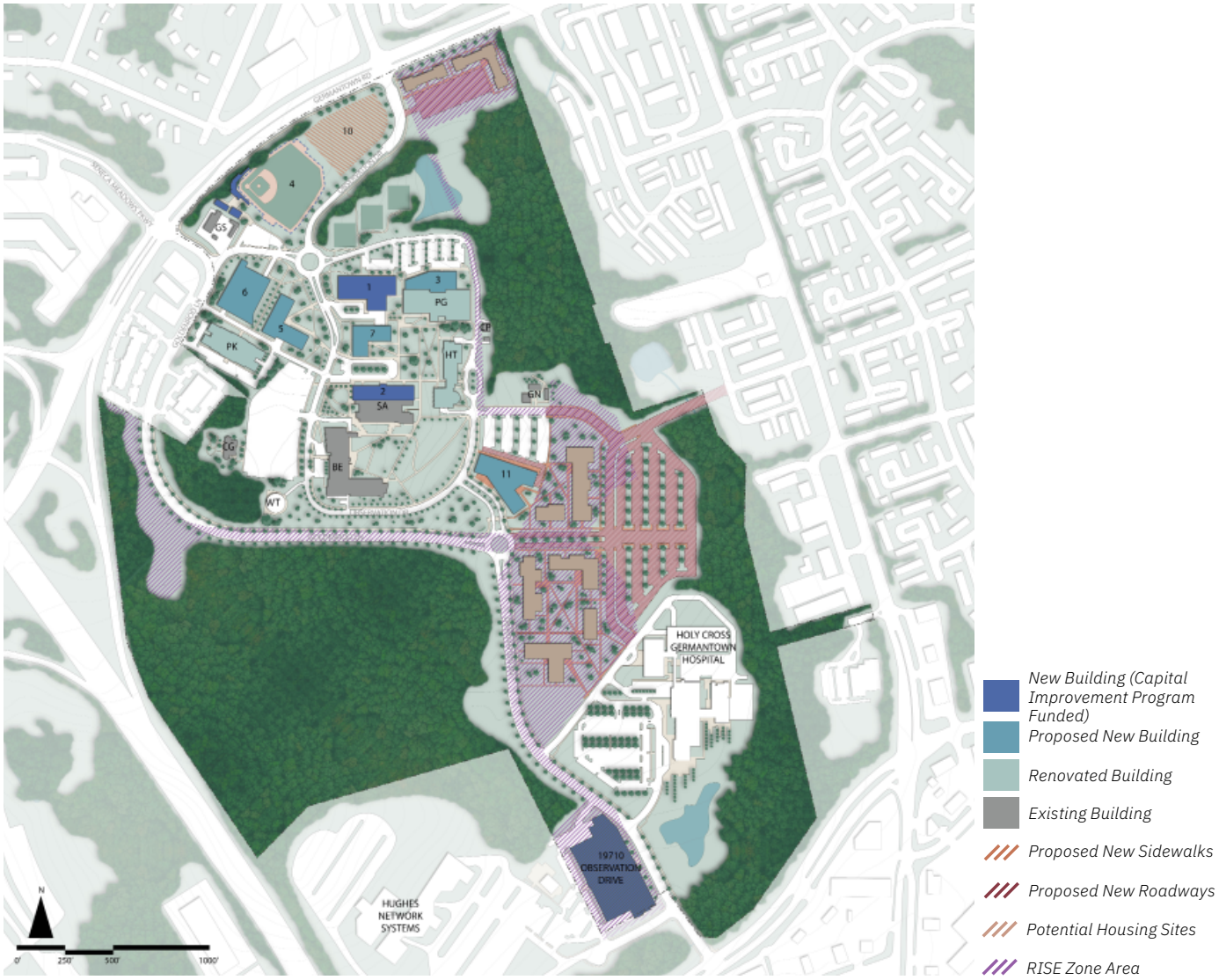
Campus Center Renovation — Renovations to CC will realign spaces opened up by the creation of the Long Nguyen and Kimmy Duong Student Services Center (SV), address replacement of systems original to the building and better connect the building to the campus landscape.

Computer Science Renovation — The Computer Science building will be renovated to host additional computer classroom space for the adjacent Humanities Building and additional drawing and painting studios to alleviate overutilized spaces in the Paul Peck Art Building. A portion of this will create a student study hub, providing a long-term use for student study, distance learning and socialization.

As the land use plan evolves, a new arts quad framed by the renovation and addition to TA, a new Media and Visual Arts Building and an expansion of the Robert E. Parilla Performing Arts Center (PA) will provide a more connected pedestrian circulation path and provide space for new academic facilities. To make room for future development, a new parking structure that could be wrapped with academic spaces will be required on the south end of the campus academic-core.

1.9.3 – GERMANTOWN CAMPUS

Figure 1.6 - Germantown Campus Final Phase 2023-33 Facilities Master Plan



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs & Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center
GN Greenhouse
GS Ground and Auto Storage

Key Issues

The Germantown Campus includes several newer buildings that effectively serve students in the sciences and computer science majors, but also has older facilities original to the founding of the campus with limited utilization and significant deferred maintenance backlogs. In particular, the Humanities and Social Sciences Building (HS), the Physical Education Building (PG) and the unrenovated portion of the Dr. DeRionne P. Pollard Student Affairs and Science Building (SA) are in need of investment to make them suitable for future needs. Key components of these buildings, such as the dining and library facilities, necessitate the development of a new building to create a sequence of swing space. While the campus quad gives the campus a center and a sense of place, the approaches to the campus core need improvement to create a sense of arrival, align service and pedestrian zones, and make the campus more intuitive as it expands beyond the current core of buildings.

In response to these issues, additional planning principles were established for the Germantown Campus, including:

Create a catalyst for Pinkney Innovation Complex for Science and Technology (PIC MC) — The implementation of the innovation campus has been slow to evolve over the past decade. The Facilities Master Plan includes new facilities that can help stimulate future development by the foundation by providing amenities that make the development attractive to tenants and provide a unique market niche for new development.

Leverage & activate green spaces — The Germantown campus has grounds that are described as bucolic and well-manicured. The Facilities Master Plan is intended to enhance the grounds as an asset for student retention and creating an environment that is inclusive to the students, faculty and community.

Expand access at the Physical Education Building (PG) — Develop a plan to increase access to PG in support of whole student wellness.

Planned Projects

The Germantown Campus will grow from the current quadrangle with the new Student Service Center, which includes a new roadway modification to clarify connections from the north entry of campus. The sequence of projects that follows will include the second phase of the SA renovation for additional STEM learning facilities and an expansion of PG for athletic, recreation, wellness and academic programs.

Student Services Center — In alignment with the goal of enhancing student success, the new Student Services Center will serve as a campus hub where students, faculty and staff will go to access and receive information, study, take classes, stay engaged with each other, participate in experiential and leadership programming, dine and have access to information about other opportunities to enhance their educational experience. This building will deliver space that creates community. This project will contain the key spaces for student engagement, such as Raptor Central, dining facilities and the library, and will make room in HS and SA to execute the balance of the plan.

Dr. DeRionne P. Pollard Student Affairs and Science Building Renovation Phase II — This project is the second phase of the renovation and expansion of the Science and Applied Studies Building to develop a larger Physics, Engineering and Math Center to support current and projected demand for STEM education.

Physical Education Building Wellness Renovation and Addition — The renovation and expansion of the PG building will address a backlog of deferred maintenance issues and provide the capability to serve a comprehensive list of academic, athletic, student wellbeing, student recreation and community recreation uses.

Baseball Facility — is a stand-alone project and will develop on a separate funding schedule.

Smaller projects include modest renovations intended to extend the use of buildings at the core of campus, such as HS, until more significant investments can be made in later years of the plan. The next phases of the plan will be influenced by development within the RISE Zone of the PIC MC.

As the land use plan evolves, the Arts and Communications Building (see #6 in Figure 3.30) will address the academic needs in these subject areas and the need for a parking structure, due to the previous campus improvements, will be confirmed. The future Humanities Building (HS) replacement will complete core campus goals and upgrades.

1.9.4 – EAST COUNTY EDUCATIONAL CENTER

The College will be opening the East County Education Center in the coming year, which will begin to shift some class offerings into the East County and provide the first step in the development of a fourth campus. This single building will offer all the student access services in abbreviated shared spaces. The academic offerings include health science labs, a multiple discipline workforce lab, computer labs and general course classrooms.

1.9.5 – EAST COUNTY CAMPUS

The location and breadth of offerings for the new campus will be developed in further detail in a separate planning process. During the development of the Facilities Master Plan, the following direction was developed as a starting point for that planning:

Holistic Campus: Mission-driven, leveraging academic + business connections, community-oriented—dedicated campus spaces to promote learning and social development work with individuals and groups in the community using a range of formal and informal methods

New Learning Environments: Student learning needs have shifted to a broad range of digitally infused spaces to serve individual and group learning. Classrooms must support new learning modalities, and additional spaces beyond the classroom are needed.

Student and Employee Wellness: Combining health, mental wellbeing, physical fitness and health education, and academic classrooms in a coordinated facility to connect to the full spectrum of student wellbeing and learning spaces. Options for community use.

Expand Access: Provide a touchdown for county services, non-profits and businesses, enhance childcare options and consider both physical and virtual environments.

Student "Union": Campus spaces dedicated to student success and development that provide opportunities for connections, collaboration and learning outside the classroom (dining space, meeting space, student retail, recreation space).

Connecting Services and Community: To support student success, special considerations for students who work, have young children, need access to technology or need to connect to county services.

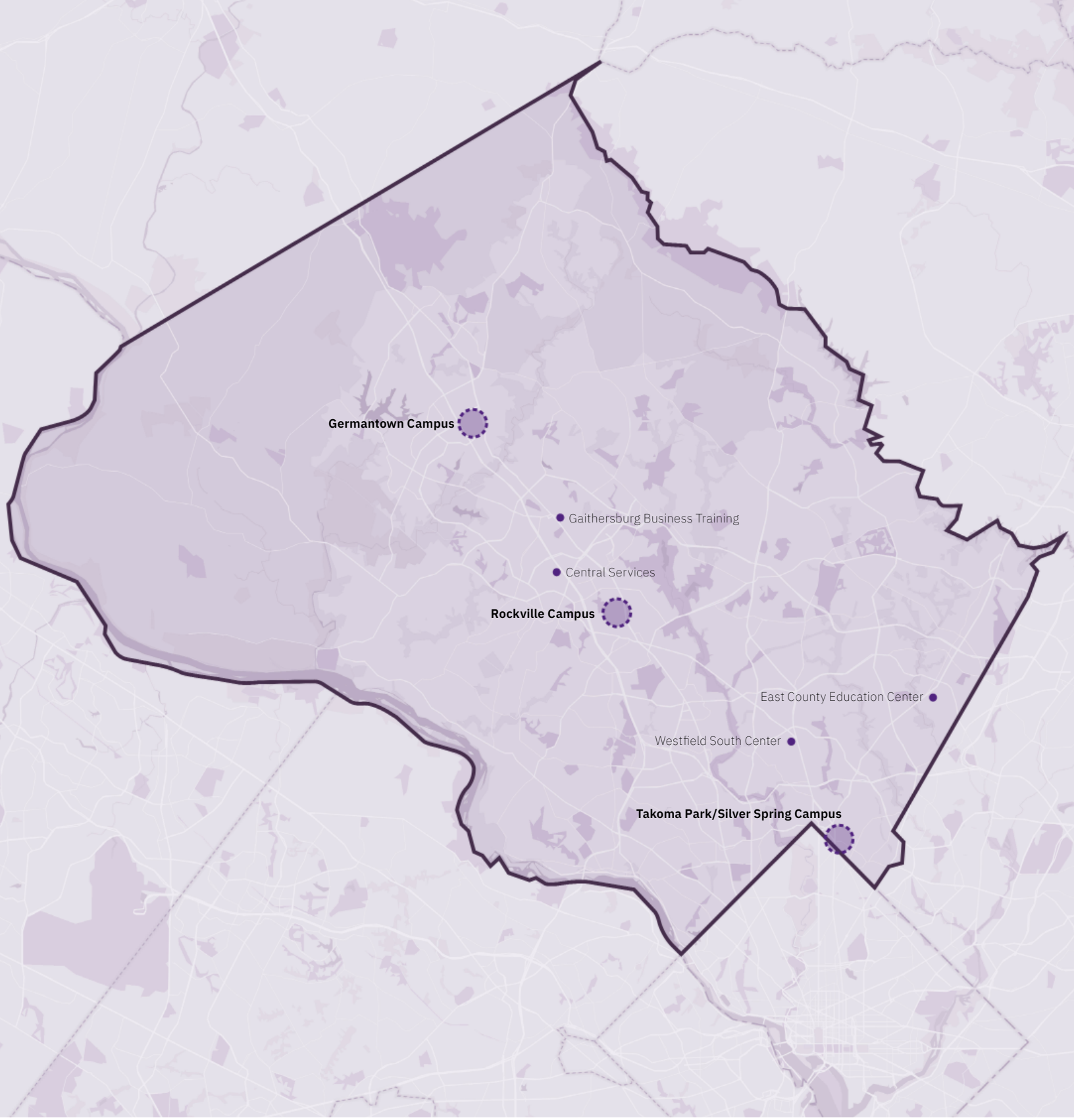
Making a Place: Attention to outdoor space, cohesive wayfinding and site amenities as opportunities to enhance student, employee and community engagement.

1.9.6 – WORKFORCE DEVELOPMENT AND CONTINUING EDUCATION

Workforce Development & Continuing Education (WD&CE) 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 Silver Spring at the Westfield South location, and in Gaithersburg at the Gaithersburg Business Training Center.

Unlike the credit course enrollment across the college, WD&CE enrollment was fairly stable prior to the pandemic. In 2013 the enrollment for non-credit courses was 24,403; it decreased by 9% between that point and 2015, but rebounded by 2019 to increase 2% to an enrollment of 24,890. The pandemic saw a dramatic decline in enrollment through 2021 of nearly 36% to 15,944. As the college has emerged from pandemic restrictions, enrollment in non-credit courses has increased by 4% to 16,644 in 2022. Enrollment should be tracked moving forward as the national demand for workforce development has grown, although there are a number of trade schools that have also grown to meet this demand.

In addition to specialized lab spaces, WD&CE generally fills classroom space not utilized by the credit courses. As such, WD&CE has been able to manage its growth through leveraging classrooms across the three campuses. The new East County Education Center and ultimately the East County Campus will provide an additional opportunity to meet the needs for classroom space. On the Rockville campus, the upper level of the Campus Center, which houses space for WD&CE, will be renovated as part of the systemic upgrades. This project will allow for the reconfiguration of space to better meet the needs of WD&CE.



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Montgomery College
Facilities Master Plan 2023 — 2033

CHAPTER 2

Takoma Park/Silver Spring Campus

CANNONDESIGN

January 31, 2024

CONTENTS

SECTION 2.1

Background Information

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 5,400 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 COMPARISON WITH 2013-23 FMP

The 2013-23 Facilities Master Plan described a projected space deficit in 2023 of 163,318 NASF, and proposed to meet that deficit by the construction of three new buildings and renovation of one existing building. New projects consisted of a new Math and Science Center, a new Health and Fitness Center combined with a Library Learning Commons, and a new Math Building. A renovation was proposed for Pavilion One and Pavilion Two. All of 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 Math and Science Center Building was proposed to be built on the site of Science South and Falcon Hall. Following the approval of the 2013-23 Facilities Master Plan, this project began to take form. The Catherine and Isiah Leggett Math and Science Building will be completed in 2024. Proposed construction of the new Library Learning Commons was shown on the site of the existing Math Pavilion and North Pavilion, allowing the Resource Center to stay in use during construction. The new Math Building was intended for the site of the existing Resource Center. Finally, the new Health and Fitness Center was the last new construction project in the sequence and was intended for the site of Science North.

Since the 2013-23 Facilities Master Plan was approved, several projects have begun and are in progress at the Takoma Park/ Silver Spring campus. These projects follow the spirit of the plan but have varied from the original proposal in some key aspects. Falcon Hall and Science South were demolished and the Catherine and Isiah Leggett Math and Science Building is being constructed in their place. The Resource Center is under renovation to enhance the library facilities on campus, which diverges from the 2013-23 Master Plan but is reflective of an annual FMP update.

The 2023-33 Facilities Master Plan describes a considerably lower projected space deficit in 2033 of 102,689 NASF. The space deficit is proposed to be met by the construction of two new buildings and partial to full renovations of four existing buildings. Proposed new construction includes a new Academic and Wellness Facility as well as a new Mixed-Use Academic Building. The Resource Center, the Catherine F. Scott Commons, Pavilion Four, Pavilion One and Pavilion Two are proposed to be renovated.

A majority of the new construction and renovation projects are located on the east side of campus; however, unlike the 2013-23 Facilities Master Plan, one new building is proposed on the west side of campus, the Mixed-Use Academic Building. The new Academic and Wellness Facility similarly will be located on the site occupied by Science North, Math Pavilion, and North Pavilion and is necessitated by the removal of Falcon Hall as part of the in-progress Math and Science Building.

2.1.3 ENROLLMENT PROJECTIONS

As noted previously, the College has seen a decline in enrollment over the past 10 years, with a peak enrollment in 2012 and a decline of 37.6% from the peak enrollment to the Spring of 2022. Specific to the Takoma Park/Silver Spring campus, the year-over-year Fall enrollment numbers from 2021 to 2022 fell 18.9% from 6,924 to 5,615. This decline reflects a 25.7% decrease in on-campus students, but an increase of 5.4% in distance-learning students.

Based on Enrollment Projections 2023-2032 Maryland Public Colleges and Universities, published in May 2023 by MHEC, over the next decade, the college is projected to experience Full Time Equivalent (FTE) enrollment growth of 41% and unduplicated headcount growth of 30%. Since many students take courses on multiple campuses, the distribution of the growth may vary as program offerings are adjusted. In particular, the development of the East County Education Center, due to open in 2024, and the development of an East County Campus will impact where growth may occur across all campuses. In the Fall of 2022, 33% of students took courses at Takoma Park/Silver Spring campus. If the numbers hold, it could be anticipated that the campus would house 7,300 students at the end of the planning period.

SECTION 2.2

Existing Site Conditions and Analysis

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 D.C. streetcar suburb of Takoma Park and the urban Georgia Avenue corridor, south of downtown Silver Spring. The campus straddles both sides of the WMATA/CSX tracks and is located about equal distance from two Metro stations, Silver Spring and Takoma Park. Of all the Montgomery College campuses, Takoma Park/ Silver Spring is the most compact 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 were built in the late 1970s. Several buildings are located to the east of 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 redevelopment of the Takoma Park campus, with the demolition of Science South and Falcon Hall and the construction of the Leggett Math & Science Building and the renovation of the library in the Resource Center, both due to be completed in 2024.

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. Campus buildings located on the Silver Spring side include the Cultural Arts Center (CU), the West Parking Garage (WG), the Health Sciences Center (HC) and Morris and Gwendolyn Cafritz Arts Center (CF). Open space on this west side of campus is limited to hardscape plazas and small-scale landscape areas.

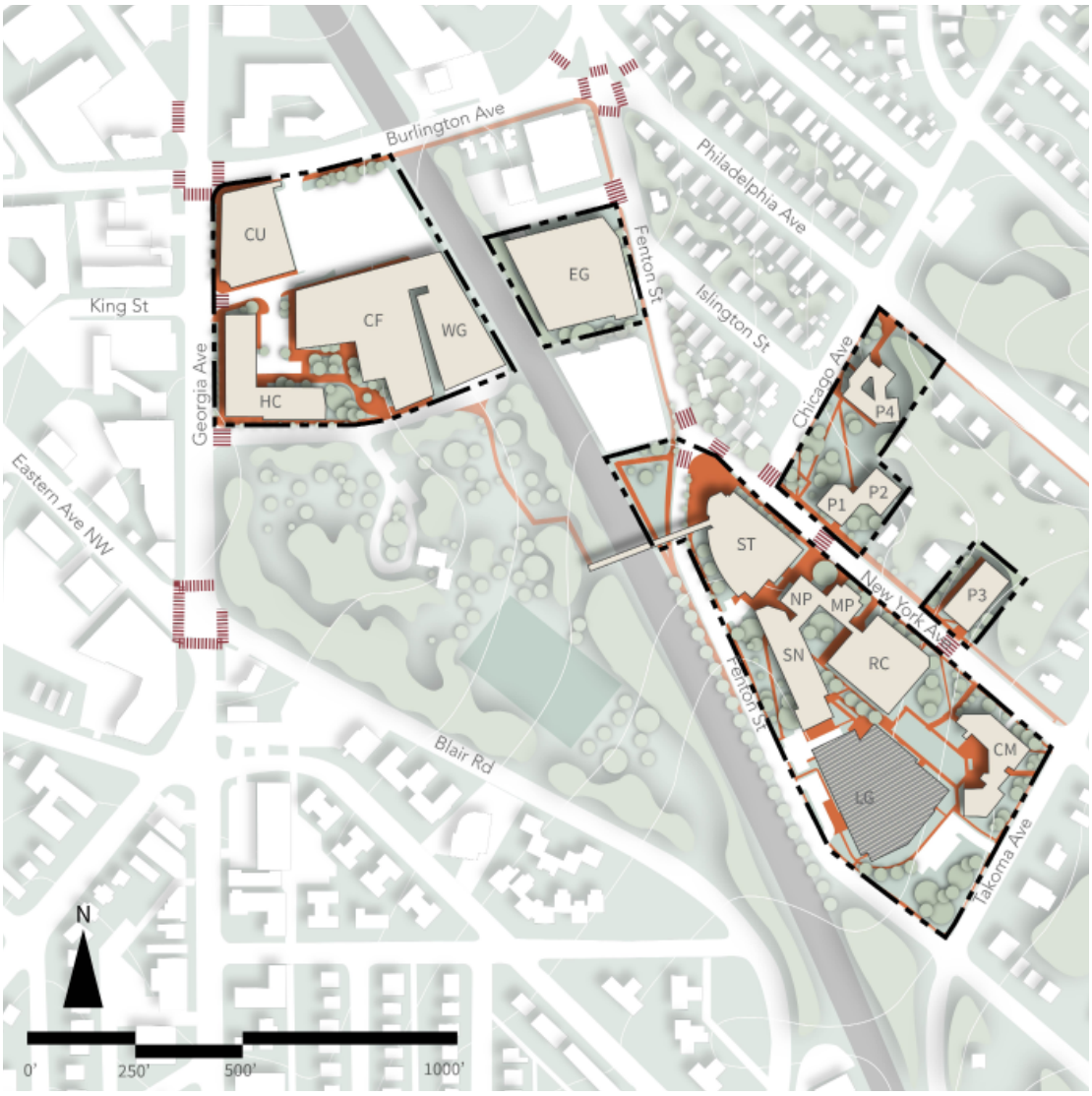
The Takoma Park side of campus is set in the midst of a single-family residential neighborhood consisting of relatively small gable roof houses. The original campus buildings were designed in the early 1970s by the architecture firm Skidmore Owings and Merrill out of California. They are small in scale and pavilion-like in character, with open air “corridors” and steep sloped roofs. While their size and scale are likely a response to the residential neighborhood surrounding the campus, their openness is not suited for the local climate. 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 (SN) and the Resource Center (RC), 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 - Falcon Hall, which was subsequently demolished, and the Commons. Pavilion Four (P4) was built in the same period at the far end of Block 69. In 1980, the East Parking garage (EG) was built on a parcel that is close, but non-contiguous, to campus and was purchased as a built garage by the College. The newest and largest building on the Takoma Park side of campus is the Student Services Center (ST), built in the mid-2000s. The new Leggett Math & Science Building (LG), located at the southwest corner of the campus at the intersection of Takoma Avenue and Fenton Street, is due for completion in 2024. The library renovation, which occupied approximately 50% of the Resource Center, will also be opening in 2024.

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 mature trees and lawn space.

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.

Figure 2.1 — Pedestrian Network



BUILDING KEY

East Campus

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- **LG** Catherine and Isiah Leggett Math & Science Building

West Campus

- **HC** Health Sciences Center
- **CF** Morris & Gwendolyn Cafritz Foundation Arts Center
- **CU** Cultural Arts Center
- **WG** West Garage

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 strongly focused on the 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 have traditionally had little visibility from the surrounding neighborhood. The buildings are small and are oriented away from the street. Campus gateway signage is small 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 Georgia 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 an electronic signage at the corner, giving the Campus additional presence within its setting.

Gateway signage should be considered in additional locations to help identify and anchor the non-contiguous campus boundaries. Creating viewsheds to campus from its surroundings are a vital part of establishing the campus presence in its community. 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.

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 traffic on the adjacent residential neighborhood. 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 Center 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.

Figure 2.2 — Gateways and Open Space

BUILDING KEY

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RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
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P1 Pavilion One
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P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

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CU Cultural Arts Center
WG West Garage

2.2.4 MAJOR UTILITIES

Mechanical

The campus heating and cooling utilities are segregated and independent of each other due to the railroad that separates the east and west campuses. Each half of the campus has a central heating and cooling plant to serve the adjacent satellite buildings currently operating on heating and chilled water systems. There are central heating and cooling plants located in the Student Services Center and the Morris and Gwendolyn Cafritz Foundation Arts Center. Thermal ice storage is installed in the Student Services Center to increase overall cooling capacity. Ice storage modules are also located in the West Garage with connections to the Morris and Gwendolyn Cafritz central plant. The cooling and heating capacity of the existing central plants is anticipated to be adequate for the future demand on the systems.

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 transformers to distribute 480/277 volt, 3 phase, 4 wire systems in the buildings except for the Student Services Pavilion and the Mathematics Pavilion which are being fed from other buildings. The existing Potomac Electric Power Company feeders have adequate capacity to accommodate planned campus expansion.

Natural Gas

Natural gas is provided by Washington Gas via a 6" main for the East Campus and an 8" main beneath Georgia Avenue for the West Campus. The existing services currently meet the campus needs and are believed to be adequate for planned growth.

Water and Sanitary

Water and sanitary sewer service are provided and serviced by Washington Suburban Sanitary Commission (WSSC), with all campus buildings being served directly from public mains and having independent meters. Combined service connections split into fire protection piping and domestic water piping in incoming service mechanical rooms. There is no private "on-site" system for domestic/fire water service or sanitary sewer on the campus. The public systems have adequate capacity to serve the campus' needs and planned new development.

Per the June 2022 Utilities Master Plan, the campus sanitary system discharges into the WSSC sewer system through collector pipes through campus. The existing collector lines are adequately sized for the current building capacity. New collector lines will be installed or replaced as existing buildings are replaced with future buildings with new footprints.

Storm Drainage

Storm drainage is managed differently on the two sides of campus. On the East Campus leaching basins dating back to the 1970s were utilized, but they are failing and no longer functional. Recommendations from past Utility Master Plans suggest that stormwater systems be addressed as buildings are renovated or replaced as with the Leggett Building. The West Campus discharges stormwater directly to the public stormwater drainage system which is believed to be adequate. All new buildings are required to provide on-site stormwater management which would include bio-retention, green roofs or rain garden areas.

Information Technology Systems

The main point of presence (MPOP) for the campus is in the Morris and Gwendolyn Cafritz Foundation Arts Center (CF). Each of the existing buildings is connected via a duct bank 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.

2.2.5 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

storm drainage systems located at the intersection of Fenton and Takoma Streets and New York Avenue and Takoma 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 systems 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 on New York Avenue.

Based on the 2006 and 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 diminishes over time due to sediment and debris accumulation combining with 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 Sciences Center, Morris and Gwendolyn Cafritz Foundation 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 two acres or less.

Stormwater management water quality volume for all buildings with the exception of the Morris and Gwendolyn Cafritz Foundation Arts Center is treated using underground proprietary filtering device(s) such as StormFilters and Baysavers. The Morris and Gwendolyn Cafritz Foundation Arts Center project removed a sufficient amount of pavement to meet its stormwater management water quality requirements.

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

2.2.6 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.

Forest Conservation requirements for the West Campus are currently being met by approved Forest Conservation Plans # mr-04105-m-1 (Approved February 24, 2005), # mr-05106-m-1 (Approved March 23, 2006), and the Final Forest Conservation Plan Amendment #mr-2008108-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 Maryland National Capital Parks and Planning (MNCPP) Forest Conservation requirements, but tree protection measures were still required. Additionally, 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. MNCPP reviewed and approved Forest Conservation exemptions for improvement projects at Pavilion Three (April 2013), Pavilion Four (December 2012), Legget (2023) and the Resource Center Library renovation (2024).

2.2.7 PEDESTRIAN & BICYCLE CIRCULATION

Pedestrian Circulation

The Takoma Park/Silver Spring (TPSS) Campus has a barrier that significantly impedes pedestrian circulation. The WMATA/CSX railroad tracks split the Campus in half, with only a pedestrian bridge as connection on campus. An alternative route would be to circulate along Burlington Avenue, which bridges over the WMATA/CSX tracks to the north of the Campus. The Campus is compact enough to encourage walking from one end to another. The pedestrian circulation on Campus is shown in Figure 2.3.

The Pedestrian Level of Comfort (PLOC) methodology developed by the Montgomery County Planning Department captures how comfortable it is to walk (or when using a mobility device, roll) in different conditions. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and pathway segment. Pathway scores are based on factors such as width, posted speed limit, buffer width and traffic volume. Crossings are scored using different metrics, such as presence of traffic control (stop sign or traffic signal), number of lanes crossed, highest posted speed limit and crosswalk type.

PLOC for the TPSS Campus and surrounding area are shown in Figure 2.4. Pedestrian crossings on Georgia Avenue at King Street and Jesup Blair Drive are undesirable because the intersections are uncontrolled with high traffic volumes on Georgia Avenue. The pedestrian route on Burlington Avenue is undesirable due to factors such as high vehicle speed and the lack of buffer between traffic and pedestrians. The crossings on New York Avenue between the pavilions and the other academic buildings are somewhat uncomfortable for pedestrians.

A primary connection between the shuttle stop on the south side of King Street and surface parking lot W1 north of King Street to the pedestrian bridge is via the West Garage (WG) drive aisle. While there are sidewalks adjacent to the aisle, there are very narrow parts of the sidewalk that make it uncomfortable to use, particularly next to the columns.

Figure 2.3 — Pedestrian Circulation

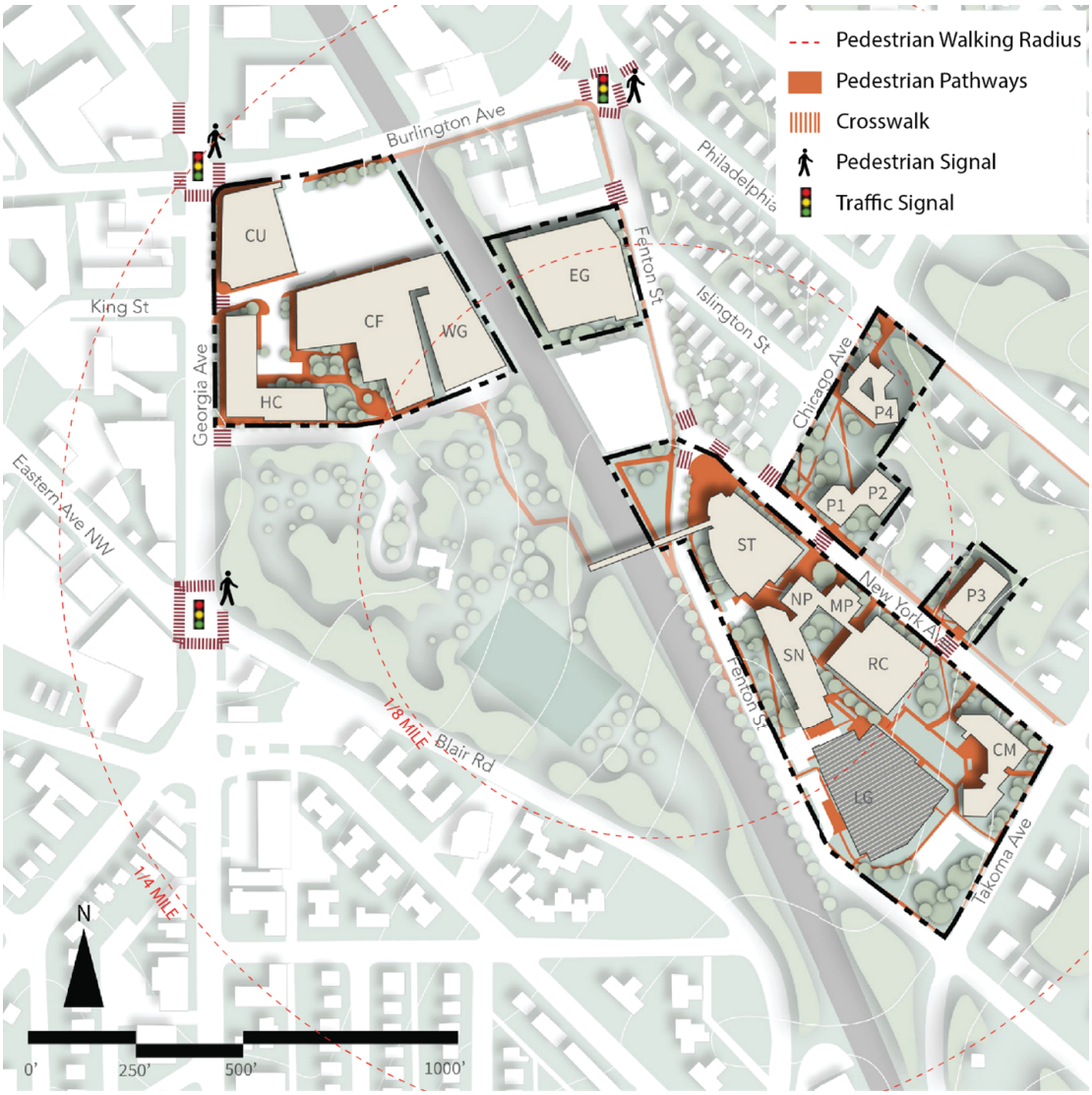

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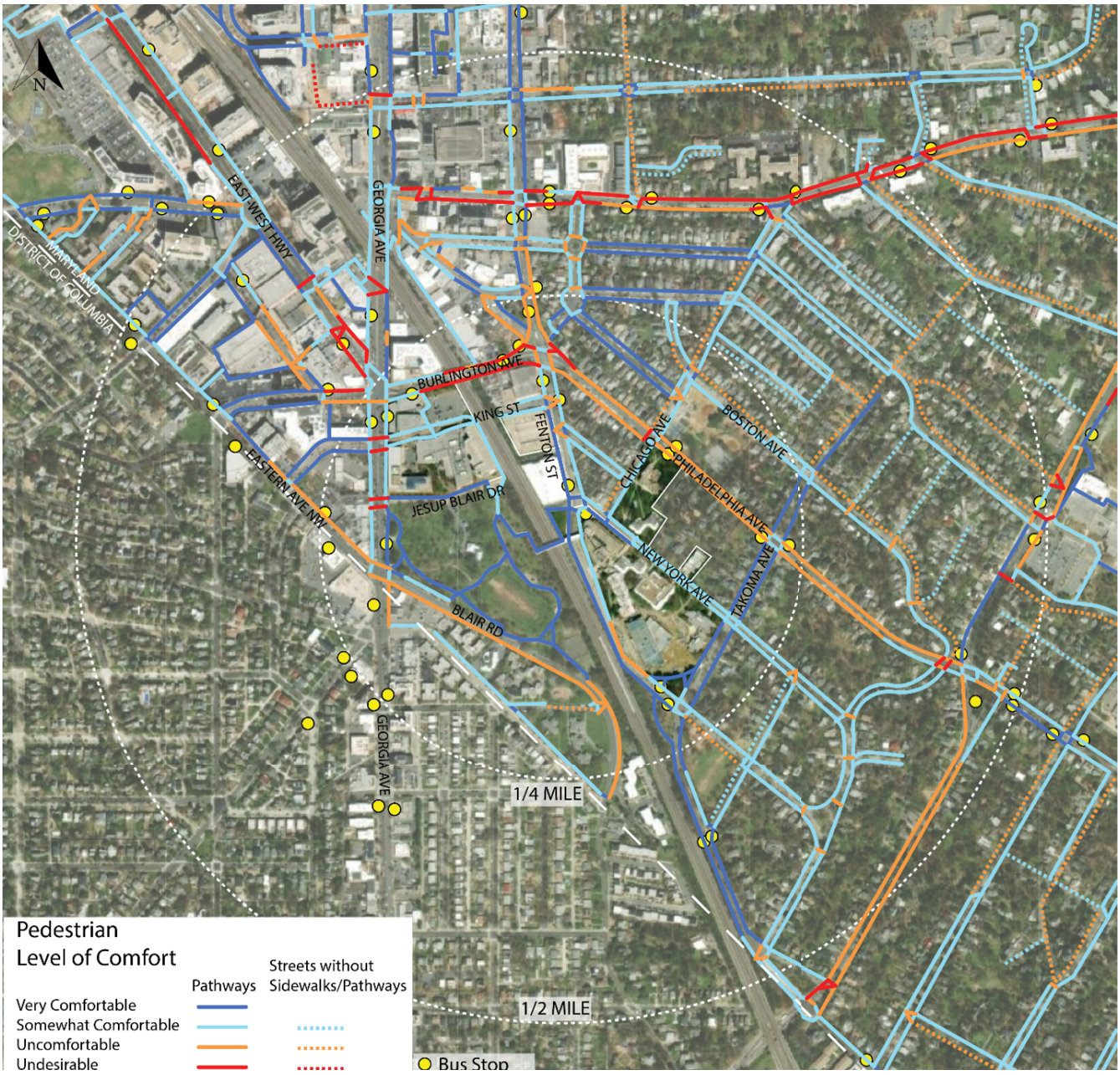
Figure 2.4 — Pedestrian Level of Comfort

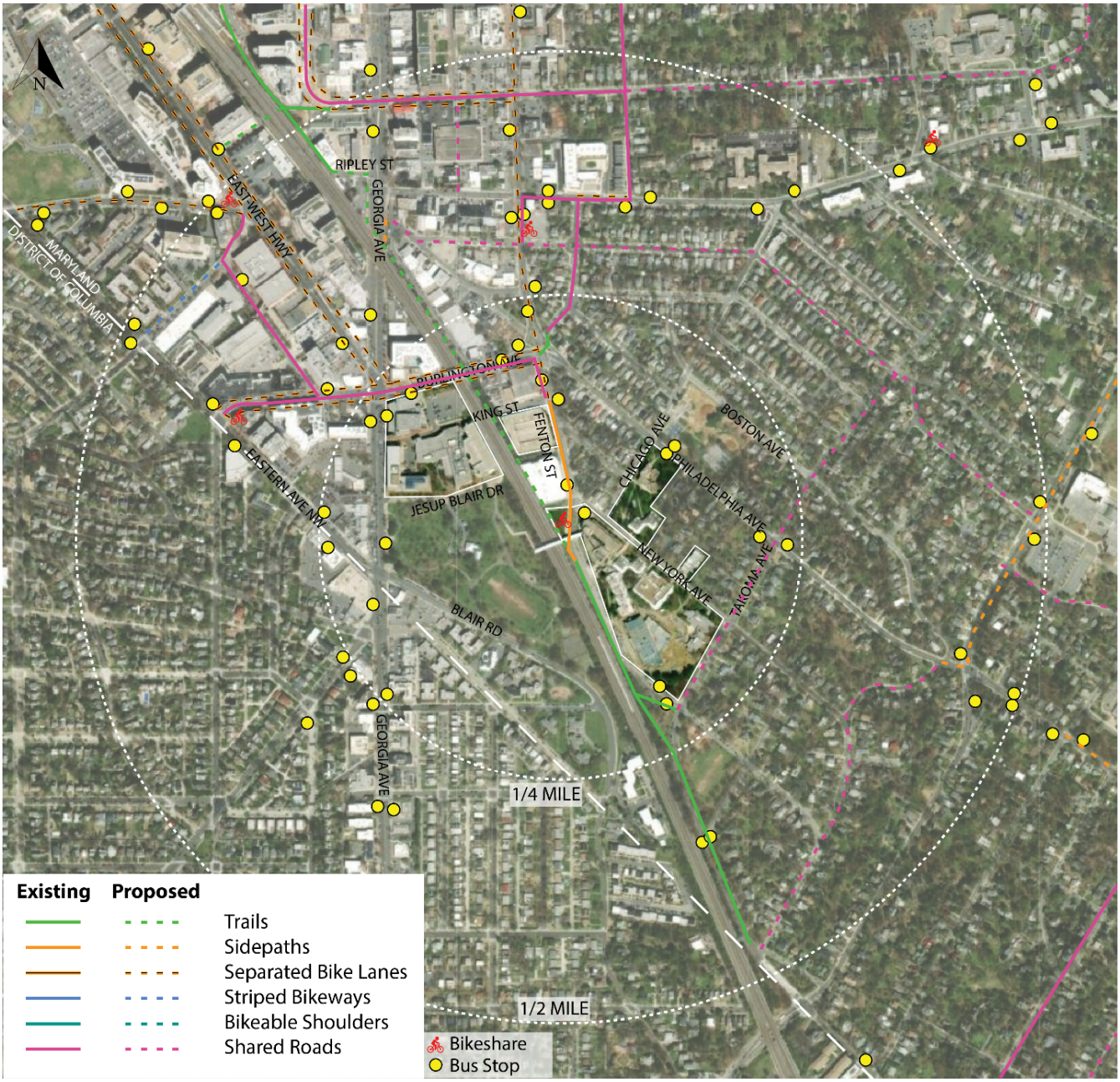


Bicycle Circulation

The Montgomery County Bicycle Master Plan in Figure 2.5 shows existing and proposed bikeways. There is a sign on the pedestrian bridge that says “No Bikes Allowed.” The only bicycle facilities available adjacent to the Campus are shared roads, with the exception of a side path on Fenton Street from King Street to the Metropolitan Branch Trail (MBT).

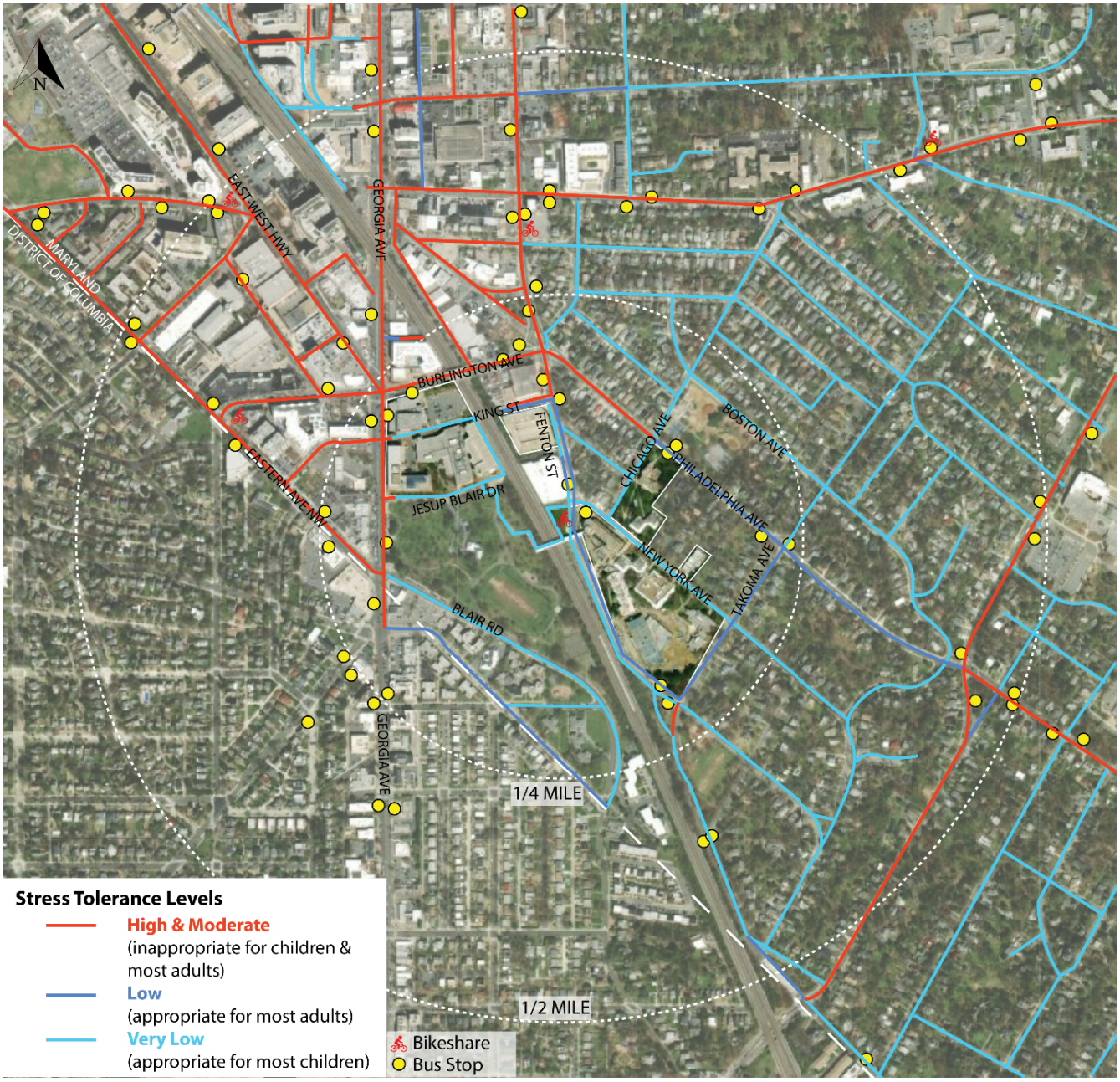
The MBT is a multi-phased project that, once complete, will span 8+ miles, connecting the Silver Spring Transit Center with Union Station in DC. The MBT will serve many neighborhoods along the way and connect both directly and indirectly with other major trails in the area. The MBT’s current northern terminus at King Street in Silver Spring would be extended to the Silver Spring Transit Center. The trail will parallel the train tracks on the northeast side to terminate at Silver Spring Transit Center.

Figure 2.5 — Bicycle Master Plan



Level of traffic stress (LTS) is an approach that quantifies the amount of discomfort that people feel when they bicycle close to traffic. The LTS methodology assigns a numeric stress level to streets and trails based on attributes such as traffic speed, traffic volume, number of lanes, frequency of parking turnover, ease of intersection crossings and others. When a street has a moderate or high level of stress, it may be a sign that bicycle infrastructure, like separated bike lanes or shared use paths, is needed to make it a place where more people will feel comfortable riding. As Figure 2.6 indicates, stress levels are high and moderate on Georgia Avenue and Burlington Avenue. The east side of the Campus generally has low or very low levels of stress as the area is mostly residential. The west side of the Campus is mostly commercial and has higher levels of stress.

Figure 2.6 — Bicycle Level of Traffic Stress



2.2.8 TRANSIT

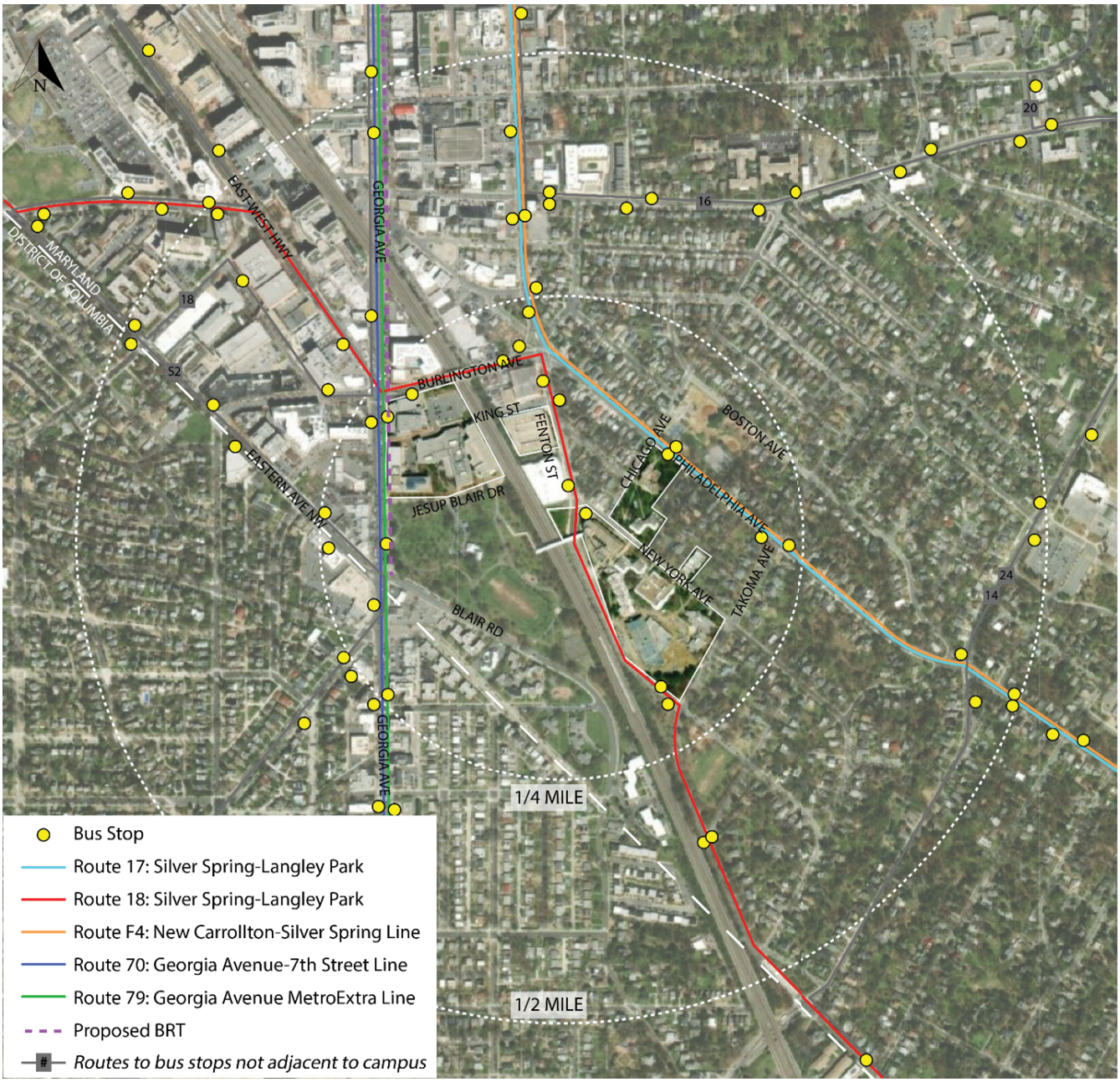
Montgomery College contracts for shuttle services between the TPSS and Rockville campuses and between the Rockville and Germantown campuses. Shuttle stops at TPSS are located at the West Garage-Blair Drive. Shuttle service from Rockville to TPSS runs from 7:00 a.m. until 8:45 p.m. and TPSS to Rockville from 6:30 a.m. to 8:15 p.m. Shuttles run every 75 minutes. The shuttle greatly decreases the travel time between campuses compared to using public transportation, reducing travel time from 75 minutes to 45 minutes.

The Campus is well served by public transportation. Multiple Ride-On bus routes and WMATA Metrobus routes have stops on or near Campus. Metrobus Routes 70 (Georgia Avenue-7th Street Line) and 79 (Georgia Avenue MetroExtra Line) have stops adjacent to the west side of Campus, providing access to parts of D.C. Metrobus Route F4 (New Carrollton-Silver Spring Line) has stops on both sides of the Campus. Ride-On Routes 17 and 18 (Silver Spring-Langley Park) have stops near the east side of the Campus on Philadelphia Avenue. Routes 18, 70 and F4 connect the Campus to the Silver Spring and Takoma Metro Stations. Routes 17 and 79 also connect the Campus to the Takoma Metro Station. Many other routes have bus stops within a half mile of the Campus. The transit map is shown in Figure 2.7. Key stops and frequency of the nearest routes are shown on Table 2.1.

Table 2.1 — Transit Route Information

ROUTE	KEY STOPS	FREQUENCY
17	Silver Spring Metro Station, Washington Adventist University	45 min.
18	Silver Spring Metro Station, Washington Adventist University	45 min.
F4	Silver Spring Metro Station, The Mall at Prince George's	12 min.
70	Silver Spring Metro Station, Washington Convention Center	12 min.
79	Silver Spring Metro Station, Washington Convention Center	10 min.

Figure 2.7 - Campus Transit Map



Students and faculty/staff took a survey in May 2023 to give feedback on their campus experience. The survey gathered information such as residential zip codes, mode of transportation and incentives for carpool and public transportation. At present, 9% of faculty/staff and 33% of students arrive at the TPSS Campus via bus and shuttle. Student and faculty/staff responses regarding what would encourage use of public transportation are shown in Figure 2.8 and Figure 2.9.

The public transportation encouragements listed in the survey are:

- Help Finding Bus Service to Meet My Schedule
- Express Bus from Your Area of Residence to Campus
- Transit Subsidies

Of the 70 students who responded to this question, 44% were willing to switch to public transportation if one of the three choices were available. Half of these students responded that they would use public transportation if there was an express bus to campus from their residential area. A considerable number of students also responded they would take public transit if there was a bus service that meets their schedule. As shown in Figure 2.9, faculty/staff residential areas were more scattered. Of the 34 faculty/staff responses, 41% were willing to switch to public transportation if one of the three choices were available. Majority of these faculty/staff (26%) were interested in having an express bus service. The opportunity of express bus service should be explored in detail.

Figure 2.8 — Transit Incentives for Students

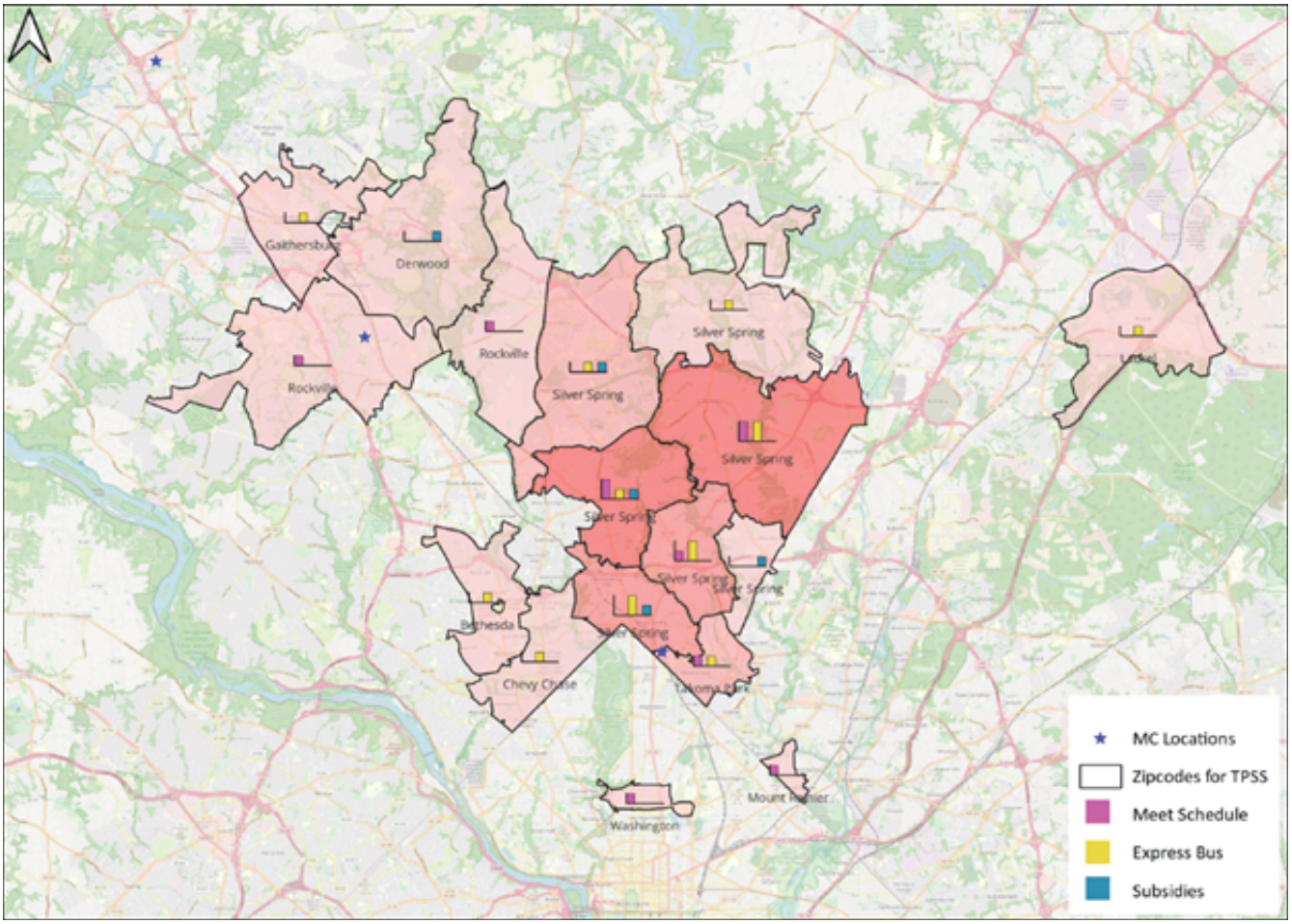
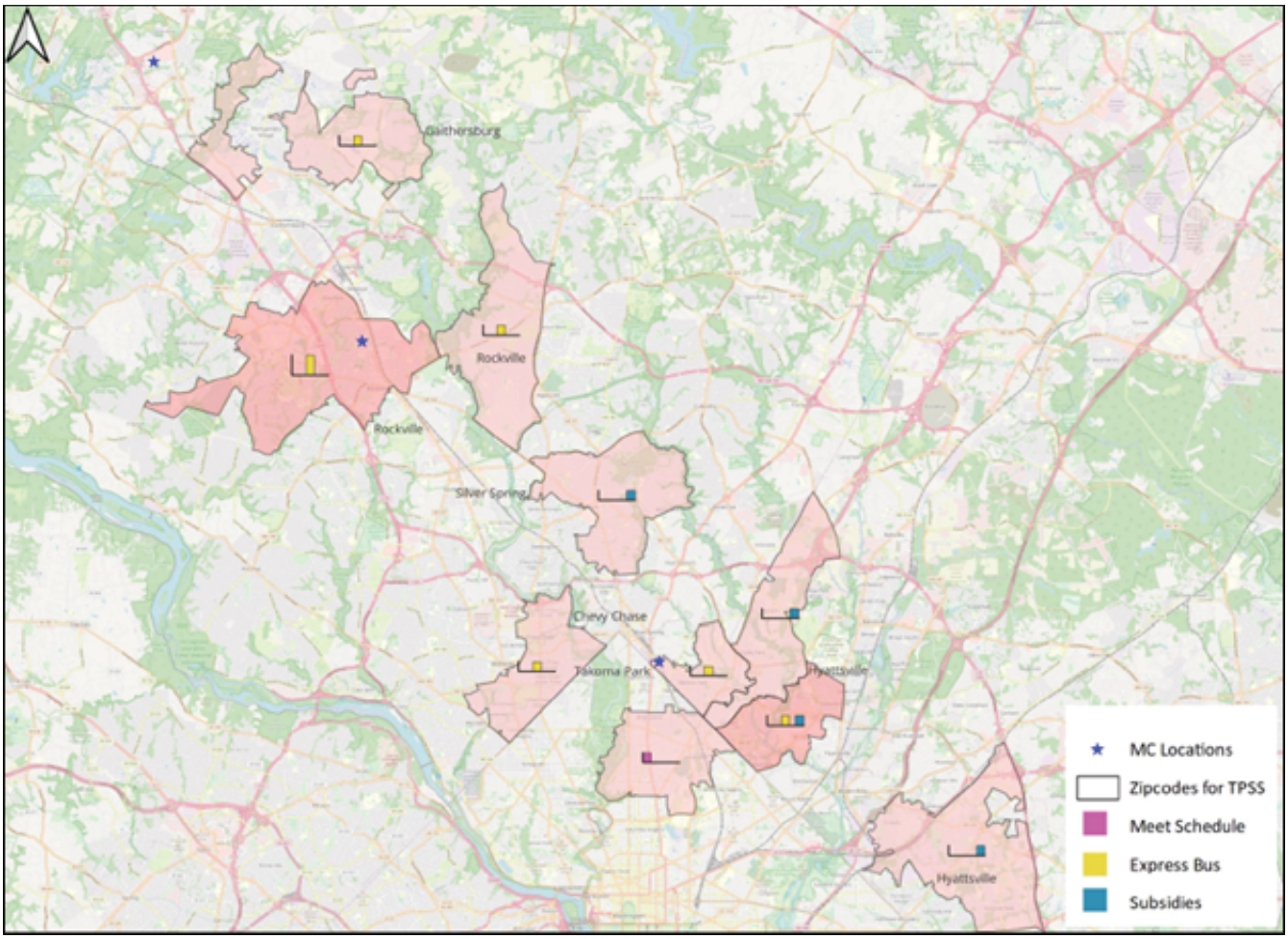


Figure 2.9 — Transit Incentives for Faculty/Staff



2.2.9 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. Campus gateways are shown in Figure 2.10. The Landmark Gateway Signage elements for this campus will be different, appropriate to their contextual settings.

Traffic Volumes

Turning movement counts conducted on March 7th, 8th, 2023 from 7-10 a.m. and 2-7 p.m., illustrated on Table 2.2, are peak inbound and outbound traffic at the primary vehicular access points. During the morning peak hour, there was a total of 260 inbound trips and 25 outbound vehicle trips. During the evening peak hour, there was a total of 99 inbound trips and 115 outbound vehicle trips.

Trip distribution indicated by the data is shown in Figure 2.11. Approximately half of the vehicle trips park in the East Garage. For those who park on the west side of the Campus, more vehicles enter from King Street than Jesup Blair Drive.

Table 2.2 — Peak Hour Traffic

	A.M.		P.M.	
Intersection	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Georgia Ave./King St.	85	10	30	36
Georgia Ave./Jesup Blair Dr.	33	7	19	28
TPSS East Garage	142	8	50	51
Total	260	25	99	115

Figure 2.10 — Vehicular Access

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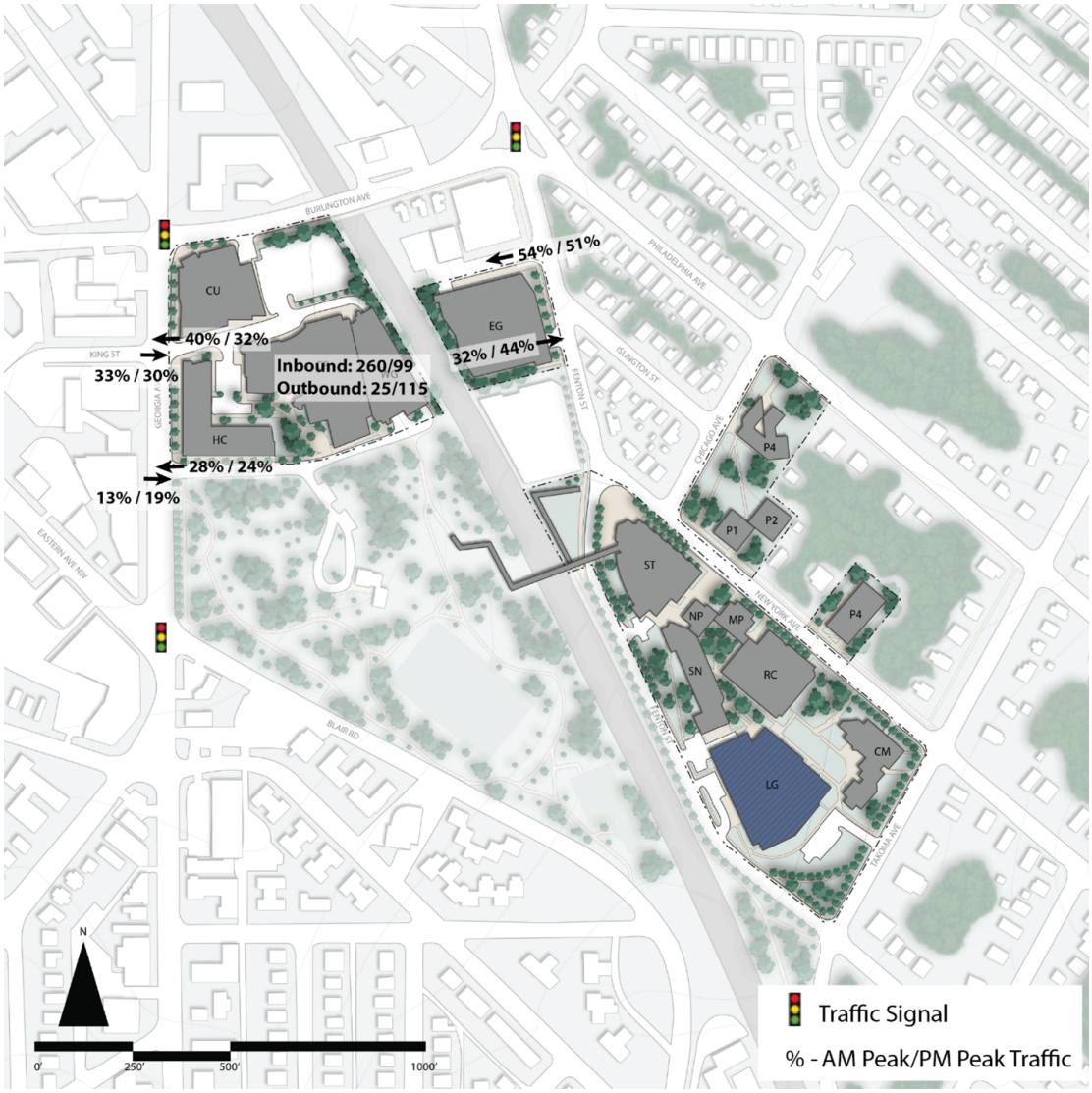
Figure 2.11 — Trip Distribution



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Transportation Mode Share

The survey of students and faculty/staff taken in May 2023 also obtained information on commuting mode share, shown in Table 2.3. Of all faculty/staff who responded to the survey, 43% arrive by passenger vehicle and 51% arrive by alternative modes of transportation. Of all students who responded to the survey, 69% arrive by passenger vehicle and 29% arrive by alternative modes of transportation.

2.2.10 PARKING

The total parking capacity of the Campus is 1,171 spaces (does not include the Cafritz underground garage as access is restricted) based on the parking survey conducted on Wednesday March 8th and Thursday March 9th, 2023 at 10 a.m., 1 p.m. and 7 p.m. A peak of 783 parked vehicles was counted on Thursday at 10 a.m., giving a parking utilization rate of 70% overall. Student parking occupancy by lot is shown in Figure 10. Faculty parking occupancy by lot is shown in Figure 11. Lot W1 has greater than 90% student utilization. In WG, student spaces are 85% utilized and faculty/staff spaces are 80% utilized. EG is less utilized by students and faculty/staff. It is noteworthy that it takes approximately three minutes to walk between EG and the academic building on the East Campus.

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. As shown by the parking survey, there is adequate parking for commuting students, faculty and staff in the East Garage. Parking in Lot W1 and WG are at functional capacity.

Table 2.3 — Transportation Mode Share

	Drive	Drop-Off	Carpool	Transit	Bike	Walk	Other
Students	31%	12%	2%	33%	2%	14%	6%
Staff	67%	2%	0%	9%	11%	9%	2%
Overall	41%	9%	1%	26%	5%	13%	5%

Figure 2.12 — Student Parking Occupancy

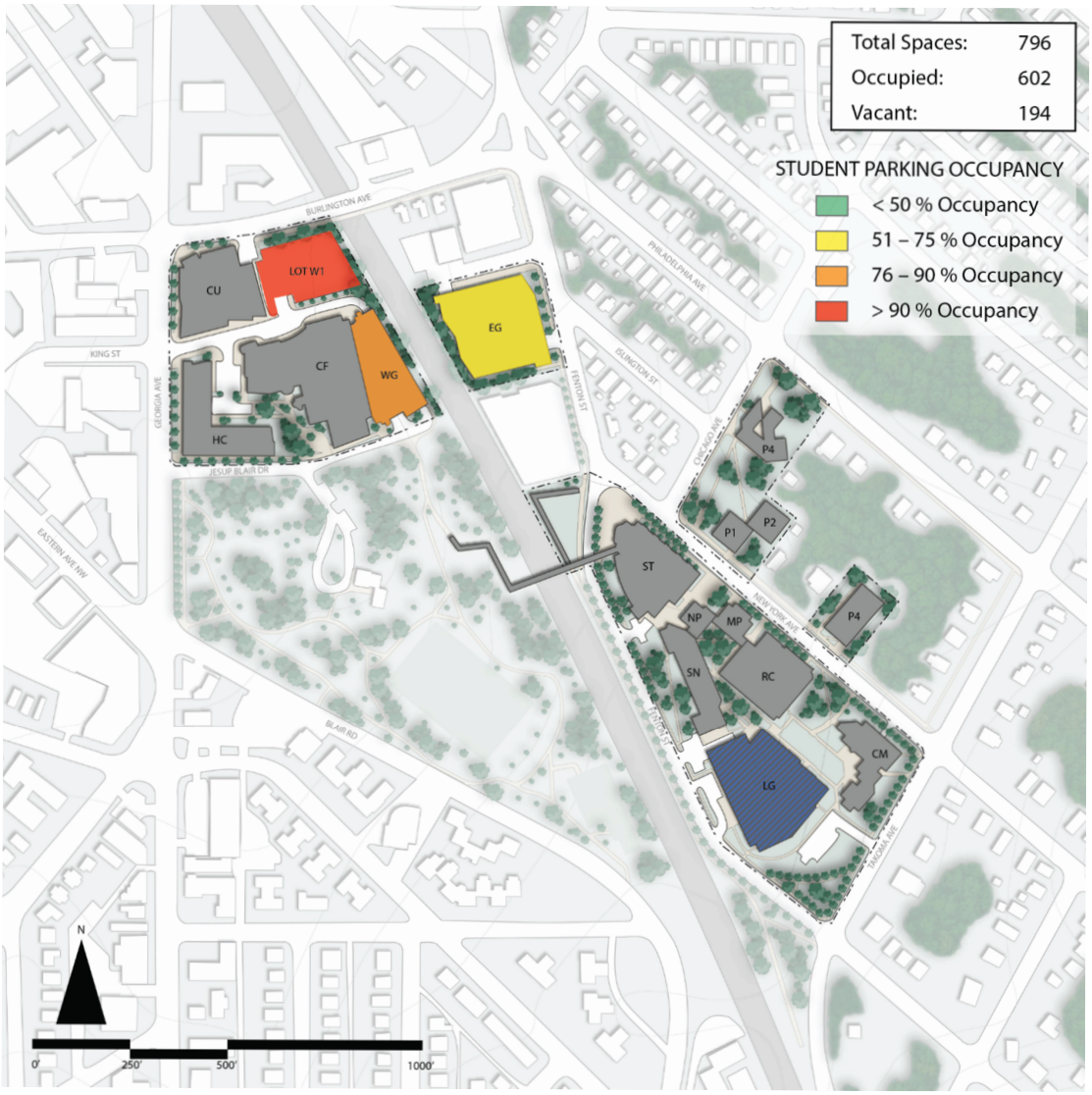

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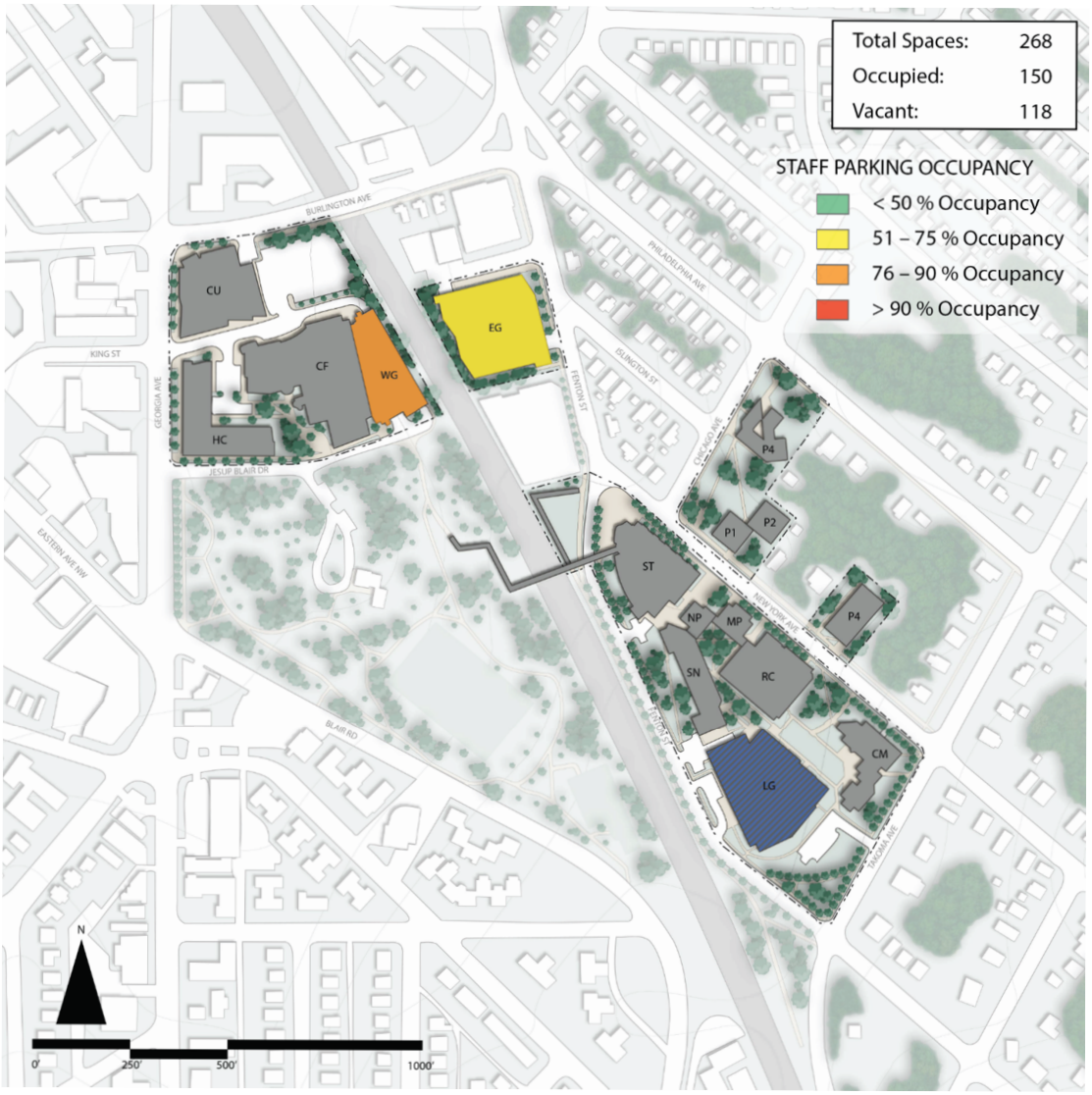
Figure 2.13 — Faculty/Staff Parking Occupancy



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SECTION 2.3

Existing Building Conditions and Analysis

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).

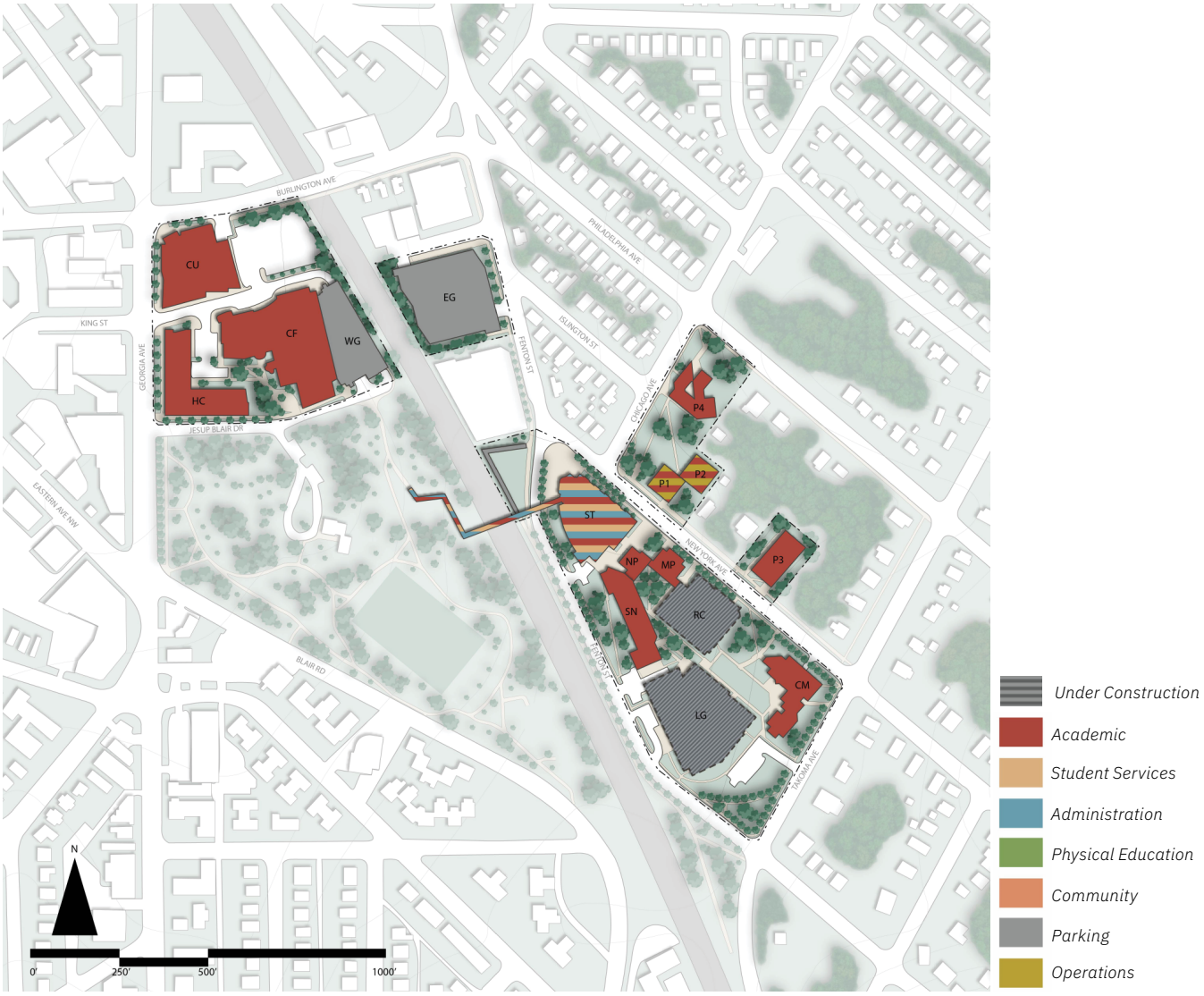
The newer buildings have been designed in conformance with the needs of modern campus buildings and meet the expectations of their uses. Below is a list of the buildings on campus and an assessment of the adequacy of the facilities to support the programs and functions.

A utilization analysis was undertaken using course data from the Fall semester of 2022. The analysis reviewed classrooms and labs for the percent of weekly core capacity utilization and broke down the results by academic unit, building, floor, classroom type and lab type.

Figure 2.14 distinguishes the use of buildings across campus. There are two major points to be taken from this diagram. First, the west side of campus lacks any student services or administration space, which may make it difficult or inconvenient for students to reach those resources if the majority of their classes are on the west side of campus. Second, now that Falcon Hall has been demolished and the Leggett Math and Science building is under construction, there is no longer any Physical Education space on campus.

The academic departments on campus tend to have localized classroom usage, as shown in Figure 2.15, which is categorized by the department that uses the majority of the space for a majority of the time in a specific building. Figures 2.16 through Figure 2.19 distinguishes the frequency a department utilizes a building with the deeper color representing highly utilized by the department and the lighter color representing little utilization by the department. The Communications, Health Sciences, Health and Physical Education, and Humanities Department (Figure 2.18) highly utilizes the Health Sciences and Cultural Arts Center. The STEM Department (Figure 2.19) uses more square footage in the Student Services Center, Science North, Math Pavilion, North Pavilion and Pavilion 4 than the other departments. The STEM utilization of buildings will inevitably shift once the Leggett Math and Science Building is open. The Arts, Business, Education, English and Social Sciences Department (Figure 2.17) has scattered ownership across campus, and the Applied Technologies, Gudelsky Institute for Technical Education, Workforce Development and Continuing Education (Figure 2.16) has very little activity on the Takoma Park/Silver Spring Campus.

Figure 2.14 — Building Use Diagram



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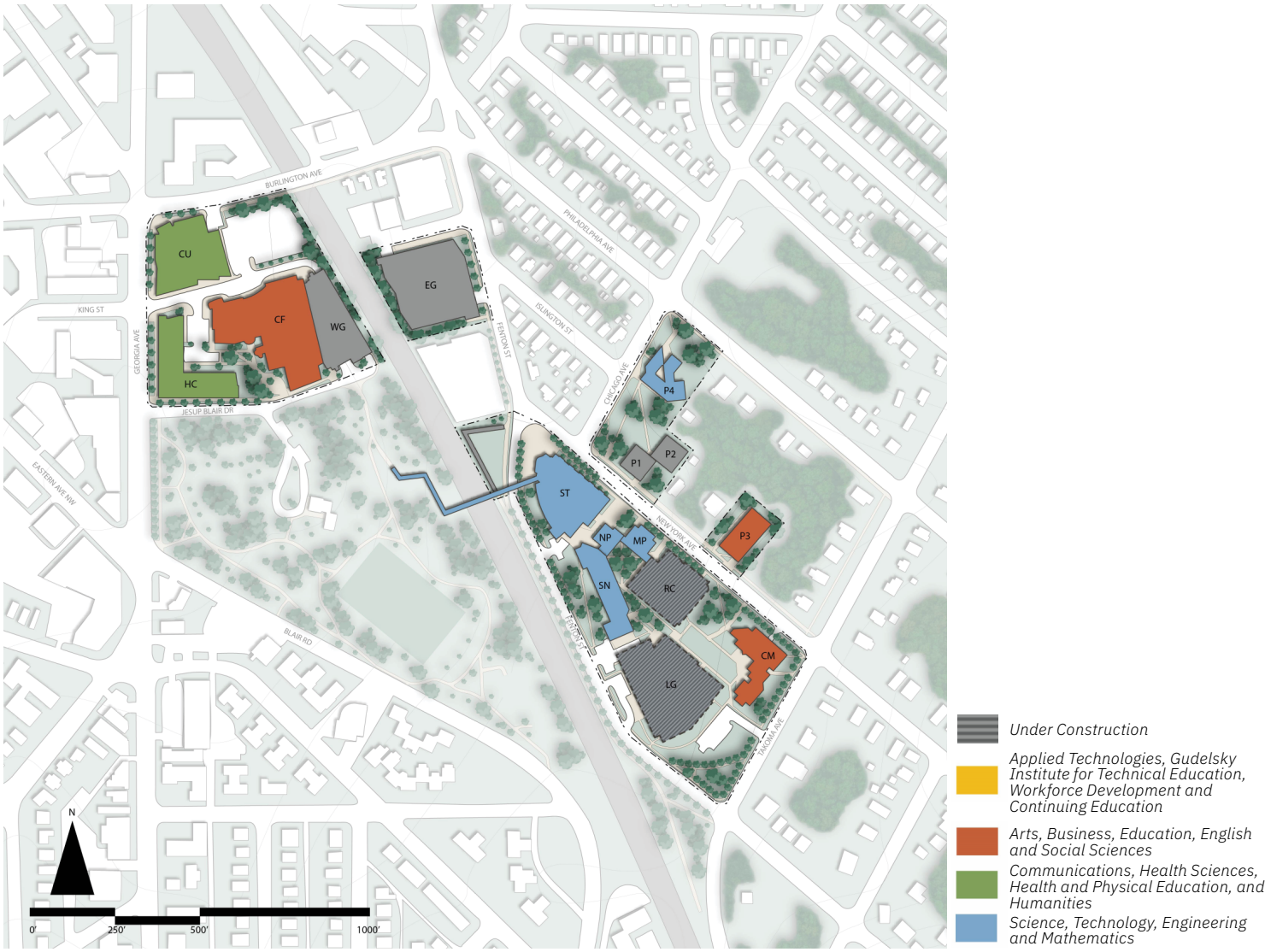
WG West Garage

Figure 2.15 — Department Use



BUILDING KEY

East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.16 — Applied Technologies, Gudelsky Institute for Technical Education, and Workforce Development and Continuing Education Heat Map

BUILDING KEY

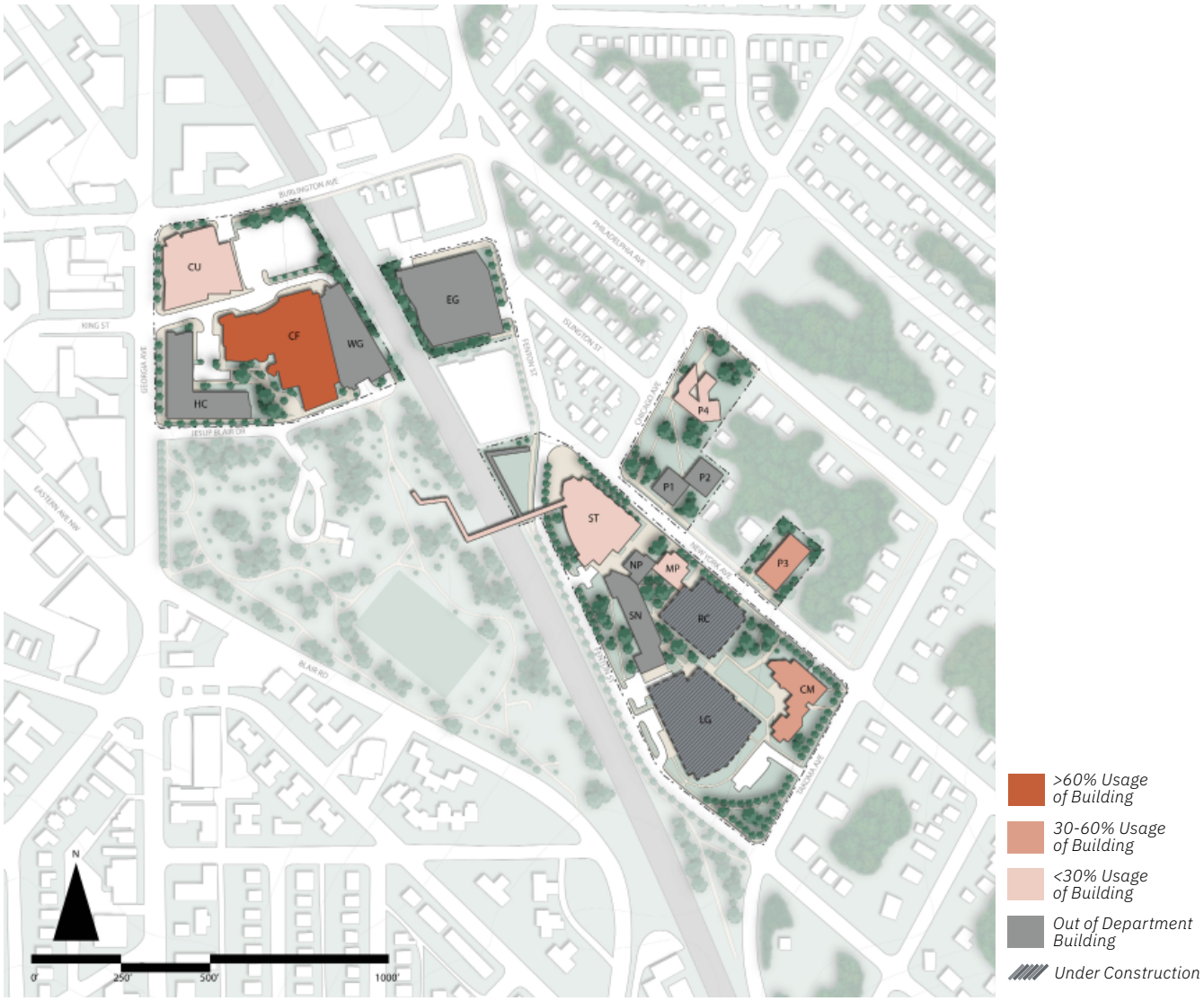
East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.17 — Arts, Business, Education, English and Social Sciences Heat Map



BUILDING KEY

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P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.18 — Communications, Health Sciences, Health and Physical Education, and Humanities Heat Map

BUILDING KEY

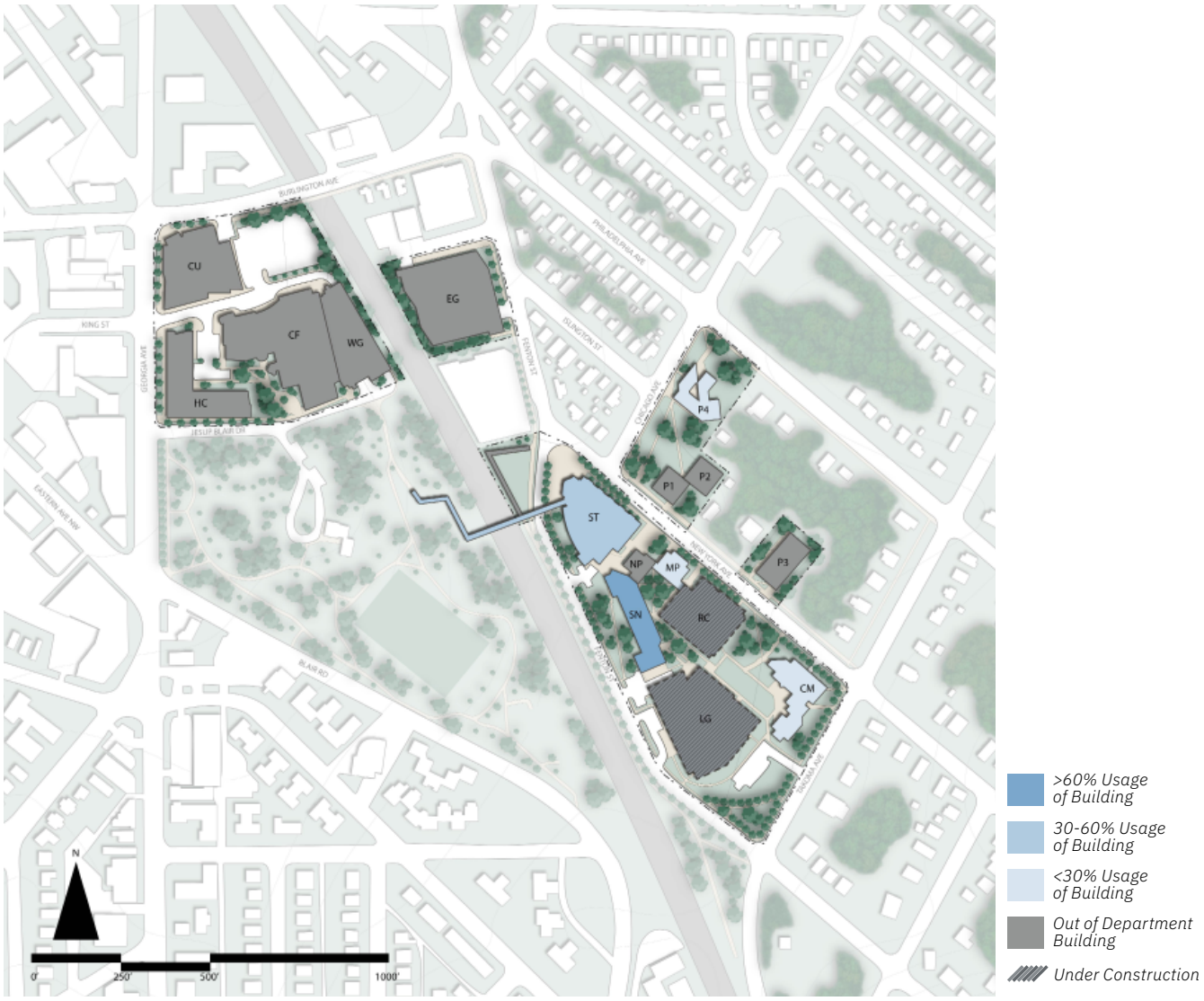
East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.19 — Science, Technology, Engineering and Mathematics Heat Map



BUILDING KEY

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P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

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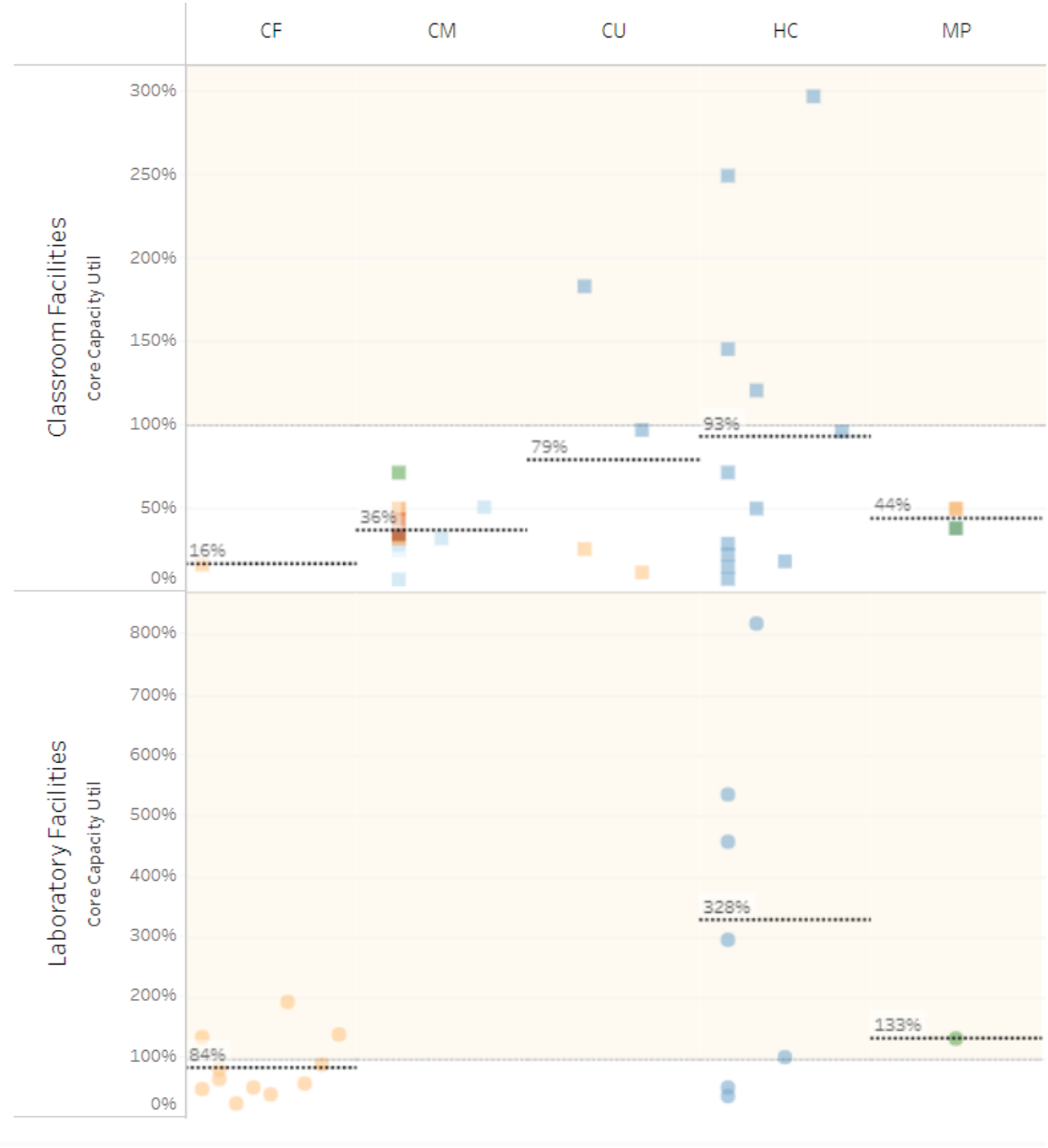
Figure 2.20 — Utilization by Building



PREDOMINANT AREA

- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

ROOM USE CATEGORY

- ■ Classroom Facilities
- ● Laboratory Facilities

Figure 2.20 — Utilization by Building

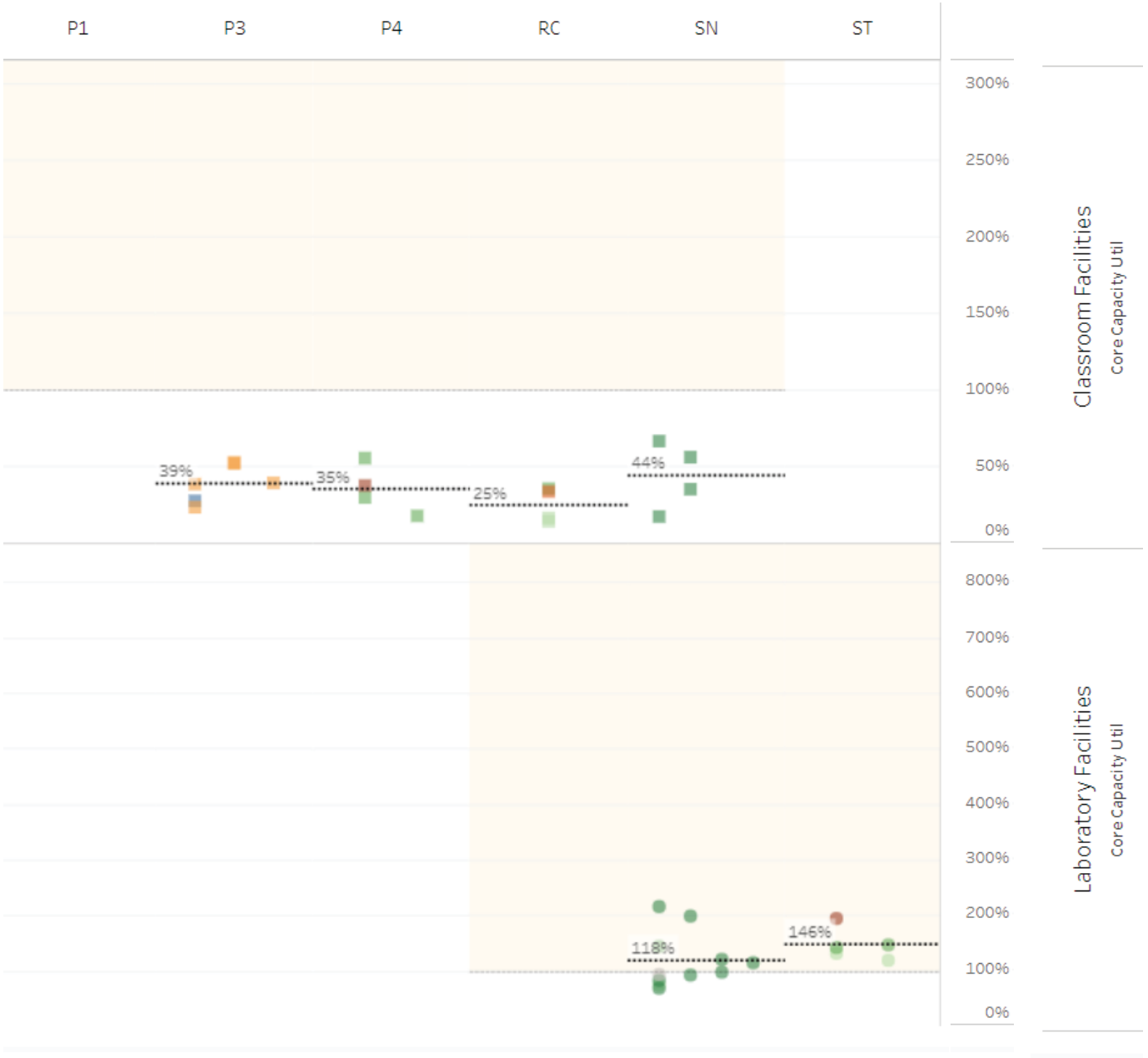


Figure 2.20 indicates the classroom and laboratory utilization by building across the campus. Trends that were noted across the College include:

- Laboratory facilities, including class labs from disciplines ranging from drawing to chemistry, are in high utilization.
- Computer classrooms have a higher utilization than typical classrooms.

On the Takoma Park/Silver Spring Campus, the analysis indicates that:

- The Health Sciences Building has numerous simulation labs that have high utilization.
- Science North and the Pavilions have high utilization, although this will change when the Leggett Math and Science Building is completed.

It will be important to re-evaluate utilization once the East County Education Center and the Leggett Math and Science Building are opened and realigning utilization across the sciences and health sciences.

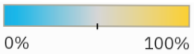
Figure 2.21 — Utilization by Floor

Campus Code	Bldg Code MCC	Building Name	Student Seats Bldg	WSCH Core Bldg	Weekly Core Capacity Factored Bldg	Weekly Core Capacity Utilization Bldg	Condition Code	Renovation Cost per SF	Floor Code	Weekly Core Capacity Utilization Floor
TP	CF	MORRIS & GWENDOLYN CAFRITZ FOUNDATION ..	680	2,748	9,881	28%	1	$435	002	25%
									001	39%
	CM	CATHERINE F. SCOTT COMMONS	470	2,452	8,246	30%	1	$315	002	29%
									001	31%
	CU	CULTURAL ARTS CENTER	260	2,142	3,889	55%	1	$565	002	58%
									001	Null
	HC	HEALTH SCIENCES CENTER	1,000	15,541	15,653	99%	1	$430	004	48%
									003	83%
									002	88%
									001	153%
	MP	MATHEMATICS PAVILION	130	532	2,294	23%	2	$315	002	133%
									001	18%
	P1	PAVILION ONE	104	Null	1,885	Null	3	$315	002	Null
									001	Null
	P3	PAVILION THREE	265	1,830	4,749	39%	1	$315	002	38%
									001	39%
	P4	PAVILION FOUR	225	1,012	4,052	25%	2	$315	002	29%
									001	24%
	RC	RESOURCE CENTER	253	649	3,944	16%	3	$315	002	22%
									001	8%
	SN	SCIENCE NORTH	503	4,834	7,129	68%	3	$410	003	83%
									002	100%
									001	50%
	ST	CHARLENE R. NUNLEY ..	106	1,589	1,132	140%	1	$395	003	140%

Figure 2.21 - Legend for Next Page

ROOM USE CATEGORY
- ■ Classroom Facilities
- ● Laboratory Facilities
- ◆ General Use Facilities, Office Facilities, Special Use Facilities

WEEKLY CORE CAPACITY UTILIZATION



PREDOMINANT AREA
- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

Figure 2.21 — Utilization by Floor

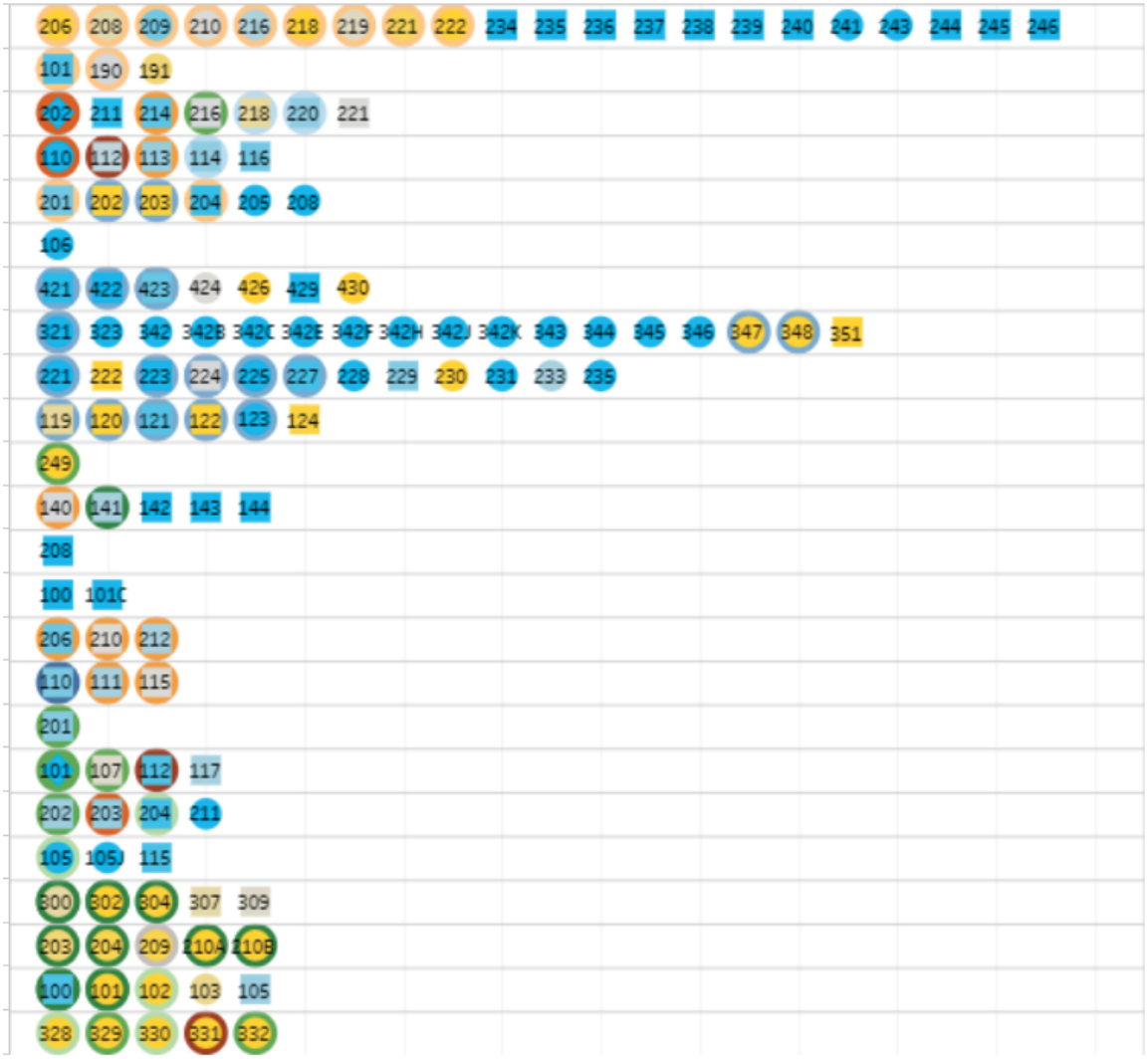


Figure 2.21 indicates the utilization by building and by floor across the campus. On the left, each building is listed with its total seat capacity and corresponding potential credit hour availability. The utilization for the building is calculated based on the core hours in aggregate and per floor. The right side of Figure 2.21 shows each classroom and lab individually and is color-coded by utilizations rate. This analysis allowed for campuswide heat mapping that helped identify targeted locations for interventions that could support the goals of the plan.

Table 2.4 — Space Inventory and Need by Hegis Code

HEGIS CODE	HEGIS CATEGORY	NEED %	NEED 2021	INV %	INV 2031	2021 DELTA	NEED %	NEED 2031	INV %	INV 2031	2031 DELTA
100 (110-115)	**CLASSROOM**	**8%**	**25,830**	**17%**	**54,241**	**28,411**	**8%**	**39,717**	**15%**	**61,328**	**21,611**
200	**LABORATORY**	**39%**	**132,930**	**27%**	**89,284**	**(43,646)**	**41%**	**204,397**	**32%**	**125,717**	**(78,680)**
210-15	Class Laboratory		126,126		84,487	(41,639)		193,935		119,259	(74,676)
220-25	Open Laboratory		6,804		4,797	(2,007)		10,462		6,458	(4,004)
300	**OFFICE**	**22%**	**75,554**	**37%**	**90,155**	**14,601**	**23%**	**115,332**	**26%**	**104,578**	**(10,754)**
310-15	Office/Conf. Room		73,994		87,464	13,470		113,336		99,180	(14,156)
320-25	Testing/Tutoring		1,560		2,691	1,131		1,996		5,398	3,402
400	**STUDY**	**4%**	**14,643**	**6%**	**19,037**	**4,394**	**4%**	**21,334**	**5%**	**21,813**	**479**
410-15	Study		10,125		4,316	(5,809)		15,569		7,092	(8,477)
420-30	Stack/Study		3,227		14,187	10,960		4,118		14,187	10,069
440-55	Processing/ Service		1,291		534	(757)		1,647		534	(1,113)
500	**SPECIAL USE**	**11%**	**37,896**	**1%**	**3,010**	**(34,886)**	**9%**	**47,303**	**1%**	**4,537**	**(42,766)**
520-23	Athletic		35,200		995	(34,205)		43,910		995	(42,915)
530-35	Media Production		1,696		2,015	319		2,393		2,266	(127)
580-85	Greenhouse		1,000		0	(1,000)		1,000		1,276	276
600	**GENERAL USE**	**10%**	**35,056**	**13%**	**42,059**	**7,003**	**9%**	**44,983**	**12%**	**46,344**	**1,361**
610-15	Assembly		12,240		15,641	3,401		13,982		18,277	4,295
620-25	Exhibition		1,560		4,338	2,778		1,996		4,338	2,342
630-35	Food Facility		10,506		10,593	87		16,157		10,593	(5,564)
640-45	No Allowance										
650-55	Lounge		3,090		8,046	4,956		4,752		8,882	4,130
660-65	Merchandising		1,660		406	(1,254)		2,096		406	(1,690)
670-75	No Allowance										
680-85	Meeting Room		6,000		3,035	(2,965)		6,000		3,848	(2,152)
700	**SUPPORT**	**6%**	**19,920**	**9%**	**30,540**	**10,620**	**5%**	**26,095**	**8%**	**32,853**	**6,758**
710-15	Data Processing		2,500		8,713	6,213		2,500		8,713	6,213
720-25	Shop/Storage		13,157		19,295	6,138		19,211		20,673	1,462
750-55	Central Service		4,000		2,532	(1,468)		4,000		3,305	(695)
760-65	Hazmat Storage		263		0	(263)		384		162	(222)
800	**HEALTH CARE**	**0%**	**524**	**0%**	**0**	**(524)**	**0%**	**698**	**0%**	**0**	**(698)**
Total NASF	**Net Assignable Square Feet**		**342,353**		**328,326**	**(14,027)**		**499,869**		**397,170**	**(102,689)**

An overview of the current and projected needs above indicates several needs on the Takoma Park/Silver Spring Campus:

- *Deficit of labs by 2031*
- *Need for recreation of some form*
- *Need to address growth needs with limited footprint*

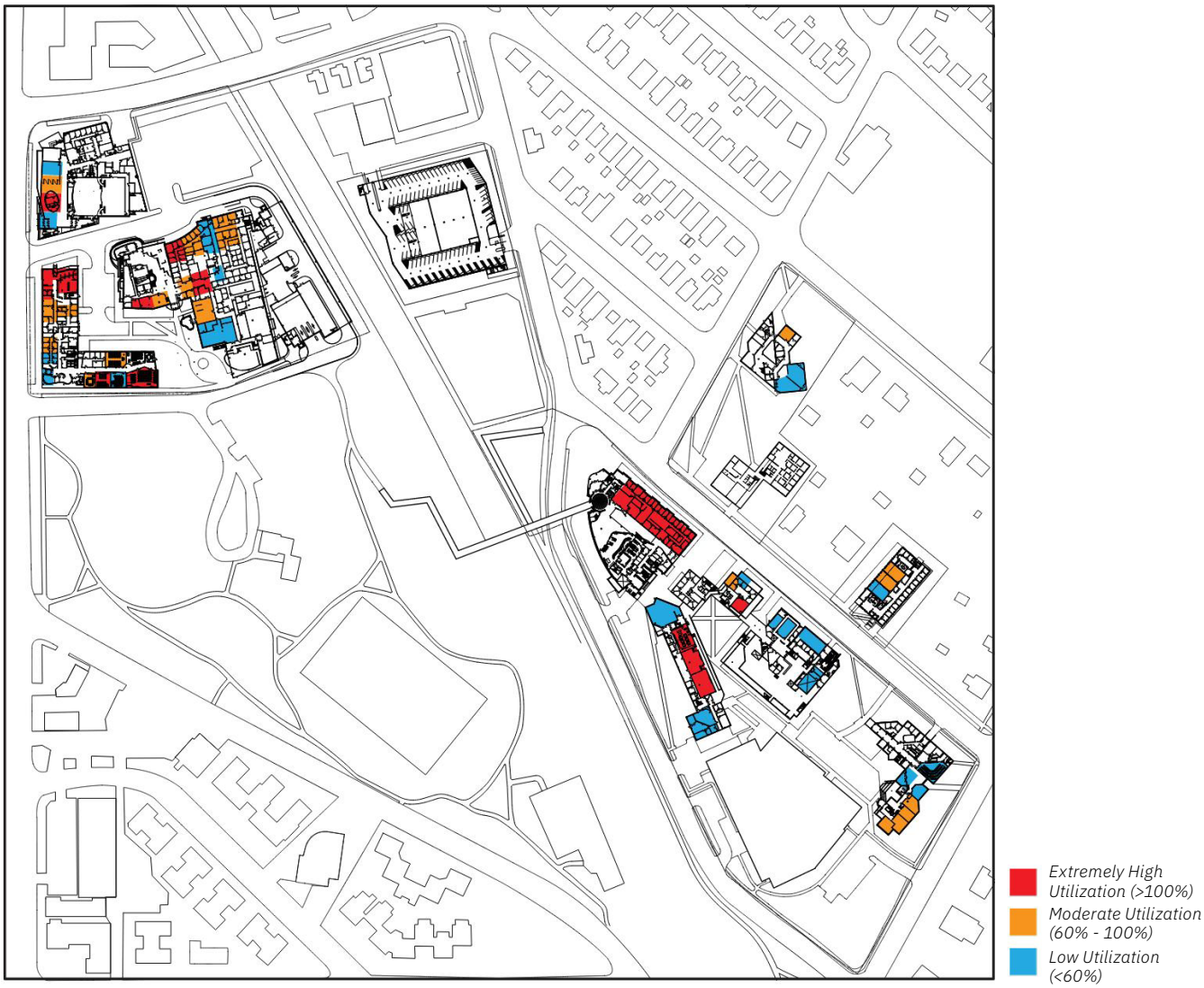
In 2022, a collegewide facilities assessment was completed to evaluate the conditions of the existing building stock. One of the major goals of the FCA is to calculate each building's Facility Condition Index (FCI), which provides a theoretical objective indication of a building's overall condition. The FCI is defined as the ratio of the cost of current needs divided by current replacement value (CRV) of the facility. The chart below presents the industry standard ranges and cut-off points.

The deficiencies and lifecycle needs identified in the assessments provide the basis for a portfolio-wide capital improvement funding strategy. In addition to the current FCI, extended FCIs have been developed to provide owners the intelligence needed to plan and budget for the "keep-up costs" for their facilities. As such the three-year, five-year, and 10-year FCIs are calculated by dividing the anticipated needs of those respective time periods by current replacement value. A summary of the individual findings for this FCA are noted with each building description below.

Table 2.5 — FCI Ranges and Description

0 - 5%	In new or well-maintained condition, with little or no visual evidence of wear or deficiencies.
5 - 10%	Subjected to wear but is still in a serviceable and functioning condition.
10 - 30%	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
30% and above	Has reached the end of its useful or serviceable life. Renewal is now necessary.

Figure 2.22 — Building Utilization Diagram



The campus utilization map indicates areas of the campus that are highly utilized (greater than 100% utilization), have moderate utilization (60-100% utilization) or have low utilization (less than 60% utilization). Buildings or areas of buildings with low utilization are considered opportunities for moderate investment to improve the overall efficiency of the campus. Areas of highly utilized space adjacent to potential outdoor space are noted for potential engagement with the landscape plan. On the East Campus, high utilization in Science North will need to be re-assessed with the completion of the Leggett Math and Science Building. On the West Campus, leveraging the utilization around the Health Sciences and the Cafritz Foundation Arts Center afford the potential for engaging outdoor space.

East Campus at Takoma Park/Silver Spring (TP/SS)

Charlene R. Nunley Student Services Center (ST) (65,497 NASF / 110,504 GSF) is a three-level building completed in 2007, providing for the successful consolidation of student services and activities. This building is referred to as the 'one stop shop' for student services. The building houses offices for Raptor Central, Financial Aid, Safety and Security, student organizations and the Vice President and Provost. It also contains lounge spaces, conference rooms, a bookstore and a cafeteria supporting student needs. The upper floor houses five computer classrooms. In addition, the facility houses a high-performance central heating and cooling plant and distribution system for the East Campus.

The building is in fair to good condition across all the major systems. As the planning period closes, the building will be over 20 years old and will need investments in the HVAC systems in order to maintain a limited maintenance backlog.

While the bulk of the building is used for student services, the third floor houses a bank of computer classrooms which are currently all above 100% utilization. The courses offered in the Fall of 2023 included accounting, computer science, law and writing. Several calculus, statistics, biology and microbiology courses were offered, which may change as the Legget Math & Science building opens in 2024. Utilization should be reviewed once that project is completed.

Table 2.6 — ST Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,610,100	**3.6%**
3-Year	$ 3,014,900	7.4%
5-Year	$ 2,151,800	7.8%
10-Year	$ 3,967,100	14.4%

Table 2.7 — ST Classroom Utilization by Seat

Student Seats	106
WSCH Core	1,589
Weekly Core Capacity Factored	1,132
Weekly Core Capacity Utilization	140%
Condition Code	1
Renovation Cost Per SF	$395

Table 2.8 — ST Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
003	140%	

Est Reserve Cost - Often called "Replacement Reserves," this is a recurring renewal and expense cost line item that are not classified as operation or maintenance expenses. These funds are set aside annually from the building's normal operating budget to pay for the eventual replacement of building components and systems that need repair or renewal.

Resource Center (RC) (34,801 NASF / 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.

The building is in poor condition and has a substantial deferred maintenance backlog. The bulk of investment needed for the building consists of a roof replacement, as well as an electrical system upgrade throughout the building.

The assignable spaces in the building are underutilized on average with a rate of around 16%. However, there is insufficient study space, specifically group study rooms, and support space for the library, which will improve once the library renovation is complete in 2024. This renovation will consist of approximately 50% of the building. Access to the Resource Center by individuals who require an elevator is extremely difficult, but the library renovation will include a new ADA-compliant elevator.

Table 2.9 — RC Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,092,300	**6.1%**
3-Year	$ 1,484,200	8.3%
5-Year	$ 3,209,300	17.9%
10-Year	$ 4,563,100	25.4%

Table 2.10 — RC Classroom Utilization by Seat

Student Seats	253
WSCH Core	649
Weekly Core Capacity Factored	3,944
Weekly Core Capacity Utilization	16%
Condition Code	3
Renovation Cost Per SF	$315

Table 2.11 — RC Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	22%	
001	8%	

The Catherine F. Scott Commons (CM) (16,600 NASF / 30,354 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. The only anticipated investments needed are for typical lifecycle replacements. The recent facilities conditions assessment did recommend for a study to be done concerning the stormwater issues on the south side of the building contributing to water infiltration and civil site drainage.

The spaces in the building have varied utilization rates, with an average utilization rate of 30% according to Fall 2022 enrollment data.

Table 2.12 — CM Facility Condition

	Est Reserve Cost	FCI
Current	$ 372,500	**3.1%**
3-Year	$ 393,200	3.2%
5-Year	$ 393,200	3.2%
10-Year	$ 1,739,500	14.3%

Table 2.13 — CM Classroom Utilization by Seat

Student Seats	470
WSCH Core	2,452
Weekly Core Capacity Factored	8,246
Weekly Core Capacity Utilization	30%
Condition Code	1
Renovation Cost Per SF	$315

Table 2.14 — CM Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	29%	
001	31%	

Science North Building (SN) (26,422 NASF / 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.

The building is in fair to poor condition, but will need significant investment toward the end of the ten-year period. ADA access is only through exterior routes and the use of a chair lift due to a non-ADA compliant elevator.

The building is 68% utilized according to Fall 2022 enrollment data. 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 undersized 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. Due to the built-in lab bench structure, asbestos in the existing floor tiles, poor internal circulation, lack of ADA access and the building condition, renovations for an alternative use of this building would be cost prohibitive.

Table 2.15 — SN Facility Condition

	Est Reserve Cost	FCI
Current	$ 454,600	**2.8%**
3-Year	$ 742,600	4.6%
5-Year	$ 2,606,100	16.3%
10-Year	$ 5,641,100	35.3%

Table 2.16 — SN Classroom Utilization by Seat

Student Seats	503
WSCH Core	4,834
Weekly Core Capacity Factored	7,129
Weekly Core Capacity Utilization	68%
Condition Code	3
Renovation Cost Per SF	$410

Table 2.17 — SN Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
003	83%	
002	100%	
001	50%	

North Pavilion (NP) (4,337 NASF / 6,942 GSF) is a two-story structure built in 1975, housing offices for faculty and staff,and a general-purpose classroom.

The building is in very poor condition and has a substantial deferred maintenance backlog. Many of the systems and finishes are reaching or have reached the end of their lifecycles and will warrant replacement in the coming years. Additionally, the surrounding site has poor stormwater drainage which has led to the deterioration of the exterior wall. An accessibility study has also been recommended by the recent facilities conditions assessment in which several accessibility issues were identified.

The building occupies a small footprint in a very central location of campus and delivers very little programmable area. The classroom sizes and numbers are insufficient to meet most proposed programs.

Table 2.18 — NP Facility Condition

	Est Reserve Cost	FCI
Current	$ 738,300	**26.6%**
3-Year	$ 743,400	26.8%
5-Year	$ 826,000	29.7%
10-Year	$ 1,045,500	37.7%

Mathematics Pavilion (MP) (4,255 NASF / 6,942 GSF) is a two-story structure built in 1975 and houses classrooms, the Math Tutoring Center and faculty offices.

The building is in fair to poor condition and will need significant investment throughout the next ten years. A majority of the improvements required are due to lifecycle replacements of the building's utilities.

The building occupies a small footprint in a very central location of campus and delivers very little programmable area. The building also lacks internal stairs linking the two levels. Many spaces are irregular and difficult to program and accommodate desired teaching methodologies. The spaces in the building vary in utilization, with the most utilized space being the building's only laboratory, with a 133% utilization rate. As a whole, the building has a utilization rate of 23% according to Fall 2022 enrollment data.

Table 2.19 — MP Facility Condition

	Est Reserve Cost	FCI
Current	$ 454,600	**2.8%**
3-Year	$ 742,600	4.6%
5-Year	$ 2,606,100	16.3%
10-Year	$ 5,641,100	35.3%

Table 2.20 — MP Classroom Utilization by Seat

Student Seats	130
WSCH Core	532
Weekly Core Capacity Factored	2,294
Weekly Core Capacity Utilization	23%
Condition Code	2
Renovation Cost Per SF	$315

Table 2.21 — MP Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	133%	249
001	18%	140 141 142 143 144

East Garage (EG) (1,787 NASF / 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.

Utilization: 51% - 75% Occupancy

Table 2.22 — EG Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,355,300	**2.6%**
3-Year	$ 4,649,200	5.2%
5-Year	$ 5,078,300	5.7%
10-Year	$ 5,359,100	6.0%

Pavilion Three (P3) (10,901 NASF / 17,372 GSF) is a two-story structure constructed in 1975 that underwent a comprehensive renovation completed in early 2016. The building houses general use classrooms and offices supporting the Humanities program.

The building is in good condition as it was recently renovated. There is little investment anticipated for the building over the next ten years.

The building is moderately utilized with a utilization rate of 39% according to Fall 2022 enrollment data.

Table 2.23 — P3 Facility Condition

	Est Reserve Cost	FCI
Current	$ 47,200	**0.7%**
3-Year	$ 58,900	0.8%
5-Year	$ 60,400	0.9%
10-Year	$ 562,200	8.1%

Table 2.24 — P3 Classroom Utilization by Seat

Student Seats	265
WSCH Core	1,830
Weekly Core Capacity Factored	4,749
Weekly Core Capacity Utilization	39%
Condition Code	1
Renovation Cost Per SF	$315

Table 2.25 — P3 Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	38%	
001	39%	

Pavilion One (P1) (4,468 NASF / 7,365 GSF) is a two-story structure constructed in 1975 and houses the Business Management and Information Sciences Department, including the swing space for the Math Learning Center computer laboratory until the Leggett building opens. 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. The roof and electrical distribution panels are nearing the end of their anticipated lifecycles and will need replacement in the short term.

Pavilion Two (P2) (5,158 NASF / 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 Library swing space is in this facility until the renovation at RC is completed.

The building is in poor condition and has a substantial deferred maintenance backlog. The roof surfaces and skylights appear older and will likely need replacement in the near future. Additionally, the HVAC rooftop unit will require replacement within the next few years.

Table 2.26 — P1 Facility Condition

	Est Reserve Cost	FCI
Current	$ 72,800	**2.5%**
3-Year	$ 840,900	28.5%
5-Year	$ 892,300	30.2%
10-Year	$ 1,065,000	36.0%

Table 2.27 — P1 Classroom Utilization by Seat

Student Seats	104
WSCH Core	Null
Weekly Core Capacity Factored	1,885
Weekly Core Capacity Utilization	Null
Condition Code	3
Renovation Cost Per SF	$315

Table 2.28 — P1 Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	Null	208
001	Null	100 101C

Table 2.29 — P2 Facility Condition

	Est Reserve Cost	FCI
Current	$ 64,700	**2.2%**
3-Year	$ 572,000	19.4%
5-Year	$ 623,100	21.1%
10-Year	$ 892,800	30.2%

Pavilion Four (P4) (8,549 NASF / 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 building is in good condition but has spatial and functional compromises. The roof surfaces and skylights appear to be older and will likely require replacement within the next few years.

The classrooms are all irregular in shape and are very small and insufficient. The building is moderately utilized with a utilization rate of 25% according to Fall 2022 enrollment data.

Table 2.30 — P4 Facility Condition

	Est Reserve Cost	FCI
Current	$ 91,300	**1.4%**
3-Year	$ 387,800	6.1%
5-Year	$ 591,900	9.3%
10-Year	$ 1,366,100	21.5%

Table 2.31 — P4 Classroom Utilization by Seat

Student Seats	225
WSCH Core	1,012
Weekly Core Capacity Factored	4,052
Weekly Core Capacity Utilization	25%
Condition Code	2
Renovation Cost Per SF	$315

Table 2.32 — P4 Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	29%	
001	24%	

Catherine and Isiah Leggett Math and Science Building (LG) (approx. 134,000 GSF) will be a three-level structure, once completed in 2024, and will serve the Math and Science departments on the Takoma Park/Silver Spring Campus. This building is being built on the site of Falcon Hall and Science South. The facility will house state-of-the-art laboratories, classrooms, a combined Math and Science Learning Center, planetarium, greenhouse, study spaces, offices and other support spaces. The completion of construction will also deliver updated landscape and outdoor spaces adjacent to the building.

Utilization

Once the building is open, it is expected that utilization of the assignable spaces will be comparatively high. Many courses, especially ones currently being taught in Science North, Student Services Center and Math Pavilion will move to the Leggett building, causing utilization shifts across the campus.

West Campus at Takoma Park/Silver Spring (TP/SS)

Health Sciences Center (HC) (63,679 NASF / 98,038 GSF) is a four-story building completed in 2004 housing the Health Sciences and nursing programs. The facility includes classrooms, 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. Only typical lifecycle interior finish, exterior finish and roof membrane replacements are anticipated in the near term.

The assignable spaces in the building are in high demand. Many of the lab spaces in the building are specialized to the Health Science and Nursing departments, two of the most sought-after programs on the Takoma Park/Silver Spring campus. The building, as a whole, has a utilization rate of 99% according to Fall 2022 enrollment data.

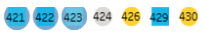
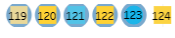
Table 2.33 — HC Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,107,400	**5.4%**
3-Year	$ 2,128,500	5.4%
5-Year	$ 2,424,800	6.2%
10-Year	$ 9,008,200	23.0%

Table 2.34 — HC Classroom Utilization by Seat

Student Seats	1,000
WSCH Core	15,541
Weekly Core Capacity Factored	15,653
Weekly Core Capacity Utilization	99%
Condition Code	1
Renovation Cost Per SF	$430

Table 2.35 — HC Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
004	48%	
003	83%	
002	88%	
001	153%	

The Morris and Gwendolyn Cafritz Foundation Arts Center (CF) (66,170 NASF / 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 and 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 fair condition but will need significant investment by the end of the next ten years. It was recommended in the Facilities Conditions Assessment that a study should be done to determine if the building is able to be solely cooled using the cooling tower. This could potentially increase energy savings and efficiency.

Many of the spaces in this building are extremely specialized to accommodate certain programs causing the utilization of the spaces to be quite varied. In its entirety, the building has a utilization rate of 28% according to Fall 2022 enrollment data.

Table 2.36 — CF Facility Condition

	Est Reserve Cost	FCI
Current	$ 990,300	**1.8%**
3-Year	$ 1,844,700	3.4%
5-Year	$ 7,179,500	13.3%
10-Year	$ 11,040,200	20.5%

Table 2.37 — CF Classroom Utilization by Seat

Student Seats	680
WSCH Core	2,748
Weekly Core Capacity Factored	9,881
Weekly Core Capacity Utilization	28%
Condition Code	1
Renovation Cost Per SF	$435

Table 2.38 — CF Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	25%	206 208 209 210 216 218 219 221 222 234 235 236 237 238 239 240 241 243 244 245 246
001	39%	101 190 191

Cultural Arts Center (CU) (28,389 NASF / 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. The only anticipated investments within the next ten years are typical lifecycle renewals.

The building has a mixture of classrooms and laboratories which have a range of utilizations. Overall, the building has a utilization rate of 55% according to Fall 2022 enrollment data.

Table 2.39 — CU Facility Condition

	Est Reserve Cost	FCI
Current	$ 552,100	**2.4%**
3-Year	$ 618,200	2.7%
5-Year	$ 842,800	3.7%
10-Year	$ 2,831,100	12.4%

Table 2.40 — CU Classroom Utilization by Seat

Student Seats	260
WSCH Core	2,142
Weekly Core Capacity Factored	3,889
Weekly Core Capacity Utilization	55%
Condition Code	1
Renovation Cost Per SF	$565

Table 2.41 — CU Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	58%	
001	Null	

West Garage (WG) (1,369 NASF / 159,795 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.

Table 2.42 — WG Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,622,900	**2.5%**
3-Year	$ 2,840,700	4.4%
5-Year	$ 2,927,800	4.6%
10-Year	$ 3,595,500	5.6%

SECTION 2.4

2033 Facilities Master Plan

2.4.1 CAMPUS FACILITIES MASTER PLAN GUIDING PRINCIPLES

The overall Facilities Master Plan leveraged a series of guiding principles to shape the decision-making process. These planning principles were established in connection with the Mission and Vision of the College, focusing on the success of students and the impact of their success on Montgomery County. They also took into account both long- and short-term goals with the lens of maintaining the effectiveness of capital investments. These principles include:

Prioritize Student Success — through expanded spaces that support student wellness, informal learning/study, dining and amenities, branding and intuitive wayfinding.

Reinvent Existing Facilities — through renovation and strategic interventions, right-size classroom and lab spaces, create faculty hubs, repurpose underutilized square footage.

Expand Access — Provide a touch down for county services, non-profits and businesses, enhance childcare options and consider both physical and virtual environments.

Plan Prudently — Each campus has land use constraints, limiting future development. Project development should consider maximizing future development potential while continuing to create activated, green campuses.

Additional principles were established for the Takoma Park/Silver Spring Campus, including:

Enhance Takoma Park Campus Core — Improving internal circulation and open space on the Takoma Park campus provides a cohesive sense of place.

Focus on Student Amenities — Provide the breadth of student-oriented spaces that make the campus attractive to students and enhance student persistence and success.

Connect to Silver Spring — Leverage the adjoining commercial district to enhance the experience for student and faculty.

2.4.2 RESPONSE TO EXTERNAL PLANNING FACTORS

The Agreement Between the City of Takoma Park, Montgomery College, Historic Takoma, Inc. and Montgomery County to Subject the Activities of Montgomery College in the Historic Preservation District of the City to Local Control (the MOU) requires that the College engage in community outreach during the earliest practicable phase of planning for projects and properties within the Takoma Park historic district. An extensive community engagement process, including ten public meetings, five of which were dedicated to Takoma Park community outreach, was undertaken in the development of the Facilities Master Plan. Continued outreach will be required as the planning and programming of projects within the designated areas are advanced.

2.4.3 PROPOSED CAMPUS STRUCTURE AND CHARACTER

Overall Observations:

1. All three campuses seem to need a signature space that symbolizes the school. Spaces should have similar icons like school colors, emblems and/or mascot prominently displayed such that the spaces become emotional touchpoints connecting students to the College, the campuses and to each other.

2. Some unity has begun to be established in site furnishings with standardized exterior seating, trash receptacles and bike racks. This is most evident at the Rockville and Germantown campuses. This effort needs to be continued, particularly at Takoma Park/Silver Spring.

3. Better wayfinding signage seems to be needed, especially at the Rockville campus. While there generally does seem to be a common look to existing signage across campuses, it could be greatly improved and be used to reinforce College identity and unity by adopting signage design that consistently uses school colors and emblems.

Takoma Park/Silver Spring Campus Landscape Recommendations:

1. While there is a more or less continuous pedestrian path from the Catherine F. Scott Commons (CM) on the Takoma Park side northwest to the Cultural Arts Center (CU) on the Silver Spring side, the path is disjointed and could be better articulated and unified. The soon-to-be completed Math & Science Building landscaping may provide a palette for use in future projects on the Takoma Park side, especially the future replacement of the Science North Building (SN) and development of the Wellness Village. As it passes along the southwest side, the path should visually and functionally embrace the existing courtyard formed by the North Pavilion (NP), the Math Pavilion (MP) and the Resource Center (RC). The courtyard has mature trees and site furnishings that encourage congregating, outdoor study and relaxation in its shaded space. A new building that connects the SN and NP/MP footprints should have either a ground-level pass through or an atrium that completes the pedestrian link from the campus core to the Student Services Building (ST).

   Between the bottom of the overpass ramp in Jesup Blair Park and CU, there are a variety of spaces and materials that could benefit from better unification. This will likely involve seeking permission from Maryland National Capital Parks and Planning (MNCPP) to replace the existing asphalt pathway with brick to match the material used on both sides of Jesup Blair Drive south of the Arts Center (CF) and the West Garage (WG).

   The one part of the overall pedestrian path that needs the most intervention is through the small parking lot between CF and the Health Center (HC). Though there are sidewalks along the west side of CF and the east side of HC, they are narrow and do not align well with the south entrance to CU which is the ultimate destination point. This encourages pedestrians to take a diagonal path through the parking lot. Consideration should be given to reworking this parking lot to make it primarily a pedestrian-friendly space while maintaining the necessary building service and handicap parking functions in a secondary fashion.

2. As the campus has evolved over the years, different site furnishings and light fixtures have been used that now manifest themselves as a hodge-podge assembly. For the most part, the Rockville and Germantown campuses have standardized the benches, bike racks, trash and recycling receptacles, and light fixtures both on and across those two campuses. Several locations on the Takoma Park campus have begun to employ those standard fixtures, but there is a noticeable lack of uniformity — especially with regard to site lighting. As future projects develop, the college should continue to enforce the established standards. Consideration should also be given to replacing outdated and non-standard fixtures. With regard to lighting, the cost of replacement will certainly be offset to some extent by employing more efficient LED fixtures to replace the dated and far less efficient HID fixtures.

3. The Takoma Park side of campus is situated adjacent to and partially within a residential neighborhood with several outstanding Victorian houses. Mature trees and deep building setbacks, particularly on the southwest side of New York Avenue, help to mitigate the institutional feel of the campus. The relatively small size of the four pavilion buildings on the northeast side of New York Avenue, coupled with many existing mature trees, also reduce the incompatibility of residential and institutional uses. Because these incompatibilities have contributed to past tensions in town-gown relations, it is advisable to exert every effort to maintain deep setbacks, protect mature trees and limit building sizes along the New York and Chicago Avenue corridors in the planning of future projects.

4. Currently facilities operations are scattered with different trade shops located in various buildings. This not only reduces efficiencies but contributes to additional traffic for supplies deliveries and day-to-day operations. Facilities personnel believe that having a centralized facilities and operations center will allow many campus supplies and consumables to be delivered to a single location. Combining the various trade shops into a central facility will allow materials and personnel to be more efficiently dispatched.

5. There is currently a triangular lot south of the ExtraSpace Storage building and across Fenton Street from the flagpole plaza in front of ST. This is the touchdown area for the pedestrian overpass on the east side of the WMTA, but is otherwise underutilized. Consideration might be given to creating an iconic space as discussed in Item 1 of the Overall Observations above.

2.4.4 PROPOSED BUILDING PROJECTS

FIGURE 2.23 — Takoma Park/Silver Spring Campus, Phase 3 2023-33 Facilities Master Plan

Major Projects

Several key projects were identified, working within the limitations of developable land.

1. Academic + Wellness Building
(71,000 NASF / 94,800 GSF)

The demolition of Falcon Hall and Science South for the construction of the Math & Science Building has resulted in very limited wellness, recreation and athletic opportunities on the campus. With the Math & Science Building completion in 2024, Science North, the Math Pavilion and the North Pavilion will become available for renewal. The Academic + Wellness Building will replace these facilities with a comprehensive wellness facility inclusive of academic, athletic, recreational, and mental and physical health space to offer comprehensive support to students. The facility will enhance both student and community access to recreational opportunities, as well as for faculty and staff. The existing site of Science North will allow for a level of parking to be located underneath the building with access from Fenton Street. The new building should be designed to allow for the creation of open space between the RC building and the new building and incorporate pedestrian traffic through the campus. While the

plan drawing indicates the general buildable area for the new project, an outdoor opening should be created from the south entrance to the Student Services Building to the green spaces at the core of the campus, allowing the natural flow of campus pedestrian traffic through the landscape. The site constraints will require the larger spaces and the bulk of the building to remain on the current site of SN, facing Fenton Street. The smaller wing can be located on the sites of MP and NP with a setback from New York Avenue in alignment with the adjacent buildings.

This project has three potential phases. The first would demolish Science North, create the parking, and prepare the site for the implementation of the project. The second would be the 94,800 GSF building noted above. The potential third phase would be the development of any additional programming that could be incorporated into the renovations of Pavilions 1, 2 and 4 noted below. At this time, it is not anticipated that the program would expand beyond the site on the west of New York Avenue, but as the program is developed, the campus has the flexibility to accommodate additional space in the existing Pavilions.

2. Mixed Use Building (48,000 NASF / 87,000 GSF)

The current parking lot W1 is a potential site for mixed-use development. The land is owned by the College's Foundation and is a potential site for a Public/Private Partnership to address campus needs. The potential uses include academic needs, specifically expansion of Health Sciences space, student residences and parking.

The program for the building should be analyzed in conjunction with the dynamics of campus utilization resulting from the opening of the Math and Science Building and the East County Education Center, which has space allocated for Health Science classrooms. The program should also be analyzed in the context of expected planning for further College development in the East County.

3. Campus Safety + Security

In order to address security concerns, provide a sense of inclusiveness, and help students and visitors navigate the campus, implementation of a cohesive set of site improvements is proposed. The interventions include comprehensive site lighting, wayfinding and graphics, site amenities, landscape improvements for visibility and the inclusion of public art. The project can be implemented in phases, but should be developed as a cohesive package to ensure there is a cohesive approach to the campus landscape.

Small Scale Interventions

Smaller projects have also been identified to help implement the goals of the master plan in the first one to five years of the planning period.

4. Pavilion 1 Renovation

When the library renovation is complete in 2024 the space vacated in P1 by the temporary library facility will be available for renovation and re-use. This space would be a likely location for a student study hub to allow for students to take online courses with secure Wi-Fi, appropriate acoustics and good lighting. This can also be a space for group work or socialization for students. The space should be welcoming and inclusive in its design. This project could also include the Student Health and Wellness (SHaW) Center to support holistic student needs. When this project is undertaken, the exterior should be evaluated inclusive of windows, exterior cladding and roofing.

4. Commons Building

With the completion of the Math and Science Building, the west side of the Commons Building facing the new campus open space should be evaluated for potential exterior coordination, creating the potential for an inviting open environment. Interior modifications to provide for student study needs may include a study hub or FF&E upgrades to enhance student use of the space.

4. Pavilions 2 and 4

Pavilions 2 and 4 will be in need of investment at the latter portion of this master plan. Renovations will include both systemic upgrades and exterior improvements in order to extend the life of these facilities built five decades ago. The renovations should also make the facilities more usable for the current needs of the College.

2.4.5 MAJOR UTILITY RECOMMENDATION

1. The near-term projects identified in the June 2022, Burdette Kohler Murphy and Associates (BKM) Utility Master Plan included the following:

   · Completion of systematic HVAC renovation of Pavilion One (P1) and Pavilion Two (P2).

   · Removal of Falcon Hall (FH) and Science South buildings in 2020 to make way for the construction of the new Math & Science Building (LB).

   · Renovation of the Resource Center (RC).

   · Removal of Mathematic Pavilion (MP) and North Pavilion (NP) to make way for the construction of a new Math building in 2036.

   Most of those are now complete or in process.

   The framework and recommendations in the BKM Utilities Master Plan are based on the much more aggressive growth program outlined in the previous Facilities Master Plan. The then-current utilities were judged to be adequately sized, and no major shortcomings were identified for the Takoma Park/Silver Spring campus except those that are ordinarily addressed as part of any new building or major renovation project. These include such things as evaluating electrical loads and providing them to PEPCO to ensure adequate service capacities can be provided, and analysis of domestic and fire water demands to determine the need for booster pumps. More detailed descriptions of specific recommendations are contained in the BKM Utilities Master Plan.

2. Maryland stormwater management regulations require "environmental site design to the maximum extent practicable." In short, this demands that a large portion of stormwater runoff from new projects be infiltrated or reused on-site by green roofs, irrigation, chiller water makeup, gray water recycling or other means. The net effect of this is that while it adds costs to future projects for stormwater management facilities and devices, the effect on receiving storm drain systems is generally not significant enough to require downstream capacity upgrades.

2.4.6 NATURAL SYSTEMS AND SUSTAINABILITY RECOMMENDATIONS

As an institution of higher education, Montgomery College embraces its responsibility to adhere to the state's climate policy and proactively integrate sustainable practices into the Facilities Master Plan (FMP). Montgomery College is fully dedicated to the objective of reducing statewide greenhouse gas emissions, as mandated by the State Senate Bill/ Climate Solutions Now Act 2022 comprehensive climate policy. This commitment aligns with the direction of the Facilities Master Plan, which outlines the College's long-term goals for sustainable infrastructure and operations.

Recognizing the urgency and significance of reducing emissions, the College is committed to implementing energy efficiency and electrification requirements for specific buildings within the institution. The Facilities Master Plan includes strategies to improve the energy efficiency of existing buildings and prioritize the use of renewable energy sources. The College will work closely with electric companies to enhance annual incremental gross energy savings through targeted programs and services, ensuring that the campuses remain at the forefront of sustainable practices.

In line with the College's commitment to sustainable transportation, it wholeheartedly endorses zero-emission vehicle mandates for both the State vehicle fleet and local school buses. This commitment is in line with our Facilities Master Plan's focus on promoting alternative transportation options, including electric vehicle charging stations and bike-sharing programs. By embracing these initiatives, the College aims to reduce emissions from transportation and create a more sustainable campus environment.

The College also supports the establishment of the Climate Catalytic Capital Fund and by actively participating in this fund, it aims to leverage the available resources to support innovative climate solutions and advance sustainable practices within the institution. The initiatives and projects supported by this fund align with the Facilities Master Plan's vision for sustainable infrastructure and operations.

Montgomery College aims to make significant contributions to the collective effort of reducing greenhouse gas emissions, fostering sustainability, and creating a more resilient and prosperous future for the college, the community and the broader environment.

2.4.7 PROPOSED PEDESTRIAN AND BICYCLE CIRCULATION

Proposed Pedestrian Circulation

The proposed 2033 campus layout does not create any new pedestrian movement. The new mixed-use building is proposed to be at the current parking lot W1 location, which already has complete pedestrian elements to the rest of the campus.

The pedestrian route on Burlington Avenue is undesirable due to factors such as high vehicle speed and the lack of buffer between traffic and pedestrians. The new building replacing parking lot W1 will generate higher pedestrian demand from the East Campus to the West Campus. Burlington Avenue has a shorter walking distance from the East Garage than the pedestrian bridge. The College should coordinate with the County to consider pedestrian improvements on Burlington Avenue.

Pedestrian crossings on Georgia Avenue at King Street and Jesup Blair Drive are undesirable because the intersections are uncontrolled with high traffic volumes on Georgia Avenue. There is approximately 850 feet between the two available crossings on Georgia Avenue. Either a full traffic signal or a pedestrian signal should be considered at King Street or mid-block between Burlington Avenue and Blair Road.

Proposed Bicycle Circulation

Bicycle facilities available adjacent to the Campus are shared roads. No changes are proposed to the existing bicycle circulation.

2.4.8 TRANSIT RECOMMENDATIONS

The Takoma Park/Silver Spring Campus is well served by existing Metro Bus and Ride On services. An overall transit mode share of 26% 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. 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. Work with the Montgomery County Department of Transportation Bus Stop Improvement Program to enhance passenger shelters and amenities, as needed, at Ride On and Metro Bus stops serving the Takoma Park/Silver Spring Campus.
5. 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.
6. 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.

See Section 2.2.8 Transit for student and staff survey responses to using public transportation as an alternative transportation method. Survey results suggest there is potential to increase public transit utilization as auto utilization is relatively high and students' trip origins are quite concentrated.

2.4.9 PROPOSED VEHICULAR CIRCULATION

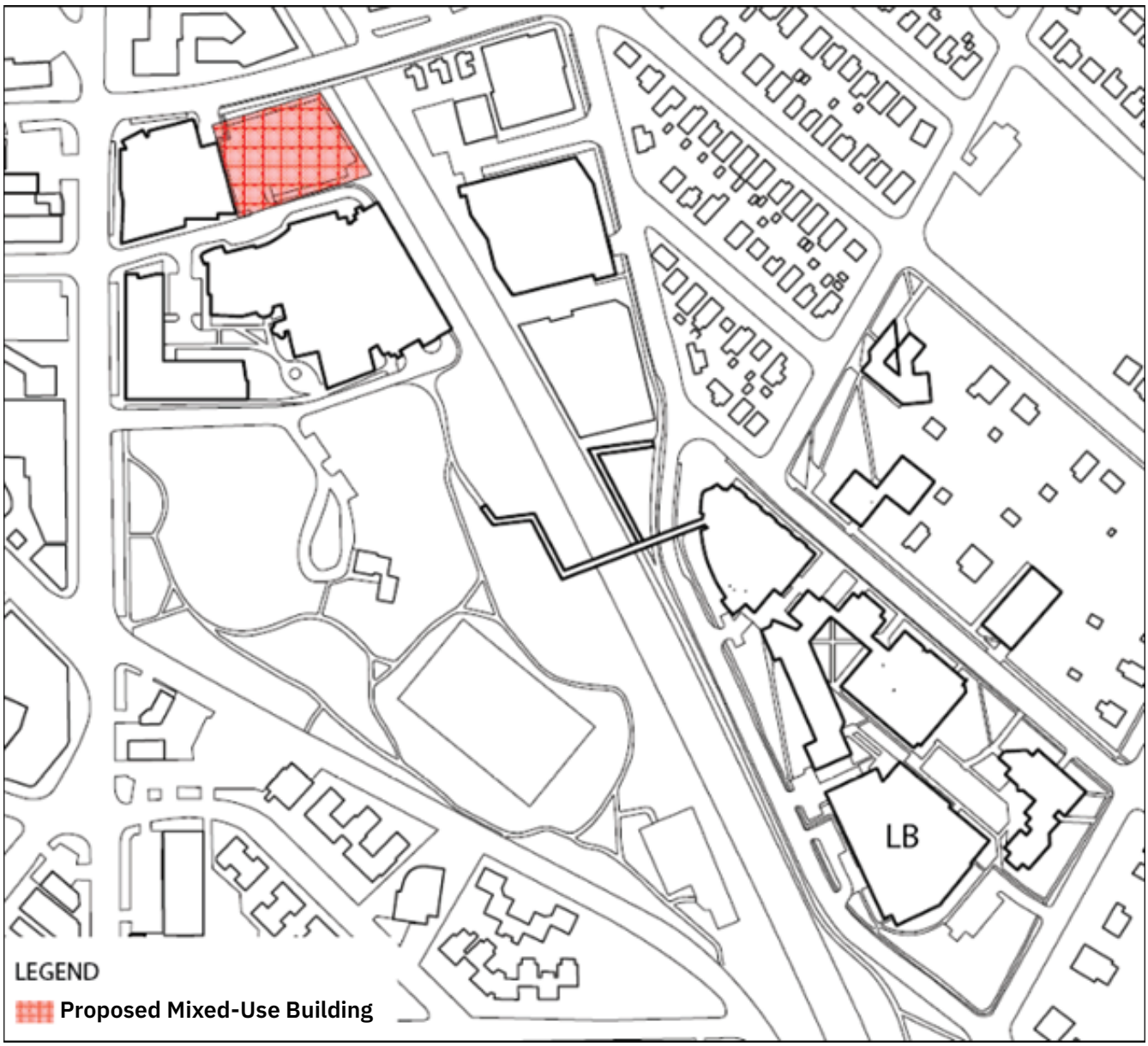
In order to address neighborhood concerns about vehicle drop off and pick up, signage was placed on New York Avenue to use the east garage instead but this program has not been effective. A new passenger pickup/drop-off area should be considered on Fenton Street between the Student Services building and the Science North building. There is sufficient space currently for vehicles stopped to be out of the driving lane and not impede traffic flow. Signage should be installed to support and encourage use of this new drop off/pick up area.

2.4.10 PARKING

The new mixed-use building will eliminate parking lot W1, shown in Figure 2.24. The Catherine and Isiah Leggett Math and Science Building (LB, under construction) will add about 18 staff-only spaces. No other changes to parking are proposed. This reduces 2033 parking supply from 1,125 to 1,059 spaces. Montgomery College projects a student and staff population growth of 41% between 2023-2033. This increases the peak parking demand for 2033 from 783 to 1,104 spaces. This increases parking occupancy from 70% to 104% between 2023-2033. Peak parking occupancy for the campus should ideally not exceed 85%.

If additional parking sites are not planned, the College should consider limiting parking permits to the Campus and other transportation demand management measures to reduce single occupant vehicles to campus.

Figure 2.24 — Proposed Parking Changes



SECTION 2.5

Implementation

Implementation — TPSS Campus

2.5.1 PROJECT SEQUENCING

The projects outlined in 2.5.4 are generally capable of being developed independently of one another and do not require enabling projects.

PHASE 1 (see Figure 2.26)

1. Academic and Wellness Facility

The Wellness Village will replace Science North, the Math Pavilion and the North Pavilion. These buildings are currently acting as swing space for the library renovation and the construction of the Math and Science Building. Once those projects are completed in 2024, the Wellness Project could be undertaken. Since implementation of the Wellness Project is not immediate, interim uses that do not impede the future redevelopment will need to be identified. If funds are available, Science North can be demolished in advance of the Academic and Wellness project.

2. Mixed-Use Building

The Mixed-Use Building is currently a surface parking lot. Since the campus currently has parking capacity, the lot could be redeveloped without the need for temporary parking alternatives. The lot is owned by the College's foundation, so alternative financing options could be investigated to advance development of the site.

3. Campus Safety and Security Improvements

The campus improvements to circulation, wayfinding, lighting and landscape can be completed independently of other projects.

PHASE 2 (see Figure 2.27)

4. Pavilion Renovations

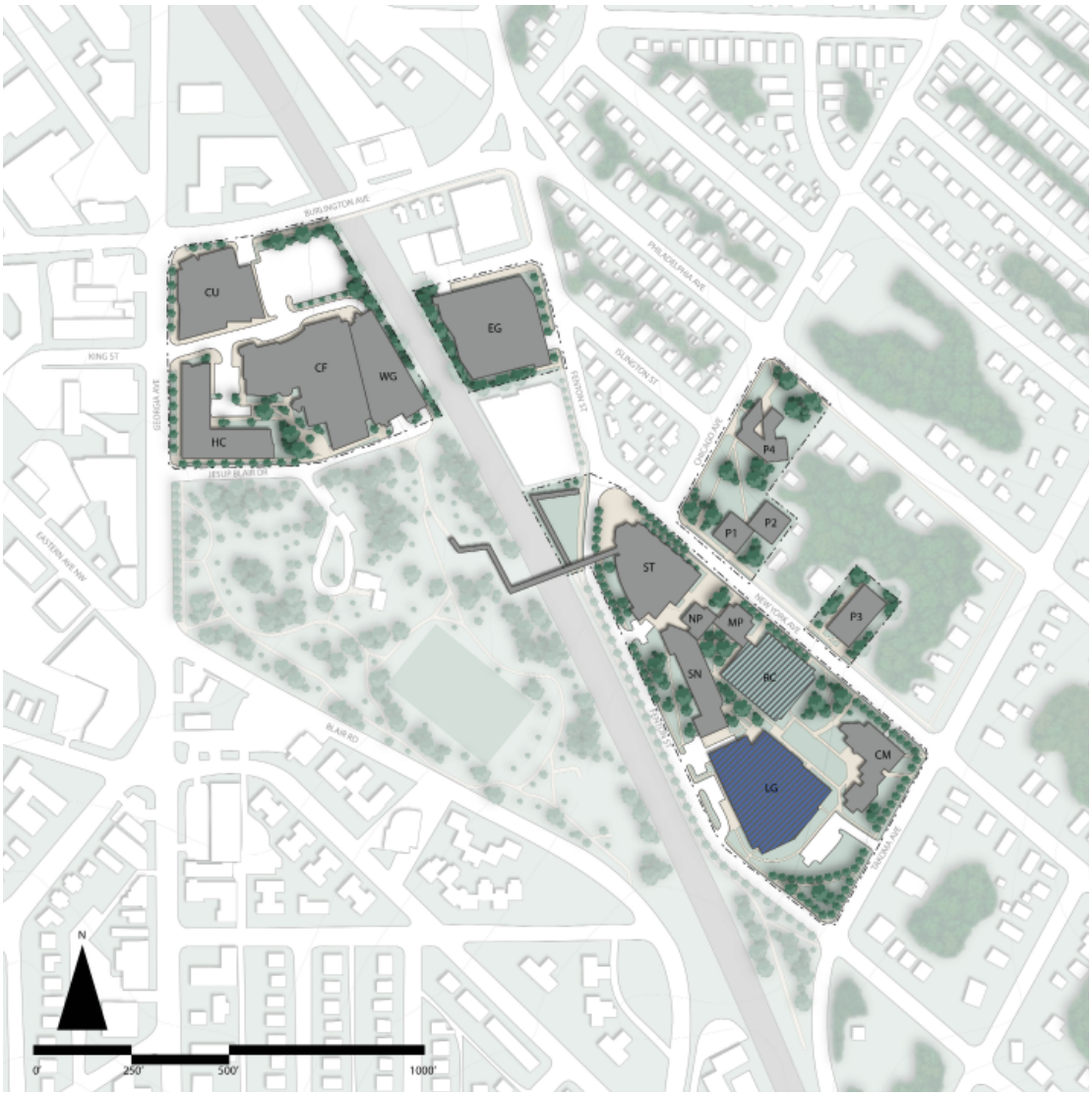
The renovations for Pavilions 1, 2 and 4 can occur independently once the Library renovation is completed and temporary facilities are no longer required. Pavilion 1 would be renovated in 2024, while Pavilions 2 and 4 would occur as funds become available at the end of the planning period.

PHASE 3 (see Figure 2.28)

5. Potential Housing Site

The timing of the housing project is dependent on the College's plans to provide student housing.

Figure 2.25 — Takoma Park/Silver Spring Campus 2023, Construction Since Last Approved FMP



BUILDING KEY

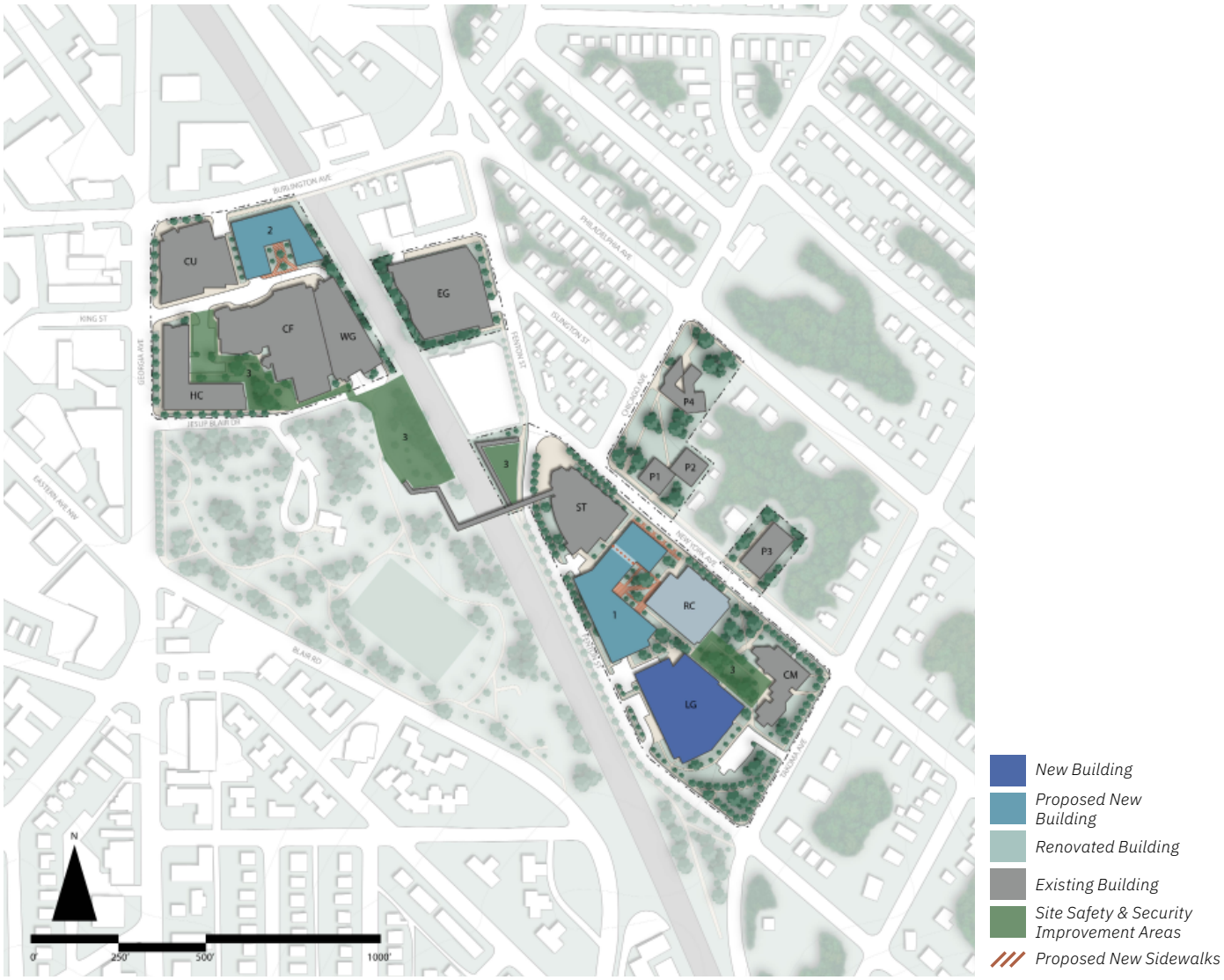
East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.26 — Takoma Park/Silver Springs Campus, Phase 1 2023-33 Facilities Master Plan



BUILDING KEY

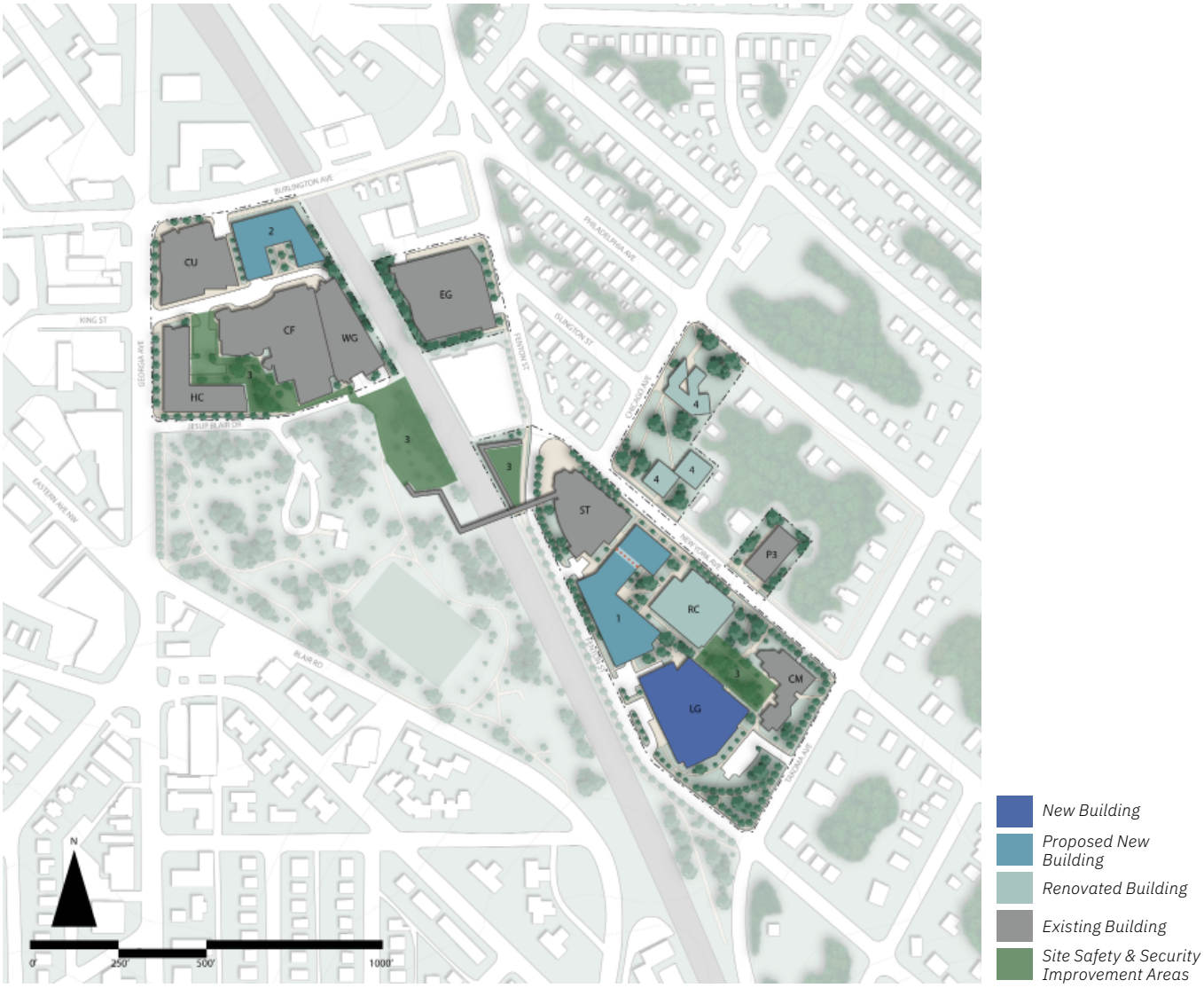
East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.27 — Takoma Park/Silver Springs Campus, Phase 2 2023-33 Facilities Master Plan



BUILDING KEY

East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

Figure 2.28 — Takoma Park/Silver Springs Campus, Phase 3 2023-33 Facilities Master Plan

BUILDING KEY

East Campus

ST Charlene R. Nunley Student Services Center
RC Resource Center
CM Catherine F. Scott Commons
SN Science North Building
NP North Pavilion
MP Mathematics Pavilion
EG East Garage
P3 Pavilion Three
P1 Pavilion One
P2 Pavilion Two
P4 Pavilion Four
LG Catherine and Isiah Leggett Math & Science Building

West Campus

HC Health Sciences Center
CF Morris and Gwendolyn Cafritz Foundation Arts Center
CU Cultural Arts Center
WG West Garage

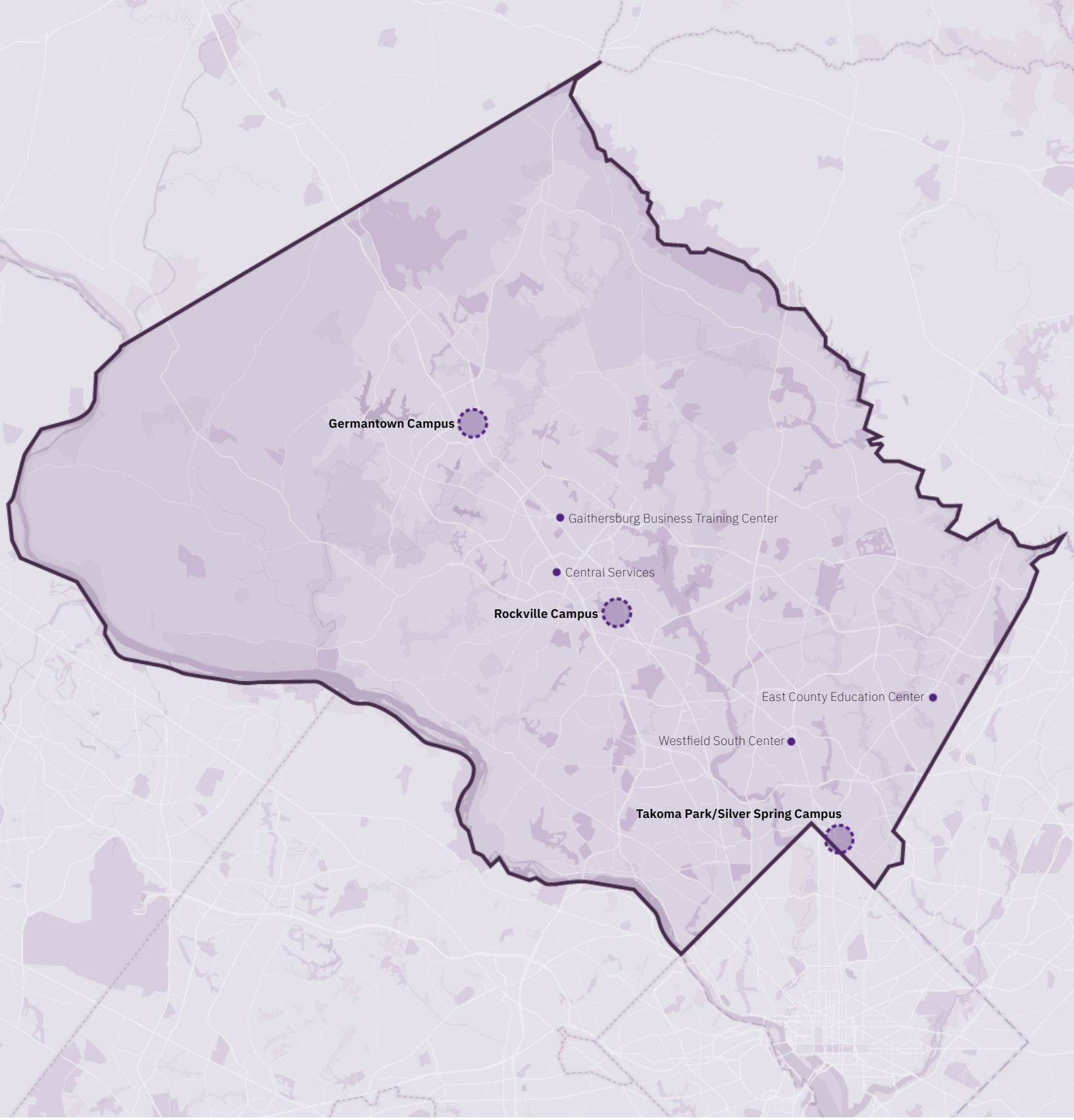
2.5.2 Projected Costs

The chart below provides an estimate of construction, planning and equipment costs for the projects in 2023 dollars. Escalation should be applied once timeframes are finalized.

Table 2.43 — Projected Total Construction Costs

	Building Demolition			Renovation			New Construction		
TAKOMA PARK/SILVER SPRING	**Area**	**Cost/ SF**	**Demo Cost**	**Area**	**Cost/ SF**	**Renovation Cost**	**Total Area**	**Cost/ SF**	**New Construction Cost**
Wellness Facility	53,834	$15	$807,510				94,800	$425	$40,290,000
Wellness Parking							25,000	$95	$2,375,000
Mixed-Use Building							87,000	$350	$30,450,000
Mixed-Use Parking							87,000	$95	$8,265,000
Subtotal	**53,834**		**$807,510**				**293,800**		**$81,380,000**

	TOTAL				
TAKOMA PARK/SILVER SPRING	**Total Construction Cost**	**Site Contingency, Testing**	**Planning Cost @ 15%**	**Equipment Cost @ 23%**	**Total Project Cost (2023)**
Wellness Facility	$41,097,510	$49,819,000	$6,165,000	$9,453,000	$65,437,000
Wellness Parking	$2,375,000	$2,879,000	$357,000	$547,000	$3,783,000
Mixed-Use Building	$30,450,000	$36,912,000	$4,568,000	$7,004,000	$48,484,000
Mixed-Use Parking	$8,265,000	$10,019,000	$1,240,000	$1,901,000	$13,160,000
Subtotal	**$82,187,510**	**$99,629,000**	**$12,330,000**	**$18,905,000**	**$130,864,000**



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Montgomery College
Facilities Master Plan 2023 — 2033

CHAPTER 3

Germantown Campus

CANNONDESIGN

January 31, 2024

CONTENTS

SECTION 3.1

Background Information

Background Information

3.1.1 INTRODUCTION

The College began offering classes in the Upcounty 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 and Applied Studies, and Humanities and 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 6,200 full-time and part-time, 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. In 2014, the new Holy Cross Germantown Hospital opened on campus and in the same year the Life Sciences Park Foundation and the College developed a plan for the Pinkney Innovation Complex 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 and employment 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 COMPARISON WITH 2013-23 FMP

The 2013-23 Facilities Master Plan heavily focused on campus development on the northern side proposing three new construction buildings and two extensive additions to existing buildings. The Master Plan also proposed two new buildings on the southern side of campus. This aggressive plan was to accommodate a projected space deficit of 227,390 NASF. The new construction projects proposed included a new Student Services Center, which coincides with a new road connecting Observation Drive to Goldenrod Lane just south of the existing baseball facility. A new Parking Garage and Arts and Communications Building rounded out a new north gateway to campus in the plan. On the southern end of campus, the 2013-23 Facilities Master Plan proposed a three-phase building project to house additional space for the Biology, Chemistry, Physics, Engineering, Geosciences and Cybersecurity programs. This building was also thought to include space to accommodate private partnerships such as incubator space and established corporate partners to form a physical link to the PIC MC. Just south of the High Technology and Science Center, the plan proposed a new Library Learning Commons. The 2013-23 Facilities Master Plan also proposed additions to the Physical Education Building and the Science and Applied Studies Building and renovations to the High Technology and Science Center, the Humanities and Social Sciences Building, the Physical Education Building and the Paul Peck Academic and Innovation Building. Overall, the 2013-23 Facilities Master Plan called for more compact campus development of new buildings on the northern edge of campus and preserving portions of the southeast side of campus for long-term development opportunities for the PIC MC. The plan also ensured the preservation of a significant forest conservation area that includes both Gunners Branch stream valley and the forest stand on the west side of the Campus.

Since the 2013-23 Facilities Master Plan was approved, a partial demolition of the Science and Applied Studies building occurred, allowing for a new addition to be constructed. The building was renamed as the Dr. DeRionne P. Pollard Student Affairs and Science Building. This project was completed in 2021. The 2023-33 Facilities Master Plan describes a considerably lower projected space deficit in 2033 of 32,886 NASF.

Consistent with the previous plan, the 2023-33 Facilities Master Plan proposes new projects on the Germantown Campus, adding to the Campus net assignable square foot space inventory. Projects in both plans include new buildings — Student Services Center, Arts and Communications Building, a Parking Garage, and a Science and Math Building — and renovations to the Physical Education, High Technology and Science Center, and Paul Peck Academic and Innovation Building. In a departure from the previous master plan, the 2023-33 Facilities Master Plan proposes the demolition of the Humanities and Social Sciences Building with a new replacement building on the site. The plan also proposes to demolish the remaining original part of the Student Affairs and Science Building and complete phase two of the project.

3.1.3 ENROLLMENT PROJECTIONS

As previously noted, the College has seen a decline in enrollment over the past 10 years, with a peak enrollment in 2012 and a decline of 37.6% to the Spring of 2022. Specific to the Germantown campus, the year-over-year Fall enrollment numbers from 2021 to 2022 fell 11.8% from 7,110 to 6,270. This decline reflects an 18-19% decrease in both on- and off-campus students, but a modest 6% increase in distance learning students.

Based on Enrollment Projections 2023-2033 Maryland Public Colleges and Universities, published in May 2023 by the Maryland Higher Education Commission (MHEC), over the next decade, the College is projected to experience Full Time Equivalent (FTE) enrollment growth of 41% and unduplicated headcount growth of 30%. Since many students take courses on multiple campuses, the distribution of the growth may vary as program offerings are adjusted. In particular, the development of the East County Education Center due to open in 2024 and the development of an East County Campus will impact where growth may occur across all campuses. In the Fall of 2022, 37% of students took courses at the Germantown campus. If the numbers took hold, it could be anticipated that the Campus would house 8,150 students at the end of the planning period.

SECTION 3.2

Existing Site Conditions and Analysis

Existing Site Conditions and Analysis

3.2.1 CONTEXT AND SETTING

Context

The Germantown Campus was established in 1978 on 208 wooded acres in the northwestern region of Montgomery County. The property is bound by MD-118 (Germantown Road) to the north, I-270 to the west, and Middlebrook Road to the south. Multi-family properties bound the Campus to the east with MD-355 (Frederick Road) to the 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, largely designated as the site of the Pinkney Innovation Complex for Science and Technology (PIC MC).

In 2014, Holy Cross Hospital opened on one of the south parcels along Observation Drive. It was the first development of non-campus facilities within the campus. The complex includes the main hospital building, garage and a professional office building that houses physician offices and research laboratories.

Also in 2014, the College and the Life Science Park Foundation developed a long-term plan for the development of new facilities designed to host businesses that would work in conjunction with the College to enhance economic development, advance the connection of the academy and industry, and provide work experience for students. The plan leverages the Regional Institution Strategic Enterprise (RISE) Zone to generate private investment to compliment the College's mission.

In 2022, a new private developing firm broke ground at the intersection of Observation Drive and Exploration Lane. The new high-tech manufacturing building will provide 140,000 square feet of space and house production of satellite broadband and networking equipment.

Setting

The Germantown Campus is characterized by the combination of a relatively compact composition of academic buildings organized around a quadrangle. Sloping wooded topography and sweeping vistas to the southeast encompass the campus. 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 Sciences (HS), Dr. DeRionne P. Pollard Science and Applied Studies Building (SA) and Physical Education Building (PG) share a common architectural vocabulary. All three buildings are one to two stories tall, with strong horizontal elements of ribbon windows or crisp, white stucco Exterior Insulation and Finish Systems (EIFS). The buildings are oriented toward the quadrangle.

The High Technology & Science Center (HT), built in 1995, 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 the buff-colored brick. The building is also four stories in height on an otherwise low-scale campus as this building bridges steep slopes.

The Montgomery College Foundation purchased a two-story building on Goldenrod Lane that was originally designed as an office building. It is clad with brown brick and dark tinted windows. The building has been renovated and serves as the Paul Peck Academic and Innovation Building (PK). 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. Montgomery College leases this space from the Foundation.

In September 2014, the Bioscience Education Center (BE) opened. It is sited immediately south of the SA on the highest point of campus. To the east of the Bioscience Education Center are sweeping views of the Holy Cross Germantown Hospital and south towards Rockville. BE 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 mimic the architectural language of the original campus buildings. Large, full-height 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. The building additionally forms the western edge and a new quad south of the original campus quad. This quad was further established by the opening of the SA addition, phase 1 which opened in 2020. This addition, paired with the Bioscience Education Center, has introduced a new architectural context to the Campus. Phase 2 of the SA renovation will replace what is left of the original SA building.

3.2.2 GATEWAYS AND VIEWS

Visibility and Identity

Arriving on the Campus from the north occurs after turning off MD-118 (Germantown Road) and proceeding 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 views are of the Campus buildings, parking lots, a storm water management pond, which is beyond a flat green area that Holy Cross Hospital utilizes for their helicopter landings. To the right of this entryway the terrain is high, and the baseball field is on the higher elevation. 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 bucolic Germantown Campus.

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 a large portion 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 five Campus buildings to the east providing a lower-level entrance into the High Technology and Science Center. This road continues south and west to form an internal loop road wrapping the main academic quad of the Campus.

As part of the Bioscience Education Center project, Observation Drive was extended to Middlebrook Road, providing a second access point onto campus to improve connections. It connects Middlebrook Road to Goldenrod Lane at a new traffic circle southeast of the Bioscience Education Center. The College recognizes that Montgomery County plans show a proposed eastern entrance that will extend Cider Press Mill Road from Frederick Road (MD-355) to the aforementioned 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 proposed connections.

The College recognizes the PIC MC RISE zone plans to develop the land southeast of the campus into the PIC MC, which would be developed by 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.

3.2.3 OPEN SPACE AND STREETSCAPE

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 the 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 the addition of the Student Affairs and Science Building, to the southeast through the sites of the proposed PIC MC and the Holy Cross Germantown Hospital. This region of campus has relatively intense slope change making it important to develop accessible pedestrian pathways to any development to the south part of campus.

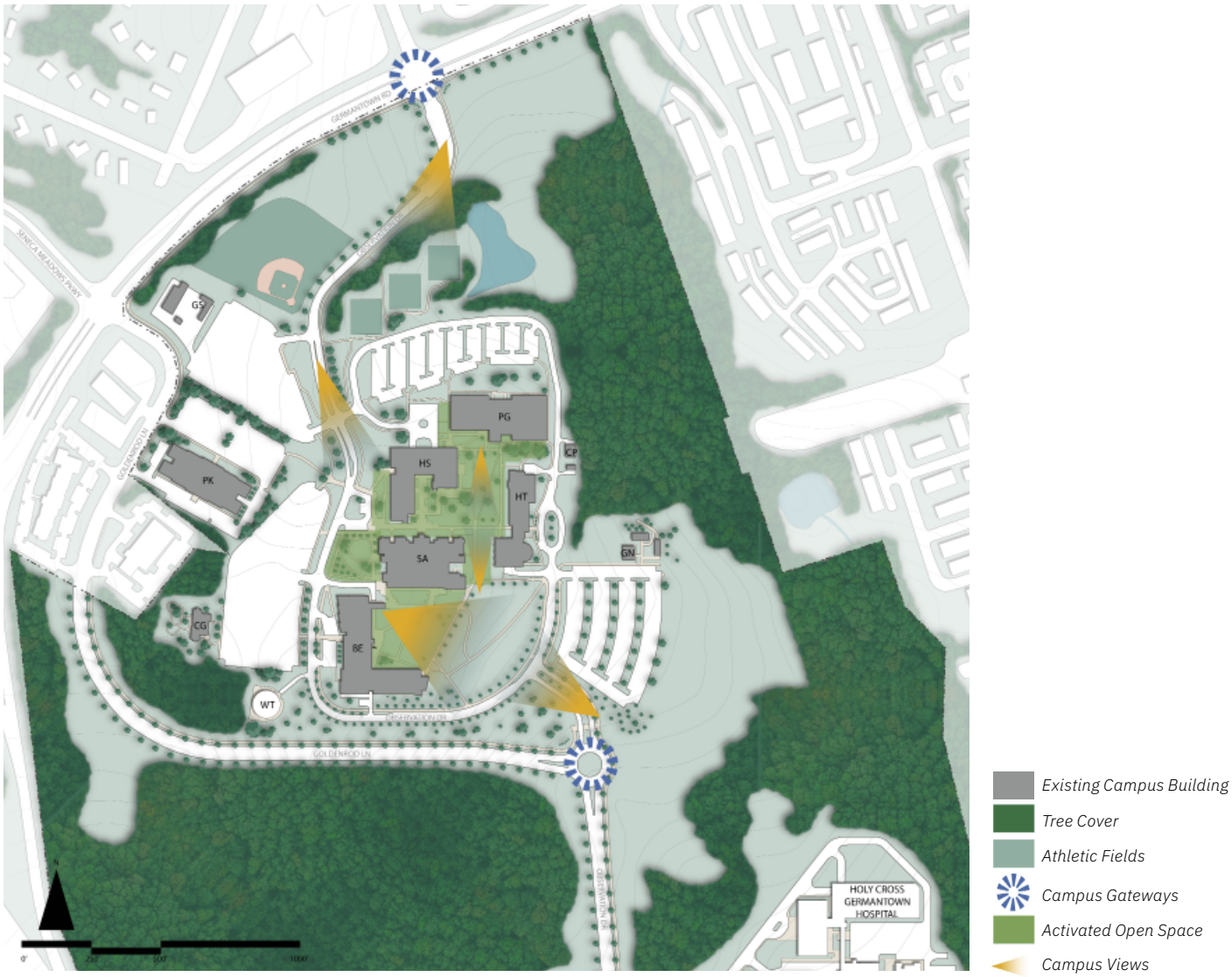
The western region of campus predominantly consists of surface parking with a baseball field to the northwest. There are minimal pedestrian pathways connecting the main campus center to the Paul Peck Academic and Innovation Building and the baseball field. Any development on this part of the Campus would require an enhanced pedestrian network and crosswalks across Observation Drive.

Figure 3.1 - Pedestrian Network

BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

Figure 3.2 - Gateways and Open Space



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

3.2.4 MAJOR UTILITIES

Mechanical

Per the June 2022 Utilities Master Plan (UMP) prepared by Burdette, Kohler, Murphy and Associates, Inc. (BKM), the campus heating and cooling utilities are centrally located in two buildings, the Bioscience Education Building (BE) and the High Technology and Science Center (HT). The HT central plant was built in 1995 and provides a central chilled water system for the campus. The HT central plant boilers were installed to support the HT building locally. Satellite boilers in the HS provide heating water to the HS and PG buildings. The BE building basement houses a central plant constructed to increase the campus heating and chilled water generation capacities. It distributes heating water to support the BE Building, the renovated SA building and the Child Care Center (CG). The BE central plant heating water piping has been extended toward the northern campus buildings for a future tie-in to the HT and HS heating water systems.

Electrical

The campus is served by the Potomac Electric Power Company (PEPCO) from an underground distribution line owned by the utility. The service is an underground loop 13.2kV feeder, originating at a PEPCO overhead line feeder which enters the campus near the intersection of MD Route 118 and Goldenrod Lane. A second PEPCO feeder interconnects with the campus along MD Route 118. The College wants to extend this second feeder north to the main campus for redundant service. Most buildings are served by pad-mounted transformers fed by a 13.2kV underground distribution loop. As projects are planned, estimated loads are calculated and sent to PEPCO to determine if their infrastructure has sufficient capacity. If modifications are required PEPCO designs and implements the system upgrades, and the College reimburses PEPCO for construction costs

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 combined domestic/fire water system with a single master WSSC revenue meter located in a vault adjacent to the vehicle shops building serving the campus. All campus buildings are served by combination incoming underground domestic water piping which splits between fire protection piping and domestic water piping the building mechanical rooms.

The on-site systems are currently adequate for the Campus needs, and the June 2022 UMP indicates that public mains operated by WSSC adjacent to the Campus in Germantown Road to the north and Goldenrod Lane to the south are capable of providing the existing and future flow rates required for domestic water usage and fire flow rate requirements.

WSSC sanitary sewer mains cross the Campus from the northern portion of Goldenrod Lane, running east to the Campus's 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. The June 2022 UMP indicates the existing collector lines are adequately sized for the current building capacity and it is believed that they will be capable of supporting near-term future growth.

Storm Drainage

The Germantown campus covers approximately 228 acres, consisting of grass, woods, buildings and open parking lots. The northern portion of the Campus utilizes inlets and pipes from campus to drain into a stormwater pond. The southern part of Campus including the area surrounding the BE and SA buildings and southeast parking lot, drain to inlets and stormwater structures that then discharge to a 42" pipe that drains south away from campus. While the current stormwater ponds are believed to be sufficient for existing and future conditions, the 2006 UMP by Wiley|Wilson reported that some of the campus drainage piping may be undersized based on storm modeling. The assertion was qualified by stating that the type of modeling used was an inexact science and that no flooding issues had been identified on campus.

Information Technology Systems

The existing utility and information technology infrastructure is a critical underpinning that supports the Campus's 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 in 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.

3.2.5 NATURAL SYSTEMS AND SUSTAINABILITY

Stormwater Management

The Campus occupies 228.7 acres consisting of woodlands, meadows and a built environment 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 near the WSSC water tower. In general, all of the existing campus development to the north of the water tower (approximately 37 acres), plus the Paul Peck Academic and Innovation 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 Center and Holy Cross Germantown Hospital, drain to the stormwater management pond located south of the Holy Cross Germantown Hospital 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 beneath 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 Paul Peck Academic and Innovation Building. This existing pond provides water quality control 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 stormwater management pond located in the northeast portion of the Campus.

The existing north stormwater management pond provides water quality and two-year, 10-year and 100-year quantity control for its respective drainage area. The pond was designed to the stormwater 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 three 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 three 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-year 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-year 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 facility 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 the Bioscience project, one directly northwest of the traffic circle, one northeast of the circle, one directly east of the greenhouse 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 the 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 two 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.

The renovation to the Student Affairs and Science Building (SA) provided the required stormwater management treatment via two micro-bioretention facilities. One facility, a planter box facility at the southeast corner of the building, captures and treats run-off from the building's roof. The other bioretention facility is located at the southwest corner of the High Technology and Science Center building and captures and treats 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.

3.2.6 FOREST CONSERVATION

A Natural Resource Inventory and Forest Stand Delineation plan was prepared by Ecotone for the Foulger Pratt Companies and Montgomery College. A Forest Conservation Plan tracked under Plan MR 2009720 covering the entire campus was approved in June 2010 by the Maryland National Capital Park and Planning Commission (MNCPP) and includes 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 lie 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 subsequent projects (Goldenrod Lane Extension, Holy Cross Germantown Hospital, SA Building Improvements, and the 19710 development project between Exploration Lane and Observation Drive) since the original approval.

3.2.7 PEDESTRIAN & BICYCLE CIRCULATION

Pedestrian Circulation

The majority of campus academic buildings are within an eighth of a mile of each other, and all school buildings are within a quarter of a mile of the campus core. The pedestrian circulation is well developed around campus, as shown in Figure 3.3. 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.

The Pedestrian Level of Comfort (PLOC) methodology developed by the Montgomery County Planning Department captures how comfortable it is to walk or use a mobility device in different conditions. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and pathway segment. Pathway scores are based on factors such as width, posted speed limit, buffer width and traffic volume. Crossings are scored using different metrics, such as presence of traffic control (stop sign or traffic signal), number of lanes crossed, highest posted speed limit and crosswalk type.

PLOC for the Germantown Campus and surrounding area are shown in Figure 3.4. Pedestrians are uncomfortable on Goldenrod Lane and Observation Drive due to factors such as no pathway buffer and high traffic volume. Pedestrian crossings to bus stops on Germantown Road (MD-118) are undesirable due to factors such as high vehicle speed and long crossings.

Figure 3.3 - Pedestrian Circulation

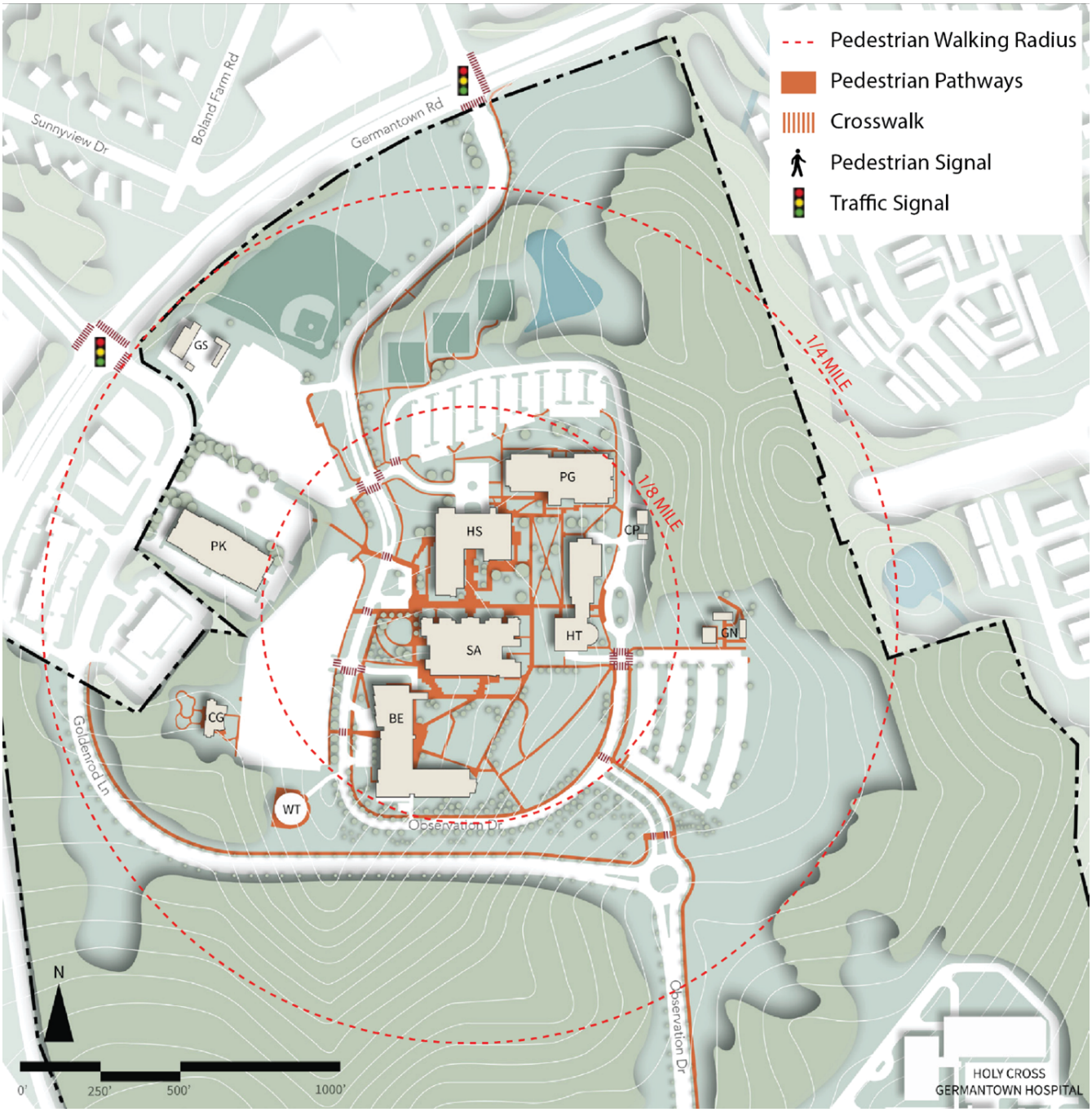
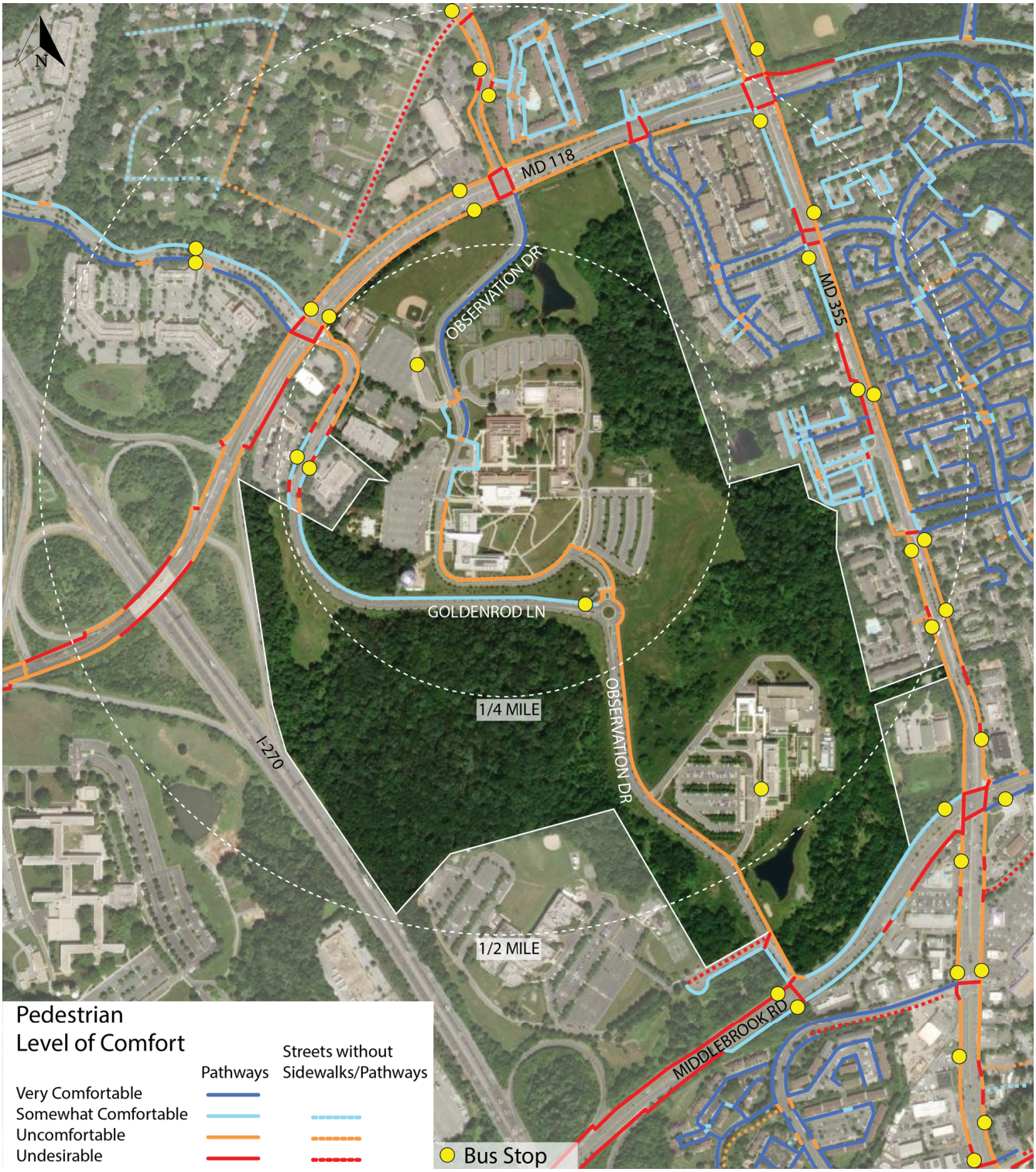


Figure 3.4 - Pedestrian Level of Comfort



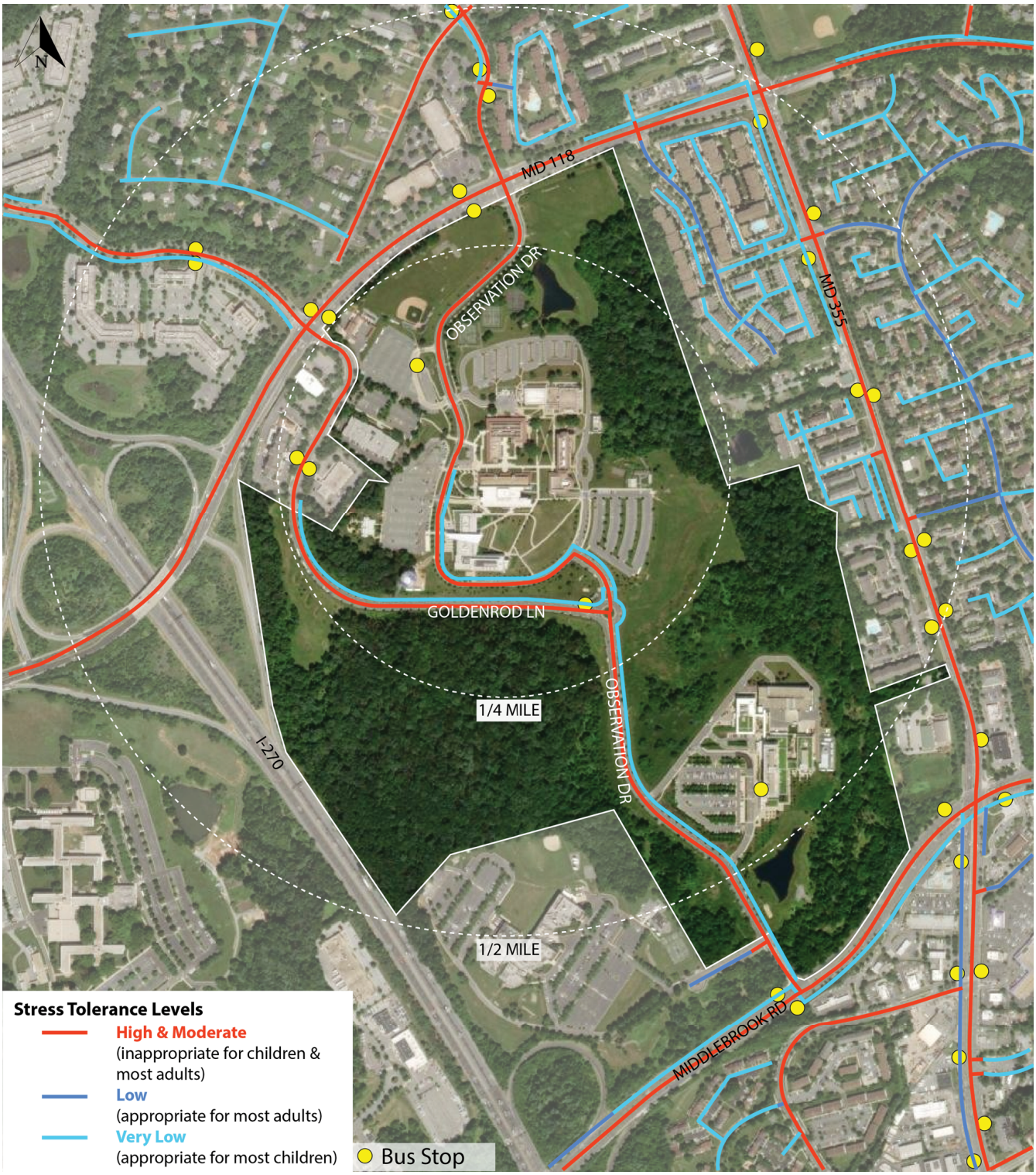
BICYCLE CIRCULATION

The Montgomery County Bicycle Master Plan in Figure 3.5 shows existing and proposed bikeways. On campus, a ten-foot-wide shared-use path exists on the east side of Observation Drive from Middlebrook Road to the circle at Goldenrod Lane. The shared-use path continues from the traffic circle to the campus loop of Observation Drive. A shared-use path also exists 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.

Figure 3.5 - Campus Bicycle Master Plan

Level of traffic stress (LTS) is an approach that quantifies the amount of discomfort that people feel when they bicycle close to traffic. The LTS methodology assigns a numeric stress level to streets and trails based on attributes such as traffic speed, traffic volume, number of lanes, frequency of parking turnover, ease of intersection crossings and others. When a street has a moderate or high level of stress, it may be a sign that bicycle infrastructure, like separated bike lanes or shared use paths, is needed to make it a place where more people will feel comfortable riding. As Figure 3.6 indicates, stress levels connecting to Germantown Road to the north are high and moderate. There are very low stress facilities from the core of the Campus to the south.

Figure 3.6 - Campus Bicycle Level of Traffic Stress



3.2.8 TRANSIT

Montgomery College contracts for shuttle services between the Rockville Campus and the Takoma Park/Silver Spring Campus and between Rockville Campus and Germantown Campus. Shuttle stops at Germantown are located at the bus stop in Lot 1. Shuttle service from Rockville starts at 7:10 a.m. and runs every 75 minutes until 7:40 p.m. The shuttle from Germantown to Rockville runs every 75 minutes from 7:45 a.m. to 8:15 p.m. The shuttle greatly decreases the travel time between campuses compared to using public transportation, reducing travel time from 60 minutes to 30 minutes.

There are several Ride-On bus routes with stops on or near the Germantown Campus. Route 55 (Rockville-Germantown Transit Center) provides service directly into the Campus, Monday-Sunday. Weekday service to the Campus runs from approximately 5:00 a.m. until 1:00 a.m. Three other Montgomery County Ride-On bus routes currently provide transit services along roadways bordering the Germantown Campus, but involve a longer walk from the Campus to the stops. These routes are: Route 70 (Germantown-Bethesda Express), Route 79 (Shady Grove-Germantown) and Route 83 (Holy Cross Germantown-Milestone Park and Ride-Germantown Transit Center). The transit map is shown in Figure 3.7. Key stops and frequency of routes are shown on Table 3.1.

Table 3.1 - Transit Route Information

ROUTE	KEY STOPS	FREQUENCY
70	Naval Medical Center	20 min.
83	Holy Cross Germantown, Germantown MARC Station	30 min.
55	Rockville Metro Station/MARC Station, Lakeforest Mall	10 min.
79	Clarksburg Town Center, Shady Grove Metro Station	40 min.

Figure 3.7 - Transit Map

There are four existing bus stops within a quarter of a mile radius. 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.

In May 2023, students and faculty/staff took a survey to give feedback on their campus experience. The survey gathered information such as residential zip codes, mode of transportation, and incentives for carpool and public transportation. Survey results suggest there is potential to increase public transit utilization as auto utilization is relatively high and students' trip origins are quite concentrated. At present, only 12% of faculty and staff and 32% of students arrive at the Germantown Campus via bus and shuttle. Student and faculty/staff responses regarding what would encourage use of public transportation are shown in Figure 3.8 and Figure 3.9.

The public transportation encouragements listed in the survey are:

- Help Finding Bus Service to Meet My Schedule
- Express Bus from Your Area of Residence to Campus
- Transit Subsidies

Of the 74 students who responded to this question, 47% were willing to switch to public transportation if one of the three choices were available. Half of these students responded that they would use public transportation if there was an express bus to campus from their residential area. A considerable number of students also responded that they would take public transit if there was a bus service that meets their schedule. As shown in Figure 3.9, faculty/staff residential areas were more scattered. Of the 48 faculty/staff responses, 42% were willing to switch to public transportation if one of the three choices were available. Majority of these faculty/staff (38%) were interested in having an express bus service. As shown in Figure 3.8 and Figure 3.9, student and faculty/staff residences are concentrated. The opportunity of express bus service should be explored in detail.

The transit challenges for the Germantown Campus include:

- The Route 79 bus provides direct access to the Shady Grove Metro Rail station, but it operates during weekday peak hours only at a frequency of every 40 minutes. The closest bus stop is on Middlebrook Road and Observation Drive, which is a 13-minute walk from the SA Building. The total trip time from the Shady Grove Metro Rail station on Route 79 would take 30 minutes.
- The Route 55 bus stops on Campus in Lot 1 and operates every 10 minutes during peak hours. However, it takes 40 minutes between the Campus and the Shady Grove Metro Rail Station.

A direct express bus connection between the Germantown Campus and the Shady Grove Metro Rail station could reduce the transit trip time to approximately 15 minutes.

Figure 3.8 - Transit Incentives for Students

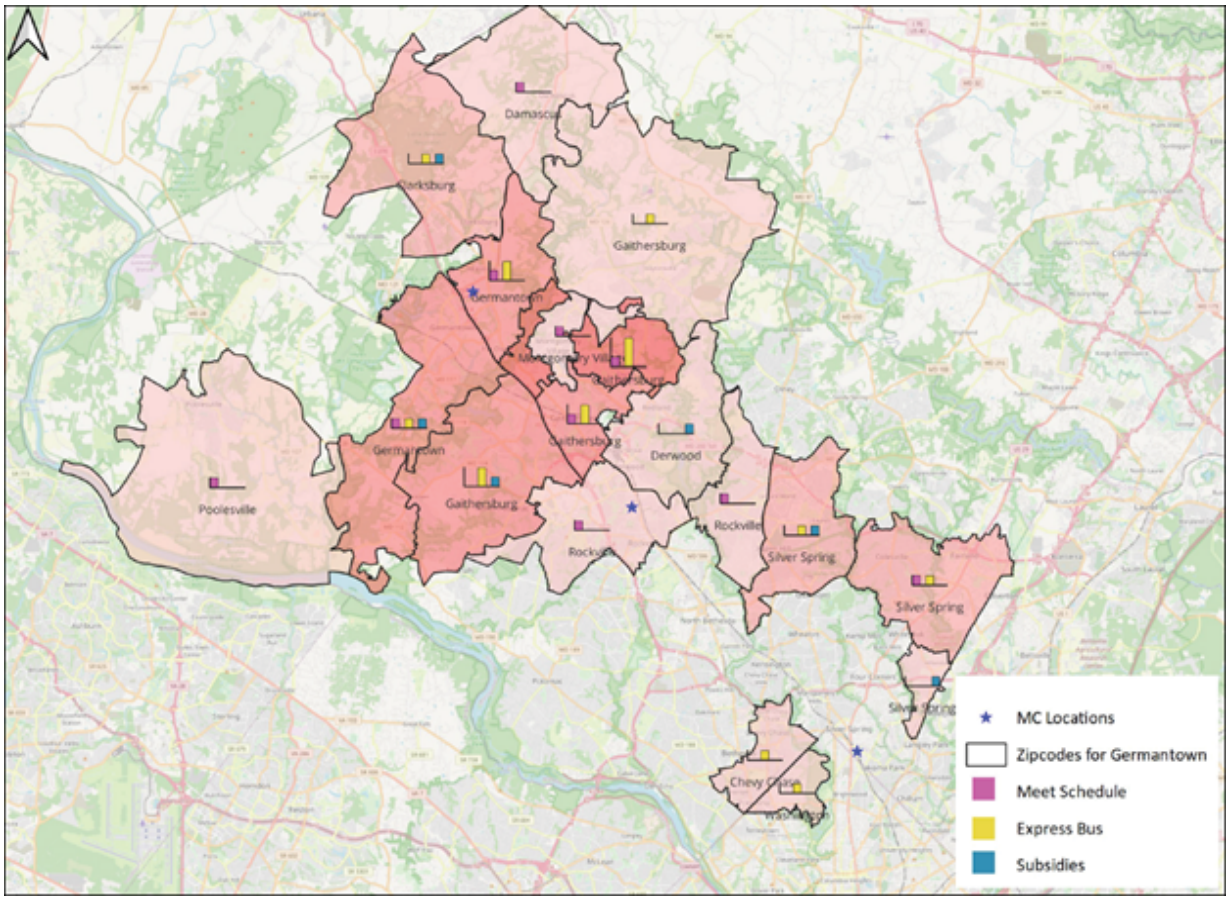
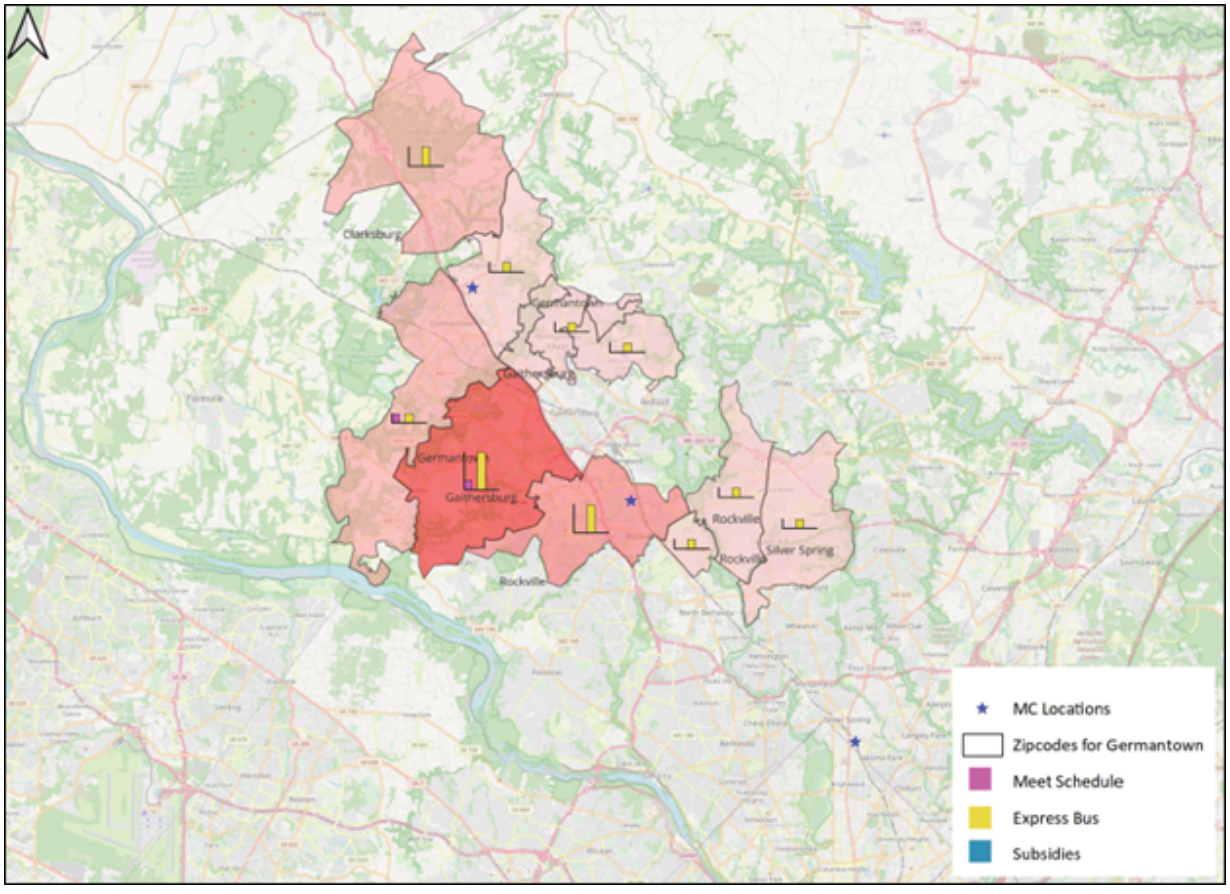


Figure 3.9 - Transit Incentives for Faculty/Staff



3.2.9 VEHICULAR CIRCULATION

Observation Drive runs through the entire Germantown Campus. It 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 unnamed road currently wraps around the four campus buildings to the east providing a lower-level entrance into the High Technology and Science Center. This road continues to the south and west to form an internal loop road with Observation Drive, wrapping the main academic quad of the Campus. Campus gateways are shown in Figure 3.10.

Montgomery County proposed an eastern entrance that will extend Cider Press Mill Road from Frederick Road (MD Rte. 355) to the Observation Drive/ Goldenrod Lane traffic circle but has no immediate plans to construct this connection. The College is 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 proposed connections.

Figure 3.10 - Vehicular Access

Traffic Volumes

Turning movement counts were conducted on March 7th-8th, 2023 from 7-10 a.m. and 2-7 p.m. Illustrated on Table 3.2 are peak inbound and outbound traffic at campus gateways. During the morning peak hour, a total of 404 inbound trips and 175 outbound vehicle trips were recorded. During the afternoon peak hour, a total of 146 inbound trips and 183 outbound vehicle trips were recorded. Not all traffic is attributed to the College since these intersections are also used by through traffic.

Trip distribution indicated by the data is shown in Figure 3.11. The majority of traffic enters and leaves the Campus via MD-118. AM outbound and PM inbound trips are almost evenly distributed at the two intersections.

Transportation Mode Share

The survey of students and faculty/staff taken in May 2023 also obtained information on commuting mode share, shown in Table 3.3. Of all faculty/staff who responded to the survey, 83% drove and 5% were dropped off. Of all students who responded to the survey, 44% drove, 20% were dropped off and 2% carpooled.

Table 3.2 - Peak Hour Traffic

	A.M.		P.M.	
Intersection	**Inbound**	**Outbound**	**Inbound**	**Outbound**
MD 118/Observation Dr	292	92	84	120
Observation Dr/Goldenrod Ln	112	83	62	63
Total	404	175	146	183

Table 3.3 - Transportation Mode Share

	Drive	Drop-Off	Carpool	Transit	Bike	Walk	Other
Students	44%	20%	2%	24%	1%	7%	3%
Staff	83%	5%	0%	8%	2%	2%	0%
Overall	58%	15%	1%	18%	1%	5%	2%

Figure 3.11 - Germantown Trip Distribution

3.2.10 PARKING

The total parking capacity of the Campus is 1,655 spaces. Based on the parking survey conducted in Fall 2022, a peak of 723 parked vehicles was counted, giving a parking utilization rate of 44% overall. Student parking occupancy by lot is shown in Figure 3.12. Faculty parking occupancy by lot is shown in Figure 3.13.

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. As shown by the parking survey, there is adequate parking for commuting students, faculty and staff on the Germantown Campus.

Figure 3.12 - Student Parking Occupancy

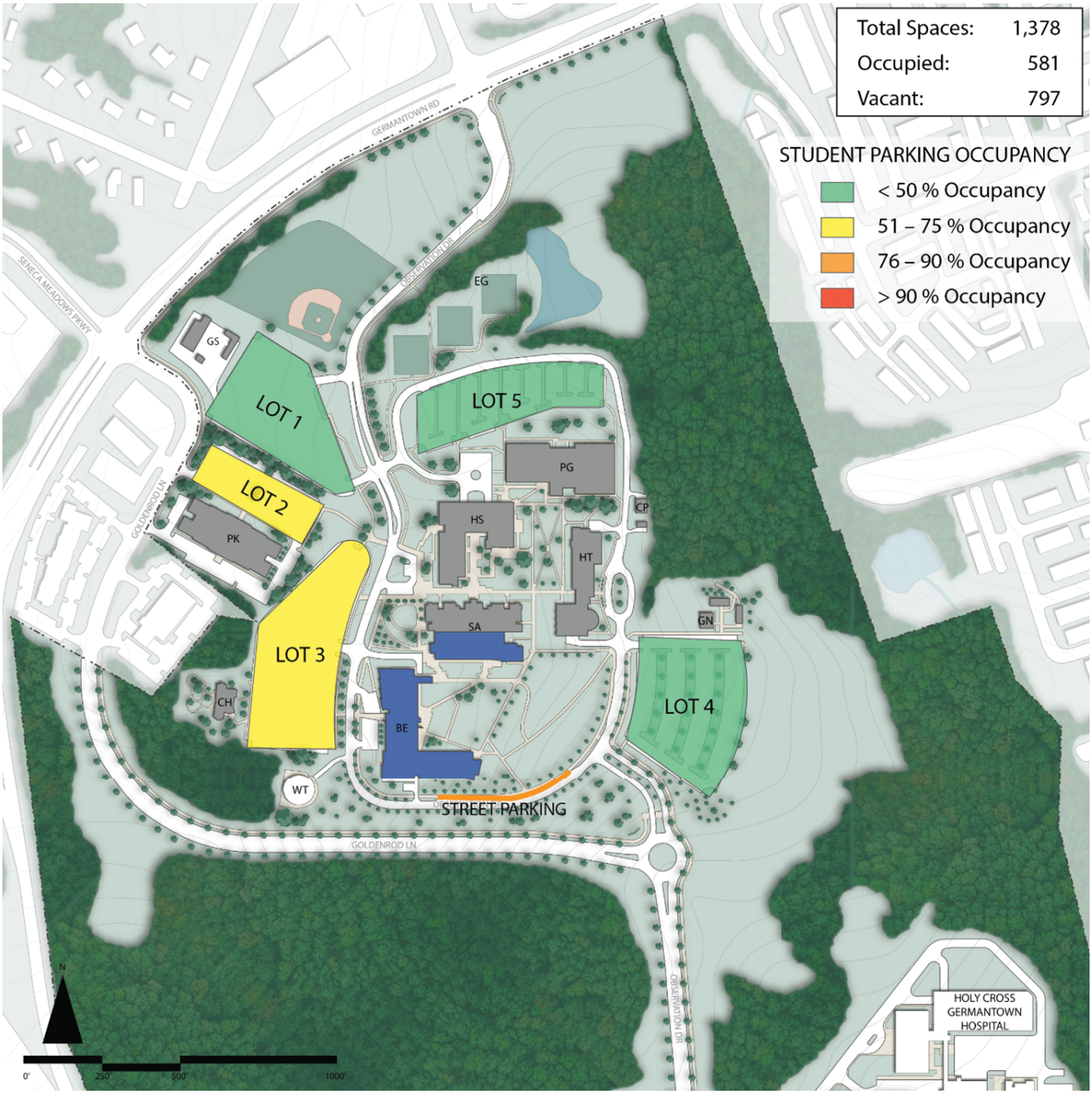
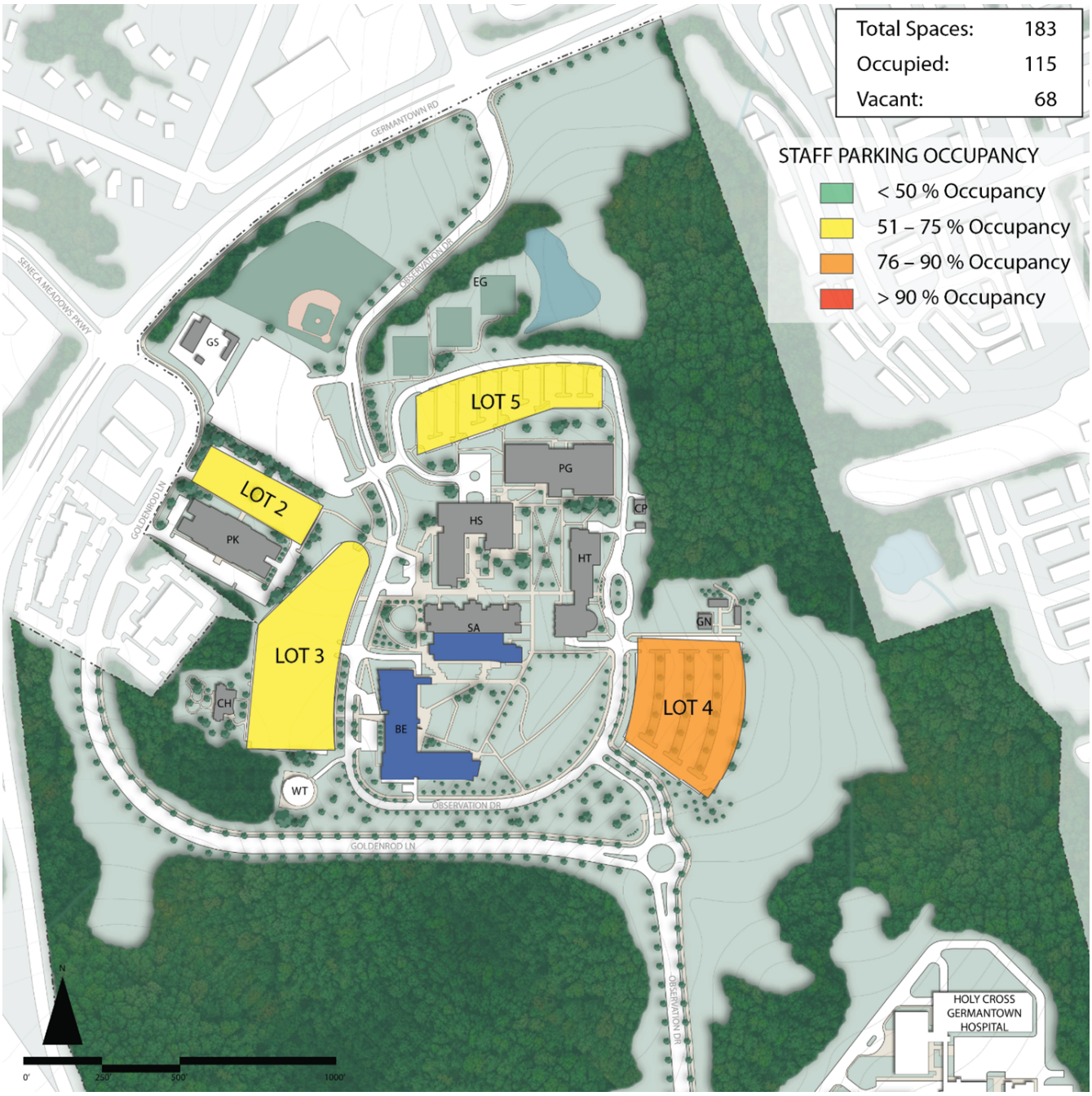


Figure 3.13 - Faculty Parking Occupancy



SECTION 3.3

Existing Building Conditions and Analysis

Existing Building Conditions and Analysis

3.3.1 BUILDING USAGE

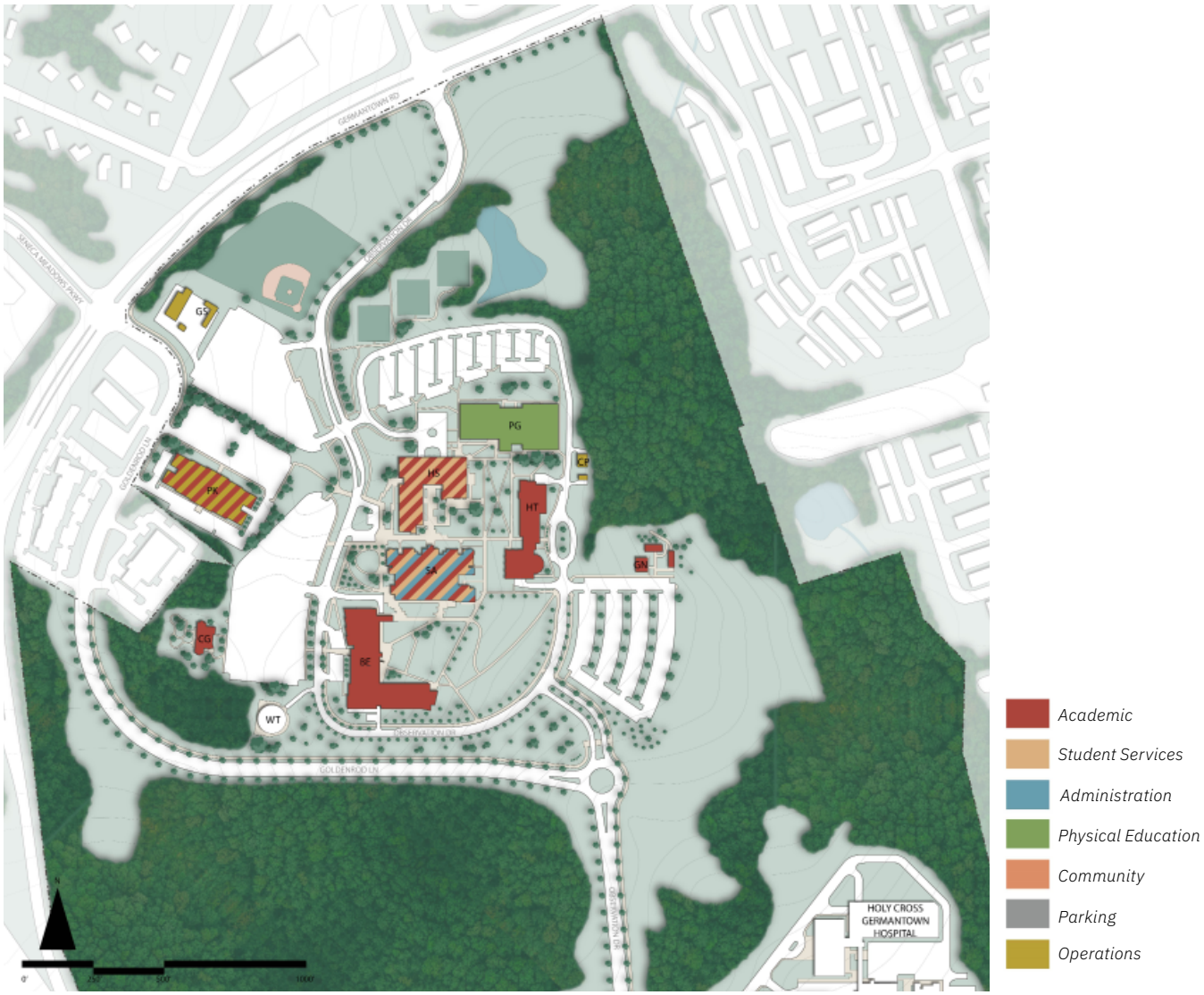
The Campus has six academic buildings of which four are grouped around a large quadrangle developed with the origination of the Campus. These include the Dr. DeRionne P. Pollard Student Affairs and Science Building which had a significant addition and renovation of a portion of the building completed in 2021, the Humanities and Social Sciences Building, the High Technology and Science Center, and the Physical Education Building. 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 Student Affairs and Science 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. A utilization analysis was undertaken using course data from the Fall semester of 2022. The analysis reviewed classrooms and labs for the percent of weekly core capacity utilization and broke down the results by academic unit, building, floor, classroom type and lab type.

Figure 3.14 distinguishes the use of buildings across campus. The Germantown Campus has centralized the Student Services and Administration spaces by utilizing the Student Affairs and Science Building and the Humanities Building. The addition of the forthcoming new Student Services Center just north of the existing Humanities Building will further establish a Student Services core on the Campus.

The academic departments on campus tend to have localized classroom usage, as shown in Figure 3.15, which is categorized by the department that uses the majority of the space for a majority of the time in a specific building. Figures 3.16 through Figure 3.19 distinguishes the frequency a department utilizes a building with the deeper color representing highly utilized by the department and the lighter color representing little utilization by the department. The Communications, Health Sciences, Health and Physical Education, and Humanities Department (Figure 3.18) mainly uses the northern cluster of buildings consisting of the Physical Education Building, High Technology and Science Center, and Humanities Building. The STEM Department (Figure 3.19) uses more square footage in the Bioscience Education Building, Student Affairs and Science Building, and High Technology and Science Center than the other departments. The Arts, Business, Education, English, and Social Sciences Department (Figure 3.17) is centralized in the Humanities Building with additional usage in High Technology and Science Center, and Paul Peck Academic and Innovation Center. The Applied Technologies, Gudelsky Institute for Technical Education, Workforce Development and Continuing Education (Figure 3.16) does not have any activity on the Germantown Campus.

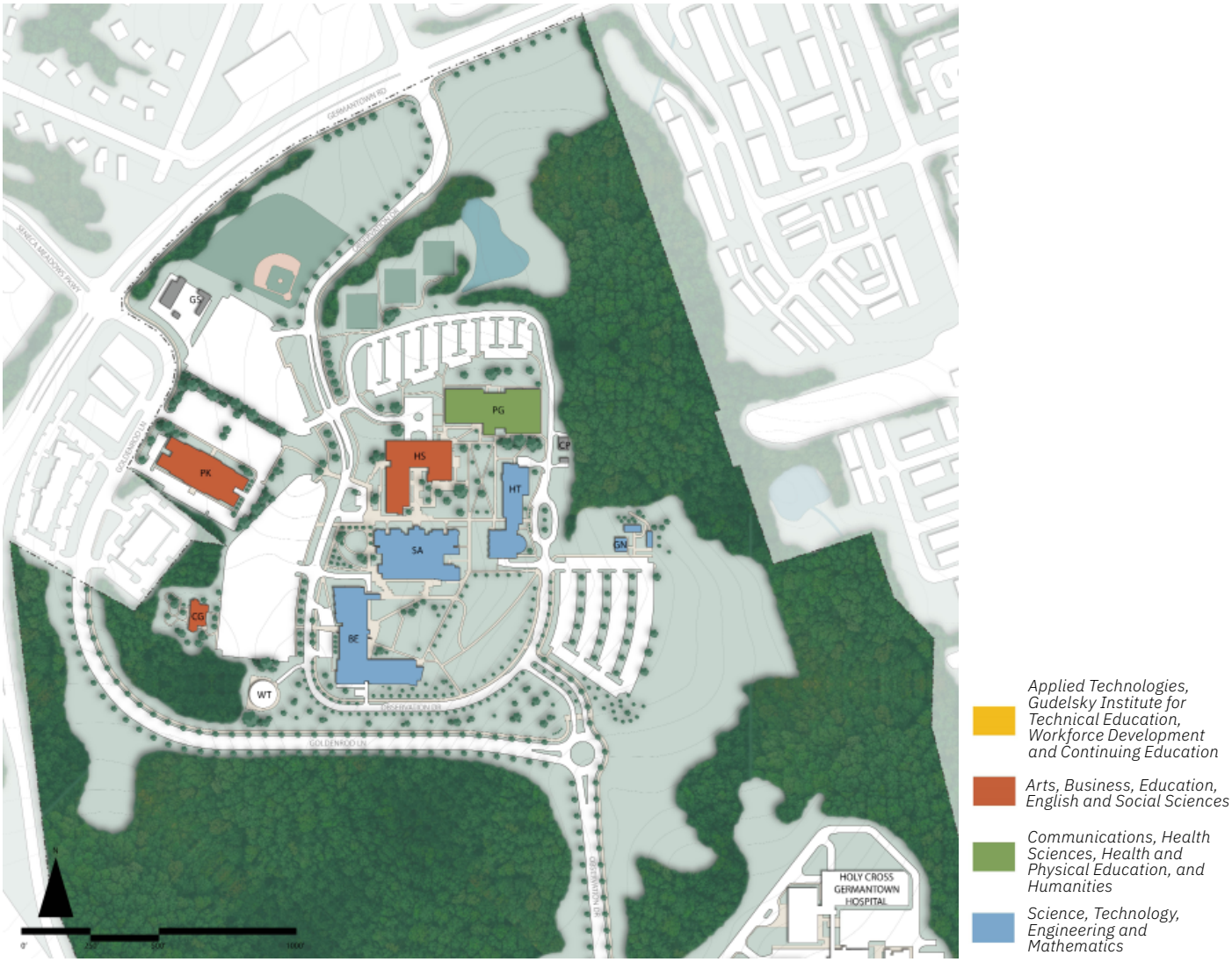
Figure 3.14 - Building Use Diagram



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

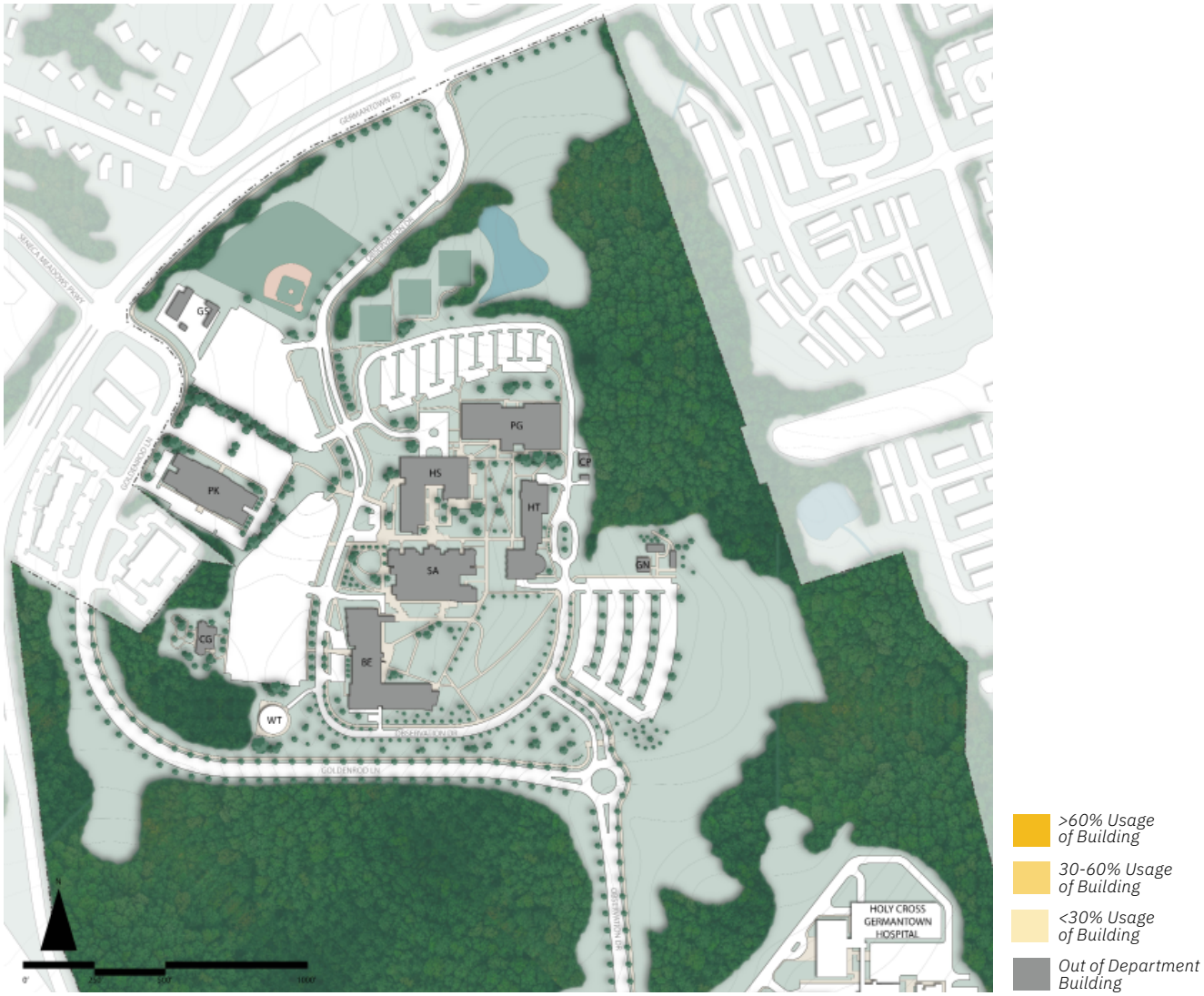
Figure 3.15 - Department Use



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

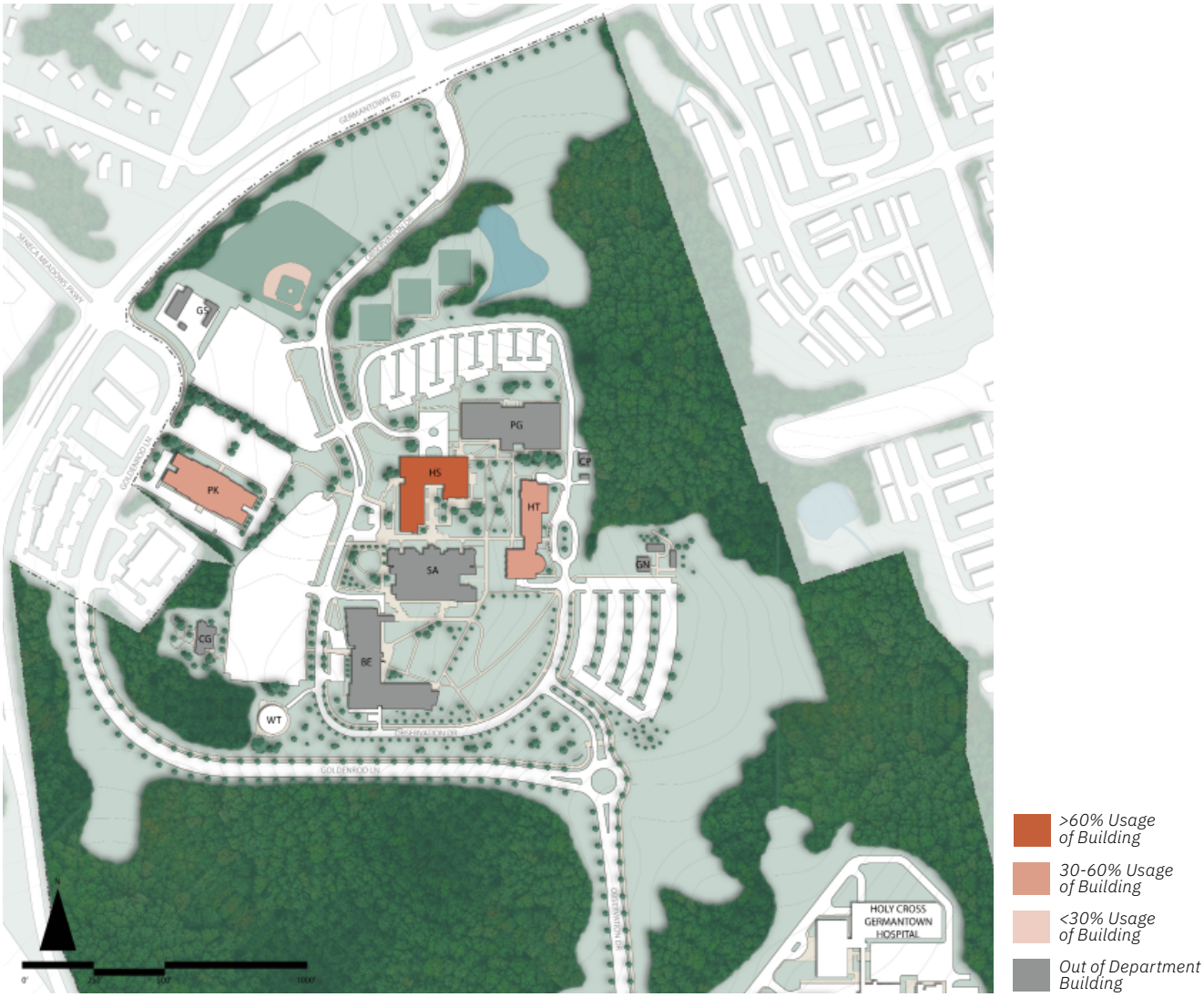
Figure 3.16 - Applied Technologies, Gudelsky Institute for Technical Education, and Workforce Development and Continuing Education Heat Map



BUILDING KEY

- **SA** Dr. DeRionne P. Pollard Student Affairs and Science Building
- **HS** Humanities and Social Science Building
- **PG** Physical Education Building
- **HT** High Technology and Science Center
- **PK** Paul Peck Academic and Innovation Center
- **BE** Bioscience Education Center
- **CG** Child Care Center - Academic Early Child Education
- **GN** Greenhouse - Academic Landscape Design Program
- **GS** Ground and Auto Storage

Figure 3.17 - Arts, Business, Education, English and Social Sciences Heat Map



BUILDING KEY

- **SA** Dr. DeRionne P. Pollard Student Affairs and Science Building
- **HS** Humanities and Social Science Building
- **PG** Physical Education Building
- **HT** High Technology and Science Center
- **PK** Paul Peck Academic and Innovation Center
- **BE** Bioscience Education Center
- **CG** Child Care Center - Academic Early Child Education
- **GN** Greenhouse - Academic Landscape Design Program
- **GS** Ground and Auto Storage

Figure 3.18 - Communications, Health Sciences, Health and Physical Education, and Humanities Heat Map

BUILDING KEY

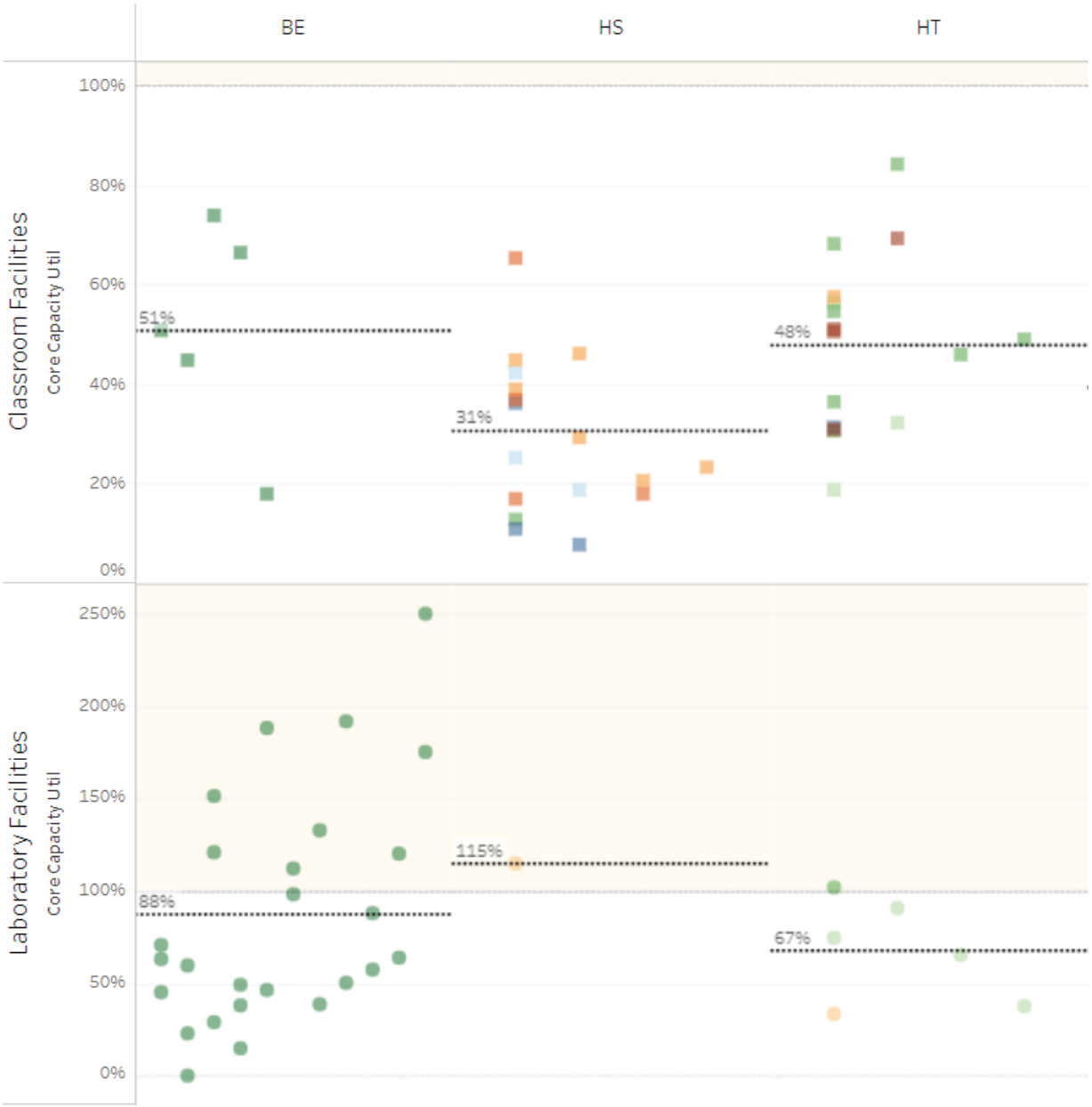
SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

Figure 3.19 - Science, Technology, Engineering and Mathematics Heat Map

BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

Figure 3.20 - Utilization by Building



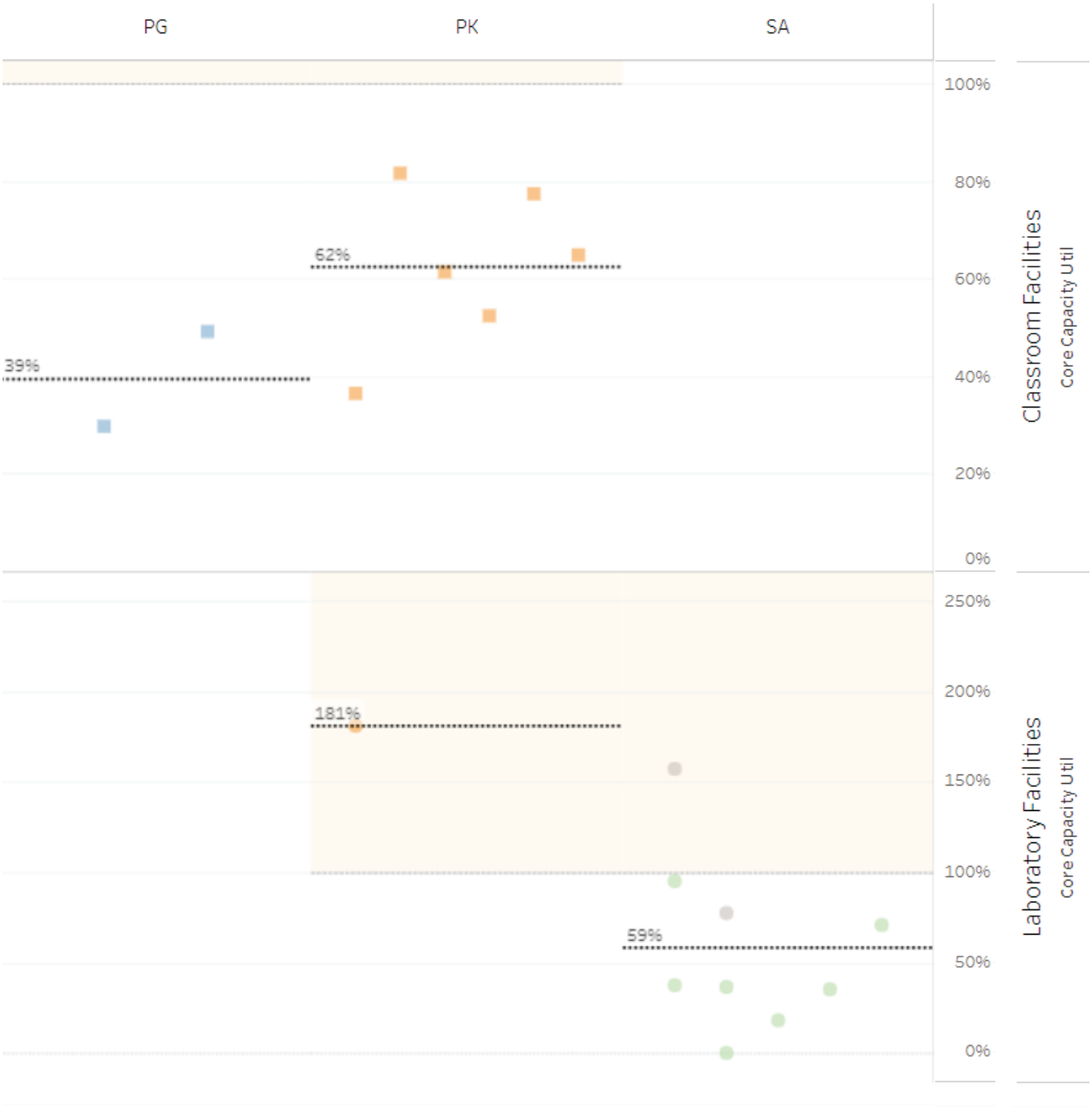
PREDOMINANT AREA

- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics, and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

ROOM USE CATEGORY

- Classroom Facilities
- Laboratory Facilities

Figure 3.20 (Continued)



The chart above indicates the classroom and laboratory utilization by building across the Campus. Trends that were noted across the College include:

- Laboratory facilities, including class labs from disciplines ranging from drawing to chemistry, are in high utilization.
- Computer classrooms have a higher utilization than typical classrooms.

On the Germantown Campus, the analysis indicates that:

- Newer science facilities, Biosciences Education Center, and Student Affairs and Science are highly utilized, particularly lab spaces.
- High Technology and Science building, which has numerous computer labs and specialty classrooms, is highly utilized.
- The Humanities and Social Sciences Building and the Physical Education Building have low utilization.

Figure 3.21 - Utilization by Floor

Campus Code	Bldg Code MCC	Building Name	Student Seats Bldg	WSCH Core Bldg	Weekly Core Capacity Factored Bldg	Weekly Core Capacity Utilization Bldg	Condition Code	Renovation Cost per SF	Floor Code	Weekly Core Capacity Utilization Floor
GT	BE	BIOSCIENCE EDUCATION CENTER	852	6,583	10,535	62%	1	$410	002	95%
									001	64%
									00G	16%
	HS	HUMANITIES AND SOCIAL SCIENCES BUILDING	602	3,057	10,507	29%	3	$315	002	24%
									001	43%
									00G	Null
	HT	HIGH TECHNOLOGY AND SCIENCE CENTER	916	6,198	14,887	42%	2	$315	004	58%
									003	47%
									002	23%
									001	40%
	PG	PHYSICAL EDUCATION BUILDING	332	248	22,048	1%	4	$450	001	1%
	PK	PAUL PECK ACADEMIC AND INNOVATION CENTER	223	2,670	3,901	68%	2	$315	001	68%
	SA	DR. DERIONNE P. POLLARD STUDENT AFFAIRS AND SCIENCE BUILDING	325	1,438	3,529	41%	3	$395	003	24%
									002	77%

Figure 3.21 - Legend for Next Page

ROOM USE CATEGORY
- ■ Classroom Facilities
- ● Laboratory Facilities
- ◆ General Use Facilities, Office Facilities, Special Use Facilities

PREDOMINANT AREA
- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

WEEKLY CORE CAPACITY UTILIZATION

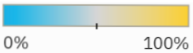
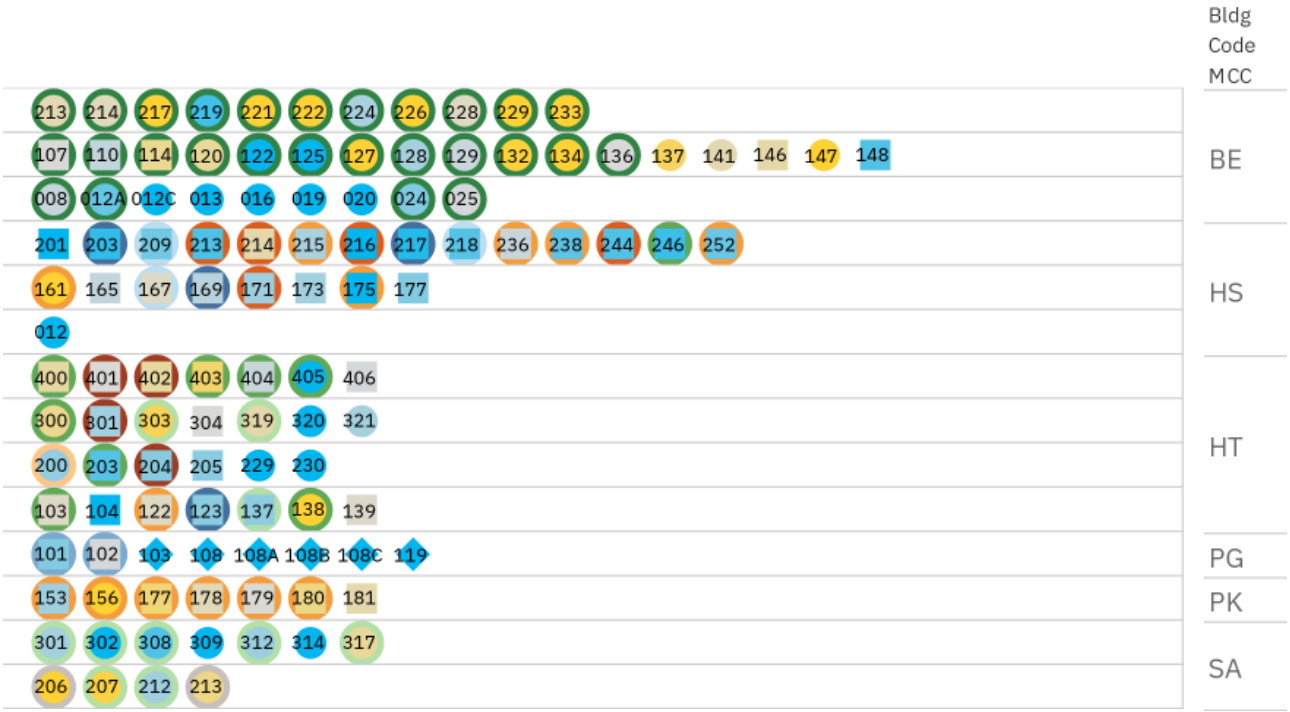


Figure 3.21 (Continued)



The chart above indicates the utilization by building and by floor across the Campus. On the left, each building is listed with its total seat capacity and corresponding potential credit hour availability. The utilization for the building is calculated based on the core hours in aggregate and per floor.

The right side of the chart shows each classroom and lab individually and is color coded by utilizations rate. This analysis allowed for campus-wide heat mapping that helped identify targeted locations for interventions that could support the goals of the plan.

Table 3.4 - Space Inventory and Need by Hegis Code

HEGIS CODE	HEGIS CATEGORY		NEED 2021	INV %	INV 2031	2021 DELTA	NEED %	NEED 2031	INV %	INV 2031	2031 DELTA
100 (110-115)	**CLASSROOM**	**8%**	**22,964**	**12%**	**34,291**	**11,327**	**9%**	**35,304**	**10%**	**35,551**	**247**
200	**LABORATORY**	**33%**	**92,882**	**30%**	**87,185**	**(5,697)**	**25%**	**142,796**	**26%**	**95,465**	**(47,331)**
210-15	Class Laboratory		85,918		80,222	(5,696)		132,090		88,502	(43,588)
220-25	Open Laboratory		6,964		6,963	(1)		10,706		6,963	(3,743)
300	**OFFICE**	**21%**	**59,139**	**24%**	**70,677**	**11,538**	**22%**	**89,963**	**29%**	**109,049**	**19,086**
310-15	Office/Conf. Room		57,560		70,677	13,117		87,938		108,409	20,471
320-25	Testing/Tutoring		1,579		0	(1,579)		2,025		640	(1,385)
400	**STUDY**	**5%**	**15,124**	**6%**	**16,286**	**1,162**	**5%**	**22,038**	**7%**	**26,016**	**3,978**
410-15	Study		10,363		3,294	(7,069)		15,931		5,144	(10,787)
420-30	Stack/Study		3,401		10,562	7,161		4,362		17,462	13,100
440-55	Processing/Service		1,360		2,430	1,070		1,745		3,410	1,665
500	**SPECIAL USE**	**14%**	**38,306**	**12%**	**33,585**	**(4,721)**	**12%**	**47,929**	**9%**	**33,585**	**(14,344)**
520-23	Athletic		35,580		27,861	(7,719)		44,490		27,861	(16,629)
530-35	Media Production		1,726		1,441	(285)		2,439		1,441	(998)
580-85	Greenhouse		1,000		4,283	3,283		1,000		4,283	3,283
600	**GENERAL USE**	**12%**	**34,761**	**9%**	**27,340**	**(7,421)**	**11%**	**44,523**	**13%**	**47,403**	**2,880**
610-15	Assembly		12,316		5,929	(6,387)		14,098		5,929	(8,169)
620-25	Exhibition		1,579		0	(1,579)		2,025		0	(2,025)
630-35	Food Facility		10,190		5,129	(5,061)		15,667		20,672	5,005
640-45	No Allowance										
650-55	Lounge		2,997		6,683	3,686		4,608		11,203	6,595
660-65	Merchandising		1,679		337	(1,342)		2,125		337	(1,788)
670-75	No Allowance										
680-85	Meeting Room		6,000		9,262	3,262		6,000		9,262	3,262
700	**SUPPORT**	**6%**	**17,524**	**8%**	**22,411**	**4,887**	**6%**	**22,403**	**7%**	**25,711**	**3,308**
710-15	Data Processing		2,500		3,500	1,000		2,500		3,500	1,000
720-25	Shop/Storage		10,808		17,575	6,767		15,591		20,375	4,784
750-55	Central Service		4,000		1,336	(2,664)		4,000		1,836	(2,164)
760-65	Hazmat Storage		216		0	(216)		312		0	(312)
800	**HEALTH CARE**	**0%**	**532**	**0%**	**0**	**(532)**	**0%**	**710**	**0%**	**0**	**(710)**
Total NASF	**Net Assignable Square Feet**		**281,232**		**291,775**	**10,543**		**405,666**		**372,780**	**(32,886)**

An overview of the current and projected space needs above indicated several needs on the Germantown Campus:

- *Largest deficit of lab spaces*
- *Deficit of athletics, food facilities and study may provide opportunity to give existing resources some attention.*
- *No net change for classrooms but a deficit of 47,331 NASF in lab space by 2031*
- *This is the only campus with a surplus of office space totaling 20,471 NASF, based on current models.*
- *A need for 16,629 NASF for athletics and recreational space over the planning period*

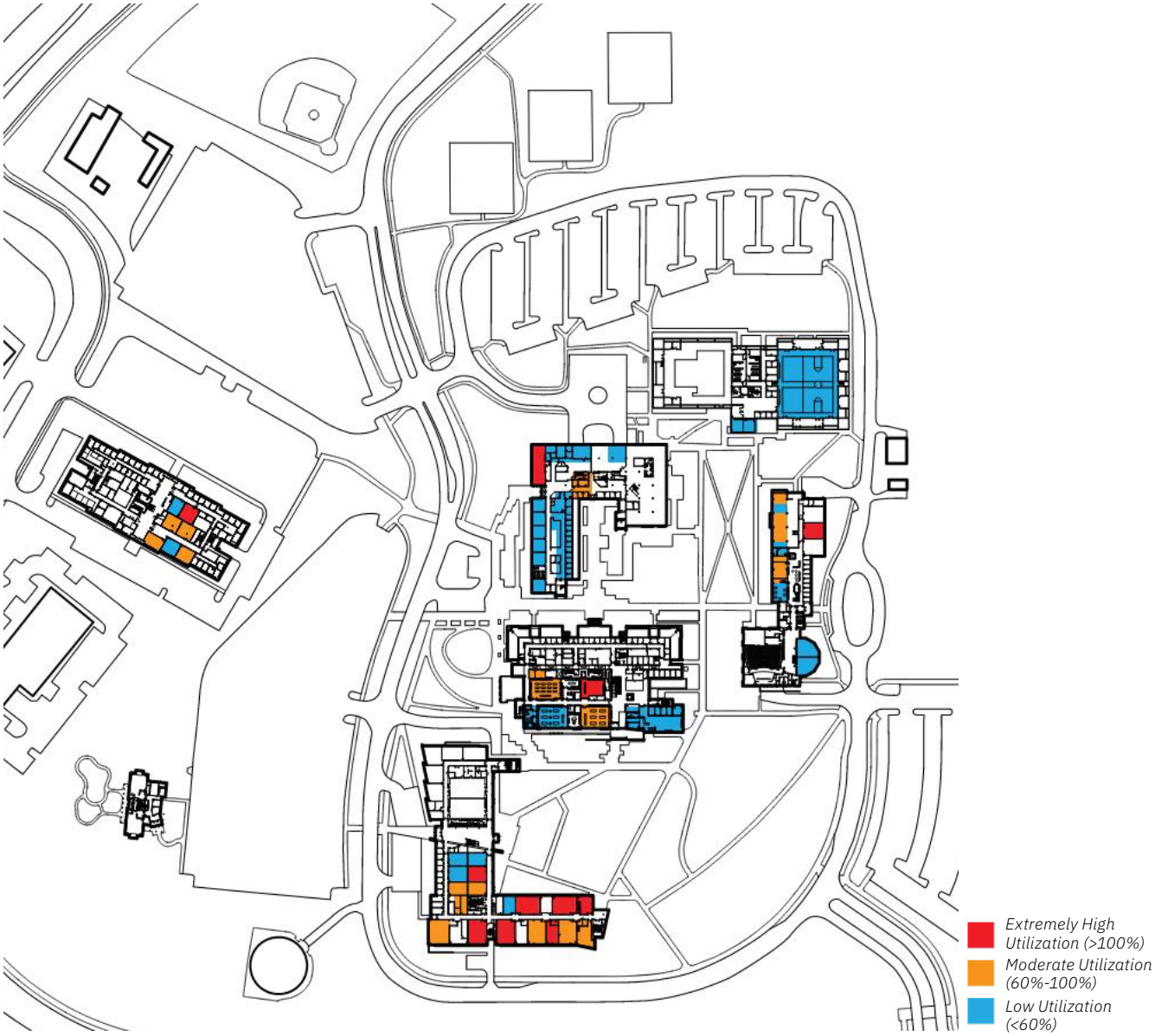
In 2022, a collegewide facilities condition assessment (FCA) was completed to evaluate the conditions of the existing building stock. One of the major goals of the FCA is to calculate each building's Facility Condition Index (FCI), which provides a theoretical objective indication of a building's overall condition. The FCI is defined as the ratio of the cost of current needs divided by current replacement value (CRV) of the facility. The chart below presents the industry standard ranges and cut-off points.

The deficiencies and life cycle needs identified in the assessments provide the basis for a portfolio-wide capital improvement funding strategy. In addition to the current FCI, extended FCIs have been developed to provide owners the intelligence needed to plan and budget for the "keep-up costs" for their facilities. As such the three-year, five-year, and 10-year FCIs are calculated by dividing the anticipated needs of those respective time periods by current replacement value. A summary of the individual findings for this FCA are noted with each building description below.

Table 3.5 - FCI Ranges and Description

0-5%	In new or well-maintained condition, with little or no visual evidence of wear or deficiencies.
5-10%	Subjected to wear but is still in a serviceable and functioning condition.
10-30%	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
30% and above	Has reached the end of its useful or serviceable life. Renewal is now necessary.

Figure 3.22 - Building Utilization Diagram



The Campus Utilization Map indicates areas of the Campus that are highly utilized (greater than 100% utilization), have moderate utilization (60-100% utilization) or have low utilization (less than 60% utilization). Buildings or areas of buildings with low utilization are considered opportunities for moderate investment to improve the overall efficiency of the Campus. Areas of highly utilized space adjacent to potential outdoor space are noted for potential engagement with the landscape plan. On the Germantown Campus, the Humanities and Social Sciences Building and the Physical Education Building are areas for improvement.

Dr. DeRionne P. Pollard Student Affairs and Science Building (SA) (57,141 NASF / 65,146 GSF), the original two-story structure constructed in 1978 was partially renovated and a three-story addition was constructed in 2021. The addition houses predominantly labs and classrooms for physical sciences, physics, engineering and landscape programs. The addition also includes student study space and open seating for student interaction. The original portion of the building houses a number of student services including Raptor Central, Student Affairs, Admissions, Financial Aid, Student Life, the Campus Safety and Security Office (open 24 hours a day), Student Employment, Counseling and Disability Support Services.

The facilities conditions assessment, which was completed after the addition and renovation, is reflective of the improvements from the recent upgrades.

The building is scheduled for the second phase of an addition project to reconfigure the building to house additional classrooms and lab spaces for the Department of Physics, Engineering and Math. Upon completion of this project, the building will be in excellent condition.

Fall 2022 utilization is mixed for the newly renovated classrooms, with Physical Science, Landscape Design and Engineering Design Labs well over 50% utilized and Physics and Engineering under 50%.

Table 3.6 - SA Facility Condition

	Est Reserve Cost	FCI
Current	$ 651,000	**2.5%**
3-Year	$ 786,700	3.0%
5-Year	$ 869,000	3.3%
10-Year	$ 1,801,300	**6.9%**

Table 3.7 - SA Classroom Utilization by Seats

Student Seats	325
WSCH Core	1,438
Weekly Core Capacity Factored	3,529
Weekly Core Capacity Utilization	41%
Condition Code	3
Renovation Cost Per SF	$395

Table 3.8 - SA Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
003	24%	301 302 308 309 312 314 317
002	77%	205 207 212 213

Est Reserve Cost - Often called "Replacement Reserves," this is a recurring renewal and expense cost line item that are not classified as operation or maintenance expenses. These funds are set aside annually from the building's normal operating budget to pay for the eventual replacement of building components and systems that need repair or renewal.

Humanities & Social Sciences Building (HS) (52,233 NASF / 75,700 GSF), is a two-story building constructed in 1978, containing general classrooms, computer-equipped classrooms, the library, 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. The facilities condition assessment places the building in the replacement category by the end of the 10-year planning window.

Utilization of classrooms is generally low, with the majority of the classrooms, including typically highly utilized computer classrooms, averaging well under 50% utilization. The Drawing Studio is an exception with a utilization greater than 100%.

Table 3.9 - HS Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,653,700	**8.8%**
3-Year	$ 4,660,000	15.4%
5-Year	$ 6,919,800	22.9%
10-Year	$ 9,101,500	30.1%

Table 3.10 - HS Classroom Utilization by Seats

Student Seats	602
WSCH Core	3,057
Weekly Core Capacity Factored	10,507
Weekly Core Capacity Utilization	29%
Condition Code	3
Renovation Cost Per SF	$315

Table 3.11 - HS Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	24%	201 203 209 213 214 215 216 217 218 236 238 244 246 252
001	77%	161 165 167 169 171 173 175 177
00G	Null	012

Physical Education Building (PG) (29,338 NASF / 36,770 GSF), is a one-story building with partial basement constructed in 1980, 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 has had systemic improvements completed in 2016, which have extended the life of the building. Currently plumbing systems and portions of the heating and cooling systems are in need of attention, while the roof will be in need of replacement. By the end of this planning period, a significant investment will be required for the building.

PG does not have adequate space to meet the functional requirements of the programs within it. The existing gymnasium is not available for recreational uses in part because the space is also used for fitness equipment. The pool is a community asset which was frequently discussed in the community engagement process of this study. The athletics department noted that the training areas are under-sized for the current programs and corridors have been utilized to support their needs.

Table 3.12 - PG Facility Condition

	Est Reserve Cost	FCI
Current	$ 251,800	1.7%
3-Year	$ 2,005,100	13.6%
5-Year	$ 2,292,100	15.6%
10-Year	$ 3,264,700	22.2%

Table 3.13 - PG Classroom Utilization by Seats

Student Seats	332
WSCH Core	248
Weekly Core Capacity Factored	22,048
Weekly Core Capacity Utilization	1%
Condition Code	4
Renovation Cost Per SF	$450

Table 3.14 - PG Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
001	1%	

High Technology & Science Center (HT) (42,251 NASF / 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 two elevators, one that was modernized in 2015, and a second elevator was recently added. By the end of the planning period, HT will be nearing the threshold for replacement without investment.

Classrooms with the building vary in utilization, in part due to the specialized nature of some of the spaces in the computer sciences and cybersecurity programs. Overall, the building has a weekly utilization of 42%.

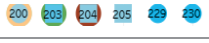
Table 3.15 - HT Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,276,00	**7.5%**
3-Year	$ 6,075,100	20.1%
5-Year	$ 7,386,700	24.4%
10-Year	$ 8,702,500	28.8%

Table 3.16 - HT Classroom Utilization by Seats

Student Seats	916
WSCH Core	6,198
Weekly Core Capacity Factored	14,887
Weekly Core Capacity Utilization	42%
Condition Code	2
Renovation Cost Per SF	$315

Table 3.17 - HT Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
004	58%	
003	47%	
002	23%	
001	40%	

Paul Peck Academic and Innovation Center (PK) (53,537 NASF / 68,826 GSF), is a two-story building containing classrooms and administrative, faculty and staff offices of the English Department acquired by the College. The first floor includes the Office of the Vice President and Provost, the English Department faculty suite, Information Technology offices and seven classrooms. The building is used for credit and non-credit education and training activities. The second floor is being utilized by the Germantown Innovation Center, a bioscience and technology incubator owned by Montgomery County.

The building is in good condition, but will need investment within the 10-year planning period.

The classrooms are generally highly scheduled, with computer classrooms and labs averaging over 100% utilization and general classrooms averaging over 50% utilization.

Table 3.18 - PK Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,282,900	**4.7%**
3-Year	$ 2,038,500	7.4%
5-Year	$ 2,151,800	7.8%
10-Year	$ 3,967,100	14.4%

Table 3.19 - PK Classroom Utilization by Seats

Student Seats	223
WSCH Core	2,670
Weekly Core Capacity Factored	3,901
Weekly Core Capacity Utilization	68%
Condition Code	2
Renovation Cost Per SF	$315

Table 3.20 - PK Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
001	68%	153 156 177 178 179 180 181

Bioscience Education Center (BE) (80,542 NASF / 139,985 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. The program includes a conference center and the Tutoring Center. 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 Student Affairs and Science Building and is planned for expansion. 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 but will need routine investment to avoid development of a significant backlog during the planning period.

Table 3.21 - BE Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,522,900	**2.7%**
3-Year	$ 1,801,800	3.2%
5-Year	$ 2,306,500	4.1%
10-Year	$ 5,816,700	10.4%

Table 3.22 - BE Classroom Utilization by Seats

Student Seats	852
WSCH Core	6,583
Weekly Core Capacity Factored	10,535
Weekly Core Capacity Utilization	62%
Condition Code	1
Renovation Cost Per SF	$410

Table 3.23 - BE Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	95%	213 214 217 219 221 222 224 226 228 229 233
001	64%	107 110 114 120 122 125 127 128 129 132 134 136 137 141 146 147 148
00G	16%	008 012A 012C 013 016 019 020 024 025

Child Care Center (CG) (3,565 NASF / 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 projected to need investment before 2033 in order to address the age of typical building systems.

Table 3.24 - CG Facility Condition

	Est Reserve Cost	FCI
Current	$ 48,700	**2.2%**
3-Year	$ 53,800	2.4%
5-Year	$ 252,300	11.4%
10-Year	$ 723,800	32.7%

Greenhouse (GN) (4,390 NASF / 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.

Table 3.25 - GN Facility Condition

	Est Reserve Cost	FCI
Current	$ 10,700	**0.6%**
3-Year	$ 10,700	0.6%
5-Year	$ 18,000	1.0%
10-Year	$ 45,700	2.5%

Support Buildings There are a number of other small buildings and structures on the Campus that provide support to activities and programs, including: storage sheds for tennis activities and the facilities maintenance area.

Facility Condition
These facilities vary in condition, but all are serviceable at the present time. The Campus also contains the college-wide fleet management operations and a vehicle service garage.

Baseball Field Several structures, including a baseball storage shed, two baseball dugouts, dugout storage shed and a press box support the baseball program.

Facility Condition
The auxiliary structures and the field itself are not suitable for conference play by the baseball team. A separate report, the Evaluation of Baseball Facility completed in 2018, recommends a new orientation for the field in order to comply with safety guidelines and conference play standards. Immediate needs include repair of the press box.

SECTION 3.4

2033 Facilities Master Plan

3.4.1 CAMPUS FACILITIES MASTER PLAN GUIDING PRINCIPLES

The overall Facilities Master Plan leveraged a series of guiding principles to shape the decision-making process. These planning principles were established in connection with the Mission and Vision of the College, focusing on the success of students and the impact of their success on Montgomery County. They also took into account both long- and short-term goals with the lens of maintaining the effectiveness of capital investments. These principles include:

Prioritize Student Success — through expanded spaces that support student wellness, informal learning/study, dining and amenities, branding and intuitive wayfinding.

Reinvent Existing Facilities — through renovation and strategic interventions, right-size classroom and lab spaces, create faculty hubs, and repurpose underutilized square footage.

Expand Access — Provide a touch down for county services, non-profits and businesses, enhance childcare options, and consider both physical and virtual environments.

Plan Prudently — Each campus has land use constraints, limiting future development. Project development should consider maximizing future development potential while continuing to create activated, green campuses.

Additional principles were established for the Germantown Campus, including:

Create a catalyst for Pinkney Innovation Complex for Science and Technology (PIC MC) — The implementation of the innovation campus has been slow to evolve over the past decade. The Facilities Master Plan includes new facilities that can help stimulate future development by the foundation by providing amenities that make the development attractive to tenants and provide a unique market niche for new development.

Leverage and activate green spaces — The Germantown campus has grounds that are described as bucolic and well-manicured. The Facilities Master Plan is intended to enhance the grounds as an asset for student retention and creating an environment that is inclusive to the student, faculty and community.

Expand access at the Physical Education Building (PG) — Develop a plan to increase access to PG in support of whole student wellness.

3.4.2 RESPONSE TO EXTERNAL PLANNING FACTORS

In 2014, the Pinkney Innovation Complex for Science and Technology (PIC MC) released a master plan for the park. The vision for the park is:

"To develop a continuum of bioscience and technology education and training from middle school to postdoctoral levels in an integrated academic, business and research environment."

Original goals for the Park are to:

- Provide space for economic development
- Locate entrepreneurs on campus to speed introduction of new science into classrooms
- Support student internships and interaction with entrepreneurs
- Provide students with advanced market-ready knowledge and skills

The park was envisioned as an integrated hub of education, business and entrepreneurship. It was seen as 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 program includes academic-industry partnerships focused on enhancing and aligning missions of the College and those of technology businesses in order to advance the collective goals for individual opportunity, economic growth and community prosperity.

The planning principles for the Park include:

- Mixed Uses
- Compact, Walkable Footprints
- Community-Building Infrastructure
- Enhanced Mobility + Connectivity
- Compelling Public Spaces

The place described in the plan, with a mixed community of college programs and tech businesses — as Resident Partners — has not fully been enacted. The ideal of creating a location for college space expansion and private use space targets in an urban, walkable place and wise land use is still a valid point of departure for the College.

The Facilities Master Plan has embraced these goals and aspirations and included the use of capital investments in the College to help actuate the PIC MC development. Further study will be required to engage the PIC MC leadership to coordinate activities between the College and the Park. Future updates to the Facilities Master Plan will include PIC MC projects as they are developed.

3.4.3 PROPOSED CAMPUS STRUCTURE AND CHARACTER

Overall Observations:

1. All three campuses seem to need a signature space that symbolizes the school. Spaces should have similar icons like school colors, emblems and/or mascots prominently displayed such that the spaces become emotional touchpoints connecting students to the school and the campuses to each other.

2. Some unity has begun to be established in site furnishings with standardized exterior seating, trash receptacles and bike racks. This is most evident at the Rockville and Germantown Campuses. This effort needs to be continued, particularly at Takoma Park/Silver Spring.

3. Better wayfinding signage seems to be needed. While there generally does seem to be a common look to existing signage across all campuses, it could be greatly improved and be used to reinforce College identity and unity by adopting signage design that consistently uses school colors and emblems

Germantown Campus Landscape Recommendations:

1. Because the Campus is the newest of the three, there are only a few mature trees. There are multiple opportunities for planting additional trees to enhance the Campus, particularly along roads, in parking lots and, to a lesser extent, along main pedestrian paths. One of the first and easiest places to start a tree planting program should be Parking Lot 5 where islands already exist but currently are only planted with grass. The redesign of Parking Lot 5 will occur with the new Student Services Center. Parking Lot 3 represents a great opportunity for island installation and tree planting. There is also likely an opportunity for the islands to be depressed relative to the pavement to capture and treat surface runoff from the pavement.

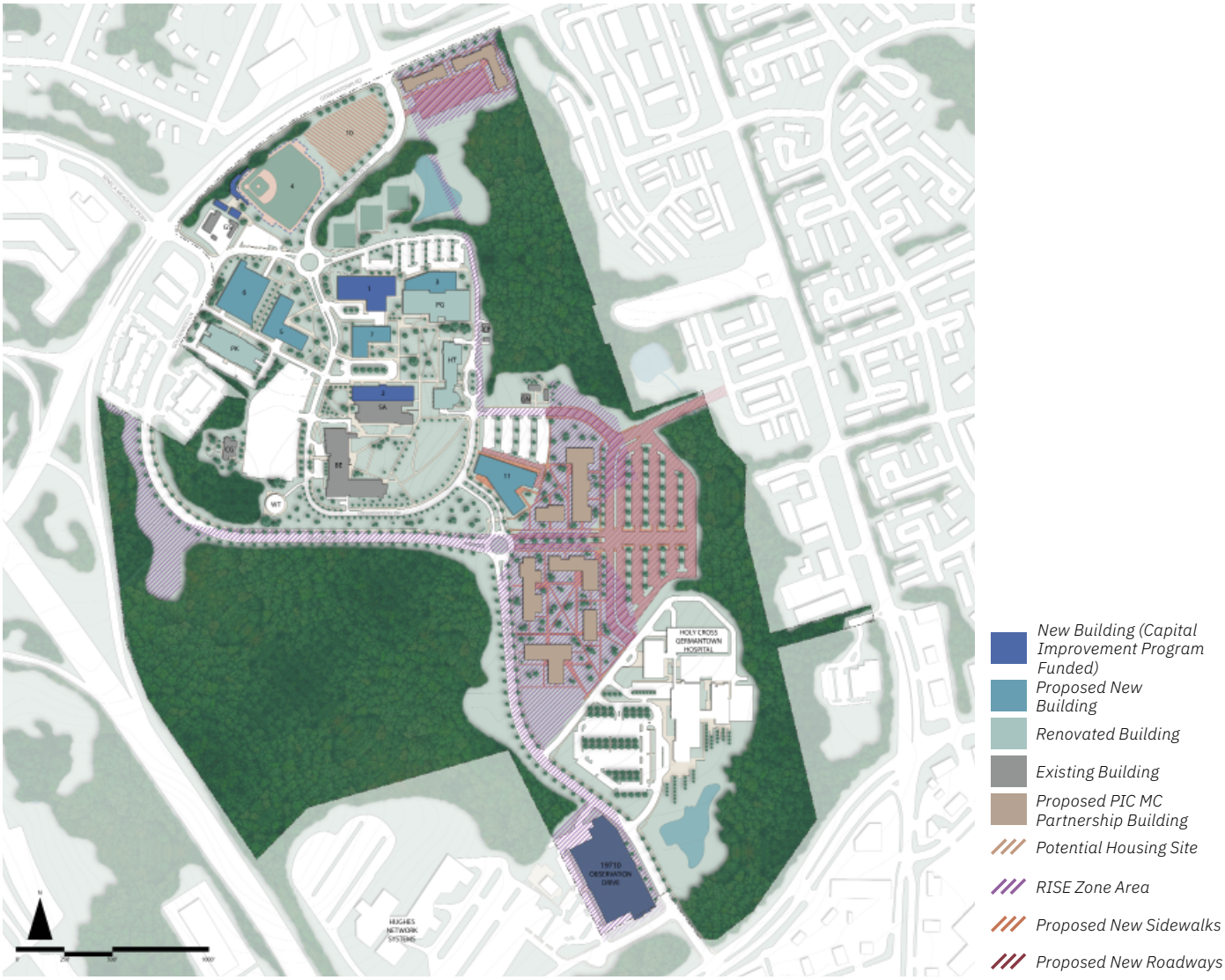
2. The realignment of the campus perimeter road and Observation Drive with a roundabout added in the northwest corner of the campus core makes a lot of sense. The current road configuration with closely spaced intersections is not only unintuitive, but also contributes to congestion at peak hours. It may not go exactly where the former FMP proposed it, and the connector from the roundabout to Goldenrod Lane may not be immediately needed, but the roundabout concept should help traffic flow in that area.

3. The view from the east side of the Bioscience Education Center (BE) is spectacular and worthy of determined efforts to preserve into the future so that it continues to be an iconic campus feature. The position and height of future downhill buildings should be carefully considered so that they do not overtake the panoramic horizon visible from the east terrace of the BE. Furthermore, landscaping, especially tree planting, should be used to frame the view, and mature heights and locations of trees need to be taken into consideration so that they mitigate the view of future campus building rooftops downslope, but do not grow to obstruct the view. Currently, there is a line of trees planted on the east side of the walkway that crosses the space approximately midway down the hill between the BE and Observation Drive that will do just that. Those trees should be relocated while they are still of movable size to more strategic locations before they begin obstructing the view.

4. An existing chiller enclosure on the east side of Observation Drive, east of the High Technology and Science Center (HT), could be made less obtrusive with strategic landscape screening, particularly along its west side. This might take the form of a green wall against the outside of the enclosure fence with landscape planting extensions north and south beyond the actual enclosure to better screen the mechanical yard from the perimeter road and the campus core.

3.4.4 PROPOSED BUILDING PROJECTS

Figure 3.23 - Germantown Campus, Phase A 2023-33 Facilities Master Plan



For Phases 1, 2 and 3 see Figures 3.27, 3.28 and 3.29 respectively.

BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

PHASE 1

1. Student Services Center (87,585 NASF / 153,660 GSF)

In alignment with the goal of enhancing student success, the new Student Services Center will also house the library commons and serve as a campus hub where students, faculty and staff will go to access and receive information, study, take classes, stay engaged with each other, participate in experiential and leadership programming, dine and have access to information about other opportunities to enhance their educational experience. This building will deliver space that creates community where students get involved in development programs to connect them with other students, faculty, staff and greater community members in meaningful ways for networking, learning and personal development. These programs and opportunities will support students in making well-informed choices about and navigating their pathway to success and achievement, primarily of which will be degree completion and a career. The primary goal of the College is to provide comprehensive and cohesive student services that support student success and degree completion. The project, as proposed, is for the design and construction of a new 87,585 NASF/153,660 GSF facility with a net to gross efficiency factor of 57% located between the HS building surface lot 5 and to the west of the PG building.

2. Dr. DeRionne P. Pollard Student Affairs and Science Building Renovation Phase II (86,262 NASF / 118,248 GSF)

This project is the second phase of the renovation and expansion of the Science and Applied Studies Building to develop a larger Physics, Engineering and Math Center to support current and projected demand for STEM education. 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 and Mathematics Center and the Science Learning Center in the Bioscience Education Center. The addition is 55,800 GSF.

3. Physical Education Building Wellness Renovation and Addition (Existing: 29,338 NASF / 36,707 GSF Addition: 30,000 NASF / 46,400 GSF)

The limited capacity of the current PG building to host credit and non-credit classes leaves little availability for student wellness needs and community access. The FCA issued in 2022 notes that aspects of the HVAC, electrical and plumbing systems and the building interiors are all in fair to poor condition, while the exterior has had recent investments that place it in good condition. The total evaluation places the building nearing the end of its useful or serviceable life by the end of the 10-year planning period of the FMP. The renovation and expansion of the PG building will address a backlog of deferred maintenance issues and provide the capability to serve a comprehensive list of academic, athletic, student wellbeing, student recreation and community recreation uses. System replacements will help address energy efficiency within a building type that uses high amounts of energy in alignment with College sustainability goals.

4. Baseball Facility

The current baseball field does not meet the recommended dimensions for the National Collegiate Athletic Association (NCAA) or the American Sports Builders Association (ASBA) guidelines. The center field fence is 335', significantly short of the recommended 400' and the foul territory on the baselines and to the backstop range from 30' to 45' and are also significantly short of the player safety recommended 60'. A renovated facility would rotate the field to improve safety and provide requirements for conference play while also providing a synthetic turf surface, player and spectator amenities and safety features including fencing and netting. These improvements are in support of the Athletic Division Change Task Force findings and recommendations.

PHASE 2

5. Arts and Communications Building (48,800 NASF / 88,800 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 arts and communications programs. Several of these classrooms currently are operating in excess of 100% utilization, particularly those used for English, reading and studio arts classes. These programs will be relocated from the Humanities and Social Sciences building to allow for replacement of that building.

6. Parking Structure (192,000 GSF)

With surface parking losses associated with the development of the Student Service Center and the Physical Education Building Wellness Renovation and Addition, as well as the development of the Arts and Communications Building, a new structured parking facility will be required. This garage could hold 550 cars, but a demand analysis should be completed when the project is planned.

PHASE 3

7. Humanities Building Replacement (37,000 NASF / 67,000 GSF)

Several classrooms where Reading and English classes are held in the HS building have utilization in excess of 150% while the building itself is projected to have exceeded its useful life within the 10-year horizon of the FMP. The conditions assessment indicates the exterior walls, roof, and windows are all in poor condition or currently failing, while the interiors and systems are currently in fair condition. Current uses of the building will be moved to the Student Services Building and the Arts and Communication Building.

8. High Technology and Science Center Renovation (42,251 NASF / 75,542 GSF)

The growth of demand surrounding cybersecurity, computer science and information technology will drive the need for renovations and upgrades to the HT building.

9. Paul Peck Academic and Innovation Building Renovation (53,537 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 10-year planning period.

PHASE A

10. Science/Math/Health Science Building (76,000 NASF / 138,000 GSF)

This project is intended to coordinate with developments at the PIC MC and will house additional space for the Health Sciences, 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 building can be 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 biotechnology 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.

11. Potential Housing Site

The College is analyzing the potential for housing associated with each campus. A gateway site was identified for a potential housing project, should the College elect to move forward with student-oriented housing at the Germantown Campus.

3.4.5 MAJOR UTILITY RECOMMENDATIONS

The basis and frameworks of the June 2022 Burdette Kohler Murphy and Associates (BKM) Utility Master Plan is the previous 2013-2023 Facilities Master Plan. That FMP outlines a far more aggressive development program than this plan proposes. Thus, the recommended actions in the BKM plan may likely be deferred. The current utilities were judged to be adequately sized, and no major shortcomings were identified for the Germantown Park Campus except those that are ordinarily addressed as part of any new building or major renovation project. These include such things as evaluating electrical loads and providing them to PEPCO to ensure adequate service capacities can be provided, extension of sanitary sewer to new buildings, and analysis of domestic and fire water demands though the water tank on the southwest corner of campus was judged by the UMP to provide enough pressure for anticipated projects. More detailed descriptions of specific recommendations are contained in the BKM Utilities Master Plan.

Maryland stormwater management regulations require "environmental site design to maximum extent practicable." In short, this demands that a large portion of stormwater runoff from new projects be infiltrated or reused on-site by green roofs, irrigation, chiller water makeup, gray water recycling or other means. The net effect of this is that while adding costs to future projects for stormwater management facilities and devices, the effect on receiving storm drain systems is generally not significant enough to require downstream capacity upgrades.

3.4.6 NATURAL SYSTEMS AND SUSTAINABILITY RECOMMENDATIONS

As an institution of higher education, Montgomery College embraces its responsibility to adhere to the state's climate policy and proactively integrate sustainable practices into the Facilities Management Plan (FMP). Montgomery College is fully dedicated to the objective of reducing statewide greenhouse gas emissions, as mandated by the State Senate Bill/ Climate Solutions Now Act 2022 comprehensive climate policy. This commitment aligns with the direction of the Facilities Master Plan, which outlines the College's long-term goals for sustainable infrastructure and operations.

Recognizing the urgency and significance of reducing emissions, the College is committed to implementing energy efficiency and electrification requirements for specific buildings within the institution. The Facilities Master Plan includes strategies to improve the energy efficiency of existing buildings and prioritize the use of renewable energy sources. The College will work closely with electric companies to enhance annual incremental gross energy savings through targeted programs and services, ensuring that the campuses remain at the forefront of sustainable practices.

In line with the College's commitment to sustainable transportation, it wholeheartedly endorses zero-emission vehicle mandates for both the State vehicle fleet and local school buses. This commitment is in line with the Facilities Master Plan's focus on promoting alternative transportation options, including electric vehicle charging stations and bike-sharing programs. By embracing these initiatives, the College aims to reduce emissions from transportation and create a more sustainable campus environment.

The College also supports the establishment of the Climate Catalytic Capital Fund and by actively participating in this fund, it aims to leverage the available resources to support innovative climate solutions and advance sustainable practices within the institution. The initiatives and projects supported by this fund align with the Facilities Master Plan's vision for sustainable infrastructure and operations.

Montgomery College aims to make significant contributions to the collective effort of reducing greenhouse gas emissions, fostering sustainability and creating a more resilient and prosperous future for the college, the community and the broader environment.

3.4.7 PROPOSED PEDESTRIAN AND BICYCLE CIRCULATION

Proposed Pedestrian Circulation

Additional pedestrian circulation routes are proposed between new and existing buildings. Details are shown in Figure 3.26.

Proposed Bicycle Circulation

The Montgomery County Bicycle Master Plan proposes bicycle side paths on Goldenrod Lane, Observation Drive and Germantown Road adjacent to the Campus. Montgomery College should continue to support the County's efforts to implement its Bicycle Master Plan.

Figure 3.24 - Proposed Pedestrian Elements

3.4.8 TRANSIT RECOMMENDATIONS

The Germantown Campus is serviced by four local bus routes, two of which have bus stops within a quarter mile of the campus core. An overall transit mode share of 18% 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. Montgomery College should continue to support and promote transit commuting and carpooling.

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. The MD-355 BRT will serve the Germantown Campus. The current stop, based on past planning work with the County, is located along Goldenrod Lane near the Paul Peck Building. This phase of the project is currently slated to open in 2029.

Specific recommendations applicable to the Germantown Campus are:

1. Continue to coordinate with MCDOT regarding the BRT routes and stops for impact to and benefit of the Campus.
2. Conduct annual staff commuter surveys through the Montgomery County Commuter Services program.
3. Participate in Metro's SmartBenefits Transit Benefits Program.
4. Promote transit and ridesharing options for students during fall and spring semester registration.
5. Work with the Montgomery County Department of Transportation Bus Stop Improvement Program to enhance passenger shelters and amenities, as needed, at Ride On and Metro Bus stops serving the Germantown Campus.
6. 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.
7. The Office of Facilities - Transportation webpage should be updated to provide transit, bicycling and carpooling maps, and information that is tailored to each campus so that faculty and current and prospective students can easily identify alternative transportation services.

See Section 3.2.8 for student and staff survey responses to using public transportation as an alternative transportation method. Survey results suggest there is potential to increase public transit utilization as auto utilization is relatively high and students' trip origins are quite concentrated.

3.4.9 PROPOSED VEHICULAR CIRCULATION

A new roundabout is proposed on Observation Drive near the baseball field. This roundabout will also connect to Goldenrod Lane. Only campus traffic is expected to utilize this roundabout.

A proposed new roadway connecting Cider Press Place at MD-355 to Observation Drive is shown on the County's Highway Master Plan as a two-lane minor arterial in a 70 foot right of way. This proposed roadway would create a fourth access point to the Campus and allow traffic to have more efficient access to MD-355.

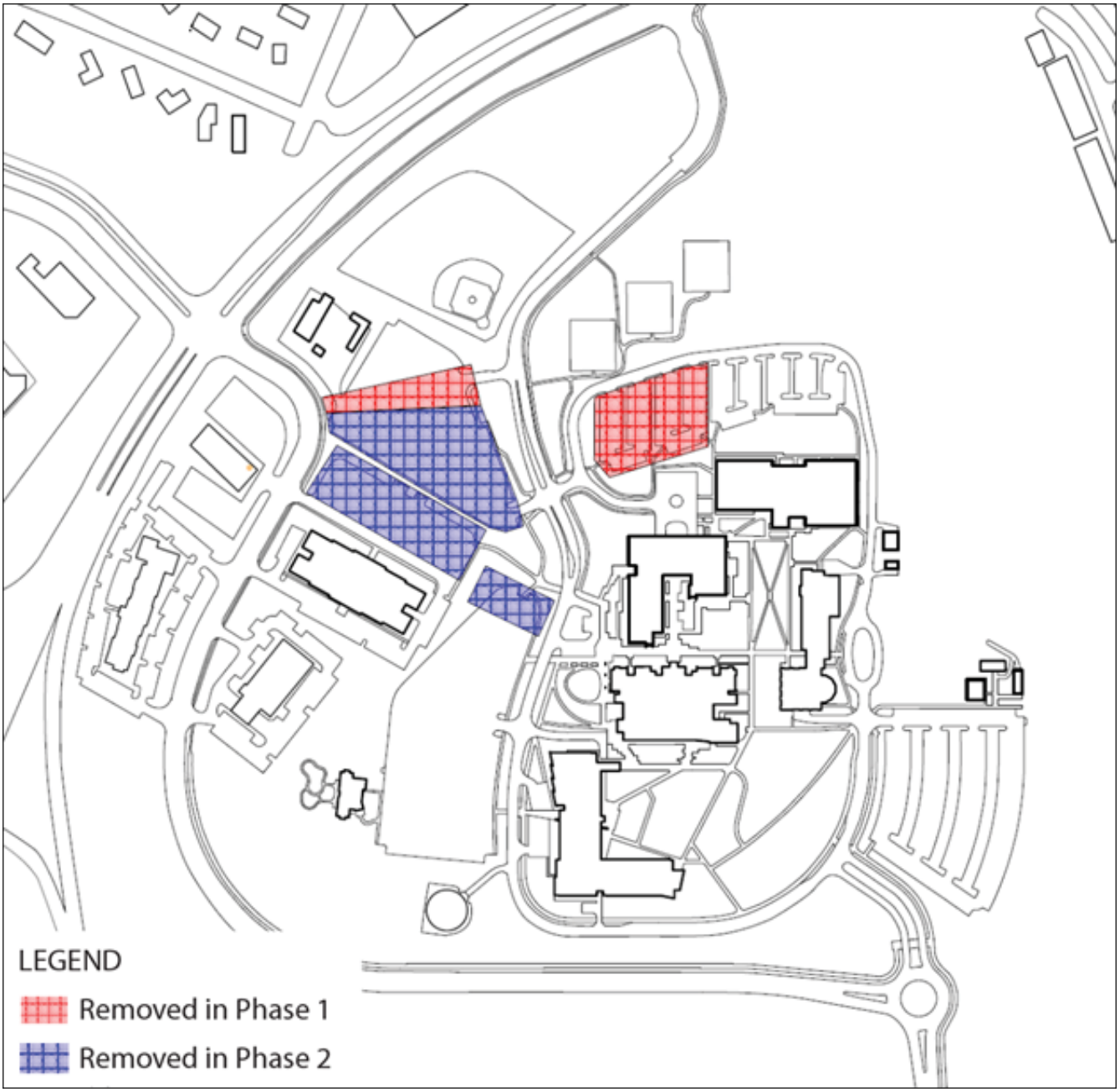
3.4.10 PARKING

A substantial amount of parking on campus will be removed by 2033 to accommodate other campus plan development. Figure 3.27 shows the locations where parking will be removed and replaced by buildings. As shown in Table 3.26, the future 2033 parking supply will be 1,048 spaces (not including the new garage). Montgomery College projects a student and staff population growth of 41% between 2023-2033. This increases the peak parking demand for 2033 from 723 to 1,019. This increases parking occupancy from 45% to 97% (not including the proposed garage) between 2023-2033. Peak parking occupancy for the campus should ideally not exceed 85%. The new parking garage should include a minimum of 150 parking spaces to accommodate the projected population growth and the loss in surface parking spaces.

Table 3.26 - 2023-2033 Parking Supply Changes

	Existing Supply	2033 Supply	Net Change
Lot 1	310	60	(250)
Lot 2	150	-	(150)
Lot 3	472	432	(40)
Lot 4	373	373	-
Lot 5	299	183	(116)
New Parking Garage	-	TBD	TBD
Total	**1,604**	**1,048**	**(556)**

Figure 3.25 - Proposed Parking Changes



SECTION 3.5

Implementation

Implementation

3.5.1 PROJECTED SEQUENCING

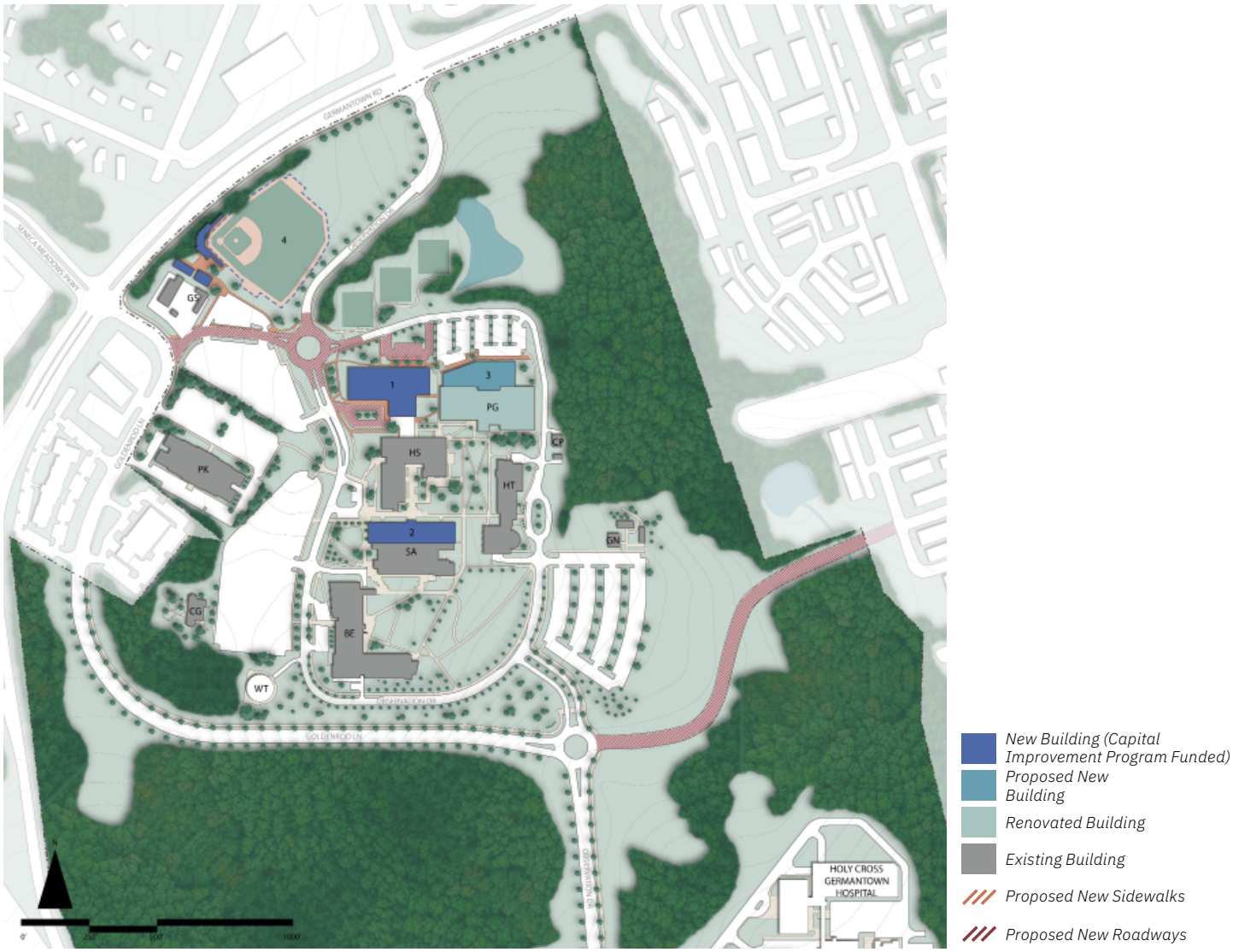
The phasing of implementation has been generally organized around four phases of development, some of which fall outside of the 10-year timeframe of the FMP.

Figure 3.26 - Germantown Campus 2023, Construction Since Last Approved FMP

BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

Figure 3.27 - Germantown Campus, Phase 1 2023-33 Facilities Master Plan



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
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HT High Technology and Science Center
PK Paul Peck Academic and Innovation Center
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

PHASE 1 (see Figure 3.27)

Phase 1 includes projects that are within the 10-year planning horizon and several of which are already developed.

1. Student Services Center

The Student Services project is an enabling project for several of the sequences to follow. It includes spaces currently in the SA, HS and PK buildings. These spaces include the dining facility and library from HS and all of the student services functions from SA.

2. Dr. DeRionne P. Pollard Student Affairs and Science Building Renovation Phase II

Once the Student Services project is completed, the unrenovated sections of the SA building will be vacated, enabling the demolition and subsequent three-story addition of the older part of this building.

3. Physical Education Building Wellness Renovation and Addition

The Wellness project is not connected to enabling projects, although some limited functions, such as fitness and classroom space could be relocated to the HS building after the completion of the Student Services Center.

4. Baseball Facility

The renovations of the baseball facilities are not connected to other projects and can be developed on their own funding schedule.

PHASE 2 (see Figure 3.30)

Phase 2 includes projects that may fall within or beyond the 10-year planning period of the FMP.

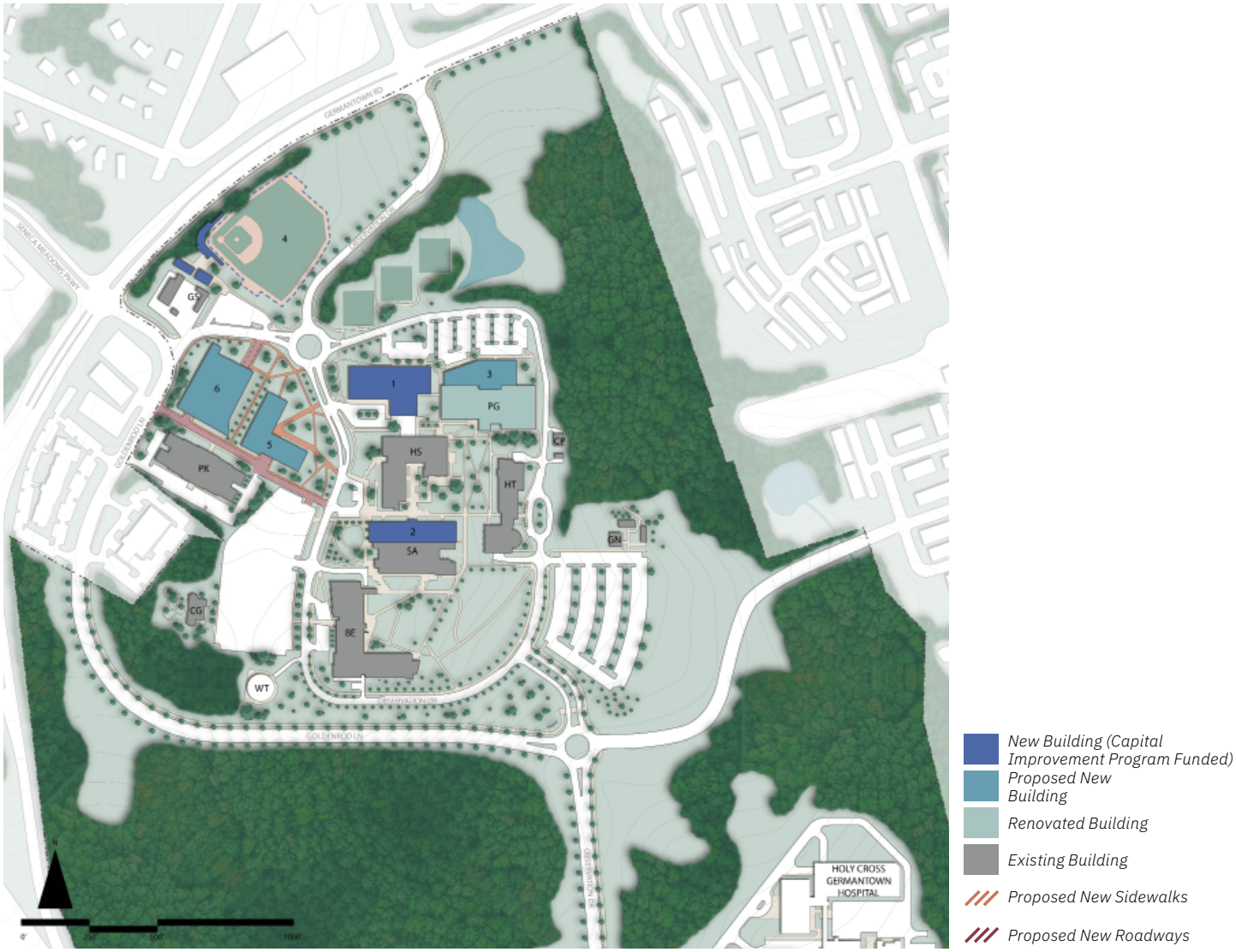
5. Arts and Communications Building

The Arts and Communications Building will enable the renovation of the HS building by providing the classroom spaces currently housed there. It does not have any enabling projects but may trigger the need for the parking structure.

6. Parking Structure

As the Student Services Center and Wellness projects take parking offline, it will be necessary to validate the demand for parking on campus and initiate the development of the parking structure to offset those losses. This will be particularly important as the Arts and Communications project is initiated.

Figure 3.28 - Germantown Campus, Phase 2 2023-33 Facilities Master Plan



BUILDING KEY

SA Dr. DeRionne P. Pollard Student Affairs and Science Building
HS Humanities and Social Science Building
PG Physical Education Building
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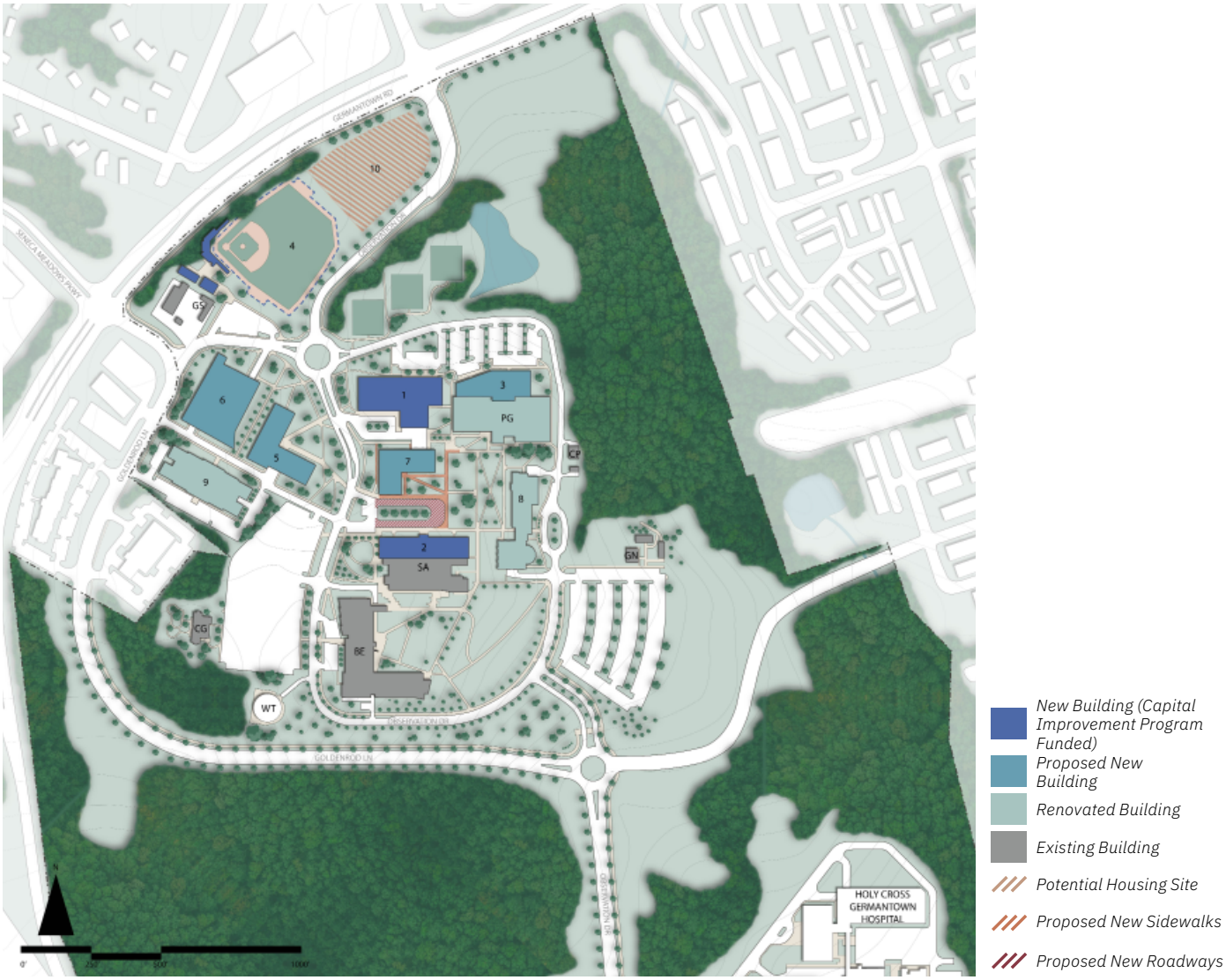
BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

Figure 3.29 - Germantown Campus, Phase 3 2023-33 Facilities Master Plan



BUILDING KEY

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BE Bioscience Education Center
CG Child Care Center - Academic Early Child Education
GN Greenhouse - Academic Landscape Design Program
GS Ground and Auto Storage

PHASE 3 (see Figure 3.29)

It is likely that the projects in Phase 3 will fall outside of the current planning window.

7. Humanities Building Replacement

The Humanities Building Replacement is facilitated by the completion of the Student Services Center, the Wellness Renovation and Addition and the Arts and Communications building. As such, it will be evaluated as those projects are completed.

8. High Technology and Science Center Renovation

The HT building could be partially renovated to meet the evolving needs of pedagogy in the technology fields, but a major overhaul would not be completed until after the Humanities Building Replacement.

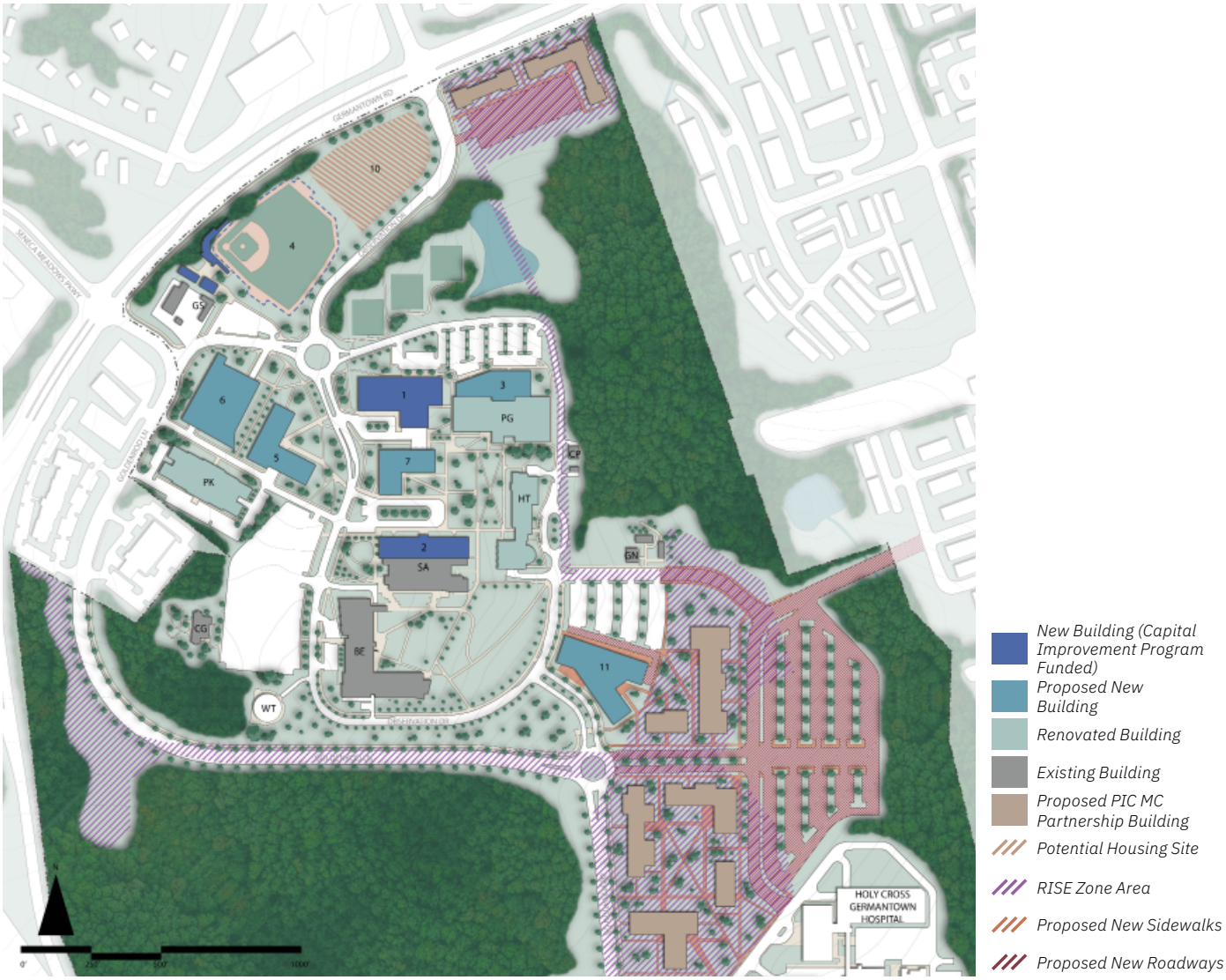
9. Paul Peck Academic and Innovation Building Renovation

The renovation of the ground floor will occur after the completion of the Arts and Communications Building, while renovations of the second floor will be tied to the lease agreement with the County.

10. Potential Housing Site

The timing of the housing project is dependent on the College's plans to provide student housing.

Figure 3.30 - Germantown Campus, Phase A 2023-33 Facilities Master Plan



PHASE A (see Figure 3.30)

Phase A includes projects tied to outside the sequence of projects noted above.

11. Science/Math/Health Science Building

This project would be launched in coordination with PIC MC and would be used to support industry partnerships as they evolve.

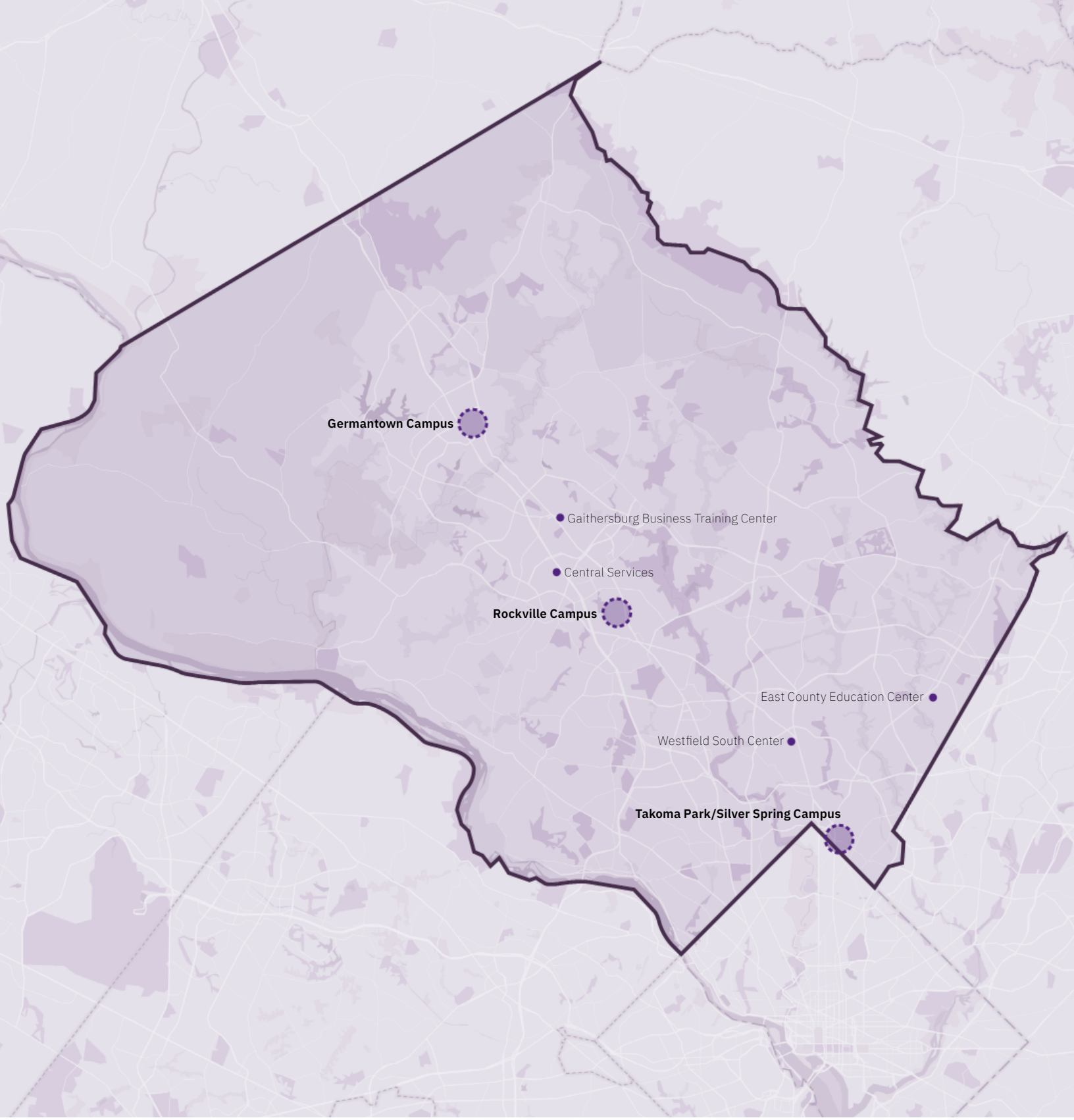
3.5.2 PROJECTED COSTS

The chart below provides an estimate of construction, planning and equipment costs for the projects in 2023 dollars. Escalation should be applied once timeframes are finalized.

Table 3.27 - Projected Costs

	Building Demolition			Renovation			New Construction		
Germantown	**Area**	**Cost/ SF**	**Demo Cost**	**Area**	**Cost/ SF**	**Renovation Cost**	**Total Area**	**Cost/ SF**	**New Construction Cost**
Student Services Center							153,600	$684	$105,142,000
SA Addition							60,000	$545	$32,700,000
PG Addition				36,707	$450	$16,519,000	46,400	$425	$19,720,000
Baseball Facility									$5,783,000
Parking Garage							192,000	$95	$18,240,000
Arts and Communications Building							88,800	$420	$37,296,000
Humanities Building	75,700	$15	$1,135,500				67,200	$420	$28,224,000
Science/Math/Health Science Building							138,000	$545	$75,210,000
Subtotal	**75,700**		**$1,135,500**	**36,707**		**$16,519,000**	**746,060**		**$322,315,000**

	TOTAL				
Germantown	**Total Construction Cost**	**Site Contingency, Testing**	**Planning Cost @ 15%**	**Equipment Cost @ 23%**	**Total Project Cost (2023)**
Student Services Center	$105,142,000	$115,374,000	$10,988,000	$11,538,000	$137,900,000
SA Addition	$32,700,000	$39,639,000	$4,905,000	$7,521,000	$52,065,000
PG Addition	$36,239,000	$43,929,000	$5,436,000	$8,335,000	$57,700,000
Baseball Facility	$5,783,000	$7,011,000	$868,000	$1,331,000	$9,210,000
Parking Garage	$18,240,000	$22,111,000	$2,736,000	$4,196,000	$29,043,000
Arts and Communications Building	$37,296,000	$45,211,000	$5,595,000	$8,579,000	$59,385,000
Humanities Building	$29,359,500	$35,590,000	$4,404,000	$6,753,000	$46,747,000
Science/Math/Health Science Building	$75,210,000	$91,170,000	$11,282,000	$17,299,000	$119,751,000
Subtotal	**$339,969,500**	**$400,035,000**	**$46,214,000**	**$65,552,000**	**$511,801,000**



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Montgomery College
Facilities Master Plan 2023 — 2033

CHAPTER 4

Rockville Campus

CANNONDESIGN

January 31, 2024

CONTENTS

SECTION 4.1

Background Information

Background Information

4.1.1 INTRODUCTION

As Montgomery College's largest and most comprehensive campus, the Rockville Campus welcomes over 11,800 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 students. In addition to credit students, the Campus also serves a substantial non-credit student body through programs of Workforce Development and Continuing Education (WD&CE). The student body, faculty and staff, and a broad range of campus partners together form a vibrant and culturally diverse community. The Campus hosts thousands of visitors each year for art exhibits, concerts, theatrical events, athletic events, conferences, lectures, and other public events, and takes great pride in serving as a long-standing community resource.

4.1.2 COMPARISON WITH 2013-23 FMP

The 2013-23 Facilities Master Plan sought to maintain a strong emphasis on outdoor space with a central green mall and increase space inventory considerably with major construction projects within the core of Campus.

The 2013-23 Facilities Master Plan described a projected space deficit in 2023 of 439,764 NASF, and proposed to meet that deficit with the construction of seven new buildings, one major addition and six renovations to existing buildings. New projects included buildings for a new Campus Center, a Library Learning Commons, a new Technical Training Center, a new Media Arts Building, and a new Humanities and Social Sciences Building. Proposals for an extensive addition to the Performing Arts Center, and a new parking garage on the southside of Campus, just east of the Science Center, to accommodate the projected enrollment growth were also made. Renovations were proposed for the South Campus Instruction Building, Gordon and Marilyn Macklin Tower, Humanities Building, Computer Science Building, Physical Education Center and Mannakee Building.

Since the 2013-23 Facilities Master Plan was approved, several projects have been completed. These include the North Garage project, completed in 2017, and the Long Nguyen and Kimmy Duong Student Services Center, completed in 2020. The previous Student Services Center, located in between Campus Center and Humanities Building, was demolished, to open a center greenway from the south to north end of campus. Additionally, a new Soccer Facility and Field House was constructed just east of the South Campus Instruction Building.

This 2023-33 Facilities Master Plan describes a considerably lower space deficit in 2033 of 218,645 NASF. This space deficit is proposed to be met by construction of five new buildings, two additions and seven renovation projects. The new buildings include a new Academic and Wellness Facility, a new parking garage with an Academic and Office wrapper building, a new Media Arts Building and a new Academic Building. The two additions consist of the Theatre Arts Building and the Performing Arts Center. Renovations are proposed for the Theatre Arts Building, Macklin Tower, Campus Center, the pool portion of the Physical Education Building, the Track and Field Facility, Humanities Building, Computer Science Building and Technical Center. This plan aims to reduce inefficient, small buildings through demolition and construct new, larger buildings capable of accommodating growing programs. The placement of new construction enhances the central green space while also extending open space through the east to west axis of the Campus. Also taken into consideration is the Rockville Campus Afforestation Plan which outlines areas designated to plant trees to meet requirements set forth by the City of Rockville.

4.1.3 ENROLLMENT PROJECTIONS

As noted previously, the College has seen a decline in enrollment over the past 10 years, with a peak enrollment in 2012 and a decline of 37.6% to the Spring of 2022. Specific to the Rockville Campus, the year over year Fall enrollment numbers from 2021 to 2022 fell 7.7% from 12,853 to 11,858 students, including on-campus students, off-campus students and distance learning students. This decline is the least of all three campuses.

Based on Enrollment Projections 2023-2032 Maryland Public Colleges and Universities, published in May 2023 by MHEC, over the next decade, the college is projected to experience Full Time Equivalent (FTE) enrollment growth of 41% and an unduplicated headcount growth of 30%. Since many students take courses on multiple campuses, the distribution of the growth may vary as program offerings are adjusted. In particular, the development of the East County Education Center due to open in 2024 and the development of an East County Campus, will particularly impact where growth may occur across all campuses. In the Fall of 2022, 69% of students took courses at the Rockville campus. If the numbers hold, it is anticipated that the Campus would house 15,400 students at the end of the planning period.

SECTION 4.2

Existing Site Conditions and Analysis

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 Hungerford Drive (MD-355), 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). 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 own the property adjacent to the northeast corner of the Campus, with utilities easements running across the northern side of the 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 but 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.

A handful of newer and/or comprehensively renovated buildings have recently been completed at the southwest corner and the north edge of the Campus. At the southwest corner, the Science Center with its renovated wing, 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, a seven-level parking garage completed in 2017, and the Long Nguyen and Kimmy Duong Student Services Center, completed in 2020, extends the architectural context of the southern science buildings to the north side of campus.

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 five 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 and with the minimal landscape screening, convey an image of a commuter campus.

Figure 4.1 - Pedestrian Network

BUILDING KEY

SW Science West Building
SC Science Center
AR Paul Peck Art Building
MU Music Building
CS Computer Science Building
TA Theatre Arts Building
MT Gordon and Marilyn Macklin Tower
HU Humanities Building
PA Robert E. Parilla Performing Arts Center
SB South Campus Instruction Building
TC Technical Center

GU Homer S. Gudelsky Institute for Technical Education
TT Interim Technical Training Center
CC Campus Center
CB Academic Annex
SV Long Nguyen and Kimmy Duong Student Services Center
CH Child Care Center
PE Physical Education Center
NG North Garage
MK Center for Training Excellence and ignITe Hub
MS Maintenance Shop
SF Soccer Field Concession Building

4.2.2 GATEWAYS AND VIEWS

Visibility and Identity

Although fronting a major thoroughfare in Rockville, Hungerford Drive (MD-355), the Campus is barely visible from that street. It is slightly more visible from Mannakee Street, though mostly concealed behind a fairly dense tree stand. There are two major gateways to the Campus fronted by recently installed signage.

Access

For cars, the major entrances to Campus are at the northeast edge of campus off MD-355 and two entrances off Mannakee Street. All three of these entrances open to views toward large parking lots. The arrival experience by public transit passes by the wide and extensive parking lots at the edge of the Campus.

Views into the Campus proper from the perimeter parking lots are slowly developing into a more "collegiate" appearance. With the construction of the Science Center, Science East and the renovation of Science West Building, the southern end of campus has increased in density and scale. Similarly, the construction of the North Garage and Student Services Center at the north end of campus has increased the Campus in density and scale. The demolition of the old Student Services Center has opened up the center of campus into a long greenway stretching from the Science Center to the Long Nguyen and Kimmy Duong Student Services Center.

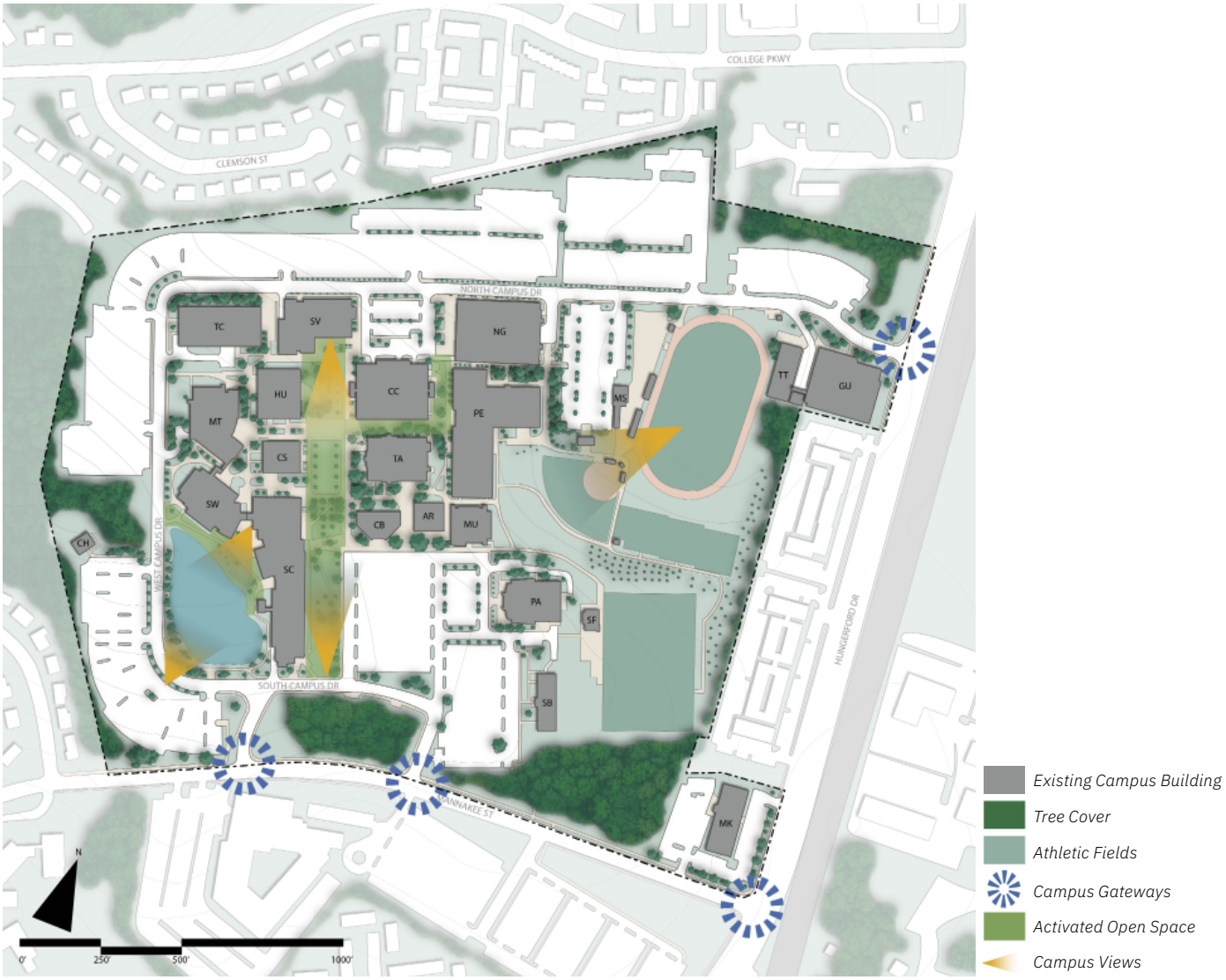
4.2.3 OPEN SPACE AND STREETSCAPE

The Campus is organized into a loose grid of buildings, with the open spaces between buildings primarily linear in character. The major exception to this is a large, landscaped amphitheater just east of the Humanities building at the north side of the Campus. Many of the linear spaces between buildings seem "left-over" and are haphazardly landscaped and furnished. However, a strong, landscaped north-south axis has taken shape.

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 internal vertical circulation through buildings.

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 on 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 the Gordon and Marilyn Macklin Tower on the west end of campus.

Figure 4.2 - Gateways and Open Space



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CH Child Care Center
PE Physical Education Center
NG North Garage
MK Center for Training Excellence and ignITe Hub
MS Maintenance Shop
SF Soccer Field Concession Building

4.2.4 MAJOR UTILITIES

Mechanical

Per the June 2022 Utilities Master Plan (UMP) prepared by Burdette, Kohler, Murphy and Associates, Inc. (BKM), the Campus, with the exception of several standalone buildings, is served by central and satellite chilled and heating water plants and their associated distribution systems. The chilled water system is at or near capacity. The UMP states that the capacity of the heating water plants and associated system are adequate to serve the Campus through 2033.

Electrical

The Rockville Campus is served by the Potomac Electric Power Company (PEPCO) from a combination of overhead and underground distribution lines owned by the utility. Each building, with the exception of the Music Building (MU), is served by separate feeders and meters connected to the PEPCO 13.2 kV system running overhead poles along the streets and underground duct bank in the campus core. The MU receives power from the Paul Peck Art Building. As projects are planned, estimated loads are calculated and sent to PEPCO to determine if their infrastructure has sufficient capacity. If modifications are required, PEPCO designs and implements the system upgrades, and the College reimburses PEPCO for construction costs.

Natural Gas

The campus is served by a 6” high-pressure natural gas service which provides gas to the boiler plants, water heaters, cooking appliances, generators and laboratories on campus. The gas service to campus is owned by Washington Gas (WGL) except for a small section from HU to CC and CS. The service is a firm (uninterruptible) gas service. The 2022 UMP recommends that natural gas distribution system upgrades should be considered with all future projects as part of the site work involved in those projects.

Water and Sanitary

Per the June 2022 UMP, the campus is served by a combined domestic/fire water system supplied by the City of Rockville which is expected to be capable of meeting capacity demands of existing and future domestic and fire water flow rate requirements, though the UMP recommends project-by-project evaluations of water pressure to determine the possible need for booster systems and/or fire pumps.

Sanitary sewer branch pipes from each building tie into Campus mains which then discharge to the City of Rockville system on the west side of campus. The College owns the on-campus sanitary sewer system (piping, manholes, etc.) and is responsible for all maintenance. The BKM Utilities Master Plan indicates that segments of the receiving City outfall pipes were previously determined to be inadequate for present and future flows. The UMP has provided several recommendations for remedying the inadequacies which rely on City of Rockville actions as well as project-by-project evaluations to gauge potential outfall capacity issues.

Storm Drainage

Per the June 2022 UMP, the storm drain system for the 85-acre Campus flows mostly to the large wet pond situated in the southwest corner of the campus core with several other outfalls, primarily serving perimeter parking lots, and flowing to off-site storm drainage networks. The earlier UMP modeled the storm drain system and determined that the existing system possessed adequate capacity for the then-current campus configuration, but suggested project-by-project evaluations to keep from overburdening the on- and off-campus system capacities.

Information Technology Systems

The main point of presence (MPOP) for the campus is currently within the Student Services Center. Each of the existing buildings is connected via a duct bank 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 has engaged in a series of separate planning activities compiled in an Information Technology Master Plan that identifies these information technology resources.

4.2.5 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 perimeter parking lots (Lots 10, 9, 8, 7, 6, 5, 2 and 1). Parking Lot 10 drains to a storm drain system that outfalls on the south side stormwater management (SWM) pond outfall channel. Parking Lot 9 drains to a storm drain system that outfalls on the north side of the SWM pond outfall channel. Parking Lots 8, 7, 6 and 5 drain to a storm drain system that outfalls into the wooded area to the west of Lot 9. Parking Lot 2 and a portion of Lot 1 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 Townhome 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 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. In 2009, the pond was once again upgraded as part of the construction of the Science Center. The 2009 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 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 is tracked under the City of Rockville Stormwater Management Permit SMP 2007-00025. The pond is 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, 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, the 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, sidewalks, roofs) and increasing infiltration and evapotranspiration, in addition to 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 allows the City to permit treatment from less than one 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-bioretention facilities were provided, each sized to only treat one inch of runoff falling short of the total required ESD volume according to the MFE 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. An infiltration trench was also provided at the tennis courts to provide the required Recharge Volume treatment.

For the North Garage, two micro-bioretention facilities were constructed to the west of the garage and two micro-bioretention facilities were constructed southeast of the Physical Education Center. Due to site limitations, the four micro-bioretention facilities only provide 40.5% of the total ESD treatment volume.

Likewise, the New Student Service Center was not able to provide treatment facilities for the full ESD treatment volumes due to site constraints.

4.2.6 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, spanning 38,500 SF. 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 and 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, with remnants including 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 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, 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.

Forest Conservation efforts to date on the Rockville Campus have been done on a project-by-project basis and thus have been difficult to track. The College has recently been working with A. Morton Thomas & Associates, Inc. to look more holistically at alternatives for a campus-wide approach to meeting the Forest Conservation requirements. These efforts dovetail with potential Campus rezoning by the City of Rockville which may alter the requirements as different land use categories have different forest retention and replanting (afforestation) requirement thresholds.

4.2.7 PEDESTRIAN AND BICYCLE CIRCULATION

Pedestrian Circulation

The Rockville Campus is a very walkable campus. Most buildings are within a quarter of a mile walking radius, or about a 10-minute walk. Two areas of the campus fall out of the quarter of a mile radius - the Homer S. Gudelsky Institute for Technical Education (GU), the adjacent Interim Technical Training Center (TT) and the Mannakee Building (MK). Details are shown in Figure 4.3.

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. A new sidewalk was installed on the south side of the central portion of north campus in 2019.

The Pedestrian Level of Comfort (PLOC) methodology developed by the Montgomery County Planning Department captures how comfortable it is to walk and roll in different conditions in Montgomery County. A variety of pathway and crossing factors are considered to determine a comfort score for each crossing and pathway segment. Pathway scores are based on factors such as width, posted speed limit, buffer width and traffic volume. Crossings are scored using different metrics, such as presence of traffic control (stop sign or traffic signal), number of lanes crossed, highest posted speed limit and crosswalk type.

PLOC for the Rockville Campus and surrounding area are shown in Figure 4.4. Pedestrians are uncomfortable crossing west on South Campus Drive due to factors such as long crossing distance and lack of traffic control. Pedestrian crossings to bus stops are undesirable on MD-355 due to factors such as high vehicle speed and long crossings.

Figure 4.3 - Pedestrian Circulation

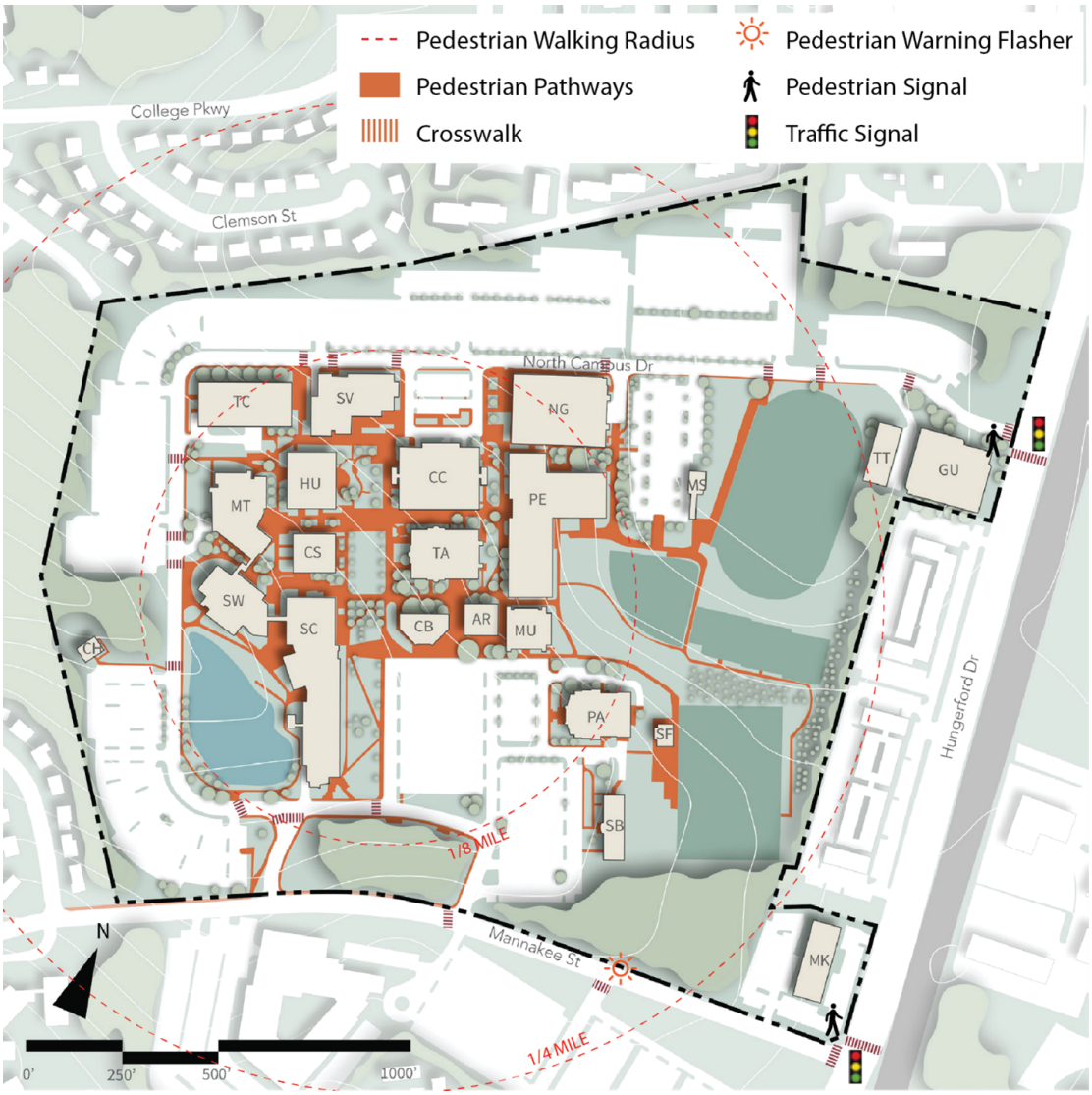

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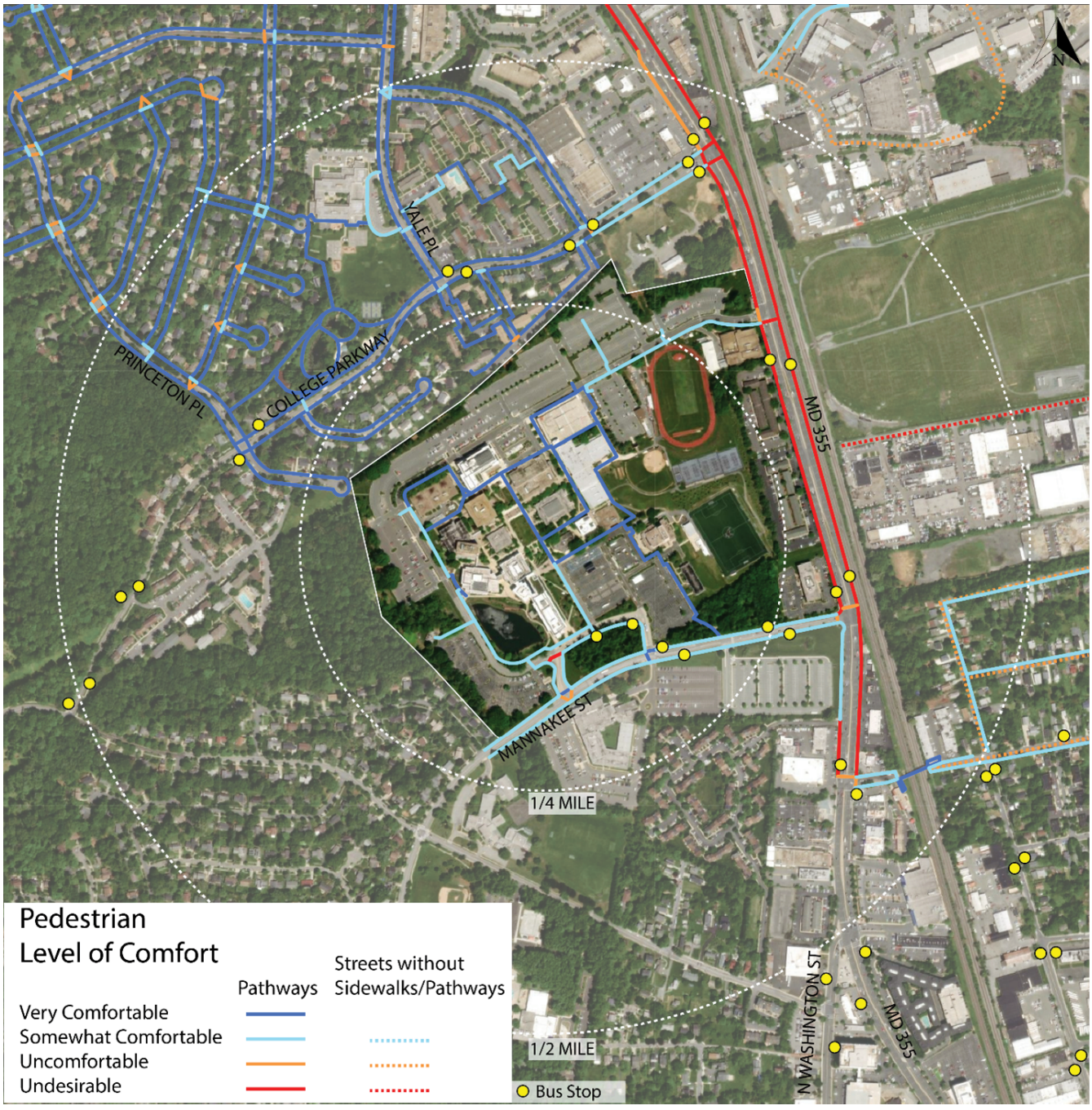
Figure 4.4 - Pedestrian Level Of Comfort



Bicycle Circulation

The City of Rockville Bicycle Master Plan in Figure 4.5 shows existing and proposed bikeways. The Campus is adjacent to the proposed bike lane along Mannakee Street. Fences on the north and west perimeters of campus prevent bicycle access from local streets. A gate in one fence at Princeton Place was permanently closed in response to neighbors' concerns. The Campus does not currently have designated bike paths. A bicycle path is proposed to connect this closed gate and Mannakee Street via West Campus Drive as part of the King Farm to Tower Oaks Crosstown Route. The type of bicycle path/facility is to be determined with further studying.

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. A Capital Bike Share Station with 21 docks is located at South Campus Drive, east of Lot 10.

Level of Traffic Stress (LTS) is an approach that quantifies the amount of discomfort that people feel when they bicycle close to traffic. The LTS methodology assigns a numeric stress level to streets and trails based on attributes such as traffic speed, traffic volume, number of lanes, frequency of parking turnover, ease of intersection crossings and more. When a street has a moderate or high level of stress, it may be a sign that bicycle infrastructure, like separated bike lanes or shared use paths, is needed to make it a place where more people will feel comfortable riding. As shown in the LTS map for Rockville in Figure 4.6, stress levels are high and moderate on MD 355 and Mannakee Street. The stress level on campus is low.

Figure 4.5 - Bicycle Master Plan

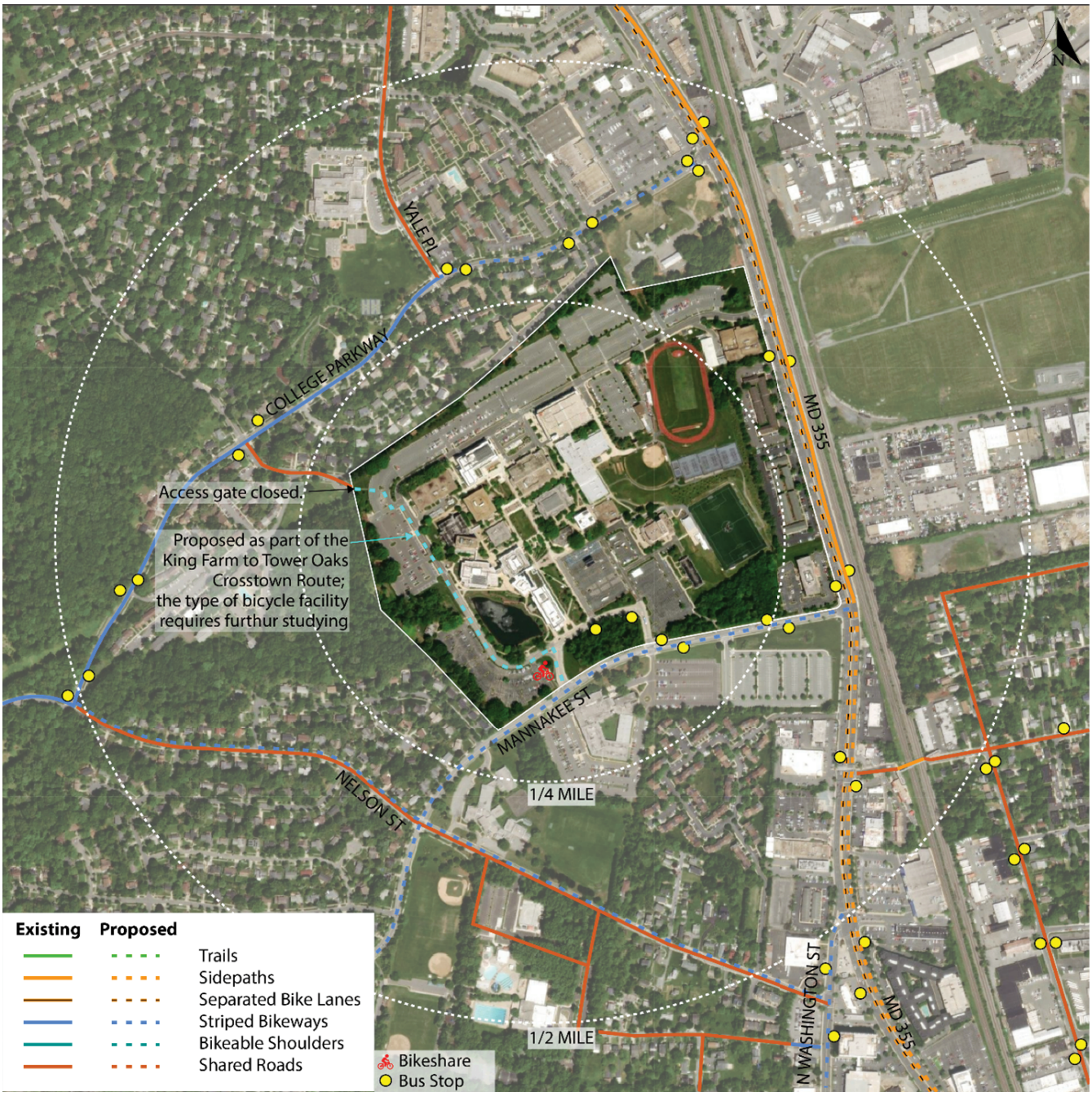


Figure 4.6 - Bicycle Level of Traffic Stress

4.2.8 TRANSIT

Montgomery College contracts for shuttle services between the Rockville Campus and the Takoma Park/Silver Spring Campus, and between the Rockville Campus and the Germantown Campus. A shuttle stop is located in front of the Academic Annex. Shuttle service to TP/SS runs between 7:00 a.m.-8:45 p.m. and leaves from TP/SS between 6:30 a.m.-8:15 p.m. Shuttle service to Germantown runs between 7:10 a.m.-7:45 p.m. and leaves from Germantown between 7:45 a.m.-8:15 p.m. All shuttles run every 75 minutes. The shuttle greatly decreases the travel time between campuses compared to using public transportation, reducing travel time to the Germantown Campus from 60 minutes to 30 minutes and to the TP/SS Campus from 90 minutes to 45 minutes.

The Campus is served by public transportation both on and off-campus. These services include the 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. Figure 4.7 identifies the routes that currently serve the Rockville campus. Key stops and frequency of routes are shown on Table 4.1.

Table 4.1 - Transit Route Information

Route	Key Stops	Frequency
Q2	Westfield Wheaton, Rockville Metro Station/MARC Station	10 min.
Q6	Westfield Wheaton, Rockville Metro Station/MARC Station	10 min.
45	Rockville Metro Station/MARC Station	25 min.
46	County Office Building, Naval Medical Center	15 min.
55	Rockville Metro Station/MARC Station, Lakeforest Mall	10 min.

Figure 4.7 - Campus Transit Map

Students and faculty/staff took a survey in May 2023 to give feedback on their transit campus experience. The survey gathered information such as residential zip codes, mode of transportation, and incentives for carpool and public transportation. Survey results suggest there is potential to increase public transit utilization as auto utilization is relatively high while students' trip origins are quite concentrated. At present, only 27% of students and 7% of faculty/staff use public transportation for their commute. Student and faculty/staff responses regarding what would encourage use of public transportation are shown in Figure 4.8 and Figure 4.9.

The public transportation encouragements listed in the survey are:

- Help Finding Bus Service to Meet My Schedule
- Express Bus from Your Area of Residence to Campus
- Transit Subsidies

Of the 174 students who responded to this question, 46% were willing to switch to public transportation if one of the three choices were available. Almost half of these students responded that they would use public transportation if there was an express bus to campus from their residential area. As shown in Figure 4.8, student residences are relatively concentrated. The opportunity of express bus service should be explored in detail. A considerable number of students also responded that they would take public transit if there was a bus service that met their schedule. As shown in Figure 4.9, faculty/staff residential areas were more scattered. Of the 86 faculty/staff responses, 40% were willing to switch to public transportation if one of the three choices were available. Almost half of these faculty/staff were interested in having an express bus service, and 15% of them would like to have transit subsidies.

Figure 4.8 - Transit Incentives for Students

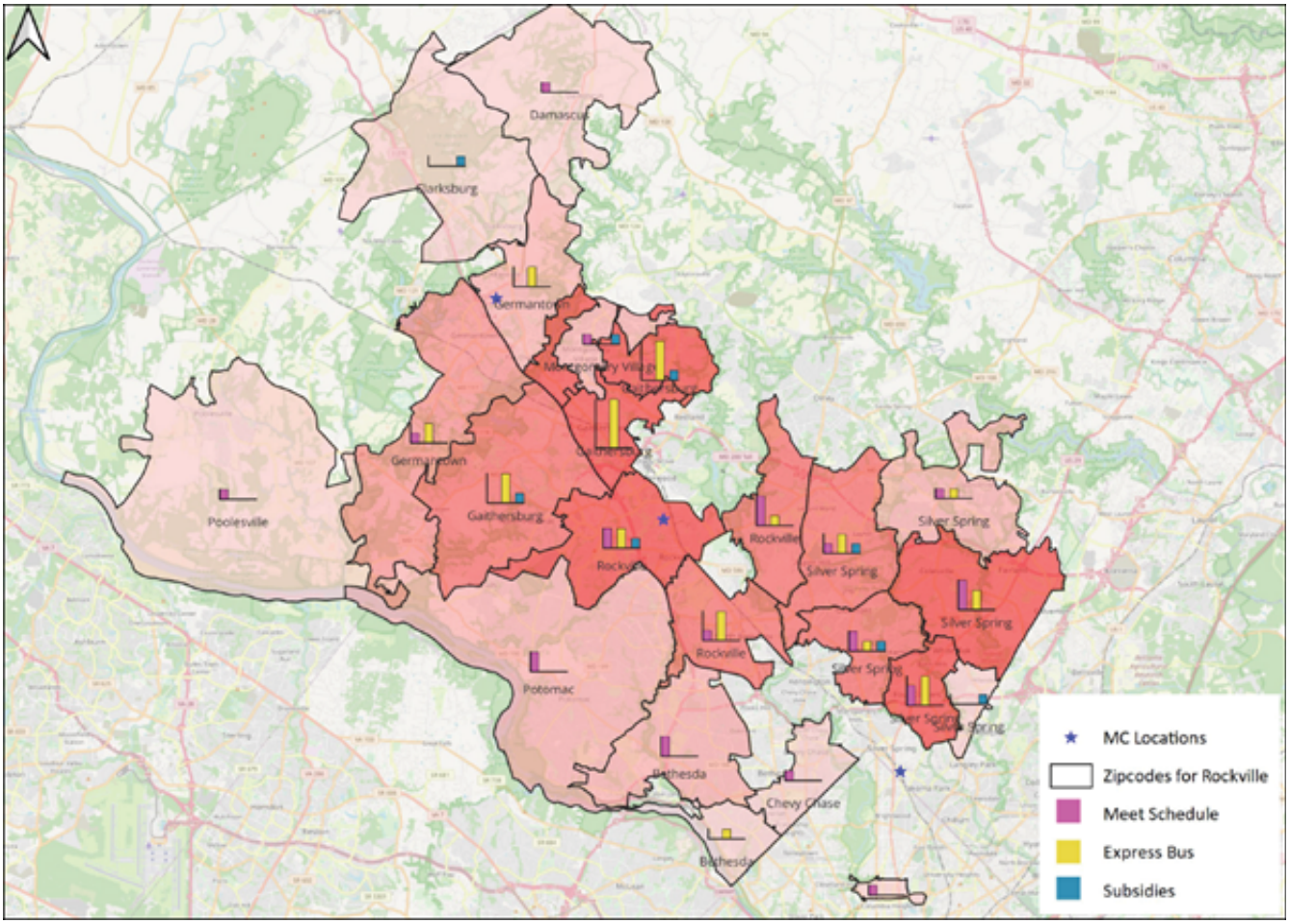


Figure 4.9 - Transit Incentives for Faculty/Staff

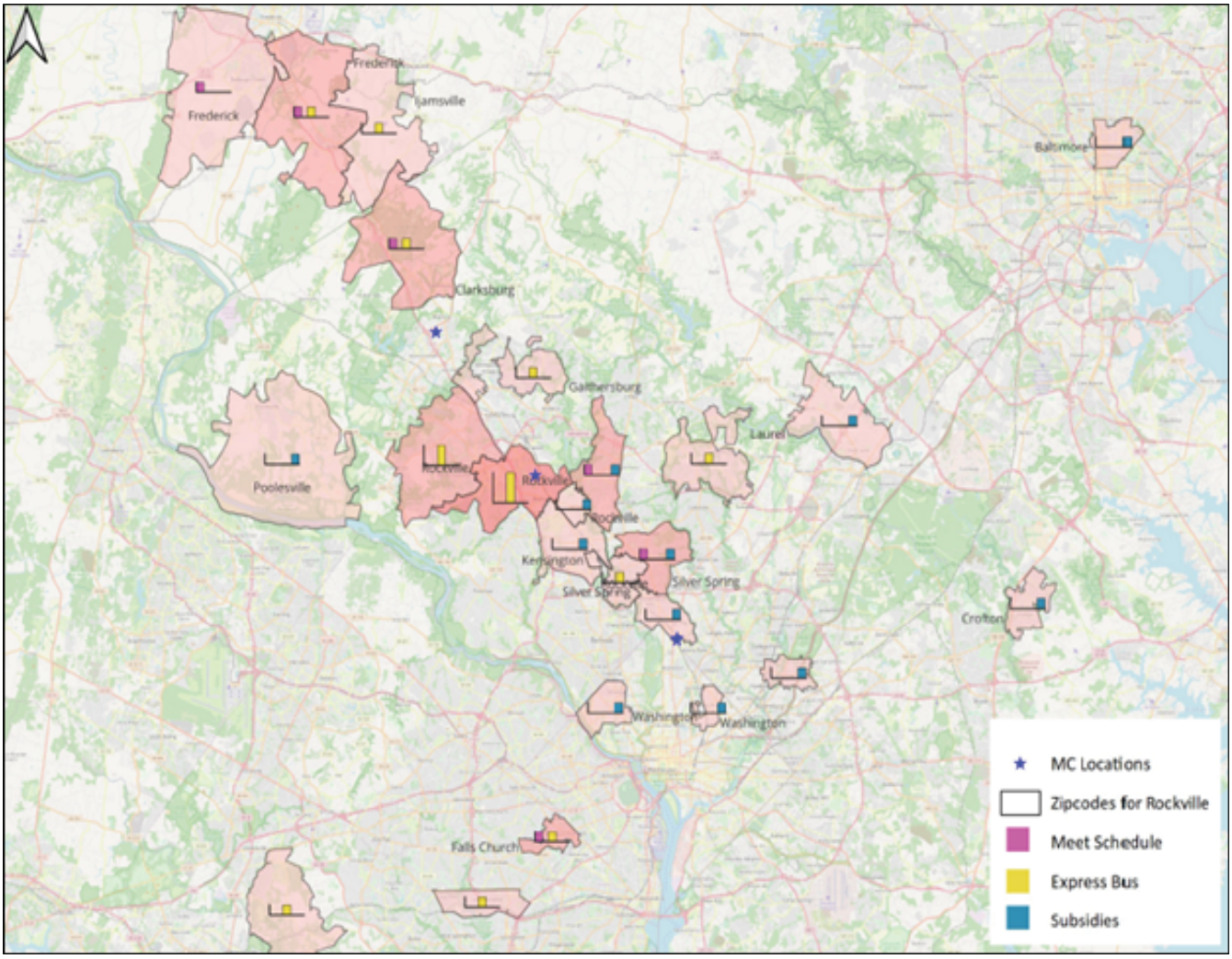
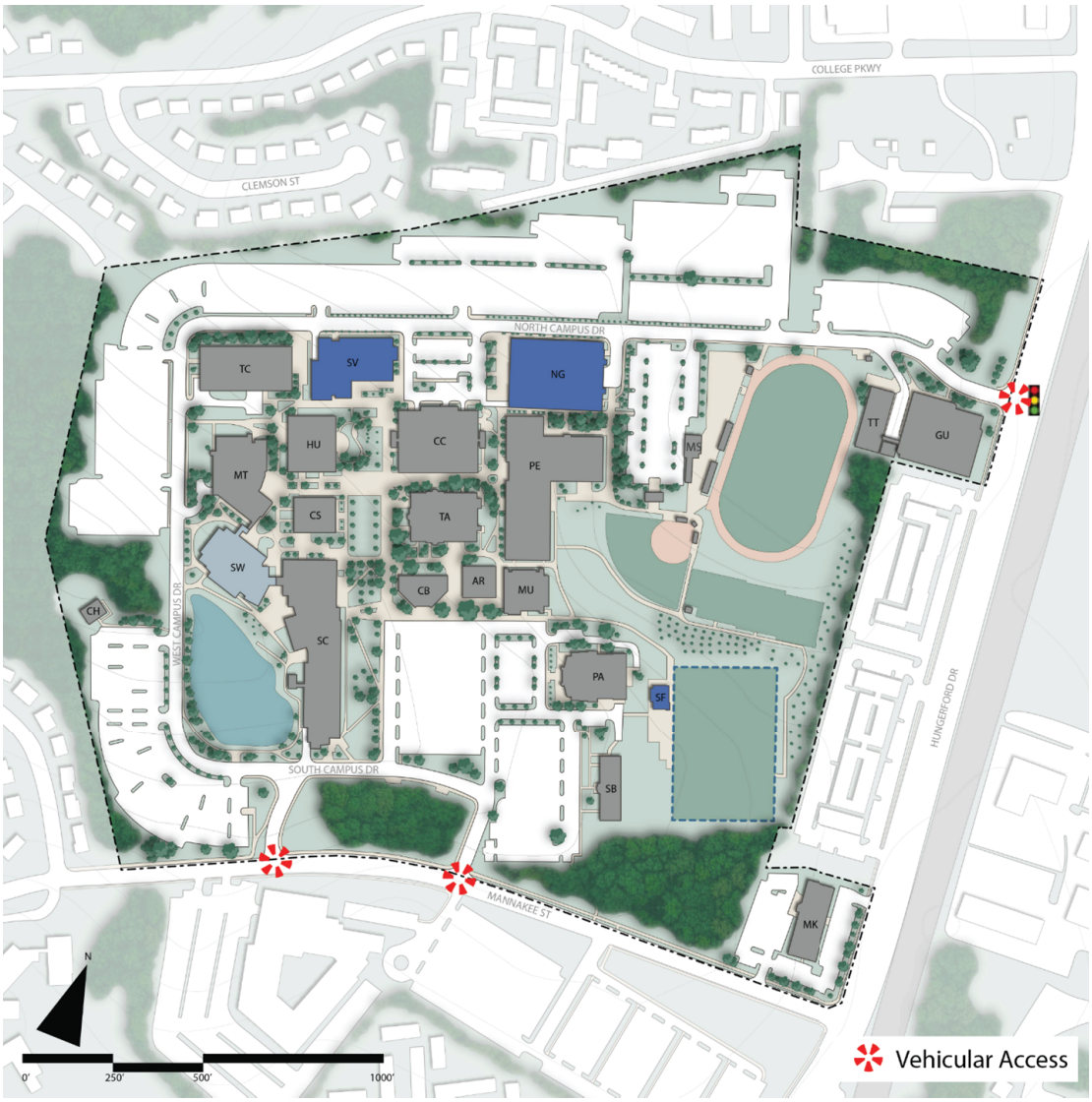


Figure 4.10 - Vehicular Access



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4.2.9 VEHICULAR CIRCULATION

The Rockville Campus is bound by a major arterial, MD 355 (Hungerford Drive) to the east, and a minor collector, Mannakee Street, to the south. Direct access to the Campus is provided via a signalized 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. Campus gateways are shown in Figure 4.10.

Traffic Volumes

Traffic counts conducted on March 7th and 8th, 2023 from 7-10 a.m. and 2-7 p.m. and illustrated on Table 4.2 indicate 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, and Mannakee Drive at its intersections with South Campus Drive. During the a.m. peak hour, a total of 1,021 inbound trips and 280 outbound vehicle trips were counted. During the p.m. peak hour, a total of 303 inbound trips and 408 outbound vehicle trips.

Trip distribution indicated by the data is shown in Figure 4.11. A.M. outbound and P.M. inbound trip distribution at the three campus gateways are similar, with the exception of A.M. outbound being 49% at Mannakee Street/South Campus Drive (east) and close to 25% at the other two intersections.

Transportation Mode Share

The survey of students and faculty/staff taken in May 2023 also obtained information on commuting mode share, shown in Table 4.3. Of all faculty/staff who responded to the survey, 77% drove and 7% were dropped off. Of all students who responded to the survey, 45% drove and 16% were dropped off. Carpool was only 1% for students and faculty/staff.

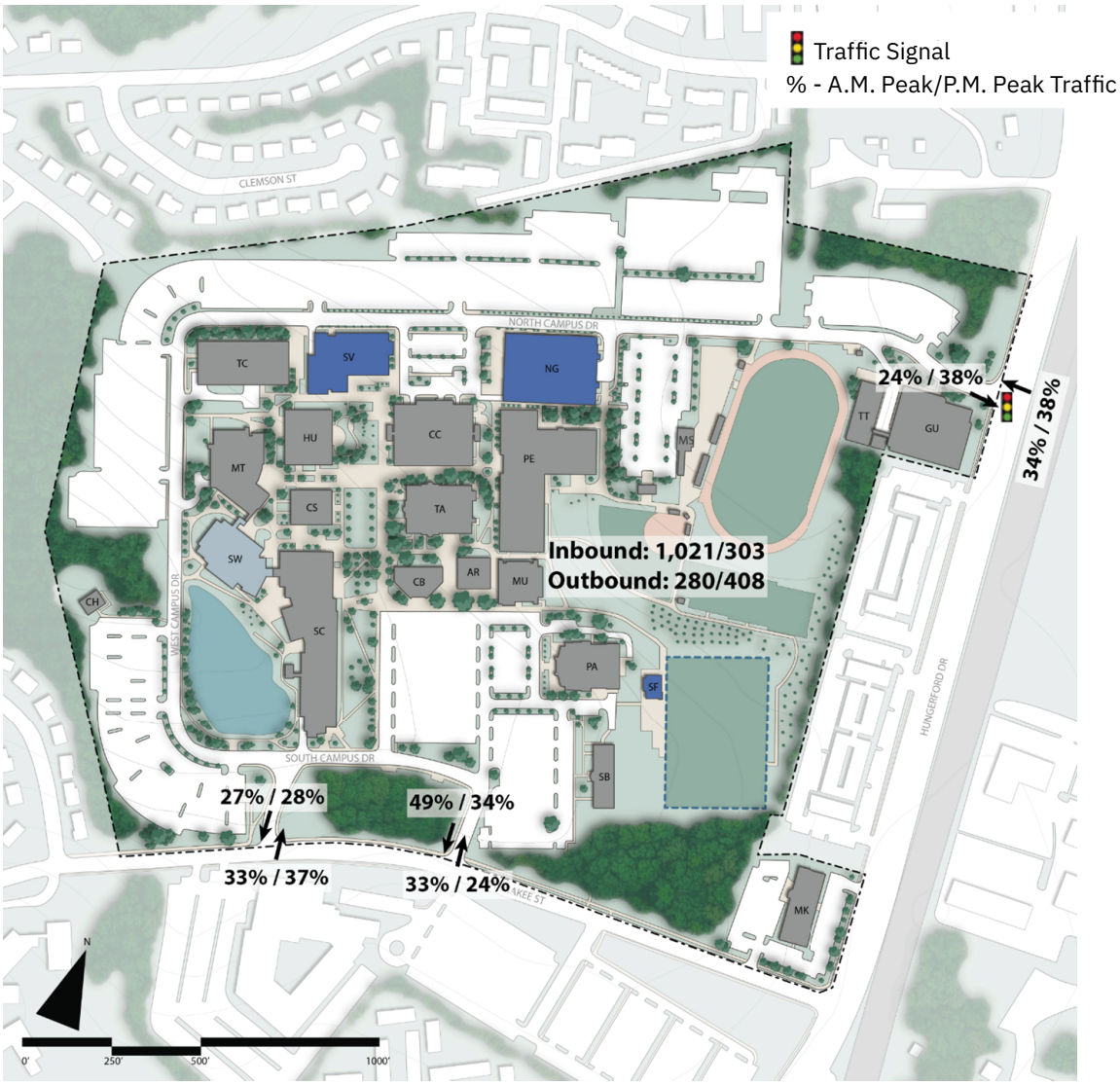
Table 4.2 - Transportation Mode Share

	A.M.		P.M.	
Intersection	**Inbound**	**Outbound**	**Inbound**	**Outbound**
MD 355/North Campus Drive	347	66	116	155
Mannakee Street/S Campus Drive East	332	138	74	139
Mannakee Street/S Campus Drive West	342	76	113	114
Total	1,021	280	303	408

Table 4.3 - Peak Hour Traffic

	Drive	Drop-Off	Carpool	Transit	Bike	Walk	Other
Students	45%	16%	1%	28%	2%	4%	4%
Staff	77%	7%	1%	7%	3%	3%	2%
Overall	55%	14%	1%	21%	2%	4%	3%

Figure 4.11 - Trip Distribution



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Existing Conditions Traffic Analysis

Existing traffic volumes were analyzed using SYNCHRO 11 software based on the Highway Capacity Manual 2000 (HCM 2000), to determine the Level of Service (LOS). LOS is a measure of the average control (i.e., signal or stop sign) delay experienced by all motorists arriving at an intersection. There are six representatives of LOS defined for intersections and they are designated using letters "A" through "F," with LOS "A" representing the best operating conditions and LOS "F" representing the worst.

The thresholds for the intersection levels of service are shown in Table 4.4. Existing signal timing plans were obtained from Montgomery County.

Analysis results are summarized in Table 4.5. The Local Area Transportation Review Guidelines from June 2023 set the HCM average vehicle delay standard for all study intersections in the City of Rockville to be 63 seconds/vehicle. All three intersections are currently operating at acceptable conditions.

Table 4.4 - Intersection Level of Service Threshold for Delay

LOS	Unsignalized	Signalized
A	0-10 sec	0-10 sec
B	> 10-15 sec	> 10-20 sec
C	> 15-25 sec	> 20-35 sec
D	> 25-35 sec	> 35-55 sec
E	> 35-50 sec	> 55-80 sec
F	> 50 sec	> 80 sec

Table 4.5 - Existing Conditions Traffic Analysis

Intersection		Existing Conditions			
		A.M. Peak		P.M. Peak	
		LOS	Delay	LOS	Delay
1	MD 335 at North Campus Drive	C	22.3	C	29.9
2	South Campus Drive East at Mannakee Street	C	16.2	A	9.3
3	South Campus Drive West at Mannakee Street	A	5.8	A	4.4

4.2.10 PARKING

The total parking capacity of the Campus is 4,138 spaces. Based on the parking survey conducted on March 7th and 8th, 2023, a peak of 1,696 parked vehicles was counted, giving a parking utilization rate of 41% overall. Student parking occupancy, by lot, is shown in Figure 4.12, and was close to 100% full in Lot 9 and Lot 12. Overall occupancy of faculty/staff spaces, shown by lot in Figure 4.13, was 50%, but Lot 5 and Lot 11 were both over 90% occupied. Faculty/staff are permitted to utilize available student spaces 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. As shown by the parking survey, there is adequate parking for commuting students, faculty and staff on the Rockville Campus.

Figure 4.12 - Student Parking Occupancy

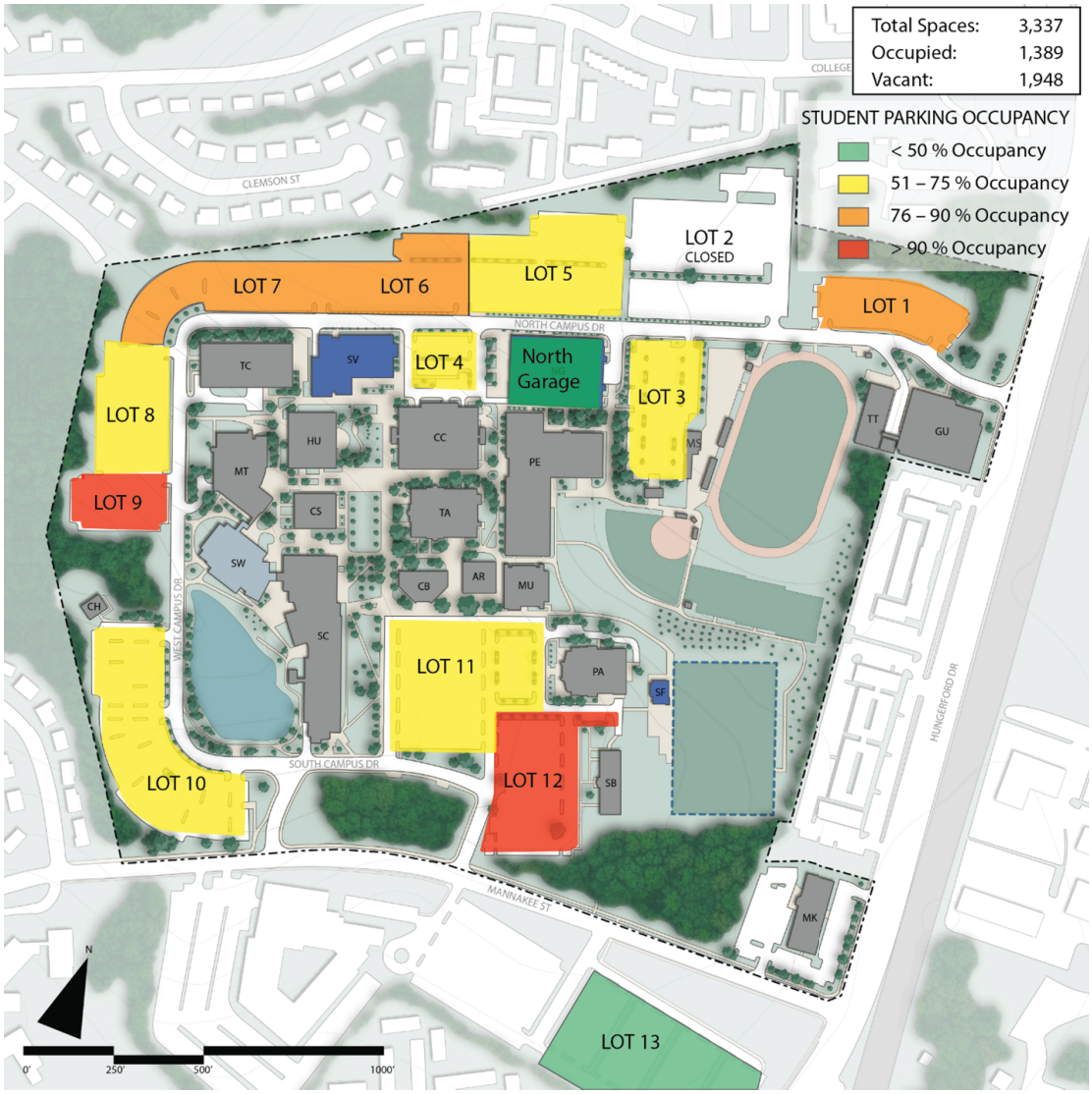

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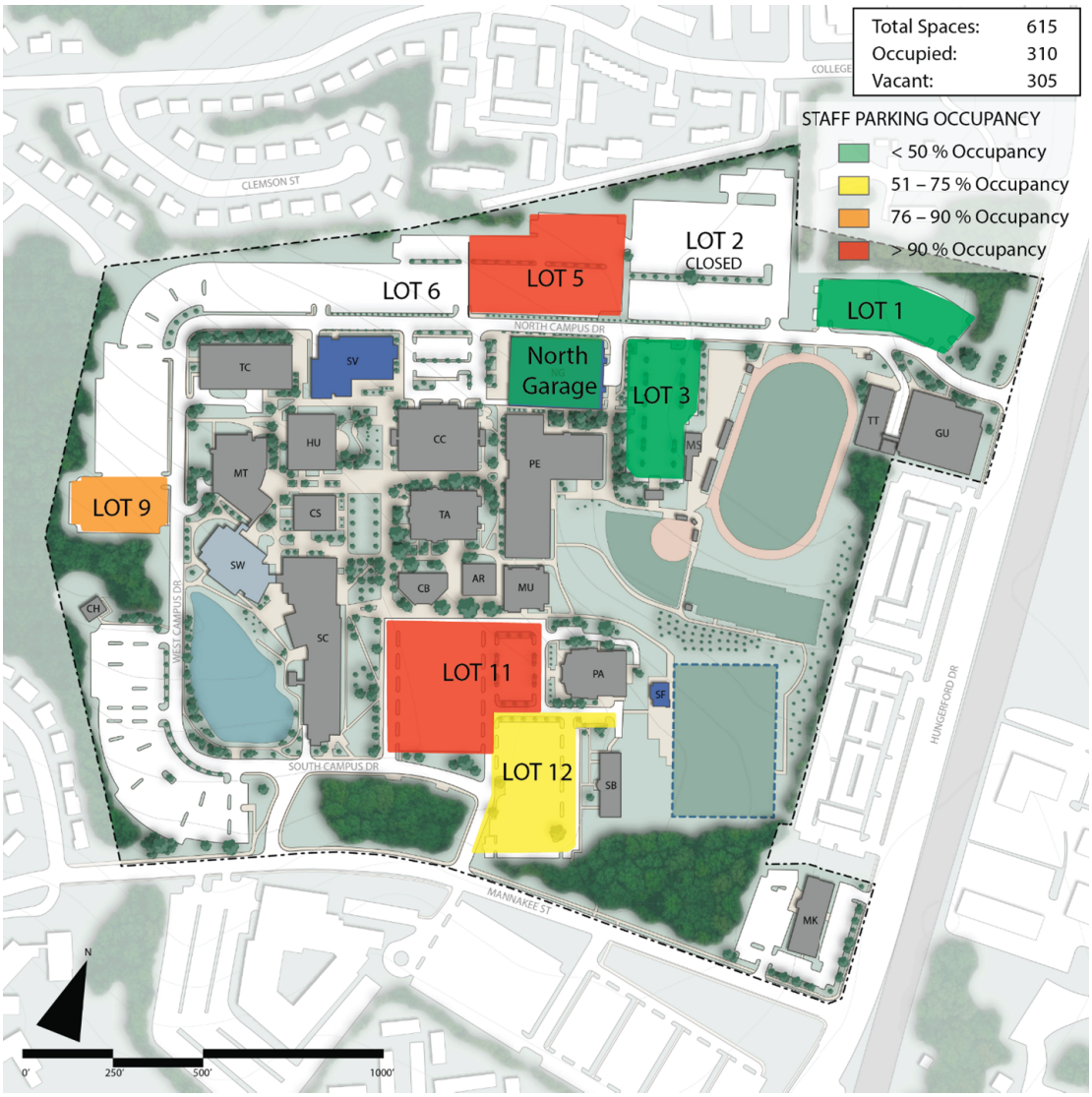
Figure 4.13 - Faculty/Staff Parking Occupancy



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SECTION 4.3

Existing Building Conditions and Analysis

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. A utilization analysis was undertaken using course data from the Fall semester of 2022 with the previous year's space inventory. The analysis reviewed classrooms and labs for the percent of weekly core capacity utilization and broke down the results by academic unit, building, floor, classroom type and lab type.

Figure 4.14 distinguishes the use of buildings across campus. The Rockville Campus has centralized the Student Services and Administration spaces by utilizing the Campus Center, Student Services Center, Humanities Building, Computer Science Building and Academic Annex. The Physical Education Building also lies in a centralized location in the context of the Rockville Campus. The main academic buildings surround this central core while also utilizing various spaces within the core buildings.

The academic departments on campus tend to have localized classroom usage, as shown in Figure 4.15, which is categorized by the department that uses the majority of the space for a majority of the time in a specific building. Figures 4.16 through 4.19 distinguish the frequency a department utilizes a building with the deeper color representing highly utilized by the department and the lighter color representing little utilization by the department. The Communications, Health Sciences, Health and Physical Education, and Humanities Departments (Figure 4.18) mainly uses the northern cluster of buildings with its main buildings consisting of the Physical Education Building and Humanities Building. The STEM Department (Figure 4.19) uses more square footage in the Science Center and Science West Building than the other departments. The STEM Department also utilizes Macklin Tower, keeping their functions on the south end of Campus. The Arts, Business, Education, English and Social Sciences Department (Figure 4.17) is centralized in the Humanities Building, however they have scattered utilization across the entire campus with highly utilized spaces in the Paul Peck Art Building and Music Building. The Applied Technologies, Gudelsky Institute for Technical Education, Workforce Development and Continuing Education Department (Figure 4.16) have dispersed utilization at the corners of campus in the Technical Center, Interim Technical Training Center, Mannakee Building and the Homer S. Gudelsky Institute for Technical Education.

Figure 4.14 - Building Use Diagram

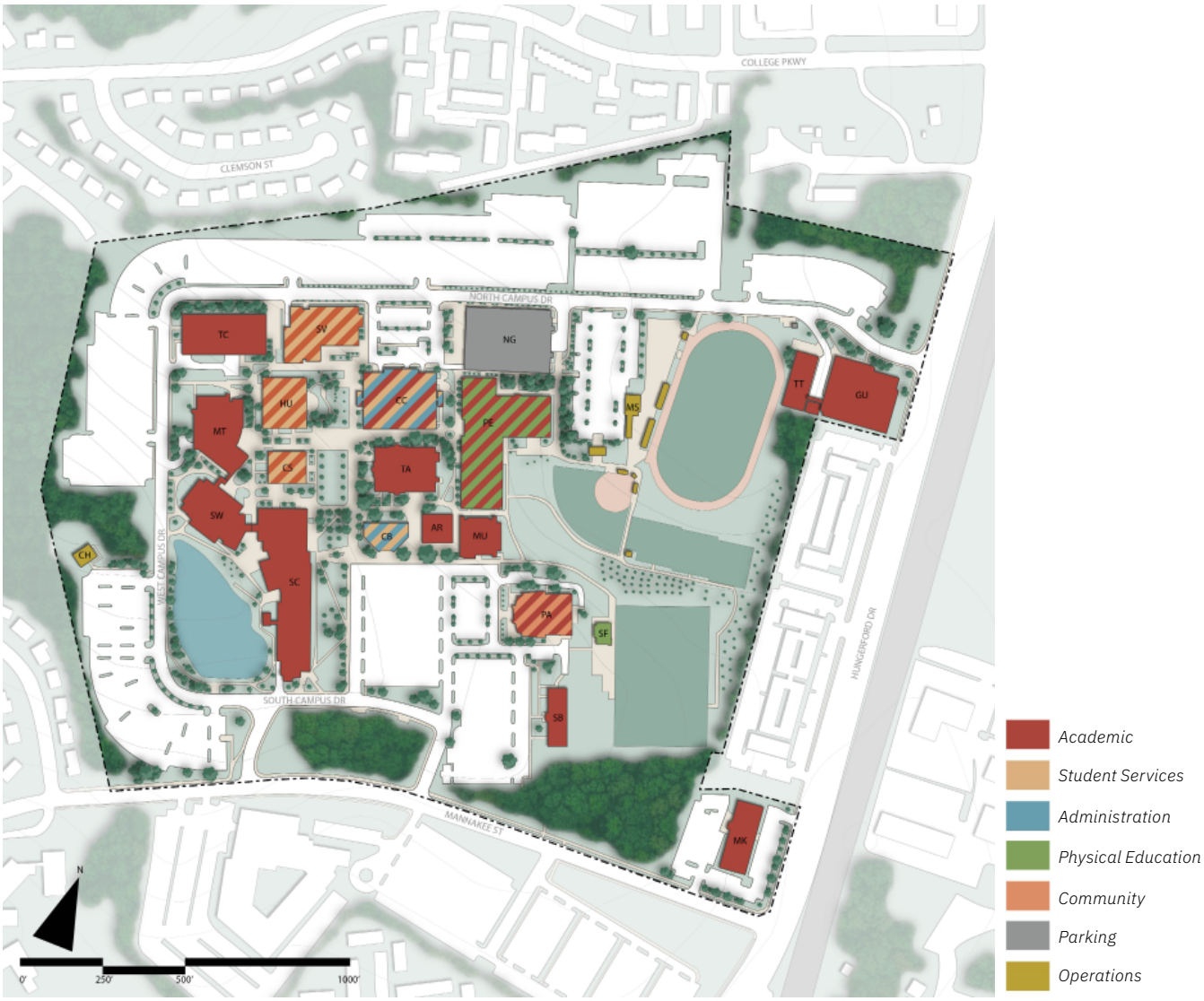

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Figure 4.15 - Department Use

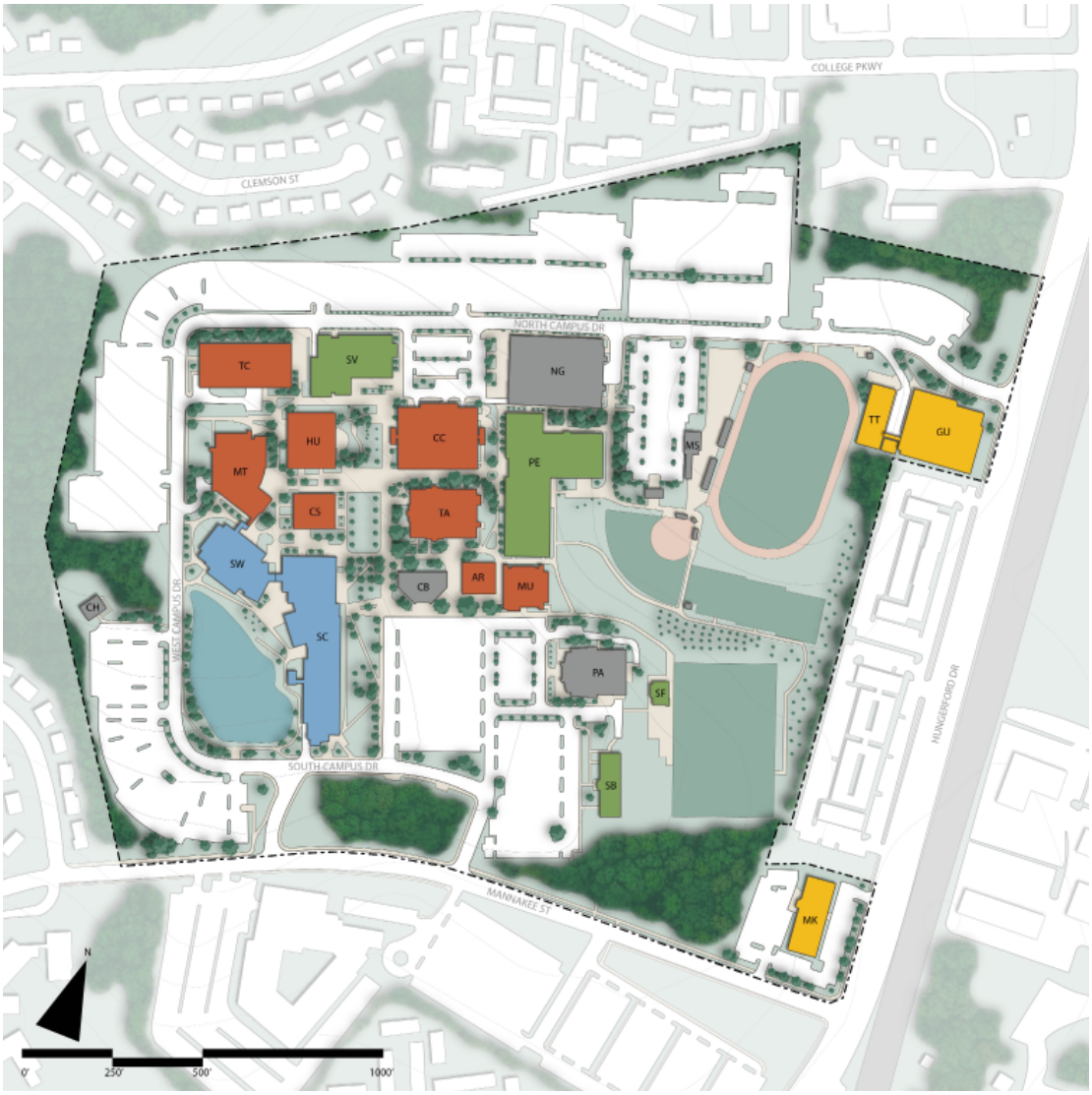

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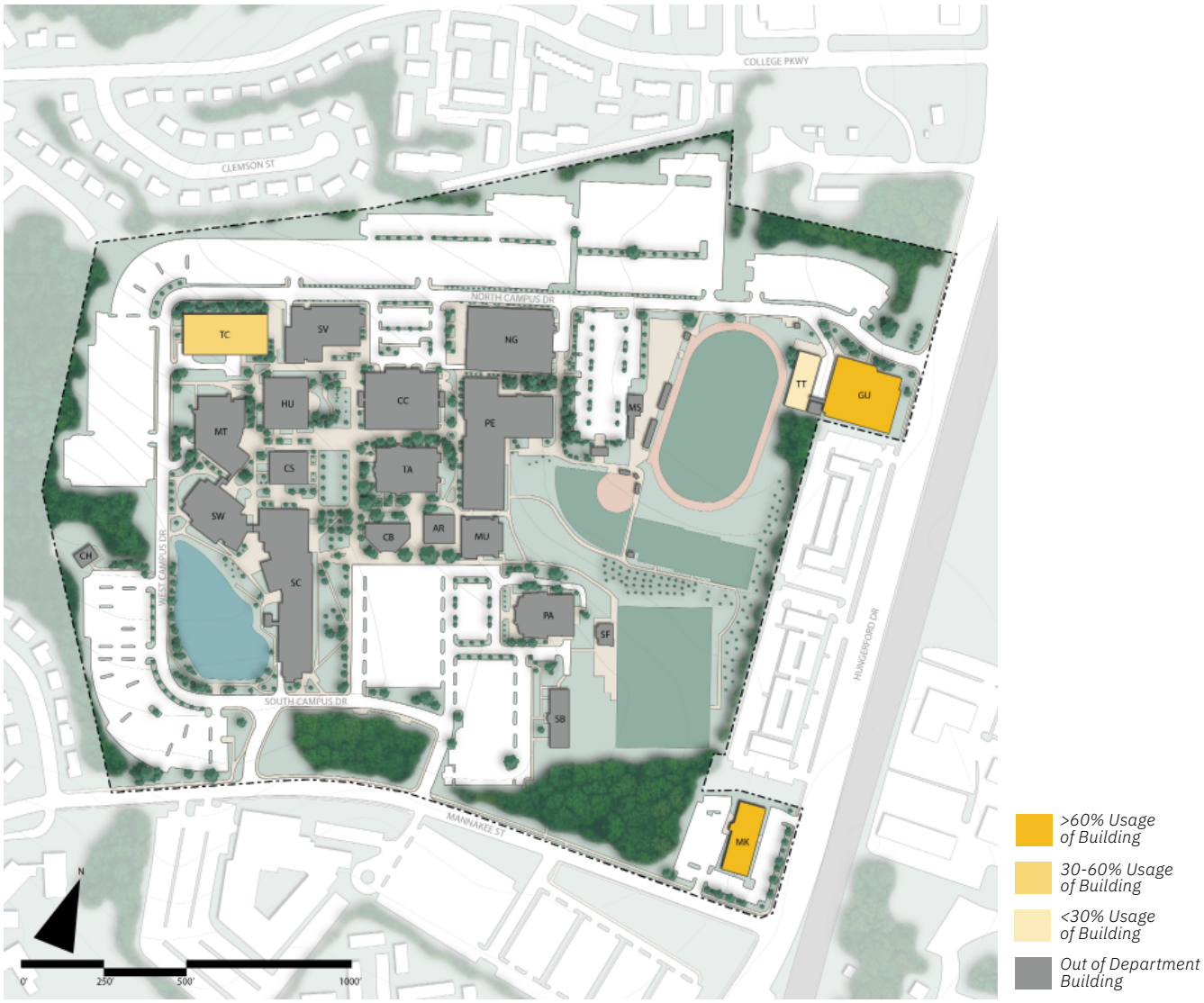
Figure 4.16 - Applied Technologies, Gudelsky Institute for Technical Education, Workforce Development and Continuing Education Heat Map



BUILDING KEY

SW Science West Building
SC Science Center
AR Paul Peck Art Building
MU Music Building
CS Computer Science Building
TA Theatre Arts Building
MT Gordon and Marilyn Macklin Tower
HU Humanities Building
PA Robert E. Parilla Performing Arts Center
SB South Campus Instruction Building
TC Technical Center
GU Homer S. Gudelsky Institute for Technical Education
TT Interim Technical Training Center
CC Campus Center
CB Academic Annex
SV Long Nguyen and Kimmy Duong Student Services Center
CH Child Care Center
PE Physical Education Center
NG North Garage
MK Center for Training Excellence and ignITe Hub
MS Maintenance Shop
SF Soccer Field Concession Building

Figure 4.17 - Arts, Business, Education, English and Social Sciences Heat Map

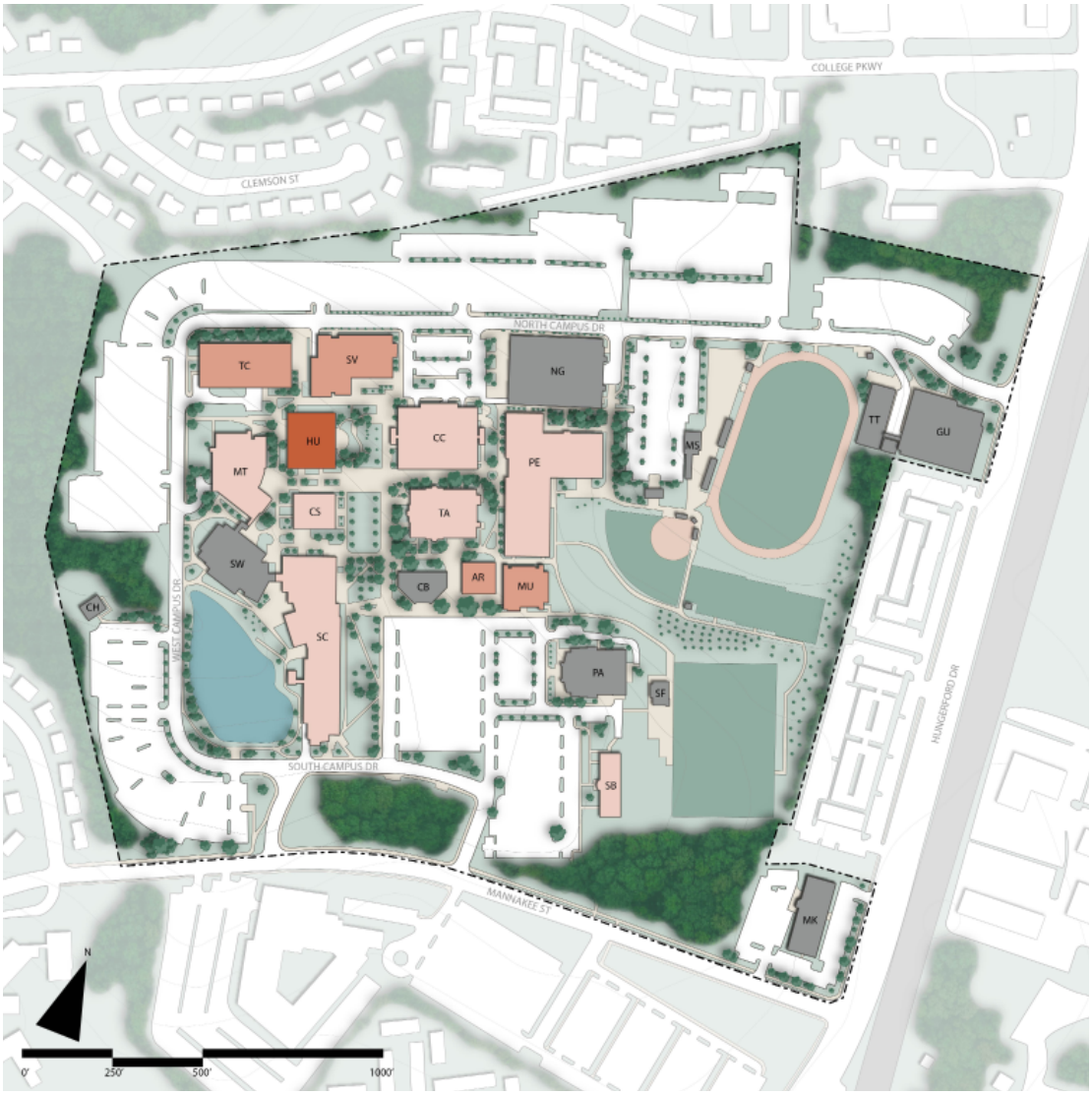


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Figure 4.18 - Communications, Health Sciences, Health and Physical Education, and Humanities Heat Map

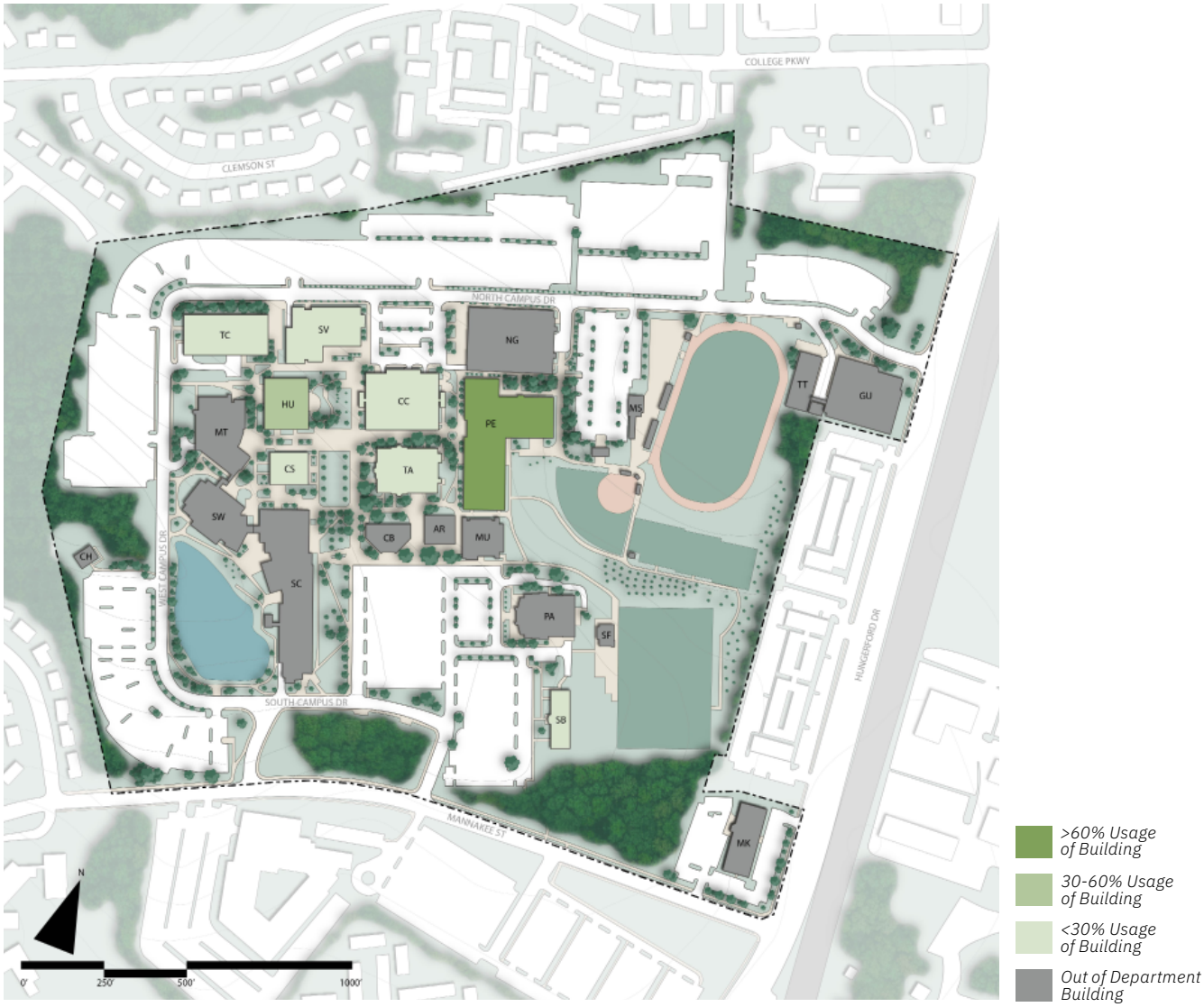

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Figure 4.19 - Science, Technology, Engineering and Mathematics Heat Map

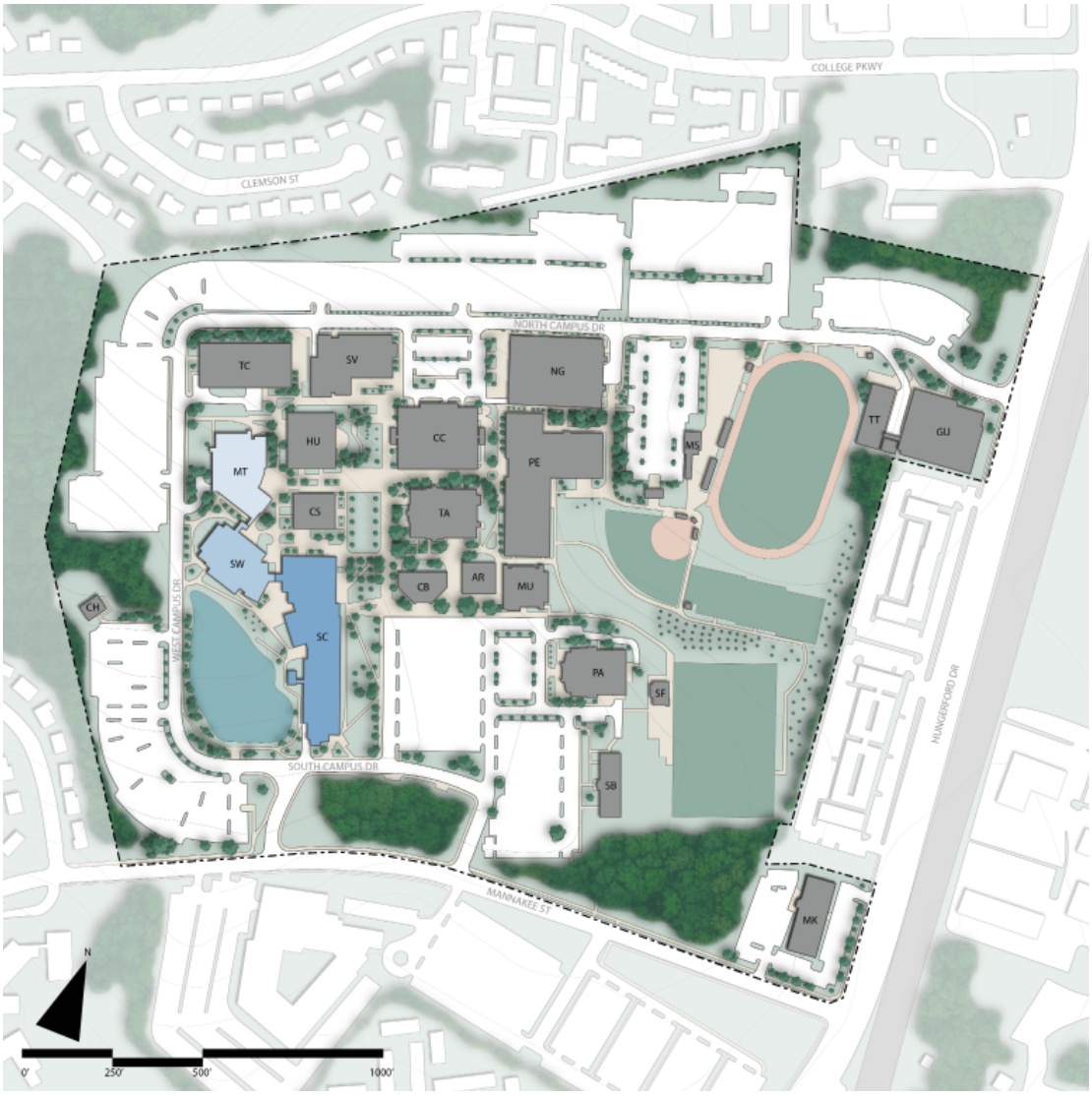

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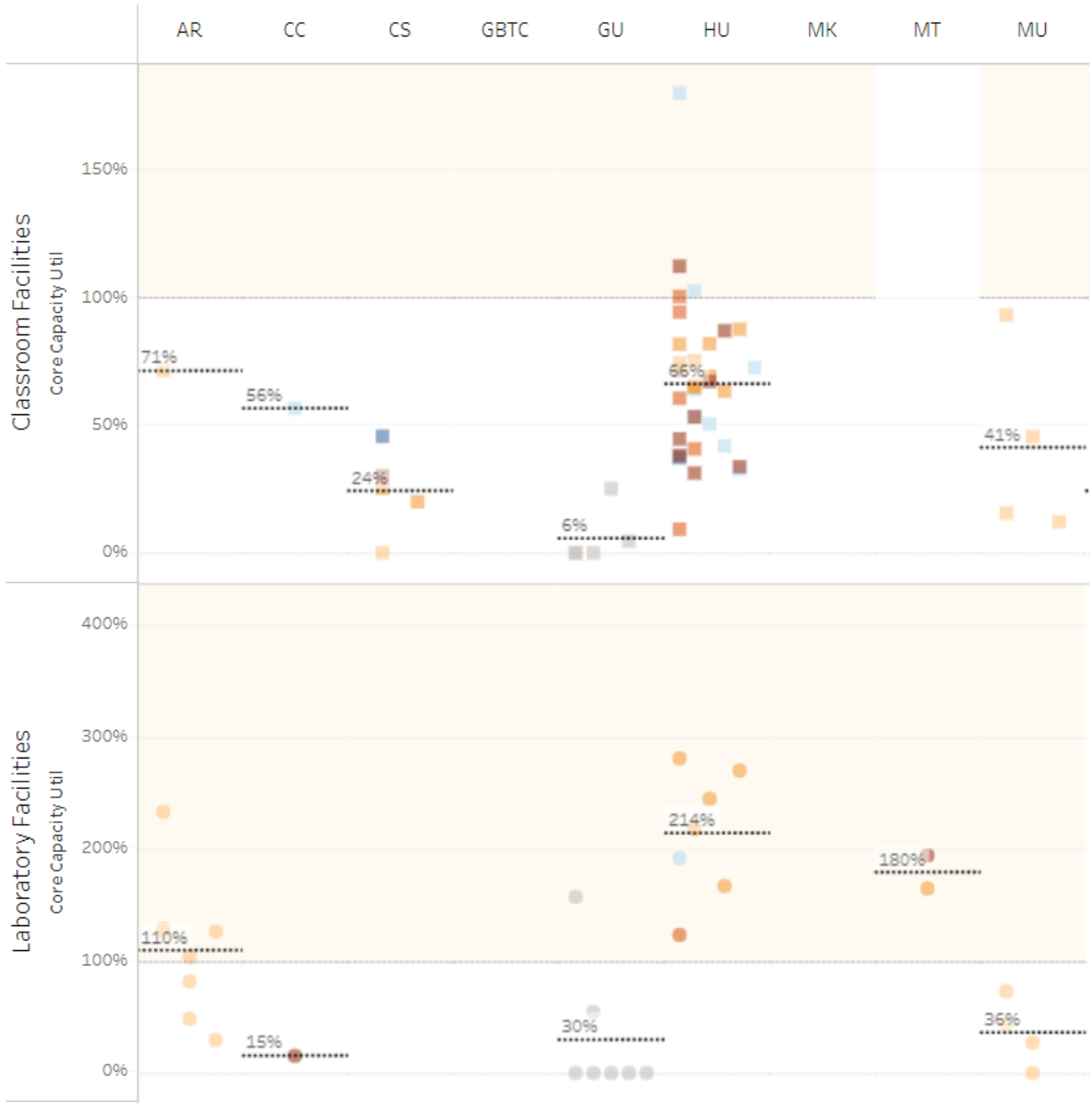
Figure 4.20 - Utilization by Building



PREDOMINANT AREA

- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

ROOM USE CATEGORY

- Classroom Facilities
- Laboratory Facilities

Figure 4.20 - Utilization by Building

Figure 4.20 indicates the classroom and laboratory utilization by building across the Campus. Trends that were noted across the College include:

- *Laboratory facilities, including class labs from disciplines ranging from drawing to chemistry, are in high utilization.*
- *Computer classrooms have a higher utilization than typical classrooms.*
- *On the Rockville Campus, the analysis indicates that:*
- *The Humanities Building, which includes several computer classrooms, is highly utilized.*
- *The Paul Peck Art Building, which includes class labs for fine arts, is highly utilized.*
- *Several buildings have low utilization due to the recent completion of other projects, including the Computer Science Building, certain floors of the Student Center, and the South Campus Instructional Building.*

Figure 4.21 - Utilization by Floor

Campus Code	Bldg Code MCC	Building Name	Student Seats Bldg	WSCH Core Bldg	Weekly Core Capacity Factored Bldg	Weekly Core Capacity Utilization Bldg	Condition Code	Renovation Cost per SF	Floor Code	Weekly Core Capacity Utilization Floor
RV	AR	PAUL PECK ART BUILDING	246	2,699	2,953	91%	2	$435	004	58%
									003	150%
									002	60%
									001	100%
	CC	CAMPUS CENTER	346	278	5,967	5%	3	$395	002	4%
									001	15%
	CS	COMPUTER SCIENCE	278	684	4,638	15%	4	$340	001	Null
									00G	17%
	GBTC	GAITHERSBURG BUSIN..	259	Null	4,293	Null	Null	$300	004	Null
	GU	HOMER S. GUDELSKY INSTITUTE FOR TECHNI..	724	722	10,634	7%	3	$300	002	3%
									001	10%
	HU	HUMANITIES BUILDING	1,246	15,416	21,164	73%	3	$315	003	99%
									002	90%
									001	60%
									00G	37%
	MK	MANNAKEE BUILDING	496	Null	8,527	Null	3	$315	002	Null
									001	Null
	MT	GORDON AND MARILYN MACKLIN TOWER	163	592	1,844	32%	2	$315	004	Null
									002	83%
									001	194%
									00G	Null
	MU	MUSIC BUILDING	222	1,085	3,517	31%	2	$375	002	21%
									001	33%
	PE	PHYSICAL EDUCATION CENTER	670	1,305	38,537	3%	4	$450	002	9%
									001	3%
	SB	SOUTH CAMPUS INSTRUCTION BUILDING	460	2,136	8,047	27%	2	$315	002	33%
									001	19%
									0LL	5%
	SC	SCIENCE CENTER	1,678	15,893	21,604	74%	1	$410	005	Null
									004	70%
									003	88%
									002	82%
									001	50%
	SV	LONG NGUYEN KIMMY DUONG STUDENT SERVICES CENTER	163	2,222	1,751	127%	1	$395	004	83%
									003	161%
									002	198%
	SW	SCIENCE CENTER WEST	942	6,096	15,522	39%	4	$472	003	32%
									002	57%
									001	Null
	TA	THEATRE ARTS BUILDING	294	1,506	4,965	30%	3	$615	002	76%
									001	13%
	TC	TECHNICAL CENTER	633	3,694	9,443	39%	4	$315	002	42%
									001	35%
	TT	INTERIM TECHNICAL T..	156	368	2,148	17%	3	$315	001	17%
	WHPL	WESTFIELD SOUTH	243	Null	4,407	Null	Null		003	Null
									002	Null

Figure 4.21 - Legend for Next Page

ROOM USE CATEGORY

- ■ Classroom Facilities
- ● Laboratory Facilities
- ◆ General Use Facilities, Office Facilities, Special Use Facilities

PREDOMINANT AREA

- Null
- Applied Technologies and Gudelsky Institute
- Business, Economics, Accounting, Computer Applications, Hospitality Management and Paralegal Studies
- Chemical and Biology Sciences
- Education and Social Sciences
- English and Reading
- English Language for Academic Purposes, Linguistics and Communication Studies
- Health Sciences, Health and Physical Education
- Humanities
- Mathematics and Statistics
- Science, Engineering and Technology
- Visual, Performing and Media Arts

WEEKLY CORE CAPACITY UTILIZATION

0% 100%

Figure 4.21 - Utilization by Floor

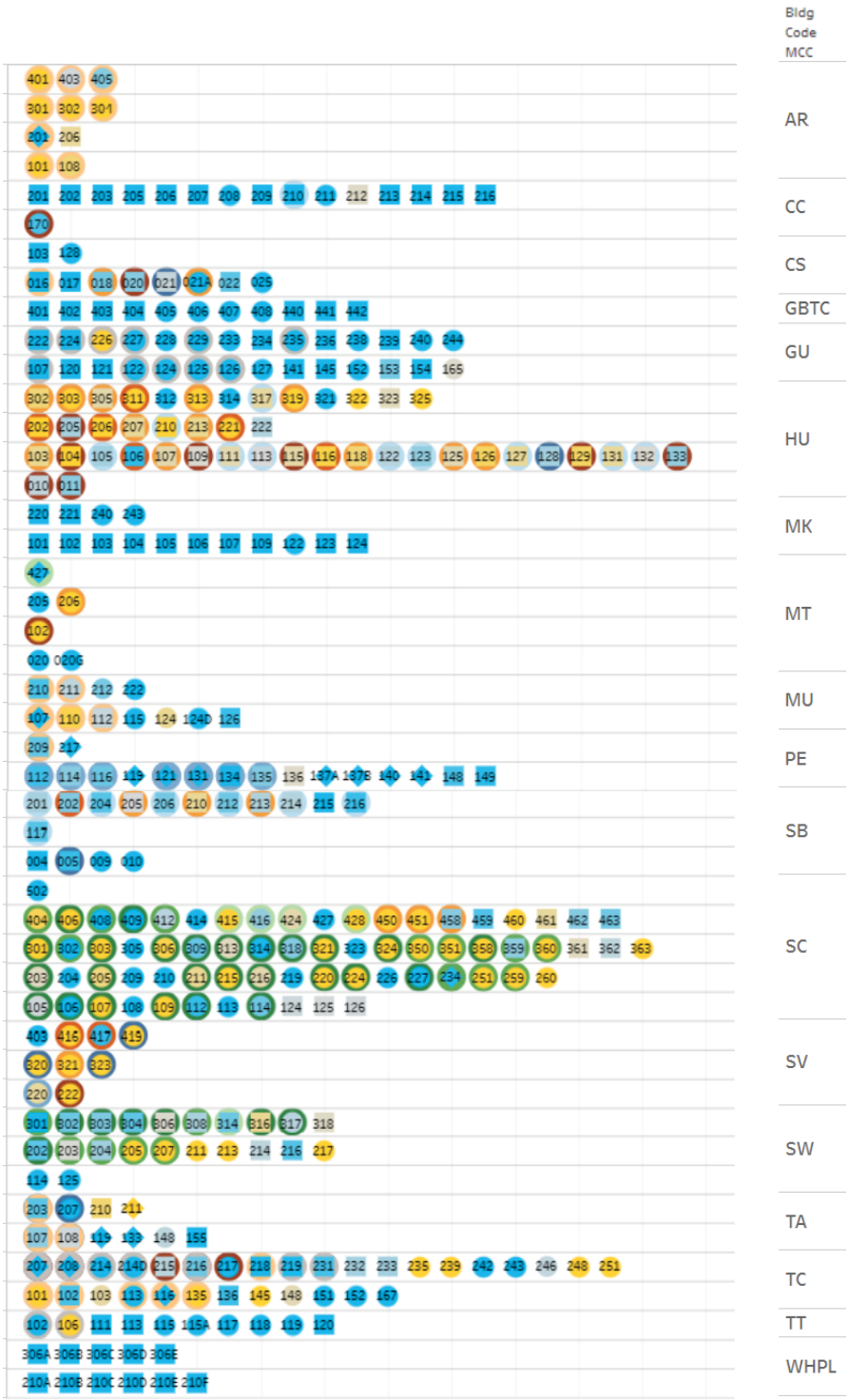


Figure 4.21 indicates the utilization by building and by floor across the Campus. On the left, each building is listed with its total seat capacity and corresponding potential credit hour availability. The utilization for the building is calculated based on the core hours in aggregate and the per floor. The right side of the chart shows each classroom and lab individually and is color-coded by utilizations rate. This analysis allowed for campuswide heat mapping that helped identify targeted locations for interventions that could support the goals of the plan.

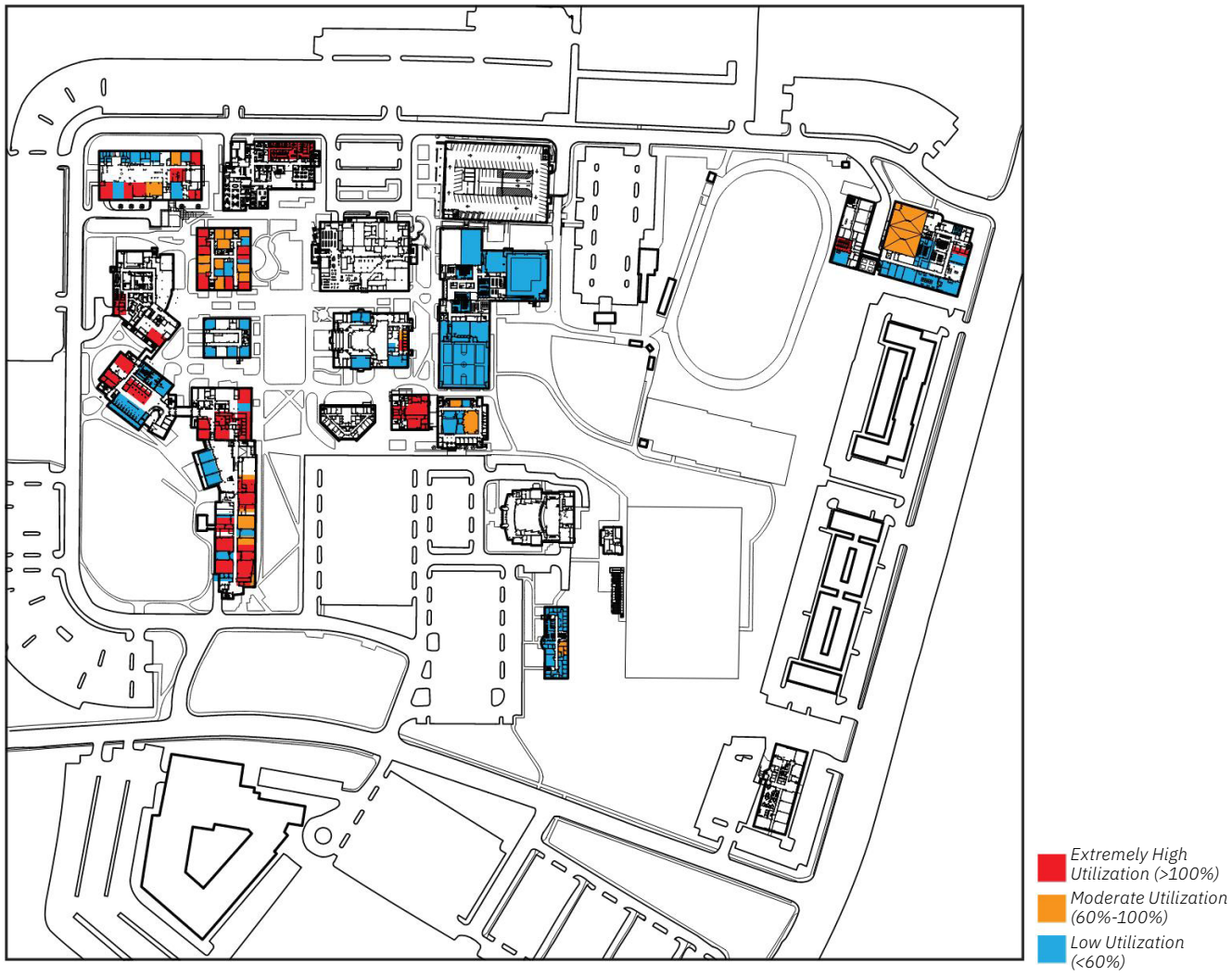
Table 4.6 - Space Inventory and Need by Hegis Code

HEGIS CODE	HEGIS CATEGORY	NEED %	NEED 2021	INV %	INV 2021	2021 DELTA	NEED %	NEED 2031	INV %	INV 2031	2031 DELTA
100 (110-115)	**CLASSROOM**	**6%**	**34,880**	**15%**	**102,420**	**67,540**	**6%**	**53,634**	**15%**	**102,401**	**48,767**
200	**LABORATORY**	**35%**	**212,463**	**28%**	**198,348**	**(14,115)**	**36%**	**326,706**	**28%**	**198,348**	**(128,358)**
210-15	Class Laboratory		196,419		194,222	(2,197)		302,035		194,222	(107,813)
220-25	Open Laboratory		16,044		4,126	(11,918)		24,671		4,126	(20,545)
300	**OFFICE**	**29%**	**178,578**	**30%**	**212,316**	**33,738**	**30%**	**273,727**	**30%**	**212,141**	**(61,586)**
310-15	Office/Conf. Room		175,918		202,760	26,842		270,040		202,585	(67,455)
320-25	Testing/Tutoring		2,660		9,556	6,896		3,687		9,556	5,869
400	**STUDY**	**5%**	**33,074**	**7%**	**51,297**	**18,223**	**5%**	**49,033**	**8%**	**55,912**	**6,879**
410-15	Study		23,875		24,697	822		36,713		22,759	(13,954)
420-30	Stack/Study		6,571		23,290	16,719		8,800		30,365	21,565
440-55	Processing/ Service		2,628		3,310	682		3,520		2,788	(732)
500	**SPECIAL USE**	**11%**	**64,440**	**9%**	**63,485**	**(955)**	**10%**	**89,088**	**9%**	**62,882**	**(26,206)**
520-23	Athletic		57,200		54,598	(2,602)		77,740		54,598	(23,142)
530-35	Media Production		6,240		7,578	1,338		10,348		6,975	(3,373)
580-85	Greenhouse		1,000		1,309	309		1,000		1,309	309
600	**GENERAL USE**	**9%**	**57,842**	**8%**	**56,809**	**(1,033)**	**9%**	**78,938**	**8%**	**57,146**	**(21,792)**
610-15	Assembly		16,640		29,350	12,710		20,748		29,350	8,602
620-25	Exhibition		2,660		2,008	(652)		3,687		2,008	(1,679)
630-35	Food Facility		20,471		11,008	(9,463)		31,475		11,008	(20,467)
640-45	No Allowance										
650-55	Lounge		7,311		12,102	4,791		11,241		12,439	1,198
660-65	Merchandising		2,760		437	(2,323)		3,787		437	(3,350)
670-75	No Allowance										
680-85	Meeting Room		8,000		1,904	(6,096)		8,000		1,904	(6,096)
700	**SUPPORT**	**5%**	**30,521**	**3%**	**18,610**	**(11,911)**	**5%**	**45,777**	**2%**	**10,803**	**(34,974)**
710-15	Data Processing		2,500		7,141	4,641		3,906		7,141	3,235
720-25	Shop/Storage		23,550		10,198	(13,352)		35,291		2,391	(32,900)
750-55	Central Service		4,000		1,063	(2,937)		5,874		1,063	(4,811)
760-65	Hazmat Storage		471		208	(263)		706		208	(498)
800	**HEALTH CARE**	**0%**	**964**	**0%**	**0**	**(964)**	**0%**	**1,375**	**0%**	**0**	**(1,375)**
Total NASF	**Net Assignable Square Feet**		**612,762**		**703,285**	**90,523**		**918,278**		**699,633**	**(218,645)**

An overview of the current and projected space needs above indicates several needs on the Rockville Campus:

- *Largest deficit of lab spaces*
- *Deficit of athletics, food facilities and study may provide opportunity to give existing resources some attention*

Figure 4.22 - Building Utilization Diagram



The Campus Utilization Map indicates areas of the Campus that are highly utilized (greater than 100% utilization), have moderate utilization (60 – 100% utilization) or have low utilization (less than 60% utilization). Buildings or areas of buildings with low utilization are considered opportunities for moderate investment to improve the overall efficiency of the Campus. Areas of highly utilized space adjacent to potential outdoor space are noted for potential engagement with the landscape plan. On the Rockville Campus, the buildings along the main campus greenspace offer the opportunity to activate much needed exterior space while improving the efficiency of the buildings. Potential areas of investigation with low utilization include the Computer Science Building, Theater Arts, Counseling and Advising and the Campus Center, while the Humanities Building has high utilization to leverage for improvements in the open space.

In 2022, a collegewide facilities condition assessment (FCA) was completed to evaluate the conditions of the existing building stock. One of the major goals of the FCA is to calculate each building's Facility Condition Index (FCI), which provides a theoretical objective indication of a building's overall condition. The FCI is defined as the ratio of the cost of current needs divided by current replacement value (CRV) of the facility. The chart below presents the industry standard ranges and cut-off points.

The deficiencies and lifecycle needs identified in the assessments provide the basis for a portfolio-wide capital improvement funding strategy. In addition to the current FCI, extended FCIs have been developed to provide owners the intelligence needed to plan and budget for the "keep-up costs" for their facilities. As such, the three-year, five-year, and 10-year FCIs are calculated by dividing the anticipated needs of those respective time periods by current replacement value. A summary of the individual findings for this FCA are noted with each building description below.

Table 4.7 - FCI Ranges and Description

0-5%	In new or well-maintained condition, with little or no visual evidence of wear or deficiencies.
5-10%	Subjected to wear but is still in a serviceable and functioning condition.
10-30%	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
30% and above	Has reached the end of its useful or serviceable life. Renewal is now necessary.

Science Center West Building (SW) (42,152 NASF / 70,508 GSF), was originally a two-story structure that underwent a renovation and addition which was completed in 2016. The renovation of the first two levels included a large learning center with auxiliary group and individual study spaces, as well as computer and engineering classrooms, and a dean's office suite. The third-floor addition houses a math emporium, classrooms, a lecture hall and study lounges.

The facilities conditions assessment, which was completed after the renovation and addition, is reflective of the improvements from the recent upgrade.

The Fall 2022 utilization data shows the building, as a whole, at around 39% utilized, however, the majority of the laboratories are consistently over 100% utilized.

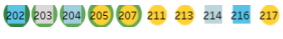
Table 4.8 - SW Facility Condition

	Est Reserve Cost	FCI
Current	$ 349,100	**1.2%**
3-Year	$ 349,100	1.2%
5-Year	$ 589,300	2.1%
10-Year	$ 1,836,000	**6.5%**

Table 4.9 - SW Classroom Utilization by Seats

Student Seats	942
WSCH Core	6,096
Weekly Core Capacity Factored	15,522
Weekly Core Capacity Utilization	39%
Condition Code	4
Renovation Cost Per SF	$472

Table 4.10 - SW Classroom Utilization by Floor

Floor Code	Weekly Core Capacity by Utilization Floor	
003	32%	
002	57%	
001	Null	

Est Reserve Cost - Often called "Replacement Reserves," these are recurring renewal and expense cost line items that are not classified as operation or maintenance expenses. These funds are set aside annually from the building's normal operating budget to pay for the eventual replacement of building components and systems that need repair or renewal.

Science Center (SC) (117,918 NASF / 201,493 GSF), is a large four-story structure completed in 2014 which includes an attached building, formerly known as Science East, that was renovated in 2014. The building houses the Biology, Chemistry, Physics, Engineering and Geosciences programs that were relocated from their homes in Science East and Science Center West Building. The Science Center also includes an Observatory that was relocated from the 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 the large central atrium that opens into an outdoor classroom adjacent to the stormwater pond. The building also includes a series of heavily used large group meeting rooms.

The building is in good condition, but will need considerable investment within the ten-year period.

The Science Center is one of the most utilized buildings on the Campus, with a 74% utilization rate according to Fall 2022 enrollment data.

Table 4.11 - SC Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,164,900	**2.7%**
3-Year	$ 4,288,900	5.3%
5-Year	$ 6,999,900	8.7%
10-Year	$ 13,748,100	**17.1%**

Table 4.12 - SC Classroom Utilization by Seats

Student Seats	1,678
WSCH Core	15,893
Weekly Core Capacity Factored	21,604
Weekly Core Capacity Utilization	74%
Condition Code	1
Renovation Cost Per SF	$410

Table 4.13 - SC Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
005	Null	502
004	70%	404 406 408 409 412 414 415 416 424 427 428 450 451 458 459 460 461 462 463
003	88%	301 302 303 305 306 309 313 314 318 321 323 324 350 351 358 359 360 361 362 363
002	82%	203 204 205 209 210 211 215 216 219 220 224 226 227 234 251 259 260
001	50%	105 106 107 108 109 112 113 114 124 125 126

Paul Peck Art Building (AR) (15,809 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 an open computer laboratory.

The building is in fair condition in terms of structural integrity, utilities and overall aesthetics. The roof will likely need replacement in the coming years, and the building as a whole will need moderate investment by the end of the ten-year period.

Insufficient space is available for ceramics, sculpture, jewelry, printmaking, locker rooms for students, and lobby and lounge space. In addition, there is a need for an Art student study area and additional faculty offices. The building is one of the most utilized buildings on the Campus, with a 91% utilization rate according to Fall 2022 enrollment data. A majority of the spaces in the building are classified as laboratories and often have utilization rates over 100%.

Table 4.14 - AR Facility Condition

	Est Reserve Cost	FCI
Current	$ 325,400	**3.2%**
3-Year	$ 933,900	9.1%
5-Year	$ 1,334,800	13.0%
10-Year	$ 1,985,300	**19.4%**

Table 4.15 - AR Classroom Utilization by Seats

Student Seats	246
WSCH Core	2,699
Weekly Core Capacity Factored	2,953
Weekly Core Capacity Utilization	91%
Condition Code	2
Renovation Cost Per SF	$435

Table 4.16 - AR Classroom Utilization by Floor

Floor Code	Weekly Core Capacity by Utilization Floor	
004	58%	401 403 405
003	150%	301 302 304
002	60%	201 206
001	100%	101 108

Music Building (MU) (10,526 NASF / 21,050 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 size and capacities of the teaching laboratories and in future flexibility to accommodate additional full-time staff and support.

This is an aging building that will need a substantial amount of investment over the next ten years. The major interventions needed will be a roof replacement as well as a replacement of the main electrical distribution panel.

The classrooms and labs in the building are varied in their utilization, with the building as a whole being 31% utilized. Many of the spaces in the building are very specialized within the Performing Arts Department.

Table 4.17 - MU Facility Condition

	Est Reserve Cost	FCI
Current	$ 371,200	**4.4%**
3-Year	$ 1,493,000	17.7%
5-Year	$ 1,569,700	18.6%
10-Year	$ 2,168,100	25.7%

Table 4.18 - MU Classroom Utilization by Seats

Student Seats	222
WSCH Core	1,085
Weekly Core Capacity Factored	3,517
Weekly Core Capacity Utilization	31%
Condition Code	2
Renovation Cost Per SF	$375

Table 4.19 - MU Classroom Utilization By Floor

Floor Code	Weekly Core Capacity by Utilization Floor	
002	21%	
001	33%	

Computer Science Building (CS) (14,583 NASF / 20,862 GSF) is a two-story building constructed in 1966 that 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 and open laboratories, and will continue to house the Campus's main administration computer center.

The building is deteriorating and in need of substantial investment over the next 10 years. Architecturally, the roof needs to be replaced in the near future, much of the tile in the building contains asbestos and is starting to crack, and many of the fixtures and finishes throughout the building are dated. There is also one elevator in the building that is not ADA compliant. Utilities-wise, there are frequent leaks throughout the building, the air-handler units are outdated and in need of replacement, and the main electrical switchboard and lighting are due for updates.

Due to the condition of the building, the spaces are scarcely utilized. The building is 15% utilized according to Fall 2022 enrollment data.

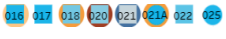
Table 4.20 - CS Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,379,300	**16.5%**
3-Year	$ 2,455,200	29.4%
5-Year	$ 2,843,600	34.1%
10-Year	$ 3,027,000	36.3%

Table 4.21 - CS Classroom Utilization by Seats

Student Seats	278
WSCH Core	684
Weekly Core Capacity Factored	4,638
Weekly Core Capacity Utilization	15%
Condition Code	4
Renovation Cost Per SF	$340

Table 4.22 - CS Classroom Utilization by Floor

Floor Code	Weekly Core Capacity by Utilization Floor	
001	Null	
00G	17%	

Theatre Arts Building (TA) (21,150 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.

The building is in fair to poor condition and has a substantial deferred maintenance backlog. Most of the architectural and superficial elements of the building are in good shape, though many of the utilities are in need of investment. In particular, most of the HVAC equipment will need replacement in the near future.

Functional issues for this building include insufficient public space for performances, lack of storage space, questionable accessibility at the first and second floor levels, undersized and inadequate numbers of offices and minimal back-of-house space (scene shop, costume construction, workspace and storage). The space utilization throughout the building is quite varied with the average utilization of the building at 30%.

Table 4.23 - TA Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,018,400	**14.4%**
3-Year	$ 2,275,800	16.2%
5-Year	$ 2,677,400	19.1%
10-Year	$ 4,388,100	31.3%

Table 4.24 - TA Classroom Utilization by Seats

Student Seats	294
WSCH Core	1,506
Weekly Core Capacity Factored	4,965
Weekly Core Capacity Utilization	30%
Condition Code	3
Renovation Cost Per SF	$615

Table 4.25 - TA Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	76%	
001	13%	

Gordon and Marilyn Macklin Tower (MT) (80,392 NASF / 117,282 GSF) is a four-story base plate and additional three-story office tower 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.

The building is in fair shape and will need moderate investment by the end of the next ten years. The immediate needs are renewal upgrades of the plumbing, HVAC and electrical systems throughout the building.

There is inadequate library study space including group study rooms and lounge space. Departmental collections, such as the Education Department collection, need to be centralized. There is insufficient space to consolidate departmental administrative and faculty offices, either in this building location or other campus locations, resulting in departmental location fragmentation. Furthermore, there is a need to add vertical ADA accessibility. The majority of assignable space within the building consists of laboratories which vary in utilization, with the building average utilization being at 32%.

Table 4.26 - MT Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,267,200	**2.7%**
3-Year	$ 1,457,200	3.1%
5-Year	$ 3,992,500	8.5%
10-Year	$ 5,718,400	**12.2%**

Table 4.27 - MT Classroom Utilization by Seats

Student Seats	163
WSCH Core	592
Weekly Core Capacity Factored	1,844
Weekly Core Capacity Utilization	32%
Condition Code	2
Renovation Cost Per SF	$315

Table 4.28 - MT Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
004	Null	
002	83%	
001	194%	
00G	Null	

Humanities Building (HU) (48,806 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's Central Plant, and central telecommunications and mail facility are located in this building.

The building is in fair condition. However, most of the mechanical, electrical and plumbing systems are reaching the end of their anticipated life cycles and will likely need replacement within the next ten years.

Although the Humanities Building was 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. The assignable spaces in the building are varied in their utilizations, however, the building is one of the more utilized on the Campus with a utilization of 73% based on Fall 2022 enrollment data.

Table 4.29 - HU Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,050,300	**3.6%**
3-Year	$ 1,113,100	3.8%
5-Year	$ 3,497,200	11.8%
10-Year	$ 6,981,700	**23.6%**

Table 4.30 - HU Classroom Utilization by Seats

Student Seats	1,246
WSCH Core	15,416
Weekly Core Capacity Factored	21,164
Weekly Core Capacity Utilization	73%
Condition Code	3
Renovation Cost Per SF	$315

Table 4.31 - HU Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
003	99%	
002	90%	
001	60%	
00G	37%	

Robert E. Parilla Performing Arts Center (PA) (16,492 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.

The building has significant deficiencies and is in need of investment in the coming years. Architecturally the building is anticipated to need a roof replacement, repairs to the exterior wall system, and exterior door and window replacements. It is recommended that the chiller be replaced in the next few years along with lighting upgrades throughout the building.

Classroom Utilization

Current needs include a campus meeting 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 Robert E. Parilla Performing Arts Center.

Table 4.32 - PA Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,695,300	**15.1%**
3-Year	$ 3,585,200	32.0%
5-Year	$ 3,672,100	32.8%
10-Year	$ 4,597,000	41.1%

South Campus Instruction Building (SB) (18,052 NASF / 29,900 GSF) is a two-story, plus ground floor building 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 deficiencies throughout the campus.

The building has a significant maintenance reserve backlog and will need considerable investment in the coming years. Mostly lifecycle replacements are anticipated which includes the roof and many of the utility systems. Additionally, it is recommended that the building receive lighting upgrades.

The building is predominantly made up of classrooms that serve the English and Reading, World Language and Philosophy departments. Overall, the building is underutilized, with a rate of 27% according to Fall 2022 enrollment data.

Table 4.33 - SB Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,269,700	**19.0%**
3-Year	$ 3,364,500	28.1%
5-Year	$ 4,099,700	34.3%
10-Year	$ 4,238,200	35.4%

Table 4.34 - SB Classroom Utilization by Seats

Student Seats	460
WSCH Core	2,136
Weekly Core Capacity Factored	8,047
Weekly Core Capacity Utilization	27%
Condition Code	2
Renovation Cost Per SF	$315

Table 4.35 - SB Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	33%	
001	19%	
0LL	5%	

Technical Center (TC) (39,012 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 offices under the Departments of Media Arts and 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 Media Arts and Technologies and the Department of Applied Technologies.

The building is currently in fair condition but is anticipated to need moderate investment within the next ten years. The roof, major mechanical systems and sprinkler system are expected to require lifecycle replacements in the near term. Additionally, the grade around the north side of the building has resulted in frequent ponding and is recommended to be evaluated.

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. The assignable spaces in the building vary in utilization. As a whole, the building has a utilization rate of 39%.

Table 4.36 - TC Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,067,700	**4.8%**
3-Year	$ 4,878,100	21.8%
5-Year	$ 4,893,100	21.9%
10-Year	$ 6,708,000	30.0%

Table 4.37 - TC Classroom Utilization by Seats

Student Seats	633
WSCH Core	3,694
Weekly Core Capacity Factored	9,443
Weekly Core Capacity Utilization	39%
Condition Code	4
Renovation Cost Per SF	$315

Table 4.38 - TC Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	42%	
001	35%	

Homer S. Gudelsky Institute for Technical Education (GU) (41,629 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, the Central Services Response Center and Workforce Development and Continuing Education occupy space in this building.

The building is in fair condition, however, various elements are nearing the end of their anticipated lifecycles. Interior finishes throughout the building, and the roof and interior lighting have all been identified as needing replacement in the short-term.

In addition to the need to relocate the Central Services 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. The building consists of a mix of laboratories and classrooms and has an overall utilization rate of 7% according to Fall 2022 enrollment data.

Table 4.39 - GU Facility Condition

	Est Reserve Cost	FCI
Current	$ 1,219,600	**4.8%**
3-Year	$ 3,323,700	13.0%
5-Year	$ 4,676,900	18.3%
10-Year	$ 6,800,600	26.6%

Table 4.40 - GU Classroom Utilization by Seats

Student Seats	724
WSCH Core	722
Weekly Core Capacity Factored	10,634
Weekly Core Capacity Utilization	7%
Condition Code	3
Renovation Cost Per SF	$300

Table 4.41 - GU Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	3%	222 224 226 227 228 229 233 234 235 236 238 239 240 244
001	10%	107 120 121 122 124 125 126 127 141 145 152 153 154 165

Interim Technical Training Center (TT) (7,871 NASF / 9,360 GSF) was constructed in 1988 and houses two corporate classrooms, Building Trades, Sheet Metal and Plumbing Laboratories, four vehicle storage bays, a corporate laboratory, storage, a machine shop and staff/corporate offices.

The building is in fair to poor shape and has a significant maintenance reserve backlog. The roof has experienced several leaks and repairs, and the roof finishes are anticipated to need replacement. Many of the exterior door and windows are nearing the need for lifecycle replacements. The mechanical system is out-of-date and is recommended to be upgraded to a more energy-efficient system. Lastly, some areas of the facility were identified as having accessibility issues.

This pre-engineered, one-story structure does not fulfill the space needs and functions of the Homer S. Gudelsky Institute for Technical Education. The building is underutilized with a rate of 17%.

Table 4.42 - TT Facility Condition

	Est Reserve Cost	FCI
Current	$ 196,200	**5.2%**
3-Year	$ 294,600	7.9%
5-Year	$ 703,300	18.8%
10-Year	$ 1,148,500	30.7%

Table 4.43 - TT Classroom Utilization by Seats

Student Seats	156
WSCH Core	368
Weekly Core Capacity Factored	2,148
Weekly Core Capacity Utilization	17%
Condition Code	3
Renovation Cost Per SF	$315

Table 4.44 - TT Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
001	17%	

Campus Center (CC) (50,619 NASF / 74,302 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 & 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, and Central Administration's Auxiliary staff offices.

Table 4.45 - CC Facility Condition

	Est Reserve Cost	FCI
Current	$ 3,014,200	**10.1%**
3-Year	$ 3,357,800	11.3%
5-Year	$ 4,034,900	13.6%
10-Year	$ 8,673,000	**29.2%**

Table 4.46 - CC Classroom Utilization by Seats

Student Seats	346
WSCH Core	278
Weekly Core Capacity Factored	5,967
Weekly Core Capacity Utilization	5%
Condition Code	3
Renovation Cost Per SF	$395

Table 4.47 - CC Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	4%	201 202 203 205 206 207 208 209 210 211 212 213 214 215 216
001	15%	170

Campus Center severely lacks adequate lobby and lounge space. There is a need to substantially enhance the quality of life on campus for commuting students with recreation activities and 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 42% of the available NASF.

The building has significant need of investment within the next 10 years. In the near term, the roof, plumbing, HVAC and electrical systems, and food service equipment are anticipated to need replacement. Additionally, there is a need for ADA upgrades throughout the building, including many of the restrooms.

The classrooms in the building are heavily underutilized and on average have a utilization rate of 5%.

Academic Annex (CB) (9,890 NASF / 17,696 GSF) is a two-story structure, originally called the Counseling and Advising Building, built in 1969 that housed Disability Support Services including the Learning Center, Counseling, Student Employment Services, Career/Transfer Center, and Dean of Student Development. Currently, this is a swing space building for campus construction projects.

The building is in fair to poor condition and has a significant maintenance reserve backlog. Architecturally, the stairwells, exterior walls and roof are all in need of replacement, repair or upgrades. Utilities-wise, the HVAC system and electrical system, including the distribution panel, are in need of replacement.

Table 4.48 - CB Facility Condition

	Est Reserve Cost	FCI
Current	$ 558,600	**7.9%**
3-Year	$ 1,609,300	22.7%
5-Year	$ 1,732,200	24.5%
10-Year	$ 2,224,700	31.4%

Long Nguyen and Kimmy Duong Student Services Center (SV) (82,127 NASF / 127,275 GSF) is a four-story structure which was completed in 2020 that consists of classrooms, administrative and registrar offices, conference rooms, support services, and common area waiting rooms and lounges. The building is located at the northern edge of campus, terminating at the pedestrian mall. The building houses 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 also houses academic and support functions including classrooms and offices for the department of Education, Assessment, ACES and TRIO, Student Service, and the Multicultural Student Center. Other functions and support spaces in the building include a Café, Operations and Maintenance space, and the Safety and Security Office.

The building is in good condition and has few anticipated upgrades in the 10-year period.

The building is highly utilized, with most of the assignable space categorized as laboratories. These spaces arepredominantly used by the Education and Psychology, the ALEP, Linguistics and Communications, and the English and Reading departments. The building as a whole has a utilization rate of 127% according to Fall 2022 enrollment data.

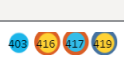
Table 4.49 - SV Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,236,500	**4.8%**
3-Year	$ 2,469,800	5.3%
5-Year	$ 3,796,500	8.1%
10-Year	$ 5,522,500	**11.8%**

Table 4.50 - SV Classroom Utilization by Seats

Student Seats	163
WSCH Core	2,222
Weekly Core Capacity Factored	1,751
Weekly Core Capacity Utilization	127%
Condition Code	1
Renovation Cost Per SF	$395

Table 4.51 - SV Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
004	83%	
003	161%	
002	198%	

Child Care Center (CH) (2,350 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 building has been closed for use since 2016. This building will be razed as the area of land that it occupies will be incorporated into the forest conservation easement when a campus-wide forest conservation easement is created.

Table 4.52 - CH Facility Condition

	Est Reserve Cost	FCI
Current	$ 243,800	**24.4%**
3-Year	$ 383,100	38.3%
5-Year	$ 383,100	38.3%
10-Year	$ 383,100	38.3%

Physical Education Center (PE) (62,408 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.

The building is in fair shape and is anticipated to need minimal investment up until the end of the ten-year period. A majority of the utility systems are in working condition but are reaching the end of their lifecycles. Some areas of the building were identified as having major to moderate accessibility issues.

Current deficiencies identified in support of the Health Enhancement, Exercise Science and Physical Education Department include the need for Health Assessment, Health Education and Movement assessment laboratories, an 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. The building is heavily underutilized with a utilization rate of 3% according to Fall 2022 enrollment data.

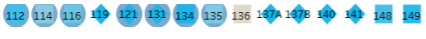
Table 4.53 - PE Facility Condition

	Est Reserve Cost	FCI
Current	$ 2,164,900	**3.5%**
3-Year	$ 4,288,900	4.9%
5-Year	$ 6,999,900	5.6%
10-Year	$ 13,748,100	**19.3%**

Table 4.54 - PE Classroom Utilization by Seats

Student Seats	670
WSCH Core	1,305
Weekly Core Capacity Factored	38,537
Weekly Core Capacity Utilization	3%
Condition Code	4
Renovation Cost Per SF	$450

Table 4.55 - PE Classroom Utilization by Floor

Floor Code	Weekly Core Capacity Utilization by Floor	
002	9%	
001	%	

Maintenance Shop (MS) (4,220 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 other 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 4.56 - Maintenance Shop Facility Condition

	Est Reserve Cost	FCI
Current	$ 94,600	**5.0%**
3-Year	$ 318,600	16.8%
5-Year	$ 517,700	27.4%
10-Year	$ 574,400	30.4%

Table 4.57 - NG Facility Condition

	Est Reserve Cost	FCI
Current	$ 271,200	**0.2%**
3-Year	$ 271,200	0.2%
5-Year	$ 543,000	0.4%
10-Year	$ 2,621,300	2.1%

< 50% Occupancy

North Garage (NG) (829 NASF / 308,400 GSF) is a seven-level parking structure located on the north side of the Campus, completed in 2017. The structure can accommodate 918 parking spaces. The structure is in good condition and there are no anticipated major investments needed in the 10-year period.

SECTION 4.4

2033 Facilities Master Plan

2033 Facilities Master Plan

4.4.1 CAMPUS FACILITIES MASTER PLAN GUIDING PRINCIPLES

The overall Facilities Master Plan leveraged a series of guiding principles to shape the decision-making process. These planning principles were established in connection with the Mission and Vision of the College, focusing on the success of students and the impact of their success on Montgomery County. The principles also take into account both long- and short-term goals with the lens of maintaining the effectiveness of capital investments. These principles include:

Prioritize Student Success — through expanded spaces that support student wellness, informal learning and study, dining and amenities, branding and intuitive wayfinding.

Reinvent Existing Facilities — through renovation and strategic interventions, right sizing classroom and lab spaces, creating faculty hubs, and repurposing underutilized square footage.

Expand Access — Provide a touch down for county services, non-profits and businesses, enhance childcare options and consider both physical and virtual environments.

Plan Prudently — Each campus has land use constraints that limit future development. Project development should consider maximizing future development potential while continuing to create activated, green campuses.

Additional principles were established for the Rockville Campus, including:

Enhance the Pedestrian Core — Create a cohesive, easily navigable and logical campus that enhances outdoor activities and makes the Campus accessible to students, staff and community.

Enhance Arrival and Frontage — Provide a stronger presence for the College on Hungerford Drive while enhancing the sequence of arrival to the Campus in the transition from vehicular to pedestrian modes.

Expand Development Potential — Provide opportunity for the Campus to grow efficiently within its constraints.

4.4.2 RESPONSE TO EXTERNAL PLANNING FACTORS

The College has undertaken a forest conservation planning effort intended to realign natural forested areas with the requirements established by the City of Rockville. The plan includes declassifying trees in the core of campus as part of the forest plan and expanding areas of the wooded campus edge, including the demolition of the Child Care Center, which is currently not occupied, and the removal of surface parking that is currently separate from the core of campus. This plan will also include the rezoning of the Campus.

4.4.3 PROPOSED CAMPUS STRUCTURE AND CHARACTER

The Campus has been significantly transformed in the past decade through the construction of the new Student Services Center and the demolition of the former Student Services Building, opening up the center of the Campus and creating a clear north-south pedestrian path. This pedestrian mall is actively used by students for social and recreational purposes. Many of the older buildings along this space have modest amounts of glazing and do not activate the space.

Generally, the Campus is surrounded by a forest buffer to the adjoining neighborhoods, with a ring of surface parking between the wooded edge and the campus circulation roadways. Inside the roadways is the campus core. Within the campus core most of the buildings on campus are two to four stories in tall, except for the Macklin Tower and the Science Center. The footprint size of buildings varies from approximately 6,000 square feet to over 40,000 square feet. Outside of the main open space, much of the Campus is defined by a grid of pedestrian passageways with a limited hierarchy.

The next phases of development will consolidate or demolish some of the buildings with smaller footprints and create a network of open spaces to help orient and clarify circulation on the Campus. Two new quads will be formed by a series of projects that include new buildings, building additions and demolition of smaller buildings. The first quad is focused on projects associated with the arts: the Theater Arts Renovation

and Addition, Media and Visual Arts Building and Performing Arts Renovation and Expansion. This open space will connect to the main north-south campus mall and will facilitate campus movement to the east. The second quad, located between the Campus Center, the North Garage and the Physical Education Building, will be facilitated by the renovation and addition of the Physical Education Building. This space will create a student-focused outdoor space activated by the dining facilities in the Campus Center and the programs in the Physical Education Building.

Overall Observations:

1. All three campuses seem to need a signature space that symbolizes the school. Spaces should have similar icons like school colors, emblems and/or the mascot prominently displayed. This will make the spaces become emotional touchpoints connecting students to the school, the campuses and to each other.

2. Some unity is beginning to be established in site furnishings with standardized exterior seating, trash receptacles and bike racks. This is most evident at the Rockville and Germantown Campuses. This effort needs to be continued so that non-standard fixtures are replaced with standard fixtures so that the Campus "look and feel" is carried forward into the future.

3. As the largest and densest of the three campuses, better wayfinding signage seems to be needed at the Rockville Campus. While there generally does seem to be a common look to existing signage across Campuses, it could be greatly improved and used to reinforce the College identity and unity by adopting signage design that uses school colors and emblems.

Rockville Campus Landscape Recommendations:

1. With the removal of the old Student sServices Building and the construction of the Long Nguyen and Kimmy Duong Student Services Building (SV) at the north end, a corridor has emerged that has the potential to be a defining and iconic open spaces on the Campus. This north-south corridor extends from South Campus Drive north through the very core of campus and ends at the plaza adjacent to the south side of SV. This corridor also links to nearly all the main pedestrian paths crossing the Campus in the east-west direction which cross the space and flow outward from it. However, in its current condition, the corridor is very much an assembly of individual sub-spaces conceived and developed on a project-by-project basis that are merely adjacent to one another. It lacks the unity that could transform it into the "grand mall" that it could be. Many of the walkways are disjointed both in materials and alignments with minor offsets that reinforce the "assembly of individual spaces" pathos. Furthermore, significant topographic change from north to south coupled with the large, depressed amphitheater area east of the Humanities Building (HU), serve to challenge any unification efforts.

Nevertheless, steps can be taken in the short-term that can lay the foundation for a long-term plan to transform the space into the grand landscape gesture that unifies and defines the campus core. Immediate efforts should be made wherever possible to choose a pavement material palette that will be used through the space. Walkways that are largely in their final positions should be rebuilt as necessary so that widths and edges align from end to end. Where possible, regrading should be undertaken so that the space is more of a uniform plane. As an example, the broad shallow hump in the Arthur and Miriam Becker Family Quad should be eliminated so that the space feels more connected to the adjacent spaces around it. Landscape planting, and in particular tree planting, should be consistent with the plantings in adjacent spaces — most importantly in the north-south direction. Plantings that interrupt the long view from north to south should be avoided to maintain the long views. All future buildings should be used to reinforce the sides of the space.

The sundial outside the northwest corner of the Theatre Arts Building (TA) is both beautiful and steeped with meaning. However, it is suffering from deferred maintenance and needs a bit of tender loving care to bring it back to its original beauty. The Master Plan contemplates an addition to the west side of TA that will reinforce the east side of the grand mall but will require the removal of the sundial. It is suggested that the components of the space be carefully removed, salvaged and restored so that the hardscape components of the sundial area can be reconstructed in a location where the sundial may resume its iconic status with honor.

2. Several areas of Campus could be significantly improved with sensitive screening. The large chiller farm south of the Technology Center (TC) is immediately adjacent to a heavily traveled pedestrian corridor that connects the west entrance of the Humanities Building (HU) to Parking Lots 8 and 9. Given space limitations, this would most likely take the form of structural walls of brick or other material similar to the nearby buildings. The walls could be faced with trellising to support a live plant covering.

   Another screening opportunity exists between the service court on the west side of Macklin Tower (MT) and West Campus Drive.

3. Creation of islands and tree planting in Parking Lots 5, 6, 7, 8, 9 and 10 is recommended. The islands, if properly configured and depressed, could capture and treat stormwater runoff from the pavement. The trees will provide important shading to what otherwise can be a significant heat island.

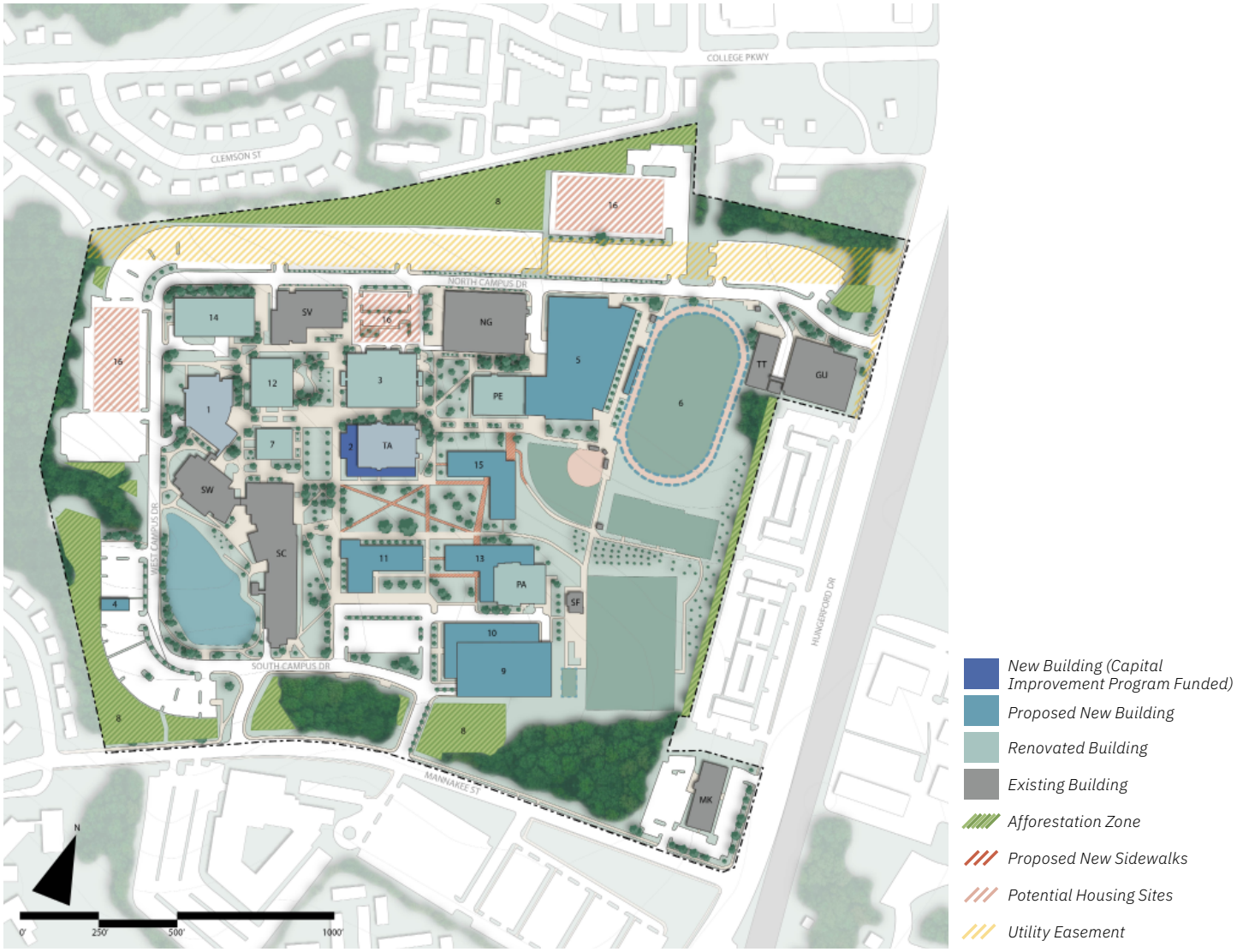
4. Several well-traveled pedestrian paths at the north end of campus should be enhanced to provide clear paths across North Campus Drive and into the parking lots on the other side. In particular, the path on the east side of the Student Services Building (SV) and the west side of the North Garage (NG) lacks crosswalks and/or ADA-accessible paths from the campus core to the north parking areas.

5. There are four separate bus shelters with three different designs on the south side of South Camus Drive in close proximity to one another. Consideration should be given to create a single large transit stop area that picks up on and continues the design refinements suggested for the grand mall discussed above. The shelters should all be of a single design that is compatible with other campus-standard site furnishings.

6. The College is in the process of working out a long-term plan with the City of Rockville to satisfy Maryland Forest Conservation Act regulations. There are several options developed by A. Morton Thomas and Associates, Inc. providing varying amounts of existing forest preservation and proposed afforestation with the overall quantities responding to different zoning designations being considered for the Campus by the City of Rockville. In general, it is suggested that afforestation be undertaken on the Campus perimeter, and in particular, where new plantings will be in high priority areas adjacent to watercourses and/or existing forest areas. Wherever possible, this strategy should be favored over seeking credit for preserving specimen trees within the campus core as that may unnecessarily restrict future development.

4.4.4 PROPOSED BUILDING PROJECTS

Figure 4.23 - Rockville Campus, Phase 3 2023-33 Facilities Master Plan



BUILDING KEY

SW Science West Building
SC Science Center
AR Paul Peck Art Building
MU Music Building
CS Computer Science Building
TA Theatre Arts Building
MT Gordon and Marilyn Macklin Tower
HU Humanities Building
PA Robert E. Parilla Performing Arts Center
SB South Campus Instruction Building
TC Technical Center

GU Homer S. Gudelsky Institute for Technical Education
TT Interim Technical Training Center
CC Campus Center
CB Academic Annex
SV Long Nguyen and Kimmy Duong Student Services Center
CH Child Care Center
PE Physical Education Center
NG North Garage
MK Center for Training Excellence and ignITe Hub
MS Maintenance Shop
SF Soccer Field Concession Building

Phase 1 – Major Projects

1. Macklin Tower Library Renovation

The renovation of the library is slated to begin construction in Fiscal Year 2025 and be completed by the 2026 Fall term. This renovation will modernize the library to align with the goal of providing spaces focused on student study needs in an environment with more virtual demands.

During this renovation, the library functions will be relocated to underutilized space made available by the construction of the Student Services building. Three potential locations are the lower level of the Campus Center or the Academic Annex.

2. Theatre Arts Renovation and Addition (30,149 NASF / 51,406 GSF)

The proposed project is for the renovation and expansion of the TA Building to address facility problems and the programmatic needs of the building. The project will result in an expanded building of 30,149 NASF/51,406 GSF, which equates to a 58% efficiency factor. The building addition is estimated to add approximately 8,182 NASF to the existing building area of 21,967 NASF.

This project is intended to address the specific facilities, cirriculum, program, and performance needs of the Theatre Arts Department by resolving space insufficiencies. The project will also address the deferred maintenance backlog of the Theatre Arts Building.

5. Physical Education Center Renovation and Expansion (Renovation: 13,650 / 18,200 GSF; New Construction: 141,000 NASF / 188,600 GSF)

The current Physical Education Center natatorium will be renovated and the remainder of the building will be replaced provide modern academic, athletic and wellness space in support of student success. The building will enhance the entry sequence to campus along North Campus Drive and replace the existing service lot. Removal of portions of the existing building will create the opportunity to develop an open space between Physical Education and the Campus Center. This space is envisioned as an outdoor space focused on wellness programming.

6. Track and Field Renovation

The existing track and field complex is in poor condition and its uses are limited due to the of injury. Improvements to the complex will serve athletic, recreational, community uses, and a portion of the College's event needs. The track is the current location for commencement ceremonies.

7. Computer Science Renovations (14,583 NASF / 20,862 GSF)

The Computer Science building is currently underutilized following the development of the Student Services Center. The building is suitable to host additional classroom space for the adjacent Humanities Building, where computer classrooms are overutilized. Additionally, the upper floor should be renovated to accommodate additional drawing and painting studios to alleviate overutilized spaces in the Paul Peck Art Building. A portion of this space will create a student study hub, providing a long-term use for student study, distance learning and socialization. This space is intended to be placed facing the main campus mall and include new windows allowing for daylight into the building. This renovation includes the abatement of hazardous materials, replacement of the HVAC system and elevator, and additional deferred maintenance within the building.

Phase 1 – Small-Scale Interventions

3. Campus Center Renovation

The Campus Center renovation is intended to repurpose spaces in the lower level of the building which have been made available through the completion of the Student Services Center. The second floor of the building will also be renovated to address significant mechanical issues, including vibration and noise, that are forcing the relocation of classes. The equipment serving this space is original to the building and in need of replacement. The systemic renovation will also allow the upper level to be reconfigured to realign the space with a revised classroom program. A serenity space will also be included in renovations on the first floor. Additional investments include improvements to the façade for energy performance, increase sunlight into the bookstore and student dining, and waterproofing with associated landscape improvements.

5. Physical Education Building

With the anticipated renovation and expansion of the Physical Education Building likely scheduled for the last part of the planning window, there is a need for short-term investments to improve the utilization and performance of the building. Improvements include an interim air conditioning solution for the gymnasium and locker rooms. Lack of ventilation and cooling in these spaces has curtailed their use in warm weather and causes additional maintenance costs. A ductless system for the gymnasium and potentially a VRF system for the locker rooms may be appropriate. There is also a need for study space in the building, which could be used by athletics for a study hall for their student athletes in addition to students engaged in academics in the building. Lastly, the athletic training spaces are four decades old and do not efficiently meet the needs of the students. Re-organizing the space and consolidating storage would make the programs function appropriately.

Phase 2

9. South Parking Garage (158,000 GSF)

In order to develop existing parking lot areas on Campus, a new parking garage will be built at the current site of the South Campus Instructional Building. The goal of the garage is to maintain parking at the periphery of campus, extend the pedestrian Campus core and consolidate vehicular traffic on the south side of Campus. The garage is sized for approximately 450 cars, however a demand analysis should be completed at the beginning of the project. The garage is planned to incorporate an occupied wrapper building on the west and north sides. The two projects may be completed independently, with the garage likely required prior to the wrapper.

10. Garage Wrapper (37,000 NASF / 67,000 GSF)

As noted above, the garage and wrapper can be completed independently, but the garage is most likely required first. The program of the wrapper may be needed for administrative space or additional classroom capacity.

11. Media and Visual Arts (45,000 NASF / 81,000 GSF)

The Media and Visual Arts building is intended to consolidate the Fine Arts and Communication Arts programs anchoring the proposed Arts Quad and the campus mall. The building will include space for Communication Arts vacated from the Technical Center, which addressed high utilization of art studio spaces. Construction of this building will remove surface parking and will allow for the demolition of the Academic Annex and the Paul Peck Art Building, both of which are small, inefficient footprints and have a backlog of deferred maintenance. The building is proposed as a new gateway building to the Campus and will include spaces for graphic design, music and art class labs, a dance studio and offices.

12. Humanities Building (48,806 NASF / 73,912 GSF)

The Humanities Building houses a number of highly utilized classrooms, which will be supported by classroom space in the renovated CS building. This project will renovate the full building, including building systems projected to be in need of replacement, and will reorganize the space to consolidate departments and provide adequate classroom space.

Phase 3

13. Robert E. Parilla Performing Arts Center Renovation and Expansion (47,200 NASF / 72,600 GSF)

This building has a strong presence in the Montgomery County community and is projected to undergo a renovation to maximize and improve its appeal to that constituency. The renovation will also bring the music programs together in one building. The renovation consists of an expansion of the auditorium and back-of-house spaces, life safety and accessibility improvements, and the addition to accommodate needed program space relocated from the Music Building. 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 also be renovated. The addition will be built on the north side aligned with the Media Arts building and extending the Arts Quad. It will house rehearsal, practice, classroom and office space for the music programs.

14. Technical Center Renovation

The Technical Center will be in need of renovations to address a backlog of maintenance repairs and to align the space with evolving pedagogy of the College.

15. Future Academic Building (45,000 NASF / 81,300 GSF)

The expansion of the Performing Arts Center will allow the demolition of the Music Building, which is an undersized, inefficient footprint and will be in need of significant investment in order to be maintained. Once demolished, a site will be available for an academic facility to complete the Arts Quad and frame a pedestrian gateway to the athletics complex.

4.4.5 MAJOR UTILITY RECOMMENDATIONS

1. The June 2022, Burdette Kohler Murphy and Associates (BKM) Utility Master Plan included a lengthy list of proposed projects on the Rockville Campus, but the framework which was the basis for that plan, predates that 2013-2023 Facilities Master Plan (FMP). That FMP outlines a far more aggressive development program than this plan proposes. Thus, the recommended actions in the BKM plan may likely be deferred. Several issues were identified in the BKM Utilities Master Plan that should be addressed over the next ten years. These include investigation and repair of leaking water line segments and periodic flushing to help overcome a significant pressure differential between the water connections in the southwest corner of campus (from Mannakee Street) compared to the connection from Hungerford Drive. The BKM plan also recommends initiating discussions with the City of Rockville regarding capacity issues in the receiving sanitary sewer system and installation of outfall metering to quantify current and anticipate future needs. These and several other projects are discussed in more detail in the BKM plan.

2. Utility capacities and needs ordinarily addressed as part of any new building or major renovation project will need to be undertaken for projects proposed in this FMP. These include things as evaluating electrical loads and providing them to PEPCO to ensure adequate service capacities can be provided, analysis of domestic and fire water demands to determine the need for booster pumps.

3. Maryland stormwater management regulations require “environmental site design to maximum extent practicable.” In short, this demands that a large portion of stormwater runoff from new projects be infiltrated or reused on-site by green roofs, irrigation, chiller water makeup, gray water recycling or other means. The net effect of this is that while adding costs to future projects for stormwater management facilities and devices, the impact on receiving storm drain systems is generally not significant enough to require downstream capacity upgrades.

4.4.6 NATURAL SYSTEMS AND SUSTAINABILITY RECOMMENDATIONS

As an institution of higher education, Montgomery College embraces its responsibility to adhere to the state’s climate policy and proactively integrate sustainable practices into the FMP. Montgomery College is fully dedicated to the objective of reducing statewide greenhouse gas emissions, as mandated by the comprehensive climate policy outlined in the Climate Solutions Now Act 2022. This commitment aligns with the direction of the Facilities Master Plan, which outlines the College’s long-term goals for sustainable infrastructure and operations.

Recognizing the urgency and significance of reducing greenhous gas emissions, the College is committed to implementing energy efficiency and electrification requirements for specific buildings within the institution. The Facilities Master Plan includes strategies to improve the energy efficiency of existing buildings and prioritize the use of renewable energy sources. The College will work closely with electric companies to enhance annual incremental gross energy savings through targeted programs and services, ensuring that the Campuses remain at the forefront of sustainable practices.

In line with the College’s commitment to sustainability, the College wholeheartedly endorses zero-emission vehicle mandates for both the State vehicle fleet and local school buses. This commitment is in line with the Facilities Master Plan’s focus on promoting alternative transportation options, including electric vehicle charging stations and bike-sharing programs. By embracing these initiatives, the College aims to reduce emissions from transportation and create a more sustainable campus environment.

The College also supports the establishment of the Climate Catalytic Capital Fund and by actively participating in this fund, the College aims to leverage available resources to support innovative climate solutions and advance sustainable practices within the institution. The initiatives and projects supported by this fund align with the FMP’s vision for sustainable infrastructure and operations.

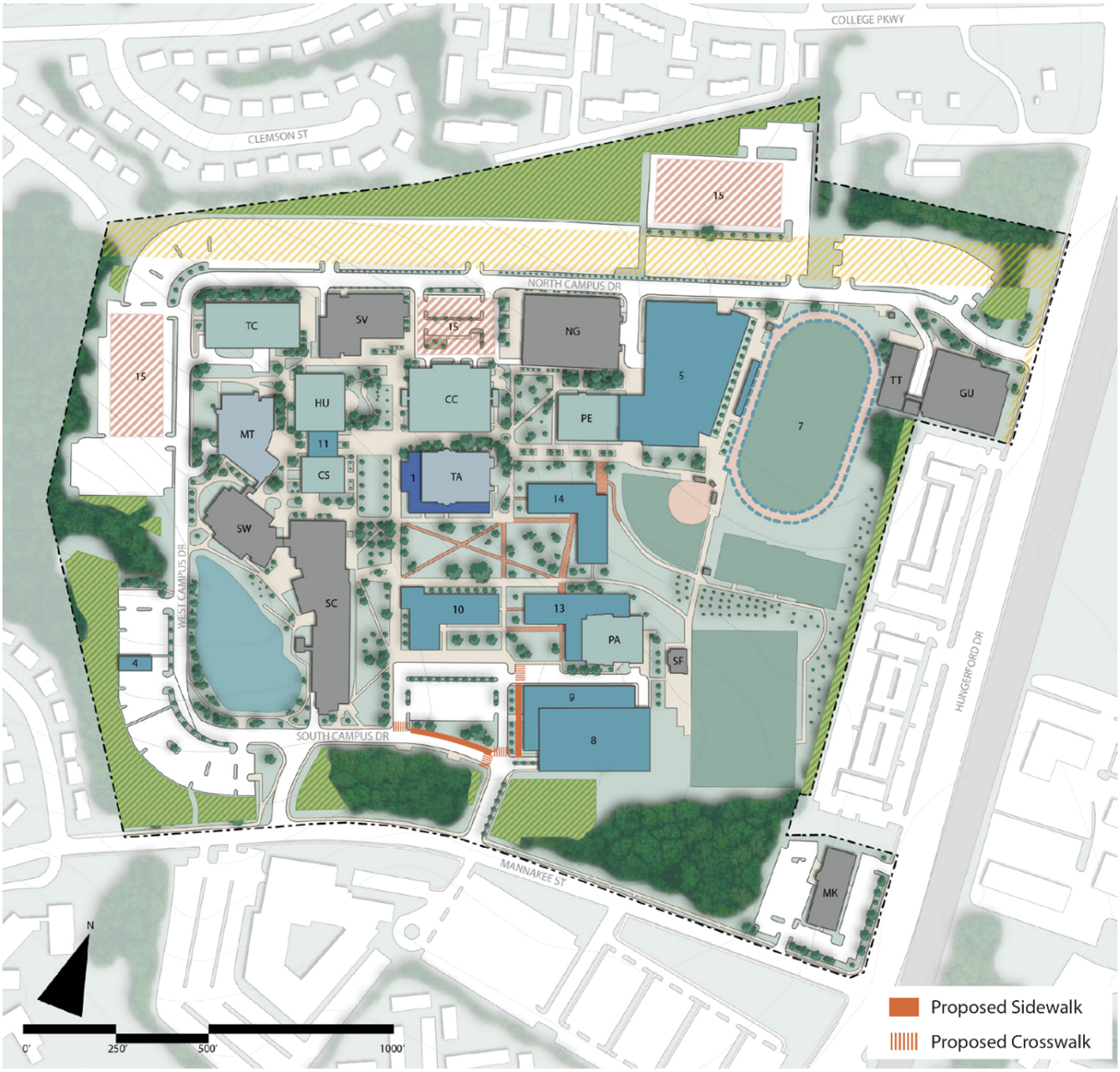
Montgomery College aims to make significant contributions to the collective effort of reducing greenhouse gas emissions, fostering sustainability, and creating a more resilient and prosperous future for the College, the community and the broader environment.

4.4.7 PROPOSED PEDESTRIAN AND BICYCLE CIRCULATION

Proposed Pedestrian Circulation

After reviewing the 2033 campus layout, sidewalks and crosswalks are proposed at several locations to complete pedestrian circulation around campus. These locations are detailed in Figure 4.24. The pedestrian crossing distance is wide across South Campus Drive and is considered uncomfortable. Low-cost interventions, such as flexible bollards and signage, could be considered as a short-term improvement to reduce the crossing distance. Bulb-outs and pedestrian safety islands could be considered as longer-term measures.

Figure 4.24 - Proposed Pedestrian Elements



Proposed Bicycle Circulation

The City of Rockville Bicycle Master Plan proposes a bicycle path that connects the closed gate at Princeton Place and Mannakee Street via West Campus Drive as part of the King Farm to Tower Oaks Crosstown Route. Further study is needed to determine the specific type of bicycle path. Regarding bicycle access to local streets, it is important that the College be responsive to the legitimate concerns of neighbors that have resulted in a closed perimeter fence at Princeton Place. At the same time, closed access points should be kept on campus planning maps and recognized as a possible future opportunity for pedestrian and bicycle access.

Montgomery College should continue to support the City of Rockville's efforts to implement its Bicycle Master Plan.

4.4.8 TRANSIT RECOMMENDATIONS

The Rockville Campus is serviced by five local bus routes, four of which have bus stops on Campus. An overall transit mode share of 21% 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.

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. Veirs Mill Road BRT will terminate at Montgomery College in Rockville. The project is currently in final design, with construction beginning in roughly a year. This project will be open for service in 2028. The stop at the current bus stop on the Rockville Campus is envisioned to be interim as Montgomery College works with Montgomery County Department of Transportation (MCDOT) to relocate the transit center to Lot 13. MD-355 BRT will also serve this Campus. The project is moving from Preliminary Engineering to Final Design and is anticipated to open a year after Veirs Mill Road (2029). The new transit center is anticipated to be open by this time.

Specific recommendations applicable to the Rockville Campus are:

1. Continue to coordinate with MCDOT regarding the BRT routes and stops for impact to and benefit of the Campus.
2. Conduct annual staff Commuter Surveys through the Montgomery County Commuter Services program.
3. Participate in Metro's SmartBenefits Transit Benefits Program.
4. Promote transit and ridesharing options for students during Fall and Spring Semester registration.
5. Work with the MCDOT Bus Stop Improvement Program to enhance passenger shelters and amenities, as needed, at Ride On and Metro Bus stops serving the Germantown Campus; students commented the bus shelters were old and had poor lighting.
6. 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.
7. 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.

See Section 4.2.8 Transit for student and staff survey responses to using public transportation as an alternative transportation method. Survey results suggest there is potential to increase public transit utilization as auto utilization is relatively high and students' trip origins are quite concentrated.

4.4.9 PROPOSED VEHICULAR CIRCULATION

There are no approved background development projects within one mile of the Rockville Campus. Future Conditions analysis only includes regional traffic growth and school population growth. The regional growth rates were derived using Maryland Department of Transportation (MDOT) historical Annual Average Daily Traffic (AADT) data from 2013-2022, shown in Table 4.58. Zero percent (versus a negative rate) was used as the annual growth rate in years when traffic declined from the previous year. For campus-related traffic, a 41% growth was used based on the College's planned enrollment growth during the 2023-2033 period.

The level of service threshold for Rockville City is 63 seconds per vehicle. Future traffic analysis at the three intersections of campus access drives and public streets showed acceptable operations, shown in Table 4.59. It should be noted that the delay at South Campus Drive (east)/Mannakee Street increases from 16.2 secondsper vehicle to 41.5 seconds per vehicle. No mitigations are required.

A convenient pick-up and drop-off location is needed to serve the 16% of students that are dropped off. Two locations are proposed due to the size of the Campus, one in Lot 4 and one in Lot 11. Details can be found in Figure 4.25.

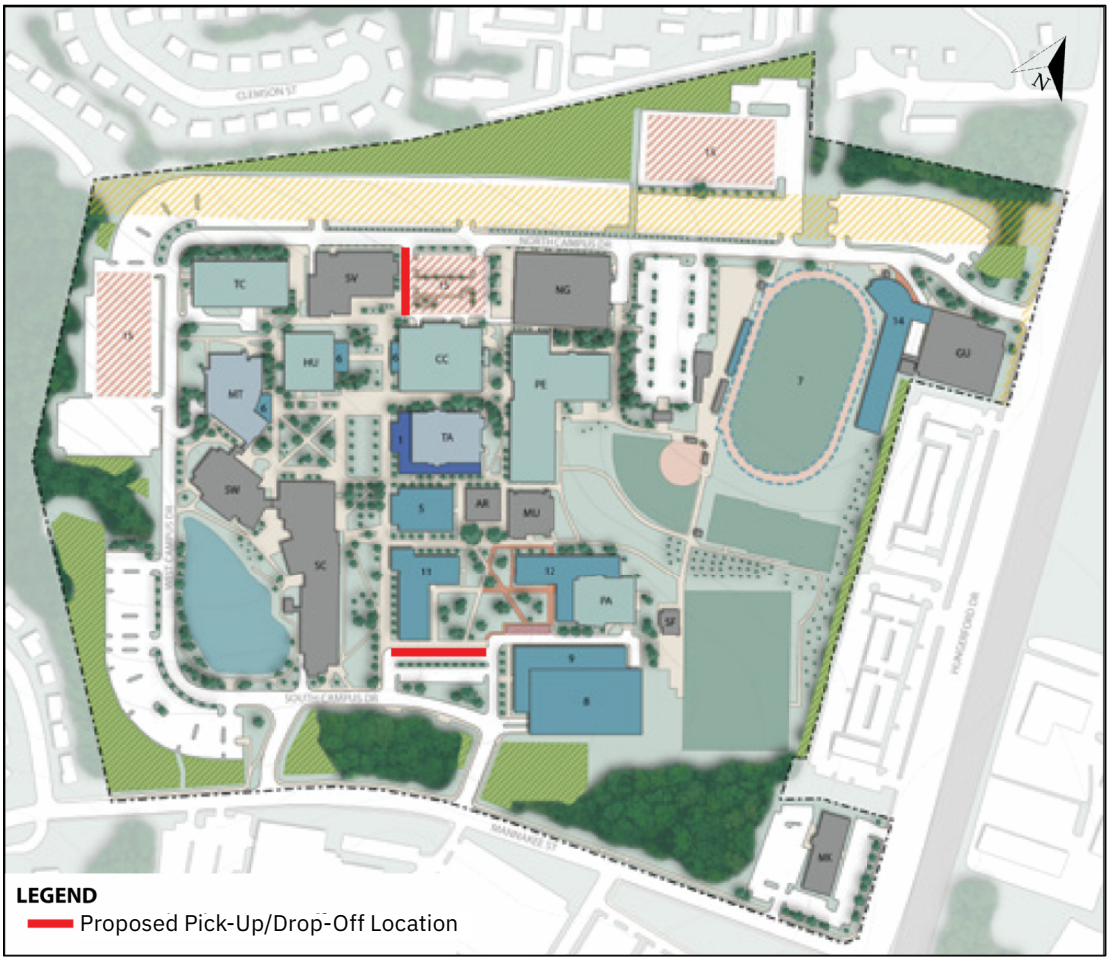
Table 4.58 - MDOT Historical AADT Data

Year		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg. Growth
MD 355	AADT	47,841	42,090	43,181	44,002	46,710	46,291	26,292	38,653	44,424	44,495	
	% Growth		0.0%	2.6%	1.9%	6.2%	0.0%	0.0%	0.0%	14.9%	0.2%	**2.9%**
	AADT	9,011	8,982	9,223	9,404	9,635	9,330	9,331	7,792	8,913	8,974	
	% Growth		0.0%	2.7%	2.0%	2.5%	0.0%	0.0%	0.0%	14.4%	0.7%	**2.5%**

Table 4.59 - Future Conditions Traffic Analysis

Intersection		Existing Conditions				Future Conditions			
		A.M. Peak		P.M. Peak		A.M. Peak		P.M. Peak	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	MD 335 at North Campus Drive	C	22.3	C	29.9	C	28.6	C	30.9
2	South Campus Drive East at Mannakee Street	C	16.2	A	9.3	E	41.5	B	10.2
3	South Campus Drive West at Mannakee Street	A	5.8	A	4.4	A	8.8	A	5.1

Figure 4.25 - Proposed Pick-Up/Drop-Off Locations



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4.4.10 PARKING

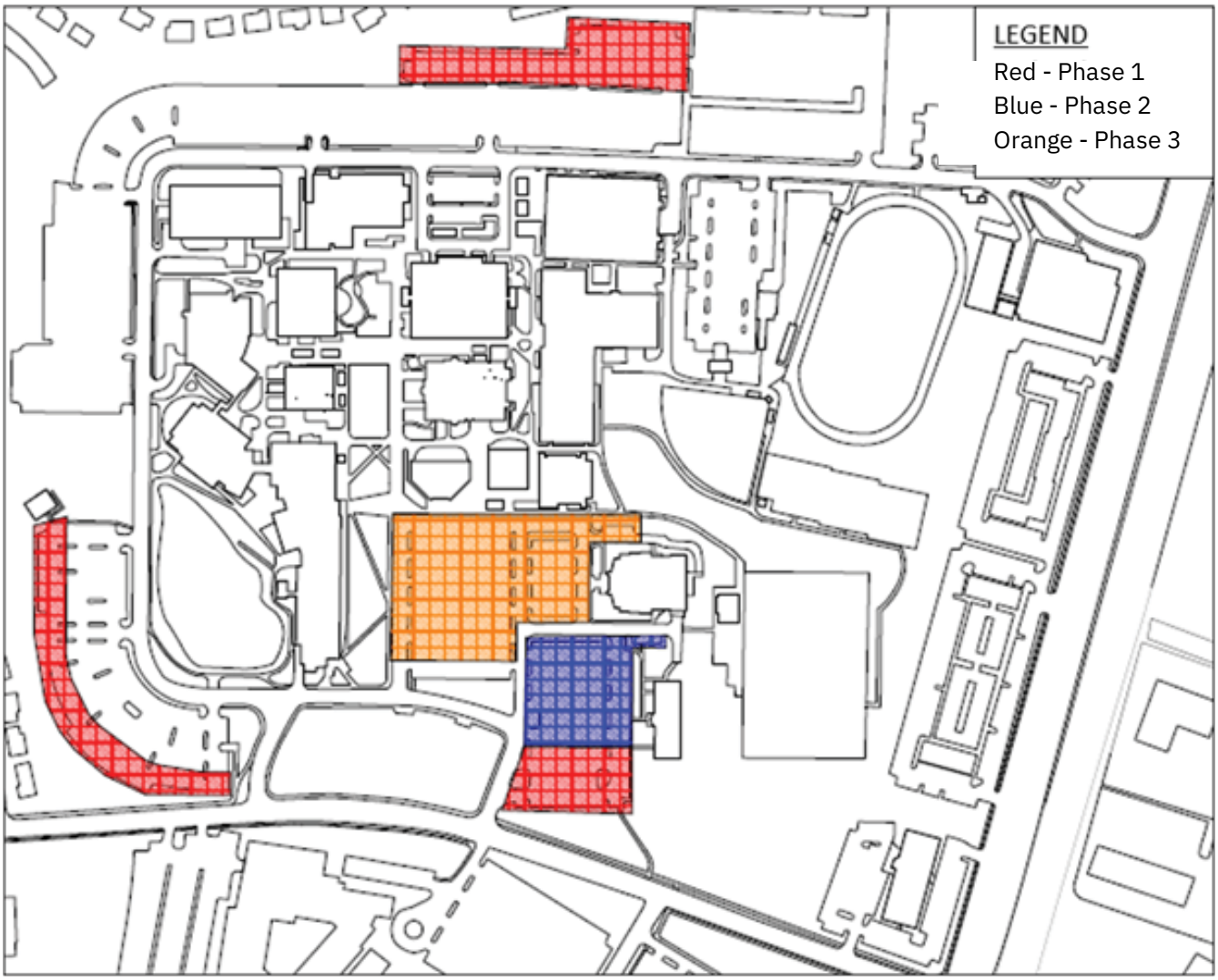
Changes to the campus parking layout are proposed in three phases. Figure 4.26 shows the locations where parking will be usurped by proposed afforestation and buildings. As shown in Table 4.60, the future 2033 parking supply will be 2,745 spaces. This will not include Lot 13, Mannakee Lot and the proposed South Garage. Montgomery College projects a student and faculty population growth of 41% between 2023-2033. This increases the peak parking demand for 2033 from 1,611 to 2,272. This increases parking occupancy from 45% to 83% (not including Lot 13, Mannakee Lot and the proposed South Garage) between 2023-2033. There would be adequate future parking to support future parking needs. Parking demand should be reevaluated before the design and construction of the proposed South Garage.

Table 4.60 - 2023-2033 Parking Supply Changes

	Existing Supply	2033 Supply	Net Change
Lot 1	160	160	-
Lot 2	459	459	-
Lot 3	167	167	-
Lot 4	42	42	-
Lot 5	363	190	(173)
Lot 6	82	82	-
Lot 7	138	138	-
Lot 8	82	82	-
Lot 9	267	267	-
Lot 10	336	221	(115)
Lot 11	319	24	(295)
Lot 12	250	-	(250)
North Garage	913	913	-
Total	**3,578**	**2,745**	**-833**

**Excludes Lot 13 from existing and future calculations*

Figure 4.26 - Proposed Phased Parking Changes



SECTION 4.5

Implementation

Implementation

4.5.1 PROJECT SEQUENCING

The phasing of implementation has been generally organized around four phases of development, some of which fall outside of the 10-year timeframe of the FMP.

Figure 4.27 - Rockville Campus, 2023-33 Facilities Master Plan, Construction Since Last Approved FMP

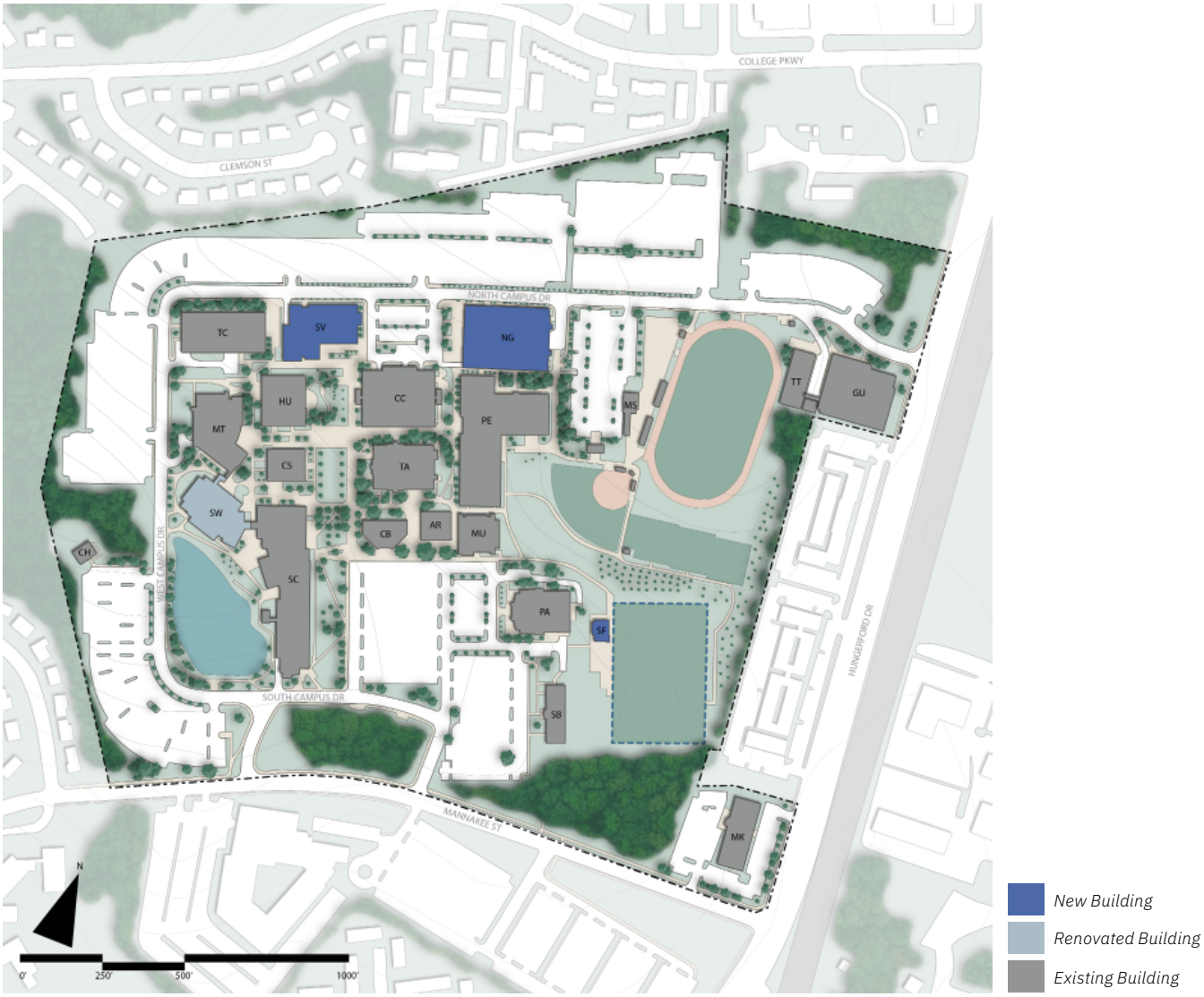
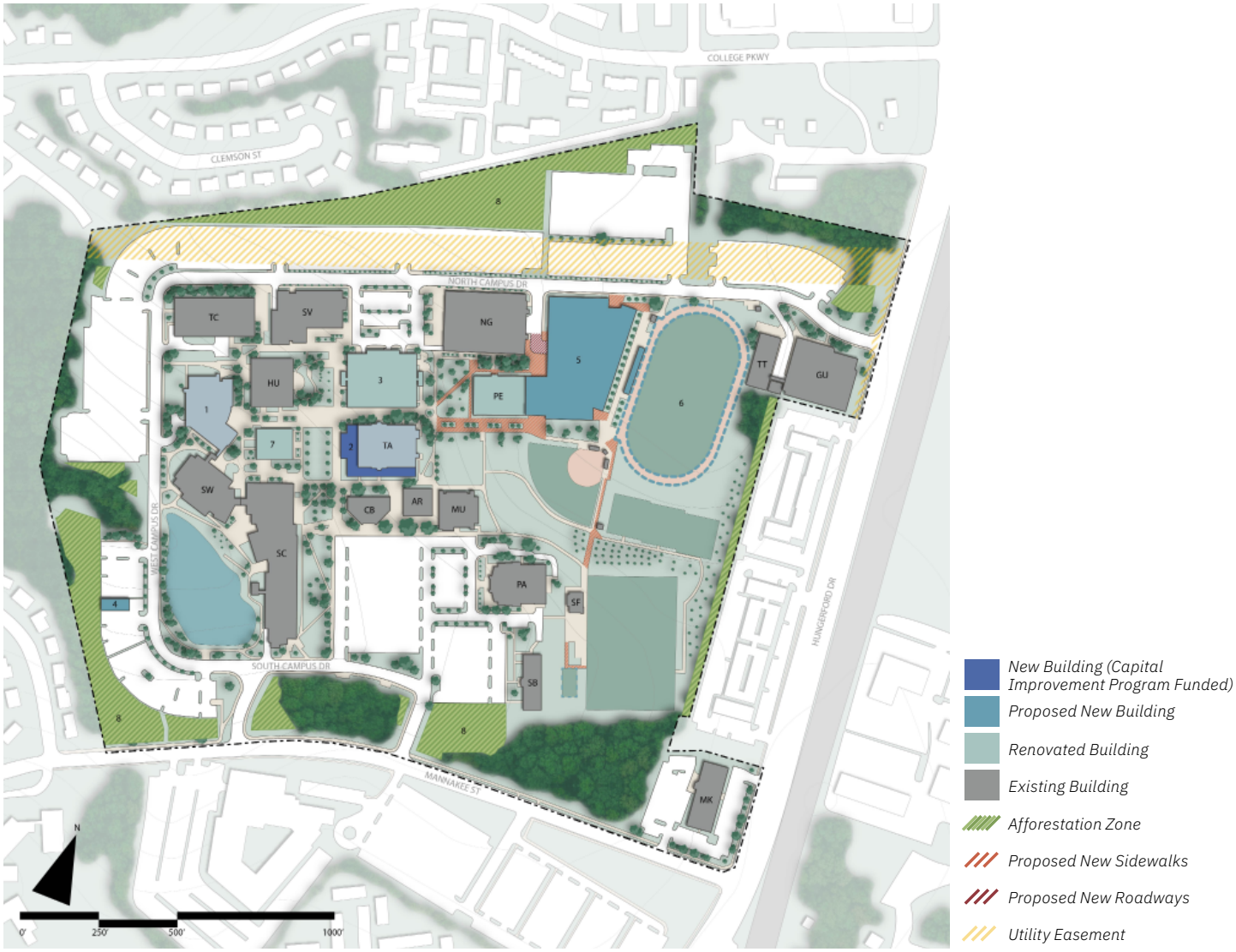


Figure 4.28 - Rockville Campus, Phase 1 2023 Facilities Master Plan



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PHASE 1 (see Figure 4.27)

1. Macklin Tower Library Renovation

The library renovation is scheduled to begin in FY 2025 and be completed by the summer of 2026. The interim swing space would be the Academic Annex.

2. Theatre Arts Renovation

The Theatre Arts project includes unique spaces, making it difficult to create swing spaces for those projects. Options include using theater facilities currently in the Cultural Arts Center on the Takoma Park/Silver Spring Campus, using the Robert E. Parilla Performing Arts Center or using a gymnasium space in the Physical Education Center (PE). Using PE would assume the expansion of that facility occurred prior to when the Theatre Arts renovation, which is currently projected to occur beginning in FY 2029 with a construction completion in the Fall of 2030.

3. Campus Center Renovation

The Campus Center renovations can be phased over the next several fiscal years to spread out the funding, or could be completed as a single project. Immediate needs include the replacement of HVAC equipment serving much of the second floor and the reconfiguration of the lower level for new uses.

4. Maintenance Shop

The existing Maintenance Shop site sits on a surface lot in between the existing Physical Education Center and Track and Field facility. The relocation of the Maintenance Shop to Lot 10 allows for the redevelopment and expansion of the Physical Education Center near the entrance of the campus, and pulls the operations of the Maintenance Shop to a more peripheral location of campus.

5. Physical Education Center Renovation and Expansion

The timing of the Physical Education Center project is dependent on funding. It is not reliant on enabling projects, since the addition can be constructed prior to demolishing the existing building. The current site is used for parking and maintenance purposes, which will need to be relocated in advance of the project development.

6. Track and Field Renovation

The track and field renovation can be tied into the Physical Education Center Renovation or run independently. There are no enabling projects associated.

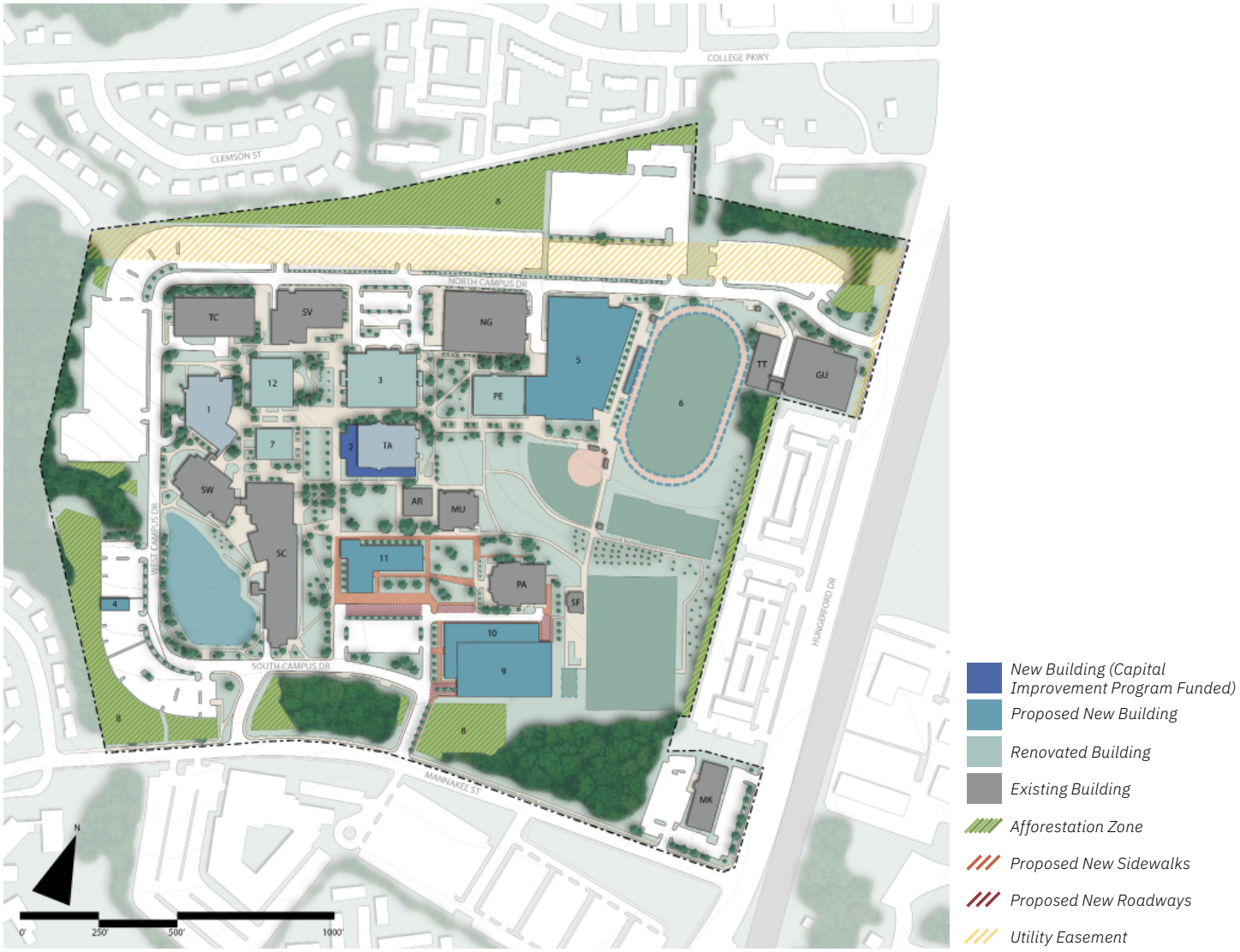
7. Computer Science Renovation

The Computer Science building will be available for renovation after the completion of the Library Renovation. Renovating the Computer Science building could offset some of the utilization of the Humanities Building, but some swing space will be required.

8. Forest Conservation Plan

Implementing the forest conservation plan will allow the reconfiguration of the core of campus and should be undertaken in advance of the developments around the Arts Quadrangle or the Physical Education Center Renovation and Expansion. It is not anticipated that parking offsets will be required, but analysis of parking use should be undertaken before removing parking to accommodate this plan.

Figure 4.29 - Rockville Campus, Phase 2 2023-33 Facilities Master Plan



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PHASE 2 (see Figure 4.28)

9. South Parking Garage

The South Parking Garage will require the demolition of the South Campus Instructional Building, so classes currently in that building will need to be accommodated elsewhere on campus. This project must provide adequate parking for several of the projects that follow in Phase 2. It must also be completed before the Media and Visual Arts or Performing Arts projects can be undertaken.

10. Garage Wrapper

While integral in concept, the Garage Wrapper is not required to be constructed in tandem with the garage. It can follow the garage when it is determined that academic programs demand the additional space.

11. Media and Visual Arts

This project is enabled by the South Campus Garage, which will offset the parking on which the building sits. Once complete, the Paul Peck Art Building and the Counseling and Advising Building can be demolished to begin formation of the Arts Quadrangle. These programs inlcude highly utilized classrooms.

12. Humanities Building Renovation

The Humanities Building houses a number of highly utilized classrooms and departmental offices. These spaces will need to be relocated during the construction period. This should be coordinated with other projects in Phase 2, including the Media and Visual Arts building and the Academic Annex, which may offer swing space for this project.

PHASE 3 (see Figure 4.29)

13. Robert E. Parilla Performing Arts Center Renovation and Expansion

The expansion of the Performing Arts Center is enabled by the development of the South Campus Garage, which will offset the parking lost due to this project. Additionally, once completed, the Music Building can be demolished to complete the Arts Quadrangle and to make room for the Future Academic Building.

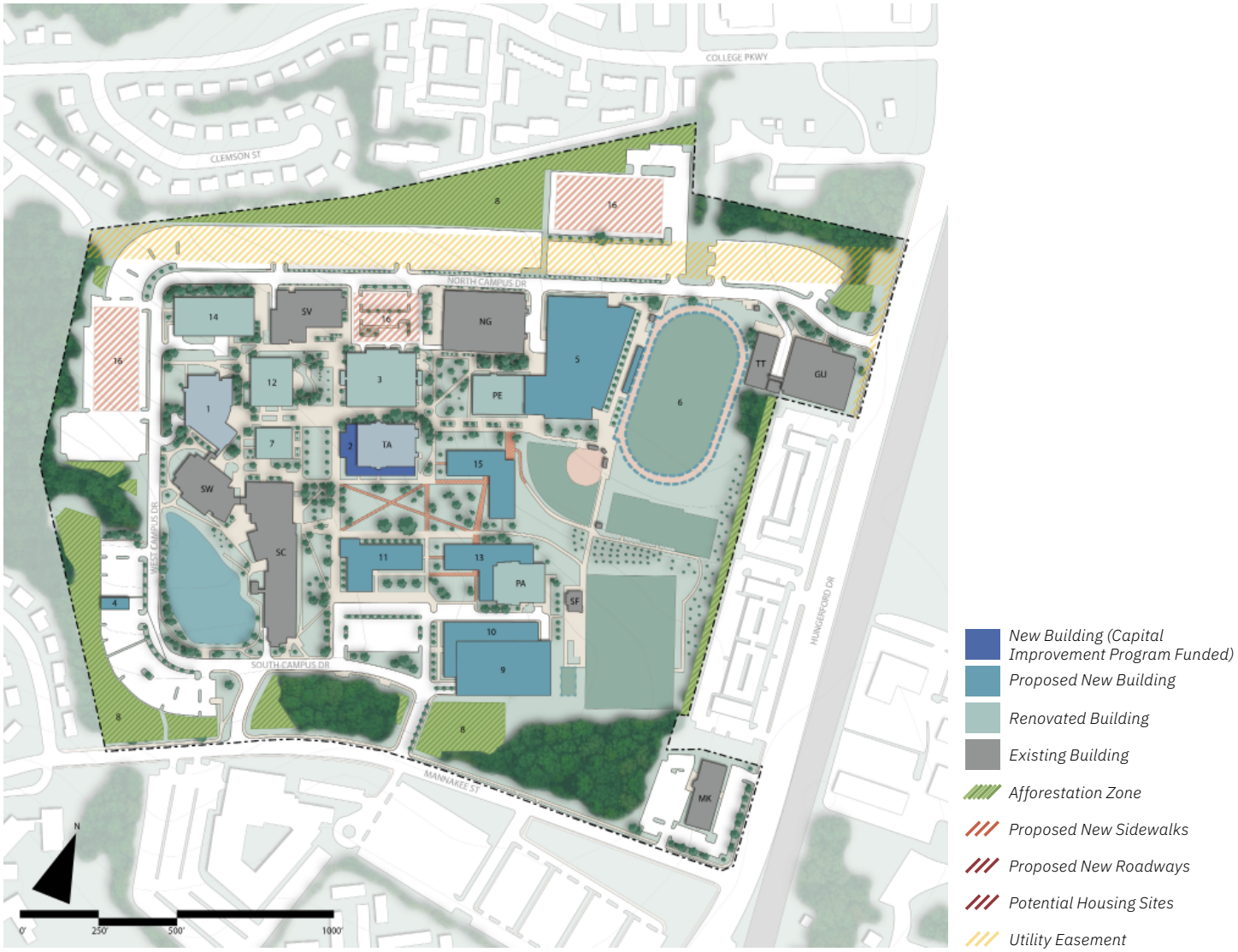
14. Technical Center Renovation

Renovations in the Technical Center will require significant swing space for the specific class laboratories contained in the current building.

15. Future Academic Building

This project can be completed once the Music Building is demolished, which would follow the Performing Arts renovation and expansion.

Figure 4.30 - Rockville Campus, Phase 3 2023-33 Facilities Master Plan



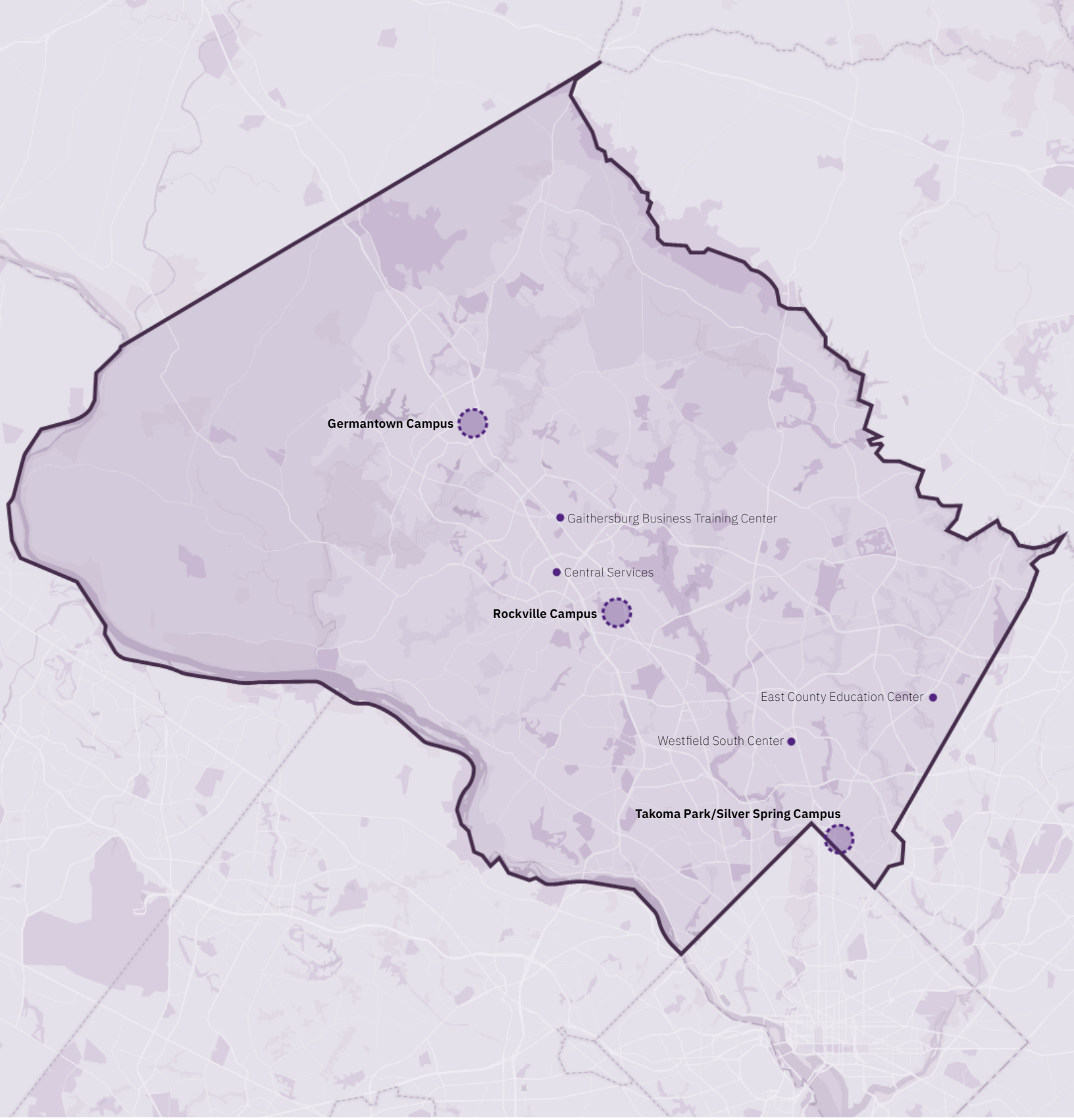
4.5.2 PROJECTED COSTS

The chart below provides an estimate of construction, planning and equipment costs for the projects in 2023 dollars. Escalation should be applied once timeframes are finalized.

Table 4.61 - Projected Total Construction Costs

ROCKVILLE	Building Demolition			Renovation			New Construction		
	Area	Cost/ SF	Demo Cost	Area	Cost/ SF	Renovation Cost	Total Area	Cost/ SF	New Construction Cost
TA ADDITION				35,032	$565	$19,794,000	49,122	$750	$36,842,000
COMPUTER SCIENCE				20,862	$340	$7,094,000			
STUDENT HUB				2,500	$315	$788,000			
SOUTH GARAGE	29,900	$15	$448,500				157,500	$95	$14,963,000
ACADEMIC BUILDING							67,800	$420	$28,476,000
FACILITIES BUILDING							3,600	$350	$1,260,000
WELLNESS FACILITY	66,749	$15	$1,001,235	18,200	$450	$8,190,000	188,600	$425	$80,155,000
TRACK COMPLEX									$15,000,000
MEDIA & VISUAL ARTS BUILDING	17,696	$15	$265,440				81,000	$580	$46,980,000
HU & CS ADDITION							5,500	$420	$2,310,000
PA ADDITION	46,644	$15	$699,660				72,600	$750	$54,450,000
FUTURE ACADEMIC							81,200	$420	$34,146,000
Subtotal	**160,989**		**$2,414,835**	**76,594**		**$35,866,000**	**707,022**		**$314,582,000**

ROCKVILLE	Total				
	Total Construction Cost	Site Contingency, Testing	Planning Cost @ 15%	Equipment Cost @ 23%	Total Project Cost (2023)
TA ADDITION	$56,636,000	$64,236,000	$8,350,000	$10,612,000	$83,198,000
COMPUTER SCIENCE	$7,094,000	$8,600,000	$1,065,000	$1,632,000	$11,297,000
STUDENT HUB	$788,000	$956,000	$119,000	$182,000	$1,257,000
SOUTH GARAGE	$15,411,500	$18,682,000	$2,312,000	$3,545,000	$24,539,000
ACADEMIC BUILDING	$28,476,000	$34,519,000	$4,272,000	$6,550,000	$45,341,000
FACILITIES BUILDING	$1,260,000	$1,528,000	$189,000	$290,000	$2,007,000
WELLNESS FACILITY	$89,346,235	$108,306,000	$13,402,000	$20,550,000	$142,258,000
TRACK COMPLEX	$15,000,000	$18,183,000	$2,250,000	$3,450,000	$23,883,000
MEDIA & VISUAL ARTS BUILDING	$47,245,440	$57,271,000	$7,087,000	$10,867,000	$75,225,000
HU & CS ADDITION	$2,310,000	$2,801,000	$347,000	$532,000	$3,680,000
PA ADDITION	$55,149,660	$66,853,000	$8,273,000	$12,685,000	$87,811,000
FUTURE ACADEMIC	$34,146,000	$41,392,000	$5,122,000	$7,854,000	$54,368,000
Subtotal	**$352,862,835**	**$423,327,000**	**$52,788,000**	**$78,749,000**	**$554,864,000**



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