



The Great Seneca Plan

DESIGN GUIDELINES DRAFT

Abstract

The design guidelines for the 2024 *Great Seneca Plan* will be used to guide the transformation of the life sciences center and adjacent areas by providing recommendations for the design of buildings and public spaces. The guidelines are based on an existing conditions analysis, stakeholder feedback and current best practices for transforming auto-oriented places into complete communities. These guidelines aim to deliver high quality buildings and spaces as well as streets with ample pedestrian comfort and multi-modal connectivity.

Design guidelines help provide information about how plan recommendations and zoning code requirements can be best met. They provide overall guidance as well as context-based recommendations for specific districts and individual sites. Design guidelines are approved by the Montgomery County Planning Board for use by public entities and developers in preparing design proposals, and planners and the Board in reviewing them. These guidelines may need to be reviewed and updated by the Planning Board as best practices and conditions evolve over time.

Source of Copies

The Maryland-National Capital Park and Planning Commission 2425 Reedy Drive, Wheaton, MD 20902-4676

The design guidelines are available online at:

<https://montgomeryplanning.org/planning/communities/west-county/great-seneca-science-corridor/great-seneca-science-corridor-plan/great-seneca-science-corridor-minor-master-plan-amendment-phase-2/>



The Great Seneca Plan

DESIGN GUIDELINES

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CHAPTER 1: INTRODUCTION

1.1 HOW TO USE THE GUIDELINES

Purpose

Design Guidelines illustrate relationships between buildings and the public realm and ensure that new development, multi-modal improvements, and required public open space are appropriately integrated. Guidelines also illustrate strategies to blend new and existing development and reduce the impacts of new development on surrounding neighborhoods. New development in the plan area should create complete communities that enhance the quality of life for existing and future workers and residents in the area. These guidelines provide clarity and certainty for stakeholders by illustrating how key properties within the plan area may develop over time.

Applicability

This document replaces the 2010 *Great Seneca Science Corridor Urban Design Guidelines*. It shall be used in conjunction with the recommendations in the 2024 *Great Seneca Plan* to guide development projects and improvements to the public domain. It includes guidance for properties within the Life Sciences Center (LSC) and for Londonderry, a residential enclave located in the center of the Plan area. For other areas outside the LSC, refer to guidance included in their respective Plan chapters. Standard Method and Optional Method projects subject to site plan review should conform with the goals and recommendations of the master plan and design guidelines, the Life Sciences Overlay Zone, and the Incentive Density implementation Guidelines.

Flexibility

Design Guidelines provide a range of strategies to appropriately meet the intent of master plan recommendations. These are not rigid requirements but help applicants understand what will be expected during development review and provide Montgomery Planning staff and the Planning Board with a framework to guide the review process. Design proposals and alternative solutions will be evaluated during the development review process based on the surrounding context, site conditions, programmatic considerations for a particular use, and ways in which the projects address applicable plan goals and the intent of the design guidelines.

Design Excellence

Montgomery Planning's Design Excellence program was established in 2015 to encourage the creation of attractive, safe, and sustainable places to live, work, and play. The Great Seneca Plan area will transform into a complete community through complex projects that include residential, science, and other employment uses connected to a vital public realm. The development review process will explore these projects' potential to achieve architectural significance. Development teams are strongly encouraged to engage with Planning Staff early via the Concept Plan process, to ensure that they have ample opportunity to achieve the best outcomes for their proposals.

1.2 IMPLEMENTATION TOOLS

Great Seneca Life Sciences Overlay Zone

The Great Seneca Life Sciences Overlay Zone (GSLSOZ) was introduced to help implement the plan's vision and to incentivize market-rate housing production in a mixed-use life sciences environment. The GSLSOZ includes form-based parameters to promote open campus development with smaller blocks, concealed parking, and street-oriented development.

Incentive Density Implementation Guidelines

The Implementation Guidelines to administer the review of proposed public benefits associated with the Optional Method of Development in the Commercial Residential (CR) and Commercial Residential Town (CRT) zones were updated in 2025 to introduce a new overall structure, a menu of public benefits, and criteria necessary for each public benefit evaluation. Information for each public benefit includes intent, visual examples, review criteria, and submission requirements. Applicants are encouraged to review the Implementation Guidelines early in the process.

Complete Streets Design Guide

Montgomery County's Complete Streets Design Guide is a resource that contributes to the creation of great places that are supported by safe and efficient transportation systems. The Guide covers the design of these transportation systems for both new streets and retrofitted existing streets.



Illustrative image of potential public open space surrounded by employment, science, and residential uses.



CHAPTER 2: VISION

The Great Seneca Plan focuses on the Life Sciences Center in the southeastern corner of the Plan area. The LSC will include a range of uses, housing options, services, and amenities in a high-quality built environment, to support an active and enriching social life with public open space and natural features that contribute to better physical and mental well-being.

2.1 CONTEXT

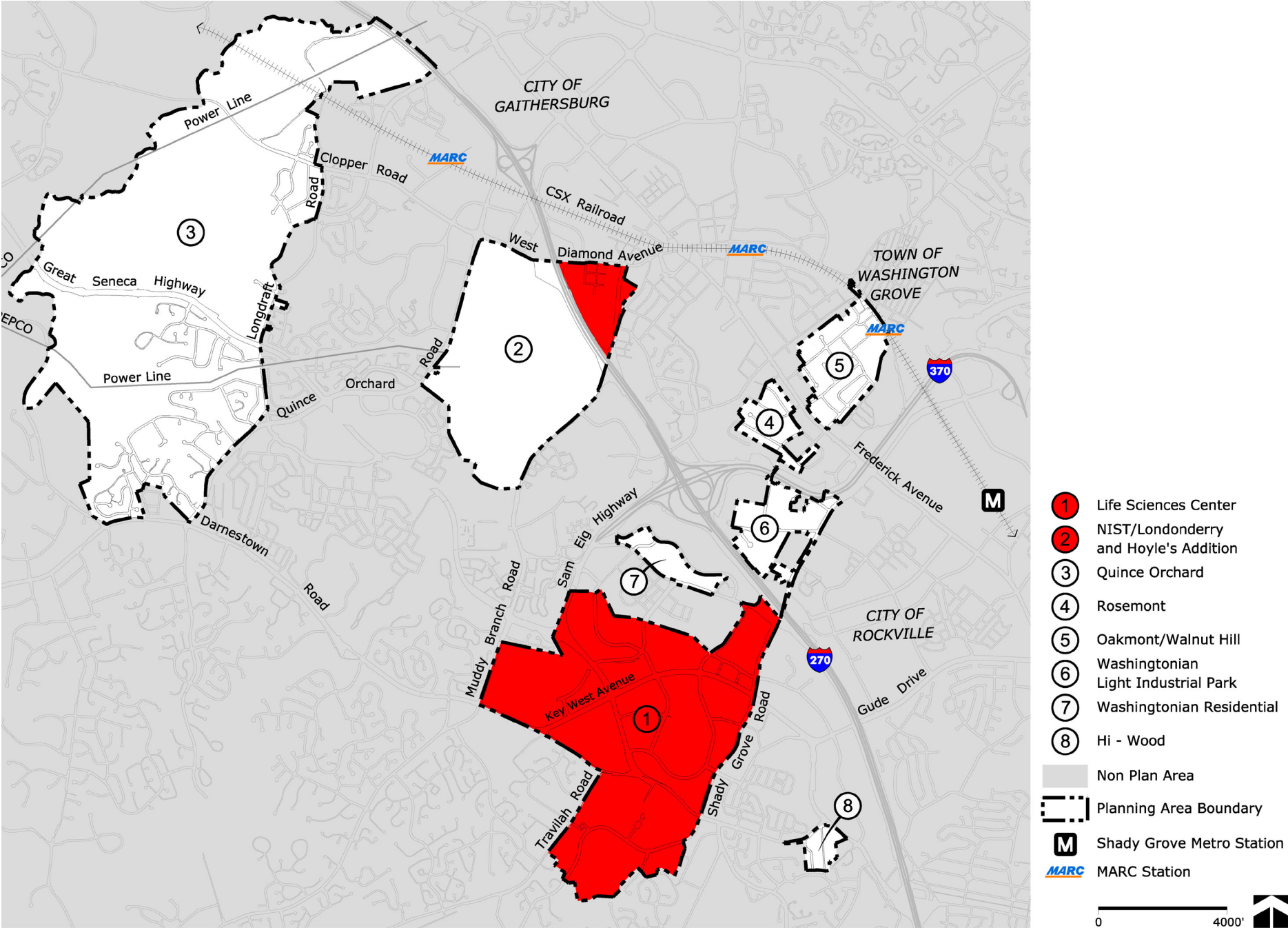
The 2024 *Great Seneca Plan* is an update to the 2010 *Great Seneca Science Corridor Master Plan*. This update retains the vision of the 2010 Plan but attempts to address the barriers that limited its full implementation. The LSC remains the economic heart of the I-270 corridor and is the premier location for life sciences and biohealth industries in the county. It is located between the City of Gaithersburg and the City of Rockville, and major roadways like Shady Grove Road, Darnestown Road, Great Seneca Highway, and Key West Avenue run through the area. The LSC and adjacent areas contain the majority of the county's life science employment.

While the area continues to grow, it consists mostly of separate office uses surrounded by surface parking lots or parking garages. Although some residential uses have been added, overall the area does not offer the type of environment needed to attract retail or office tenants, or to support the complete community envisioned by the Plan.

The Design Guidelines recognize that the area's attractiveness to life science uses relies in part on the flexibility offered by its current development patterns. But improving the area's ability to attract investment and talent will require it to transition into an effective innovation district that includes a variety of uses and amenities that foster collaboration and entrepreneurship, to continue to support regional growth into the future.

The Guidelines are based on principles from *Thrive Montgomery 2050* to offer context-sensitive recommendations for all the opportunity sites identified by the Plan. These principles are discussed and illustrated separately, and their application will be determined by the specifics of each location. Development teams are strongly encouraged to review all these parameters early in the design process.

Map 1: Area Map - Guidelines apply only to the areas shown on red.



The Life Sciences Center today consists of suburban campuses for science, health, office, and research with recently added multi-family and townhome residential uses. Major through-roads divide the area and discourage pedestrian activity and interconnectivity between existing development. Usable public open space is limited, and few locations offer retail options or services.

To support the continued growth of the LSC and to strengthen its economic competitiveness as an epicenter of science and innovation, the Great Seneca Plan envisions a complete community that provides:

- A range of land uses, jobs, diverse housing options, and amenities to meet the needs of a variety of people
- A high-quality built environment that supports an active and enriching social life
- Integrated natural features that contribute to better physical and mental well-being
- Roadways that have been transformed from barriers into vital elements of the public realm which knit neighborhoods together and provide valuable links and social spaces.



Aerial illustrative including existing, approved, and master plan envisioned redevelopment of opportunity sites.

To achieve a cohesive downtown, design guidelines emphasize placement and quality in the built environment and illustrate how redevelopment can define and structure the envisioned public realm. New development should integrate transit and other mobility options and expand availability and access to amenitized public open space.

The guidelines also illustrate strategies for already developed properties to achieve the transformations envisioned by the Master Plan, via strategic infill or selective adaptive reuse. Existing development patterns on most properties will remain, but should be modified to include additional land uses, street connections, and public open space. As the area changes, existing patterns will evolve to add new uses and services and better connect to adjacent neighborhoods.



Top: Mixed-use development fronting onto master planned streets should include ground floor activating uses or retail, if feasible, to promote pedestrian activity and encourage eyes on the street.

Center left: Seating should be provided along public streets and open spaces to promote casual interactions.

Bottom Right: The High Line, New York NY. Example of an elevated linear park with grassy areas, landscaping, and multiple innovative buildings.

Bottom Left: Redeveloping campuses can diversify by including residential uses, including high-rise where feasible.

2.2 GOALS

The Life Sciences Center is an economic engine for the county that attracts a range of health, science, and research-related industries offering job opportunities for a skilled workforce. Enhancing the quality of place for all will attract investment, stimulate economic activity, and create additional job opportunities. Improved interconnectivity and a mix of R&D, health, academic, and residential uses could promote industry cross-collaboration that can foster entrepreneurship and transform the area into a thriving innovation district. With a sustainable and resilient local economy, the area can attract national interest and contribute to regional and national economic growth.

The following goals are based on themes from *Thrive Montgomery 2050* and support the vision set forth by the 2024 *Great Seneca Plan* of a complete downtown where innovative solutions integrate new development with existing uses.

Safe and Accessible Built Environment

Goal: Create complete districts near transit hubs and activity centers by promoting development and investment in infrastructure and amenities that improve attractiveness and efficiency where people live and work.

Following these principles can achieve this result:

- Break larger properties up to include mixed uses, services, and amenities within walking distances using development patterns with short blocks (sides less than 600 feet, and perimeters of less than 1,800 linear feet, depending on terrain conditions).
- Utilize existing surface parking lots to locate additional density.
- Consolidate parking into shared facilities to create “park once” areas that prioritize pedestrians for a more vibrant, efficient, and economically successful downtown.
- Build human-scaled buildings designed for pedestrian engagement and comfort.



Pedestrian Street, Seattle, WA (iStock.com)

Connected Social Environment

Goal: Use redevelopment to create a mobility network with high levels of internal connectivity that provides vital connections to social spaces and natural recreation areas.

The LSC's public environment should:

- Create naturalistic open areas to support active lifestyles and strengthen the physical and mental health of residents.
- Encourage social interaction by creating streetscapes that function as places to move, socialize, and gather.
- Include parks and amenitized public open spaces that connect existing and new development with retail options, services, and future residential areas.



Green Urban Park (iStock.com)

Healthy and Resilient Natural Environment

Goal: Create a resilient and sustainable downtown that protects human health by mitigating and adapting to climate change and its impacts.

New development, infrastructure, and open spaces should:

- Include strategies and systems to conserve and generate energy and reduce greenhouse gas emissions.
- Protect and manage existing natural resources and use them as community assets by providing limited access, where appropriate.
- Respond to climate change, and protect and improve air and water quality, by integrating innovative sustainable solutions and adaptation strategies.
 - Explore using green roofs and walls to combat urban heat.
 - Add permeable pavement, or other appropriate strategies, to improve drainage to mitigate flooding impacts.
 - Adopt rainwater harvesting.
 - Integrate biophilic design principles into the design of new development and public open space.
 - Pursue performance-based green certifications for buildings, landscapes, and infrastructure projects.
- Reduce vehicular emissions by promoting a shift to electric vehicles, bicycles, and pedestrian-friendly streets.



Novartis HQ Courtyard, Basel, Switzerland

Desirable and Competitive Economic Environment

Goal: Enhance the quality of the built environment to attract investment, stimulate economic activity, and transform the area into a thriving innovation district that includes improved infrastructure and public spaces supportive of talent development.

Implement Plan recommendations by:

- Creating a network of accessible public spaces.
- Improving public transit access and walkability.
- Working with developers to deliver physical infrastructure that supports collaborative innovation.
- Promoting interaction and collaboration between residents, visitors, and workers by making innovation “visible” through redevelopment, using the following strategies:
 - Creative building design.
 - Dynamic public spaces.
 - Smart and sustainable technology.
 - Mixed-use, walkable environments that foster interaction and collaboration.

Creative Building Design

- Use building transparency to allow visibility into the innovative activities and research happening inside labs, offices, and workshops.
- Explore distinctive and forward-thinking architectural building designs to serve as a physical statement of an innovative local culture.
- Adaptively reuse buildings to showcase innovative approaches to design and functionality.



601 Wharf St SW, Washington, DC - Innovative architectural design can diversify existing development and be attractive to new professionals.

Dynamic Public Spaces

- Create accessible public open spaces that provide outdoor connectivity to foster communication, interaction, and collaboration.
- Make innovation an everyday experience by designating specific outdoor areas within public open space for startups to publicly test and showcase prototypes and new technology.



Klide Warren Park, Dallas TX: Amenitized public open space can create opportunities for both leisure and professional collaborations. (iStock.com)

Smart and sustainable technology

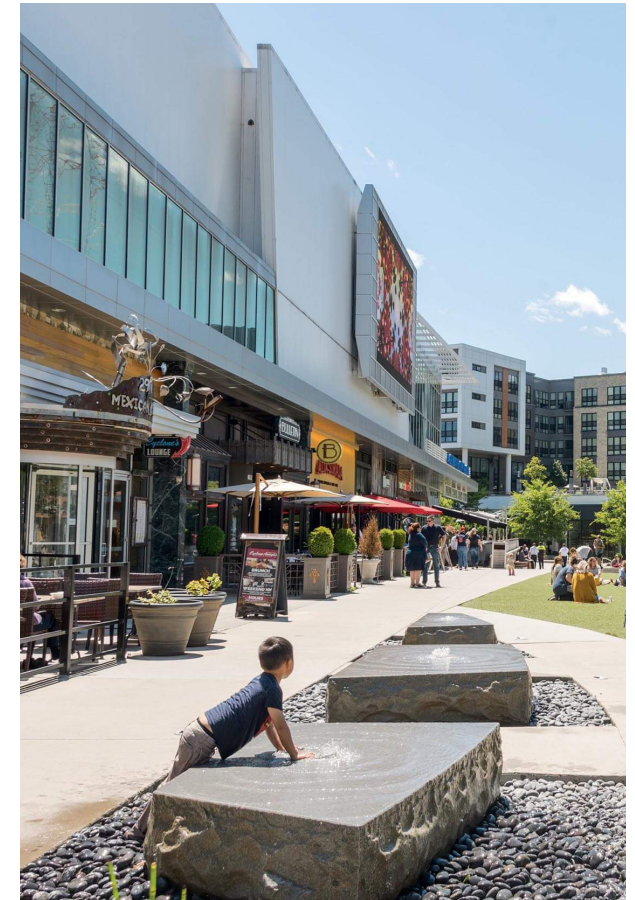
- Integrate smart building systems and advanced automation for lighting, heating, and security into redevelopment.
- Visibly communicate a commitment to future-focused solutions by showcasing innovative sustainable building features.
- Prioritize pedestrian-friendly streets, ample bike paths, and access to robust public transit and regional connections.



Design of new buildings should utilize and reflect new construction technologies and systems (iStock.com)

Mixed-use, walkable environments

- Mix innovation-focused spaces with residential areas, retail, and local businesses to create a vibrant community with a holistic approach to innovation that enhances quality of life.



Mixed-use development, Mosaic District, Fairfax, VA - Along with employment and research, redevelopment should also include commercial and residential uses.

2.3 URBAN DESIGN AND LAND USE STRATEGIES

The Plan recommends the creation of a Place Management Organization (PMO) to identify and leverage shared resources to advance the implementation of plan recommendations. The LSC today includes several research and health campuses with adjacent residential and retail uses that could evolve into a unique downtown that integrates innovation and sustainability to attract residents and users.

The PMO should bring together local stakeholders to identify common goals and define an achievable mission for the area by:

- Developing an identity for the area and a programming focus to push the mission forward.
- Attracting public investment by promoting strong private sector leadership that can invite private investment to the area and secure a mix of funding sources.
- Developing an innovative and attractive public realm experience intentionally designed to attract and support growing enterprises aligned with the overall mission.
- Periodically assessing the LSC's users, design, and programming to ensure success.

In addition, this section describes several concepts that should be promoted by the PMO as the area develops to ensure the emerging downtown integrates innovation, clusters parking facilities to promote walkability, embraces sustainability, and delivers a public realm that is amenitized and scaled for pedestrian comfort.

Innovation District

An innovation district is a concentrated area containing research institutions, high-growth companies, and startups in a walkable, mixed-use environment to spur collaboration and economic growth. Innovation districts are characterized by a mix of housing, offices, and amenities, along with a focus on specific industry strengths, to facilitate the sharing of ideas and drive new discoveries and job creation.

Key principles and characteristics:

- **Anchor institution:** An academic institution, medical center, or major corporation that provides a foundation for academic–industry collaboration.
- **Business co-location:** The physical concentration of businesses and research facilities to bring together diverse talent and ideas, and sharing resources.
- **Mixed-use development potential:** Districts that include places for people to live, work, and play, fostering the spontaneous interactions that build a complete community.
- **Capacity to achieve economic and social goals:** Beyond job creation, potential to foster inclusive collaboration, drive sustainable growth, and address social challenges through intentional planning and infrastructure.
- **Opportunities for strategic development:** As Innovation Districts often emerge from existing urban areas, leveraging their infrastructure and repurposing underutilized land can create a new hub of activity.



Park Square and Office Building, Science and Technology Park, Chongqing, China (iStock.com)



Academic Building, The Universities at Shady Grove



Local Retail on Darnestown Road

Park-Once District

A park-once district is a walkable, mixed-use area where visitors are encouraged to park their car in one centralized location and complete their remaining errands or activities on foot. This model consolidates parking into shared facilities that prioritize pedestrians over vehicles and lead to a more vibrant, efficient, and economically successful downtown.

Key principles and characteristics:

- **Shared resources:** Parking facilities, which can be public or privately owned, are used by multiple businesses and shared throughout the day.
- **Mixed-use development:** By reducing the land needed for parking, this model allows for greater density and a mix of retail, commercial, residential, and green spaces, making the area livelier and more dynamic.
- **Enhanced walkability:** With fewer surface lots creating “dead zones,” walking distances are shorter, and the overall pedestrian experience is more pleasant. This is supported by design standards that enhance the streetscape with features like trees, benches, and landscaping.
- **Strategic parking placement:** Parking structures are often built on the periphery of the district or “wrapped” in active uses like retail on the ground floor. This keeps the pedestrian-facing streetscape active and engaging.

Biophilic Design

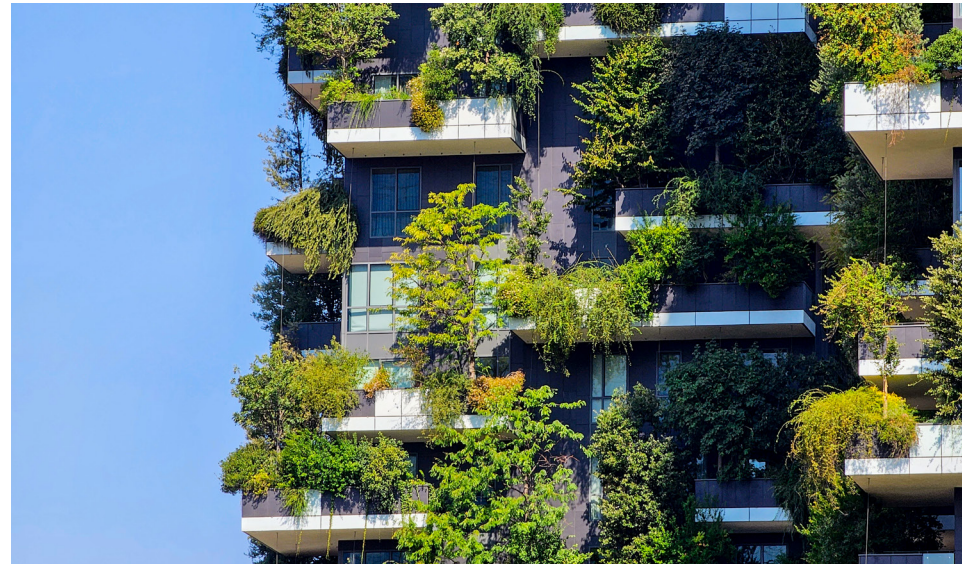
Biophilic architecture incorporates natural elements into buildings to enhance human health and well-being by creating a stronger connection to nature. It is based on the idea that humans have an innate need to connect with the natural world. Biophilic design incorporates features like natural light, plants, water, organic materials, and natural patterns, as well as creating spaces that provide both expansive views and safe, sheltered areas.

Key principles and characteristics:

- **Natural elements:** Providing direct contact with nature through features like living walls, indoor gardens, water, and natural light.
- **Natural materials:** Using wood, stone, bamboo, and other materials to create a sense of warmth and comfort, often mimicking natural forms and patterns.
- **Biomorphic forms:** Integrating shapes and patterns that are inspired by nature
- **Prospect and refuge:** Designing spaces that provide both open, expansive views (prospect) and areas that feel safe and sheltered (refuge).
- **Natural processes:** Emphasizing dynamic and sensory conditions found in nature, such as seasonal changes, breezes, and the sound of water.
- **Place-based design:** Connecting the building to its specific local environment and ecology.



Public Parking Garage, Santa Monica, CA (iStock.com)



Exterior Living Wall (iStock.com)

Human-Scale Design

Human-scale architecture designs spaces that are proportionally aligned with the human body to foster comfort, well-being, and social interaction. This approach uses human dimensions and perception as the primary metric for design, creating environments that are inviting, accessible, and psychologically positive. Key principles include using body-relatable scale and dimensions for everyday objects and spaces, incorporating features that create a sense of intimacy, and designing for walkability and gathering.

Key principles and characteristics:

- **Proportionality:** Buildings and elements are sized to relate well to human dimensions, ensuring that features like doorways, stairs, and rooms are a comfortable and logical size for average use.
- **Accessibility:** Spaces are designed to be usable by all people, including those with disabilities, promoting inclusivity and ease of navigation.
- **Intimacy and comfort:** The design encourages small, intimate environments that provide a sense of security and comfort, such as a front porch, entrance portico, courtyard, or a small seating area.
- **Social connection:** By reducing distances and creating inviting streetscapes, human-scale design encourages people to see and interact with each other, fostering a stronger sense of community and belonging.
- **Sensory experience:** This design approach considers how the environment feels and functions on a sensory level, making it congruent with human biology and psychology.

Bethesda Avenue, Bethesda, MD - Successful pedestrian environment with storefronts, wide pedestrian areas, and landscaped buffers with mature trees and seating areas.



2.4 DESIGN ELEMENTS

Recommendations within these guidelines are based on building or development typology. They promote architectural diversity to create pedestrian-friendly environments that contribute to a safe and comfortable public realm. These apply to both new construction and adaptive reuse where feasible.

Building Placement

Goal: Locate buildings to frame streets and public spaces and create a comfortable environment for pedestrians.

- Place the base of buildings along the edges of streets, parks, and open spaces to enclose and define the public realm.
- Locate the façade of the building base within the build-to-area or along the build-to-line. Provide greater building setbacks, where appropriate, to improve pedestrian amenities, including more space for tree planting, sidewalks, forecourt plazas, and other publicly accessible open spaces.



Locate building fronts and active uses along sidewalks and open spaces.

Building Massing and Articulation

Goal: Design building massing to reduce perceived bulk and correspond to surrounding structures.

Townhouse:

- Provide human-scaled entryways and ground-floor windows that line sidewalks and open spaces.
- Project bays and/or balconies on the façade that are either grounded or supported by robust architectural elements.
- Establish a clear and strong roofline that expresses continuity across attached units.
- Keep roof forms simple and provide dormers and roof decks when compatible with the architectural vocabulary.
- Apply materials across the façade that reflect the underlying structure of the building. Avoid the haphazard application of different materials as purely surface treatments.
- Use bays and balconies to articulate the facade of a string of townhouses.
- Design strings of townhouses as a unified architectural composition.



Townhomes should create continuous street facades articulated with projecting bays and varied materials.

Mid-Rise (three to six stories):

- Incorporate active uses into tall ground floors with generous lobbies lining sidewalks and open spaces.
- Distinguish entryways to ground-floor residential units, businesses, and amenities with canopies and awnings.
- Create a clear base, middle, and top for the building. The scale of each element should be proportional to the scale of the overall building and should relate effectively to the surrounding context.
- Break down the overall mass into distinct pieces and avoid large, contiguous facades.
- Break down the scale of large facades with architectural elements like bays, balconies, and facade projections.
- Animate the roof line with varying heights, vertical elements and roof canopies.
- Express corners as slender tower-like elements topped with iconic roof forms.
- Apply materials across the façade to reflect the underlying structure of the building.



Break down large facades with projecting bays, balconies, and diverse materials.

High-Rise (greater than six stories):

- Provide taller ground floors with active uses and lobbies connecting directly to sidewalks and open spaces.
- Extend canopies and awnings over entrances to distinguish ground-floor residential units, businesses, and amenities.
- Create a clear base, middle, and top for the buildings. The scale of each element should be proportional to the scale of the overall building and should relate effectively to the surrounding context.
- Slim down tower proportions by limiting floor plate sizes.
- Break down the scale of large facades with architectural elements like bays, balconies, and facade projections.
- Articulate building tops to enhance the area's skyline and create gateways at key intersections.
- Organize façade materials to reflect the underlying structure of the building.



Articulate taller structures to create human scale at the street level and slender proportions for taller elements.

Street Activation

Goal: Provide ground floor and base design elements that engage with the sidewalk and street environment.

- Provide frequent entries, transparency, and operable storefronts where possible to encourage visual and physical connections between a building's ground floor and public sidewalk. Avoid long blank walls along the sidewalk.
- Along street frontages without commercial uses, multi-family buildings should explore using building amenities such as lobbies, fitness rooms, and lounge and common areas to activate the street.
- Orient private balconies and terraces toward the street to encourage an interface between the private and public realms and provide eyes on the street.
- Include elements such as public art, awnings, signage, plantings, and seating to create a visually engaging and inviting ground floor to frame the sidewalks and open spaces.



(1) Bleecker Street, New York, NY
(2) Bethesda Avenue, Bethesda, MD

Examples of street activation including human-scaled and articulated storefronts lining comfortable sidewalks with well landscaped buffer zones.

Loading, Servicing, and Parking

Goal: Design loading, servicing, and parking to minimize conflicts between vehicles, pedestrians, and cyclists while reducing the visual impacts of vehicular access and parking on the public realm.

- Provide a continuous, level, and clearly delineated pedestrian through-zone across driveways to encourage drivers to yield to pedestrians. Apply the same materials across these vehicle access points as the adjoining sidewalks.
- Locate loading and servicing at the rear and within the interior of a building whenever possible. Provide service alleys if possible, to access these areas. Minimize the width and height of driveways and vehicular entrances. Where possible, combine loading dock and garage access.
- Screen vehicle and servicing access areas and trash storage with landscaping or other vertical elements, and design vehicle access doors to incorporate materials and finishes that are consistent with the rest of the building.
- Avoid placing entries to loading docks, service areas, and parking garages on neighborhood residential streets or a public open space when alternative access is feasible.
- Provide queuing spaces for pick-up and drop-off where feasible to reduce idling in the travel lanes.
- Ensure continuous tree canopy along service areas and lay-by areas to the greatest extent feasible.



(1) M-NCCPC HQ, Wheaton, MD
(2) Solaire Apartments, Silver Spring, MD

Examples of garage, loading and service areas integrated with the design of the overall building facade- and materials.

Public Open Space

Goal Create a hierarchy of open spaces throughout the LSC.

The 2022 *Park, Recreation and Open Space Plan* recommends that for urban areas an open space system should be planned and tailored to serve the projected demographics of residents, workers, and visitors. The Plan recommends the creation of an interconnected network of open spaces with diverse functions. The new open space system should support a vibrant and sustainable urban center by including areas that will be comfortable, attractive, easily accessible, and safe and that provide a range of experiences, including festivals and outdoor events.

The open space diagram illustrates potential locations for future public open spaces, specifics to be determined via the regulatory review process. As most properties in the LSC are already developed or have recent approvals, the Great Seneca Plan does not designate specific open space types. Refer to the 2019 *Energized Public Spaces Design Guidelines (EPSDG)* for open space types and potential amenities.

Map 2: Open Space and Mobility Network



- (1) Civic Green, Mosaic District, Fairfax, VA
- (2) Urban Plaza, Columbia Heights, Washington, DC
- (3) Neighborhood Green and Plaza, UDC, Washington, DC



Park Design Elements

The EPS Design Guidelines provide additional design guidance for each park type and should be consulted in conjunction with this document. Designers should consult case studies in the EPS Design Guidelines for creative ideas that may promote diverse parks and open spaces in different sizes and configurations.

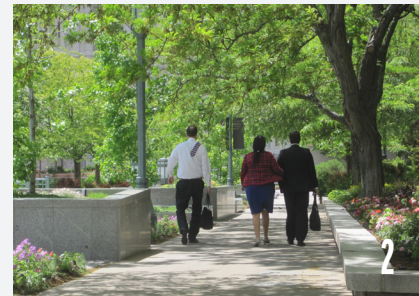
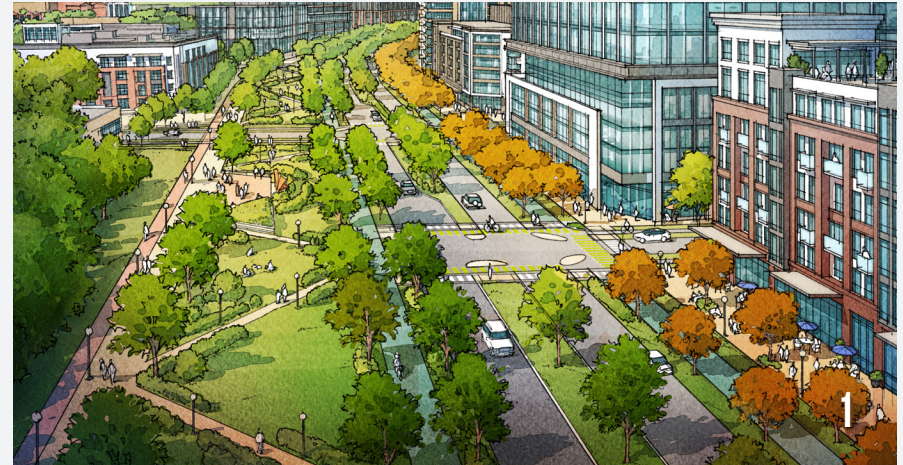
Open Space Types

- 1. Civic Green:** Accommodate social gatherings, special events and casual play elements.
Key Features: Large central lawn as focal point with seating, trees or shade structures.
Size: ½ acre minimum.
- 2. Urban Plaza:** Integrated into commercial or mixed-use development, to serve as focal point for community activity.
Key Features: Central hard-scape as focal point, with seating, trees and shade structures.
Size: ½ acre minimum, 1 acre ideal.
- 3. Neighborhood Green:** Mix of social gathering, active recreation and contemplative areas.
Key Features: May include a play area, skate spot or community garden, or other similar neighborhood-serving recreational facilities. Includes plantings and landscaped areas for sitting.
Size: 1/4 acre minimum.
- 4. Urban Recreational Park:** Key West Avenue Promenade and Great Seneca Greenway. Local and regional destinations for passive and active play.
Key Features: Passive and active play areas.
Size: Will vary along the length of Key West Avenue and Great Seneca Highway.

Key West Avenue and Great Seneca Highway

The Plan recommends a significant transformation for these two major roads, by repositioning and consolidating travel lanes to improve the area for walking, biking, and rolling. This would create major green spaces within the road right-of-way, connected to new development through the downtown area to provide passive and active recreation opportunities for residents and workers.

Improvements will be delivered incrementally. Property owners fronting along these roads pursuing redevelopment in the near term must deliver partial or interim frontage improvements, located to facilitate integration with future improvements within the right-of-way. Extent of frontage improvements associated with near-term redevelopment will be determined through the development review process, depending on the property's location.



(1) Proposed Key West Avenue Illustrative
(2) (3) Examples of outdoor walking areas creative playground areas.

Sustainable Design

Goal: Extend the life of existing structures through adaptive reuse.

- Explore creative solutions that incorporate the retrofitting of existing buildings to increase energy efficiency, automate building systems to reduce waste, promote up-to-date sustainable practices, and contribute to a healthier environment.
- Adapt and reuse existing buildings to accommodate new uses supported by current market demands.
- Concentrate infill development on existing surface parking lots.
- Retrofit facades of existing buildings to extend the life of viable structures.

Goal: Reduce slow and untreated stormwater runoff to improve water quality in surrounding streams and creeks.

- Plant street trees to intercept stormwater and design tree wells to capture and infiltrate runoff.
- Install soft landscaping in open space areas to allow for adequate drainage and reduce strain on stormwater systems.
- Improve water quality through filtering using permeable pavement, stormwater management facilities, and tree coverage.
- Retrofit existing surface parking lots with stormwater management features and increased tree coverage.
- Incorporate Environmental Site Design elements such as bioretention systems, bioswales, rainwater harvesting, underground detention/retention vaults, and vegetated roofs.
- Use native and adaptive plants in landscape areas that require less irrigation, are not invasive, and benefit local wildlife.
- Plant trees and other green features in public and private open spaces.
- Encourage use of rainwater to water planted areas.
- Utilize intensive green roofs with a minimum of six inches of soil depth to maximize water treatment.

Goal: Sequester carbon, reduce the urban heat island effect, and improve air quality.

- Increase urban tree cover along streets, in open spaces, and in existing parking lots.
- Use native and adaptive species in landscaping and tree planting that require less irrigation, are not invasive, and benefit local wildlife.
- Develop mixed-use communities with walkable and bikeable destinations that reduce people's dependence on vehicular travel.
- Place soft landscaping in open areas to reduce the heat island effect.

Goal: Promote energy conservation and on-site energy production.

- Encourage the installation of solar panels on buildings, parking lots, and garages to shade parking spaces and generate clean energy.
- Seek opportunities for on-site renewable energy generation.
- Consider block and building orientation to maximize passive solar heating, cooling, and lighting, and optimize siting for solar energy generation.
- Encourage the design and construction of green roofs to reduce heating and cooling demand.
- Use building construction design, materials, and systems that save energy.
- Design buildings and sites to maximize natural ventilation and air flow.

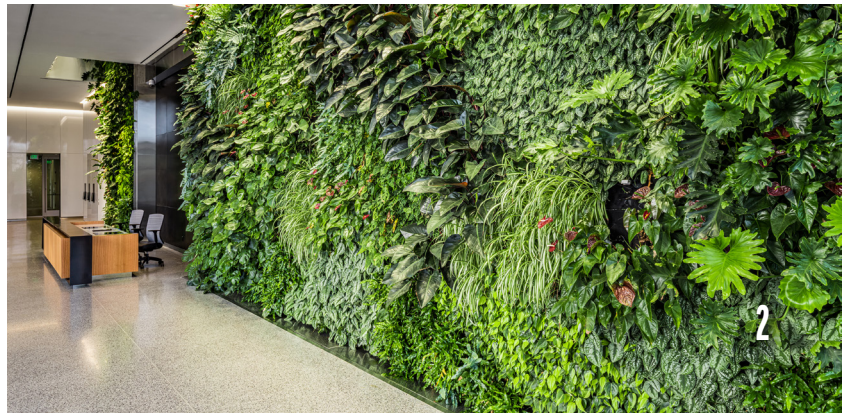
Opposite Page:

(1) One World Trade Center, NY : Glass screen refractors attached to the building's base that absorb sunlight while trapping heat to avoid overheating the concrete construction behind it.

(2) M-NCPPC HQ, Wheaton, MD: Living green wall, building lobby

(3) NOMA District, Washington, DC: Streetscape incorporating bio-swales and various landscape elements.

(4) M-NCPPC HQ, Wheaton, MD: Green roof and rooftop solar.



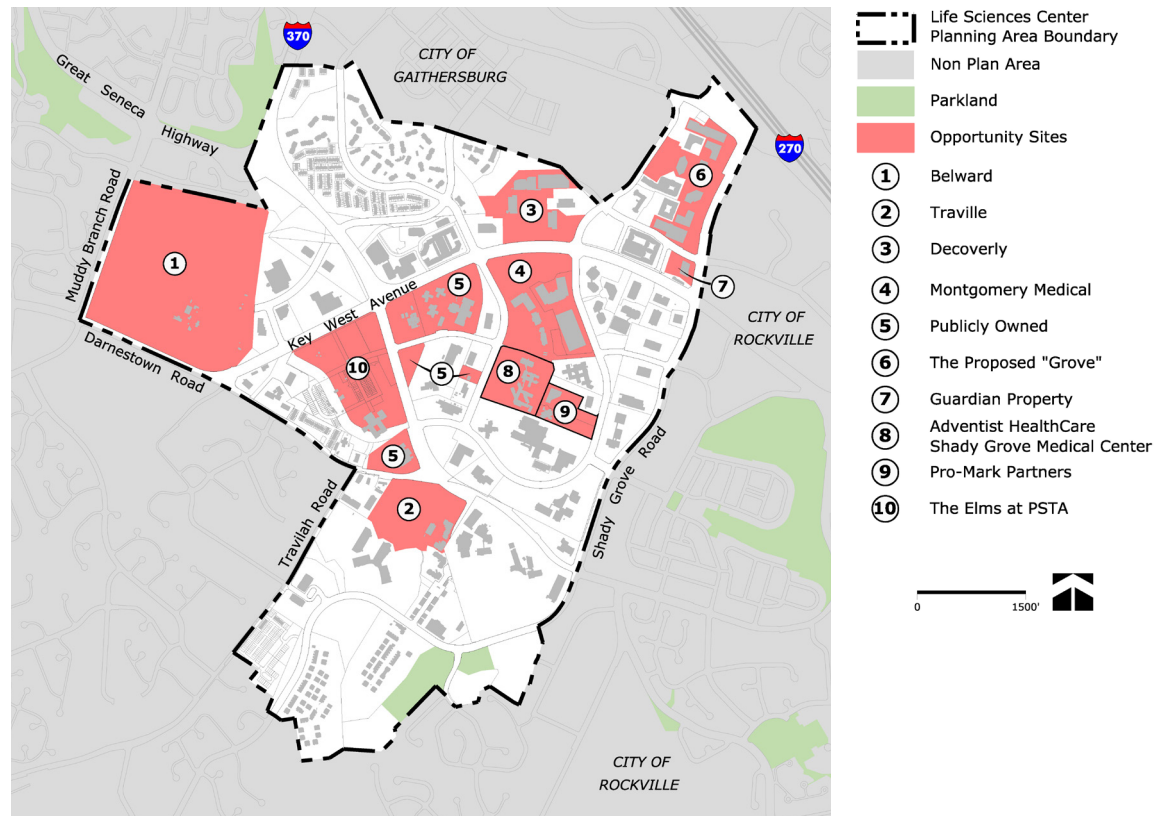


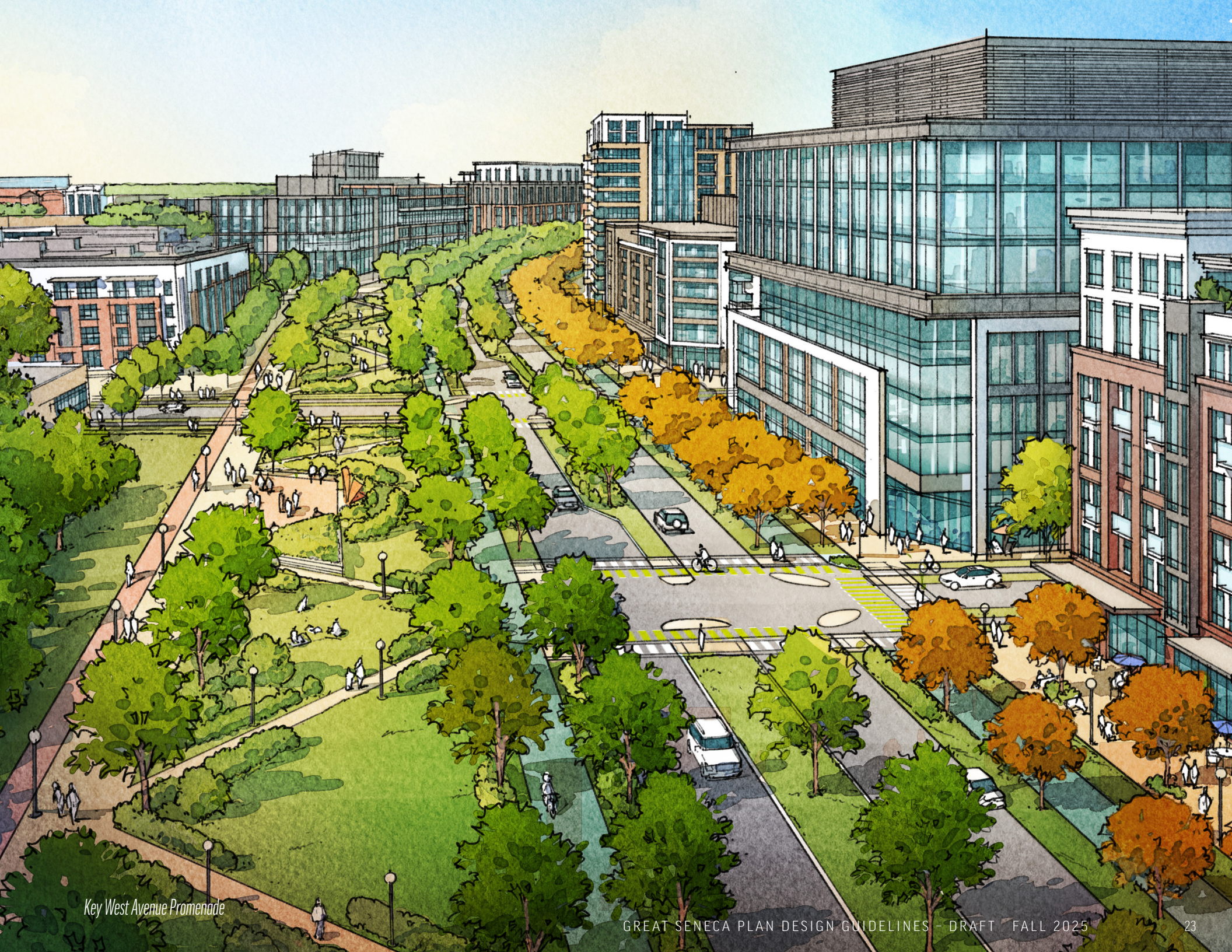
CHAPTER 3: GUIDELINES FOR THE LIFE SCIENCES CENTER

From the 2024 Great Seneca Plan, p. 58:

“The opportunity sites have the potential to accommodate infill development or redevelopment near planned transit, as well as to deliver public benefits, including parks, public open space, streets, and sustainable design. The sites are currently at different stages of delivering new buildings and benefits; some sites are under construction or undergoing development review, while other sites have been identified by property owners or staff as high potential sites... Final road and open space alignment and design will be determined with new development or redevelopment of the site at regulatory review.”

Map 3: Opportunity Sites





Key West Avenue Promenade

3.1 DESIGN GUIDANCE - OPPORTUNITY SITES

Infill Development

Achieving the complete communities envisioned by the Master Plan will require integration between new development and existing uses and structures. Most properties in the area are suburban office campuses with viable and active single-use structures which property owners might likely retain. This creates an opportunity to explore innovative approaches to infill development, particularly on larger properties and in areas where existing uses are not typically part of mixed-use environments. Combining new infill residential, commercial uses with existing office or institutional development would yield alternative urban environments that can be designed in innovative ways to support the county's growing and diverse population.

Campus Redevelopment

- The predominantly horizontal mix of uses and corporate campus format of many properties in this area will continue to attract similar development for the foreseeable future.
- Corporate campuses can retain their open organizations and at the same time provide a mix of uses along their edges to generate revenue and offer amenities and services to residents of surrounding communities.
- For strategies, see page 42.

Infill Townhouse Development

- Recent interest in residential uses is changing the character of some of the older office clusters in the area by mixing viable older office structures with new residential uses, street connections, and green open space.
- Older but viable office buildings can remain next to new infill townhome or multi-family residential, which can add new street connections, open space, and retail alternatives.
- For strategies, see page 44.

- (1) Commercial Center, Mosaic District, Fairfax VA
- (2) Townhouse Development, Mosaic District, Fairfax VA
- (3) Seating Areas, High Line, New York NY
- (4) Discovery Green, Silver Spring MD



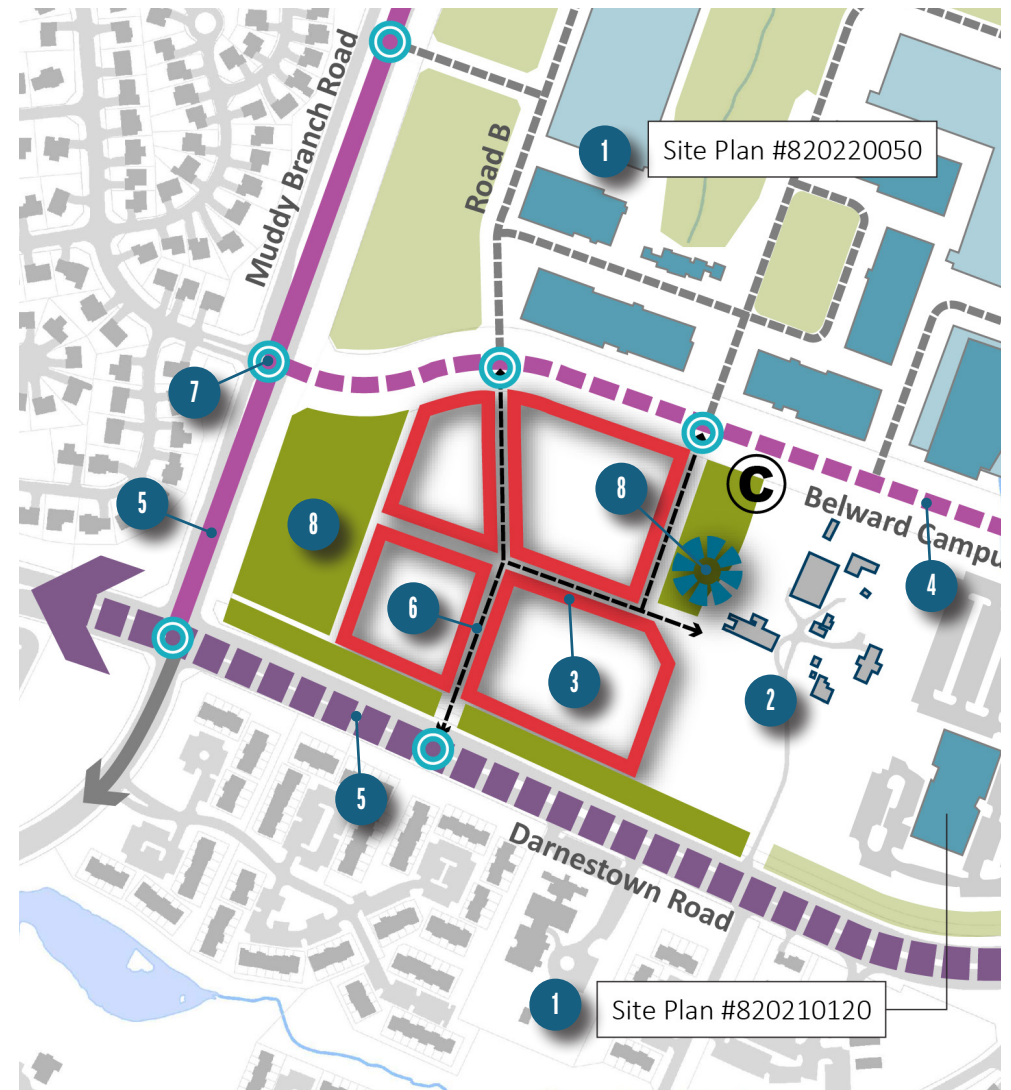
Opportunity Site Diagrams

The diagrams in this document assume coordinated redevelopment for properties that today may be under single or multiple ownership. Properties with multiple ownerships might redevelop jointly or individually; planning staff will interpret these diagrams as needed to address each application as submitted. Actual site, building design, and location of open spaces will be evaluated during the regulatory review process.

The diagrams illustrate where active building frontages and streetscape improvements should be a priority, highlight opportunities for increased connectivity, and suggest where public open space could be created.

Follow the key below for how to read each diagram's symbols:

- 1 **Approved Development:** Illustrate extent of approvals to date, whether under construction or not.
- 2 **Existing Development:** Several opportunity sites include existing structures likely to remain. Those are highlighted for reference.
- 3 **Build-to-Lines:** Illustrate segments where street facing buildings should be a priority. Streetscape improvements are also required along these frontages as recommended by the street sections included in the Plan.
- 4 **New Streets:** Public streets recommended by the Sector Plan. For designations and sections refer to the Plan document.
- 5 **Existing Streets:** Refer to Street Classifications Tables in the Plan document for recommendations.
- 6 **Potential Interior Connections:** Additional streets, not recommended by the Plan. Located as needed by the proposed development. If included, should be built to public street standards and include street facing buildings and streetscape improvements.
- 7 **Enhanced Intersection:** Illustrated for reference purposes. Particulars of each crossing to be determined during the regulatory review process.
- 8 **Public Open Space:** Public open space should be consolidated in centralized locations. Residential development should distribute smaller common open spaces within blocks throughout the development. Refer to page 18 in these guidelines for open space types.



Sample Opportunity Site Diagram

3.2 OPPORTUNITY SITES



Belward Campus

Development of this property will be primarily institutional to include medical, educational, and life sciences with:

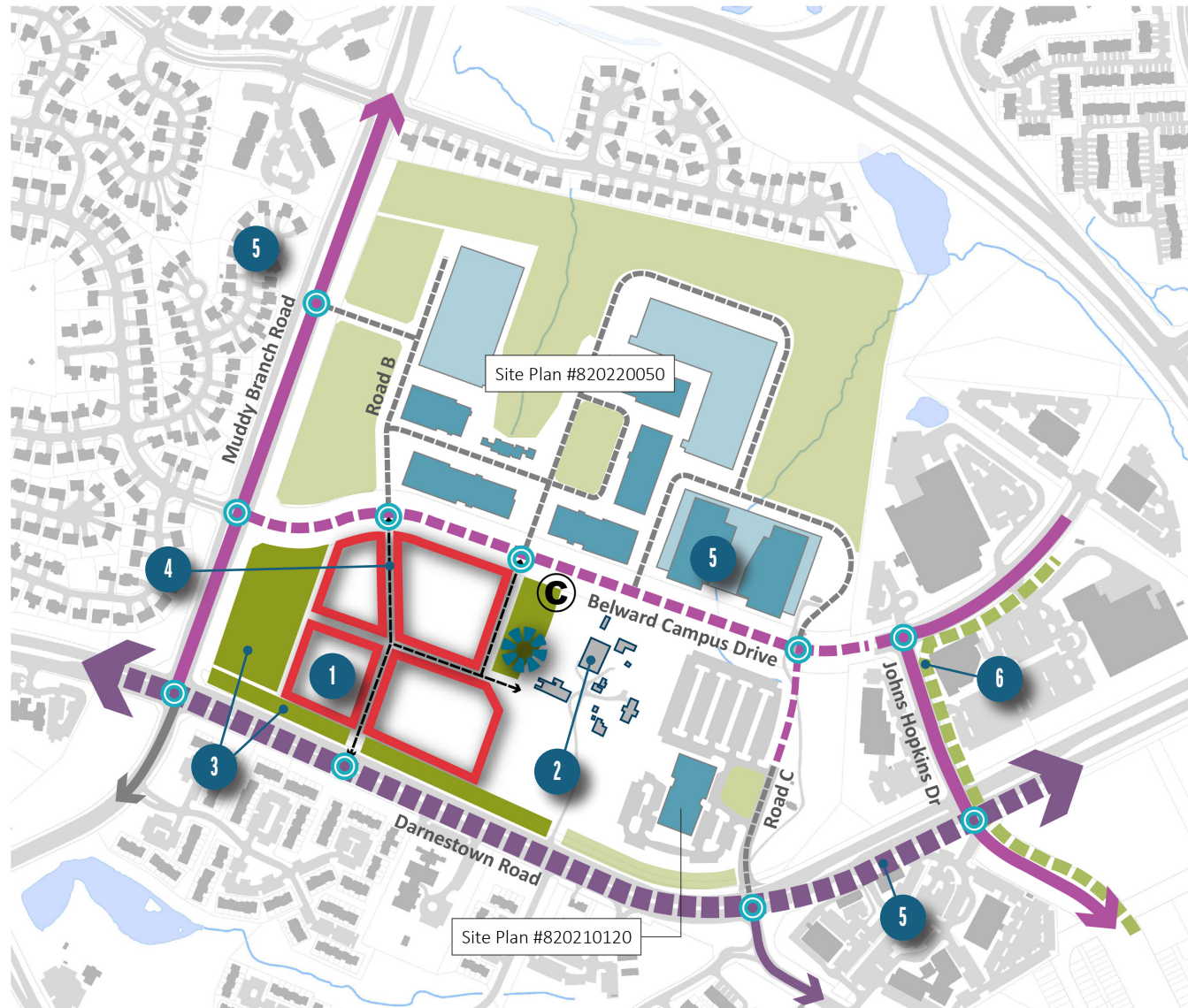
- Adaptive reuse of the historic Belward Farm buildings, preservation of open space and mature trees surrounding the farmstead.
- Construction of a street grid with the Corridor Connector alignment that includes dedicated bus lanes through the property to Muddy Branch Road.
- Creation of Privately Owned Public Space (POPS) and the Mission Hills preserve.



(1) Existing Belward farm.

(2) Proposed Science Campus

Map 4: Belward Farm



Note: For descriptions of the elements illustrated on this map, see p.25.

LEGEND

- Build-to-line
- - - LSC Loop
- Approved Open Space
- Recommended Open Space
- ⊙ Protected Intersection
- ⓐ Connector Stop

STREETS

- ← Existing Street
- - - Approved Street
- - - Potential Street
- ← Town Center Blvd
- ← Town Center St

Buildings

- 1 Future development should extend to Muddy Branch Road and Darnestown Road.
- 2 Consider adaptive reuse alternatives for the Belward Farm structures.

Open Space

- 3 Future development should deliver the remaining part of Muddy Branch park and improvements along the Darnestown Road Promenade.

Streets

- 4 Expand the local street grid approved to date to Darnestown Road and Muddy Branch Road with future development.
- 5 Refer to the Plan for Belward Campus Drive, Key West Avenue and Muddy Branch Road street sections.
- 6 Construct the LSC Loop where required. Coordinate with the requirements of the Complete Streets Guide.

Opportunity Sites



Traville Parcel N

This is phase 2 of a larger research and development campus that includes the already developed Parcel M immediately to the south. The most recent development phase includes three research and development buildings; two are under construction and the final building has a pending regulatory application.

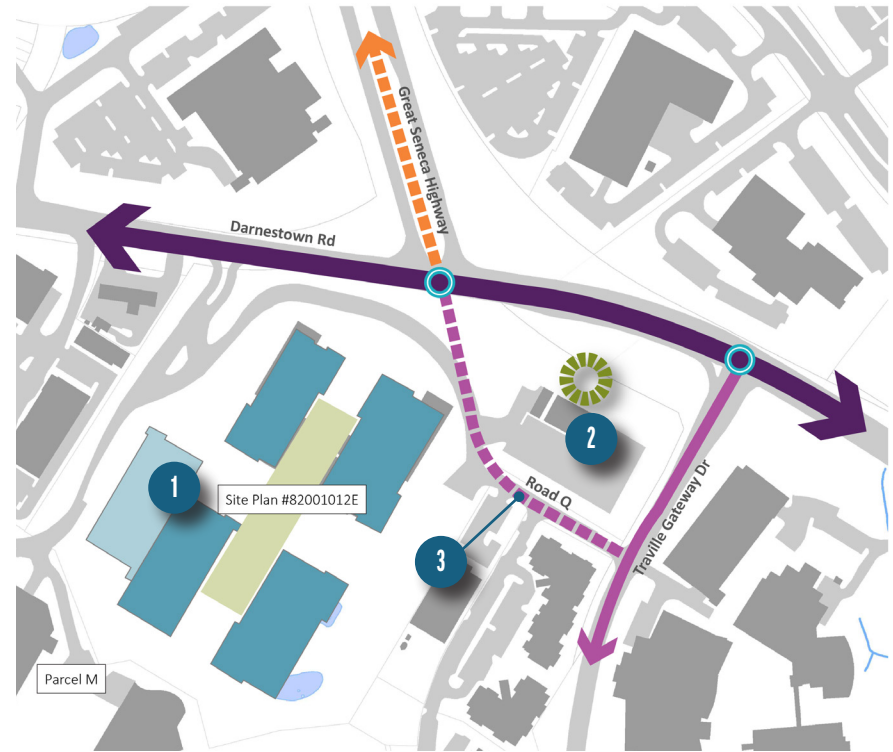
The site will continue to build out as approved to include:

- Open space on the northeast corner of the parcel
- An extension to Great Seneca Highway through the property.



(1) Illustrative of Science Buildings. (2) Approved open space. (3) Open space precedent image.

Map 5: Traville Parcel N



Note: For descriptions of the elements illustrated on this map, see p.25.

Buildings

- 1 Area will continue to develop as approved.

Open Space

- 2 A civic green at the corner of Darnestown Road and Traville Gateway Drive will be part of a future development phase.

Streets

- 3 Road Q will include a grass median near Darnestown Road. Sidepaths will be provided both sides.

LEGEND

- Approved Open Space
- Protected Intersection
- Civic Green

STREETS

- Town Center Blvd
- Downtown St
- Town Center St

Opportunity Sites

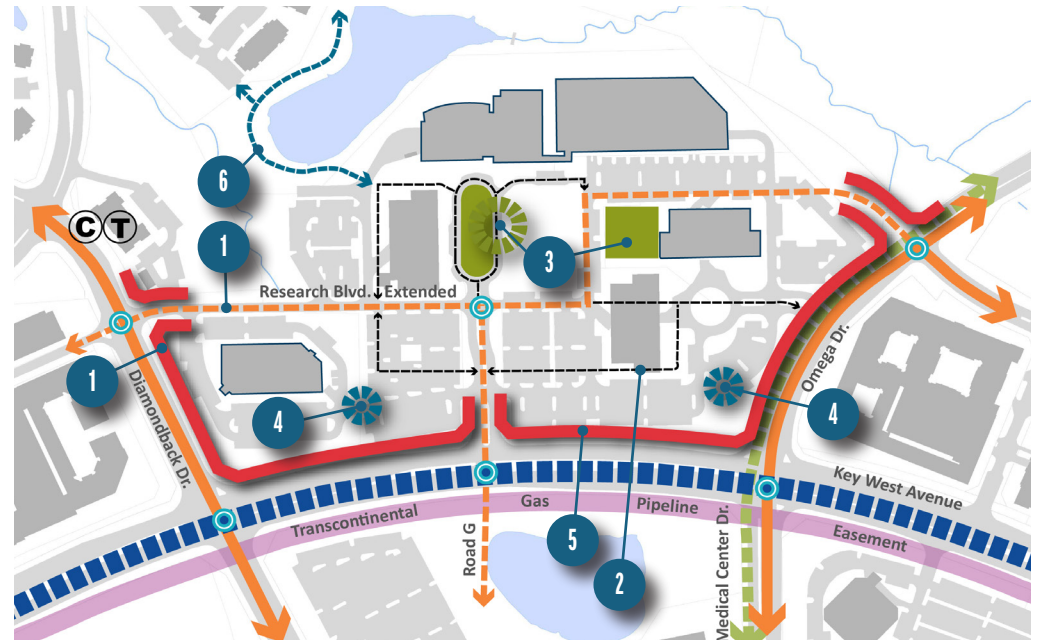


Decoverly Hall

This is an older office cluster with existing buildings still in use. Current zoning permits residential and commercial uses. Property owners should explore:

- Infill residential, retail, or employment redevelopment that retains existing offices.
- Converting existing driveways into a grid of streets with public roads between Omega Drive and Diamondback Drive.
- Repurposing existing green areas and creating new centralized and accessible public open space.

Map 6: Decoverly Hall



Note: For descriptions of the elements illustrated on this map, see p.25.



(1) (2) Mix of residential types. (3) (4) Safe and comfortable pedestrian/bike areas. (5) Accessible open space. (6) Retained existing uses.

Buildings

- 1 Locate street facing buildings along all master planned streets and private streets.
- 2 Building setback along private streets may vary if building type is attached residential (townhome).

Open Space

- 3 Retain, improve, and add amenities to existing green areas.
- 4 Provide additional pocket greens throughout.

Streets

- 5 Refer to the master plan for all recommended street sections. Extent of dedication and streetscape improvements along Key West Avenue will be established during the regulatory review process.
- 6 Improve pedestrian path around existing pond. Provide a connection to the Crown Farm development to the north.

LEGEND

- Build-to-line
- LSC Loop
- Pedestrian Trail
- Gas Pipeline Easement
- ⊙ Protected Intersection
- ⊙ Civic Green
- ⊙ Neighborhood Green
- Ⓢ Connector Stop
- Ⓣ Transit Stop

STREETS

- Potential Street
- ← Downtown Blvd
- ← Downtown St

Opportunity Sites



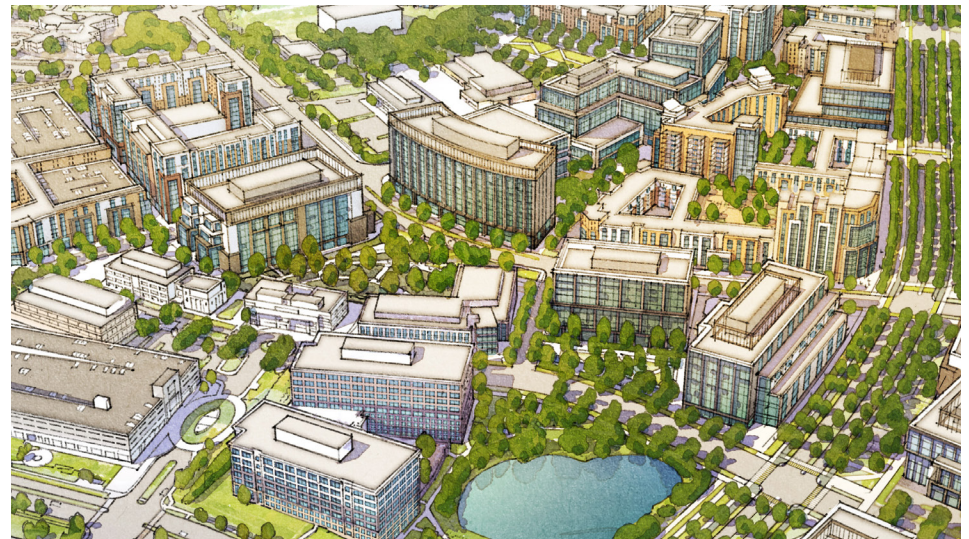
Alexandria Real Estate (ARE) - Montgomery Medical

The former Johns Hopkins Montgomery County Medical Center, this property currently contains the National Cancer Institute headquarters and research laboratories as well as several life science buildings.

- Infill development should replace the existing surface parking lots.
- Broschart Road, Blackwell Road, and Key West Avenue should be designed as pedestrian-friendly urban streets and have active frontages.



Existing buildings in the area.

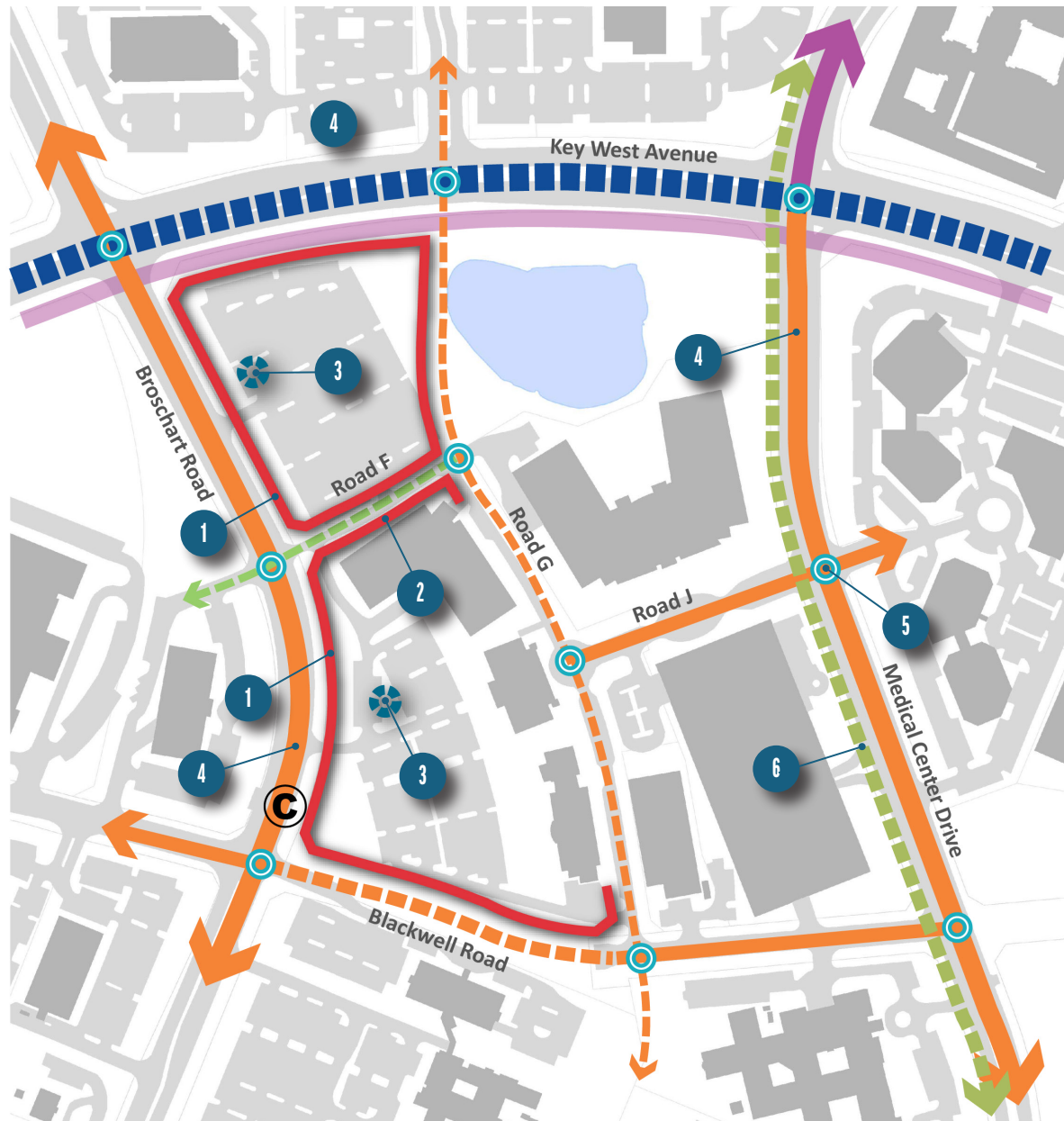


Illustrative of master plan vision for the area.



Redevelopment should provide: (1) Additional science/office buildings with accessible public open space. (2) (3) Safe and comfortable pedestrian and bicycle facilities.

Map 7: Montgomery Medical



LEGEND

- Build-to-line
- - - LSC Loop
- Gas Pipeline Easement
- Protected Intersection
- ★ Neighborhood Green
- C Connector Stop

STREETS

- ← Downtown Blvd
- ← Town Center St
- ← Downtown St
- ← Shared Commercial St

Buildings

- 1 Locate street facing buildings along all new master planned streets.
- 2 Location of building fronts along shared streets can adjust to accommodate public open space.

Open Space

- 3 Provide public open space with new development, particularly near future transit.

Streets

- 4 Refer to the master plan for all recommended street sections. Extent of dedication and streetscape improvements along Key West Avenue and Broschart Road will be established during the regulatory review process.
- 5 Requirements for each protected intersection shall be identified during the regulatory review process.
- 6 Construct the LSC Loop where required. Refer to the *LSC Loop Trail Design Guidelines* for additional information.

Note: For descriptions of the elements illustrated on this map, see p.25.

Opportunity Sites



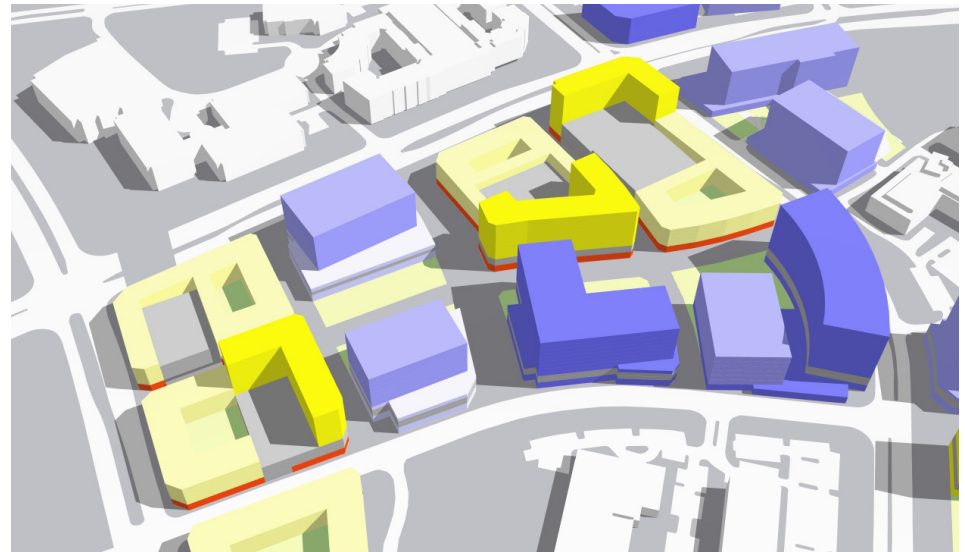
Publicly Owned Sites

Redevelopment of this prominent location should deliver mixed-use development that includes life sciences, residential, and retail uses. It should also:

- Improve frontages along Key West Avenue, Great Seneca Highway, Blackwell Road, Broschart Road.
- Construct internal network of shared streets and urban open spaces.
- Improve frontages along the intersection of Great Seneca Highway and Medical Center Drive.



Existing Conditions



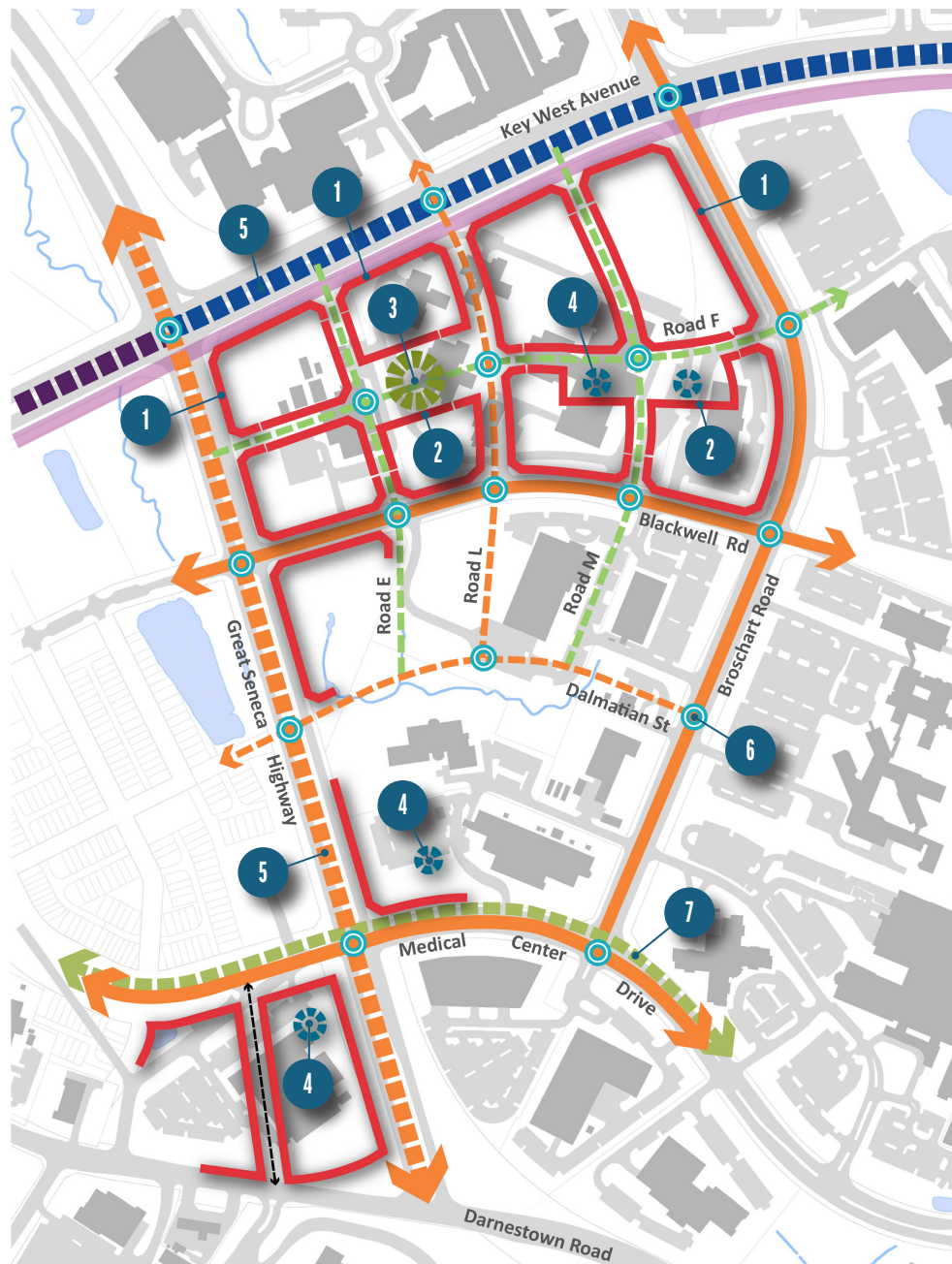
Illustrative massing of potential mixed-use development.

- Legend**
- Residential Mid-Rise
 - Residential High-Rise
 - Science
 - Office
 - Retail
 - Parking



Redevelopment should provide: (1) (2) Diversity of dwelling unit types. (3) (4) Safe and comfortable pedestrian and bicycle facilities. (5) Accessible open space. (6) Include new science uses.

Map 8: Publicly Owned Sites



Note: For descriptions of the elements illustrated on this map, see p.25.

LEGEND

- Build-to-line
- - - LSC Loop
- Approved Open Space
- - - Gas Pipeline Easement
- Protected Intersection
- ★ Civic Green
- ★ Neighborhood Green

STREETS

- - - Potential Street
- ← Downtown Blvd
- ← Town Center Blvd
- ← Downtown St
- ← Shared Commercial St

Buildings

- 1 Locate street facing buildings along all new master planned streets.
- 2 Location of building fronts along shared streets can adjust to accommodate public open space.

Open Space

- 3 Provide a Civic Green where highest redevelopment density is expected.
- 4 Create smaller urban plazas and pocket spaces throughout. See pages 18-19 for open space types and suggested amenities.

Streets

- 5 Refer to the master plan for all recommended street sections. Right-of-way dedication and streetscape improvements along Key West Avenue and Great Seneca Highway will be established during the regulatory review process.
- 6 Requirements for each protected intersection shall be identified during the regulatory review process.
- 7 Construct the LSC Loop where required. Refer to the *LSC Loop Trail Design Guidelines* for additional information.

Opportunity Sites



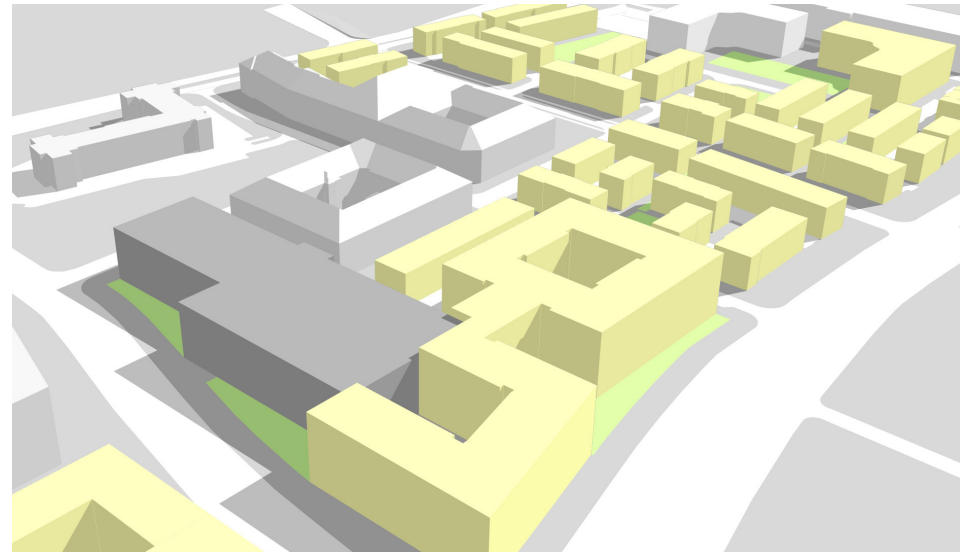
The Grove

(2611 Research Boulevard, 15300 Corporate Boulevard, 15304 Corporate Boulevard, 9201 Corporate Boulevard, 9211 Corporate Boulevard)

These aging office buildings should be redeveloped into a mixed-use cluster that includes residential and non-residential uses, anchored by public open space. Redevelopment should expand east-west connectivity and improve the public realm along Shady Grove Road, Omega Drive, and Research Blvd.



Existing Conditions

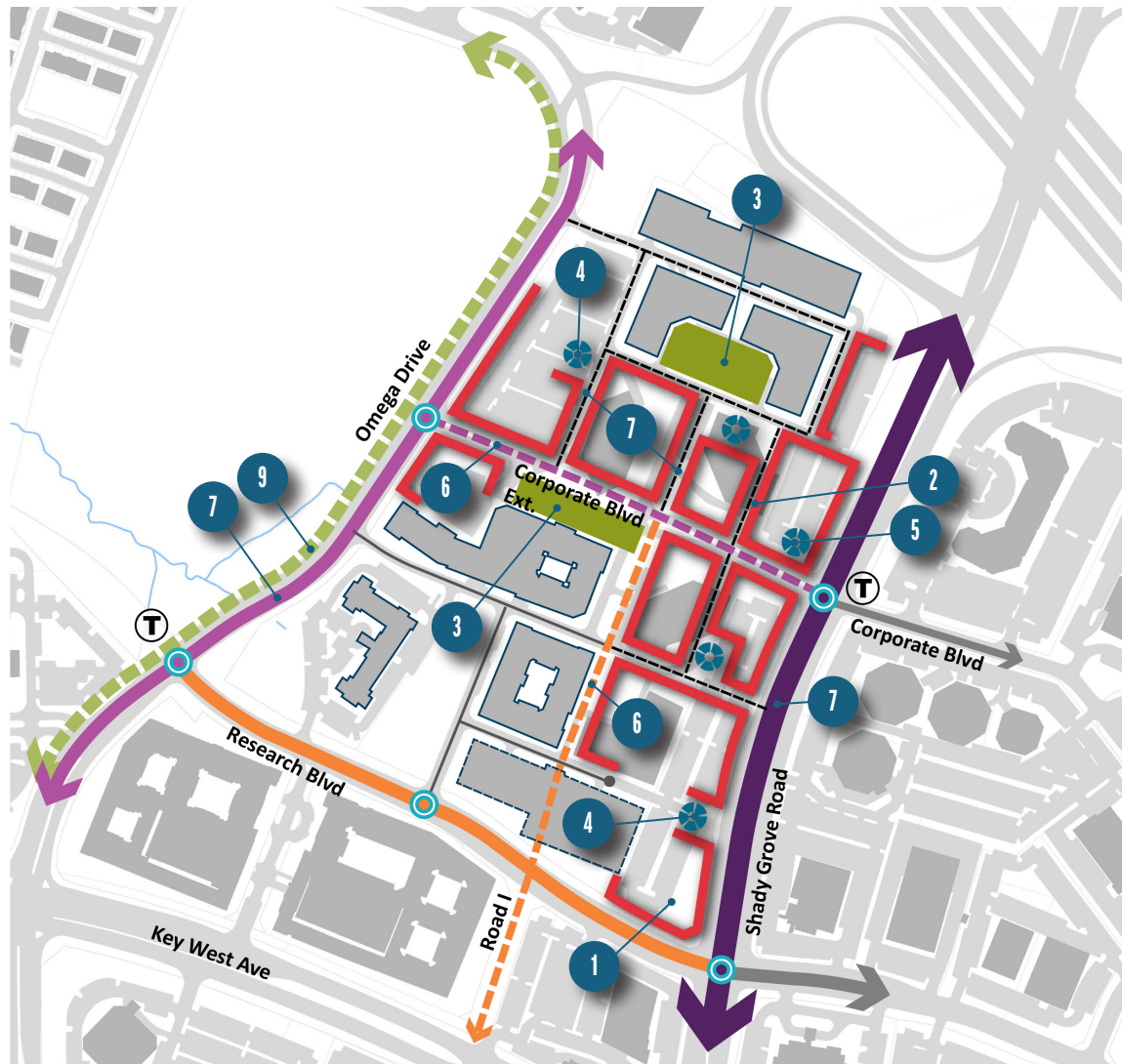


Illustrative showing potential redevelopment scenario.



Redevelopment should provide: (1) (2) Diversity of dwelling unit types. (3) (4) Safe and comfortable pedestrian and bicycle facilities. (5) Accessible open space. (6) Some existing buildings will remain.

Map 9: The Grove



LEGEND

- Build-to-line
- - - LSC Loop
- Potential Open Space
- ⊗ Neighborhood Green /Urban Plaza
- ⊙ Protected Intersection
- Ⓣ Transit Stop

STREETS

- Existing Street
- - - Potential Street
- Town Center Blvd
- Downtown St
- Town Center St

Buildings

- 1 Locate higher density, height, and mixed uses near the corner of Shady Grove Road and Research Blvd.
- 2 Locate street facing buildings along all new master planned and private streets.

Open Space

- 3 Retain and improve existing green areas.
- 4 Provide additional pocket open spaces throughout.
- 5 Consider an urban plaza adjacent to the proposed transit station.

Streets

- 6 Construct public streets recommended by the Plan. Explore locations for on-street or visitor parking if needed.
- 7 Right-of-way dedication and streetscape improvements along Shady Grove Road and Omega Drive will be established during the regulatory review process.
- 8 Expand the street grid with private streets constructed to public streets standards, with street facing buildings and streetscape improvements.
- 9 Construct the LSC Loop where required. Refer to the *LSC Loop Trail Design Guidelines* for additional information.

Note: For descriptions of the elements illustrated on this map, see p.25

Opportunity Sites



Adventist Healthcare Medical center

Adventist Healthcare Medical Center will continue to pursue infill development supportive of its current mission. Redevelopment should:

- Improve frontages along Broschart Road
- Expand access to publicly accessible open spaces and provide new public amenities connected to new development.
- Provide pedestrian connections through the site.
- Improve east-west vehicular connectivity between Medical Center Drive and Broschart Road.
- Connect with other LSC districts via the LSC Loop, an important ped/bike connector recommended by the 2010 Master Plan.



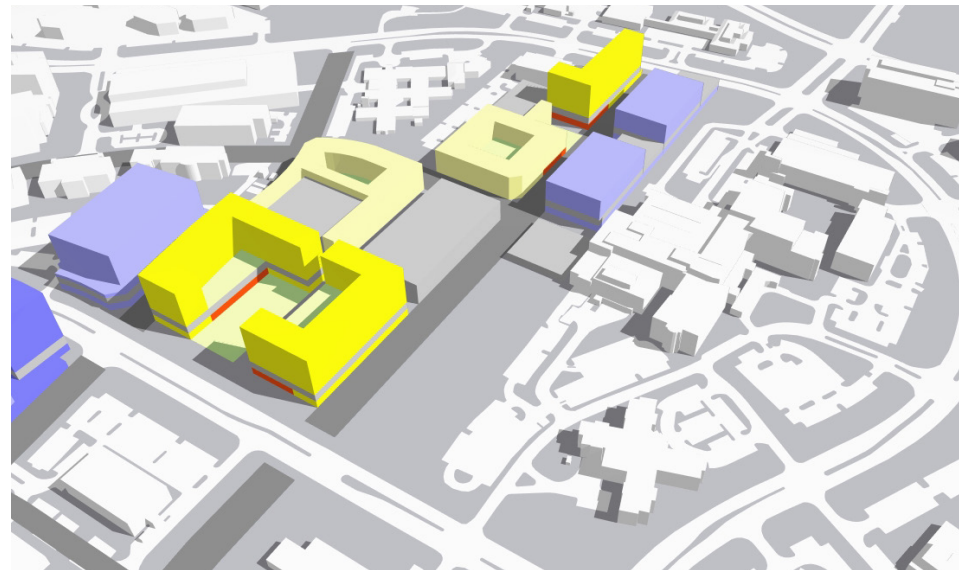
Existing Conditions



9711 and 9715 Medical Center Drive

These properties are under consolidated ownership. Extensive surface parking lots and low intensity uses can deliver mixed-use redevelopment with residential, or life science uses. Redevelopment should:

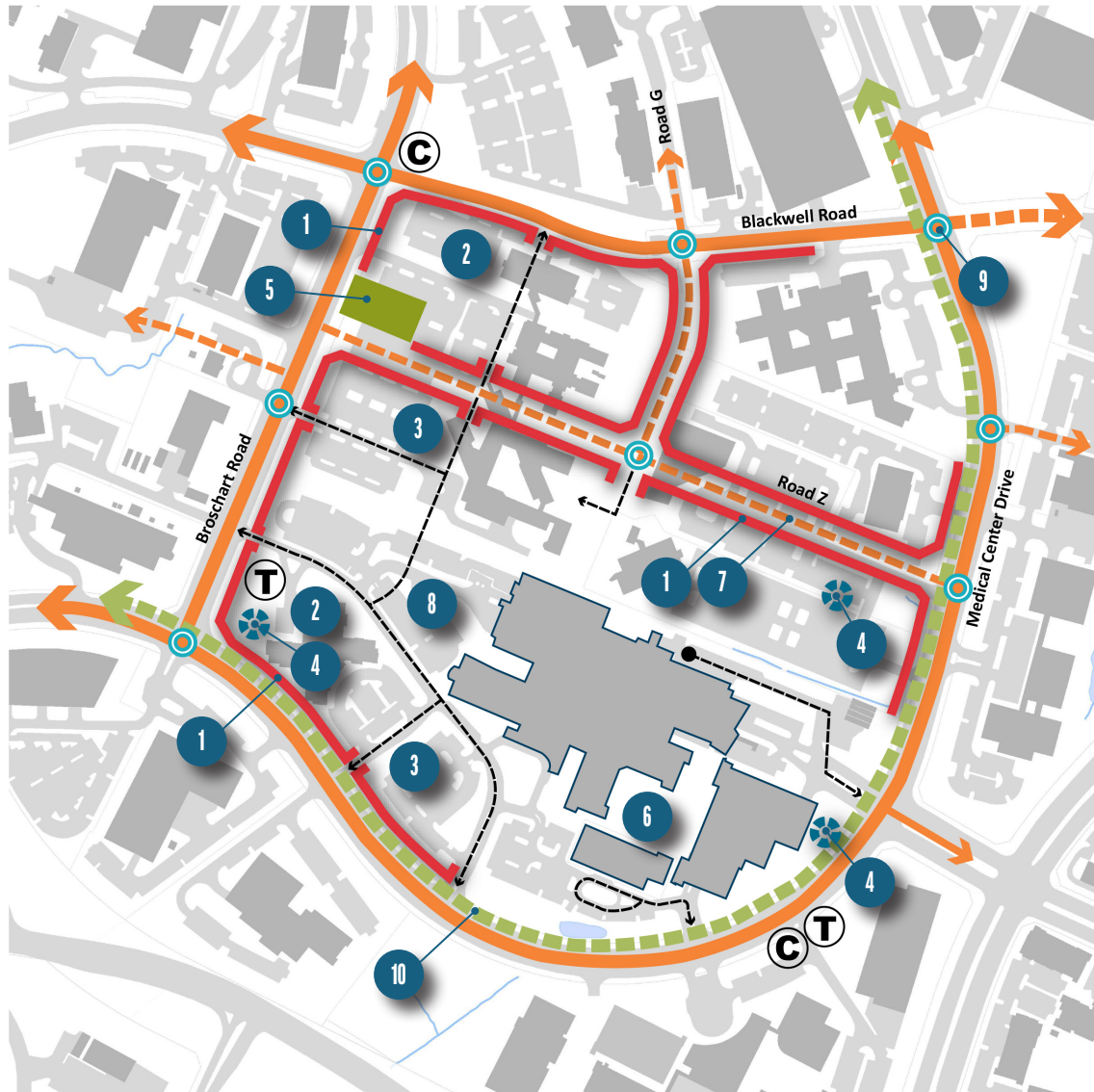
- Construct an east-west connection between Medical Center Drive and Broschart Drive.
- Connect with potential redevelopment on surrounding Adventist Healthcare.
- Improve frontages and streetscape along Medical Center Drive that integrates the LSC Loop.



Illustrative massing showing potential for mixed-use development.

Legend	
Residential Mid-Rise	Yellow
Residential High-Rise	Light Yellow
Science	Blue
Office	Purple
Retail	Brown
Parking	Grey

Map 10: Adventist Healthcare / 9711-9715 Medical Center Drive



LEGEND

- Build-to-line
- - - LSC Loop
- Urban Park
- Protected Intersection
- ★ Neighborhood Green /Urban Plaza
- C Connector Stop
- T Transit Stop

STREETS

- - - Potential Street
- ← Downtown St

Buildings

- 1 Locate street facing buildings along all new master planned and private streets.
- 2 Locate higher density and height near transit or at infill locations near existing structures.

Open Space

- 3 Lower scale development should provide a variety of open space types connected to the recommended mobility network.
- 4 Provide public open space with redevelopment. Locate urban plazas at recommended transit station locations.
- 5 Locate recommended urban park to anchor the future transit stop (Broschart Rd. near Blackwell Rd.).
- 6 Expand access to existing open spaces part of Adventist Healthcare along Medical Center Drive and connect to the LSC Loop.

Streets

- 7 Refer to the master plan for all recommended street sections.
- 8 Convert existing driveways to private streets with future development. Construct to public street standards.
- 9 Requirements for each protected intersection shall be identified during the regulatory review process.
- 10 Construct the LSC Loop where required. Refer to the *LSC Loop Trail Design Guidelines* for additional information.

Note: For descriptions of the elements illustrated on this map, see p.25

Opportunity Sites

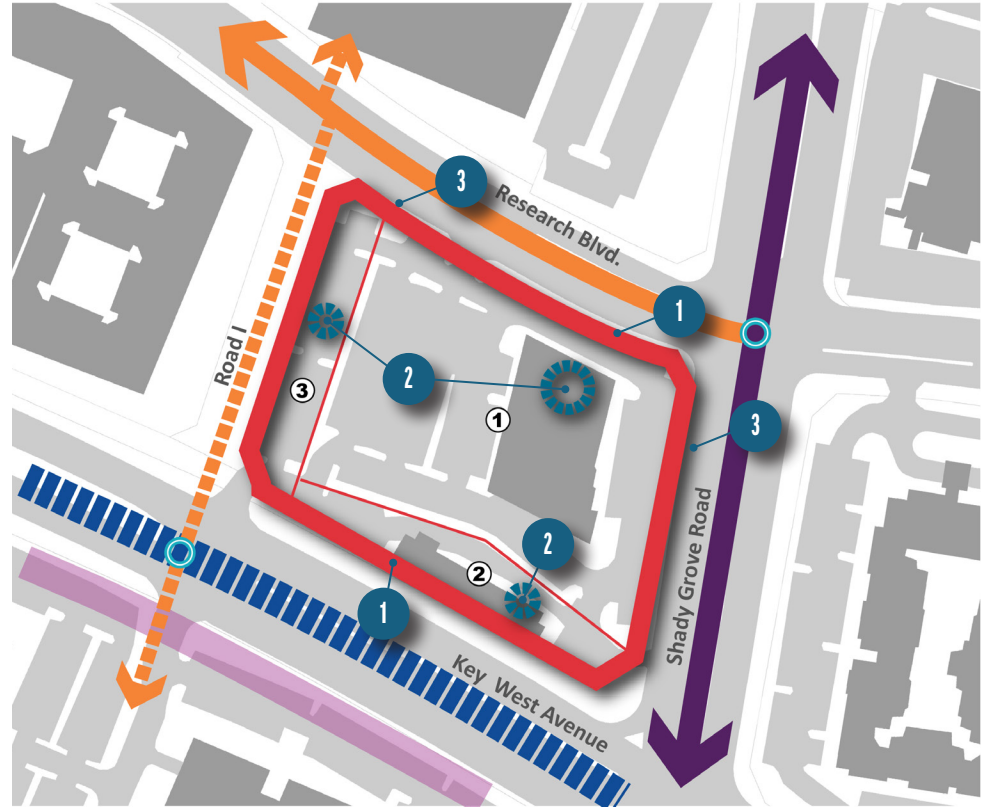


15200 Shady Grove Road and 9401 Key West Avenue

There are three separate properties at this location, the two addresses above (1)(2) are actively used, the third (3) is a strip of land left after the dedication of Road I. These could redevelop separately or jointly. If developed individually, each must address their respective frontages and provide open space as required.

If redeveloped jointly, a comprehensive approach could be explored to maximize zoning capacity and strategically deliver public open space and streetscape improvements.

Map 11: 15200 Shady Grove Road / 9401 Key West Avenue



Buildings

- 1 Create street facing buildings along all master planned streets.

Open Space

- 2 Redevelopment should provide a neighborhood green or urban plaza on each property.

Streets

- 3 Streetscape improvements along Key West Avenue, Shady Grove Road, and Research Blvd. will be established during the regulatory review process.

LEGEND

- Build-to-line
- Gas Pipeline Easement
- Neighborhood Green /Urban Plaza
- Protected Intersection

STREETS

- Town Center Blvd
- Downtown St
- Downtown Blvd

PROPERTIES

- 1 15200 Shady Grove Road
- 2 9401 Key West Avenue
- 3 Vacant Parcel- Mallory Square



Redevelopment should provide: (1) Vertical mix of uses. (2) (3) Safe and comfortable pedestrian and bicycle facilities. (5) Accessible open space.

Opportunity Sites



The Elms at PSTA

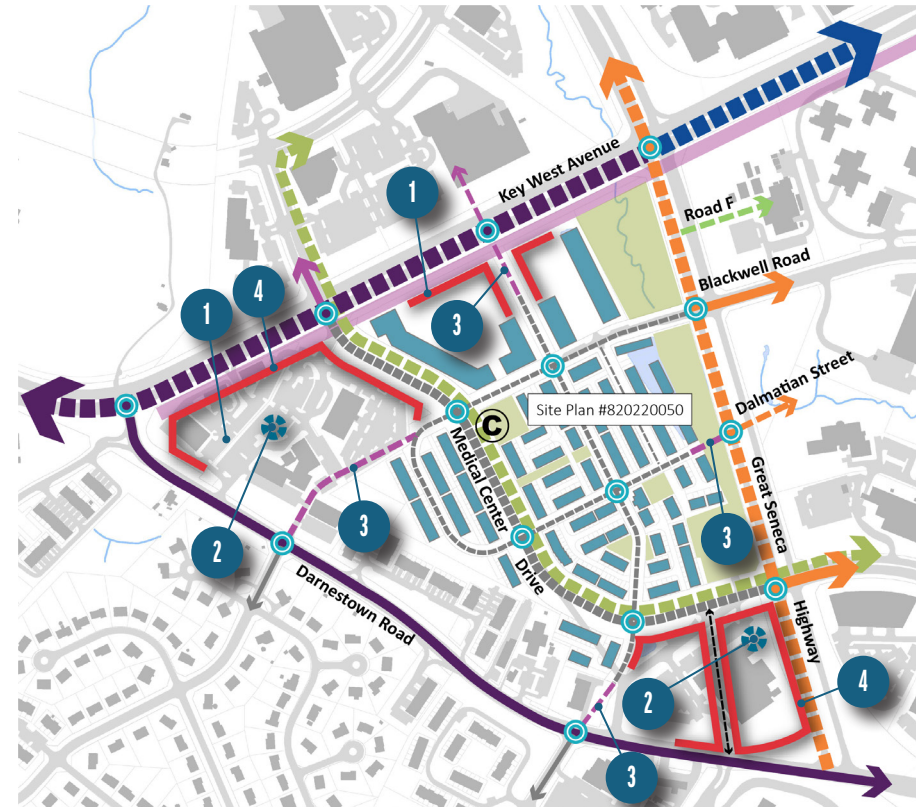
The former PSTA site is currently under construction to deliver a mix of dwelling units, a play field, trails and open space, various amenities, and a network of public streets.

Future development of properties at the corners of Key West Avenue and Great Seneca Highway with Darnestown Road would anchor the approved development with mixed uses, improved frontages, additional connections and public open space.



Redevelopment should deliver: (1) (2) Mix of residential types. (3) (4) Safe and comfortable pedestrian/bike areas. (5) (6) Accessible open space.

Map 12: The Elms at PSTA



Buildings

- 1 Infill or redevelopment at these locations should add frontages and streetscape improvements to Key West Avenue and Medical Center Drive.

Open Space

- 2 Provide neighborhood green or urban plaza at this location if redeveloped.

Streets

- 3 Future development should extend dead ends on approved local street grid to meet surrounding major roads and local streets connecting local streets.
- 4 Provide streetscape improvements along all priority building frontage areas.

LEGEND

- Build-to-line
- LSC Loop
- Approved Open Space
- Gas Pipeline Easement
- Protected Intersection
- Connector Stop

STREETS

- Existing Street
- Approved Street
- Potential Street
- Downtown Blvd
- Town Center Blvd
- Downtown St
- Town Center St

3.3 ENCLAVES

Londonderry / Hoyle's Addition

The Plan envisions this area as a residential neighborhood with local-serving retail, public open spaces, and a grid of streets as well as improved transit and safer connections to nearby destinations. Given the multiple ownerships on this block, separate owners might proceed on their own. During regulatory review planning staff will assess transitions between adjoining properties.

The area will continue to provide much-needed affordable housing and introduce market-rate housing options.

- Explore higher-density development at major roads, near the intersections of West Diamond Avenue with Perry Parkway and Muddy Branch Road, and at Muddy Branch Road and I-270.
- Consider an internal grid of streets lined with small blocks of attached single-family uses.
- Provide public open spaces suitable for the proposed redevelopment:
 - Neighborhood Greens within exclusively residential areas.
 - Urban Plazas to anchor potential storefronts at part of mixed-use development.
- Alternatives to mitigate noise concerns associated with adjacent I-270.



Existing garden apartments



Redevelopment should provide: (1) Mixed uses at prominent locations. (2) (3) Safe and comfortable pedestrian and bicycle facilities. (4) Interior single family attached units. (5) (6) Public open spaces appropriate for the each development type.

Map 13: Londonderry



Note: For descriptions of the elements illustrated on this map, see p.25.

LEGEND

- Build-to-line
- Potential Open Space
- ⊗ Neighborhood Green / Urban Plaza

STREETS

- ← Existing Street
- - - Potential Street
- - - Shared Residential Street
- ← Town Center Blvd
- ← Town Center St

Buildings

- 1 Locate street facing buildings along all new master planned and private streets.
- 2 Mixed-use development should anchor major road intersections, and contain potential lower-scaled townhome development.
- 3 Affordable housing tower and parking facilities will remain.

Open Space

- 4 Provide a network of smaller public open spaces anchored by residential development.
- 5 Provide public open space with mixed-use development, type to be determined during regulatory review.
- 6 Explore strategies to mitigate noise from I-270, including both development and green alternatives.
- 7 Coordinate with the State Highway Administration to explore alternatives to improve residual open areas between I-270 and future development.

Streets

- 8 Establish a compact network of Town Center and private or shared streets.
- 9 Master planned streets are illustrated to connect to existing intersections; final alignments will be established during the regulatory review process.

3.4 ADDITIONAL STRATEGIES

Campus Redevelopment

Goal: Transform older office parks and institutional campuses into complete communities through diversity of building types or mix of uses, by developing underutilized land and converting buildings within existing developed areas to create more sustainable, livable, and economically vibrant neighborhoods.

These efforts involve a blend of the following strategies:

- **Adaptive reuse:** Converting or redeveloping existing office buildings into residential units, hotels, or creative office spaces.
- **New infill construction:** Building new structures on unused parcels, surface parking lots, or green areas within the existing office park footprint. These can include new housing, retail spaces, public facilities, and amenities.
- **Mixed-use development:** Combining various uses (residential, commercial, retail, entertainment, and green space) to create a dynamic “live-work-play” environment.
- **Placemaking and amenities:** Designing common areas and green spaces to foster a sense of community and attract new residents and businesses.
- **Quality Open Space:** Public spaces should encourage collaboration, outdoor work, recreation, and community use. Central Plazas or Greens with seating, and greenways or multi-use trails that connect key destinations offer places for walking meetings and active transportation.
- **Transitions to adjacent neighborhoods:** Extending existing streets into the campus supports safe and direct movement for residents, students, and employees. Transition zones with compatible building heights and public spaces positioned along shared boundaries help maintain neighborhood character and improve accessibility.



Example of adaptive reuse of an existing brick barn into a community center.



Examples of interventions to transform existing campuses.

(1) Innovative seating addition to existing open space.

(2) Seating and amenities along campus walkways connecting to adjacent neighborhoods.

(3) The Crossings at Kansas University - Development along campus edge with amenities and residential options for adjacent communities, in support of KU Innovation Park.

Townhouse-Scale Infill Development

Goal: Convert mid/late-20th-century office parks into mixed, walkable townhouse-scale districts that retain useful elements such as existing vehicular connections and viable office buildings, retrofit obsolete components like unused surface parking and defunct structures, and develop a fine-grain block network supported by green spaces and complete streets.

The strategies below provide guidance for townhouse-scale infill development related to street and block design, incorporating diverse residential building types, integrated green infrastructure, high-quality public spaces, and phased implementation. These principles emphasize human-scale design, improved mobility options, context-appropriate transitions, and resilient infrastructure to support a cohesive, people-oriented infill community.

Design Strategies

1. Create walkable, human-scaled blocks and street networks

- Introduce short blocks, frequent intersections, and mid-block passages to support safe, comfortable pedestrian movements.
- Retrofit office-park drives into complete streets with appropriate lane widths, bikeways, sidewalks, and planting zones.
- Add new streets to break down large developable areas and provide inter-parcel connectivity, prioritizing streets recommended by the master plan.
- Recommended Block length: 400 to 600 ft on most streets.
- Recommended Block perimeter: 1,200 to 1,600 ft, max 1,800 ft on constrained edges.

2. Deliver diverse housing options to support multiple household types

- Use a variety of townhouse, stacked-unit, and small-scale multifamily types to meet varied incomes and life stages.
- Ensure building types fit appropriately along different street conditions and open-space edges with taller building types along higher classification roads and larger open spaces, and smaller building types along lower classification roads.
- Side elevations facing street frontages or open spaces should be considered high visibility elevations and include additional architectural treatment that is similar in details, and architectural elements as the front elevations.

3. Integrate green infrastructure as a foundational design element

- Combine stormwater features such as bioswales, tree trenches, rain gardens, and permeable surfaces with placemaking and shading functions.
- Achieve long-term ecological performance and resilience goals, including canopy coverage and on-site stormwater management.

4. Provide high-quality public spaces accessible to all residents

- Establish a hierarchy of neighborhood greens, pocket parks, linear greenways, and plazas.
- Locate smaller open spaces more internal to the site
- Provide useable open space for gathering and active/passive recreation that is not encumbered by stormwater management facilities or fire department access.
- Ensure every unit is within a two to three minute walk of a public open space.

5. Ensure context-sensitive transitions to retained office buildings

- Use compatible building types and landscape buffers to smooth height and massing transitions.
- Activate office edges with improved frontages and accessible open-space treatments.
- Where feasible, accommodate inter-parcel connectivity to allow pedestrian, bicycle, and vehicular circulation.

6. Support multimodal mobility and reduce reliance on single-occupancy vehicles

- Implement protected bikeways, neighborhood bikeways, traffic-calming strategies, and micromobility stations.
- Use TDM measures such as unbundled parking, shared parking, transit passes, and mobility hubs.

7. Allow flexible, phased implementation

- Deliver streets and signature open spaces early while accommodating interim parking and temporary public realm treatments.
- Transition to full buildout through structured parking, alley networks, and refined frontage conditions.



(1) Compact block size arrangement (2) Two-over-two unit example (3) Bioswale integrated into landscape buffer (4) Centralized common open space (5) Stacked flats as transitional units to existing commercial.

Town House Types

A) Rear-Loaded Townhouses (garage access via alley)

- Preferred townhouse typology for all street types;
- Present the front door and stoop as the primary element.
- Screen alley entrances with low walls, fences or landscape and provide landscaping within alleys.
- Recommended Setbacks:
 - Front: 6 to 12 ft with stoops, porches, or small forecourts.
- Recommended Width: 16 to 24 ft
- Recommended Height: Three to four stories
- Minimum 30% transparency on the ground-floor along fronting street.



Rear loaded, three stories unit.

B) Front-Loaded Townhouses (garage on street)

- Avoid if possible, use only on tertiary streets; prioritize access from alleys or mews elsewhere to maintain a pedestrian-first public realm.
- Where used, limit the presence of garages to 60% of the ground floor front façade.
- Provide individual entry garage doors recessed at least 18 inches from the main facade and provide a prominent stoop or porch with a lead walk.
- Pair pedestrian entryways to maximize space for street trees.
- Recommended Setbacks:
 - Front: 8 to 10 ft (stoop or small front garden).
- Recommended width: 22 to 28 ft
- Recommended Height: Three to Four stories



Front loaded, three stories unit.

C) Two-over-Two Stacked Townhomes (duplex stacks, two floors each)

- Maintain townhouse scale and building rhythm along the streetscape.
- Locate buildings along primary streets and front onto larger open spaces.
- Avoid external stairs and ensure ground floors contain livable space not encumbered by circulation and parking.
- Recommended Width: 22 to 28 ft
- Recommended Setbacks:
 - Front: 8 to 15 ft; stoops/porches strongly encouraged.
- Recommended Height: 4 stories
- Garage access via alley or interior court; screened and landscaped



Rear loaded, two-over-two unit.

D) Stacked Flats (Three to four stories, walk-up or elevator)

- Locate buildings to frame parks and terminate vistas; add ground floor flex space for live-work opportunities near offices.
- Parking: Surface at interior court (for interim or early phases) transitioning to wrapped or below-grade where feasible.
- Recommended Width: 60 to 100 ft
- Recommended Height: Three to five stories
- Recommended Setbacks:
 - Front 10 to 15 ft; side 5 to 10 ft; rear 10 to 15 ft or to alley.
- Provide stoop entries for ground floor units.



Stacked flats, three stories.

E) Back-to-Back Townhouses (no rear yard; service via alley or mews)

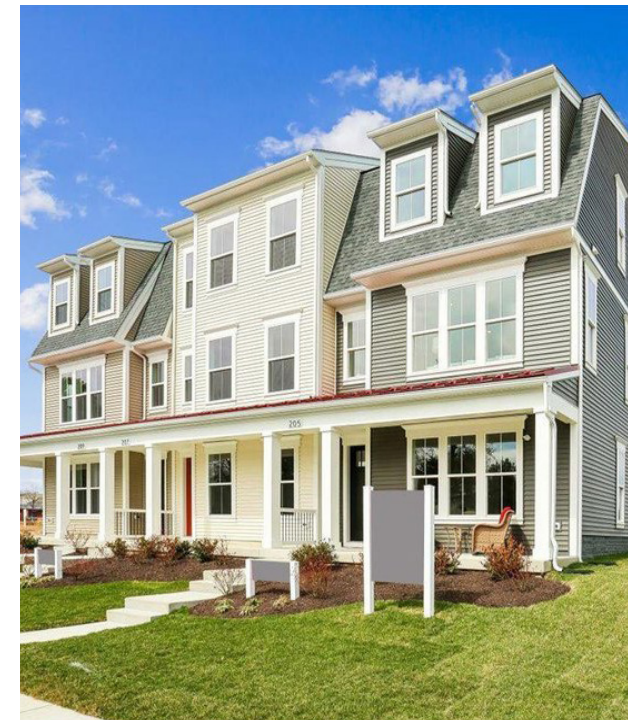
- Recommended for shallow blocks or where depth is constrained but walkability is paramount.
- Ensure alleys are designed as hardscaped mews with high quality paving and landscaping.
- Ensure both façades are designed as “fronts”.
- Recommended width per two unit module: 20 to 28 ft
- Recommended Setbacks:
 - Front: 8 to 15 ft (stoop or small front garden).
- Recommended Height: Three to four stories
- Parking: Front loaded or consolidated in structured parking or limited alley garages; avoid double garage doors on mews.



Front loaded, Back-to-back unit.

F) Triplexes (Three units per building)

- Useful as transition buildings near retained offices or along quieter residential edges.
- Recommended Width per Unit: 28 to 40 ft
- Recommended Height: Three stories .
- Recommended Setbacks: Front 10 to 15 ft with porch and garden; sides 5 to 8 ft; rear 10 to 15 ft.



Rear loaded, Triplex unit.



CHAPTER 4: PLACEMAKING

4.1 PLACEMAKING GUIDANCE

Master plans have a long-range vision for public and private improvements, typically spanning the next 20 to 25 years. In the short-term, community stakeholders can implement temporary solutions to improve the livability and enjoyment of the area through creative placemaking.

The guidelines provide examples for private landowners, community members, artists, and public agencies to imagine creative ways to visualize master plan recommendations for the public realm and to enhance underutilized spaces, existing streets and other public open areas. The strategies described are particularly useful in the interim, before larger development projects or capital improvement projects are completed.

Interim improvements should focus on innovation and technology to reflect the industries and businesses that currently operate in the LSC and to attract similar companies and startups in the future.

Potential Locations

Streets: Consider temporary means to partially showcase the transformations recommended by the master plan for major roads through the area, which will convert medians into parklets and sidewalks into truly public spaces where users can play, gather, and relax. Active streets can become destinations, enhance foot traffic to local businesses, and provide additional outdoor spaces for residents of all ages.

Parking Lots and Underutilized Spaces: Explore creating pop-up public spaces at strategic locations for interim, seasonal, or weekend use by adding food trucks, seating, lighting, and color to make these areas inviting and usable.

Existing Parks and Open Spaces: Implement creative limited interventions such as urban beaches, colorful lighting, and seating alternatives to enhance existing parks and privately owned public spaces.

For additional information visit: <https://montgomeryplanning.org/planning/placemaking/>

Event Examples



(1) (2) Wheels in Wheaton Placemaking, 2022 (3) Randolph Hills Placemaking, 2018 (4) Burtonsville Placemaking, 2019



CONCLUSION

The planning process is structured in a hierarchy of decisions:

- Master and sector plan recommendations provide the vision for a specific area.
- Zoning Ordinance and other codes establish standards and regulations for development.
- Design Guidelines provide inspiration and suggestions to fulfill the plan's vision, and serve as a problem-solving tool.

The precedent images and diagrams in these guidelines help visualize the recommendations of the 2024 *Great Seneca Plan*, and offer ideas about best practices in building and site design. The diagrams in these guidelines also illustrate how Zoning Code requirements can be prioritized, in the context of individual opportunity sites.

The illustrative layouts included in this document assume consolidated development of property clusters that, in many cases, consist of multiple ownerships. These diagrams are intended to convey the Plan's holistic vision for the area. Should an individual property within a cluster with multiple owners were to redevelop separately, the development review process should consider transitions, connections, and other strategies to achieve incremental continuity with adjoining properties that might redevelop in the future.

The guidelines are developed by planning staff working with property owners. They are approved by the Planning Board for use by planning staff in developing and evaluating proposed building projects and other applications.

The guidelines are not regulations that mandate specific forms and locations for buildings and open space. They illustrate how plan recommendations and principles might be met, and encourage applicants to propose designs that implement the Plan's vision and create an attractive and successful public realm.

RESOURCES

Glossary of Planning Terms:

<https://montgomeryplanning.org/about-planning/mission/glossary/>

Plans for Reference:

The Great Seneca Plan

<https://montgomeryplanning.org/blog-design/wp-content/uploads/2025/09/Great-Seneca-Plan-Phase-2-Final-ONLINE.pdf>

Complete Streets Design Guide

<https://montgomeryplanning.org/planning/transportation/complete-streets/>

LSC Loop Trail Design Guidelines Draft

https://www.montgomeryplanning.org/community/lsc_loop/index.shtm

Montgomery Parks Plans:

2022 Parks Recreation and Open Space Plan

<https://montgomeryparks.org/projects/directory/powered-by-parks-2022-park-recreation-and-open-space-plan/park-planning/>

Energized Public Spaces Design Guidelines

<https://montgomeryparks.org/projects/directory/energized-public-spaces-design-guidelines/>

Other Resources:

The Global Institute on Innovation Districts

<https://giid.org/articles/what-are-innovation-districts/>

Biophilic Design Institute

<https://biophilicdesigninstitute.com/biophilic-design/>

ReinventingParking.org - Park-Once-and-Walk District Design Strategies

<https://www.reinventingparking.org/2023/02/walkable-parking-in-city-cores.html>



The Great Seneca Plan

DESIGN GUIDELINES