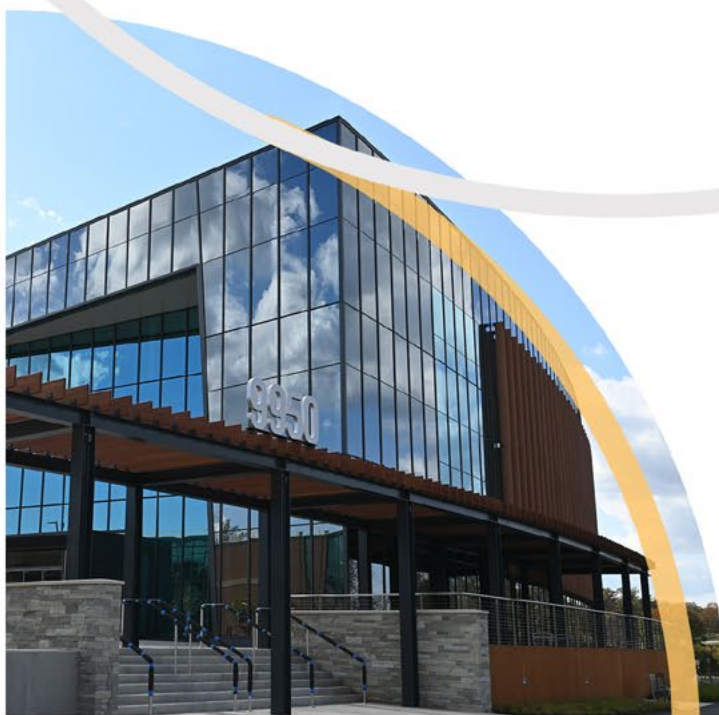




Great Seneca Science Corridor

MINOR MASTER PLAN AMENDMENT

Approved & Adopted December 2021



Abstract

The Great Seneca Science Corridor Minor Master Plan Amendment contains the text and supporting maps for an amendment to portions of the approved and adopted 2010 Great Seneca Science Corridor Master Plan. It also amends The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties, as previously amended. The Great Seneca Science Corridor Minor Master Plan Amendment area is located in the heart of the I-270 Corridor. The Plan area includes the Shady Grove Life Sciences Center, National Institute of Standards and Technology, and the residential neighborhoods of Quince Orchard and Rosemont. The planning area is nearly completely surrounded by the City of Gaithersburg, the City of Rockville and the Town of Washington Grove. The City of Gaithersburg occupies 10 square miles in the center of the Plan area but is not included in the Plan area. This Amendment is specifically focused on evaluating the staging requirements of the 2010 Plan. This Amendment does not provide recommendations for land use, zoning, transportation, parks, trails and open space, the environment, or historic resources.

Source of Copies

The Maryland-National Capital Park and Planning Commission
2425 Reedie Drive, 14th Floor
Wheaton, MD 20902

Online at:

<https://montgomeryplanning.org/planning/communities/midcounty/great-seneca-science-corridor/great-seneca-science-corridor-plan/great-seneca-science-corridor-master-plan-minor-master-plan-amendment/>

The Maryland-National Capital Park and Planning Commission

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two counties.

The Commission is charged with preparing, adopting and amending or extending The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties. The Commission operates in each county through Planning Boards appointed by those county governments. The Planning Boards are responsible for all local plans, zoning amendments, subdivision regulations and administration of parks.

The Maryland-National Capital Park and Planning Commission encourages the involvement and participation of individuals with disabilities and its facilities are accessible. For assistance with special needs (e.g., large print materials, listening devices, sign language interpretation, etc.), please contact the M-NCPPC Montgomery County Commissioners Office by telephone 301-495-4605 or by email at mcpchair@mncppc-mc.org. Maryland residents can also use the free Maryland Relay Service for assistance with calls to or from hearing or speech impaired persons; for information, go to www.mdrelay.org/ or call 866-269-9006.



Great Seneca Science Corridor

MINOR MASTER PLAN AMENDMENT

APPROVED AND ADOPTED
Prepared by the Montgomery County Planning Department
MontgomeryPlanning.org



THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

6611 Kenilworth Avenue • Riverdale, Maryland 20737

MCPB No. 21-128
M-NCPPC NO. 21-29

RESOLUTION

WHEREAS, The Maryland-National Capital Park and Planning Commission, by virtue of the Land Use Article of the Annotated Code of Maryland, is authorized and empowered, from time to time, to make and adopt, amend, extend and add to *The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District Within Montgomery and Prince George's Counties*; and

WHEREAS, the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission, pursuant to procedures set forth in the Montgomery County Code, Chapter 33A, held a duly advertised public hearing on June 3, 2021 on the Public Hearing Draft Great Seneca Science Corridor Minor Master Plan Amendment, being also an amendment to portions of the approved and adopted 2010 *Great Seneca Science Corridor Master Plan*; and *The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District Within Montgomery and Prince George's Counties*, as amended.

WHEREAS, the Montgomery County Planning Board, after said public hearing and due deliberation and consideration, on July 1, 2021, approved the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment, recommended that it be approved by the District Council, and forwarded it to the County Executive for recommendations and analysis; and

WHEREAS, the Montgomery County Council sitting as the District Council for the portion of the Maryland-Washington Regional District lying within Montgomery County, held a public hearing on October 19, 2021, wherein testimony was received concerning the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment; and


WHEREAS, the District Council, on November 9, 2021 approved the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment subject to the modifications and revisions set forth in Resolution No. 19-1053.

NOW, THEREFORE BE IT RESOLVED, that the Montgomery County Planning Board and The Maryland-National Capital Park and Planning Commission do hereby adopt the said Great Seneca Science Corridor Minor Master Plan Amendment, together with the *General Plan for the Physical Development of the Maryland-Washington Regional District within Montgomery and Prince George's Counties*, as amended, and as approved by the District Council in the attached Resolution No. 19-1053; and

Approved as to
Legal Sufficiency: /s/ Matthew T. Mills
M-NCPPC Legal Department

BE IT FURTHER RESOLVED, that copies of said Amendment must be certified by The Maryland-National Capital Park and Planning Commission and filed with the Clerk of the Circuit Court of each of Montgomery and Prince George's Counties, as required by law.

This is to certify that the foregoing is a true and correct copy of a resolution adopted by the Montgomery County Planning Board of the Maryland-National Capital Park and Planning Commission on motion of Commissioner Rubin, seconded by Commissioner Cichy, with Chair Anderson and Commissioners Cichy, Patterson, and Rubin voting in favor of the motion, and Commissioner Verma absent at its regular meeting held on Thursday, December 2, 2021, in Wheaton, Maryland.



Casey Anderson, Chair
Montgomery County Planning Board

CERTIFICATION

This is to certify that the foregoing is a true and correct copy of Resolution No. 21-29 adopted by the Maryland-National Capital Park and Planning Commission on motion of Commissioner Geraldo, seconded by Commissioner Cichy, with Chair Hewlett, Vice-Chair Anderson, and Commissioners Bailey, Cichy, Doerner, Geraldo, Patterson and Verma voting in favor of the motion, and Commissioners Rubin and Washington being absent for the vote at its regular meeting held on Wednesday, December 15, 2021 via video-conference, and broadcast by the Department of Parks and Recreation, Prince George's County.



Asuntha Chiang-Smith Executive Director



Contents



INTRODUCTION	1
AMENDMENT PURPOSE AND RECOMMENDATION SUMMARY	2
2010 PLAN VISION	6
PROGRESS TOWARDS THE 2010 VISION	12
BARRIERS TO DEPARTURES FROM THE 2010 PLAN VISION	21
RECOMMENDATIONS	30
ADVANCING THE PLAN VISION	31

FiguresTables

FIGURE 1 - LIFE SCIENCES CENTER DISTRICTS	4
FIGURE 2 - GREAT SENECA SCIENCE CORRIDOR MASTER PLAN AREA	5
FIGURE 3 - CORRIDOR CITIES TRANSITWAY ROUTE	6
FIGURE 4 - CCT ROUTE	8
FIGURE 5 - STAGING ALLOCATIONS FOR NON-RESIDENTIAL DEVELOPMENT	10
FIGURE 6 - COMMUTING PATTERNS: WORKS TRIPS TO LIFE SCIENCES CENTER	17
FIGURE 7 - LIFE SCIENCES CENTER LOOP TRAIL	19
FIGURE 8 - 2010 PLAN OPEN SPACE MAP	26
FIGURE 9 - OUTREACH FEEDBACK	29
FIGURE 10 - ANNUAL AVERAGE DAILY TRAFFIC	33
TABLE 1 - STAGING REQUIREMENTS	11
TABLE 2 - EDUCATION REQUIRED IN LIFE SCIENCE JOBS IN LIFE SCIENCES CENTER	14
TABLE 3 - EXPERIENCE REQUIRED IN LIFE SCIENCE JOBS IN LIFE SCIENCES CENTER	14
TABLE 4 - RESIDENTIAL UNITS BUILT IN LIFE SCIENCES CENTER SINCE 2010	16
TABLE 5 - EXISTING AND APPROVED DEVELOPMENT IN LIFE SCIENCES CENTER	23
TABLE 6 - RECENT/LAB RESEARCH DEVELOPMENT PROJECTS IN AND NEAR LIFE SCIENCES CENTER	31



Introduction

Ten years have passed since the 30-year vision established in the 2010 Great Seneca Science Corridor Master Plan (2010 Plan) was approved and adopted. There have been several departures and barriers to implementing the vision, however key elements of the vision have been achieved. First and foremost, the life sciences industry is central to the economic health of the county and the Life Sciences Center remains the county hub for the industry. Demand for life sciences space in the area remains high and there is a strong residential market. The life sciences industry, in addition to providing future revenue and employment, also offers opportunities to enhance economic equity in the county.

The vision of an urban, compact form of development with mixed-uses, however, has not been realized. The area remains largely suburban with high-speed arterials cutting through the Life Sciences Center separating primarily single-use projects. New projects have been built with lower densities than anticipated in the 2010 Plan and several large, approved projects remain unbuilt. The absence of high-quality transit, restrictions on commercial development, and market forces likely contributed to the departure from urban densities and forms.

One of the most immediate and disruptive barriers to advancing the 2010 Plan vision is the lack of funding and uncertain future of the Corridor Cities Transitway (CCT), a proposed bus rapid transit system that would connect key locations within the corridor. The CCT is the centerpiece of both the 2010 Plan and its corresponding staging requirements. The State of Maryland has declined to further fund the CCT, although the project remains a long-term goal for Montgomery County. Absent funding for the CCT, commercial development cannot proceed in this crucial hub for the competitive and growing life sciences industry because staging requirements that include the CCT cannot be achieved.

The 2010 Plan recognized the need to revisit the Plan in regular intervals, focusing on the Life Sciences Center, to assess the development of the area, the need for infrastructure delivery, and progress toward achievement of the vision. The purpose of this Great Seneca Science Corridor Minor Master Plan Amendment (Amendment) is to evaluate the progress of the 2010 Plan, develop recommendations to facilitate the continued growth of the life sciences industry, and advance transportation options serving the Life Sciences Center.

This Amendment is not a traditional master plan amendment, as it does not provide recommendations for land use, zoning, transportation, parks, trails and open space, the environment or community facilities. Rather, this Amendment evaluates the 2010 Plan, considers progress towards the 2010 Plan vision, illustrates departures from and barriers to implementing the original vision, and concludes with a recommendation for adjustments to the staging requirements of the 2010 Plan.

Amendment Purpose and Recommendation Summary

The purpose of this Amendment is to balance support for economic development and opportunity in the county with critical transportation connections that service this important hub. Life sciences and other job-creating development has been stymied in recent years due to constraints in the staging requirements established by the 2010 Plan, which allocates development based on the provision of key public facilities and infrastructure. In July 2020, Montgomery Planning, at the request of the Montgomery County Council, initiated a Minor Master Plan Amendment to evaluate and modernize the staging requirements of the 2010 Plan.

Three critical factors require this Amendment:

1. There is a pressing need to accommodate life sciences development to support the county's economic health, employment growth and global leadership in science and innovation.
2. There continues to be a demand for commercial development, but all non-residential development capacity has been allocated and additional commercial development in the area cannot proceed due to the restrictions of the staging requirements in the 2010 Plan.
3. The future of the CCT, the centerpiece of the 2010 Plan vision, is uncertain, with no plans for further work or funding. In addition to being foundational to the Plan's vision, the CCT is the centerpiece of the Plan's staging requirements. For non-residential development to proceed, the CCT must be funded or the staging must be amended.

This Amendment is specifically focused on evaluating the staging requirements of the

2010 Plan in order to address the urgent need to accommodate growth in the life sciences industry, which contributes to the county's economic health as well as advancements in science. To provide relief to the life sciences industry development pressure at this crucial time for the county, the Amendment recommends immediately releasing 400,000 square feet of non-residential development capacity without any additional staging requirements. This is consistent with the non-residential development capacity permitted in Stage 1 of the 2010 Plan and generally equivalent to the non-residential capacity converted to residential units over the last decade. Based on recent development trends and market absorption rates, the creation of an interim stage with 400,000 square feet of new non-residential development will provide sufficient capacity to relieve the immediate demands in the area and allow time for a comprehensive review of the 2010 Plan vision, recommendations and staging requirements.



Recommendation 1

Create an interim stage, between Stage 1 and Stage 2, that shifts 400,000 square feet of non-residential development from Stage 2 to this interim stage. Release 400,000 square feet of non-residential development capacity immediately through this interim stage.

The 400,000 square feet of non-residential development capacity is limited to the LSC North, LSC Central, and LSC South districts. New development capacity allocations through this interim stage are prohibited in the LSC West and LSC Belward Districts. The additional capacity of 400,000 square feet is only available for non-residential development and is not eligible for conversion to residential development under the staging requirements.



Recommendation 2

Initiate a comprehensive amendment to the 2010 Plan to address the departures and barriers from the 2010 Plan vision identified through this Amendment, as well as changes to or the potential elimination of the staging requirements. The comprehensive amendment provides an opportunity to integrate policy guidance from countywide plans and initiatives including Corridor Forward: The I-270 Transit Plan, Thrive Montgomery 2050, and Vision Zero, as well as to employ a robust outreach and engagement strategy to create a plan that advances racial equity and social justice.

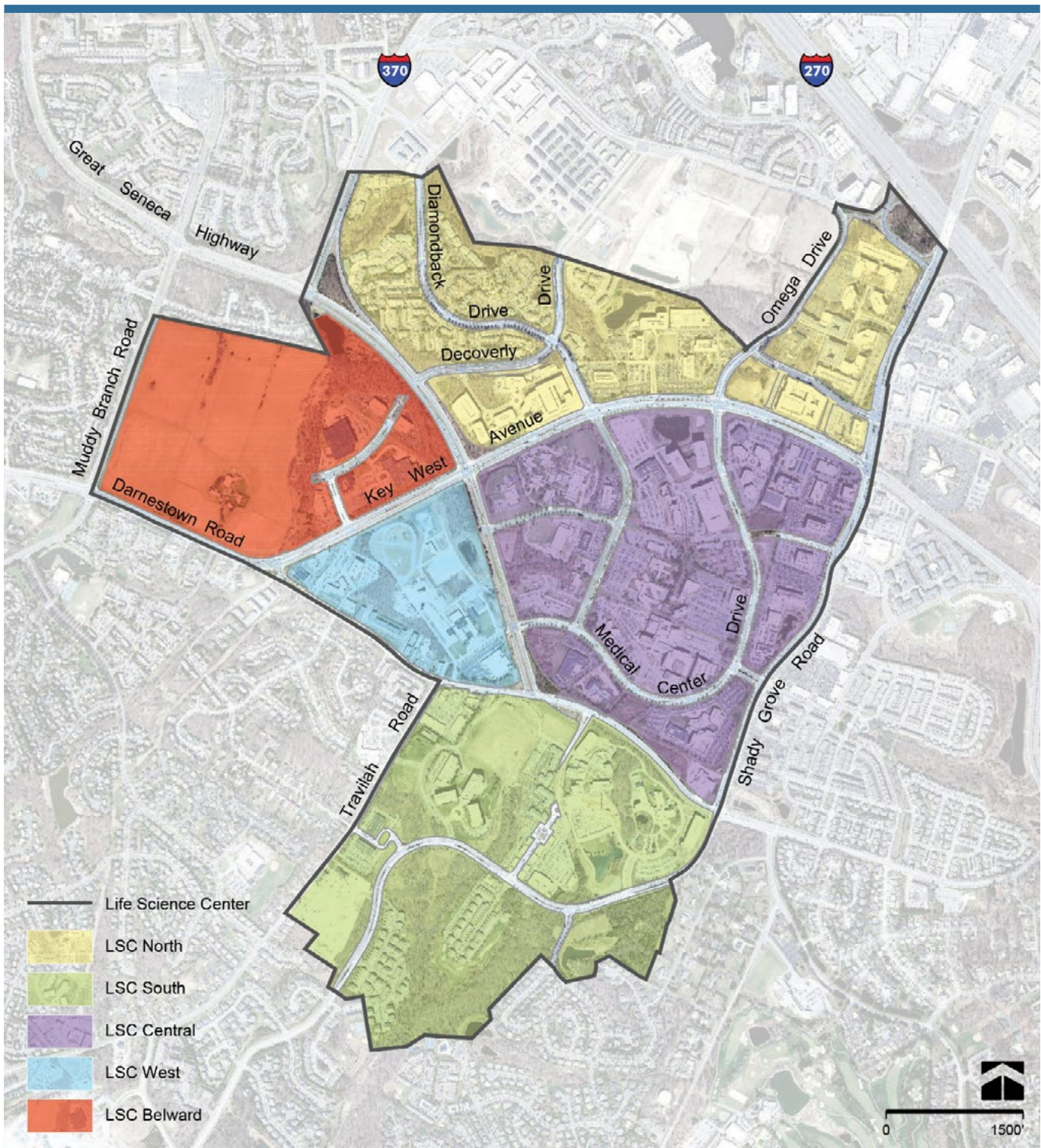


figure 1

The 2010 Plan designated districts within the Life Sciences Center. The LSC Districts are shown on the map. The 400,000 square feet of non-residential development capacity allocated by the interim stage in Recommendation 1 is limited to the LSC North, LSC Central, and LSC South districts. New development capacity allocations through this interim stage are prohibited in the LSC West and LSC Belward Districts.

Plan Boundary

The Amendment boundary covers 4,360 noncontiguous acres in the heart of the I-270 Corridor—maintaining the 2010 Plan boundaries—which includes the Life Sciences Center, the western Quince Orchard and Rosemont neighborhoods, and the National Institute of Standards and Technology (NIST). These areas are surrounded and often separated by the City of Gaithersburg, the City of Rockville and the Town of Washington Grove. The City of Gaithersburg occupies 10 square miles in the center of the Plan area. The Life Sciences Center serves as the county’s premier location for the life sciences and

biohealth industries. The Adventist HealthCare Shady Grove Medical Center, John Hopkins University-Montgomery College Campus, the Universities at Shady Grove, biotechnology companies, and the National Cancer Institute’s consolidated headquarters are all located in the Life Sciences Center.

The Amendment will focus on the Life Sciences Center, shown in Figure 1, despite the 2010 Plan including a larger area. The Life Sciences Center is the only area of the 2010 Plan subject to its staging requirements.

Great Seneca Science Corridor Master Plan Area

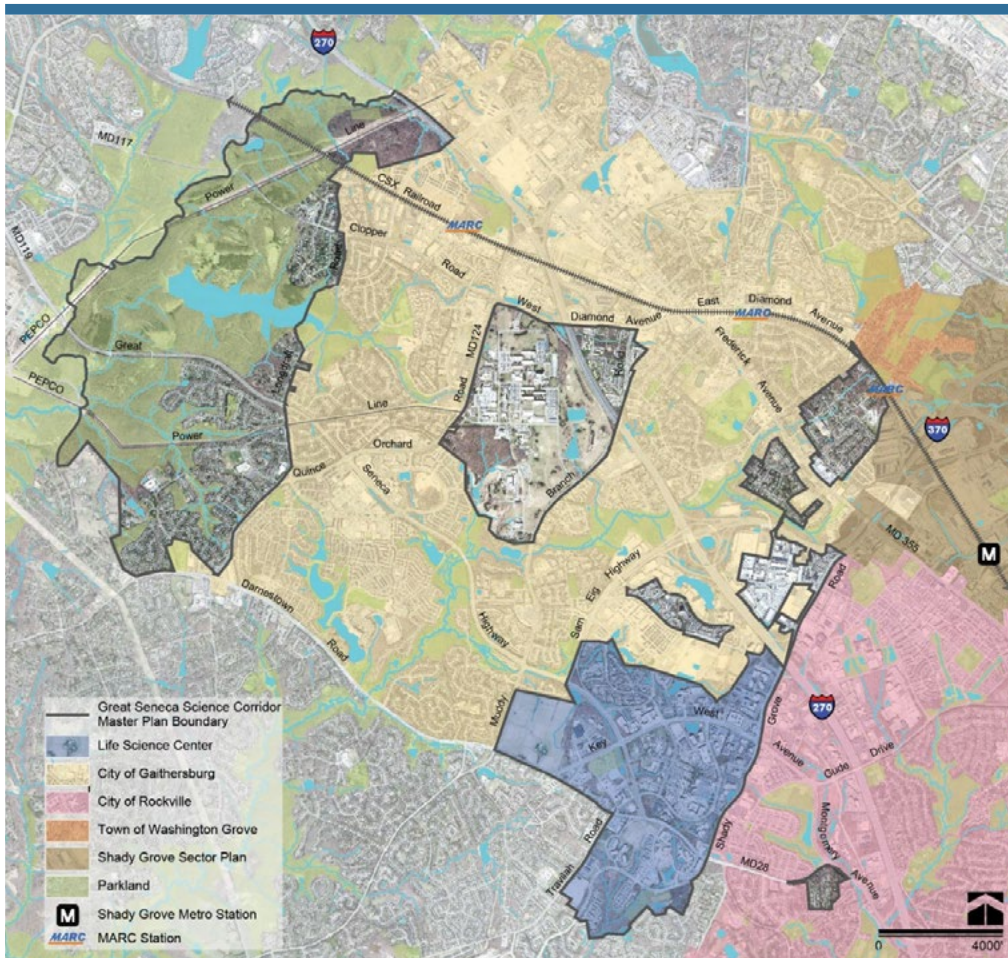


figure 2

Map of the Great Seneca Sciences Corridor Master Plan area. The Life Sciences Center, the focus area of this Amendment, is highlighted in blue.

2010 Plan Vision

“This Plan establishes a blueprint for the LSC that includes an expanded, first-class medical center, research facilities, academic institutions, and an array of services and amenities for residents, workers, and visitors. It will have an open space system that incorporates the area’s natural environmental features into a larger network, connecting destinations by paths and trails, and providing opportunities for a range of outdoor experiences.” – 2010 Plan, p. 15

Through the 1970s Montgomery Planning encouraged medical development in the area, paving the way for the Adventist HealthCare Shady Grove Medical Center. In the 1980s Montgomery County strategically invested in the area to improve its competitive position to attract the life sciences industries. The Life Sciences Center (LSC) was created on publicly owned land, which the county donated to Johns Hopkins University Montgomery County Campus (JHU-MCC) and to the University of Maryland for the Universities at Shady Grove (USG) to complement the existing medical services.

The 2010 Plan built on these public investments and created a blueprint for the Life Sciences Center as a dynamic biotechnology, healthcare, and higher education hub. In addition to supporting a health and life sciences cluster, the 2010 Plan envisioned the Life Sciences Center as a vibrant live/work community with an array of services and amenities. The mixed-use neighborhoods would be connected by a refined street network, trails, and a high-quality transit system.

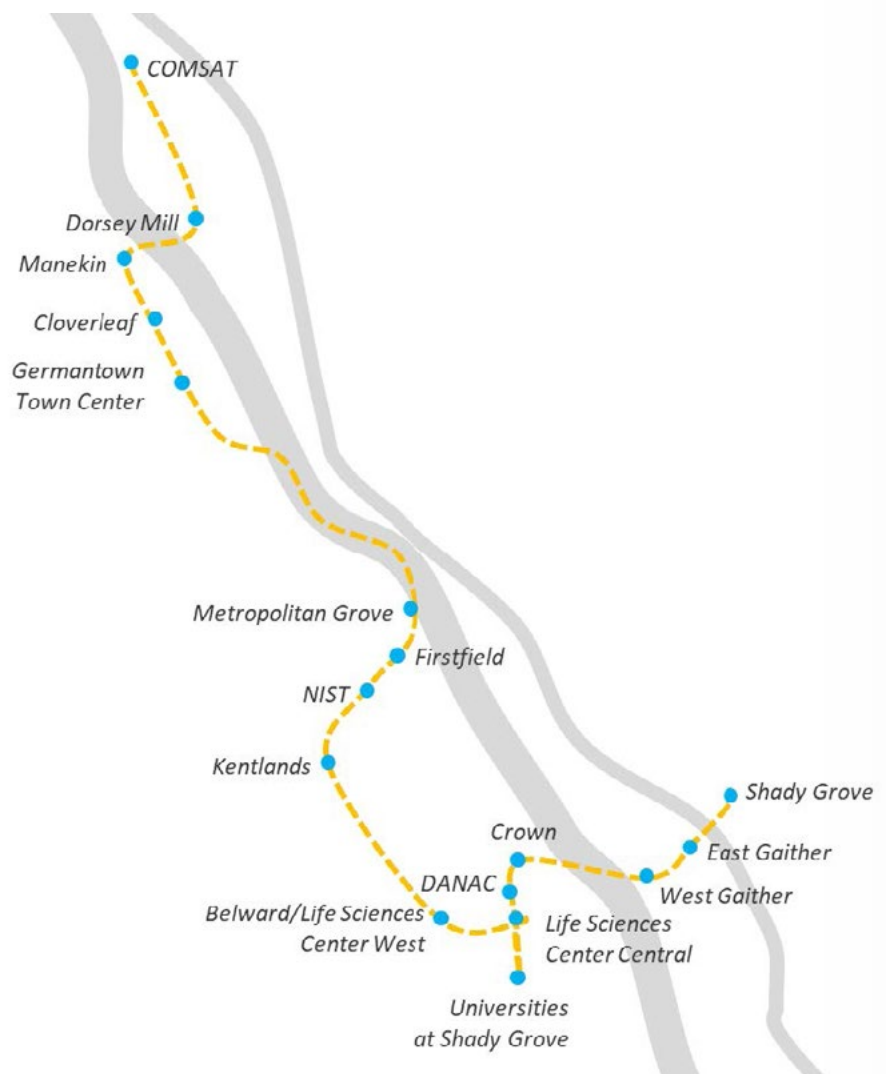


figure 3 | Corridor Cities Transitway route.



“Transit is an essential element of this Plan and is the basis for the land use and zoning recommendations. A strong public and private commitment to the Plan’s transit proposals will help ensure that the LSC is connected internally as well as to the rest of the Corridor.” 2010 Plan, p.15

The CCT is the cornerstone of the 2010 Plan transit vision. The 14-mile CCT is planned to travel from the Shady Grove Metrorail Station to the Comsat site in Clarksburg, with four stations planned within the Life Sciences Center. The 2010 Plan concentrates density and amenities around the planned stations. The CCT connects the Life Sciences Center internally, and with the existing transit network and residential communities. The CCT is planned to link the Life Sciences Center to both the Metropolitan Grove MARC Station and the Shady Grove Metrorail Station, as well as King Farm, Crown Farm, Kentlands, and the Watkins Mill Town Center. As envisioned, the CCT enables people who work at the LSC to live in nearby communities and commute by transit, supporting the 2010 Plan vision to transform the “suburban, auto-oriented LSC into tomorrow’s walkable, vibrant science center.” (2010 Plan, p. 20)

The 2010 Plan establishes a staging plan that addresses timing of development and provision of key public facilities. The Plan identifies requirements that must be achieved before additional development capacity can be released. The CCT is the centerpiece of the staging plan; stages of development are tied to the funding, construction, and operation of the CCT, to ensure transit is available as development proceeds.

CCT Route

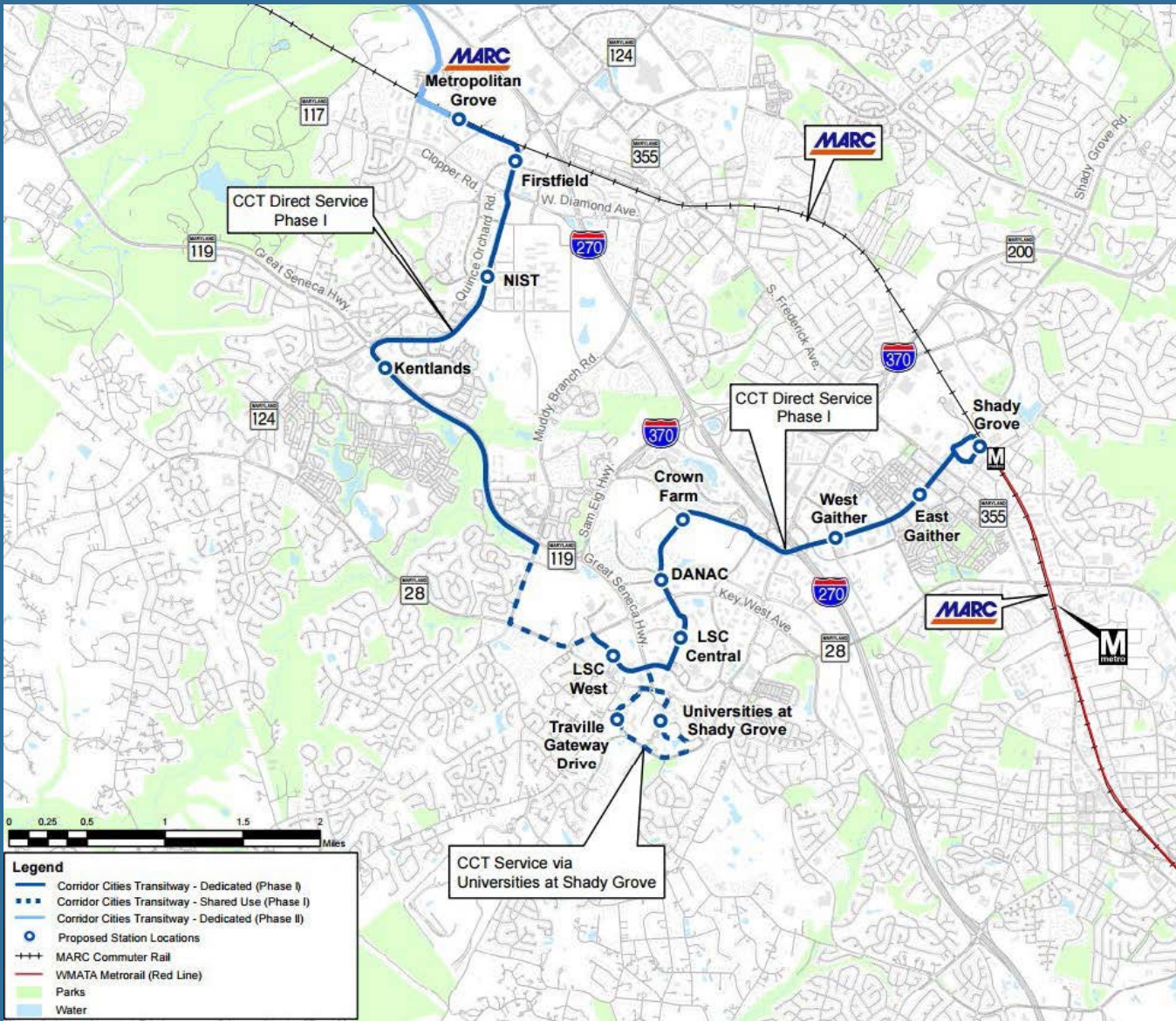
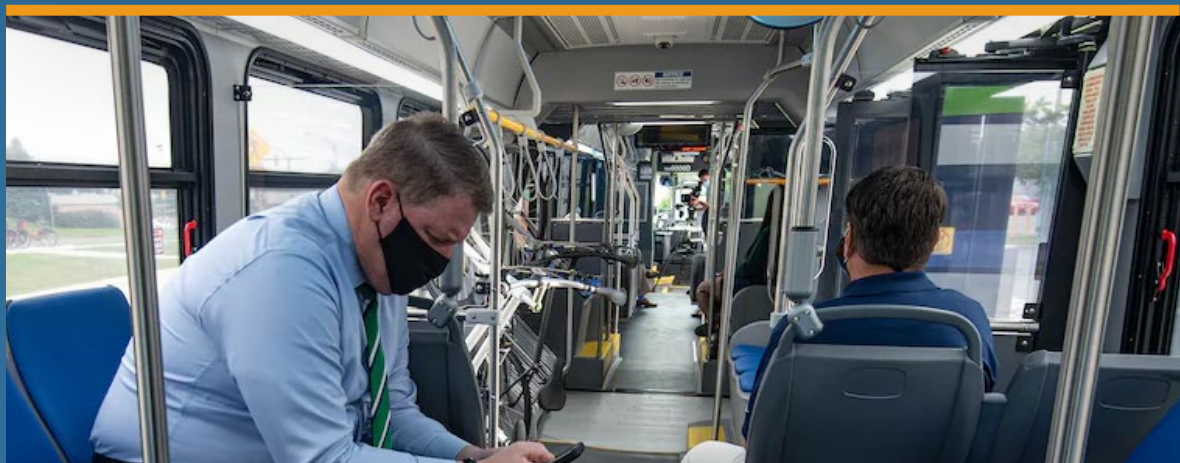


figure 4 CCT Route with connections to Metropolitan Grove MARC Rail Station and Shady Grove Metrorail Station.



2010 Staging Plan

Staging requirements, typically applied in master plans or redevelopment projects that will significantly transform land use, address the timing of development and the provision of key public facilities and amenities within the lifetime of the plan or project. Through staging plans, incremental development is paired with infrastructure, public facilities, services, or specific milestones to ensure that development advances at a pace consistent with the delivery of infrastructure and services necessary to support the development and minimize negative impacts. The staging plan only applies to and tracks development within the Life Sciences Center.

At the time of the 2010 Plan adoption, there was approximately 7 million square feet

of non-residential development in the Life Sciences Center. Additionally, approximately 3.7 million square feet of non-residential development had been approved by the Planning Board but had not yet been built in the Life Sciences Center. The 3.7 million square feet of development that was approved and unbuilt, also referred to as pipeline development, is not subject to the Plan's staging requirements unless a project's Preliminary Plan expires. The owner of a property approved for non-residential development may re-subdivide and convert to residential development and still be exempt from staging, provided that the change in development will not increase the number of vehicle trips.

Pipeline Development: Approved and Unbuilt Development

Montgomery Planning tracks all the approved but unbuilt residential and non-residential development, also referred to as pipeline development, for Montgomery County.

The pipeline is an inventory of development projects that have been approved by the Montgomery County Planning Board but not completely built. This inventory covers unbuilt dwelling units and unbuilt non-residential building gross square footage. Non-residential gross floor area is characterized into the number of jobs and gross floor area for office, retail, industrial, and other non-residential types associated with the project.



2010 Plan Staging Allocations of Non-Residential Development

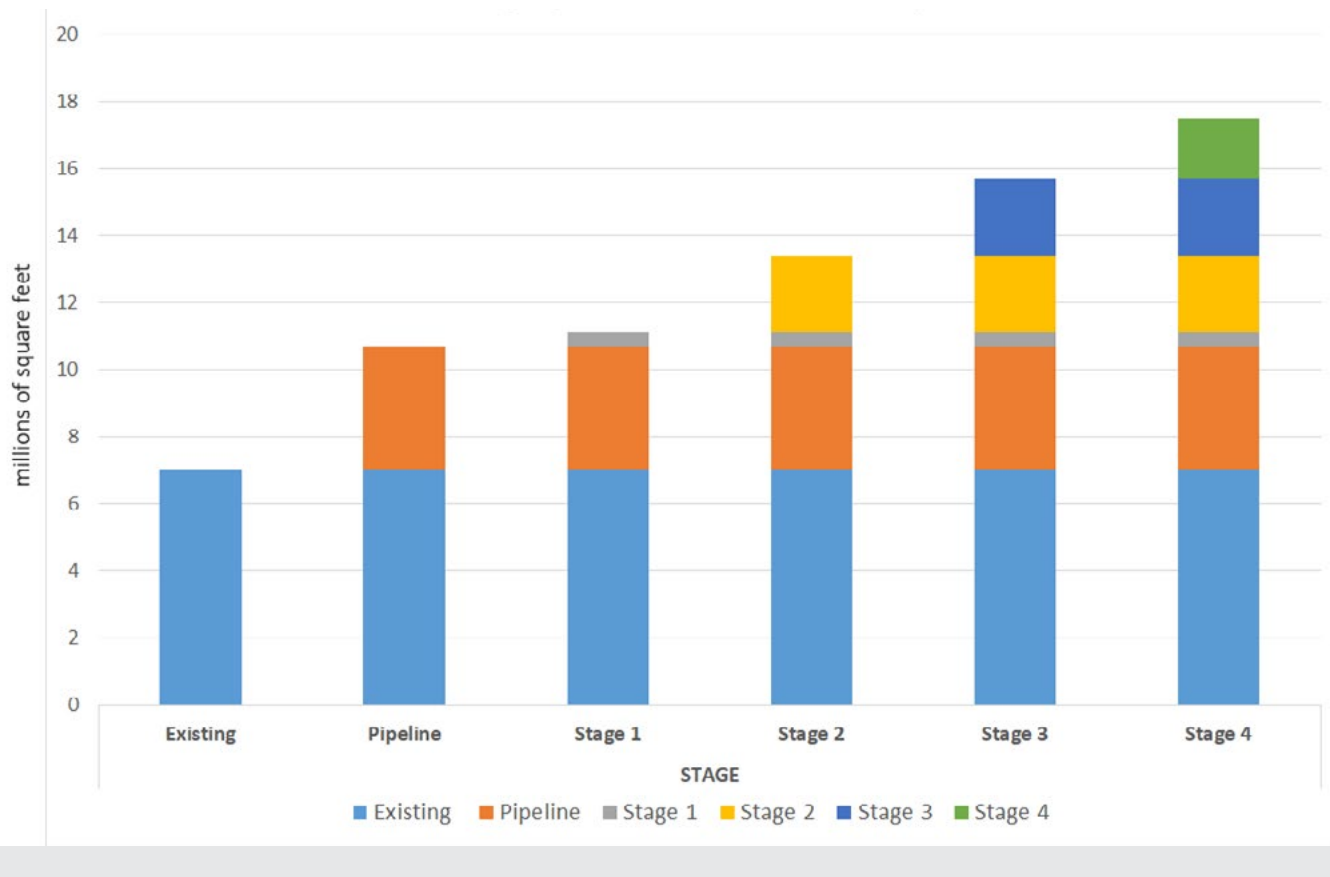


figure 5 | 2010 Plan's Staging Allocations for non-residential development.

The 2010 Plan establishes four stages of development, each with its own requirements. Requirements for Stage 1 have been met, which released 400,000 additional square feet of non-residential capacity, which has since been allocated. The requirements for Stage 2, which includes the full funding of the CCT, have not been met, which prohibits new non-residential development from proceeding.

table 1

Staging Requirements

Stage 1

400,000
Square Feet
Commercial
Development

- Approve and adopt the Sectional Map Amendment.
- Fund and begin operating the Greater Shady Grove Transportation Management District (TMD).
- Designate the LSC Central, West, Belward, and North Districts as a Road Code Urban Area.
- Include the entirety of the Rickman property on Travilah Road in the R&D Policy Area.
- Document the baseline of non-driver mode share through monitoring and traffic counts.
- Develop a monitoring program for the Master Plan within 12 months of adopting the Sectional Map Amendment.

Stage 2

2,300,000
Square Feet
Commercial
Development

- Fully fund construction of the CCT from the Shady Grove Metro Station to Metropolitan Grove within the first six years of the County's CIP or the State's CTP.
- Fully fund relocation of the Public Safety Training Academy from LSC West to a new site.
- Fund the LSC Loop trail in the County's six-year CIP and/or through developer contributions as part of plan approvals.
- Attain an 18 percent non-auto driver mode share (NADMS).

Stage 3

2,300,000
Square Feet
Commercial
Development

- CCT is under construction from Shady Grove Metro Station to Metropolitan Grove and at least 50 percent of the construction funds have been spent.
- Program for completion within six years any needed master-planned transportation improvement identified by the most recent biennial monitoring review to be needed at this time.
- Construct and open at least one public street (such as Medical Center Drive extended) across LSC West and Belward to provide a direct connection across major highways and between the districts, contributing to place-making and connectivity.
- Attain a 23 percent NADMS.

Stage 4

1,800,000
Square Feet
Commercial
Development

- Begin operating the CCT from the Shady Grove Metro Station to Clarksburg.
- Program for completion within six years any needed master-planned transportation improvement identified by the most recent biennial monitoring review to be needed at this time.
- Attain a 28 percent NADMS.

The implementation chapter of the 2010 Plan recommends evaluating the 2010 Plan, revisiting in regular intervals with a focus on the Life Sciences Center “to assess how the area is developing, the need for infrastructure delivery, and if the vision is being achieved.” (2010 Plan, p. 80) The 2010 Plan stated that the staging plan should also be regularly assessed to determine if any modifications are necessary.

Progress Towards the 2010 Vision

Since the approval and adoption of the 2010 Plan, the Life Sciences Center has continued to transform. There has been substantial progress toward achieving the original vision over the last decade. As desired, the life sciences industry is central to the economic health of the county and the Life Sciences Center remains the county hub for the industry.

Life Sciences Hub

Even as the county experienced sluggish job growth in many employment sectors, the life sciences industry grew by over 30 percent between 2010 and 2018. In 2018, almost 7,000 private sector workers in the life sciences industry were employed in the Life Sciences Center and immediately adjacent areas, while approximately 3,300 were employed in other areas of the county.¹ The National Cancer Institute's consolidated headquarters as well as life sciences companies such as Medimmune, Bioreliance, Novavax, and AstraZeneca are all located in the Life Sciences Center and adjacent areas.²

The Life Sciences Center and adjacent areas have become the epicenter for life sciences growth in the county. From 2010 to 2018, pharmaceutical manufacturing and life sciences research and development—the life sciences industry subsectors that are the largest, most competitive and most important to the county's economic base—expanded employment by 62 percent inside the Life Sciences Center and its immediately adjacent areas, while contracting by 26 percent in the rest of the county.³ This disparity in growth rates suggests that the life sciences industry is consolidating geographically in and around the Life Sciences Center, and that the area is becoming increasingly important for the county's economic and innovative health.

After decades of investing to attract the life sciences industry, the industry is gaining momentum in the county. The life sciences industry cluster is one of Montgomery County's most competitive private sector clusters, accounting for \$6.2 billion annually of gross regional product (GRP), or 6.5 percent of the county's total GRP.⁴ The life sciences industry is the one of the county's most valuable exporting industries, meaning that most of its products and services are consumed outside of the county. Capturing the outside revenue from these exports is part of what enables the county to continue to support a high quality of life. There is a critical need to enable the continued growth of the life sciences industry in the county both for the economic competitiveness of Montgomery County and for the advancement of vital sciences.

The COVID-19 pandemic has only increased pressure for life sciences development in the county. Several companies in the Life Sciences Center have been involved in research, development and production of vaccines, rapid testing, and antibody testing for COVID-19. In the Life Sciences Center alone, biohealth companies have received over \$2 billion in federal funding for these efforts.

¹ The plan area is home to other large employers outside of the life sciences cluster, such as the National Institute of Standards and Technology (NIST), the Financial Industry Regulatory Authority (FINRA), and Adventist HealthCare at Shady Grove, which together employ approximately 4,000 people.

² Due to the discontinuous plan boundaries, the area subject to the 2010 Plan, as well as its immediately adjacent areas are included in the employment analysis, to fully reflect the life

sciences cluster. These data include only the private sector, so they omit the National Institutes of Health, which is an important life sciences hub in the county located outside of the Corridor.

³ Growth and contraction calculations based on MDOL QCEW microdata.

⁴ GRP data from EMSI Labor Market Analytics, 2019.



Life Sciences



The term Life Sciences is broadly used to describe an industry that studies living organisms and life processes. The industry focuses on advancements in human health, with specific sectors of the industry focused on personalized medicine, cell and gene therapy, vaccine development, medical diagnostics, biopharmaceuticals, medical devices, and health services and suppliers. These sectors include research and development, manufacturing and sales.

The Montgomery County Economic Development Corporation designates the county's life sciences industry cluster as a "biohealth" industry, which includes research and development in biotechnology, pharmaceutical manufacturing, medical device manufacturing, and wholesale distribution of medical equipment. This Amendment uses both the life sciences industry and the biohealth industry interchangeably to describe the industry.

The Life Sciences Center, located within the 2010 Great Seneca Science Corridor Master Plan area, represents some of the world's most advanced developments in regenerative medicine, immunology, cell and gene therapies, vaccine development and biomanufacturing with companies such as Lentigen, Cartesian Therapeutics, Saint Gobain, MaxCyte, Catalent, Qiagen, GSK, Novavax, and Emergent all located there.

The life sciences industry is a crucial cornerstone of economic development, offering well-paying jobs to a diverse workforce. The industry also provides an opportunity for expanding employment and wages for communities with traditionally less access to jobs and who may have been harder hit by the recent economic recession. Life sciences jobs often require advanced degrees, however, the industry also offers many opportunities for people with bachelor’s degrees or less education. In 2017, more than a quarter of the jobs in the Life Sciences Center were held by those with some college or an associate’s degree.⁵ Jobs such as these, with well-established biotechnology companies, hospitals (such as Adventist HealthCare Shady Grove Medical Center), and clinics can provide stable employment, predictable schedules and incomes, and benefits. Thus, they can provide firm financial footing to those without bachelor’s degrees who often must string together various positions across industries and sectors.

Throughout the county, the life sciences industry offers opportunities for people at different stages in their careers, which can attract and retain younger residents and students. According to an analysis of job postings by the Montgomery County Economic Development Corporation, nearly half of all jobs posted in 2018 required three years or less of experience to apply.

table 2 | **Education Required in Life Science Jobs in the Life Sciences Center**

Education	Percent of Jobs
Some high school or less	10%
High School	18%
Some college or associate's degree	26%
Bachelor's degree or higher	46%

Data Source: U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES)

table 3 | **Experience Required in Life Science Jobs in the Life Sciences Center**

Experience Required	Percent of Jobs
0-1 years	19%
2-3 years	24%
4-6 years	19%
7-9 years	5%
10+ years	3%
Not specified	29%

Data Source: Percentages based on analysis by Montgomery County Economic Development Corporation

⁵ According to 2017 U.S. Census Bureau Longitudinal Employer-Household Dynamics (LEHD) Origin-Destination Employment Statistics (LODES).

Although most private sector jobs in all industries in the Life Sciences Center area are held by White people (63 percent), Black employees are overrepresented compared to their county population, holding 25 percent of Life Sciences Center jobs in 2017.⁶ Another 12 percent were filled by Hispanic people. Job growth in the private sector was also more rapid for Black people (24 percent) and Hispanic people (45 percent) than for White people (7 percent) in the Life Sciences Center during the 2002 to 2017 period. This data includes all private sector jobs, so while it is unclear exactly what roles these employees of color are filling, the Life Sciences Center appears to be a center of opportunity. Intentionally expanding stable and well-paying opportunities with the chance for career progression for people of color can help to accelerate this trend and promote employment equity in the county.

One of the life science industry's top occupations is that of Biological Technician. According to the EMSI, an economic analytics firm, this occupation has a high concentration in Montgomery County relative to other counties, and demand for biological technicians continues to be high. In Montgomery County, the occupation is more racially and ethnically diverse than it is in other places, with whites making up 49% of the occupational workforce, Asians making up 22%, Blacks comprising 18% and Hispanic or Latinx workers accounting for 8%. Crucially, two-thirds of biological technician positions require no more than an Associate's Degree, and the average annual salary in Montgomery County for this occupation is almost \$65,000.⁷ Creating more employment in this and similar occupations in the Life Sciences Center can help to expand the opportunity for well-paying stable jobs that do not require advanced degrees for Montgomery County's diverse population.

Montgomery County has recognized the potential of the industry for equitable economic development. As part of a recent economic development initiative, the Universities at Shady Grove (USG) and Montgomery College are anticipated to offer four-week retraining programs for work in the life science industry. Montgomery College aims to retrain hospitality and food-service workers to work in the bio-manufacturing sector, while USG plans to focus on training people with a science background to work in lab facilities.

Thriving Residential Market

The primary goal of the 2010 Plan is to create a world-class hub for the life sciences, and the 2010 Plan acknowledges that a "range of housing options and amenities is needed to support this development and help achieve county housing goals" (p. 23). In 2010, the Life Sciences Center had developed as a single-purpose, single-use employment center, and zoning prevented housing. The 2010 Plan sought to increase the land available for housing and create the opportunity to live near work.

The Life Sciences Center is a growth area for multi-family development with substantial recent construction and relatively low vacancies. An uptick in multifamily leasing is driving vacancy down in the Life Sciences Center. Since the adoption of the 2010 Plan, projects proposing an additional 1,823 units have received development approvals. Of the approved units, recent construction has delivered 1,277 new multi-family housing units, as shown in Table 4. As of spring 2021, a new residential development at the former Public Safety Training Academy is under review by Montgomery Planning. This development would add approximately 600 additional units through a combination of townhomes and low-rise multi-family housing.

⁶ Data on race and ethnicity of workers are from U.S. Census Bureau LEHD. Data include primary and secondary jobs in the private sector and state and local government, but do not include Federal employment.

⁷ Due to the discontinuous plan boundaries, the area subject All occupational data are from EMSI and represent all of Montgomery County. Occupational data are not available at geographies as small as the Life Sciences Center.

table 4 | **Residential Units Built in the Life Sciences Center Since 2010**

Residential Development	Number of Units
Camden Shady Grove	457 units
Mallory Square	365 units
Axis at Shady Grove	355 units
Travilah Grove	100 units
TOTAL	1,277 units
PSTA Site (proposed)	(645 units proposed)
Remaining Residential Capacity in Stage 1	2,189 units*

*does not include PSTA site proposed units.

Of the 1,823 approved units, only 311 units have counted toward staging; the rest were the result of conversions from approved commercial capacity, as permitted by the 2010 Plan’s staging requirements. A residential capacity of 2,189 units remains in Stage 1 of the staging requirements, meaning that new residential development may proceed unhindered. The remaining residential capacity does not account for the proposed residential units on the former Public Safety Training Academy site. A preliminary plan has been submitted but has not yet been approved. Once approved, a project is considered pipeline development and the number of residential units would be deducted from the remaining residential capacity allowed by the staging requirements.

Transportation Options

The 2010 Plan envisioned a bustling community where people living and working in the Life Sciences Center enjoyed transportation choices. The centerpiece of the vision is a high-quality local and regional connector in the form of the Corridor Cities Transitway (CCT), with five stops sited in the Life Sciences Center. The Plan further envisioned that the Life Sciences Center would be linked by the LSC Loop trail, unifying a grid of sidewalks, and a network of bikeways, trails, and paths. The result would be a transit

rich, walkable, and bikeable community—a far cry from the auto-centric, suburban office park landscape that dominated the Life Sciences Center in 2010.

The extent of the transportation investment has been markedly less than envisioned—most notably, due to the stalled CCT design and implementation. However, since 2010 there have been improvements to the pedestrian and bicycle circulation system, as well as new transit options and micro-mobility opportunities, such as Capital Bikeshare as well as dockless bike- and scooter-share. These improvements are reflected in the increase in people choosing to travel to work using modes other than driving alone.

More than 20,000 people commute daily to the Life Sciences Center. According to the Metropolitan Washington Council of Government’s regional travel model, the largest proportion of morning commutes into the Life Sciences Center and its adjacent areas come from within these same areas. Access to the area remains easier and more widespread by car, but approximately 16 percent of workers commute by transit to the area. While more than 2.7 million people can access the Life Sciences Center in a 45-minute drive, only about 150,000 people can access the Life Sciences Center in a 45-minute transit trip.

Commuting Patterns: Work Trips to the Life Sciences Center

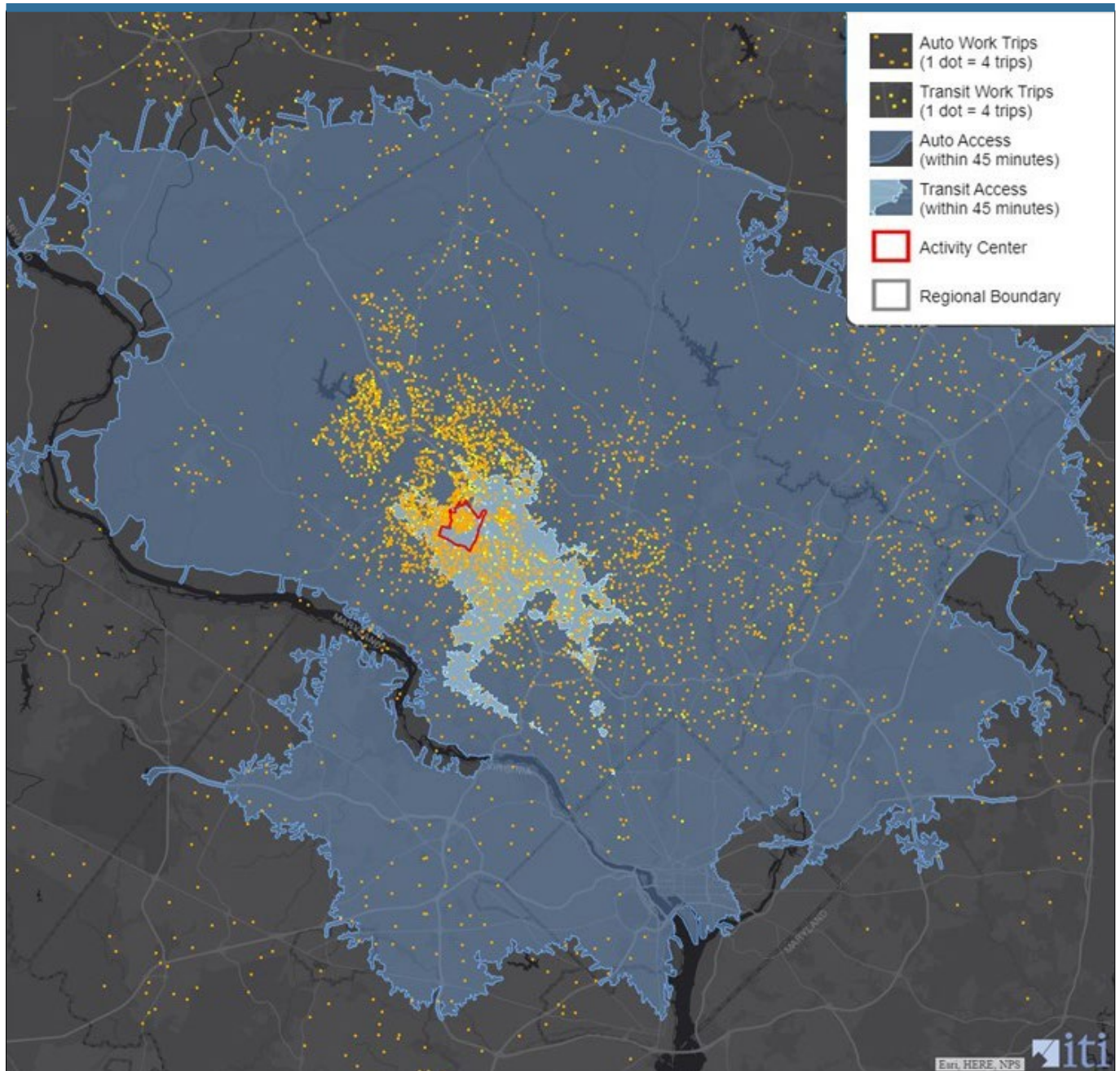


figure 6 | Trips to work and access to the Life Sciences Center, shown in red.



Mode Share

Mode Share is the percentage of commuters using a particular type of transportation. The 2010 Plan set goals for non-auto driver mode share (NADMS)—the percentage of people walking, biking, taking transit, carpooling, or using any means other than driving alone in a personal vehicle—and included them in the staging recommendations. Before Stage 2 begins, the area must attain 18 percent NADMS, before Stage 3 begins, the area must attain 23 percent NADMS, and before Stage 4 begins, the area must attain 28 percent NADMS. The area has achieved a 19 percent NADMS.

For those living within the Great Seneca Science Corridor Plan area, over two-thirds commute to work alone by private vehicle, and fewer commute by public transit than in the rest of the county. Nevertheless, 19 percent of commuters walk, bike, take public transportation, carpool, or telework, an increase since 2010. Surveys from the Shady Grove Transportation Management District (TMD) suggest that people who live in the multi-family apartment buildings have a higher non-auto driver mode share (32 percent) and are more likely to take transit (27 percent).

Access and amenities for people walking or biking is central to the 2010 Plan vision, and existing and planned investments in infrastructure promise to improve active transportation. The 3.5-mile LSC Loop, which received funding for planning, design, and construction in 2020,

unifies the pedestrian and bicycle circulation system of sidewalks, bikeways, trails, and paths. It is also a crucial tool to increase NADMS and mobility options in the area and serves as an organizing element for planned open space in the Life Sciences Center, connecting residents, employees, and visitors to active recreation.

A staging requirement for Stage 2 of development, the LSC Loop links activity centers and community facilities, including the planned high school in Gaithersburg's Crown Farm neighborhood, Falls Grove Village shopping center, and the planned Traville Local Park to major employment and residential hubs in the Life Sciences Center. The LSC Loop trail enables people to get to jobs, school, recreation, and shopping destinations by walking, biking, or rolling.

In addition to supportive infrastructure, new access to non-motorized mobility has come to the Life Sciences Center. Shared micromobility options have arrived in the area over the past decade, including bike share and scooter share. Capital Bikeshare

currently operates eight docking stations in the Life Sciences Center. The majority of the Plan area also falls within the service limits of the dockless shared mobility companies Lime and Bird, with coverage ending near Quince Orchard Road.

Life Sciences Center Loop Trail

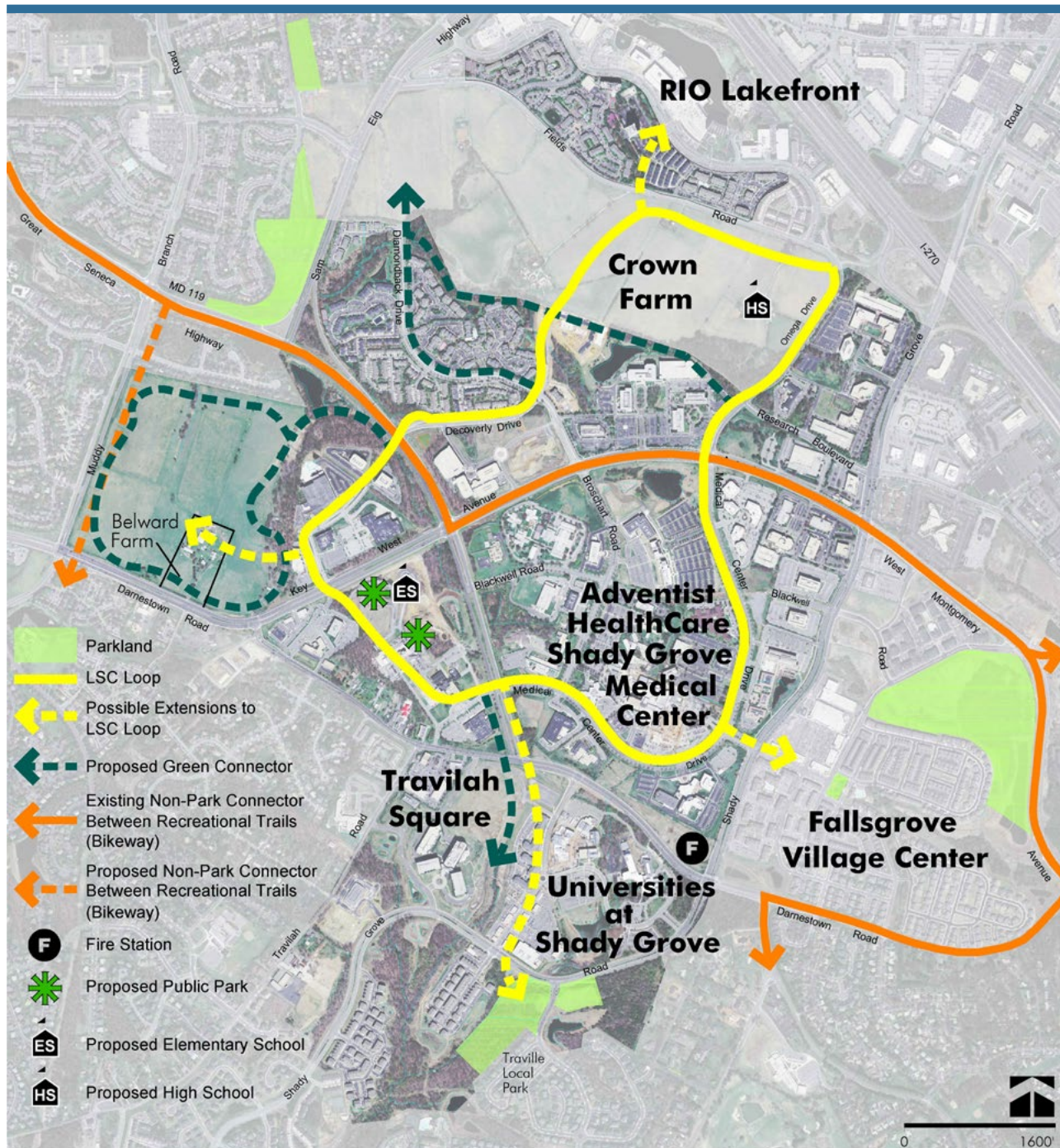


figure 7 | LSC Loop trail connects jobs, school, recreation, and shopping.

Progress Towards the 2010 Vision:

Key Takeaways

- ❖ The life sciences industry is central to the economic health of the county, providing jobs and revenue, and the Life Sciences Center is the hub for this industry's growth in the county.
- ❖ Life sciences industry in the county has been integral to developing life-saving science, including the global response to the COVID-19 pandemic.
- ❖ There has been sustained demand to locate and expand in the Life Sciences Center, and that demand has increased with the COVID-19 pandemic.
- ❖ The life sciences industry provides jobs to a diverse set of employees and has the potential to be a driver of equitable economic development.
- ❖ Residential development capacity remains under the 2010 Plan Stage 1 of development.
- ❖ The multi-family residential market is strong, although the density of built and proposed projects is lower than anticipated.
- ❖ The area has met the NADMS requirements for Stage 2 of development, however it remains below the county average.
- ❖ Residents in the new apartment buildings appear to ride transit at higher levels than other residents, suggesting there may be a market for high-quality transit.
- ❖ Existing transit service to and from the Life Sciences Center remains inferior to automobile access, limiting desirability for residents and commuters to use transit to access the area.

Barriers To and Departures From the 2010 Plan Vision

The 2010 Plan established a vision of transforming the suburban auto-dependent Life Sciences Center into a walkable, vibrant science center with a mixture of uses served by transit as well as an array of services and amenities for residents, workers, and visitors. There has been substantial progress towards the realization of the 2010 Plan vision, as the Life Sciences Center has solidified its place as a premier, globally recognized hub for the life sciences. The area, however, remains largely suburban, with high speed arterials cutting through the Life Sciences Center and separating primarily single-use projects. New projects have been built with lower densities than anticipated and several large approved pipeline projects remain unbuilt. The vision of an urban, compact form with mixed-uses has not materialized. There are still major obstacles to achieving the 2010 vision and there have been key departures in implementation.

Transit and the Corridor Cities Transitway

Perhaps the single largest barrier to achieving the 2010 Plan vision is the stalled implementation of the Corridor Cities Transitway (CCT). Transit is an essential element of the 2010 Plan, and the CCT is the cornerstone of the transportation vision, which underpins the land-use and zoning recommendations. The 2010 Plan identifies the CCT as an important tool for attracting business and creative-class workers--people working in science, engineering design, education, arts, music and entertainment, who generate new ideas in technology and other creative content. The CCT, as planned, serves as an internal link between the areas within the Life Sciences Center, enabling people who live and work in the area to commute by transit. The CCT also serves as an important connection to regional transit networks and nearby residential communities, allowing more workers to commute by transit.

The planned CCT not only connects people to various places, but each station stop serves as its own activity hub. Each stop acts as a catalyst for a new development pattern, defining the district by including public open space or parks, a concentration of retail and residential uses.

Despite the centrality to the vision for the area, the CCT has an uncertain future. The Maryland Department of Transportation's Maryland Transit Administration does not intend to further fund the implementation of the CCT. The county has reiterated support for the project, however there are no immediate plans for implementation nor is there a source of reserved funds.

The stalling of the CCT, as both the centerpiece of the 2010 Plan vision and staging requirements, has hindered non-residential development. The consolidation of the life sciences industry in and around the Life Sciences Center maintains pressure for development serving the industry, particularly specialty and purpose-built spaces in the area. However, continued growth is hindered by the staging requirements established in the 2010 Plan, which limit the development capacity. Commercial development capacity for the current Stage 1 has been fully allocated and additional commercial development in the area cannot proceed until staging requirements are met to enable opening Stage 2, including the full funding of the CCT.

A concurrent planning effort, Corridor Forward: The I-270 Transit Plan, is evaluating the CCT as one of several transit options that could serve communities along the I-270 corridor, including the Life Sciences Center. Corridor Forward is anticipated to prioritize transit options based on the county's strategic economic, environmental, and equity goals, and create an implementation plan to realize the highest-priority project(s). Corridor Forward is expected to produce a prioritized list of transit options and may identify higher priority transit options to serve communities along the I-270 corridor.

There are no high-quality transit options available in the area and there have not been any major improvements to transit serving the area since the approval of the 2010 Plan. The Life Sciences Center is served by seven local Ride On bus routes (43, 54, 56, 66, 67, 74, 127). Three of these bus routes provide all-day service, however none of them provide frequent service, defined as 10- to 15-minute headways during the day. Ridership along three of the routes has declined substantially over the past five years, however in the case of two of these, the decrease coincides with the closing of major stores at the Lakeforest Mall, which they also service.

Pipeline Development and Existing Stock

Failure to achieve the requirements of Stage 2 has restricted new non-residential development, however non-residential development has been limited by other factors as well. In 2010, there was a significant amount of non-residential development existing in the Life Sciences Center, approximately 7 million square feet. Development included the Adventist HealthCare Shady Grove Medical Center, J. Craig Venter Institute, and regional office buildings. At the time, there was also another 3.7 million square feet of approved and unbuilt development, including 1.4 million square feet of development at the Belward property, owned by Johns Hopkins University. Since 2010, new non-residential development construction and conversions of non-residential approvals to constructed residential projects, and constructed pipeline development has increased the non-residential development on the ground to 8.3 million square feet.

The North Germantown-Rockville area experienced a significant office development boom between 1998 and 2009, which was accompanied by strong absorption. Little office development has been delivered post 2009. In 2009, the area appeared overbuilt, then recession losses led to a spike in vacancy. Since 2009, office vacancy has not dipped below 10 percent, a level at which new development is not attractive without an identified tenant.

table 5 | Existing and Approved Development in the Life Sciences Center

Existing Development	8,266,850 Square Feet
Approved and Unbuilt	2,474, 084 Square Feet

Still, significant development capacity remains approved but unbuilt, most notably pipeline development at the Belward property. Multiple extensions of the adequate public facilities validity periods—both by request and through universal extensions—have allowed Johns Hopkins University and others to maintain their approvals over decades without advancing approved development. These approved but undeveloped pipeline projects have left the area with lower levels of development than anticipated in the 2010 Plan.

There is limited vacant land within the Life Sciences Center, with one prominent 18-acre vacant parcel owned by BMR-Shady Grove LLC and several vacant parcels of three to five acres. Thus, most additional demand for development will need to be met through infill development, potentially through replacing surface parking lots or the redevelopment of obsolete office properties.

Demand for Non-Residential Space

The demand for life sciences space in the Life Sciences Center continues, even without available capacity. The life sciences industry demand for space, however, appears divergent from the traditional office space that is available in the Life Sciences Center.

There has been little development of office space in the past 10 years in the North Rockville-Germantown market, and office vacancy in the market area is high; office vacancy climbed steeply in 2020 and is approaching 15 percent. The data does not indicate there is much unmet demand for new office space, however it is likely that there are many obsolete office buildings in this market that do not meet the special needs of

the life science industry, an industry with unmet demand in the market. As a result, expansion of the industry could drive new development or renovation of existing office buildings. However, according to the Maryland Tech Council, conversion of existing office space to life sciences space without a tenant is unlikely, especially for projects over 20,000 square feet, as larger tenants are pursuing new development to meet their specific needs.⁸

Flex space—space that has some sort of combination of warehouse space and office/retail space—is more desirable in the Life Sciences Center though market rents for flex space are far less than for retail, office, or multifamily. Vacancy for flex space has declined substantially in the last five years in the broader North Rockville-Germantown market. Despite demand, there has been little development and rents have not climbed. Due to the lower level of rents for flex space and the high value of land and labor costs in the Washington, D.C. region, it is difficult to foresee new development of speculative flex space—flex space built without a tenant—through costly office conversions being widely feasible in the Life Sciences Center. Instead, according to the Maryland Tech Council, larger life science companies—seeking spaces of 40,000 square feet or more—are pursuing new development because of their specific needs.

Several recent developments in Gaithersburg, adjacent to the 2010 Plan area, illustrate the types of life sciences development the Plan area may anticipate. The first is an 80,000 square foot office-to-lab conversion project from Alexandria Real Estate Equities and Scheer Partners, leased by Novavax, a biotech company that received \$2 billion in funding for its COVID-19 work, at 704

⁸ Bio Innovation Conference Scheer Partners Thought Leadership Session, Maryland Tech Council.

Quince Orchard Road. Novavax is also leasing the adjacent property (700 Quince Orchard Road), which is a 122,000 square foot conversion project to which Novavax plans to add an additional approximately 50,000 square feet of purpose-built space. Other recent developments in the Life Sciences Center, such as the 85,000 square foot purpose-built space for Autolus and the recently completed 175,840 square foot research and development infill building at 9800 Medical Center Drive, exemplify the demand for specialty and purpose-built space, space designed for the particular needs of a company or institution.

The 700 Quince Orchard property was originally planned as a live-work-play mixed-use development with 175 townhomes in the City of Gaithersburg. Although not in the 2010 Plan area, the conversion of the 700 Quince Orchard Road project from a mixed use to a single purpose project is a step away from the vision for the area, which envisioned a mix of land uses.

Limited Mixed-Use Development

A mixed-use, urban environment has not been achieved 10 years after the adoption of the 2010

Plan, nor does it appear to be achievable in the next decade, the horizon of the approved plan.

The Life Sciences Center has experienced limited retail development, although there has been a fair amount of retail growth in the larger North Rockville-Germantown market.⁹ The Travilah Grove Shopping Center project, which included a facelift of approximately 42,000 square feet of existing retail as well as nearly 14,500 square feet of new retail, is the most substantial retail development in the area. However, due to the limited availability of vacant land and the increased construction cost of including retail on the ground floor of new multifamily buildings and potentially reduced demand for retail space after the COVID-19 pandemic, it is unlikely that retail will be a significant source of growth in the Life Sciences Center area.

The scale of both the housing development and the accompanying retail has occurred at a lower density than anticipated in the 2010 Plan. There has been limited success with attracting mixed-use retail/residential development, with projects such as Mallory Square including just 3,500

⁹ There has been some positive development in the North Rockville-Germantown area since 2003, which is significant because of the limited demand nationally for new retail space in the past 15 years



square feet of retail. Whether due to waning national support for brick-and-mortar retail or to the staging restriction on non-residential development, there have been fewer commercial services in proposed developments.

The proposed development for the former Public Safety Training Academy site, relocated as part of the staging requirements, exemplifies the type of development the area is attracting, and its departure from the 2010 Plan vision. The 2010 Plan envisions the PSTA site as a hub of activity that draws people from other parts of the Shady Grove Life Sciences Center. The Plan's zoning recommendations allow up to 2,000 dwelling units and 150-foot building heights at the site. The Plan also envisions redevelopment with neighborhood-serving retail, employment uses, parks and active public spaces, as well as a CCT station.

The preliminary plan submitted for the Elms at PSTA proposes approximately 645 dwelling units and 1,940 square feet of ground floor retail space in one of the multi-family structures, as well as parks and public spaces smaller than anticipated in the 2010 Plan. The planned unit mix includes approximately 281 townhouses, 64 2-over-2 condominiums, and 300 multi-family units in a mid-rise building with surface parking. While the proposed development includes several elements identified as priorities in the 2010 Plan, the overall mixture of uses and densities are less than anticipated—consistent with the overall development pattern in the area.

There appears to be further demand for multi-family housing in the area. New development will likely take the same form of the recent multi-family buildings—stick-frame wood construction wrapping a pre-cast parking garage. Retail and mixed-use are generally limited with this form of development as it requires a more costly concrete podium. This stick-frame multi-family typology is typically four to five stories in height, and projects generally utilize four to six acres of land.

Form

The Plan prioritized life sciences development in mid- and high-rise mixed-use buildings, and promoted urban-style design with structured parking, pedestrian scale streets, signature buildings, and shorter distances between buildings and the sidewalk, which creates a frame for the street. The Design Guidelines that accompanied the 2010 Plan recognized that “Today, the buildings and spaces in Great Seneca Science Corridor Master Plan area are complementary in use and function, but unsustainable as self-sufficient entities. They function like typical research parks, with wide roadways and setback buildings forming visually separated spaces and physical barriers that prevent a cohesive and accessible built environment.” (Design Guidelines, p. 5) As an earlier draft of the guidelines stated, the “area exists as a series of tenuously linked adjacencies whose sum is less than their individual parts.”

The pejorative description of the 2010 Life Sciences Center from the Design Guidelines could easily describe the Life Sciences Center today. Development has not achieved the urban style form envisioned; the form of the built environment remains relatively unchanged. New development, although it employs best design practices like high quality construction materials and infill redevelopment of surface parking lots, remains primarily suburban and auto-centric in form. The 2010 Plan identified four principles to set the scale and character of the LSC:

- ❖ Buildings that define the public spaces, streets, plazas, parks, and views.
- ❖ Circulation on a pedestrian-oriented street grid that creates pedestrian and bicycle connections to transit and between uses and districts.
- ❖ A system of public open spaces that provides a setting for community activity and also preserves natural resources.
- ❖ A standard for sustainability that reflects the LSC's cutting edge science.

2010 Plan Open Space Map

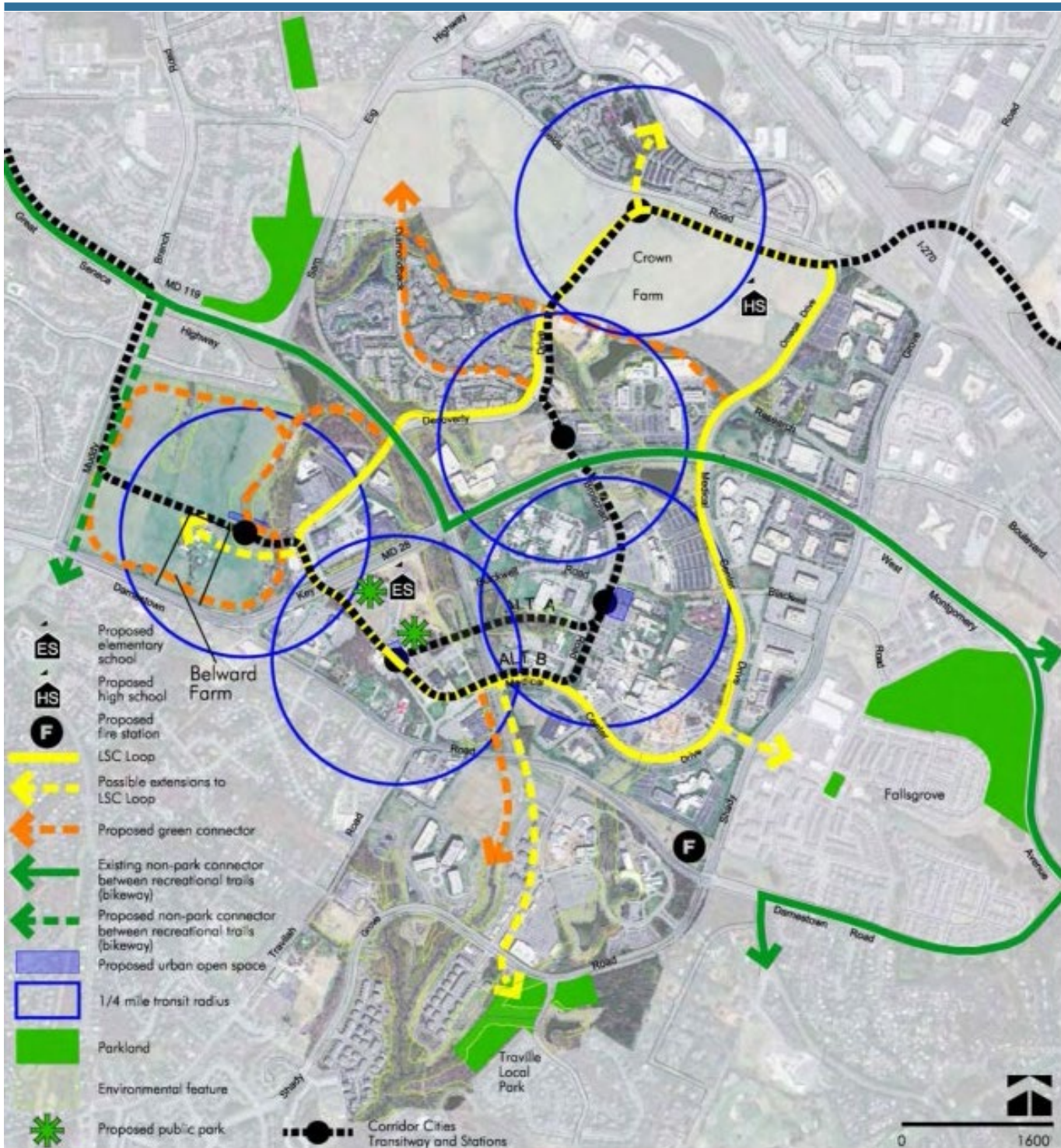


figure 8

2010 Plan Open Space Map: Open space network comprised of public parks and trails such as the LSC Loop Trail, Traville Local Park, and Muddy Branch Trail Connector, and the LSC West Urban and LSC West Local Parks, as well as public privately owned civic greens and linear parks have not been delivered.



Buildings should define the public realm, however many of the recent developments and applications for development in the Life Sciences Center are inward-facing suburban campuses. The entrances are not oriented to the street, the setbacks are close to 100 feet, second tier street grids are not implemented, and the projects do not integrate with surrounding sites. Buildings that do not have a relationship with the street inhibit the walkability and safety of the area.

The vision of a walkable urban form is elusive too. Building orientation and site connection create challenges for people walking, rolling, and taking transit in the area, by increasing the distance between destinations and offering a less active, interesting public realm. Absence of a street grid, connections between sites, and site orientation can also affect the safety and comfort of people walking, rolling, and taking transit. Longer distances between buildings and the street and infrequent intersections contribute to higher design speeds—speeds at which drivers feel comfortable driving fast on a road. Easily identifiable connections to adjacent properties, low-speed, low-traffic roadways or paths allow people to safely and comfortably walk or roll to nearby destinations.

Park and recreational facilities planned to serve the community and shape the public realm of the Life Sciences Center have yet to be delivered.

Key community facilities envisioned in the 2010 Plan, such as the North Potomac Community Center and Travilah Fire Station 32, have been built, but open spaces, both public parks and privately owned public spaces have not been implemented. These parks and open spaces have not moved forward for a variety of reasons—private pipeline development has not been constructed, competing funding priorities in the county’s Capital Improvements Program—but their absence from the landscape has been a great departure from the 2010 Plan vision. This departure has contributed to the lack of community gathering spaces, activated space, and non-motorized connectivity.

The departure in urban form is perhaps a function of the other departures: a stalled CCT, existing hostile public streetscapes, lower density due to unrealized pipeline projects, less dense residential projects, and commercial space that accommodates fewer workers, and the limited mix of uses. However, the form is the most acutely apparent departure from the vision. To describe the progress of the 2010 Plan over the past decade, one resident quoted Gertrude Stein: “There is no there, there.” The area does not have a cohesive organizing principle, and many amenities and connections have not been constructed.

Barriers To and Departures From the 2010 Plan Vision:

Key Takeaways

- ❖ The CCT is at the center of both the 2010 Plan and the staging requirements. There are no immediate plans to fund the CCT, which means that no new non-residential development can occur under the current staging.
- ❖ Key large projects remain unbuilt.
- ❖ Available office space may not meet the needs of the life science industry. Recent projects have suggested the preference or need for specialty or purpose-built spaces.
- ❖ Mixed-use vision has not been realized.
- ❖ New projects have largely maintained traditional suburban, auto-centric, office park design.

OUTREACH

Outreach targeted to fit the timeline and technical material of the Amendment; focused on information sharing and reciprocal education. Montgomery Planning held smaller meetings with stakeholders. Due to COVID-19 precautions, all outreach activities were virtual, offering community members to participate by phone or internet.

Throughout the process, staff consulted with the Great Seneca Science Corridor Implementation Advisory Committee (IAC), established by the 2010 Plan and comprised of residents, and institutional and private representatives. They provided guidance for the approach of the amendment, outreach to the community as well as history and context of development. Through interviews, life science industry experts as well as developers in the Life Sciences Center shared unique considerations for the industry.

Montgomery Planning Staff coordinated closely with county partners, Montgomery County Economic Development Corporation (MCEDC) and Montgomery County Department of Transportation (MCDOT). In addition to sharing data and analysis, Montgomery Planning and MCDOT co-hosted a virtual public meeting.

Montgomery Planning hosted a virtual public meeting and virtual office hours with community members to benefit from community knowledge and understand their experiences as well as their perceptions of progress, opportunities, and obstacles, to realizing the Plan's vision.

Do you feel like we've made progress towards the vision over the past 10 years? Is it the progress you expected?



figure 9 | Feedback from the Implementation Advisory Committee on the progress of the 2010 Plan vision. A majority of responses referenced parks, connectivity, and/or a sense of place.

Recommendations

The purpose of this Amendment is to support economic health and opportunity in the Life Sciences Center by enabling growth. The scope of the Amendment is narrow in order to provide rapid, targeted analysis and recommendations that move toward realizing the 2010 Plan vision despite lack of funding for the CCT. The following recommendations of the Amendment seek to provide relief to the life sciences industry development pressure at this crucial time for the county and the industry and support a more comprehensive evaluation of the Plan area in the near term.

Recommendation 1

Create an interim stage, between Stage 1 and Stage 2, that shifts 400,000 square feet of non-residential development from Stage 2 to this interim stage. Release 400,000 square feet of non-residential development capacity immediately through this interim stage. The 400,000 square feet of non-residential development capacity is limited to the LSC North, LSC Central, and LSC South districts. New development capacity allocations through this interim stage are prohibited in the LSC West and LSC Belward Districts. The additional capacity of 400,000 square feet is only available for non-residential development and is not eligible for conversion to residential development under the staging requirements.

Recommendation 2

Initiate a comprehensive amendment to the 2010 Plan to address the departures and barriers from the 2010 Plan vision identified through this Amendment, as well as changes to or the potential elimination of the staging requirements. The comprehensive amendment provides an opportunity to integrate policy guidance from countywide plans and initiatives including Corridor Forward: The I-270 Transit Plan, Thrive Montgomery 2050, and Vision Zero, as well as to employ a robust outreach and engagement strategy to create a plan that advances racial equity and social justice.

Advancing the Plan Vision

The implementation of the 2010 vision, both the achievements and departures, raise considerations that influenced the short-term recommendations of this Amendment: the needs of the life science industry, density of projects and their traffic impacts, potential transit options, and future planning opportunities. These considerations informed the reasoning for the Amendment recommendations.

The Life Sciences Industry

The life sciences industry is central to the economic health of the county, providing jobs and revenue, and the Life Sciences Center is the hub for this industry's growth in the county. Interviews with life sciences industry stakeholders, MCEDC, as well as economic leaders and developers, emphasized the importance of colocation—the desire for life sciences companies to be located near other life sciences companies. Employment and growth data show that the life sciences industry has consolidated in and around the Life Sciences Center.

If development cannot proceed in the Life Sciences Center, there is a potential that life sciences companies will locate elsewhere, near other life sciences hubs outside of the county, which could diminish the viability of the Life Sciences Center.

Through the Amendment recommendations, it is crucial to enable some development capacity immediately to meet the growth needs of the industry. Referencing recent life sciences development projects in the area, development capacity of 400,000 square feet would accommodate between two and five projects.

table 6 | Recent lab/research development projects in and near the Life Sciences Center*

Project	Square Feet	Location	Project Delivery
704 Quince Orchard Road	80,000	Gaithersburg	2019
700 Quince Orchard Road	172,000	Gaithersburg	2020
9950 Medical Center Drive	85,000	Life Sciences Center	2019
9800 Medical Center Drive (Parcel F)	175,840	Life Sciences Center	2020
Traville Parcel N	200,000	Life Sciences Center	Under Review**
9800 Medical Center Drive (Parcel X)	93,560	Life Sciences Center	Under Review**

* None of the projects in the table require new development capacity to move forward. They are either not in the 2010 Plan area, were part of approved pipeline development or already received approvals under Stage 1.

**Under review by Montgomery Planning as of March 2021.

Transportation Planning

The density anticipated in the 2010 Plan has not been realized. Residential development has remained far below what is allowed in Stage 1 of development. In 2010 there were 3,262 existing dwelling units. Stage 1 allowed an additional 2,500 units to be built and only 311 of those units have been allocated, with 2,189 residential units of capacity remaining in Stage 1.¹⁰

The density of employees in the area remains lower than projected as well. First, several projects in the pipeline of approved development that received approvals prior to the approval and adoption of the 2010 Plan have yet to be constructed. The County Council extended their adequate public facilities (APF) validity period beyond the typical seven years and in some cases beyond the 12-year APF validity period maximum. The 2010 Plan anticipated that the 3.7 million square feet of approved pipeline development would proceed, but approximately 2.4 million square feet of non-residential pipeline development remains unbuilt.

Second, the types of employment that have moved in and spaces that have been built require more space per employee, meaning that the same amount of gross floor area accommodates fewer employees. According to the MCEDC, life-science uses require up to twice the amount of space per employee than the average office space.

Over the past decade, there has been a substantial increase in telework. The 2010 Plan predicted minimal telework, just one percent of employees. However, according to the Shady Grove Transportation Management District, over seven percent of employees currently telework.

Fewer residents, visitors, and workers translates into fewer car trips. Fewer anticipated trips than projected, coupled with increases in the NADMS even beyond the Stage 2 requirements, has led to relatively stable traffic. Stage 1 of development allocated 400,000 square feet and approximately 1.2 million square feet of pipeline non-residential has been constructed since 2010. Over the past decade, however, there has been very little up or down movement in the average of daily traffic on the major roadways in the area.

Assuming all pipeline development were to be built out to its full, approved development—which has not been the trend in the area—an additional 400,000 square feet of new lab/research development would yield a negligible number of additional peak-hour trips beyond what was projected for Stage 1.

¹⁰ An additional 1,212 residential units have been converted from approved non-residential pipeline development. The 2010 Plan provided that the owner of a property approved for commercial development may re-subdivide and convert to residential development. This conversion will be exempt from staging, if the conversion does not increase vehicle trips.

Annual Average Daily Traffic (AADT, 2010-2019)

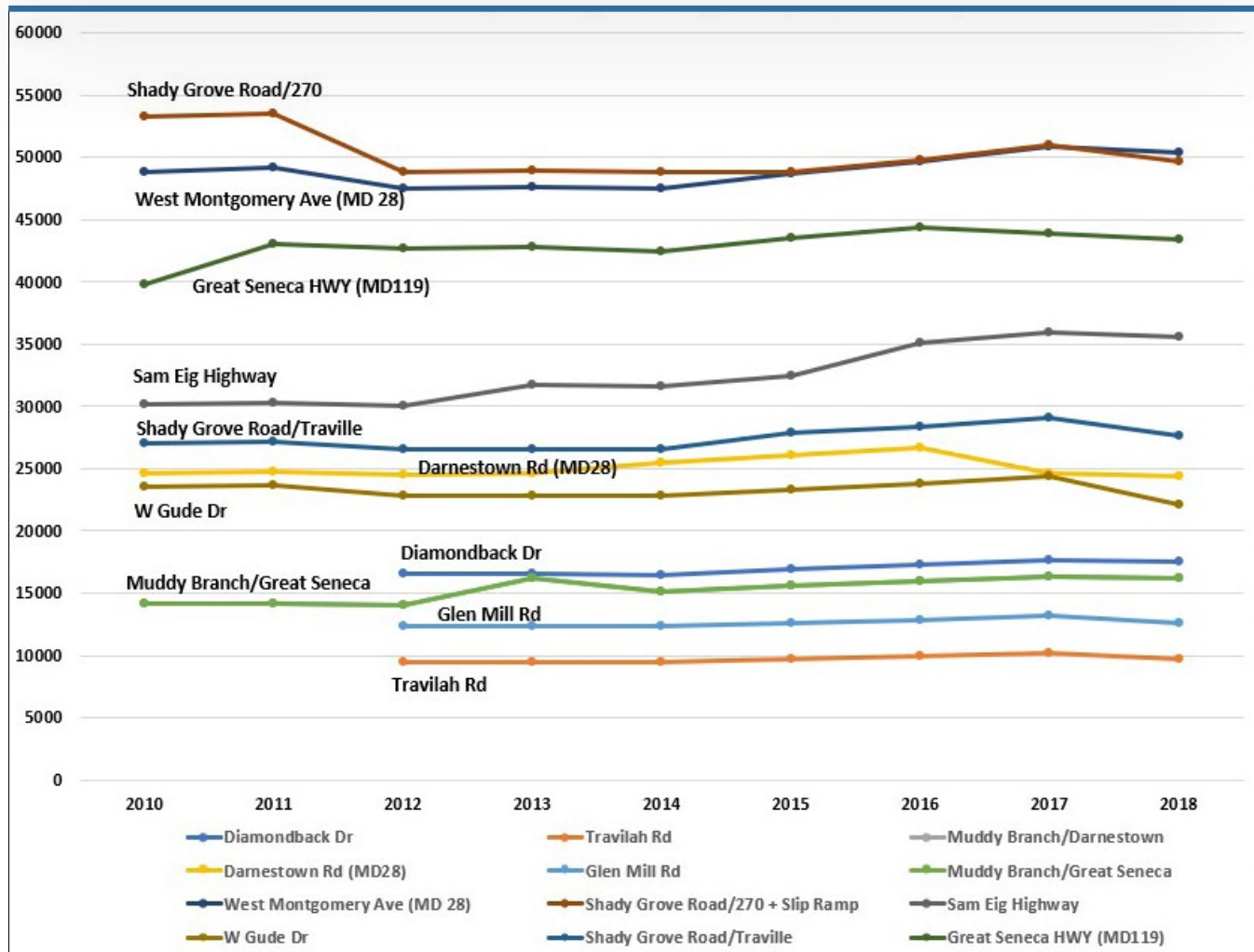


figure 10 | Annual Average Daily Traffic on select roadways in and near the Life Sciences Center.

Potential Transit Options

The Montgomery County Department of Transportation (MCDOT) is requesting funding in the fiscal year 2022 County budget for planning and design for the Great Seneca Transit Network, an enhanced bus network to service the Life Sciences Center. The Corridor Cities Transitway remains the long-term transit vision for MCDOT, but the county recognizes that implementation in the near-term is not realistic and quality transit is needed now.

The proposed network aims to improve access for residents to major transit hubs and jobs, expand mobility choices, enhance economic activity, and strengthen connections for essential healthcare and education workers. The five transit lines proposed by the Montgomery County Department of Transportation would potentially connect priority destinations, including the Shady Grove Metrorail Station, Rockville Town Center and Metrorail Station, RIO, and Falls Grove as well as residential centers such as Crown Farm, Kentlands, and King Farm to sites throughout the Life Sciences Center.

The proposed bus network would prioritize and enhance transit through dedicated bus lanes, transit signal prioritization, and queue jumps, as well as improved bus stations. The frequency of transit service would bring it well above current service levels. MCDOT is working to secure funding to advance this project in the next fiscal year, which would support planning and design for the proposed route network and improvements.

The proposed network would provide many of the connections recommended in the planned alignment of the CCT. The bus routes are a departure from vision of the high quality, permanent infrastructure that would accompany the CCT. However, key dedicated infrastructure elements would speed travel times and increase reliability of transit options. Installation for enhanced bus shelters with real-time information could improve the desirability of transit as well.

The 2010 Plan recognized that the CCT may involve a staged or phased implementation and key factors to consider would be frequent service (10 minutes or less), faster average speed than conventional bus, branding and clean technology vehicles, and distinctive well-lit station areas. The Great Seneca Transit Network would meet all these considerations. In the near-term this project, or another of comparable scale, could increase transit ridership by offering fast, alternative transit.

Future Planning Opportunities

Over the past decade, Montgomery County has adopted policies and enacted legislation that have far-reaching consequences for how the county plans and provide a framework for future planning initiatives. Montgomery Planning has also developed guidelines to direct safe, equitable and sustainable development. A comprehensive amendment recommended in Recommendation 2 will provide an opportunity to align the vision, recommendations, and overall staging requirements of the 2010 Plan with the county's defined goals, priorities, and values. Policy initiatives, including but not limited to the following, will be incorporated into future planning initiatives:

- ❖ The Racial Equity and Social Justice Act was approved and adopted by the Montgomery County Council in December 2019 and requires that the Planning Board consider racial equity and social justice when preparing Master Plans.
- ❖ The Vision Zero resolution was adopted by the Montgomery County Council in 2016 and commits to eliminating traffic fatalities and severe injuries. Currently underway is the ten-year action plan to eliminate traffic fatalities and severe injuries by 2030.
- ❖ The Planning Board Draft of Thrive Montgomery 2050, an update to the county's General Plan, includes policy guidance for a broad range of land-use and planning issues and for achieving the overarching objectives of economic competitiveness, racial and social equity, and environmental sustainability.

In addition to integrating policy guidance from countywide plans and initiatives, the comprehensive amendment offers an opportunity to examine and develop recommendations regarding:

- ❖ The staging requirements of the 2010 Plan, including requirements involving the funding and construction of the CCT.
- ❖ Transportation recommendations of the 2010 Plan, including the six recommended grade separated interchanges, to ensure they are consistent with county transportation goals and priorities.
- ❖ The safety and comfort of the transportation network for people walking, biking and rolling, to ensure consistency with the county's Vision Zero policy and Complete Streets Guidelines.
- ❖ Land use and zoning recommendations of the 2010 Plan, considering existing and planned transit as well as multimodal improvements.
- ❖ Housing affordability and attainability in the area.
- ❖ The status of public and private open space, parks and trails, including the LSC Loop trail.
- ❖ The urban design guidelines that accompanied the 2010 Plan.
- ❖ Opportunities to advance racial equity and social justice.

Conclusion

Following the approval and adoption of this Amendment, 400,000 square feet of new non-residential development capacity will be released without any additional staging requirements. Stage 1 of the 2010 Plan allocated 400,000 square feet of non-residential capacity and provides a benchmark to evaluate future development in the area. While the Stage 1 development was allocated with the approval of two preliminary plans within two years of the Plan adoption, much of this development was just recently completed – a decade following the approval of the 2010 Plan. In addition, over the last decade approximately 400,000 square feet of approved but unbuilt commercial development was converted to residential units. The immediate allocation of 400,000 square feet restores the non-residential development anticipated in the staging requirements of the 2010 Plan.

Based on recent development trends in the Life Sciences Center and surrounding areas as well as the precedent of Stage 1 allocation and development, the creation of an interim stage with 400,000 square feet of new non-residential development provides the potential for a few projects to proceed, relieves immediate demand in the area, and provides sufficient capacity to sustain development pressure while a comprehensive amendment to the 2010 Plan is completed.

The immediate allocation of 400,000 square feet of non-residential development capacity, coupled with the existing approved but unbuilt development, will address the urgent need to accommodate growth in the life sciences industry in the near-term, supporting the county's economic health and employment opportunities as well as maintaining the county's leadership in life sciences innovation. This additional development capacity will also respond to the three critical factors that required this Amendment — a pressing need to accommodate

life sciences development, inability of commercial development to proceed due to staging requirements, and the stagnation of the CCT.

The second recommendation, to initiate a comprehensive amendment to the 2010 Plan, provides an opportunity to address issues that fall outside of the scope of this Amendment without the urgent need to accommodate demand. The Amendment process will enable engagement with residents and stakeholders to produce recommendations that further the development of the area, reflecting the county's goals and trends. The comprehensive amendment offers an opportunity to examine and develop recommendations regarding a wide range of issues.

Acknowledgements

Gwen Wright, Planning Director
Robert Kronenberg, Deputy Director
Tanya Stern, Deputy Director

Project Team

Mid-County Planning Division

Carrie Sanders, Chief
Zubin Adrianvala
Steve Findley
Elwyn Gonzalez
Maren Hill, Project Manager
Jessica McVary, Master Planner/Supervisor

Functional Planning and Policy Division

Jason Sartori, Chief
Jesse McGowan

Research and Special Projects Division

Caroline McCarthy, Chief
Todd Fawley-King*
Benjamin Kraft

Park Planning, Department of Parks

Charles Kines

Legal Office

Matt Mills

Communications Division

Bridget Broullire, Chief
Darrell Godfrey
Brian Kent

*former staff member

Elected and Appointed Officials

County Council

Gabe Albornoz, President
Evan Glass, Vice President
Andrew Friedson
Tom Hucker
Will Jawando
Sidney Katz
Nancy Navarro
Craig Rice
Hans Riemer

County Executive

Marc Elrich

The Maryland-National Capital Park and Planning Commission

Elizabeth M. Hewlett, Chair
Casey Anderson, Vice Chair

Montgomery County Planning Board

Casey Anderson, Chair
Partap Verma, Vice Chair
Gerald R. Cichy
Tina Patterson
Carol Rubin

Prince George's County Planning Board

Elizabeth M. Hewlett, Chair
Dorothy F. Bailey, Vice Chair
William M. Doerner
Manuel R. Geraldo
A. Shuanise Washington

Resolution No.: 19-1053
Introduced: November 9, 2021
Adopted: November 9, 2021

**COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND
SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION
OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT
WITHIN MONTGOMERY COUNTY, MARYLAND**

Lead Sponsor: County Council

SUBJECT: Approval of the August 2021 Great Seneca Science Corridor Minor Master Plan Amendment

1. On August 9, 2021, the Montgomery County Planning Board transmitted to the County Executive and the County Council the August 2021 Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment.
2. The August 2021 Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment contains the text and supporting maps for an amendment to portions of the Approved and Adopted 2010 Great Seneca Science Corridor Master Plan. It also amends The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties, as amended.
3. On October 19, 2021, the County Council held a virtual public hearing on the August 2021 Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment. The Minor Master Plan Amendment was referred to the Council's Planning, Housing, and Economic Development Committee for review and recommendations.
4. On November 1, 2021, the Planning, Housing, and Economic Development Committee held a worksession to review the issues raised in connection with the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment.
5. On November 9, 2021, the County Council reviewed the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment and the recommendations of the Planning, Housing, and Economic Development Committee.

Action

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following resolution:

The Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment, dated August 2021, is approved with revisions. County Council revisions to the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment are identified below. Additions to the text of the Plan are indicated by underscoring. All page references are to the August 2021 Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment.

Page 3: Modify the first bulleted recommendation under “Recommendations” as follows:

- Create an interim stage, between Stage 1 and Stage 2, that shifts 400,000 square feet of non-residential development from Stage 2 to this interim stage. Release 400,000 square feet of non-residential development capacity immediately through this interim stage. The 400,000 square feet of non-residential development capacity is limited to the LSC North, LSC Central, and LSC South districts. New development capacity allocations through this interim stage are prohibited in the LSC West and LSC Belward Districts. The additional capacity of 400,000 square feet is only available for non-residential development and is not eligible for conversion to residential development under the staging requirements.

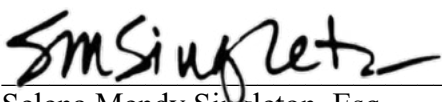
Page 30: Modify the first bulleted recommendation under “Recommendations” as follows:

- Create an interim stage, between Stage 1 and Stage 2, that shifts 400,000 square feet of non-residential development from Stage 2 to this interim stage. Release 400,000 square feet of non-residential development capacity immediately through this interim stage. The 400,000 square feet of non-residential development capacity is limited to the LSC North, LSC Central, and LSC South districts. New development capacity allocations through this interim stage are prohibited in the LSC West and LSC Belward Districts. The additional capacity of 400,000 square feet is only available for non-residential development and is not eligible for conversion to residential capacity under the staging requirements.

General

All illustrations and tables included in the Plan will be revised to reflect the District Council changes to the Planning Board Draft Great Seneca Science Corridor Minor Master Plan Amendment (August 2021). The text and graphics will be revised as necessary to achieve and improve clarity and consistency, to update factual information, and to convey the actions of the District Council. Graphics and tables will be revised and re-numbered, where necessary, to be consistent with the text and titles.

This is a correct copy of Council action.



Selena Mendy Singleton, Esq.
Clerk of the Council



Great Seneca Science Corridor

MINOR MASTER PLAN AMENDMENT

APPROVED AND ADOPTED
Prepared by the Montgomery County Planning Department
MontgomeryPlanning.org