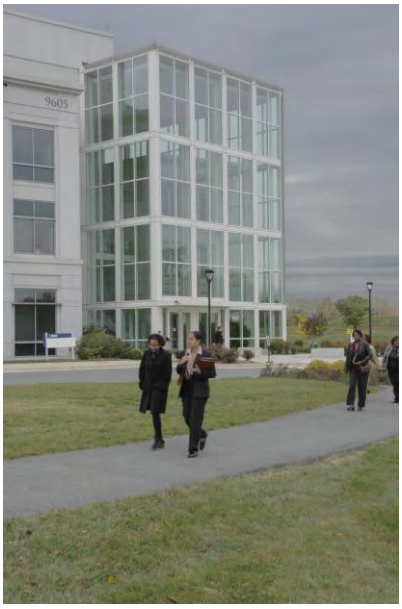
February 2009

Public Hearing Draft

gaithersburg west master plan

The Life Sciences Center



Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission

MontgomeryPlanning.org

gaithersburg west master plan

The Life Sciences Center

Abstract

This plan for areas of western Gaithersburg within the County's planning jurisdiction contains the text and supporting maps for a comprehensive amendment to the approved and adopted 1982 *Oakmont Special Study Plan,* the 1985 *Gaithersburg Vicinity Master Plan*, and the 1990 *Shady Grove Study Area 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, the *Master Plan of Highways within Montgomery County,* as amended, and the *Master Plan of Bikeways,* as amended. This Plan makes recommendations for land use, zoning, urban design, transportation, environment, and community facilities.

Source of Copies

The Maryland-National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3760

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 the county government. The 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 Community Outreach office, 301-495-4600 or TDD 301-495-1331.

Public Hearing Draft Plan

gaithersburg west master plan

The Life Sciences Center

Prepared by the Montgomery County Planning Department
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the plan process

A master plan or sector plan provides comprehensive recommendations for the use of public and private land. Each plan reflects a vision of the future that responds to the unique character of the local community within the context of a countywide perspective.

Together with relevant policies, plans guide public officials and private individuals when making land use decisions.

The PUBLIC HEARING DRAFT PLAN is the first formal proposal to amend an adopted master plan or sector plan. Its recommendations are not necessarily those of the Planning Board; it is prepared for the purpose of receiving public testimony. The Planning Board holds a public hearing and receives testimony, after which it holds public worksessions to review the testimony and revise the Public Hearing Draft Plan as appropriate. When the Planning Board's changes are made, the document becomes the Planning Board Draft Plan.

The PLANNING BOARD DRAFT PLAN is the Board's recommended Plan and reflects their revisions to the Public Hearing Draft Plan. The Regional District Act requires the Planning Board to transmit a master plan or sector plan to the County Council with copies to the County Executive who must, within sixty days, prepare and transmit a fiscal impact analysis of the Planning Board Draft Plan to the County Council. The County Executive may also forward to the County Council other comments and recommendations.

After receiving the Executive's fiscal impact analysis and comments, the County Council holds a public hearing to receive public testimony. After the hearing record is closed, the Council's Planning, Housing, and Economic Development (PHED) Committee holds public worksessions to review the testimony and makes recommendations to the County Council. The Council holds its own worksessions, then adopts a resolution approving the Planning Board Draft Plan, as revised.

After Council approval, the plan is forwarded to the Maryland-National Capital Park and Planning Commission for adoption. Once adopted by the Commission, the plan officially amends the master plans, functional plans, and sector plans cited in the Commission's adoption resolution.

Table of Contents

plan summary 1
- Key Recommendations 1

overview and context 2
- Planning Framework 5
- The Future of the I-270 Corridor 5
- Annexation 7

life sciences center 9
- Planning for Science, Health Care, and Transit 9
- Vision 9
- Today's LSC 11
- Tomorrow's LSC: Linking Land Uses/Connecting Communities 13
  - Housing 16
  - Urban Form and Open Spaces 16
  - The LSC Loop 19
- The LSC Districts 21
  - LSC Central: A Medical and Biotech Center 21
  - LSC West: A New Residential Community 25
  - LSC Belward: A New Science and Research Community 27
  - LSC North: Residential and Office 30
  - LSC South: Mixed-Use Center 32
- LSC Circulation 35

areas and enclaves 39

implementation 61
- Zoning 61
- Staging 61
- Transportation Network 64

Maps

Gaithersburg West Master Plan: Areas and Enclaves 3
Wedges and Corridors 4
MD 355/I-270 Corridor 6
City of Gaithersburg Proposed Maximum Expansion Limits 8
LSC Districts 10
LSC Existing Zoning 11
Corridor Cities Transitway (Phase 1) 14
Proposed Corridor Cities Transitway Alignment and Stations 15
LSC Existing Land Use 17
LSC Open Space Network 20
LSC Central District 22
Proposed LSC Zoning 24
LSC West District 26
LSC Belward District 28
LSC North District 31
LSC South District 33
Watersheds 34
LSC Circulation 37
Gaithersburg West Existing Land Use 40
Gaithersburg West Existing Zoning 41
Existing Land Use: Quince Orchard 42
Existing Zoning: Quince Orchard 44
Existing Land Use: McGown Property 46
Existing Zoning: McGown Property 47
Existing Land Use: NIST/Londonderry-Hoyle's Addition 49
Existing Zoning: NIST/Londonderry-Hoyle's Addition 50
Existing Land Use: Rosemont, Oakmont, Walnut Hill 51
Existing Zoning: Rosemont, Oakmont, Walnut Hill 52
Existing Land Use: Washingtonian Light Industrial Park 53
Existing Zoning: Washingtonian Light Industrial Park 55
Existing Land Use: Washingtonian Residential 56
Existing Zoning: Washingtonian Residential 57
Existing Land Use: Hi Wood 58
Existing Zoning: Hi Wood 59
Transportation Network 60
Bikeway Network 65
LSC Proposed Bikeway Network 73
Trail Network 75

Tables

Street and Highway Classifications 66
Countywide Bikeways 71
LSC Bikeways 74

plan summary

The Gaithersburg West Master Plan envisions a vibrant Life Sciences Center (LSC) where the foundation of science, business, health care, and academic uses combine to create a dynamic, sustainable science and medical hub. A place where knowledge drives the agenda and students of all ages can rub shoulders with the industry's best minds, creating an environment that will attract new thought and investment.

This Plan envisions an LSC where the built environment reflects the inspiring discoveries occurring inside the labs, research centers, and universities.

Key Recommendations

- Transform the LSC into a dynamic live/work community while ensuring growth opportunities for research, medical, and bioscience interests.
- Realign the Corridor Cities Transitway (CCT) through the LSC to provide three transit stations that will be the focal point of new development in LSC Central, LSC West, and LSC Belward.
- Concentrate density, building height, and civic green spaces at the CCT stations. Provide appropriate transitions to adjacent neighborhoods and to the historic Belward Farm.
- Create a grid pattern of new streets that improve local circulation, promote alternatives to car use for local trips, and enhance access to the future transit stations.
- Create the LSC Loop as the organizing element of the open space plan to connect districts and destinations, incorporate natural features, and provide opportunities for recreation and non-motorized transportation.

- Replace the Public Service Training Academy (PSTA) in the LSC West district with a new residential community that includes supporting retail, open spaces, and community facilities.
- Maintain the established residential neighborhoods throughout Gaithersburg West.
- Create a sustainable neighborhood that will attract nationwide interest for design and materials that minimize carbon emissions, maximize energy conservation, and preserve water and air quality.
- Ensure that development in the Piney Branch Special Protection Area south of Darnestown Road uses the best available stormwater management treatment techniques to protect the watershed's headwaters.
- Meet the recreation needs of the Gaithersburg West area by identifying and acquiring a site for a new local public park.
- Support the County's Agricultural Reserve with zoning that requires acquisition of Building Lot Termination (BLT) easements to achieve maximum densities.

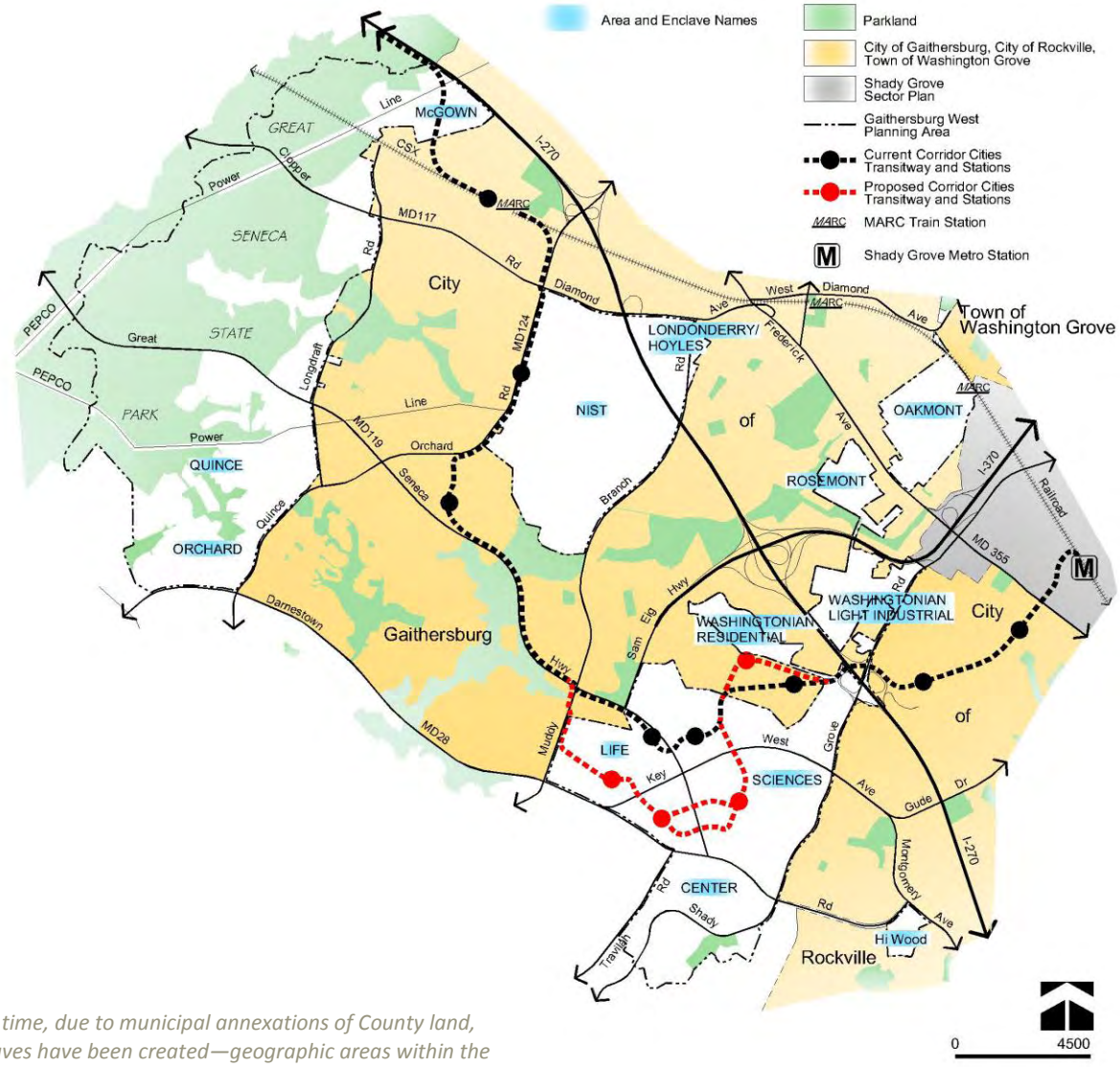
overview and context

Forty-five years ago, the County identified the I-270 Corridor as a place for higher densities in a series of Corridor Cities supported by a comprehensive transportation network. Since then, jobs and business opportunities have attracted skilled workers and business investment that have in turn enabled local government to provide quality schools, amenities, and services.

The *Gaithersburg West Master Plan* addresses the heart of the I-270 Corridor. It includes the Life Sciences Center, which has played a significant role in establishing the Corridor as a globally-known center for science and technology-driven industry, home to biotechnology companies, higher education facilities, and a quality medical center. This Plan provides a blueprint for the future that will transform the LSC into a vibrant place served by transit and enhanced by open spaces.

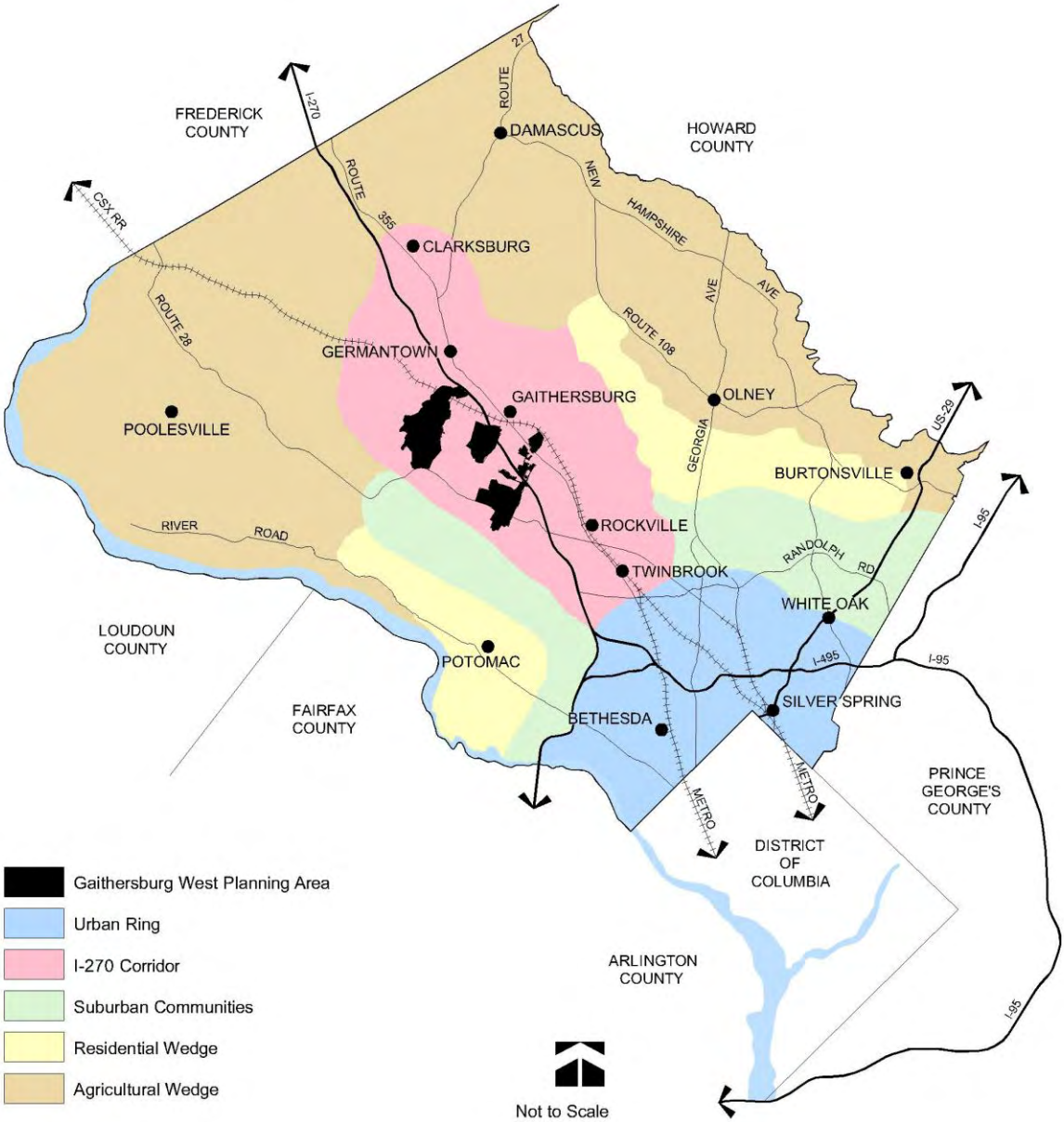
The Gaithersburg West Plan area is 4,360 acres and includes the Life Sciences Center and the Areas and Enclaves. The City of Gaithersburg occupies ten square miles in the center of the Plan area. The City of Rockville borders the Plan on the east and the Town of Washington Grove is to the northeast. The incorporated municipalities have their own planning and zoning authority and are not part of the County's master plans.

Gaithersburg West Master Plan: Areas and Enclaves



Over time, due to municipal annexations of County land, enclaves have been created—geographic areas within the County's planning control, but completely surrounded by a municipality. This Plan also includes areas that are contiguous to County land.

Wedges and Corridors



The suburban communities, residential wedge, and agricultural preserve provide areas for lower density residential uses, open space, as well as farmland, stream valley, and natural resources protection.

Planning Framework

The Plan's recommendations are consistent with State and County planning policies.

- The 1964 General Plan identifies the I-270 Corridor (which includes the LSC) for concentrated, high-density development supported by a comprehensive transportation system including a major highway network, rail lines, and centers called Corridor Cities.

- The 1992 Economic Growth, Resources Protection and Planning Act requires local plans to protect sensitive environmental resources.

- The 1993 *General Plan Refinement* supported the Corridor Cities concept but acknowledged that it had not yet fully evolved.

- The 1997 Priority Funding Areas Act directs State spending to support smart growth, typically to existing communities and places where local governments want investment to support future growth. The entire Plan area is within a Priority Funding area and is eligible for State funding.

The Future of the I-270 Corridor

The I-270 Corridor is the County's economic engine and the biotechnology industry is a critical driver. Area businesses benefit from proximity to the federal government—the world's largest technology buyer. Locally-based federal research centers support a major biotechnology industry cluster and offer promising future opportunities such as nanotechnology.

Economic expansion, population growth, and diversification will stimulate new development. New residents—many from highly skilled backgrounds—will augment an extraordinary talent pool. This larger, more varied skill base could open new creative and entrepreneurial business directions—from digital media to international market development to technology commercialization. New and expanding opportunities combined with a "quality of place" that fosters innovation could encourage younger residents and recruits to stay in the area.

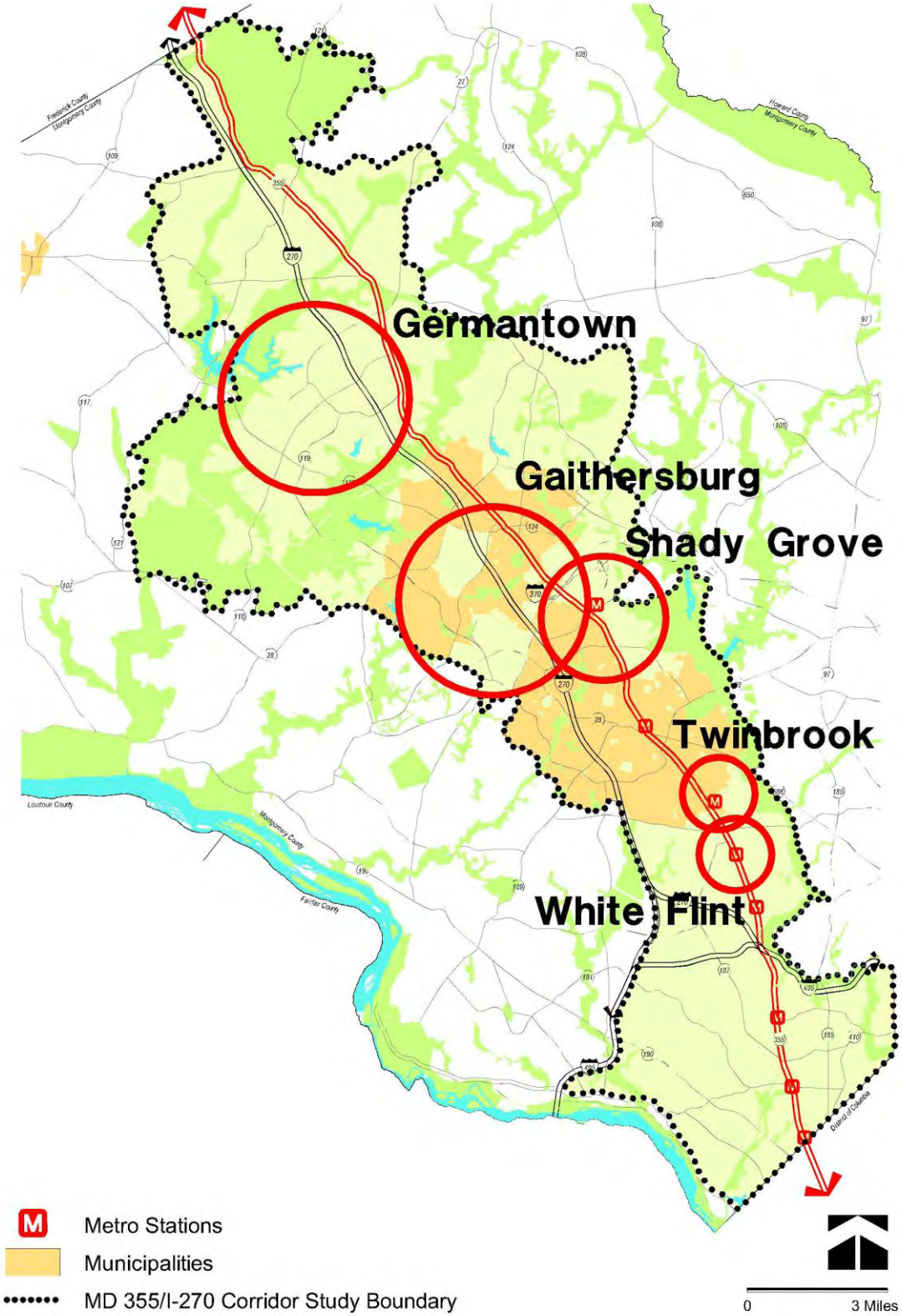
By channeling development into existing centers served by transit, highways and infrastructure, the County will protect its natural environment and agricultural land that contribute to our quality of life while making better use of existing transportation and service infrastructure.

The County's approach to managing growth could bolster the Corridor's competitive strengths—a high quality of place, exceptional talent base, strong employment resources and the potential for enhanced economic opportunity. Mixed-use environments offer mobility, affordable housing, diversity in services and employment and environmental advantages.

This Plan's recommendations work within the comprehensive overview of the *MD 355/I-270 Corridor Study,* which provides a policy framework for the individual master and sector plans. Creating higher density, mixed-use communities at transit stations epitomizes smart growth and sound planning principles by:

- balancing land use and transportation

MD 355/I-270 Corridor



- providing opportunities to live near work
- maximizing public investments in infrastructure
- reducing sprawl and protecting the environment
- reducing the carbon footprint and reliance on fossil fuels
- producing more sustainable forms of development
- creating the types of places many people want to live and work.

- The proposed 2009 *White Flint Sector Plan* envisions the Metro station area and Rockville Pike as a vibrant and sustainable urban center that can adapt to future challenges.

- The 2009 *Twinbrook Sector Plan* builds on the area's proximity to the Metro station and allows growth for technology-oriented businesses as well as a supportive mix of housing and industrial uses.

- The 2006 *Shady Grove Sector Plan* would transform the area around the Shady Grove Metro Station from a light industrial service park to a high-density mixed-use community with a residential focus that makes the best use of Metro proximity.

- The proposed 2009 *Germantown Master Plan* builds on the Corridor City concept and envisions an up-County center for community life with mixed uses and density focused at transit stations.

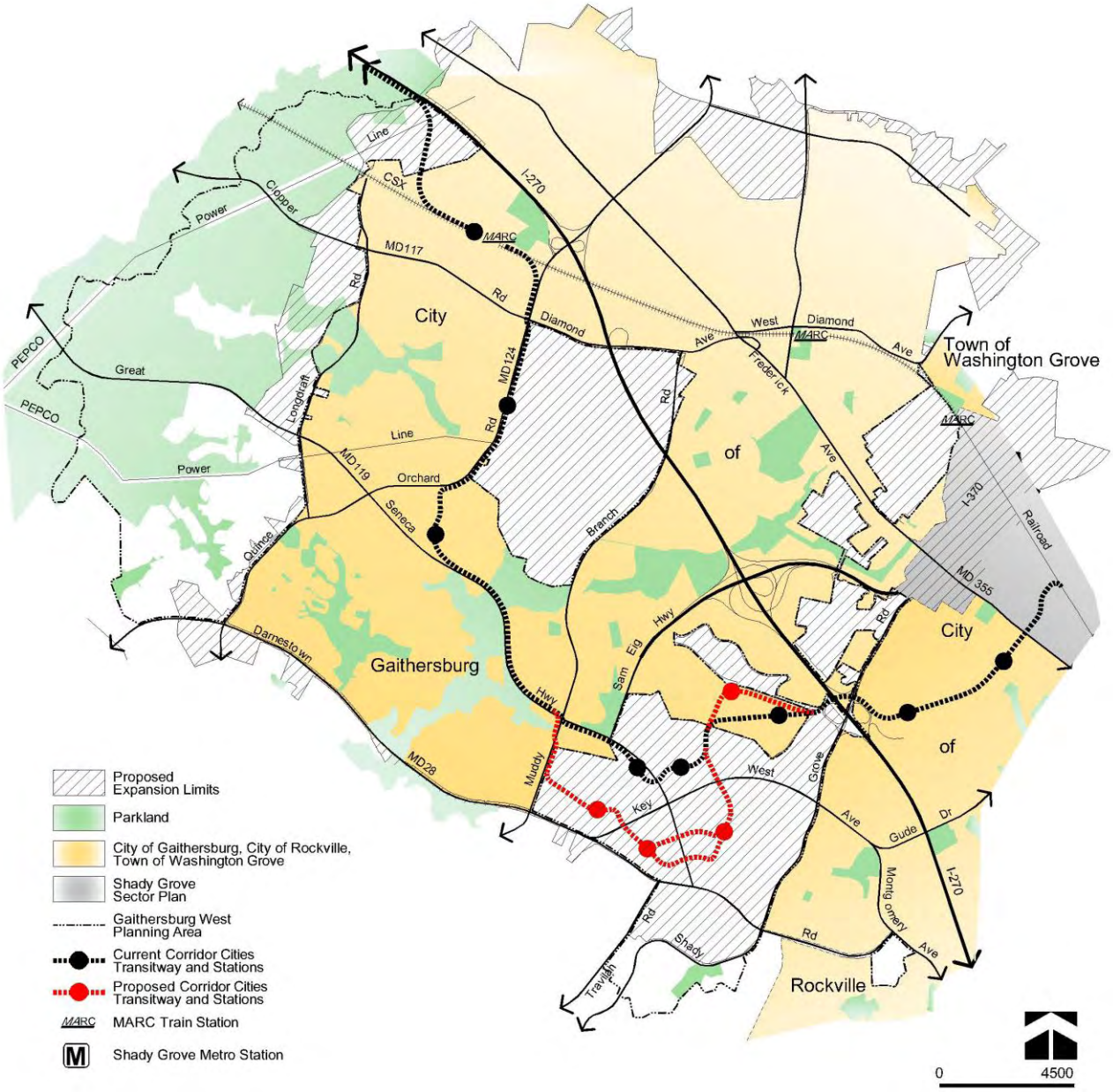
This Plan focuses development around future transit stations in the LSC and provides bicycle and pedestrian systems that enhance access to transit. The Corridor Cities Transitway (CCT) will enable people who work at the LSC to live in nearby communities connected by transit. This Plan also recommends new housing opportunities in the LSC to create more opportunities to live near work. In addition to promoting a compact form of development, this Plan seeks to promote a healthy community by fostering walkability, creating new opportunities for recreation, and providing growth potential for important medical services. The result will be a sustainable form of development and a community where people want to live and work.

Annexation

Municipalities establish Maximum Expansion Limits (MEL) to set boundaries for future annexations of unincorporated land. The Maryland State Code (Article 23A, Section 19) requires that municipalities produce a Municipal Growth Plan delineating the MEL. Only land within the MEL can be considered for annexation and municipalities may only annex land that adjoins its boundaries. Ideally, the boundaries between the County and the municipalities would be logical and well-defined, following roads or natural features such as streams.

In 2008, the City of Gaithersburg prepared an expanded MEL as part of its draft *Municipal Growth Element*. The City's proposed MEL includes nearly all of the *Gaithersburg West Master Plan* area, including the Life Sciences Center. This Plan recognizes that future annexations may occur and that incorporating some of the enclave areas into the City would help create coherent boundaries. This Plan strongly opposes annexation of any portion of the Life Sciences Center, which is not an enclave. Over the past 30 years, the County has invested substantial resources to create and develop the LSC. Annexing any of the LSC would leave the County without control of a significant element of its economic development strategy and create irretrievable revenue losses.

City of Gaithersburg Proposed Maximum Expansion Limits



the life sciences center

Planning for Science, Health Care, and Transit

The Plan's vision for the LSC builds on the strong foundation of existing institutions and businesses, and the County's land use plan that brought together health services, academia, and research and development companies. Today, the LSC has the largest concentration of, and is the premier location for, research and biotechnology companies in the County.

The future viability of the LSC requires the following components:

- opportunities for growth and expansion of existing enterprises
- a dynamic environment that will attract skilled workers and investment
- infrastructure and services to support future development
- staging development to balance growth and minimize adverse impacts
- sustainable practices that provide a "quality of place."

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.

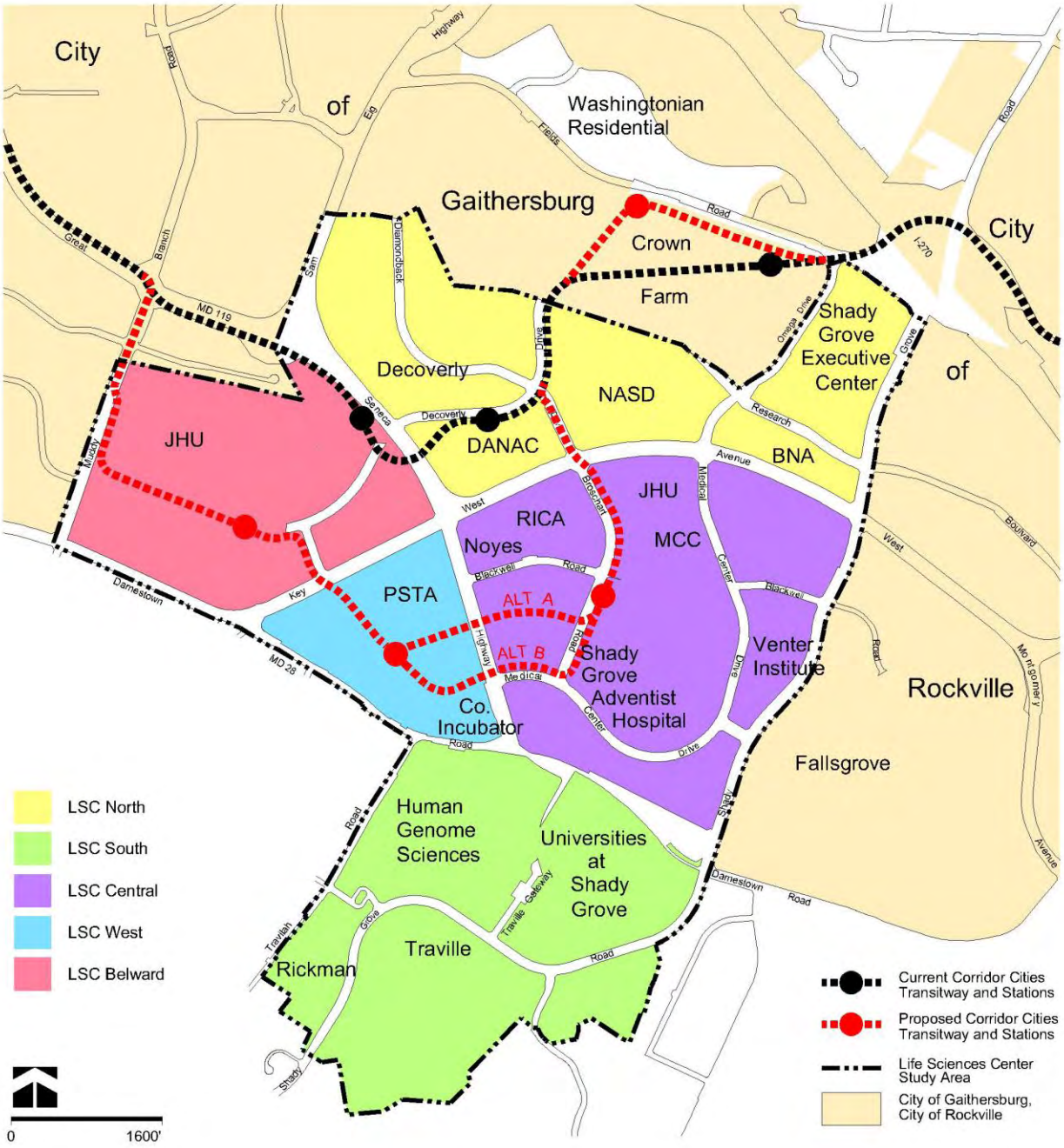
Vision

"It's heading right at us, but we never see it coming…The most important things happening in the world today won't make tomorrow's front page…They'll be happening in laboratories—out of sight, inscrutable and unhyped until the very moment when they change life as we know it."
— "The Future is Now," The Washington Post, April 13, 2008

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 encompasses 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.

The LSC of the future will be served by a fully-integrated transit system that links mid-County activity centers via the Corridor Cities Transitway (CCT). Access to high quality transit is increasingly important to businesses trying to attract knowledge-based, creative class workers. The LSC will continue to be a specialized employment center but it will be connected by transit with nearby residential communities at the Shady Grove Metro Station, the King Farm, the Crown Farm, Kentlands, and the Watkins Mill Town Center.

LSC Districts



In previous plans, the Life Sciences Center was narrowly defined as the large block that includes Shady Grove Adventist Hospital. This Plan applies the term more broadly to five districts, incorporating the Belward property to the west and the Universities at Shady Grove to the south.

Today's LSC

The LSC's two academic institutions—the Universities at Shady Grove (USG) and the Johns Hopkins University - Montgomery County Campus (JHU-MCC)—have increased its prominence and expanded opportunities for collaboration. Shady Grove Adventist Hospital provides the broader community with a full range of health care services. A number of biotechnology companies, including Human Genome Sciences, BioReliance, and the J. Craig Venter Institute, are located here.

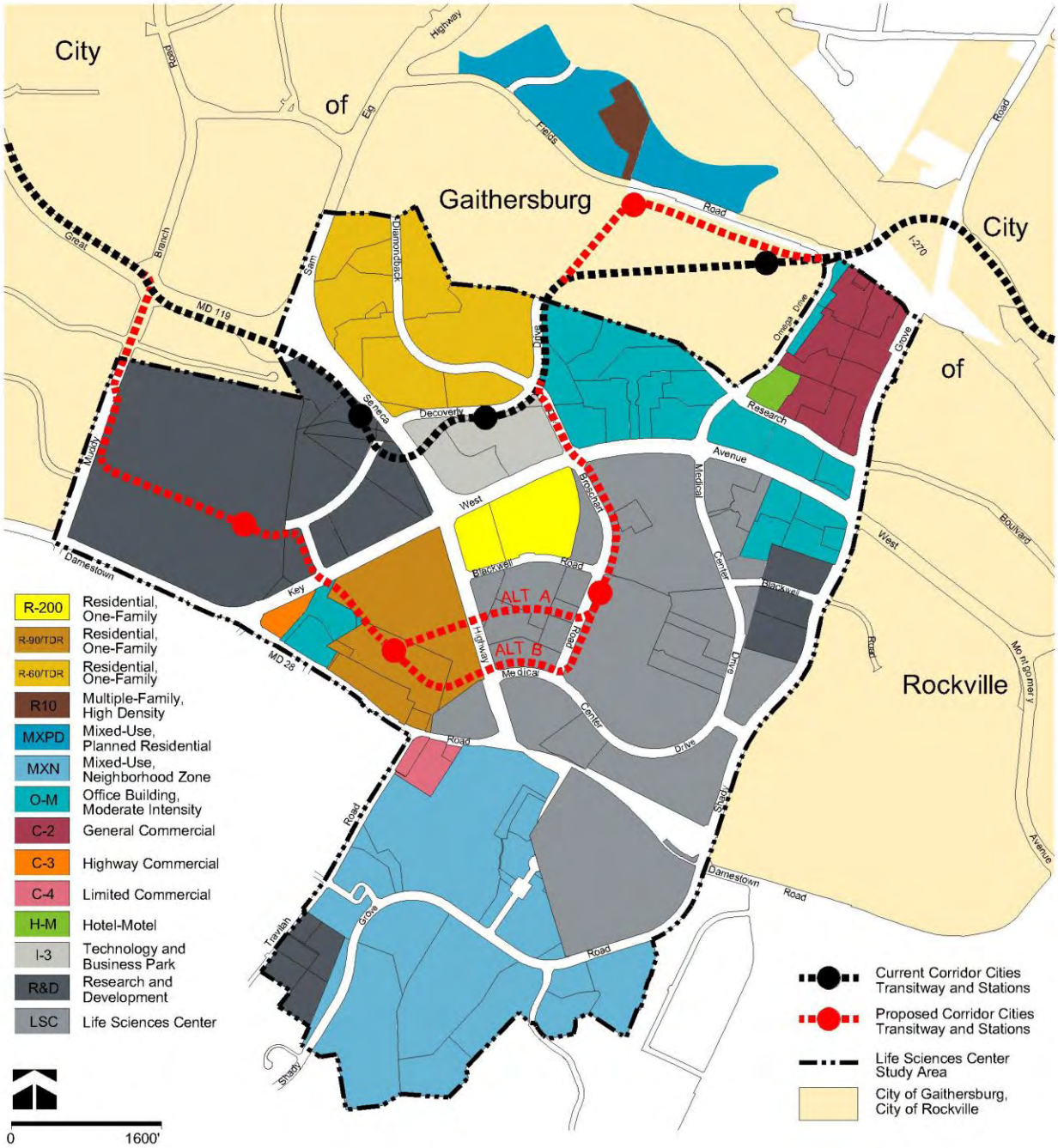
Many of the goals for the LSC have been realized. As originally envisioned, the LSC had a specific land use purpose with a unique employment niche. Residential and retail development was planned for large tracts surrounding the LSC, rather than integrated within the Center. The LSC and R&D Zones ensured that land would be reserved for life sciences to concentrate these uses and accomplish the original vision for the LSC. Housing and retail were specifically excluded from the LSC and R&D zones to enable the primary land uses of medical, life science, and academia to become established and have room to grow.

Today, the LSC contains nearly seven million square feet of commercial development and has 3.7 million square feet of approved development in the pipeline. Many LSC sites have maximized their development potential under the existing zoning.

The LSC's physical framework is modeled on a 20-year old development program for suburban research parks. The LSC looks and functions like a conventional office park with single-purpose clusters separated by wide highways and surrounded by parking lots. This model ensured auto-dependence while discouraging walking. There is so little variety of uses in the LSC today that employees often drive to lunch spots.

Existing Life Sciences Center Zoning		
Zone	**Description**	**Acreage**
LSC	Life Sciences Center	226
R&D	Research & Development	167
O-M	Office, Moderate Intensity	85
I-3	Technology & Business Park	24
H-M	Hotel-Motel	3
C-2	General Commercial	42
C-3	Highway Commercial	3
C-4	Limited Commercial	4
MXN	Mixed-Use Neighborhood	192
MXPD	Mixed-Use, Planned Residential	42
R-10	Multifamily, High-Density	7
R-60/TDR	Single-Family Residential/TDR	60
R-90/TDR	Single-Family Residential/TDR	62
R-200	Single-Family Residential	22

LSC Existing Zoning



Of the 900 acres in the greater LSC, 500 are currently covered by zones that exclude or limit housing and retail uses. The 325 acres that comprise the majority of life sciences uses (LSC Central and LSC Belward) are covered by the LSC and R&D zones, which currently limit the uses in these areas. Of the areas that are covered by zones that allow housing, one-quarter of this land (75 acres) is currently in public use for non-residential purposes.

Tomorrow's LSC: Linking Land Uses/Connecting Communities

This Plan envisions a future LSC with an enhanced role as the County's premier life sciences location. Transforming today's suburban, auto-oriented LSC into tomorrow's walkable, vibrant science center requires changing the built environment and the mix of uses. The CCT is the centerpiece of the Plan's vision for the LSC.

The CCT in the I-270 Corridor will:

- provide a transit option among the Corridor Cities
- improve mobility within the Corridor
- alleviate congestion on I-270
- extend transit service west and north of the Shady Grove Metro Station (the terminus of the Red Line).

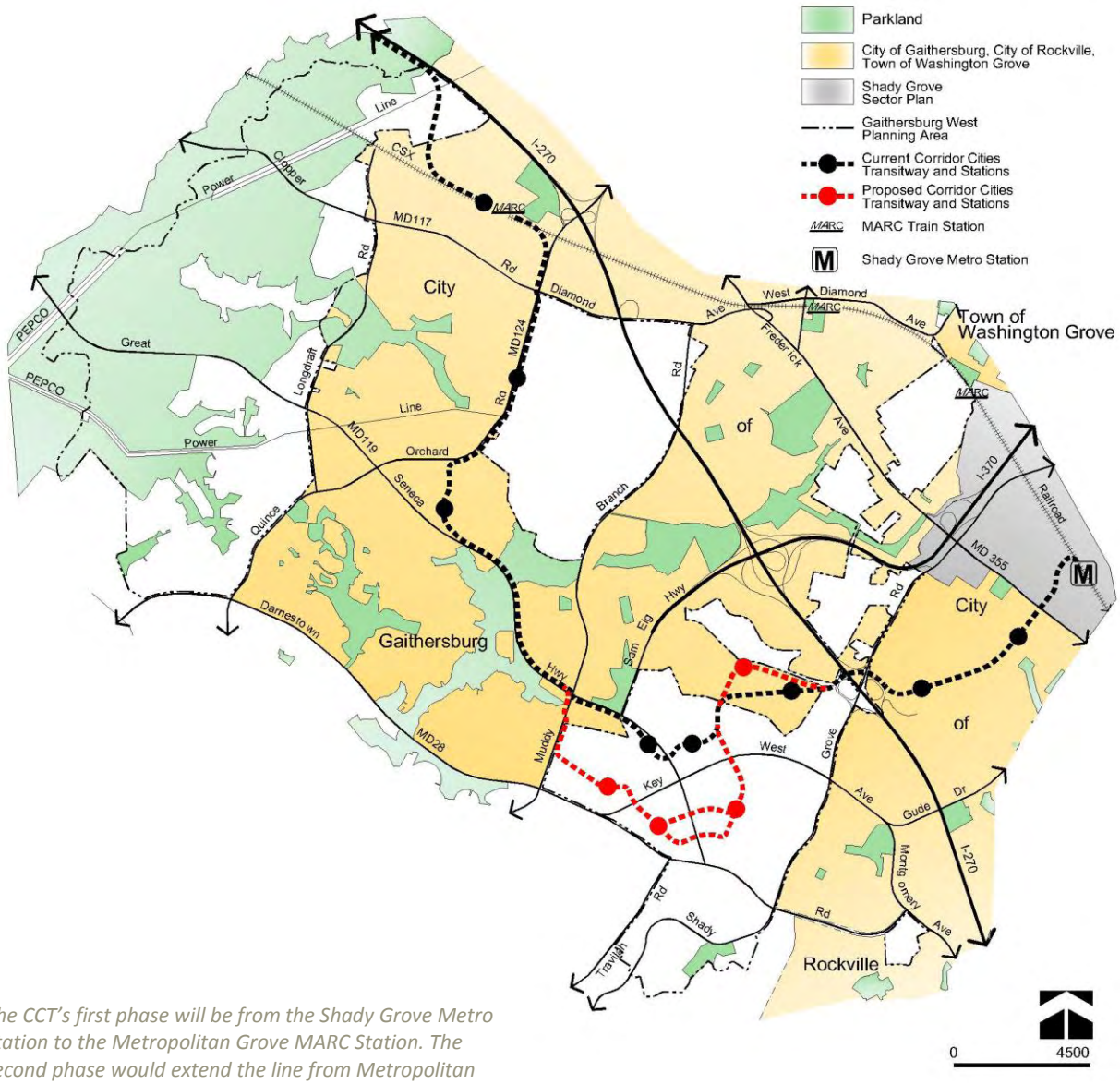
The 14-mile CCT transit line will run from the Shady Grove Metro Station to the Comsat site in Clarksburg. Fourteen stations are planned, with park-and-ride facilities at seven. The alignment is planned as an exclusive, dedicated facility for either light rail transit (LRT) or bus rapid transit (BRT) with limited interaction with vehicular traffic at local street crossings. It is planned to include a multi-use path.

Both the 1964 General Plan and the 1970's Gaithersburg and Germantown plans included the concept of a transitway. It has also been recommended in all subsequent I-270 Corridor master plans, including the 1994 Clarksburg Plan and the 1993 *Frederick County Comprehensive Plan*.

This Plan recommends realigning the CCT to bring transit into the heart of the LSC where it can serve a greater number of businesses, institutions, and other users than the current route. The Plan builds a pattern of density focused on the three LSC Districts where CCT transit stations are proposed: LSC Central, LSC West, and LSC Belward. Increased density is recommended only at proposed transit stations and development can only proceed in stages that are linked to the provision of infrastructure, most importantly, the CCT. The LSC North and LSC South Districts are not recommended for increased densities. Realigning the CCT route into the center of the LSC will bring transit closer to LSC South, home to the Universities at Shady Grove, Human Genome Sciences, and the Traville community.

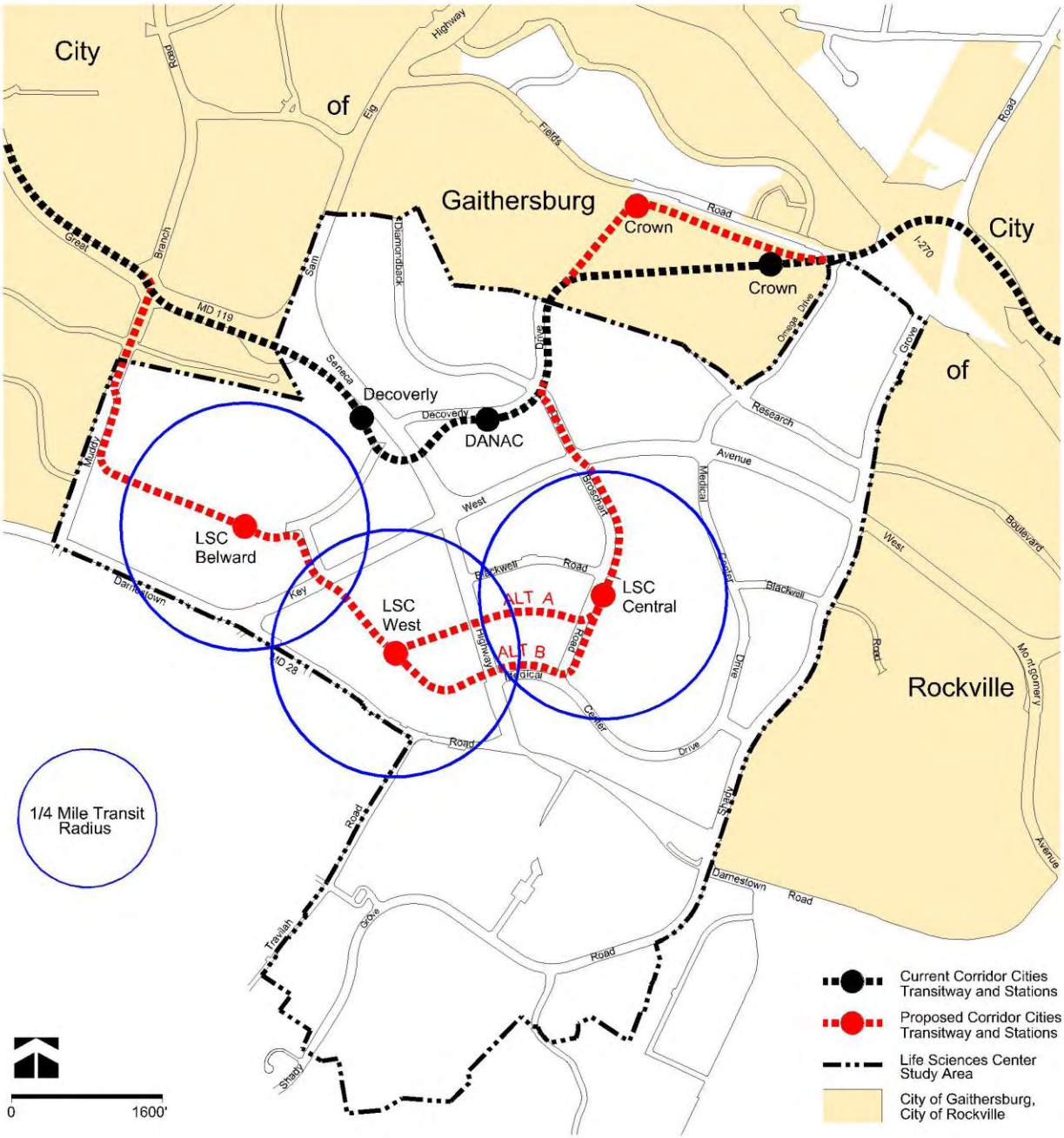
The two current station locations—DANAC (on the south side of Decoverly Drive) and Decoverly (along Great Seneca Highway near Sam Eig Highway) are not located to serve the LSC Districts with the most growth potential and the greatest number of future transit riders. Growth at the DANAC station is limited due to the existing residential community to the north. The Decoverly station would serve primarily as a park-and-ride facility since it is located along a highway rather than in the center of development. Also, the alignment near the Decoverly station would impact an environmentally sensitive wetland and stream buffer area, which could be avoided if the route is relocated. The Plan's three proposed stations locate the stops in the center of large blocks where new development and redevelopment is expected, increasing the number of potential CCT riders within a quarter mile radius, or a five-minute walk. The proposed realignment would lengthen the route by one mile. This Plan shows both the current alignment and the proposed alignment because the Maryland Transit Administration is studying the route and selecting an alternative. For the proposed alignment, two options are being considered between the LSC Central and LSC West stations.

Corridor Cities Transitway (Phase 1)



The CCT's first phase will be from the Shady Grove Metro Station to the Metropolitan Grove MARC Station. The second phase would extend the line from Metropolitan Grove north to Germantown and Clarksburg. The CCT route and design will not only connect people and places, but its stations will be the focal point of new development in the Corridor.

Proposed Corridor Cities Transitway Alignment and Stations



Housing

This Plan's primary goal is to create a world class life sciences center. A range of housing options and amenities is needed to support this development and help achieve County housing goals. The transportation infrastructure proposed in this Plan will link the LSC Districts in a sustainable development pattern where people can walk, bike, or use transit to reach their destinations.

One of the County's fundamental planning tools is the jobs-housing balance, the ratio of jobs to housing units in an area. Creating a balance provides the opportunity for people to live near work, which can reduce traffic congestion. While a balanced jobs-housing ratio does not guarantee that the housing will be occupied by those who work nearby, opportunities to live near work should be provided.

To date, the LSC has developed as a single-purpose, single-use employment center. Housing has not been a permitted use so the jobs-housing ratio is not balanced. Because the LSC's focus has been on economic development and jobs, not housing, achieving the optimal jobs-housing balance within this small geographic area is unrealistic. However, over a broader area, the appropriate ratio can be achieved.

The 1990 Plan proposed new residential neighborhoods on large tracts of land near the LSC, not within it, including new neighborhoods at the King Farm, the Crown Farm, and the Thomas Farm (Fallsgrove). King Farm and Fallsgrove were annexed into the City of Rockville and are nearly built-out. The Crown Farm was annexed into the City of Gaithersburg, which approved a mixed-use community with 2,250 dwelling units that is not yet under construction.

This Plan recommends a new residential community on the current site of the County's Public Service Training Academy (PSTA), LSC West. Housing development on this site could yield 2,000 new dwelling units. In addition, the Plan recommends that housing be allowed as a secondary use in the LSC Central and LSC Belward Districts, which, along with several other sites in the greater LSC could yield 3,000 new dwelling units. Residential development must provide Moderately Priced Dwelling Units and workforce housing.

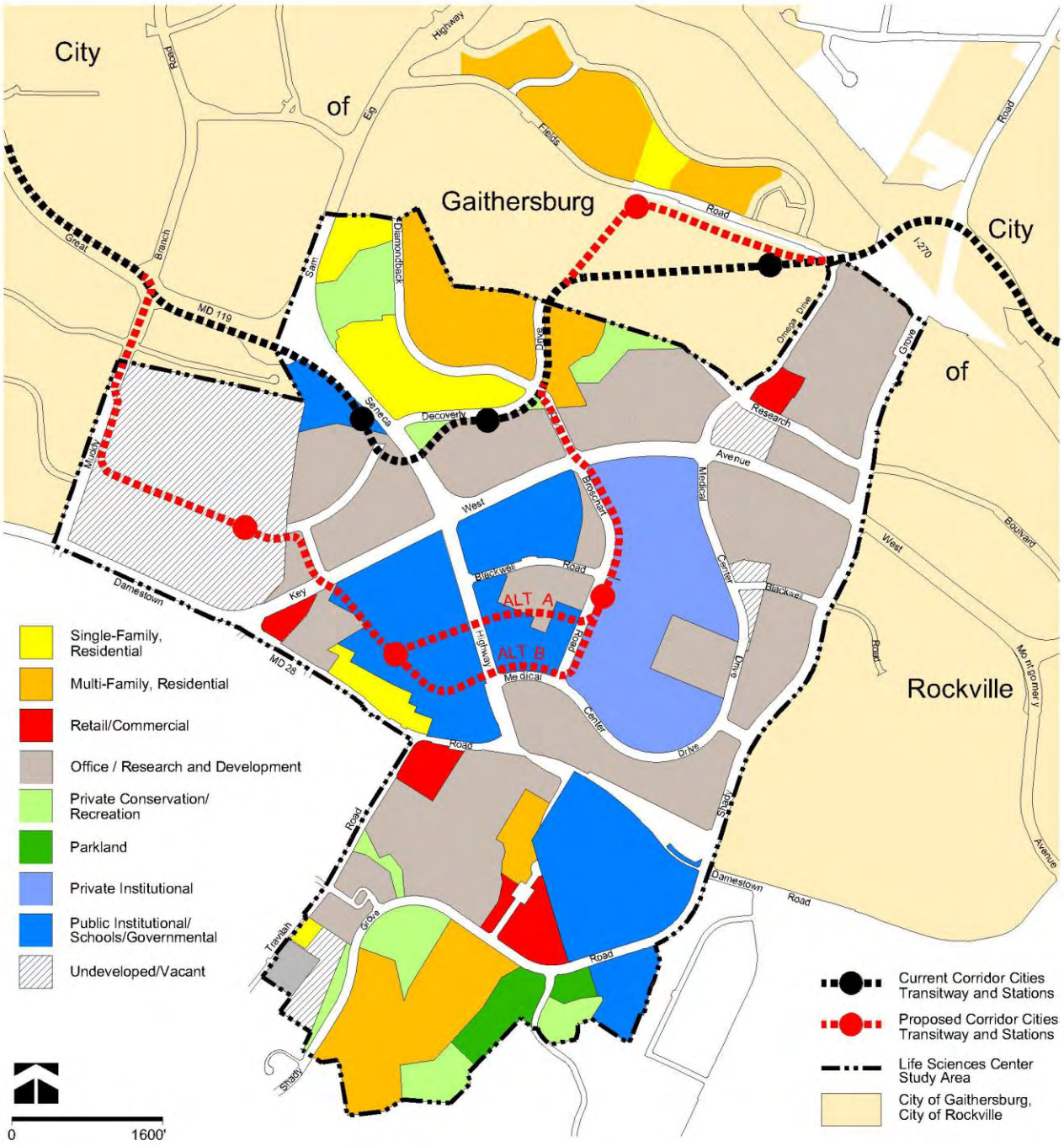
Overall, the residential land use recommended for the LSC could result in 5,000 additional dwelling units to complement a potential total of 60,000 jobs (based on existing, approved, and proposed development). The resulting ratio of 7.5 jobs per dwelling unit within the LSC reflects the Plan's emphasis on the life sciences and health care services but does not reflect the substantial amount of existing housing nearby in Rockville, Gaithersburg, and Potomac.

In the future, the LSC will be part of a continuum of communities linked by the CCT, enabling people to live and work within the corridor and get where they need to go by transit. At CCT stations to the east and west of the LSC, over 10,000 dwelling units are planned in pedestrian-oriented, mixed-use communities, including the Shady Grove Metro Station, the Crown Farm, and Watkins Mill Town Center. Creating such places fosters sustainable development and helps reduce sprawl as well as our dependence on autos.

Urban Form and Open Spaces

The LSC is five districts that will be connected through a refined street network, transit, and trails. The highest density and height will be concentrated at the three proposed CCT stations. People may live and work in the same district, but interact with colleagues in another district. Overall, mobility will be enhanced through options other than cars, and shorter trips.

LSC Existing Land Use



There are 3,262 dwelling units in the LSC area—

- *1,368 units in the Washingtonian enclave*
- *1,144 at Decoverly*
- *750 (including 230 senior units) at Traville*

The streets, buildings, and open spaces will create a physical environment that supports the research community and enhances opportunities for people to interact in an active community. Design guidelines, in a separate document, will provide detail to guide new development and implement the urban form recommendations in this Plan.

The Plan's urban design recommendations set the scale and character for the LSC.

- A **pedestrian-oriented street** grid that makes pedestrian and bicycle connections to transit and between uses and districts.
- A **building** framework that defines the public spaces, streets, plazas, parks, and views.
- A system of **parks and open spaces** that provides a setting for public activity and also preserves important natural resources.
- A standard for **sustainability** that reflects the LSC's cutting edge science in the built and natural environment.

Circulation

The LSC will have a walkable street system with a finer grid network than exists today. Streets and transit will tie the districts together. The LSC Loop, described below, will unify the pedestrian and bicycle circulation system with sidewalks, bikeways, trails, and paths that provide options for mobility as well as recreation.

- Grid network of streets
- Sidewalks connecting districts, providing access to transit and public spaces.
- CCT transit stations

Buildings

Buildings will be oriented to the streets and public spaces. They will be built based on development standards that accommodate a variety of uses, including laboratories, prototype manufacturing, offices, academic buildings, residences, and retail spaces; allowing mixed uses is critical to achieving the Plan's vision. Building standards will also ensure that new development provides compatible transitions to adjacent neighborhoods with lower densities along Darnestown and Muddy Branch Roads.

- Buildings and residential entrances oriented to streets
- Parking garages located on block interiors
- Visible retail focused at CCT stations

Public Open Spaces

The LSC will have a comprehensive system of public open spaces for collaboration, recreation, and other public activity. In addition, the open space system will preserve important resources including streams, forests, and historic properties. This open space system will also provide the setbacks and green spaces that contribute to compatibility with the adjacent neighborhoods.

- Public open spaces at each CCT station
- Stream valley parks
- Transitional green areas

Sustainability

New development will incorporate environmentally sensitive design to conserve and generate energy and manage stormwater. Building and street design will respond to sun, shade, and topography, and make maximum use of renewable resources with minimal disruption of the natural environment.

- Conservation and mitigation, such as green roofs

- Energy generation, such as wind turbines and solar panels
- Recycling and reuse through building design, construction, demolition, and operation

The LSC Loop

The LSC's proposed redevelopment offers an opportunity to create an interconnected pedestrian and bike system linking neighborhoods, both existing and future, to each other, parks, transit, and other destinations. This Plan recommends using urban design, parks, and trails to create an interconnected open space network for the LSC that will provide a range of experiences and a sense of place, integrating the built and natural environments and passive and active spaces.

The organizing element of the LSC open space plan is a 3.5 mile multi-use path loop connecting the districts and destinations. The LSC Loop will run alongside existing streets, such as Medical Center Drive and Omega Drive, and be completed on new streets in LSC West. It will incorporate the proposed CCT path through LSC West and onto the Belward property.

The LSC Loop will link activity centers and community facilities, including the planned high school on the Crown Farm, the historic Belward Farm, and the civic green and retail center on LSC West. Three CCT stations are along the Loop, at the Crown Farm, Belward, and LSC West. From the Loop, paths will connect with other destinations and activities in the area, including Fallsgrove and Traville. Traville Local Park, in LSC South, is proposed for a small rectangular field, half-court basketball, older children's playground, and a tot lot, and should be accessible from the LSC Loop.

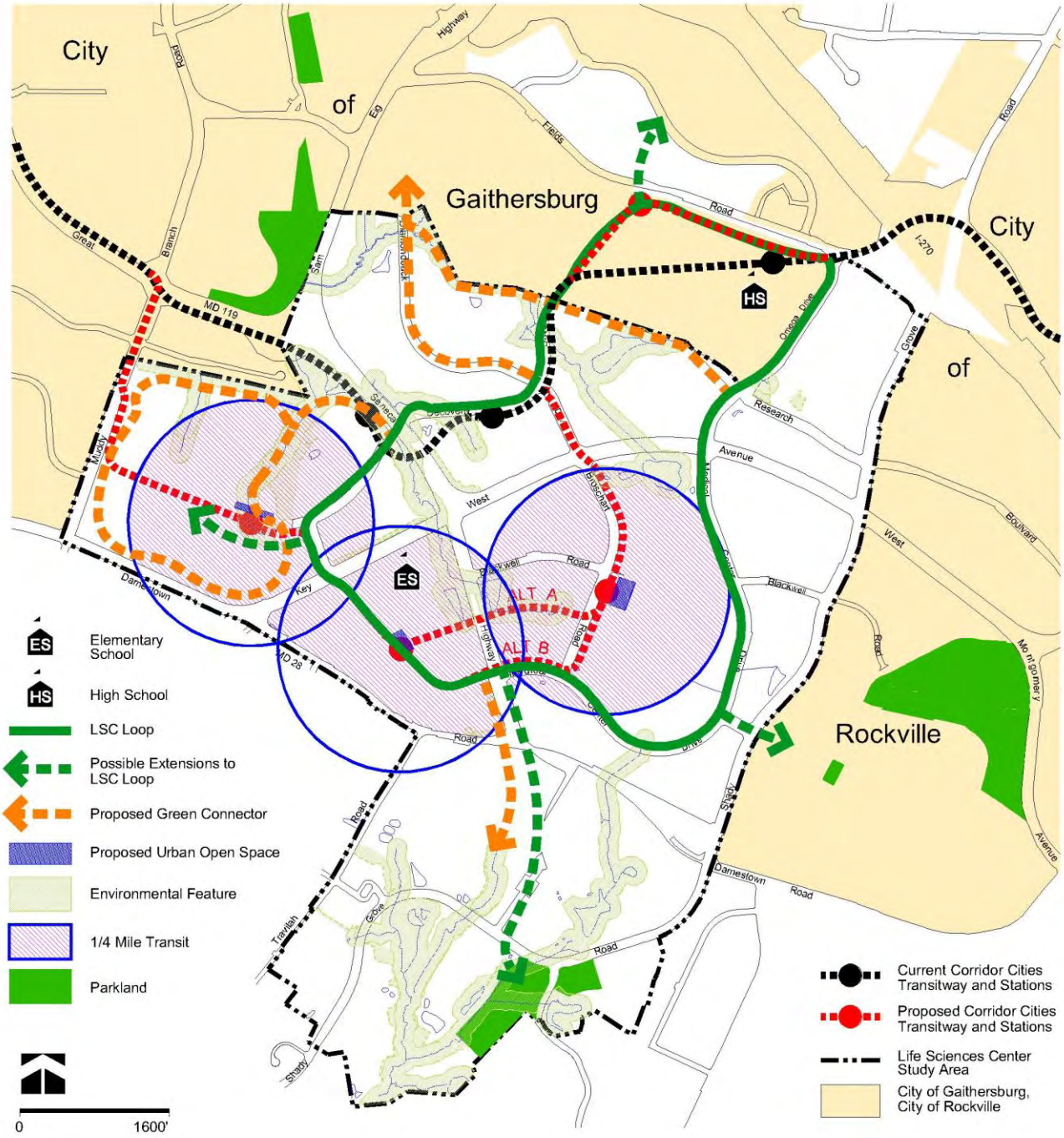
The LSC's existing stream buffer areas should be seamlessly integrated with the Loop, offering passive outdoor experiences. The on-road hard surface portion of the Muddy Branch Trail Corridor intersects the Plan area at the southwest corner of the Belward property, and should connect to the rest of the Countywide trail system.

Not all open space can or should be publicly owned and managed. Public amenity spaces in new developments will provide needed recreation and open space. Public parks and publicly accessible open spaces should complement each other and be seamlessly integrated to create a cohesive pattern of open space.

The LSC Loop should:

- Create a primary recreational feature that connects the districts, destinations, and open spaces throughout the area.
- Provide connections to area amenities, including the historic Belward Farm, retail destinations, the proposed high school and elementary school, and the natural path system through the stream buffer areas.
- Connect destinations by paths and trails.
- Integrate regulated green spaces such as wetlands, streams, and forest conservation easements to provide passive recreational experiences.
- Provide connections to Traville Local Park in LSC South.

LSC Open Space Network



The LSC Districts

The Plan's land use, zoning, circulation, and design recommendations for the LSC Districts focus density at the proposed CCT stations to fulfill the Plan's vision of connected centers.

Life Sciences Center: Existing and Proposed Development				
	Existing	*Existing & Approved*	*1990 Master Plan*	*Proposed 2009 Plan*
Commercial (sf)	6,940,000	10,700,000	12,925,000	20,000,000
Dwelling units	3,300	3,300	3,800	8,000
Jobs	21,200	30,550	38,000	60,000

The largest property owners at the three proposed CCT stations—JHU's Belward and MCC sites, Shady Grove Adventist HealthCare, and the future developers of LSC West (the PSTA site)—will be required to submit Concept Plans that demonstrate how their site will achieve the Plan's vision, including highest densities and heights at the stations, mixed uses, a local street network, neighborhood buffers, the LSC Loop, historic properties, and open spaces.

LSC Central: A Medical and Biotech Center

This 230-acre center includes Shady Grove Adventist Hospital, several medical office buildings, the Johns Hopkins University-Montgomery County Campus, the Regional Institute for Children and Adolescents (RICA) and Noyes Institute facilities, and some County social service uses. This area also includes the Key West Corporate Center and biotech companies such as the J. Craig Venter Institute, BioReliance, and Otsuka.

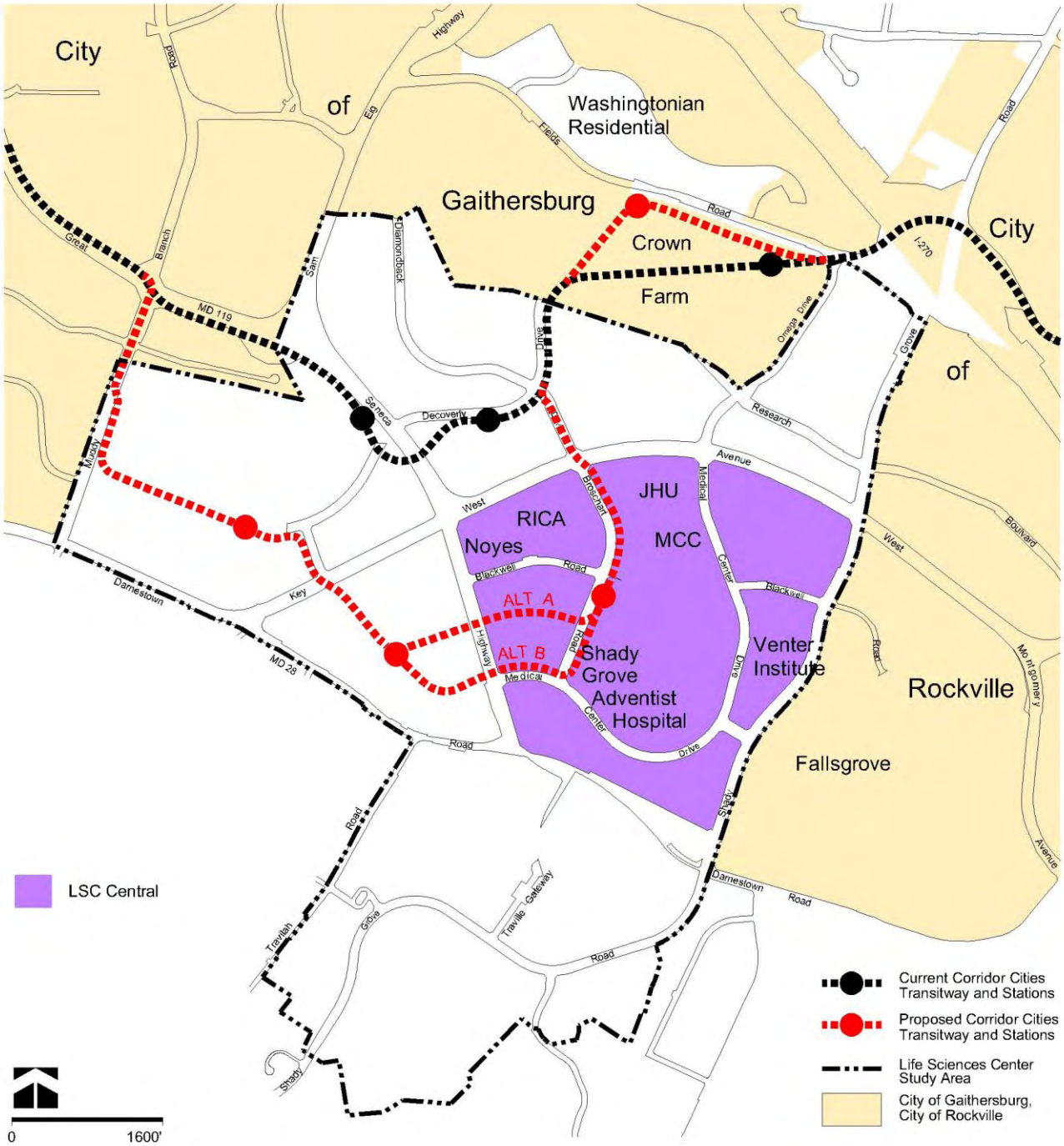
Today, LSC Central is a single-purpose destination for workers, students, and hospital visitors. It should continue to focus on medical and biotech uses, but other uses should be introduced, including retail and a limited amount of housing (approximately 30 percent of permitted FAR). The Plan recommends a CCT station on Broschart Road near Blackwell Road and these streets should be enlivened with activating uses. Future development, in its design and use, should be carefully planned to take advantage of transit and contribute to creating a vibrant LSC hub.

Adventist HealthCare (AHC) and JHU, as the district's largest property owners, will play a significant role in achieving the land use vision. Population growth, combined with demographic shifts and aging baby boomers, is fueling demand for additional capacity at the Shady Grove Adventist Hospital. To meet these needs, the 48-acre facility will continue to evolve, including centers of cardiac and vascular services, oncology, and women's and children's services.

AHC intends to develop medical offices, diagnostic and outpatient treatment facilities, and convenience retail. Accompanying these physical improvements will be structured parking, landscaped open spaces, and other public amenities. Under the current zoning, AHC would not be able to expand its facilities substantially. This Plan supports an expanded, first-class medical center and recommends zoning changes to accommodate future growth.

Most of the land in LSC Central is zoned LSC. To implement the Plan's vision of a mixed-use, transit oriented center, the LSC Zone will be modified to permit more uses, density, and height. The new zone would allow housing and the Plan recommends that 30 percent of the FAR in LSC Central could be

LSC Central District



residential. LSC Central sites zoned R-200, O-M, and R&D are recommended for rezoning to the new LSC Zone.

The Plan envisions redevelopment of portions of the block surrounded by Broschart Road, Medical Center Drive, Great Seneca Highway, and Blackwell Road. Currently, this area is developed with low-density, low-scale uses. With a transit station along Broschart Road, portions of this block could redevelop to higher densities with a mix of housing, retail, and employment uses. The Plan recommends rezoning the RICA and Noyes facilities to accommodate redevelopment consistent with the vision for LSC Central if these current uses are relocated.

Recommendations

Land Use and Zoning

- Amend the LSC Zone to allow mixed uses and increased density.
- Allow up to 1.0 FAR for properties in LSC Central.
- Allow up to 1.5 FAR for the AHC and JHU properties adjacent to the proposed CCT station.
- Allow 30 percent of permitted FAR to be used for housing.
- Update the LSC zoning standards to reflect current technology and allow future flexibility.
- Rezone the RICA and Noyes properties from the R-200 Zone to the LSC Zone.
- Rezone the R&D parcels to the LSC Zone.
- Rezone the O-M parcels to the LSC Zone.
- Require a Concept Plan with future regulatory plans for AHC and JHU to address the Plan's guidelines, including the CCT location, the highest densities and height at transit, a mix of uses, creation of a local street network, and open spaces.

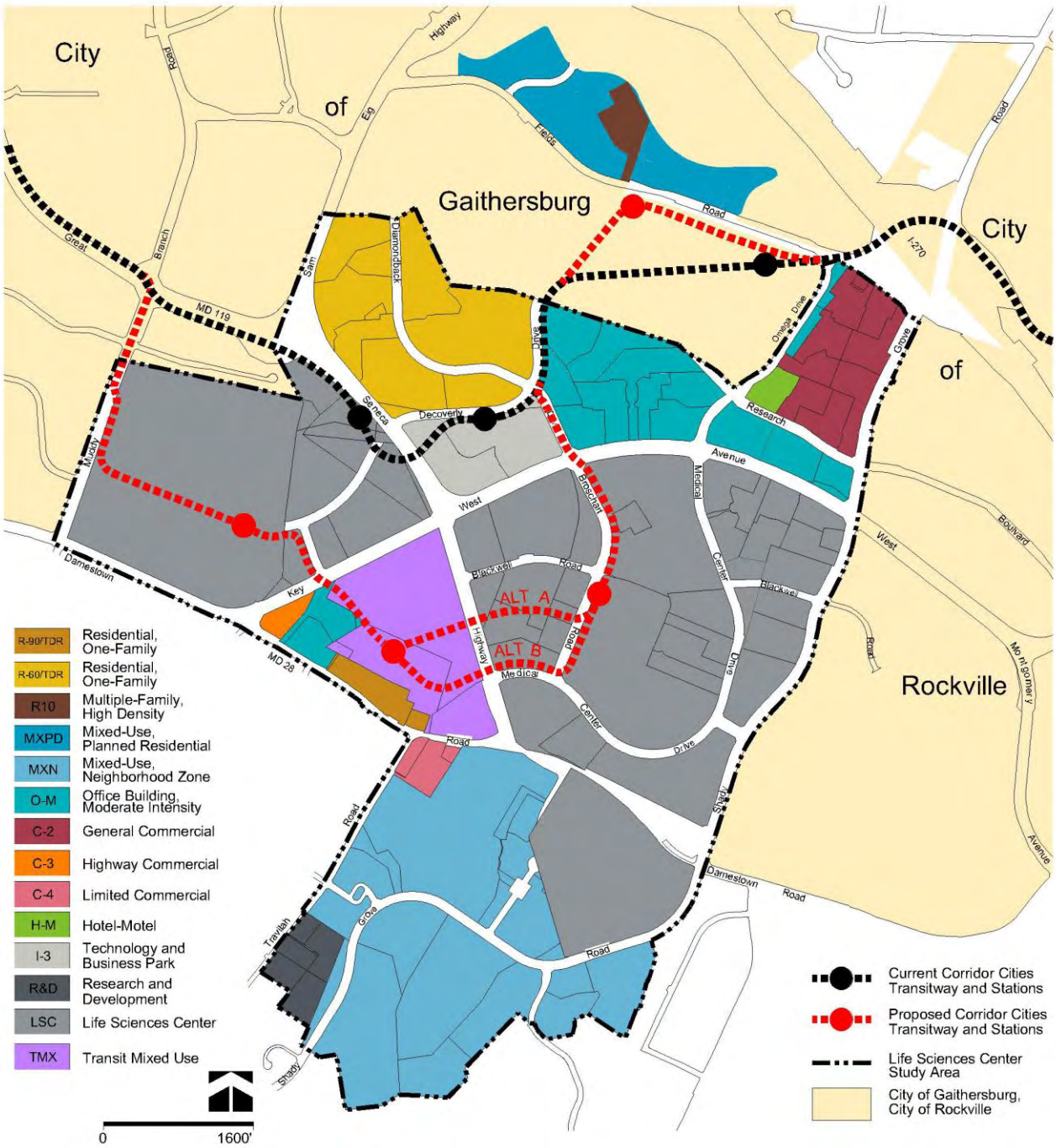
Urban Form and Open Spaces

- Locate the highest density and tallest buildings (143 feet) adjacent to the transit station to form an identifiable center. Future developments should be well-integrated with each other.
- Create an identifiable LSC Loop along Medical Center Drive that connects pedestrians to other transit centers, the network of natural pathways along the stream buffers, and the open spaces.
- Design Broschart Road as an urban street, lined with buildings and activating street-level uses. The east side of Broschart Road is shared by AHC and JHU, and both property owners have opportunities to create a lively street edge that takes full advantage of transit station proximity.
- Design Blackwell Road between the AHC and JHU properties with a building edge and improved connections.
- Provide at least 15 percent of the net tract area as public use space.
- Include the following public open spaces:
  - LSC Loop
  - Stream buffers
  - Urban square at the CCT station
  - Urban promenade to connect between buildings and public spaces.

Mobility

- Locate a CCT Station along Broschart Road near Blackwell Drive in the vicinity of the Shady Grove Adventist Hospital and the JHU-MCC campus.
- Extend Blackwell Road between Medical Center Drive and Broschart Road.

Proposed LSC Zoning



- Create additional streets to encourage an urban building form and to improve access and circulation for pedestrians and vehicles.

LSC West: A New Residential Community

Most of this site is the County's Public Service Training Academy (PSTA), on 52 acres of this 75-acre parcel. The PSTA has been at this site, bordered by Key West Avenue, Great Seneca Highway, and Darnestown Road, since 1973 when the area was mostly farmland. Since the 1980s, when the County decided to create the LSC, the uses around the PSTA have changed dramatically.

This training facility for firefighters, police officers, and operators of large vehicles is next to the County's Innovation Center (Incubator), which provides space for biotech start-up businesses. On the north side of Darnestown Road are a small retail center, a medical office building, and several single-family homes that have been assembled and are proposed for townhouse development.

While the PTSA is an important public facility, it has no relationship to the LSC. The County recognizes that all of the PSTA's needs cannot be satisfied at this location that has little expansion capability. The County is currently exploring sites where the PSTA could be relocated.

The Plan supports relocating the PSTA and redeveloping the site with a residential community that includes amenities and services to bring housing opportunities within walking distance of jobs in the LSC. The corner of Great Seneca Highway and Darnestown Road has the potential to become a signature site. The Innovation Center could remain at this location or, ideally, be incorporated into redevelopment of the PSTA or elsewhere in the LSC.

The Plan recommends the TMX-2 Zone with a 1.0 FAR that could yield 2,000 dwelling units with supporting retail and community uses. The recommended CCT realignment would create a new station designated as a Transit Station Development Area required by the proposed TMX Zone. Residential buildings with the most density and height should be adjacent to the CCT station and the community should include retail, civic spaces, a planned fire station, and if needed, a new public elementary school.

Development should be accompanied by a new urban park to serve as the central open space for the proposed residential community. This green space should be near the CCT station and could be combined with the proposed new elementary school to create a recreational focal point for the community.

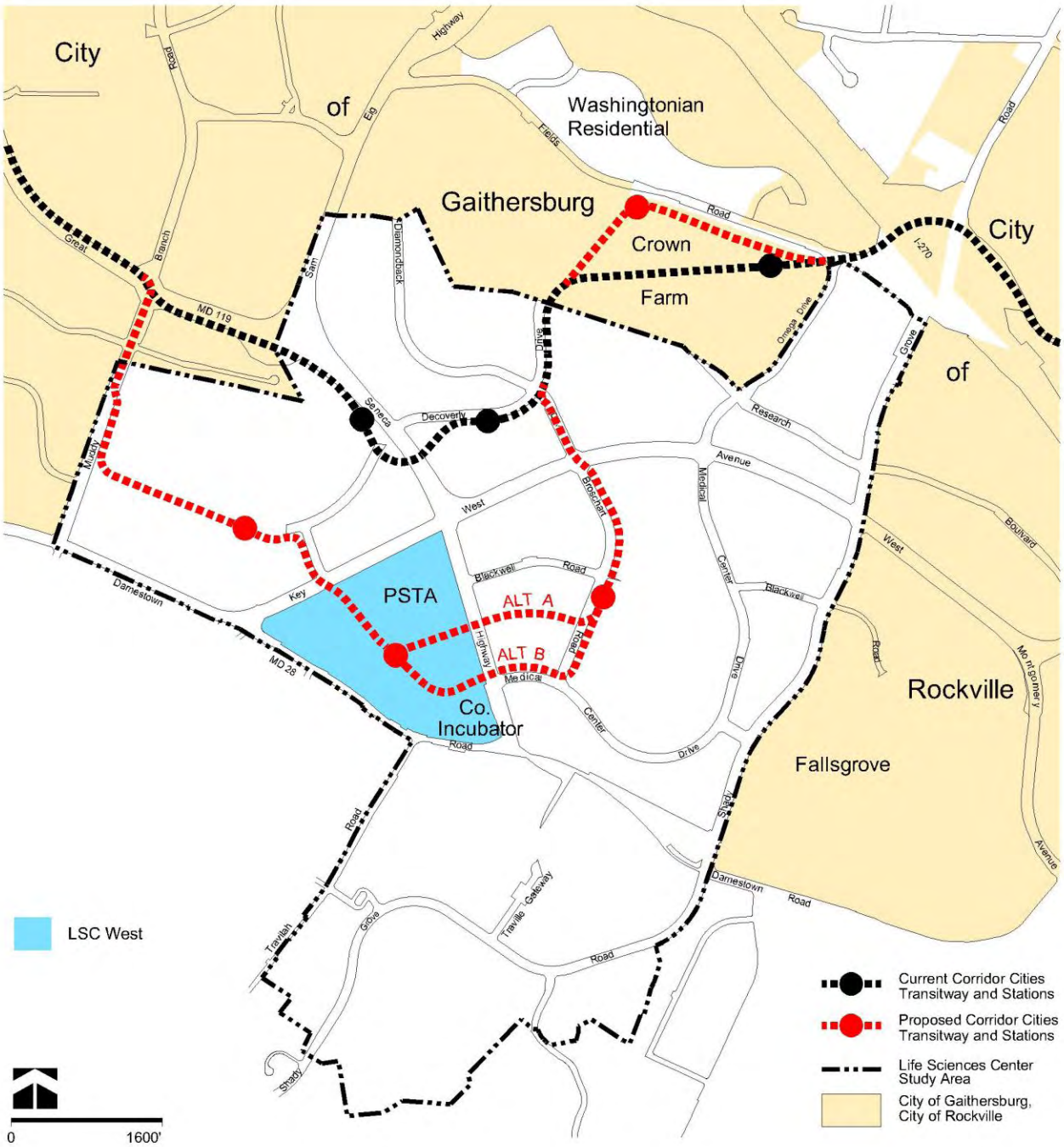
The Plan recommends that the forested area at the corner of Great Seneca Highway and Key West Avenue be preserved and since rare, threatened, or endangered species information has never been gathered for this site, a Natural Resources Inventory should be prepared when the site is redeveloped.

Recommendations

Land Use and Zoning

- Relocate the PSTA and create a new residential community on the site with supporting retail, open space, transit, and community facilities.
- Rezone the PSTA from R-90/TDR to TMX-2 with a 1.0 FAR and designate it as a Transit Station Development Area.

LSC West District



- Require a Concept Plan for LSC West with the first Preliminary Plan application to address the CCT location, the placement of highest densities and height at transit, creation of a local street network and the LSC Loop.
- Locate highest density housing and retail uses and the tallest buildings (143 feet) closest to the CCT station to provide convenience and activity.
- Preserve the forest at the corner of Key West Avenue and Great Seneca Highway.
- Accommodate a new public elementary school and fire station.

Urban Form and Open Spaces

- Extend the LSC Loop along Medical Center Drive to connect pedestrians to other transit centers, the network of natural pathways along the stream buffers, and the open spaces.
- Locate a multi-story elementary school facing Medical Center Drive extended.
- Share park facilities for active recreation between the school and the recommended civic green space.
- Provide at least 15 percent of the net tract area as public use space.
- Integrate the following public open spaces:
  - LSC Loop
  - Stream buffers
  - Forest preserve along Great Seneca Highway and Key West Avenue
  - Civic green at the CCT Station
  - Urban promenade to connect between buildings and public spaces.
- Use the visible corner at Darnestown Road and Great Seneca as a signature site for a significant building.

Mobility

- Locate a CCT station along Medical Center Drive extended near the center of the LSC West site.
- Create a grid of streets on LSC West as part of the new residential community.

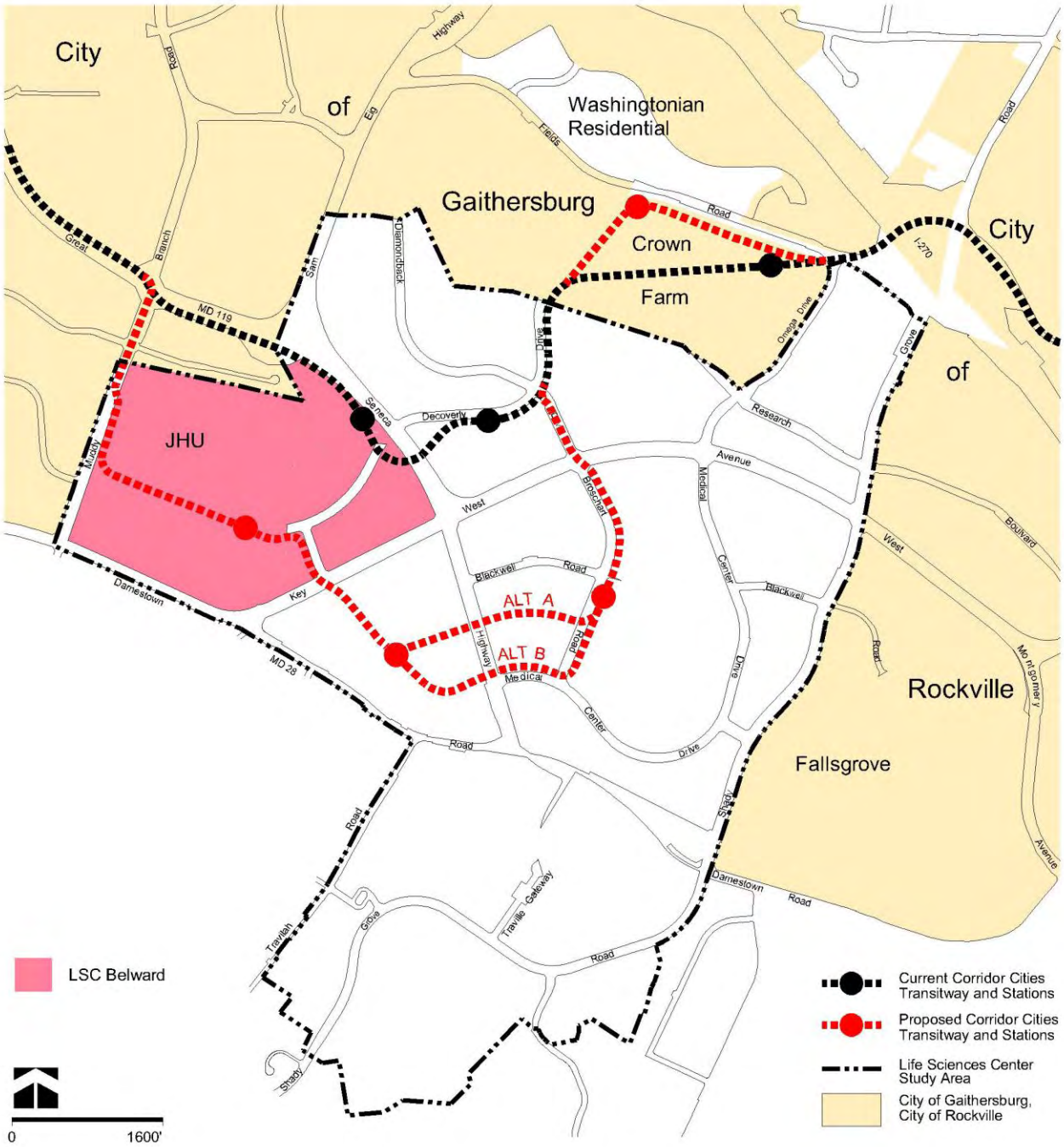
LSC Belward: A New Science and Research Community

The Belward property, owned by JHU, is surrounded by major roads and by residential neighborhoods on three sides. The 1990 *Shady Grove Study Area Master Plan* designated Belward as part of the greater Life Sciences Center and recommended it be developed as a research campus with a limited amount of employee housing. JHU received Preliminary Plan approval in 1996 for 1.8 million square feet on 138 acres, a density of 0.3 FAR in the R&D Zone. The eastern portion of the property, with access from Key West Avenue, was sold and developed. The remaining 107 acres is currently undeveloped.

This Plan recommends an increased density on the Belward property, served and supported by a CCT transit station. The Plan recommends that both the 107-acre undeveloped Belward property as well as the developed, eastern portion, be rezoned to allow a mix of uses and higher densities focused on the CCT station that achieve the vision for the LSC. Development on the Belward property should provide housing for the employees and/or visiting researchers. Compatible transitions and buffers for the adjacent single-family neighborhoods are critical.

The Belward Farm is the historic portion of the property, and includes the 1891 farmhouse as well as barns and outbuildings. An environmental setting of 6.98 acres was established for the historic properties as part of the 1996 Preliminary Plan approval, including the driveway from Darnestown Road to preserve views of the site.

LSC Belward District



To the north and immediately adjacent to Belward is the Mission Hills neighborhood, a subdivision of 52 single-family homes in the City of Gaithersburg. Across Muddy Branch Road to the west are the Washingtonian Woods and Westleigh neighborhoods, also in the City of Gaithersburg. South of Darnestown Road are the North Potomac neighborhoods, in the County's 2002 Potomac Subregion Master Plan.

Due to the proposed increase in development recommended for Belward, this Plan recommends expanding the farmstead's environmental setting to between 10 and 12 acres. New development adjacent to and near the historic farmstead must be compatible in scale and graduated in height to be sensitive to the historic resource. Views of the farmstead from Darnestown Road, as well as other vantage points within Belward should be incorporated into future site planning and design. Reuse of the Belward Farm offers opportunities for a community or cultural center that could become a destination on the CCT and the LSC Loop.

Recommendations

Land Use and Zoning

- Rezone the Belward property from R&D to the LSC Zone and allow up to 1.0 FAR.
- Require a Belward Concept Plan with the first Preliminary Plan application to address the Plan's guidelines, including the CCT location, the highest densities and height at transit, preservation of the historic property, creation of a local street network and the LSC Loop, and neighborhood buffers.
- Maintain Belward as an open campus development.
- Provide a network of active and passive open spaces.

Historic Belward Farm

- Preserve views of the farmstead from Darnestown Road, looking north, east, and west as well as other vantage points within the larger Belward site.
- Use the site, including the house and barns, for recreational, educational, social, or cultural uses that complement the community and new development.
- Preserve open space and mature trees surrounding the farmstead. Retain an environmental setting large enough to convey the agricultural character of the historic resource, between 10 and 12 acres.

Urban Form and Open Spaces

- Concentrate the highest density and building heights (110 feet) near the CCT station.
- Step the buildings down to 60 feet (four stories) adjacent to the Belward Farm.
- Organize the significant roads to provide views of the historic Belward Farm.
- Complete the Muddy Branch Trail Corridor from Dufief Mill Road and Darnestown Road to Great Seneca Highway along the Belward property on the east side of Muddy Branch Road.
- Create the LSC Loop along Medical Center Drive and Decoverly Drive to connect pedestrians with other transit centers, the network of natural pathways along the stream buffers, and the open spaces.
- Preserve the landmark tree on the Muddy Branch Road side of the property.
- Include the following public open spaces:
  - LSC Loop
  - Stream buffers
  - Belward Farm environmental setting
  - Urban square at the CCT station
  - Urban promenade to connect between buildings and public spaces.
- Provide at least 15 percent of the net tract areas as public use space.
- Create a 300-foot buffer along Muddy Branch Road and a 60-foot buffer along Darnestown Road.
- Preserve and augment the existing trees along the northern boundary to provide a transition to the existing single-family houses in Mission Hills.
- Provide a buffer along the property's northern edge, adjacent to Mission Hills, between the property line of the single-family homes and any buildings on Belward.

- Provide a 100-foot wide stream buffer around the two tributaries of the Muddy Branch.

Mobility

- Realign the CCT through the LSC with a station on the Belward property along Decoverly Drive near the intersection with Medical Center Drive extended.
- Extend Decoverly Drive across Great Seneca Highway into and through the Belward site to Muddy Branch Road.
- Create a network of new streets with short blocks.
- Provide a comprehensive pedestrian network throughout Belward with an emphasis on easy and convenient access to the proposed CCT station.
- Implement the LSC Loop, including natural surface trails through the stream valleys and connected paths and sidewalks throughout the site and in the perimeter buffer areas.
- Build the proposed trail connection (a non-park connector between recreational trails/bikeway) on the east side of Muddy Branch Road from Darnestown Road to Great Seneca Highway.
- Improve connections and access from surrounding neighborhoods to enable residents to easily access the CCT station, the LSC Loop, the historic site, as well as other amenities on the site.

LSC North: Residential and Office

LSC North is developed with several office parks, including DANAC, the National Association of Securities Dealers, Shady Grove Executive Center, and the Bureau of National Affairs. These properties are zoned I-3, O-M, and C-2. LSC North also includes the residential communities of Decoverly, with 1,144 townhouse and multifamily units along Diamondback Drive west of Decoverly Drive.

This Plan relocates the CCT station from Decoverly Drive at the DANAC site into the core of the Life Sciences Center adjacent to Shady Grove Adventist Hospital. However, the Plan maintains the current alignment pending a decision by MTA.

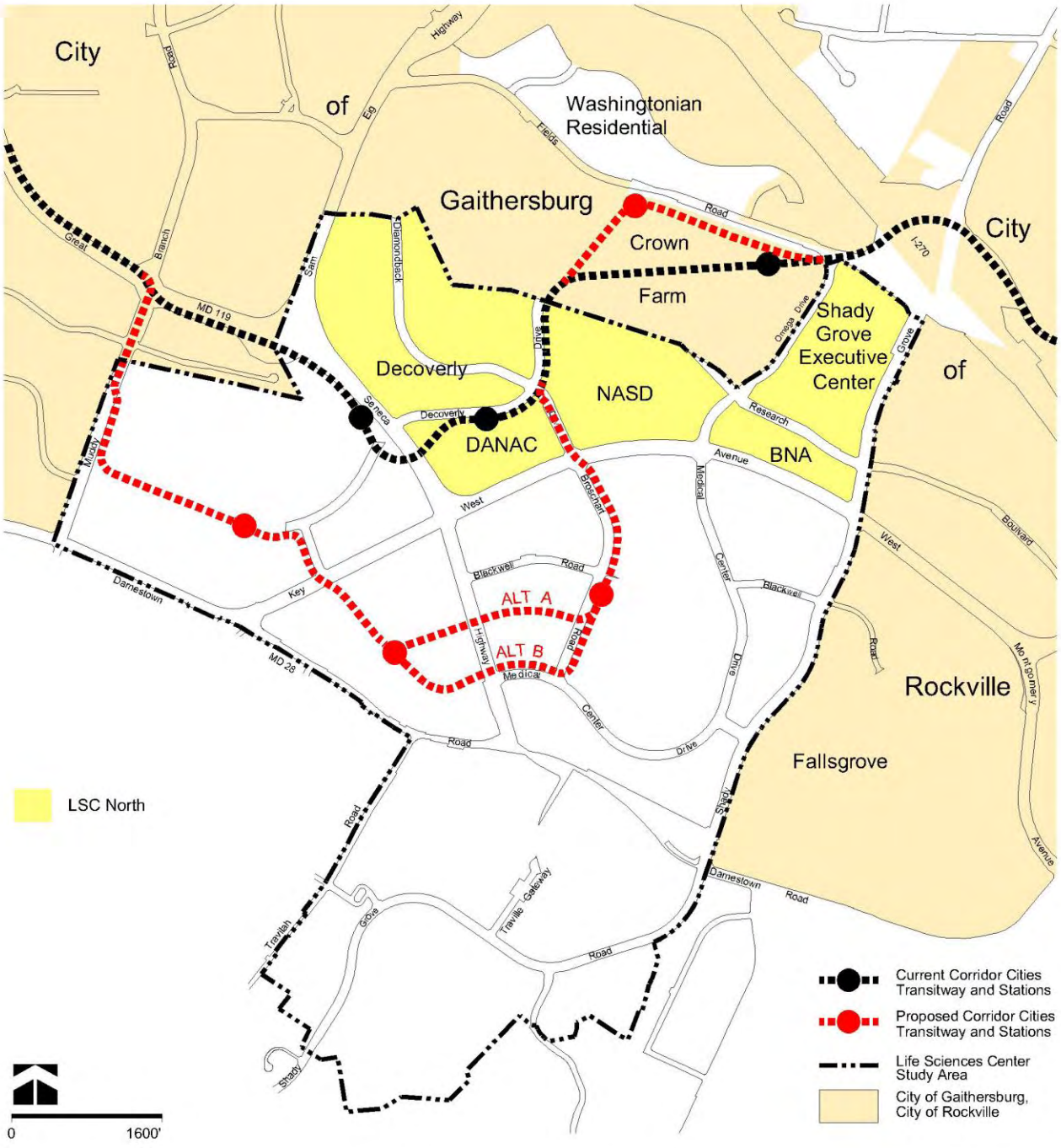
Each of the office parks in LSC North has some remaining development capacity. Several property owners are interested in more flexibility, particularly the ability to consider housing rather than office. While the uses are limited, the current zones for several of the office parks allow relatively high density for the area (1.5 FAR) and the Plan does not recommend increases because the objective is to concentrate additional density at the proposed CCT stations. The Plan also seeks to achieve an overall balance between land use and transportation infrastructure.

The possibility of residential as an infill use on remaining developable sites in LSC North would increase the amount of housing near the jobs in the greater LSC. To create a sense of community, the Plan encourages clustering any housing to create a residential neighborhood rather than isolated housing sites in scattered office parks.

Recommendations

- Extend Decoverly Drive north from its current terminus, into and through the Crown Farm to Fields Road.
- Extend Diamondback Road north from its current terminus into and through the Crown Farm to Fields Road.

LSC North District



LSC North is west of Shady Grove Road, north of Key West Avenue, and south of the Crown Farm property.

- Provide for the LSC Loop, to be accompanied with the CCT from Fields Road to Diamondback, and then along Decoverly Drive and across Great Seneca to the Belward site.

LSC South: Mixed-Use Center

This area south of Darnestown Road includes the Traville community's retail and residential uses, Human Genome Sciences (HGS), and the Universities at Shady Grove, an innovative academic center that is part of the University System of Maryland.

The retail and residential developments at Traville are built-out, with approximately 100,000 square feet of retail and 750 dwelling units, 230 of which are senior housing. The HGS site is approximately half built-out. The Universities at Shady Grove has produced a master land use plan for their site, which is approximately half built-out.

Only the 13-acre Rickman property on Travilah Road (zoned R&D) is currently undeveloped. The Plan supports R&D uses on this site, but housing would also be compatible with surrounding properties.

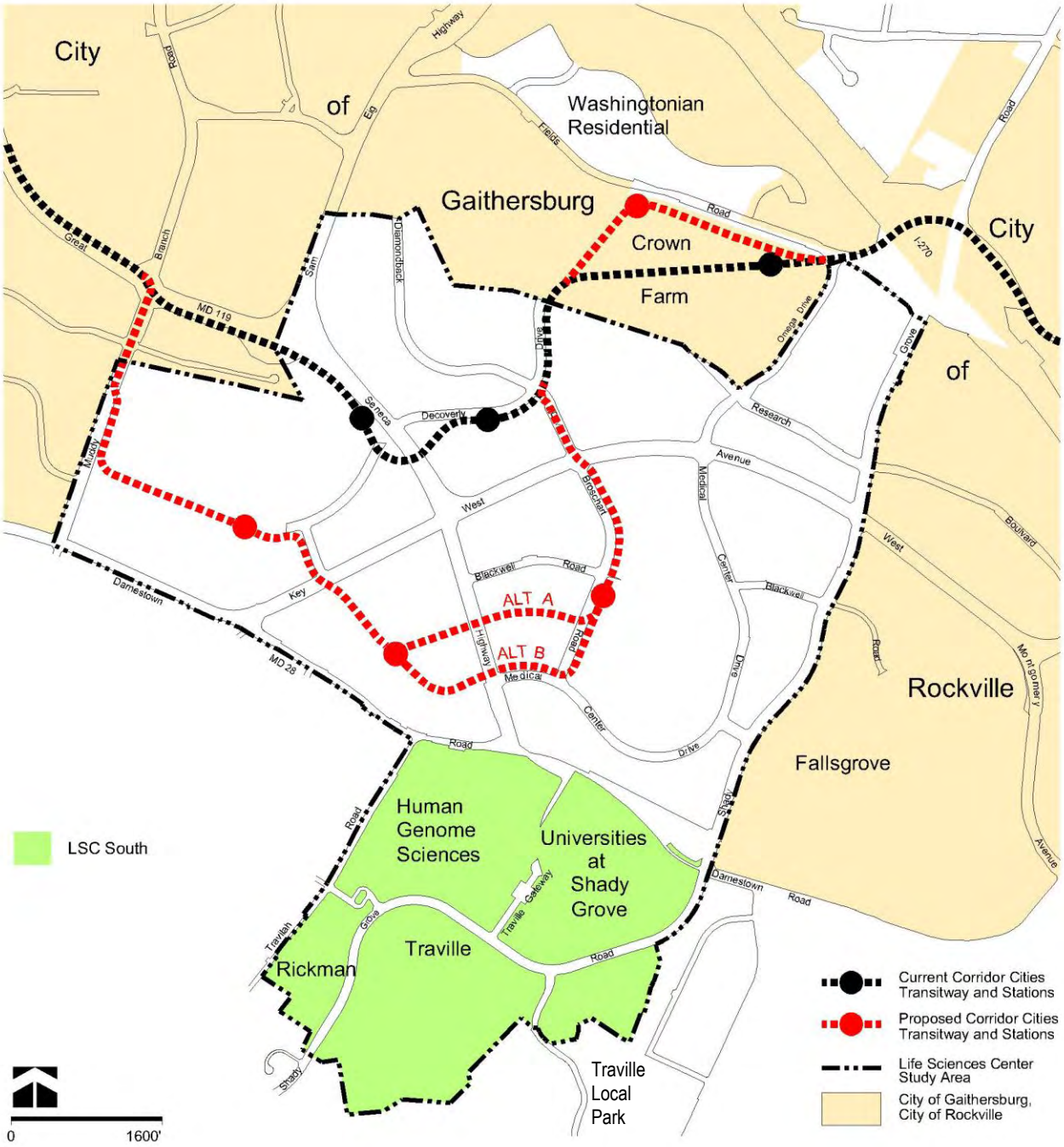
LSC South is in the Watts Branch Watershed and is part of the Piney Branch sub-watershed, which is a Special Protection Area (SPA) due to its fragile ecosystem, unusually good water quality, and susceptibility to development pressures. SPAs require approval of a water quality plan demonstrating a high level of stormwater control and treatment. Accordingly, this Plan recommends minimal additional development.

This Plan encourages the physical and visual integration of LSC South with the areas north of Darnestown Road, through building design and massing, street character and improved connections across Darnestown Road, and access to the CCT stations at LSC Central and West. These stations are between one-half to three-quarters of a mile (a 10-15 minute walk) from LSC South destinations. With higher density development around the CCT stations the transit locations will become more visible and recognizable as landmark features.

HGS and USG, along the south side of Darnestown Road, have developed as campus-style, inward-focused designs with parking along Darnestown Road. Future development at these sites should create a building edge along Darnestown Road near Great Seneca Highway. On the north side, redevelopment of the PSTA site will also create opportunities for new buildings to address the street edge, especially the corner of Darnestown Road and Great Seneca Highway.

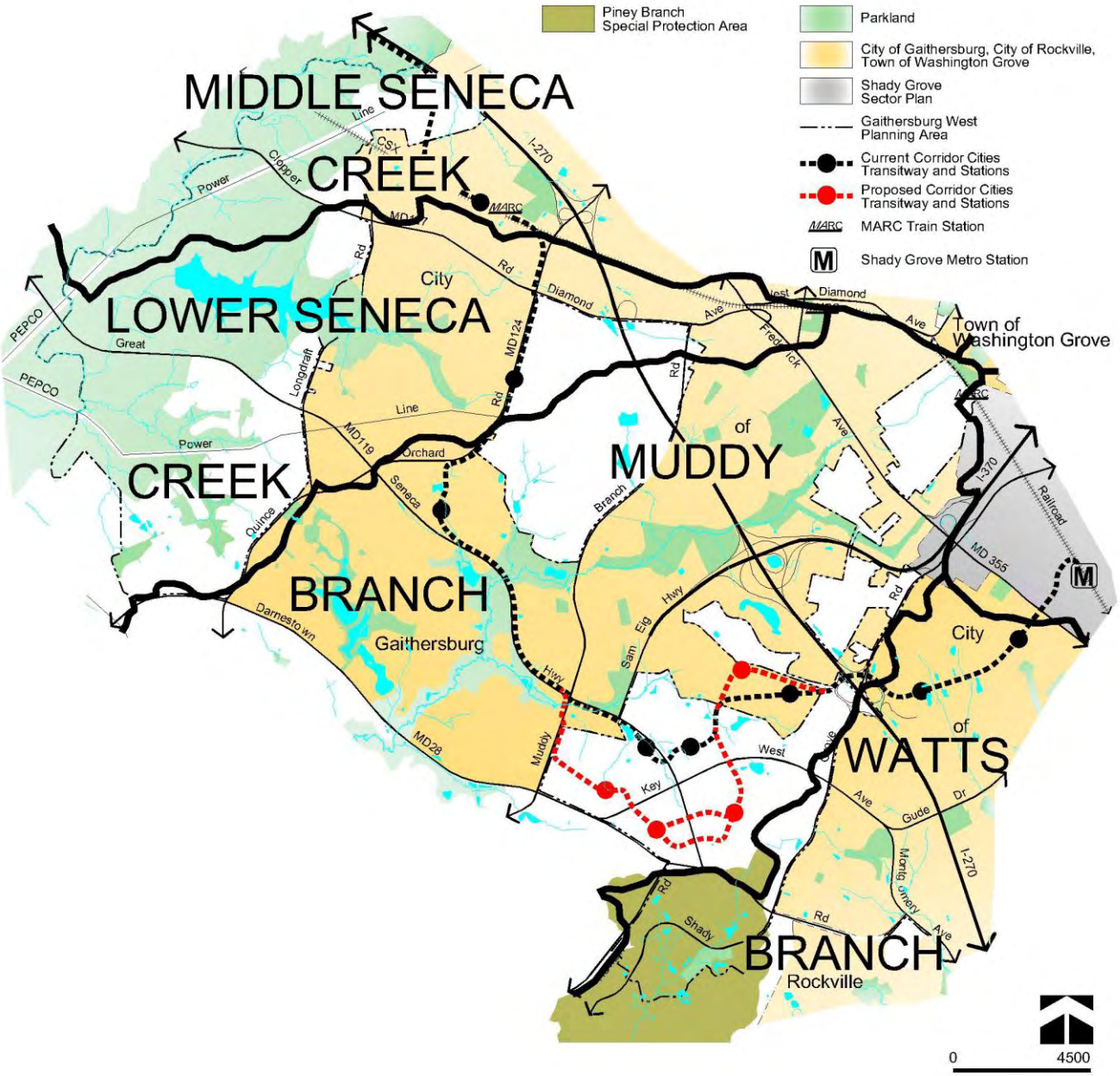
Extending Great Seneca Highway as a local business district street south of Darnestown Road provides an additional, signalized access point for LSC South. This proposed improvement should be coordinated with HGS's future plans, including their internal street network. A major benefit of improving the intersection of Great Seneca Highway and Darnestown Road would be to provide direct access, particularly for pedestrians and bicyclists, between LSC South and the proposed CCT station at LSC West.

LSC South District



LSC South is located south of Darnestown Road and includes the Universities at Shady Grove (USG), Human Genome Sciences, and the Traville retail and residential developments.

Watersheds


Piney Branch Special Protection Area
Parkland
City of Gaithersburg, City of Rockville, Town of Washington Grove
Shady Grove Sector Plan
Gaithersburg West Planning Area
Current Corridor Cities Transitway and Stations
Proposed Corridor Cities Transitway and Stations
MARC Train Station
Shady Grove Metro Station
MIDDLE SENECA
CREEK
LOWER SENECA
CREEK
BRANCH
Gaithersburg
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MUDDY
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Recommendations

- Maintain the R&D zoning on the Rickman site, but consider it for R-T to encourage residential development.
- Protect the Piney Branch sub-watershed and support the SPA by limiting development in LSC South to existing and approved projects, with the exception of the undeveloped Rickman parcels on Travilah Road.
- Extend Great Seneca Highway as a local business district street south of Darnestown Road.
- Improve pedestrian connections between LSC South and areas to the north—LSC West and LSC Central—emphasizing pedestrian access to the future transit stations.
- Construct Traville Local Park and provide connections to the LSC Loop.

LSC Circulation

The Plan provides a comprehensive transportation network for all modes of travel, including bicycle and pedestrian routes and constructing the CCT on the proposed realignment through the LSC. The local street network will supplement existing arterials by extending and connecting existing roads, and by creating new streets. In addition to the specific mobility recommendations provided for each district, this section provides overall transportation goals and guidelines for the LSC.

An enhanced and expanded transportation network will:

- better integrate and connect the five LSC Districts
- improve local circulation and take trips off the major roads
- improve the pedestrian environment
- provide access to transit by creating short, walkable blocks directly connected to CCT stations.

Street System

This Plan recommends a network of major highways, arterial roads, and local streets that provide safe access and help shape the community's character. The Plan includes recommendations for major infrastructure projects to support existing and proposed development based on build-out of the LSC to the proposed maximum zoning capacity. Maximum zoning capacity is not always achieved and some of the street network recommendations may not be necessary. Staging of development and infrastructure provision, particularly the CCT, is addressed in the Implementation section. Revisiting the Plan in six years will assess the pace of build-out and the need for infrastructure delivery.

The proposed local street network will create a finer grid than exists today and improve vehicular and pedestrian connections between the districts. Streets and transit will tie the districts together. The LSC Loop will unify the pedestrian and bicycle circulation system with sidewalks, bikeways, trails, and paths that provide options for mobility as well as recreation.

The local street network should be built to business district street standards with sidewalks on both sides and lower speeds. Business district streets are two lanes with parking on one side (60-foot right-of-way) or both sides (70- or 100-foot right-of-way) and should include curb extensions at crosswalks to further reduce pedestrian exposure to vehicular traffic.

Recommendations

- Augment the master planned street network to include a grid of business streets with 60-, 70-, and 100-foot right-of-ways. Master planned streets should be consistent with the design standards in the County Code. Exceptions to this treatment include portions of Key West Avenue and Sam Eig Highway, which will require separate design treatments.
- Design local streets and intersections with pedestrian-friendly characteristics such as minimal corner radii, special crosswalk pavement, wide sidewalks, and street trees.
- Reconstruct Sam Eig Highway as a grade-separated highway within a 250-foot right-of-way with three through lanes in each direction; shoulders suitable for peak-period, peak-direction BRT; two-lane, one-way frontage roads connecting to Fields Road and Diamondback Drive; and a flyover ramp from eastbound Great Seneca Highway to northbound Sam Eig Highway.
- Reconstruct Key West Avenue within a 200-foot right-of-way between Great Seneca Highway and Shady Grove Road to provide a consistent design treatment including a wide landscaped median, eight through travel lanes (four in each direction), and a separate curb lane that can serve as a through lane for transit vehicles and a right turn lane for other vehicles during peak periods.
- Construct urban diamond, grade-separated interchanges at three LSC locations: Great Seneca Highway over Muddy Branch Road, Great Seneca over Key West Avenue, and Key West Avenue over Shady Grove Road.
- Remove the grade-separated interchange from the intersection of Shady Grove and Darnestown Roads and from the intersection of Darnestown Road and Wootton Parkway (as recommended in the 1990 *Shady Grove Study Area Master Plan*).
- Develop an LSC bicycle network that facilitates bicycle travel in mixed traffic along local streets. This network should include an interconnected system of shared use paths (Class I bikeways), signed shared roadways/on-road paths (Class III bikeways along local streets), and shared roadways with wide curb lanes or paved shoulders.
- Implement the LSC Local Bikeway network described in the Implementation section.

Transit System

Project planning for the CCT takes into account the potential need to reconfigure existing bus service to avoid duplication and ensure the most efficient allocation of vehicles and personnel. There are currently six Ride On routes from the Shady Grove Metro Station, three of which provide service to the LSC area, including Shady Grove Adventist Hospital and the Traville Transit Center. When the CCT is in place, these routes may need to be adjusted to ensure the most efficient service.

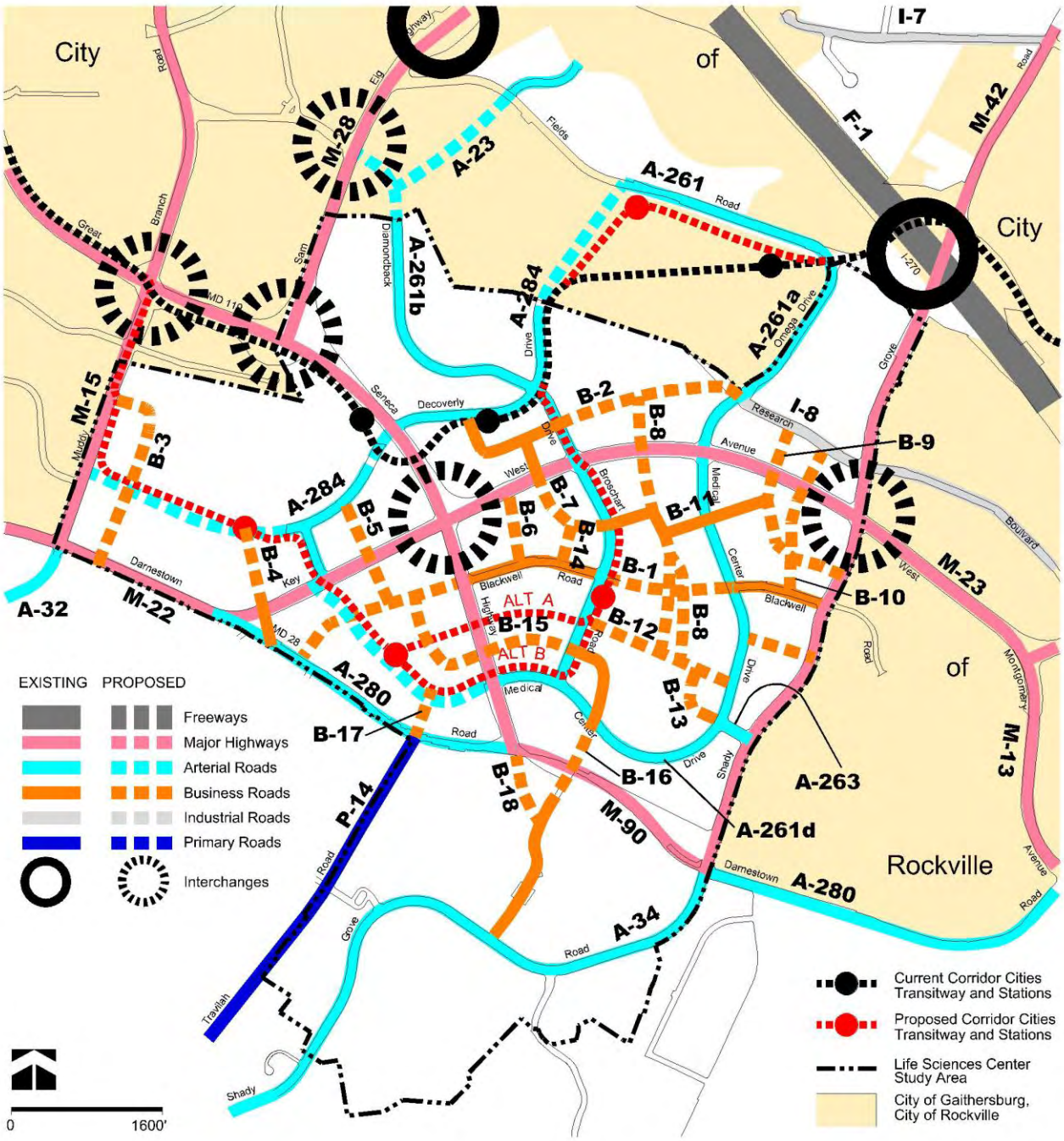
Recommendations

- Realign the CCT with line-haul service between the three proposed LSC CCT stations. To reduce delays for transit and vehicles, this realignment may require CCT bridges over Key West Avenue and Great Seneca Highway.
- Develop express bus service using value-priced lanes from I-270 and the Intercounty Connector (ICC) to serve the LSC.
- Develop shuttle bus routes serving the LSC area.

Travel Demand Management

With development focused in the LSC, the Plan recommends an aggressive non-auto driver mode share goal. The current mode share in the LSC area is roughly 16 percent. The proposed goal of 30 percent

LSC Circulation



relies on a combination of land use (density, diversity, and design) and zoning requirements, transit improvements (including the CCT), Travel Demand Management (TDM) programs, and staging.

Recommendations

- Establish an LSC parking lot district to actively manage demand and promote shared parking efficiencies, particularly relieving the requirement for smaller properties to self-park. Public/private parking agreements should be encouraged as private properties redevelop and potentially act as a funding source for the CCT.
- Define public garage sites at Preliminary Plan for publicly-owned properties in LSC Central (near Shady Grove Adventist Hospital) and LSC West.
- Establish long-term parking space capacity limits in LSC Central, LSC West, and LSC Belward.
- Establish a 30 percent non-auto driver mode share goal for LSC employees.

areas and enclaves

The areas and enclaves are the portions of this Plan outside of the Life Sciences Center.

The *areas* include the western communities of Quince Orchard and the McGown property that are contiguous to County land. The enclaves are the islands of County land surrounded by a municipality. Over time, due to municipal annexations, six *enclaves* have been created—geographic areas that are within the County's jurisdiction, but are completely surrounded by a municipality.

Five of the enclaves are surrounded by the City of Gaithersburg and one is surrounded by the City of Rockville:

- The National Institute of Standards and Technology (NIST) and Londonderry and Hoyle's Addition
- Rosemont
- Oakmont and Walnut Hill
- Washingtonian Residential
- Washingtonian Light Industrial
- Hi Wood

For the most part, these areas are built-out with stable, mature residential neighborhoods, long-term institutional uses, or light industrial uses. While significant change is not anticipated or recommended, this section highlights several issues. Existing land use and zoning maps for the Plan area are included in this section as well as maps for each area and enclave.

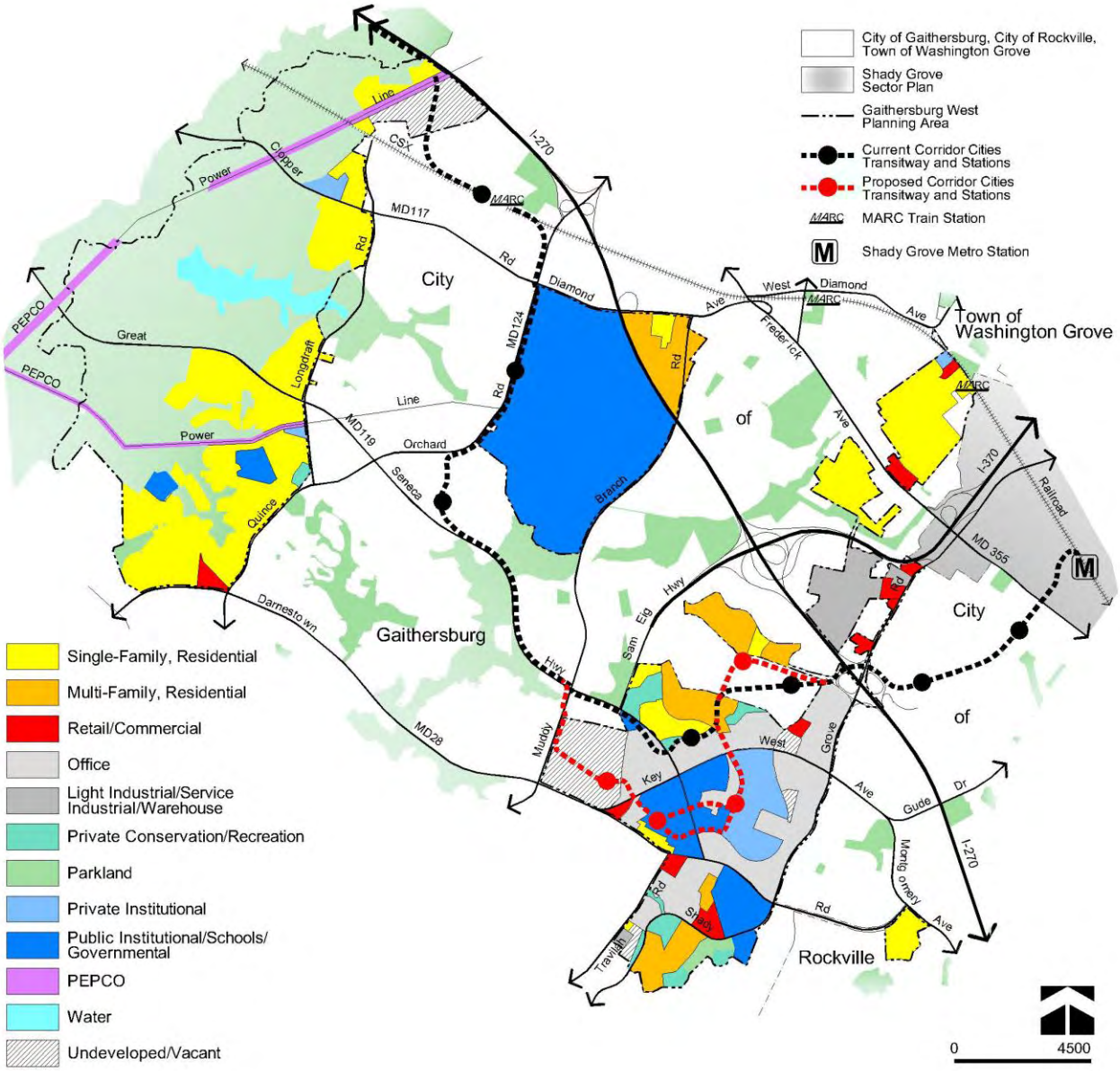
Areas

Quince Orchard

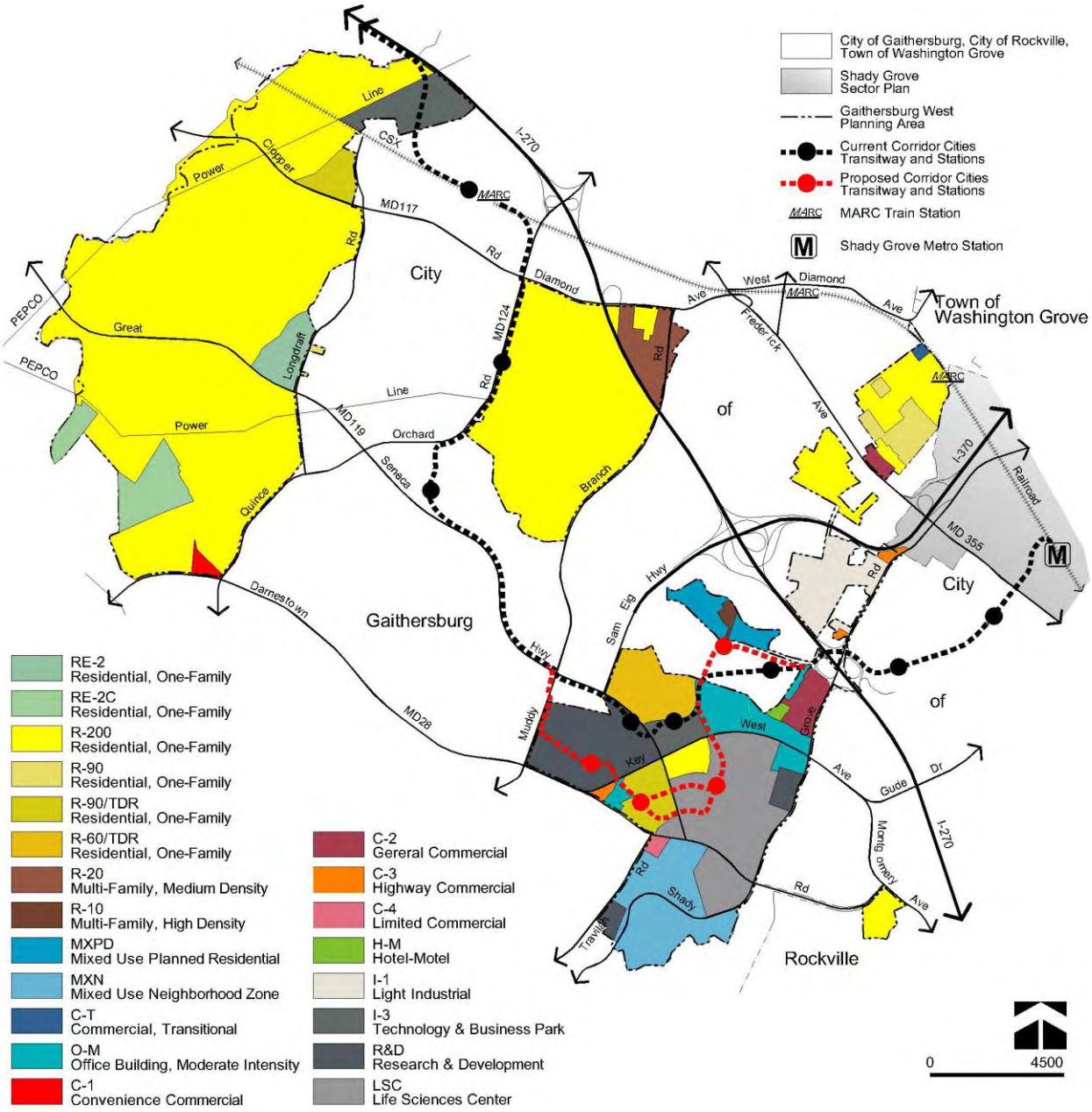
The communities in the westernmost part of the Plan area are Quince Orchard, Orchard Hills, Willow Ridge, and Parkridge. These areas are built-out with stable, mature residential neighborhoods and the intent of the Plan is to maintain and preserve these areas.

Quince Orchard and Longdraft Roads divide the County from the City of Gaithersburg. The City's 2008 MEL includes extensive areas in the vicinity of Quince Orchard but this Plan does not support annexation, which would alter the logical boundaries that currently divide the County and the City and could result in the loss of potential sites for County parks, as when the Crown Farm was annexed into the City of Gaithersburg.

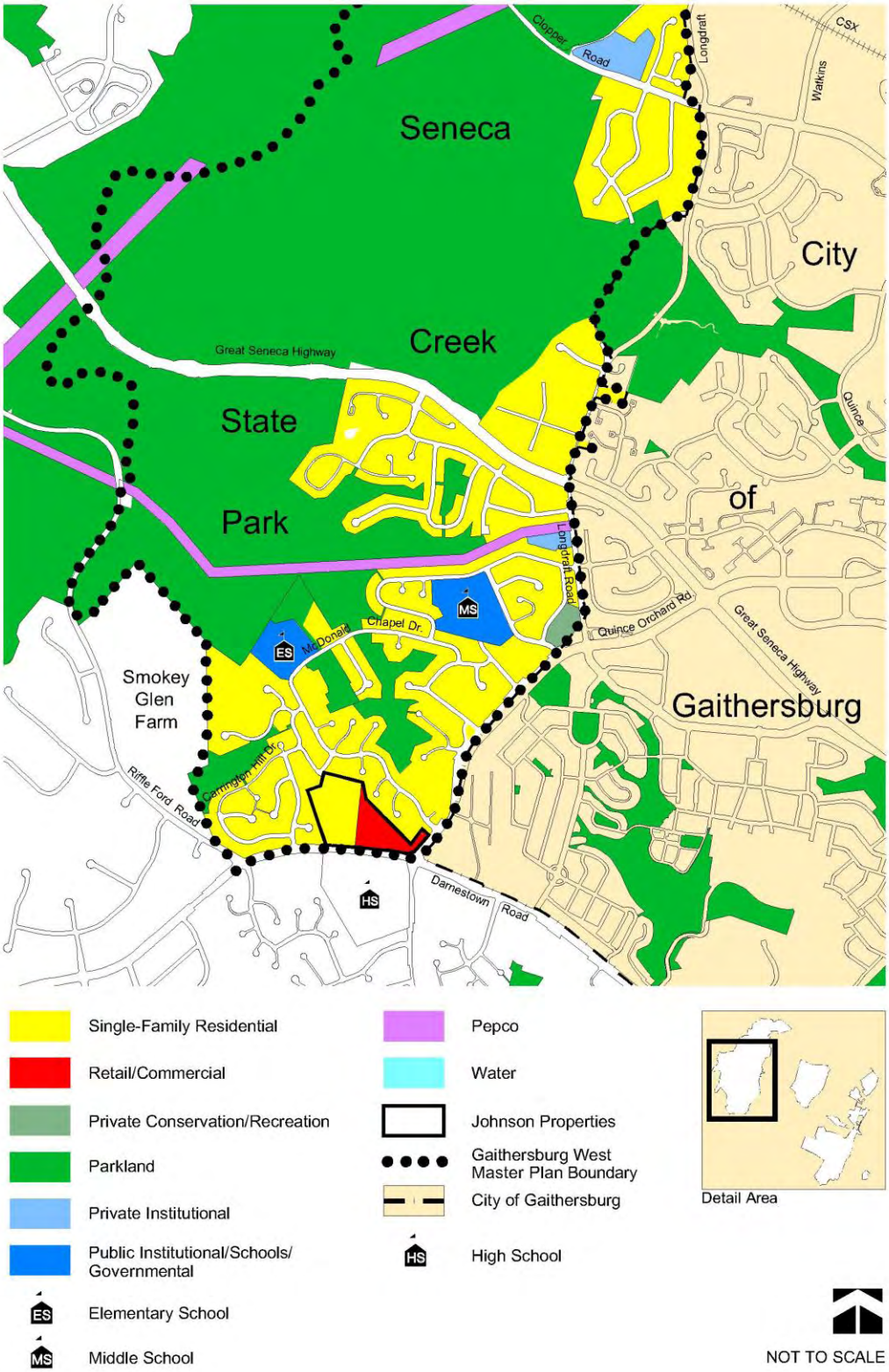
Gaithersburg West Existing Land Use



Gaithersburg West Existing Zoning



Existing Land Use: Quince Orchard



Areas east of Quince Orchard and Longdraft Roads are generally within the City of Gaithersburg. Areas west of these roads and east of Seneca Creek State Park are in the Gaithersburg West Master Plan. Areas south of Darnestown Road are covered by the County's 2002 Potomac Subregion Master Plan.

Parks are essential components of community life that protect the environment, establish neighborhood identity, and provide valuable recreational opportunities. They should be designed as part of a comprehensive open space system that supports recreation, a sense of place, and a sustainable community.

The Quince Orchard Area includes:

- Seneca Creek State Park (1,842 acres)
- Orchard Park Neighborhood Park (12.3 acres) – Carrington Hill Drive
- Quince Orchard Valley Neighborhood Park (89.2 acres) – Suffolk Terrace

The *Countywide Park Trails Plan* proposes a 250-mile interconnected system of hard surface and natural surface trails in eight greenway corridors in the County. The Seneca Greenway Corridor forms the Plan area's western boundary and provides a continuous 25-mile natural surface trail along Seneca Creek between the Potomac and Patuxent Rivers. Connections to Seneca Greenway Corridor from Quince Orchard Valley Neighborhood Park should be provided.

The *Land Preservation, Parks, and Recreation Plan (LPPRP)* provides recommendations and policy guidelines for future park development. The LPPRP noted the need for additional recreation facilities in the I-270 Corridor including four rectangular fields.

The 1985 *Gaithersburg Vicinity Master Plan* and the 1990 *Shady Grove Study Area Master Plan* both recommended a 10-acre local park on the Crown Farm, which has since been annexed into the City of Gaithersburg and is no longer available for a County park site. Consideration should be given, but not limited to, two properties in the Quince Orchard area if they become available in the future: the Johnson property at 12311Darnestown Road and the Smokey Glen Farm property at 16407 Riffle Ford Road. The Johnson family owns the largely vacant R-200 14-acre parcel on Darnestown Road along with the adjacent C-1 commercial property. The Smokey Glen Farm has operated for over 50 years as a private recreation facility providing outdoor events for large groups. Ideally, a new park would provide two rectangular fields for active recreation.

Longdraft Road

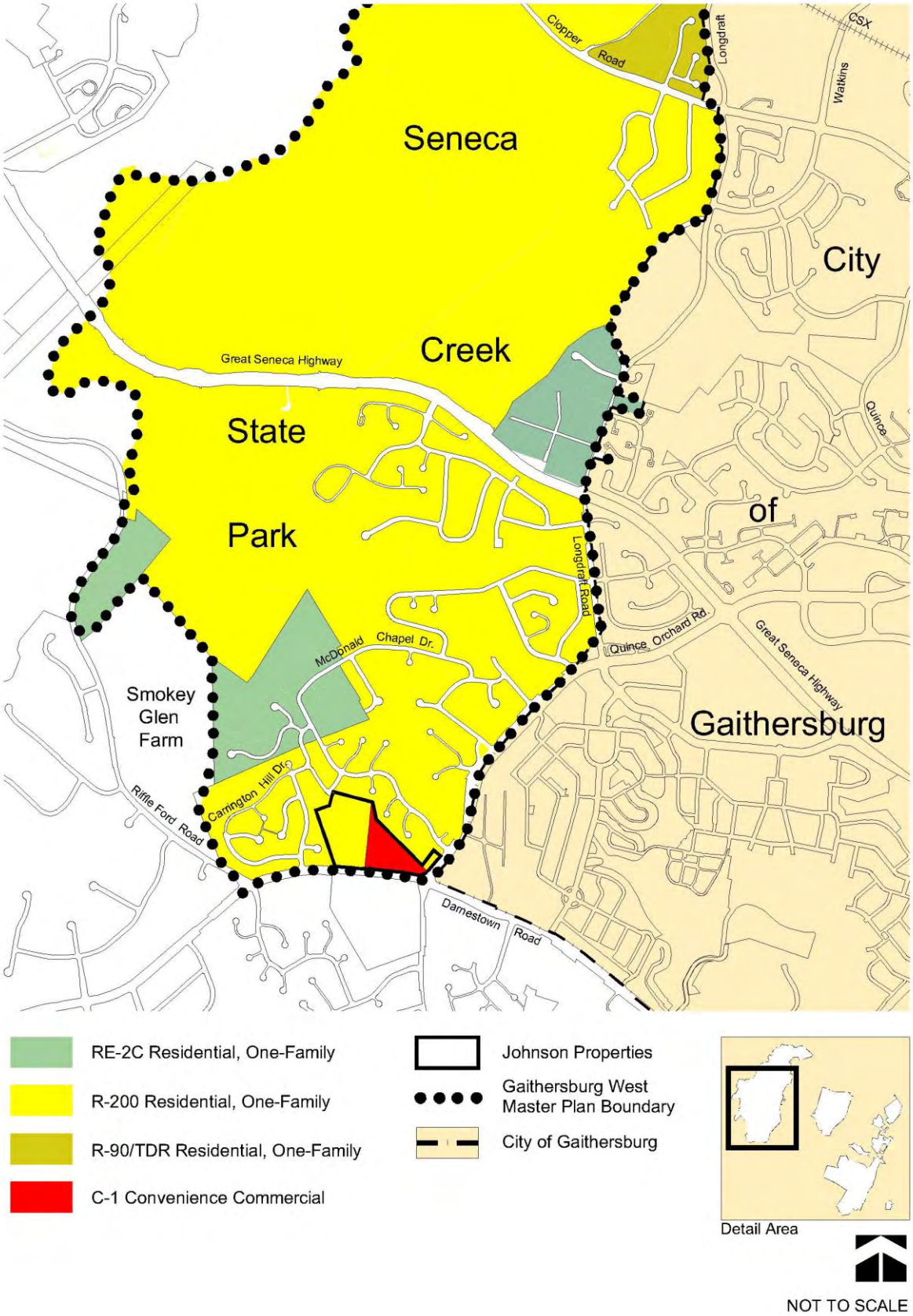
In 2008, the Montgomery County Department of Transportation (MCDOT) completed a Facility Planning Study of Longdraft Road between Clopper and Quince Orchard Roads and made recommendations for upgrades. The County Council chose not to proceed with Phase II of the Longdraft Road facility plan.

Longdraft Road is currently two lanes, and for most of its length it has no curbs, gutters, shoulders, or sidewalks. Along the 1.5-mile stretch that was studied, 30 residential driveways and 13 intersections result in a large number of turning movements. Due to travel demand forecasts and the extension of other area roads, improvements to Longdraft Road may be needed to reduce existing and future congestion and improve vehicular and pedestrian safety. This Plan recommends that Longdraft Road be retained in the *Master Plan of Highways* as a four-lane arterial road.

Recommendations

- Retain the existing residential and commercial zones and maintain the established character of these neighborhoods.

Existing Zoning: Quince Orchard



- Address the demands for active recreation in this area by acquiring land for a local public park when a site becomes available.
- Provide a natural surface trail connecting Quince Orchard Valley Neighborhood Park to the Seneca Greenway Corridor.
- Retain Longdraft Road as a four-lane arterial.
- Promote planting street trees and neighborhood trees.

McGown Property

The McGown property is a largely undeveloped tract south of I-270 and adjacent to the City of Gaithersburg. It includes a 65-acre parcel in the I-3 Zone and a 10-acre parcel in the R-200 Zone. Access to the McGown property is currently via Game Preserve Road, a narrow, two-lane road adjacent to Seneca Creek State Park that includes a one-lane tunnel under the CSX tracks.

The property contains mature forest, some of high quality. Tributary streams flow to Seneca Creek across the property and are priorities for restoration or retrofit. The 10-acre parcel features steep slopes, a mature oak-hickory forest with birds common to an interior woodland, as well as mature mountain laurel in the understory with a minimal presence of invasive species. The Plan recommends that this high quality forest on the 10-acre parcel be preserved.

The proposed CCT is planned to run diagonally across the McGown property, with a stop co-located with the MARC Metropolitan Grove Station. A CCT maintenance facility is also being considered adjacent to the CSX rail line.

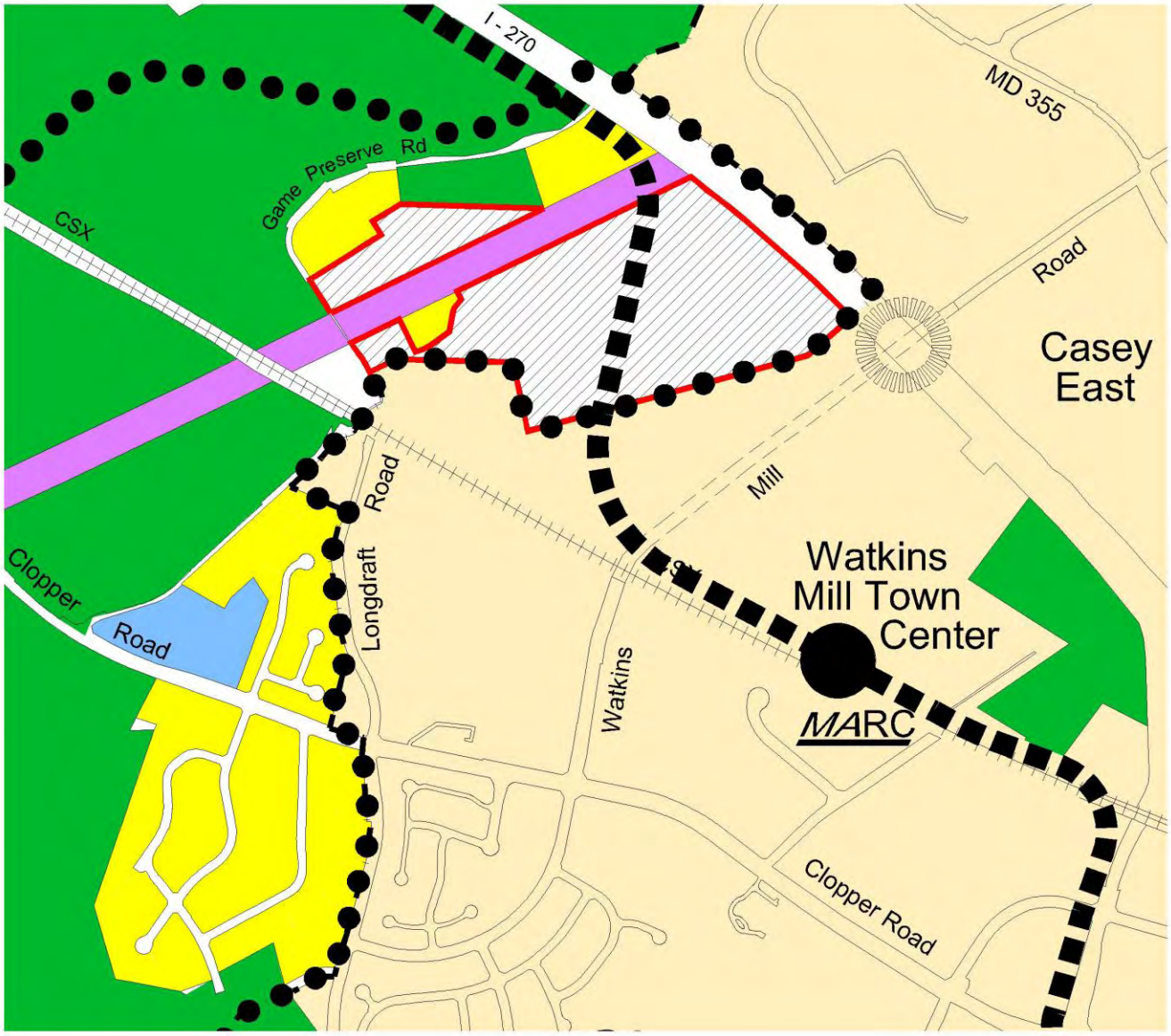
The City has approved two mixed-use developments adjacent to the McGown property: Watkins Mill Town Center to the south and Casey East between I-270 and MD 355. The Town Center project includes a 27-acre city park and the Casey East project includes a site for the 6th District Police Station. To provide access to the City's mixed-use developments, several new roadway improvements would be required, including access ramps to I-270 that extend onto the McGown property.

The McGown property is within the City of Gaithersburg's Maximum Expansion Limits (MEL). Since this property is somewhat isolated and disconnected from any centers of growth planned in the County, annexation into the City of Gaithersburg may be appropriate. Annexation would allow for a comprehensive and coordinated development of the parcel that would be compatible with the adjacent mixed-use projects that have been approved by the City of Gaithersburg. This Plan would support a moderate density, mixed-use development on the McGown property.

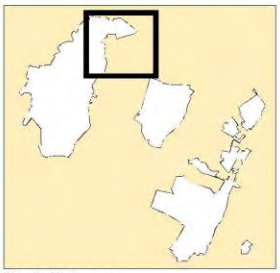
Recommendations

- Coordinate planning with the City of Gaithersburg.
- Consider the Planned Development Zone at a moderate density (10-15 units per acre).
- Preserve the property's natural resources, particularly the high quality, mature forest on the 10-acre parcel.
- Preserve and create connections to Seneca Creek State Park.
- Provide right-of-way for Watkins Mill Road extended.

Existing Land Use: McGown Property



Single-Family Residential
Parkland
Private Institutional
PEPCO
McGown Property
Undeveloped/Vacant
Gaithersburg West Master Plan Boundary
City of Gaithersburg
Proposed Corridor Cities Transitway and Stations
Proposed Interchange

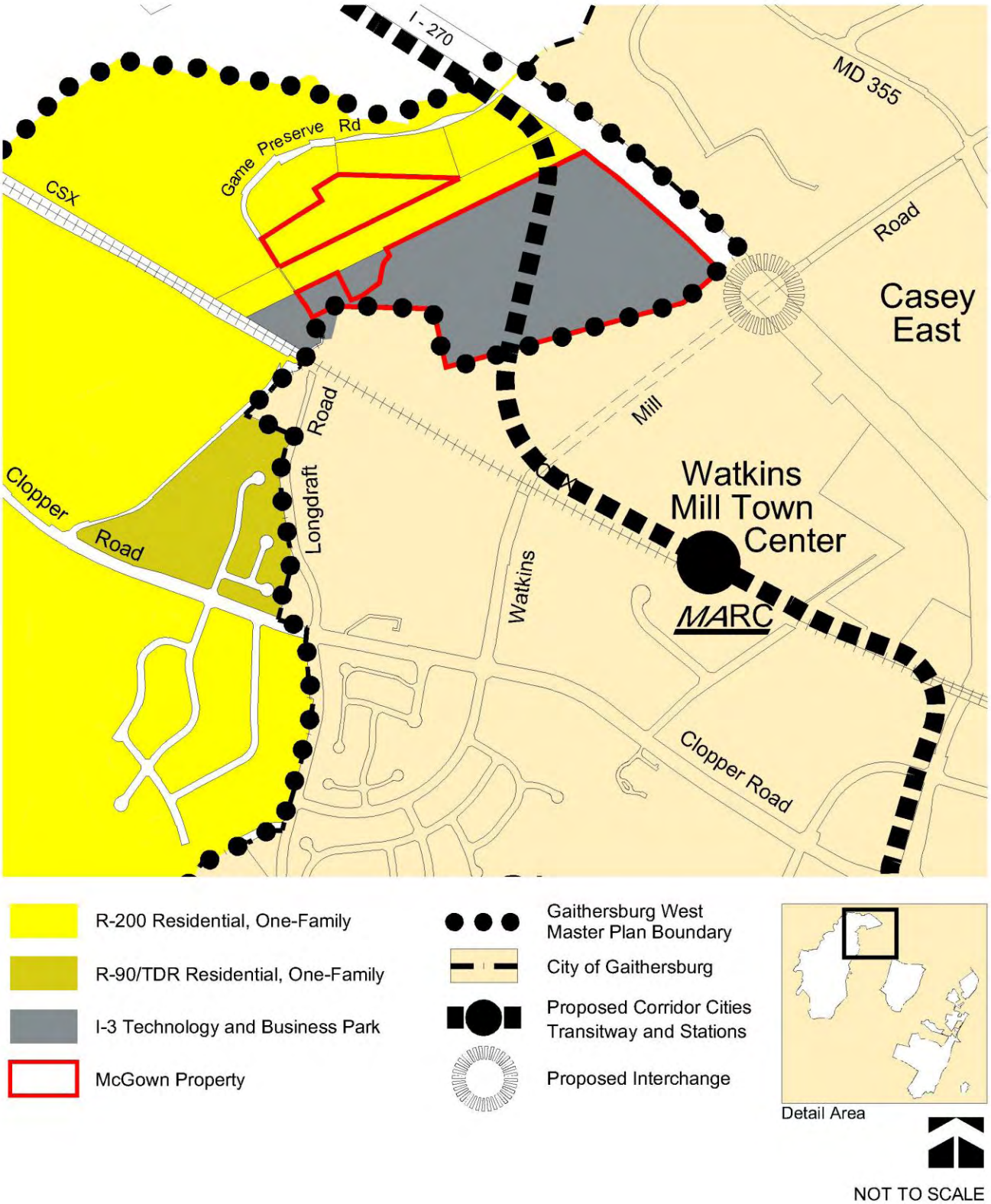


Detail Area

NOT TO SCALE

The McGown property is two parcels divided by the PEPCO right-of-way: a 65-acre site zoned I-3 and a 10-acre site zoned R-200. It borders Seneca Creek State Park to the northwest and the City of Gaithersburg to the south and east.

Existing Zoning: McGown Property



- Establish access points to the McGown property from Watkins Mill Road extended.
- Provide off-ramp right-of-way for the proposed new interchange at I-270 and Watkins Mill Road.
- Establish and provide CCT right-of-way and provide for a transit station co-located with the MARC station in the City of Gaithersburg.

Enclaves

The five enclaves that are surrounded by the City of Gaithersburg are all within the City's Maximum Expansion Limits (MEL) and could be considered for annexation. This Plan does not recommend significant changes for the enclave areas. Enclaves sometimes create confusion for citizens regarding services and other jurisdictional matters.

Recommendation

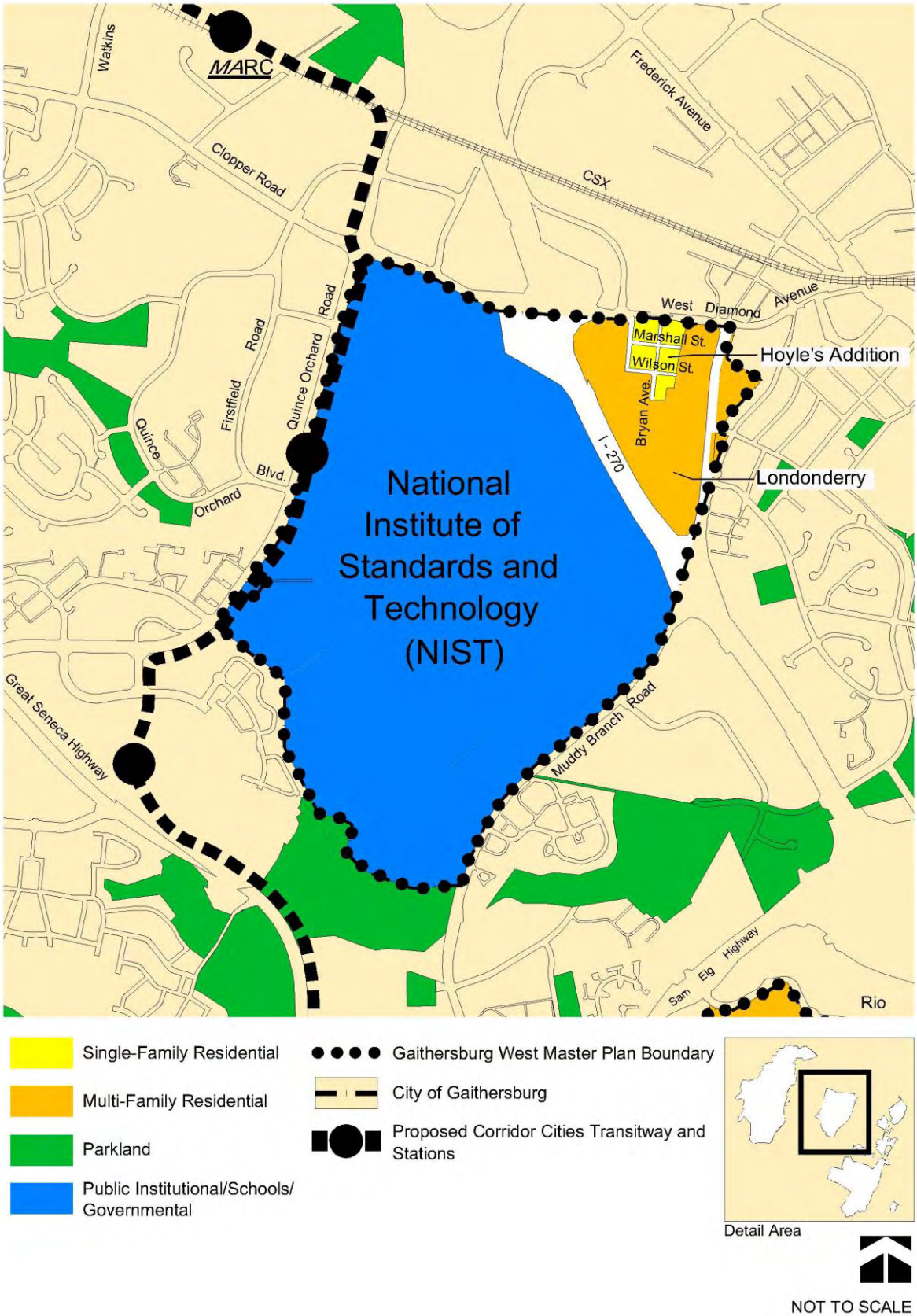
- Encourage the City of Gaithersburg to create an annexation fact sheet that explains the effects and implications, as well as the process, of incorporation. Occasional information seminars hosted by the City for residents in the enclave areas may also be useful.

National Institute of Standards and Technology (NIST)

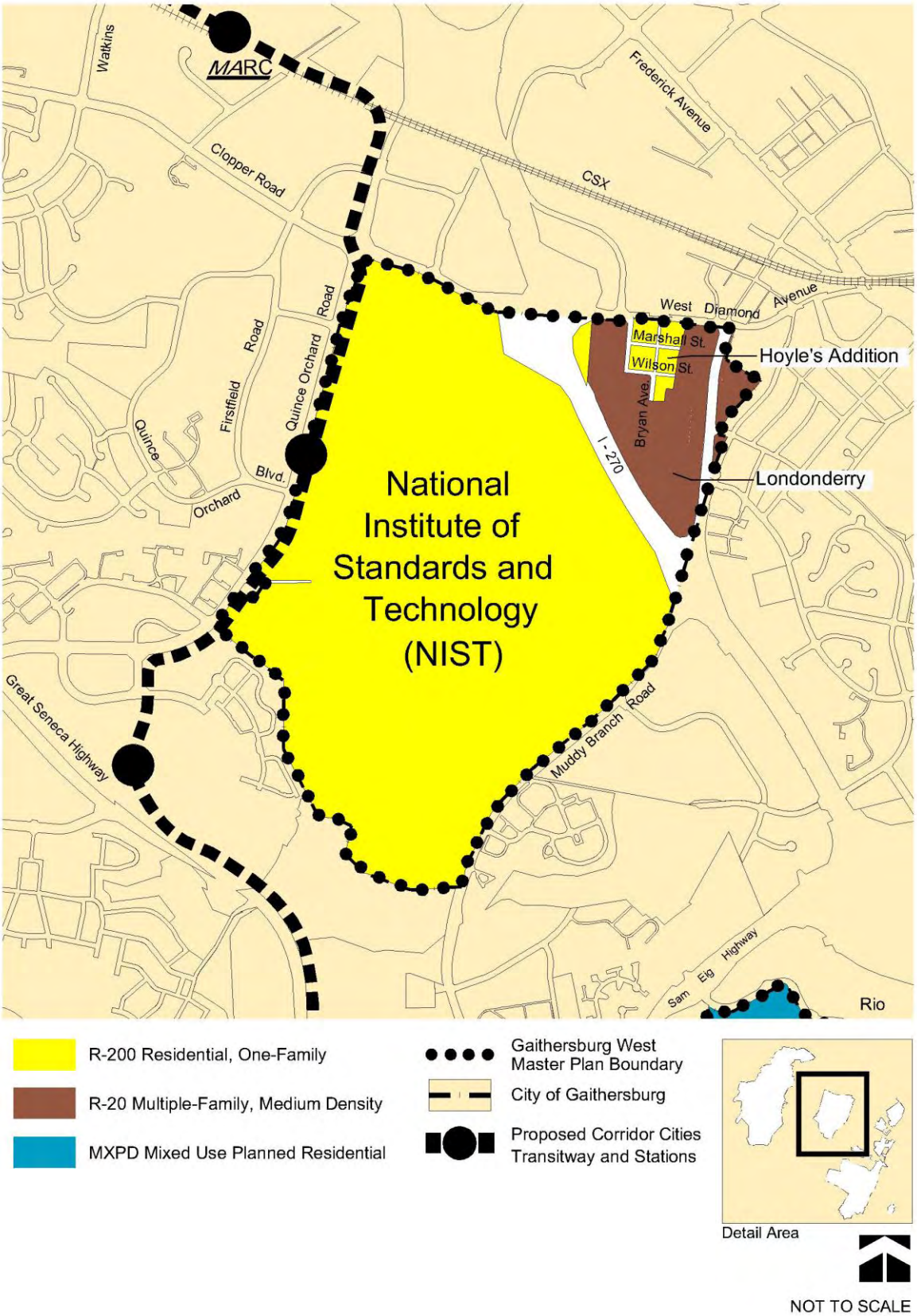
NIST is a federal agency with two locations, in Gaithersburg and Boulder, Colorado. NIST promotes innovation and industrial competitiveness by advancing measurement sciences, standards, and technology. NIST researchers work with industry, academic institutions, and other government agencies. The 580-acre Gaithersburg facility has 3.4 million square feet in a campus style research, development, and office complex. There are no plans to significantly expand the facility, which is zoned R-200.

A CCT station is planned on the western side of the NIST facility. With 5,000 employees (2,700 permanent and 2,300 contract), this station offers an opportunity to change commuting patterns and is an important link in the future public transit network.

Existing Land Use: NIST/Londonderry-Hoyle's Addition



Existing Zoning: NIST/Londonderry-Hoyle's Addition



Recommendations

- Coordinate with NIST to plan for the proposed CCT station along Quince Orchard Road.
- Refer all plans for development at NIST, including campus master plans, to the Montgomery County Planning Board as part of the mandatory referral process.
- Preserve mature trees and forest.
- Target stream buffer areas for forest planting and removal of invasive plants.

Londonderry and Hoyle's Addition

Both the Londonderry and Hoyle's Addition areas are appropriate for annexation by the City of Gaithersburg. Hoyle's Addition may be appropriate for townhouse zoning in the future. Any future development should provide appropriate transitions to the surrounding residential areas and protect the natural features.

Recommendations

- Annexation of these areas into the City of Gaithersburg is logical and consistent with the City's MEL.
- Maintain the existing zoning.
- Target stream buffer areas for forest planting and removal of invasive plants.
- Use low-impact development techniques to minimize runoff to stream systems.

Rosemont, Oakmont, and Walnut Hill

These primarily residential communities have little development potential and the stable residential areas should be preserved. Several recommendations for this area reflect consistency with the 2006 *Shady Grove Sector Plan*, particularly removing the CSX Transitway easement along Oakmont Avenue and maintaining Oakmont Avenue as a two-lane arterial.

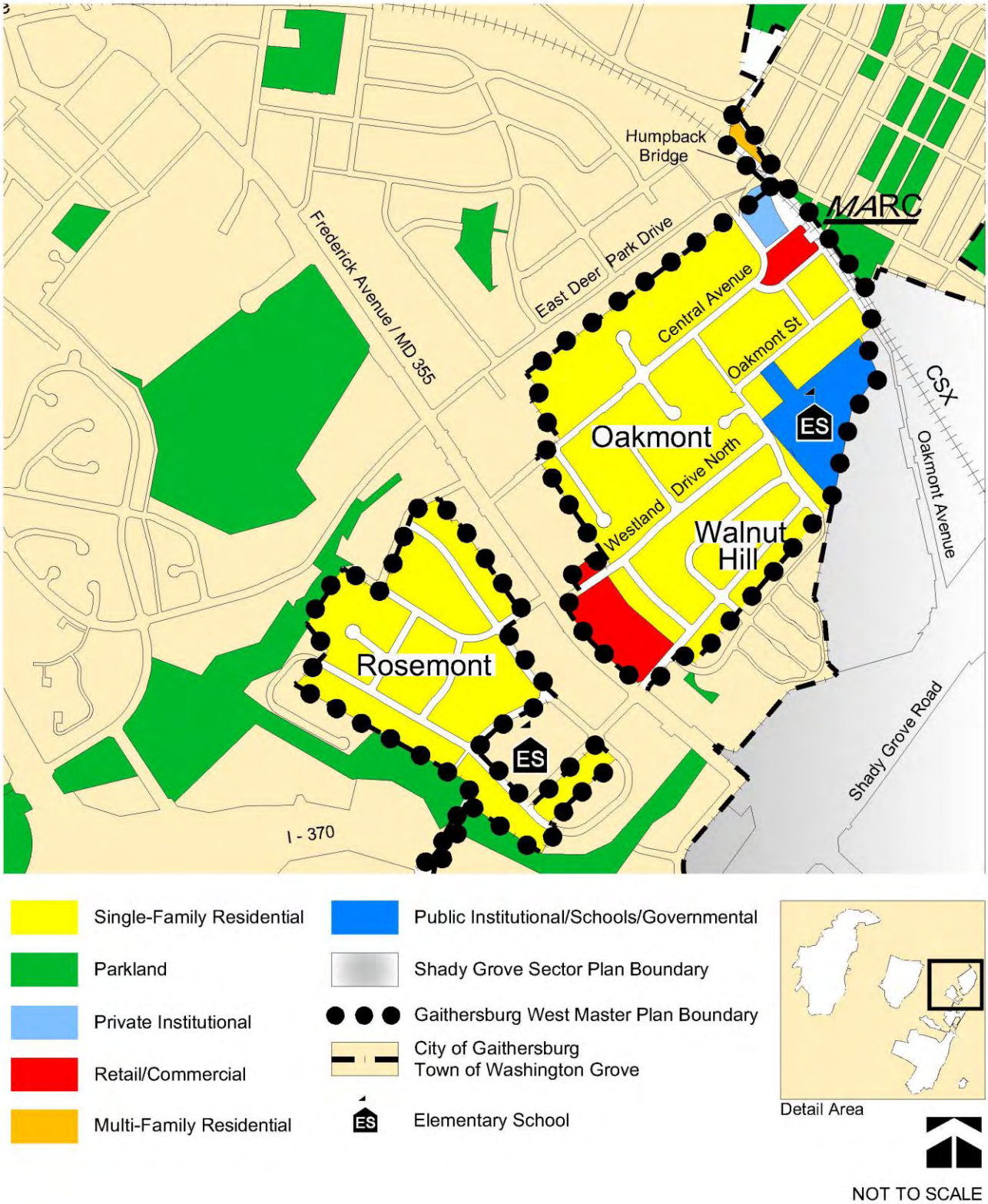
The 1982 *Oakmont Special Study Plan* recommended the C-T Zone for several single-family houses along Oakmont Street at its intersection with Oakmont Avenue near the CSX tracks. The C-T option was intended to buffer the single-family houses from the proposed transit easement north of the CSX tracks and from the possible widening of Oakmont Avenue to four lanes. Given the recommendations to remove the transit easement and maintain Oakmont as two lanes, this Plan recommends removing the proposed C-T option.

Deer Park Bridge

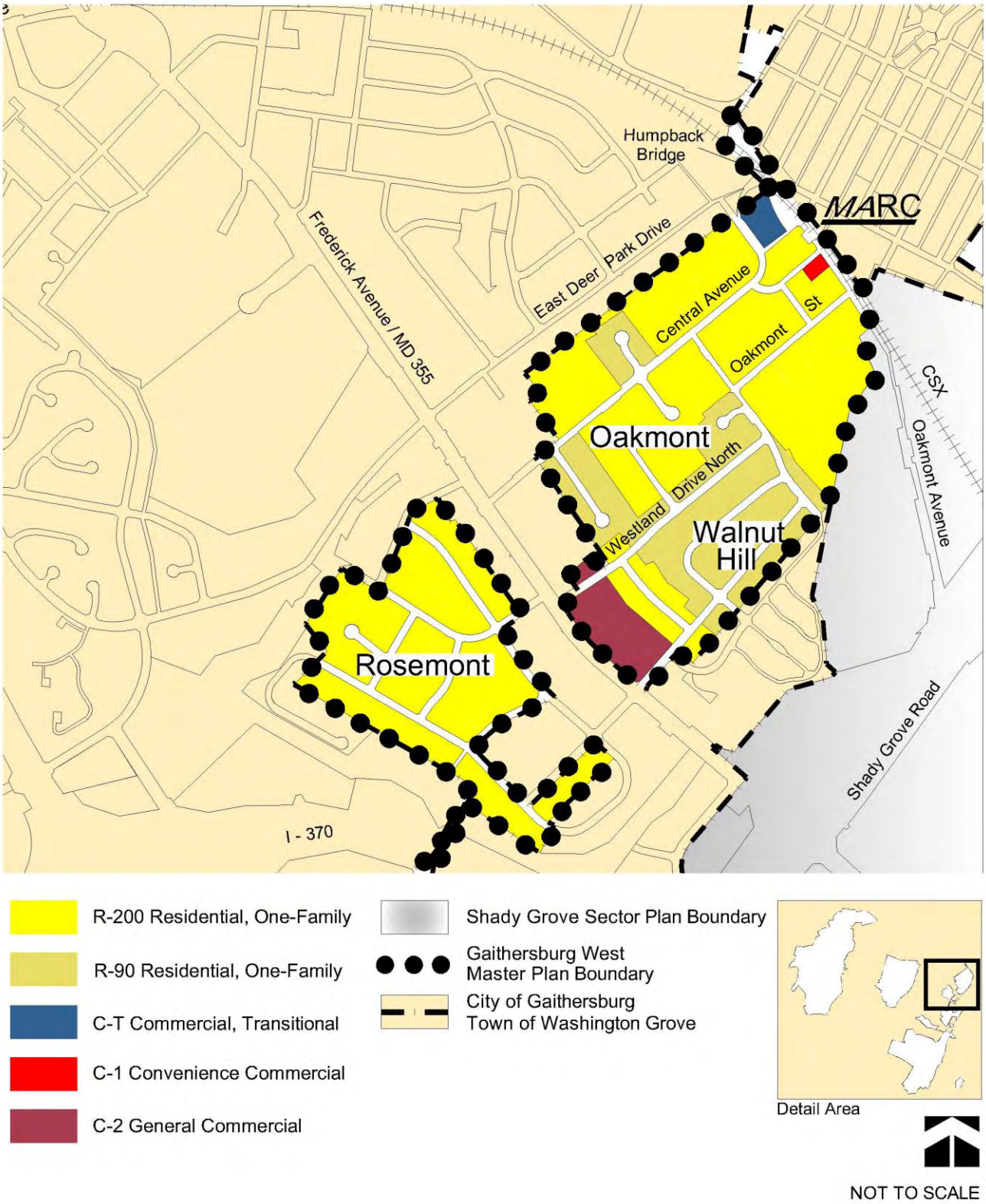
Deer Park Bridge, known as the Humpback Bridge, was built in 1945 and added to the *Locational Atlas and Index of Historic Sites* in 2005. The bridge spans the CSX railroad tracks, providing a connection between Gaithersburg and the historic Town of Washington Grove. The bridge is near the Washington Grove MARC station and reflects the origin and development of Washington Grove, Oakmont, and Gaithersburg. As a local landmark, the Humpback Bridge is a familiar visual feature. A timber bridge has been at this location since the 1880s. The bridge was rehabilitated in 1988 and 2000.

The bridge is maintained by the Montgomery County Department of Transportation (MCDOT), which is currently evaluating its structural condition. Future restoration or rehabilitation work should preserve the bridge's form, scale, and location. The traditional use of wood is important, but materials should be considered with some leniency. If deemed unsuitable for further rehabilitation for vehicular traffic, new uses may be identified that would be compatible with its preservation, including exclusive use by

Existing Land Use: Rosemont, Oakmont, Walnut Hill



Existing Zoning: Rosemont, Oakmont, Walnut Hill



bicyclists and pedestrians. Heritage tourism goals include a railroad theme that could connect with this resource.

MCDOT initiated a facility planning study several years ago, which has been delayed due to concerns raised by the City of Gaithersburg and the Town of Washington Grove. MCDOT is currently conducting a comprehensive structural test to examine the condition of the bridge. This Plan supports the ongoing efforts of MCDOT to assess the bridge's condition and explore appropriate alternatives, including rehabilitation or replacement that address safety, mobility, preservation, and fiscal considerations.

Recommendations

- Remove the proposed C-T zoning option on the R-200 properties in the vicinity of Oakmont Street.
- Designate Oakmont Avenue from the southern Plan boundary to Central Avenue with an 80-foot minimum right-of-way and two travel lanes, consistent with the 2006 *Shady Grove Sector Plan*.
- Remove the CSX Transitway easement along Oakmont Avenue, consistent with the 2006 *Shady Grove Sector Plan*.
- Improve stormwater management, reduce impervious surface, increase street tree planting, and incorporate other low impact development and green building techniques if the Walnut Hill Shopping Center redevelops.
- Refer MCDOT's *Deer Park Bridge Facility Planning Study* through the mandatory referral process for Planning Board review and comment.
- Preserve and create connections following Muddy Branch parallel to Central Avenue.

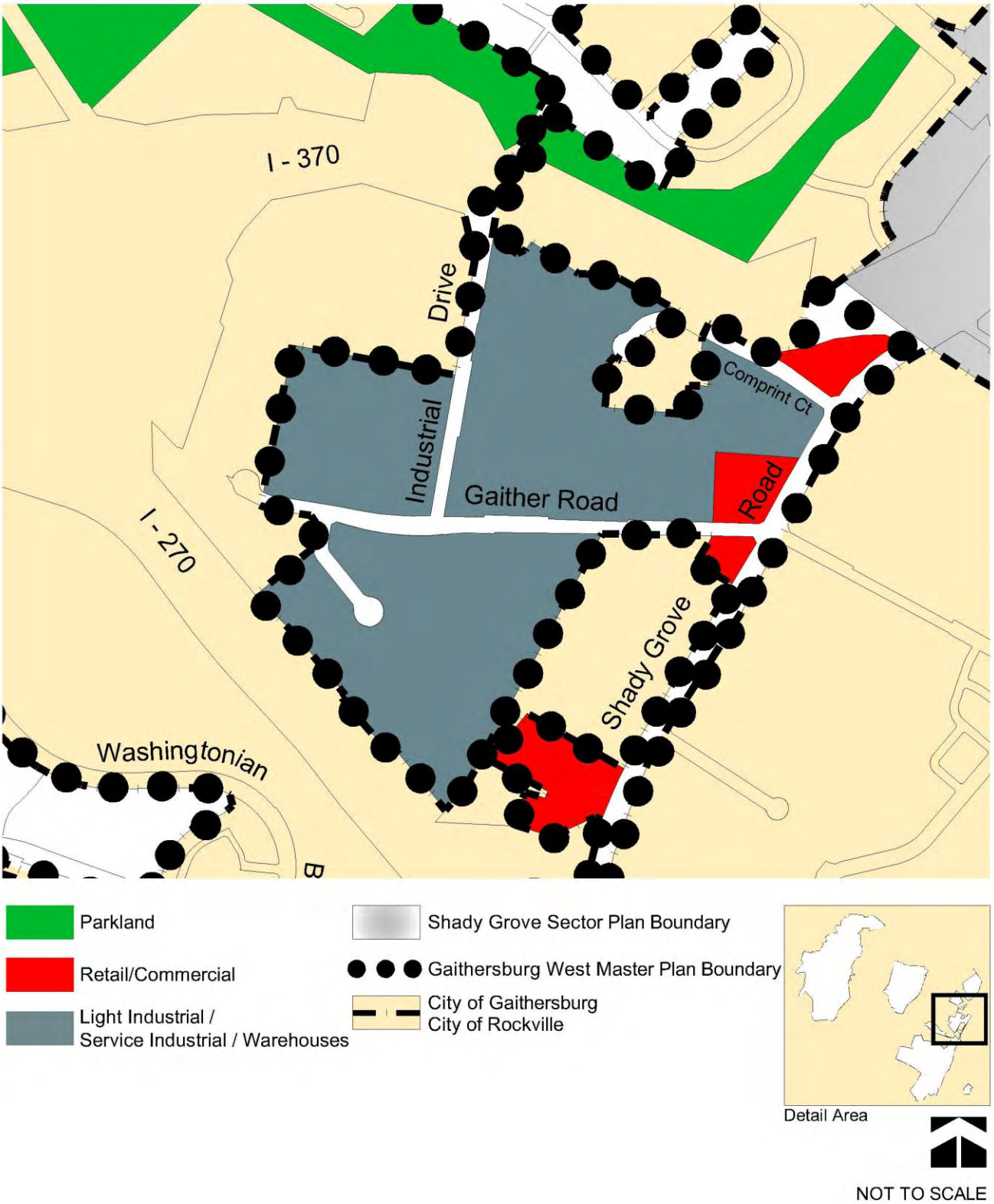
Washingtonian Light Industrial Park

This 103-acre enclave is a light industrial area primarily zoned I-1 with a few C-3 parcels. The Shady Grove Center, north of Gaither Road was built in 1971 and has 108,000 square feet of retail space on a six-acre site. The property owners are considering redevelopment with mixed uses (retail and office), which is not allowed with the existing I-1 Zone. The owners are exploring options for the property and may request a rezoning or a zoning text amendment.

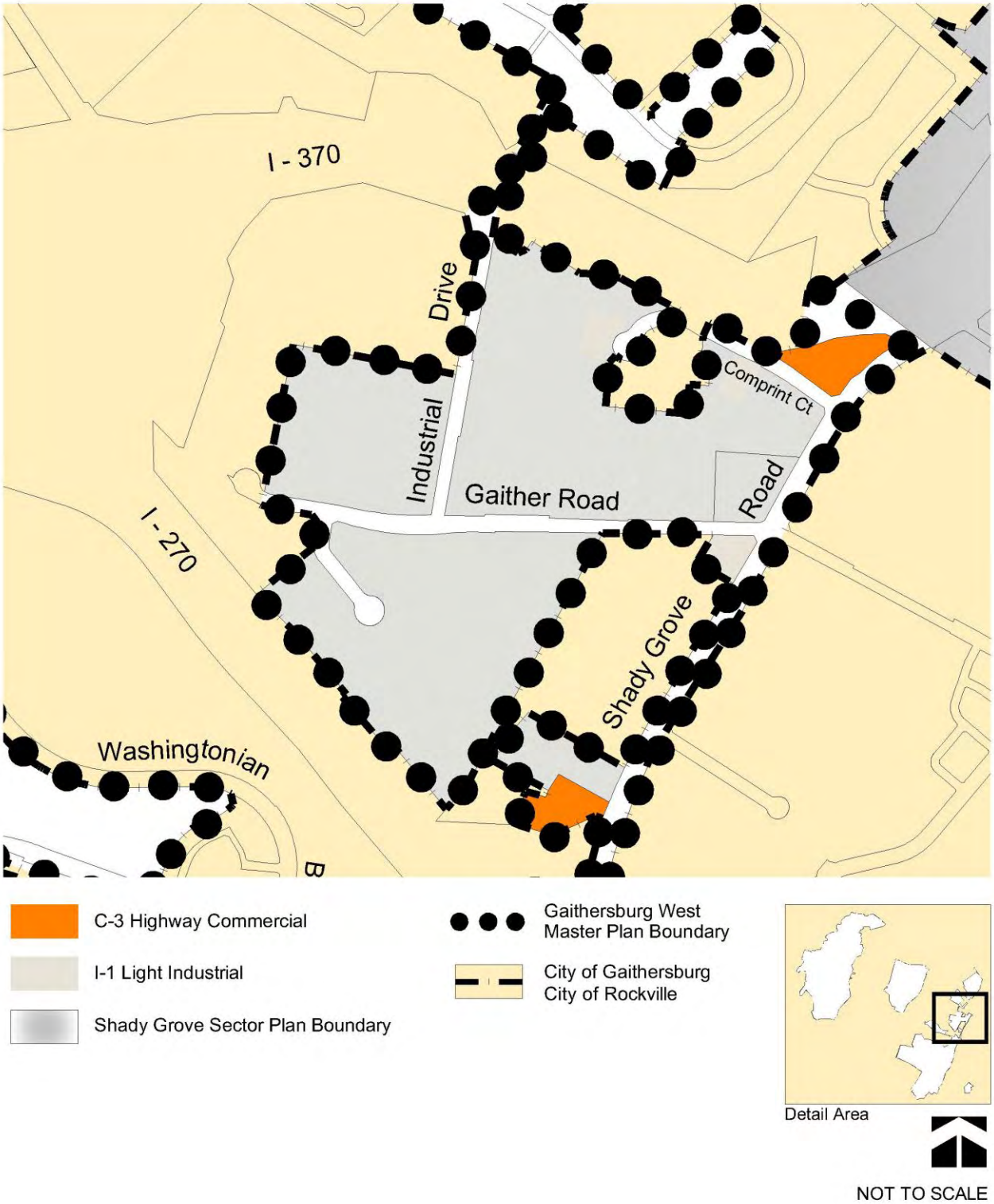
Recommendations

- Consider future commercial mixed-use redevelopment of the Shady Grove Center.
- Retain the I-1 Zone and the C-3 Zone for all other properties in the Washingtonian Light Industrial Park.
- Reduce imperviousness, improve stormwater management, and implement other green building techniques if there is redevelopment in this area.

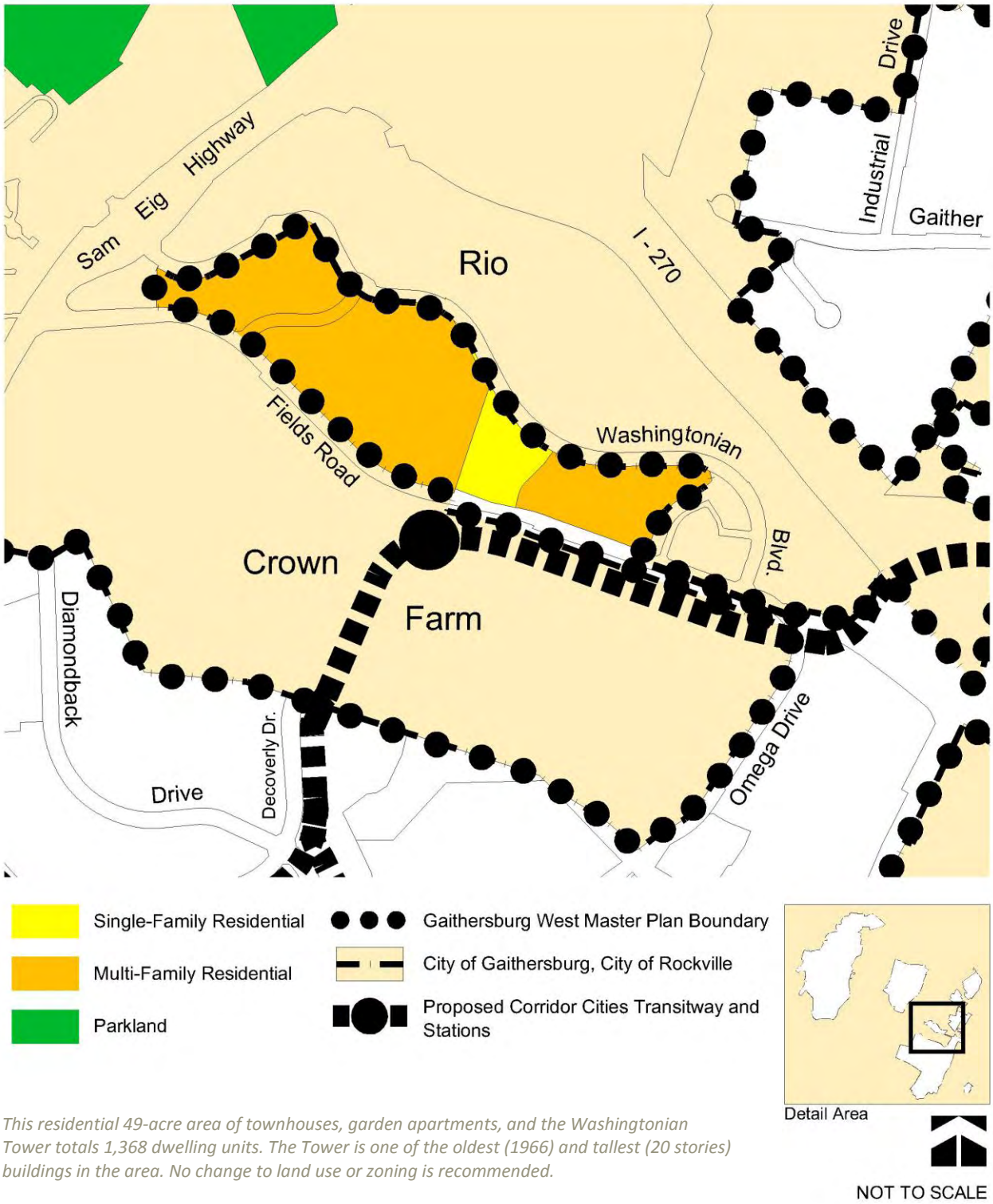
Existing Land Use: Washingtonian Light Industrial Park



Existing Zoning: Washingtonian Light Industrial Park

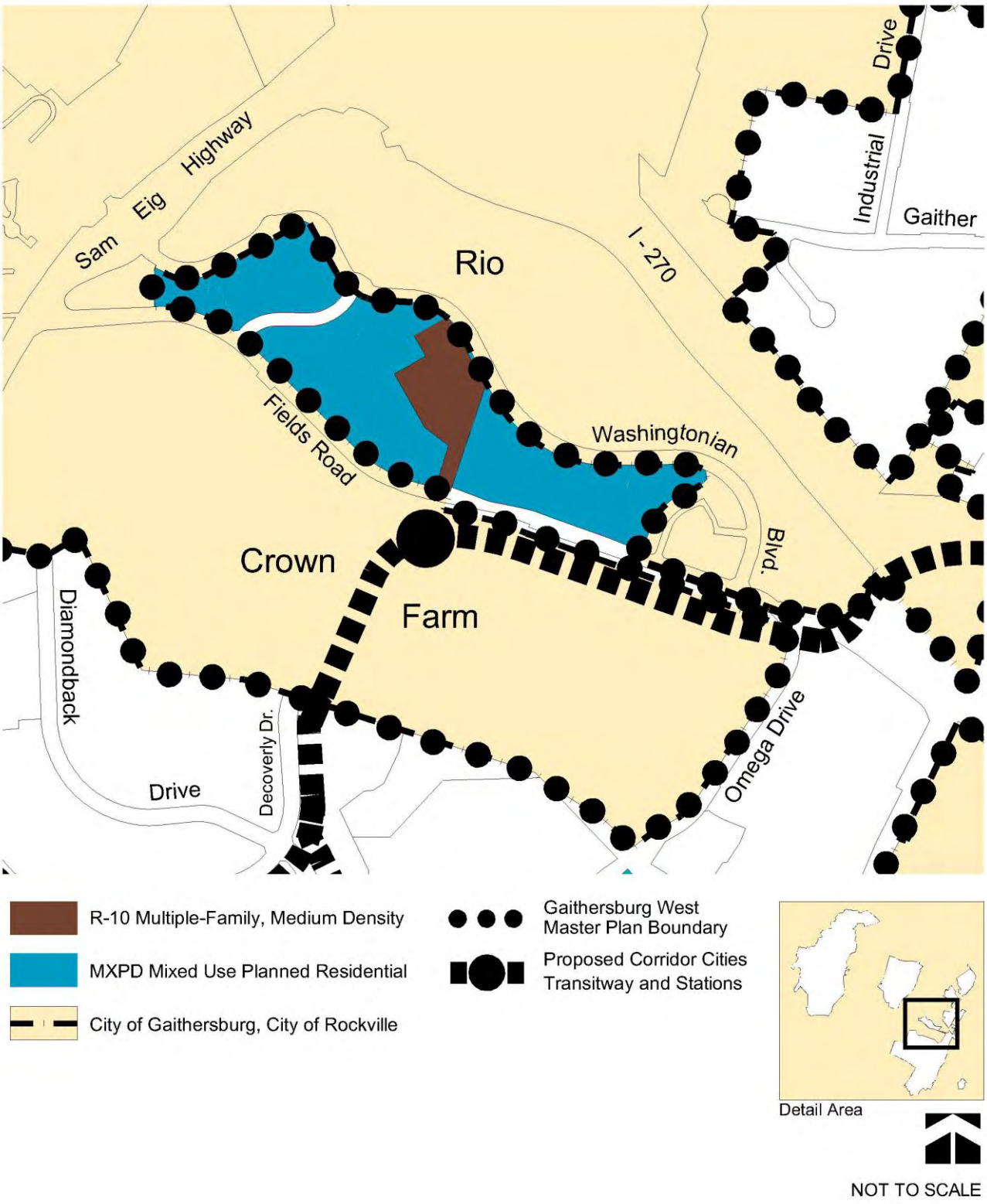


Existing Land Use: Washingtonian Residential

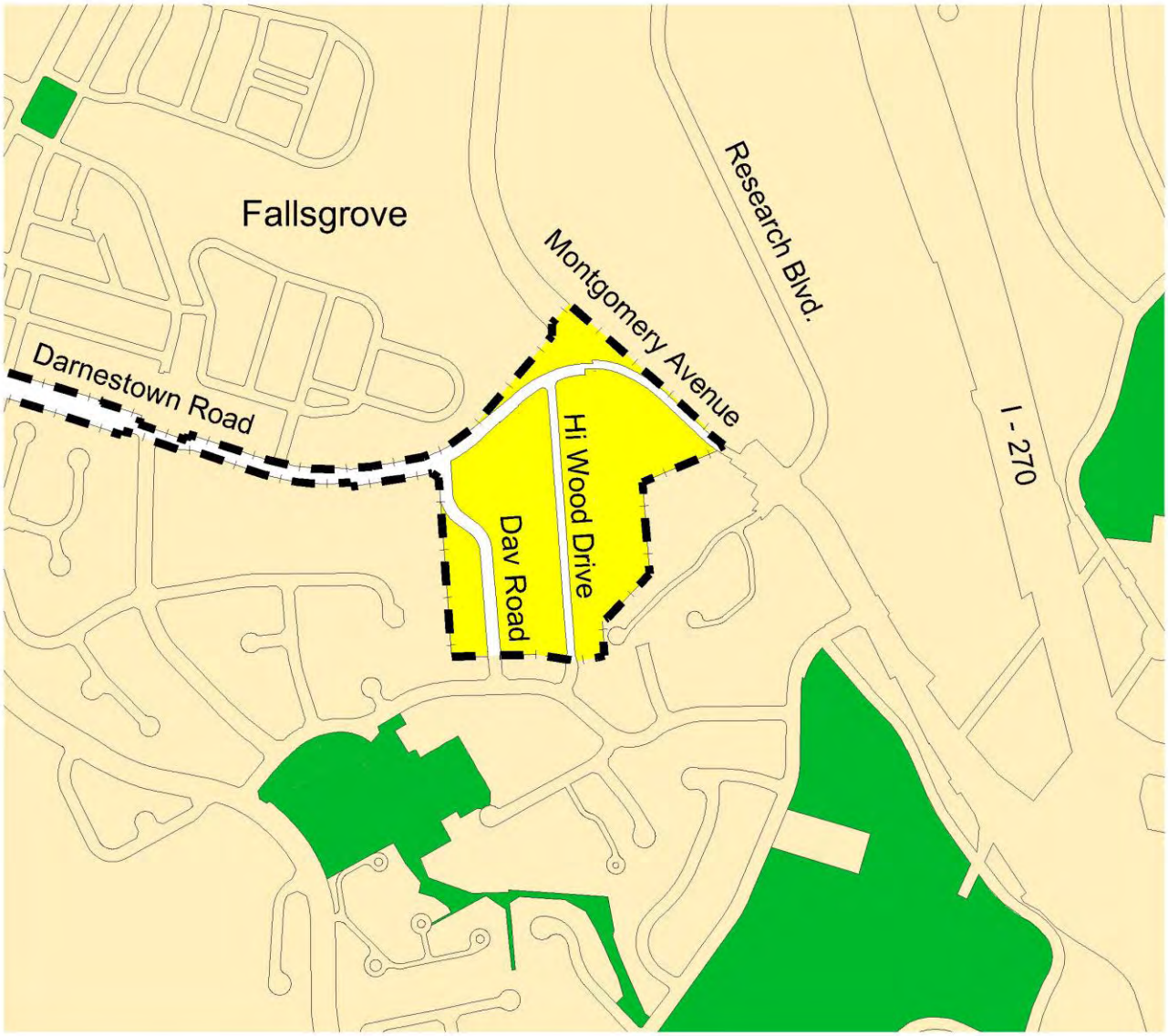


This residential 49-acre area of townhouses, garden apartments, and the Washingtonian Tower totals 1,368 dwelling units. The Tower is one of the oldest (1966) and tallest (20 stories) buildings in the area. No change to land use or zoning is recommended.

Existing Zoning: Washingtonian Residential



Existing Land Use: Hi Wood



Single-Family Residential

Parkland

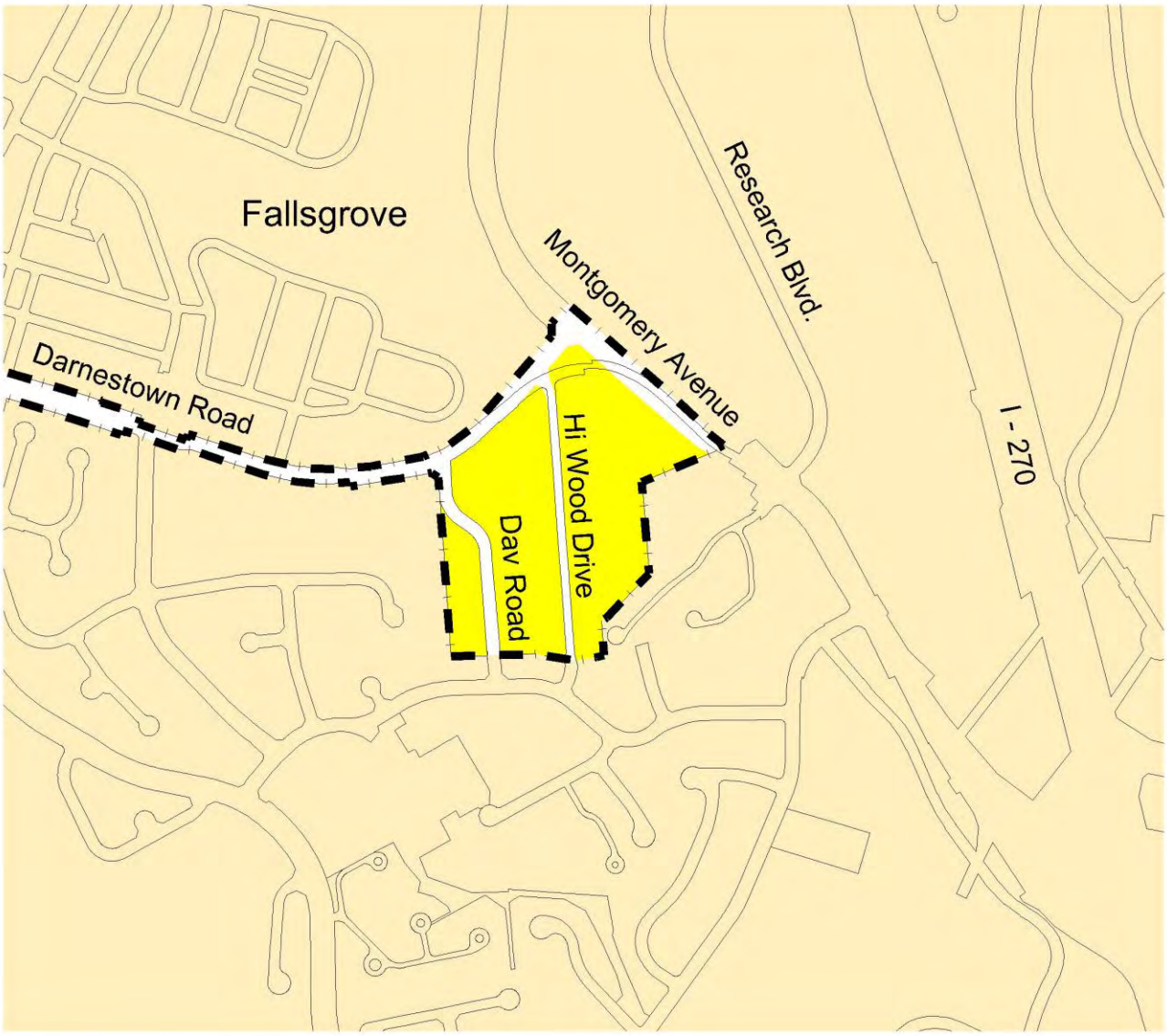
City of Rockville

Detail Area

NOT TO SCALE

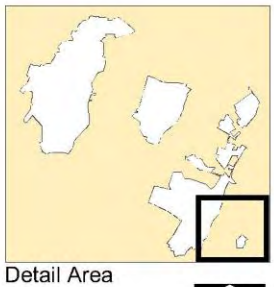
Hi Wood is a 29-acre residential community zoned R-200. It is within the City of Rockville's Maximum Expansion Limits and no change to land use or zoning is recommended.

Existing Zoning: Hi Wood



R-200 Residential, One-Family

City of Rockville



Detail Area

NOT TO SCALE

implementation

This Plan recommends implementation strategies for zoning and staging public facilities and infrastructure, and provides guidance for regulatory review.

Zoning

For the LSC to achieve its potential, this Plan recommends retaining the LSC Zone but modifying it to reflect contemporary standards, contribute to preserving the Agricultural Reserve through Building Lot Termination (BLT) easements, and allow more density and uses without diminishing the area's primary mission of medical and biotechnology uses. After the Plan is approved and adopted, along with a text amendment revising the LSC Zone, the zoning changes will be implemented through a Sectional Map Amendment.

This Plan recommends that the largest property owners surrounding the three proposed CCT stations submit Concept Plans that demonstrate how their sites will achieve the Plan's vision, including placing the highest densities and building heights at the stations, providing a mix of uses, creating a local street network, providing appropriate neighborhood buffers, creating the LSC Loop, preserving historic properties, and providing open spaces. Concept Plans should be submitted by JHU for Belward and the JHU-MCC site, by Shady Grove Adventist HealthCare, and by the future developers of LSC West (the PSTA site) with the Preliminary Plan application (for currently unapproved projects) or with Site Plan amendments (for approved projects).

Staging

Staging governs the timing of development and the provision of public facilities, but not the total amount or type of development. Each development stage will be initiated when all of the triggers for that stage are met. After a stage has been triggered, individual properties can proceed with Preliminary Plan approval.

Experience shows that not all density allowed by zoning is built and certainly not all at once. Absorption rates are one limiting factor. Realizing the vision of the Plan will take time and its implementation should be reviewed six years after adoption to evaluate how development is achieving the vision.

This Plan promotes transit-oriented development by concentrating higher density uses near future CCT stations. Staging principles seek to prevent the construction of low intensity uses at transit stations that could preclude or delay the recommended higher intensity uses. To achieve the vision, a mix of uses must be part of new development and redevelopment.

The Plan vision anticipates a new built form near future CCT stations:

- Buildings will be a minimum of 60 feet tall.
- Structured parking will be hidden from the street; surface parking is inconsistent with the Plan's vision.
- Mixed-use development is emphasized; single purpose retail buildings are not acceptable.

In the R&D Village policy area, the County's Adequate Public Facilities Ordinance (APFO) indicates that by suburban standards, area roads are congested and certain school clusters are overcrowded. Any new development will need to mitigate a percentage of its impact before it could move forward.

In addition to APFO standards, this Plan's staging ensures that infrastructure is in place before development is allowed to move forward. Staging is provided in the LSC Central, West, and Belward Districts where the greatest changes are proposed. Residential development is not subject to the staging amount or sequence since increasing housing in the LSC is encouraged to improve the jobs-housing balance and provide mixed uses.

Development in the pipeline of approved projects is not bound by these staging requirements.

Staging Principles

Staging will help implement the Plan's vision, using the following principles.

- Life science uses should be given priority.
- Density and height should be concentrated at transit stations amid transit-oriented mixed-use development at LSC Central, LSC West, and LSC Belward.
- Historic and environmental resources should be protected.
- Buildings within one-eighth mile of the future CCT stations should be at least 60 feet high. In all other areas, the minimum building height is 36 feet (three stories of occupied space) in order to retain land for future higher densities.
- Single purpose or free standing retail is inconsistent with the Plan's vision in any phase of development.
- Public institutions are not subject to staging because these projects are reviewed as mandatory referrals.

Staging Requirements

Approximately 3.7 million square feet of non-residential development is approved and unbuilt in the LSC pipeline of development. This increment of development is not subject to the Plan's staging requirements as long as a project's Preliminary Plan continues to be valid. The following staging requirements apply to the LSC Central, West, and Belward Districts.

Stage 1

Stage 1 allows up to 6 million square feet (including existing and pipeline development) of non-residential development recommended by this Plan.

This increment of development is calculated as the low end of density that reasonably supports higher investment in transit such as Bus Rapid Transit, one of the modes being considered for the CCT.

The initial review of this Plan's land use recommendations, facility needs, and staging is expected to occur during Stage 1.

Before Stage 1, the following actions must take place:

- Fund and begin operating the Greater Shady Grove Transportation Management District (TMD).
- Create a new LSC policy area with urban standards and characteristics.
- Document the baseline of non-driver mode share through monitoring and traffic counts.
- Include the entirety of the Rickman property located on Travilah Road into the new LSC Policy Area.

Stage 2

Stage 2 allows up to 12 million square feet (including existing and pipeline development of non-residential development recommended by this Plan.

Before Stage 2, the following actions must take place:

- Relocate the Public Service Training Academy (PSTA).
- Fully fund construction of the CCT from the Shady Grove Metro Station to the Belward property in the County's six-year CIP or State CTP.
- Fund the LSC Loop trail in the County's six year CIP.
- Construct and open to traffic at least one public street connection across both the Belward property and the PSTA to provide a direct connection between Key West Avenue, Muddy Branch Road, and Great Seneca Highway.
- Document a five percent increase over the baseline for the non-driver mode share.

Stage 3

Stage 3 allows up to 15 million square feet of non-residential development.

Before Stage 3, the following actions must take place:

- Begin operating the CCT from the Shady Grove Metro Station to Clarksburg.
- Determine the need for an elementary school in LSC West (on the PSTA site).
- Document a 15 percent increase over the baseline for the non-driver mode share.
- Fully fund the widening of Key West Avenue and the interchanges in the LSC area, or other transportation projects providing equivalent mobility in the County's six year CIP or the State CTP.

Plan Evaluation Six Years after Adoption

State legislation requires revisiting master plans every six years. This Plan's review will be particularly important in assessing how the area is developing, impacts on infrastructure delivery, and if the vision is being achieved.

The review of the Plan should examine:

- the ratio of jobs to housing—are local workers occupying the housing
- the built form's evolution
- absorption rates to determine the rate of needed infrastructure delivery
- costs to the County
- the CCT's delivery schedule
- traffic generation and roadway performance
- the area institutions' investment in the Plan's vision.

Growth Policy

Current master plan efforts are focused on strategic growth. Creating nodes of activity at transit locations with mixed uses can promote a better balance between jobs and housing, reducing the number of vehicle miles traveled. The County's growth policy, which traditionally addresses traffic and school capacity, may also include "quality of place" measures in the future.

Growing strategically means higher densities where transit is or will be; creating greener buildings; providing more service locally; using existing infrastructure and providing mobility choices. This Plan helps achieve these goals, promoting the opportunity for transit service in the mid-County area.

- Establish a new LSC policy area for the LSC Central, LSC West, and LSC Belward transit station areas, modeled on the Germantown Town Center policy area.
- Revise the spatial definition of the R&D Village policy area to include the entirety of the Rickman property, located on Travilah Road, within its boundary. Presently, the subject property is physically

located in two policy areas—R&D and North Potomac. This revision would rectify this situation and is consistent with the land use and transportation objectives of this Plan.

Transportation Network

This Plan provides a comprehensive transportation network for all modes of travel, including transit, roads, bicycles, and pedestrians, described on the following tables and maps, to guide implementation of the Plan's street and highway system and bikeway and trails networks.

Street and Highway Classifications

This Plan proposes the following changes to the *Master Plan of Highways.*

- Remove roadways that have been annexed by the City of Gaithersburg:
  - Louis Sullivan Drive
  - portions of Fields Road
  - portions of Diamondback Drive (although connection to Sam Eig Highway within City of Gaithersburg is needed for network connectivity).

- Remove the Shady Grove Road/Darnestown Road and Shady Grove Road/Wootton Parkway interchanges recommended in the 1990 Plan.

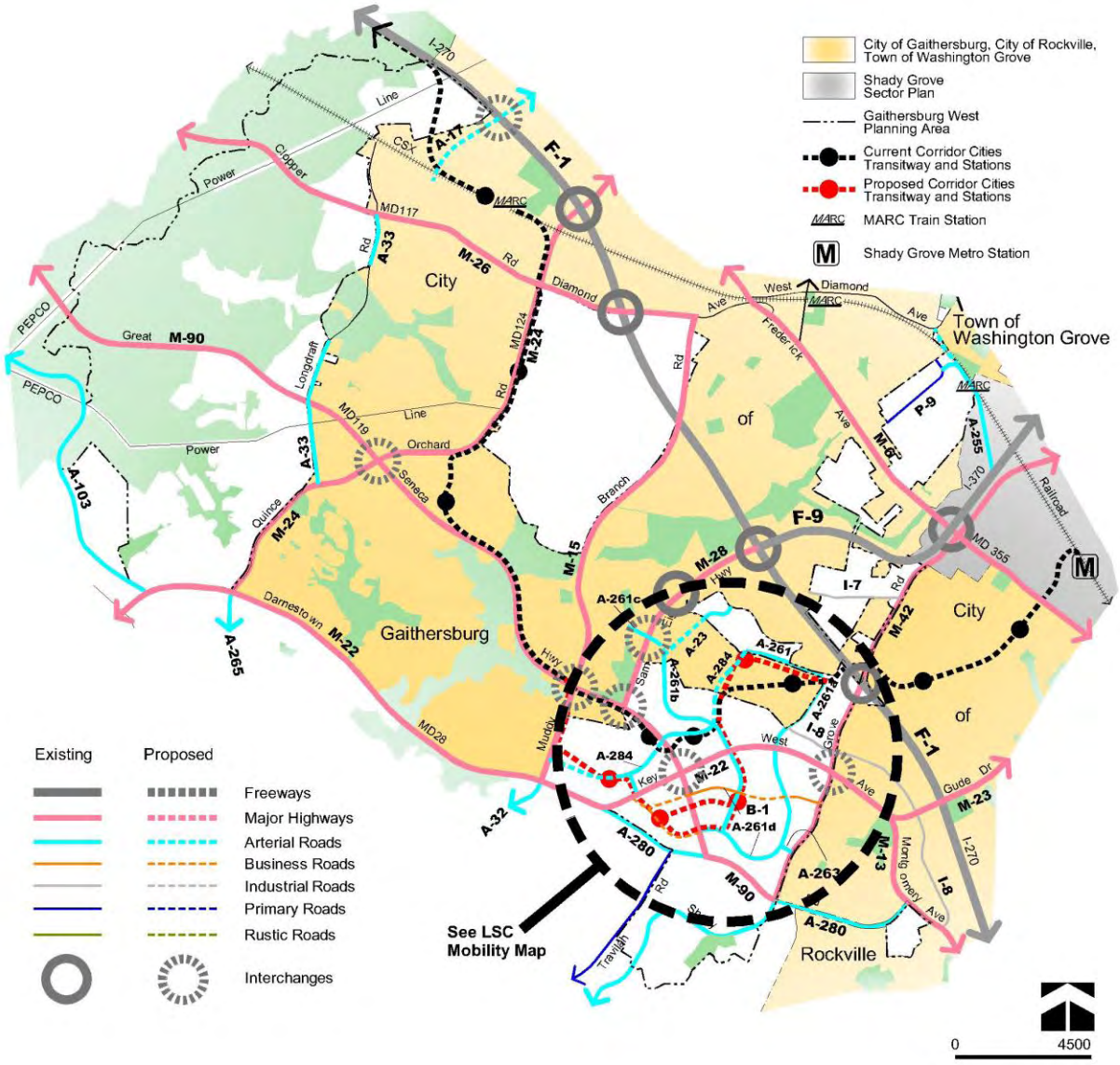
- Retain the 1990 Plan's recommendations for grade-separated interchanges at:
  - Sam Eig Highway at Diamondback Drive
  - Sam Eig Highway and Great Seneca Highway (MD 119)
  - Great Seneca Highway and Key West Avenue (MD 28)
  - I-270 at Watkins Mill Road extended (in the City of Gaithersburg).

- Add new grade-separated interchanges at:
  - Key West Avenue (MD 28) at Shady Grove Road
  - Great Seneca Highway at Muddy Branch Road (in coordination with City of Gaithersburg)
  - Quince Orchard Road at Great Seneca Highway (in coordination with City of Gaithersburg).

- Change the number of lanes for Oakmont Avenue from four to two, as recommended in the 2006 *Shady Grove Sector Plan*.

- Remove the CSX Transitway easement along Oakmont Avenue, as recommended in the 2006 *Shady Grove Sector Plan.*

Transportation Network



street and highway classifications

Road Number	Road Name/Route	Limits	Minimum (r.o.w.)	Lanes[1]	Speed (m.p.h)	Design Standard
Freeways						
F-1	I-270	Great Seneca Creek to Shady Grove Road	300'	12	-	-
Major Highways						
M-6	Frederick Avenue (MD 355)	Gaithersburg City Limit to Gaithersburg City Limit	150'	6	-	2008.10
M-13	West Montgomery Avenue (MD 28)	Darnestown Road to 800' east of Darnestown Road	150'	6	-	2008.04 or .10
M-15	Muddy Branch Road	Darnestown Road (MD 28) to Gaithersburg City Limit	150’	6	45	2008.04 or .08
	Muddy Branch Road	Gaithersburg City Limit to West Diamond Avenue (MD 117)	150’	6	45	2008.04 or .08
M-22	Darnestown Road (MD 28)	Riffle Ford Road to Muddy Branch Road	120'	4	40	2008.04
	Darnestown Road (MD 28)	Muddy Branch Road to Key West Avenue (MD 28)	150'	6	40	2008.04
	Key West Avenue (MD 28)	Darnestown Road (MD 28) to Shady Grove Road	200’	8	40	Custom
M-24	Quince Orchard Road (MD 124)	Darnestown Road (MD 28) to Longdraft Road	150’	6	40	-
	Quince Orchard Road (MD 124)	Gaithersburg City Limit to Gaithersburg City Limit	180' [2]	6	-	-
M-26	Clopper Road (MD 117)	Great Seneca Creek to Quince Longdraft Road	150’	4 to 6	45	2008.04
	Diamond Avenue (MD 117)	Quince Orchard Road (MD 124) to Muddy Branch Road	120'	4 to 6	45	-
M-28	Sam Eig Highway	Great Seneca Highway (MD 119) to I-270	250’	6+BRT	50	Custom
M-42	Shady Grove Road	Darnestown Road to 1,200’ west of Frederick Road (MD 355)	150'	6	40	2008.04
M-90	Great Seneca Highway (MD 119)	Great Seneca Creek to Quince Orchard Road (MD 124)	150'	6	45	2008.10
	Great Seneca Highway	Key West Avenue to Darnestown Road	150’	6	45	2008.10
	Great Seneca Highway	Key West Avenue to Darnestown Road	150’	6	45	2008.10
	Darnestown Road	Great Seneca Highway to Shady Grove Road	150'	6	45	2008.10

[1] These are the number of planned through travel lanes for each segment, not including lanes for turning, parking, acceleration, deceleration, or other purposes auxiliary to through travel.

[2] Fifty feet of right of way is intended for provision of an exclusive transitway; where dual width is specified, the lower figure refers to non-transitway sections.

Arterial Roads					Speed (m.p.h.)	Design Standard
A-17	Watkins Mill Road	Clopper Road (MD 117) to MD 355 (City of Gaithersburg)	NA[3]	4	-	-
A-23	Rio Boulevard	Washingtonian Boulevard (City of Gaithersburg) to Fields Road	80'	4	30	As built
A-33	Longdraft Road	Quince Orchard Road (MD 124) to 180' north of Longdraft Court (City of Gaithersburg)	80'	4	30	2004.01
	Longdraft Road	Golden Post Lane (City of Gaithersburg) to Clopper Road (MD 117)	80'	4	30	2004.01
A-34	Shady Grove Road	Darnestown Road to Cavanaugh Drive	100’	4	35	2004.09
A-103	Riffle Ford Road	Great Seneca Creek to 700' north of Woodsboro Drive	80'	4		-
	Riffle Ford Road	220' east of Hallman Court to Darnestown Road (MD 28)	80'	4	40	2004.08
A-255	Oakmont Avenue	Ridge Road to 100' south of Washington Grove Lane (City of Gaithersburg)	80'	2	30	
A-261	Fields Road	From 1500' east of Rio Boulevard (City of Gaithersburg) to 675' west of Washingtonian Boulevard (City of Gaithersburg)	150’[3]	4	-	-
	Fields Road	From 150' west of Omega Drive (City of Gaithersburg) to Omega Drive	150’[3]	4	-	-
A-261a	Omega Drive	Fields Road to Key West Avenue (MD 28)	100'	4	30	2004.10
A-261b	Diamondback Drive	Sam Eig Highway to Key West Avenue	100'-150’[3]	4	30	2004.09
	Broschart Road	Key West Avenue to Medical Center Drive	100'	4	30	2004.09
A-261d	Medical Center Drive	Key West Avenue (MD 28) to Key West Avenue (MD 28)	100'-150’[3]	4	30	2004.10 (needs SUP)
A-263	Medical Center Way	Shady Grove Road to Medical Center Drive	100'	4	30	As built
A-280	Darnestown Road	Key West Avenue (MD 28) to Great Seneca Highway	100'	4	40	2004.10
A-280	Darnestown Road	Shady Grove Road to West Montgomery Avenue (MD 28)	80'	4	40	2004.10
A-284	Decoverly Drive	Muddy Branch Road to Fields Road	100'-150'[4]	4	30	2004.09

[3] Watkins Mill Road is an arterial within City Limits. As a significant connection to I-270, it is included in this table; ROW requirements are deferred to the City of Gaithersburg.

Business Roads					Speed (m.p.h.)	Design Standard
B-1	Blackwell Road	Great Seneca Highway to Broschart Road	100’	4	30	2005.03
	Blackwell Road	Broschart Road to Shady Grove Road	100’	4	30	2005.03
	Blackwell Road	Key West to Great Seneca Highway	70’	2	30	2005.02
B-2	*Road A*	proposed new road	70’	2	30	2005.02
B-3	*Road B*	proposed new road	70’	2	30	2005.02
B-4	*Road C*	proposed new road	70’	2	30	2005.02
B-5	*Road D*	proposed new road	70’	2	30	2005.02
B-6	*Road E*	proposed new road	70’	2	30	2005.02
B-7	*Road F*	proposed new road	70’	2	30	2005.02
B-8	*Road G*	proposed new road	70’	2	30	2005.02
B-9	*Road H*	proposed new road	70’	2	30	2005.02
B-10	*Road I*	proposed new road	70’	2	30	2005.02
B-11	*Road J*	proposed new road	70’	2	30	2005.02
B-12	*Road K*	proposed new road	70’	2	30	2005.02
B-13	*Road L*	proposed new road	70’	2	30	2005.02
B-14	*Road M*	proposed new road	70’	2	30	2005.2
B-15	*Road N*	proposed new road	70’	2	30	2005.02
B-16	*Traville Gateway Drive*	Shady Grove Road to Medical Center Drive	70’	2	30	2005.02
B-17	*Travilah Road*	Darnestown to Medical Center Drive extended	70’	2	30	2005.02
B-18	*Road Q*	proposed new road	70’	2	30	2005.02
I-8	Research Boulevard	Omega Drive to Shady Grove Road	80'	4	30	2006.03

[4] Fifty feet of right of way is intended for provision of an exclusive transitway; where dual width is specified, the lower figure refers to non-transitway sections.

Primary Residential Streets						
P-9	Central Avenue	500' east of Frederick Avenue (MD 355, City of Gaithersburg) to 350' north of Oakmont Avenue (City of Gaithersburg)	70'	2	25	2003.12
P-14	Travilah Road	Darnestown Road to Unicorn Way	70’	2	30	2003.10

Pedestrian Network

Every trip starts or ends with a pedestrian trip. The pedestrian element of the transportation network should emphasize the need for safe, contiguous, and accessible walking routes to local destinations, especially transit. Providing a safe and pleasant pedestrian experience is a challenge in areas designed for cars. Signal timing at intersections impacts pedestrian safety and comfort. The County should continue to improve operations and infrastructure to meet national guidelines, including the *Manual for Uniform Traffic Control Devices* and Americans with Disabilities Act best practices.

Recommendations

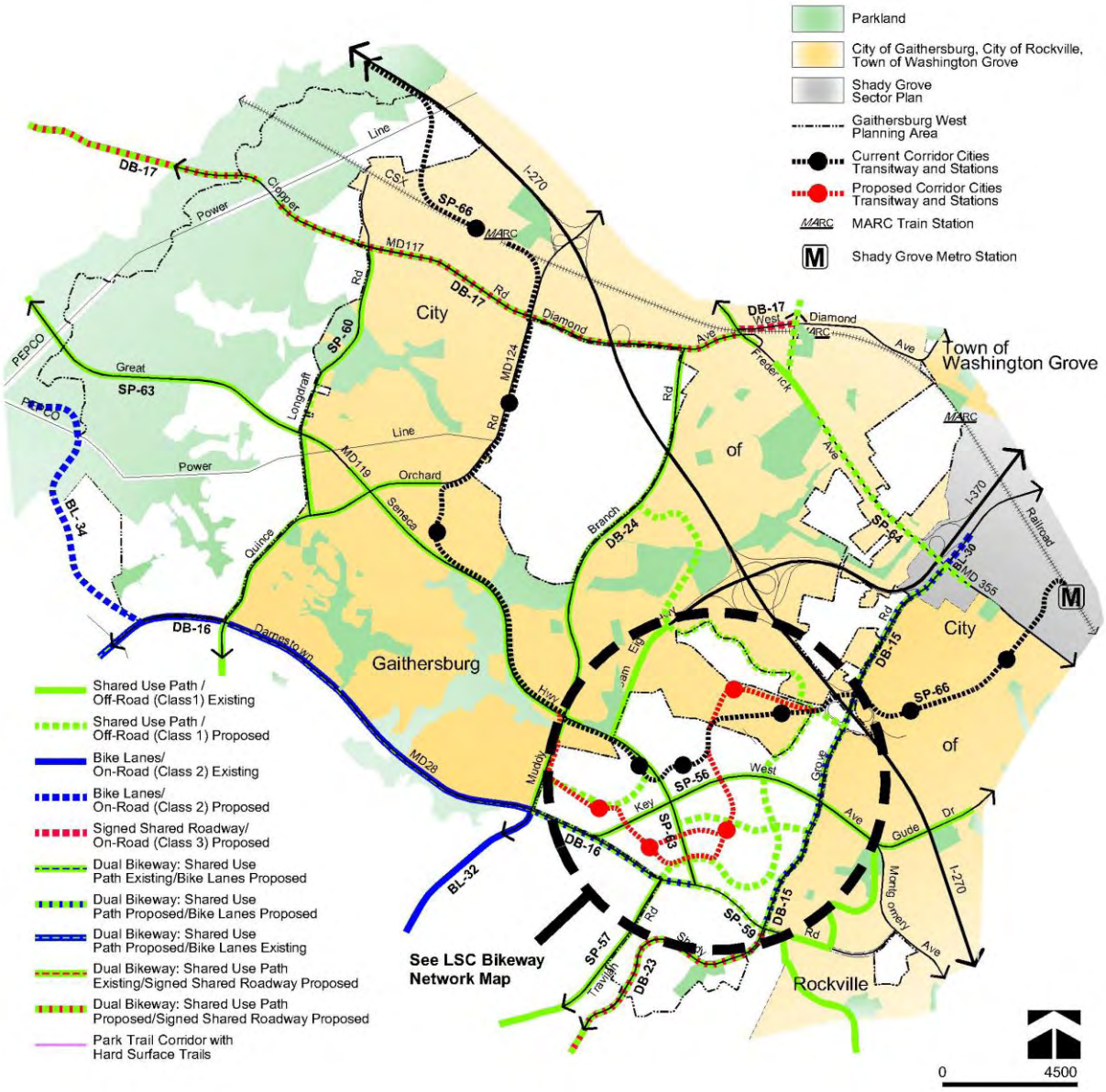
- Design local streets and intersections with pedestrian-friendly characteristics such as minimal corner radii, special crosswalk pavement, wide sidewalks, and street trees.
- Place sidewalks sufficiently away from curbs and travel lanes to separate pedestrians from moving traffic.
- Provide four-way crosswalks at intersections.
- Provide sidewalks on both sides of public streets.
- Create a grid of intersecting streets and short blocks in new developments or redevelopment areas to support and encourage walking.
- Design streets that are defined with buildings, animated with active uses, and include streetscape and landscape features to encourage pedestrian activity.

Bikeway and Trail Systems

This Plan encourages walking and biking as an alternative to automobiles as well as for recreation. This Plan supports efforts to implement safe and convenient pedestrian and bicycle facilities through an inter-connected system of bikeways, trails, and sidewalks. The Plan area is served by a network of existing bikeways and trails. Recommendations to enhance and complete the system are included in this section.

The recommended Countywide and local LSC bikeway networks must be coordinated with the cities of Gaithersburg and Rockville to ensure that a linked system evolves. Together, the Countywide and local bikeways and the trails network will provide a framework for an interconnected system.

Bikeway Network



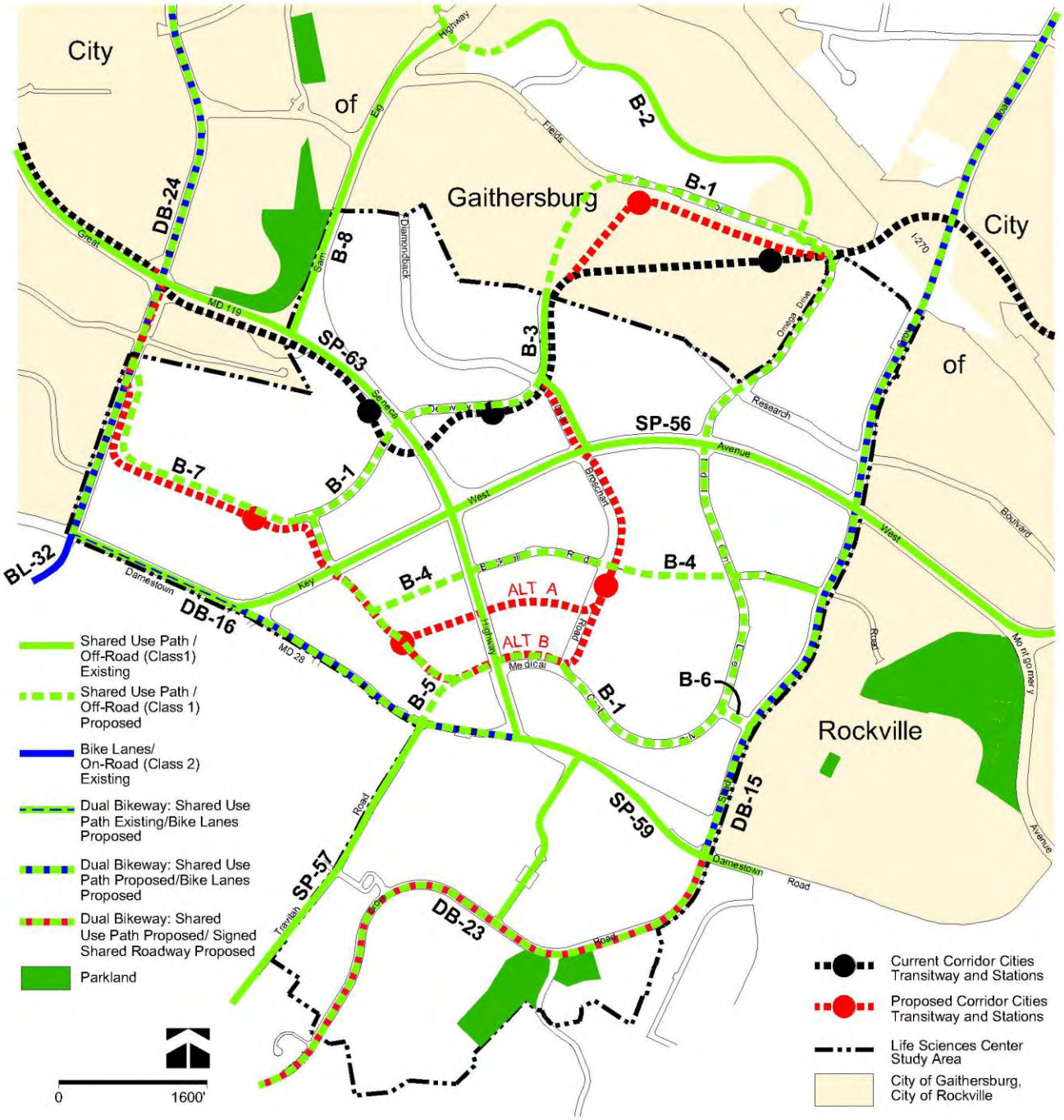
countywide bikeways

Route Number	Bikeway Name	Bikeway Type	GWMP Limits	Status/ Condition	Description
BL-30	Shady Grove Road—east	Bike lanes	Frederick Road (MD 355) to Muncaster Mill Road (MD 115)	Implemented between MD 115 and Crabbs Branch Way. Proposed between MD 355 and Crabbs Branch Way.	Part of a direct route to Shady Grove Metrorail station.
BL-32	Dufief Mill Road	Bike lanes	Darnestown Road (MD 28) to Travilah Road	Existing	Roadway shoulder functions as bike lanes.
BL-34	Riffle Ford Road	Bike lanes	Darnestown Road to Germantown Road (MD 118)	New proposal in 2005 CBFMP	Important connection to South Germantown Park.
DB-15	Shady Grove Road—west	Dual Bikeway: shared use path and bike lanes	Darnestown Road to Frederick Road	Proposed	Forms part of connection to Shady Grove Metrorail station; shared use path to be implemented by Rockville, bike lanes to be implemented by County.
DB-16	Darnestown Road—north	Dual Bikeway: shared use path and bike lanes	Seneca Road to Great Seneca Highway (MD 119)	Shared use path and bike lanes exist in segments. Bike lanes installed by SHA from Seneca Road to Muddy Branch Road.	Provides direct connection to Rockville and forms part of connection to Gaithersburg from Poolesville; SHA-provided 16' wide curb lanes should be striped as bike lanes.
DB-17	Clopper Road/Diamond Avenue	Dual Bikeway: shared use path and signed shared roadway	Summit Avenue to Clarksburg Road (MD 121)	Mostly proposed. Shared use path exists in segments.	Provides direct connection to City of Gaithersburg as well as several MARC stations; Improvements by SHA underway within Gaithersburg city limits.
DB-23	Shady Grove Road extended	Dual Bikeway: shared use path and signed shared roadway	Darnestown Road to River Road (MD190)	Modified proposal in 2005 CBFMP	Suitable for both on-road and off-road facilities. An important east-west connector between Potomac communities and cities of Rockville and Gaithersburg.

DB-24	Muddy Branch Road	Dual Bikeway: shared use path and bike lanes	Darnestown Road to Diamond Avenue	Mostly proposed. Existing 8' concrete path in segments, but narrows in places.	Direct connection to City of Gaithersburg; indirect connection to Gaithersburg MARC station. Need consistent-width path for entire roadway; adequate ROW exists for bike lanes if road is improved in the future.
SP-56	Key West Avenue	Shared use path	Darnestown Road to Gude Drive	Existing	Connection between countywide bikeway network and City of Rockville bikeway system.
SP-57	Travilah Road	Shared use path	Darnestown Road to River Road	Proposed, exists in segments	Connects to two major bikeways and several local destinations; forms part of alternate route to C&O canal.
SP-58	Quince Orchard Road	Shared use path	Dufief Mill Road to Darnestown Road	Exists in segments; mostly proposed.	Provides direct connection to Gaithersburg.
SP-59	Darnestown Road – south	Shared use path	Key West Avenue to Wootton Parkway	Proposed	Forms part of important connection to City of Rockville and Rockville Metrorail station.
SP-60	Longdraft Road	Shared use path	Quince Orchard Road to Clopper Road (MD 117)	Proposed	Connects to two major bikeways and to City of Gaithersburg.
SP-63	Great Seneca Highway (MD 119)	Shared use path	Darnestown Road to Middlebrook Road	Existing	Provides excellent off-road connections between Germantown and Gaithersburg.
SP-64	Frederick Road (MD 355)	Shared use path	Gude Drive to Watkins Mill Road	Exists in segments; mostly proposed	Provides excellent connection to downtown Rockville and Gaithersburg.
SP-66	Corridor Cities Transitway	Shared use path	Shady Grove Metro Station to Frederick Road (MD 355)	Mostly proposed; segments exist as part of other bikeways.	Connects major employment centers in the I-270 Corridor north of Rockville; intended to parallel the CCT and be implemented as part of CCT project, regardless of mode or alignment.

SP=Shared Use Path BL=Bike Lanes DB=Dual Bikeway

LSC Proposed Bikeway Network



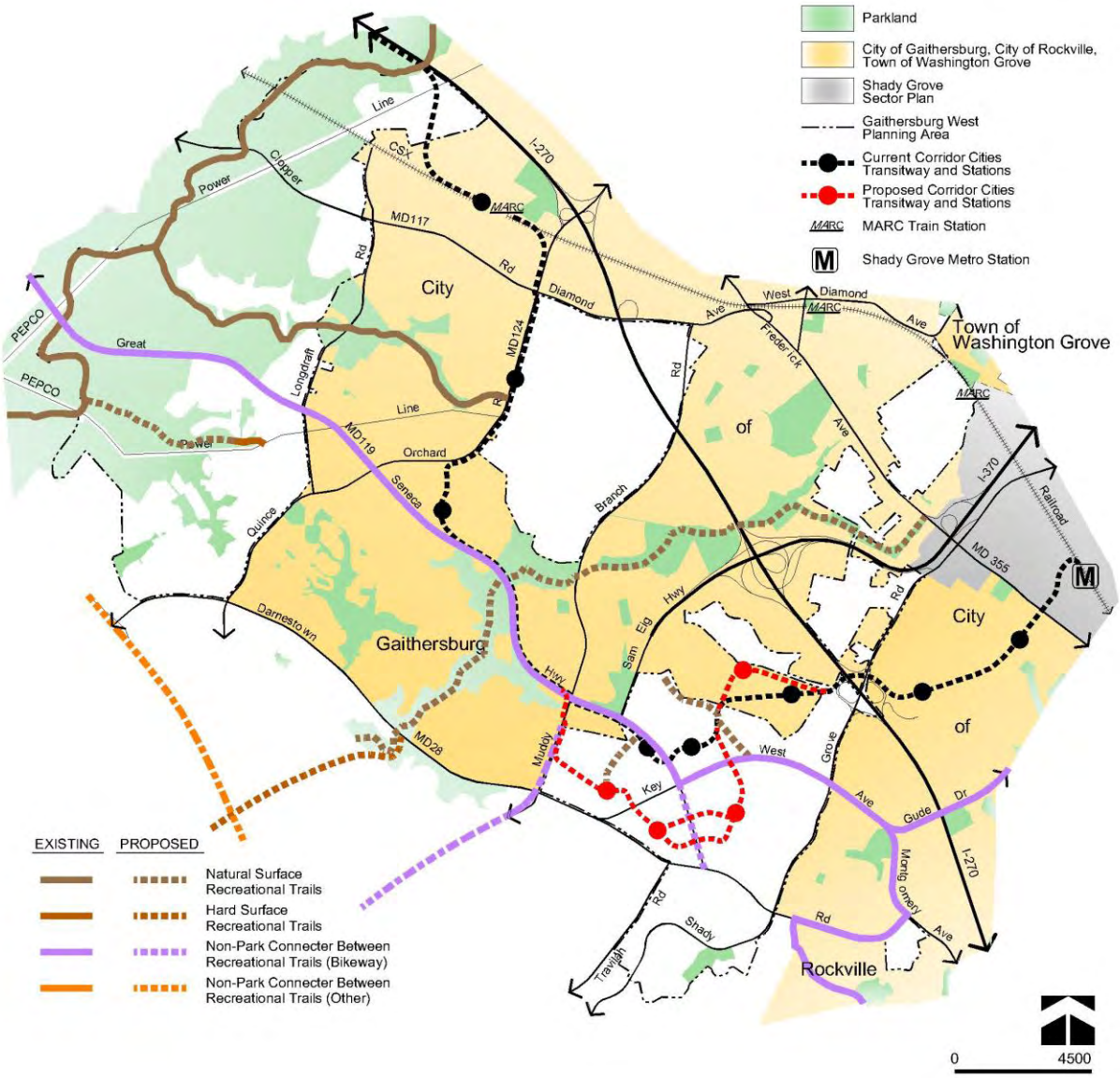
LSC Bikeways

This Plan's recommended local bikeway network supplements the regional framework provided by the *Countywide Bikeways Functional Master Plan* and the *Countywide Park Trails Plan*. The local LSC bikeway network will connect to area schools, parks, open spaces, and commercial centers as well as to the Countywide system.

LSC Bikeways

Bikeway Name	Bikeway Type	Limits	Status/ Condition	Discussion
B-1 LSC Loop	Shared use path	Circular loop through the LSC	Proposed	3.5- mile recreational path connecting major destinations in the LSC Districts.
B-2 Washingtonian Boulevard	Shared use path	Sam Eig Highway to 850' northwest of Fields Road (City)	Existing and proposed, short segments exist	Connects mixed-use area to the local and City of Gaithersburg bikeway networks.
B-3 Decoverly-Diamondback	Shared use path	Key West Ave. to Crown Farm property line	Existing segment; Proposed through Crown Farm.	Connects mixed-use areas to the countywide bikeway network on Key West; should extend through Crown Farm to Fields Road.
B-4 Blackwell Road	Shared use path	Shady Grove Road to Darnestown Road	Proposed	Connect countywide bikeway on Shady Grove Road to LSC and City of Rockville.
B-5 PSTA	Shared use Path	Medical Center Drive extended through PSTA to Darnestown Road	Proposed	Connect LSC Loop on Medical Center Drive to the PSTA site and across Darnestown Road to countywide SP-57 and DB-16.
B-6 Medical Center Way	Signed, shared roadway	Medical Center Drive to Shady Grove Road	Proposed	Connect LSC Central to the countywide network and City of Rockville paths and destinations.
B-7 Belward Property	Shared use path along the CCT alignment	Key West Avenue to Muddy Branch Road	Proposed	Connect to LSC Loop, CCT station, historic farm, and countywide DB-24 on Muddy Branch Road.
B-8 Sam Eig Highway	Shared use path	Washingtonian Blvd. to Great Seneca Highway	Existing	Connects Rio and future Crown Farm development to the Countywide bikeways.

Trail Network



Recommendations

- Provide Countywide and local bikeways as recommended on the bikeway tables and maps.
- Provide a continuous bikeway as part of the CCT.
- Include bikeway and pedestrian paths as part of all grade-separated interchanges.
- Complete the trails network, including:
  - The Muddy Branch Trail Corridor from Dufief Mill Road and Darnestown Road to Great Seneca Highway on the east side of Muddy Branch Road adjacent to the Belward property.
  - A natural surface trail connection between Quince Orchard Valley Park and the Seneca Greenway Corridor.

Public Hearing Draft

gaithersburg west master plan

The Life Sciences Center

Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission

MontgomeryPlanning.org