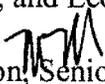


PHED Committee #1
April 5, 2010

MEMORANDUM

April 1, 2010

TO: Planning, Housing, and Economic Development (PHED) Committee

FROM: Marlene Michaelson,  Senior Legislative Analyst

SUBJECT: Gaithersburg West Master Plan

This is the Planning, Housing, and Economic Development (PHED) Committee's seventh worksession on the Gaithersburg West Master Plan. This worksession will focus on any issue the Committee has not yet discussed (sustainability, the open space plan, public facilities, and amenities) and follow-up issues from previous worksessions.

Committee Members should bring a copy of the Sector Plan to the meeting for reference.

Sustainability

The sustainability section of the Master Plan appears on page 24. As Staff noted in the last worksession, it is more limited in scope and depth than similar sections in most master plans. Staff recommended (and the Committee concurred) that the Planning Department be asked to revise and expand upon this section. Attached on © 1 to 4 is a memorandum from Planning Department Staff related to environmental issues, followed by a new section on sustainability that they recommend replace the text on page 24 (© 5-10). (*Note that these have been revised since the last worksession and differ from the changes attached to the last packet.*). Staff believes that this new language is a significant improvement over what was included in the Master Plan and recommends the Committee's support.

Parks and Open Space Plan

The Plan's open space recommendations are described on pages 23 and 26 to 27. The Committee agreed with the Staff recommendation to have this section of the Sector Plan expanded. The Committee also asked that the Department of Parks assess whether there is sufficient parkland in the planning area and what could be done to better describe the functional goals for these open spaces and ensure that they will be an asset for existing as well as new residents. A draft of an expanded section on parks and open spaces appears on © 11 to 13 and additional comments on parks and open space are also in the descriptions of the specific districts (e.g. see new description of open space system for Belward Farm on © 17). **Staff believes that Planning Department staff addressed many of Staff's concerns, and this language provides a clearer vision of what is intended for the planning area.** At the PHED meeting, Department of Parks staff will address whether the planning area has a sufficient amount of parkland.

Community Facilities and Amenities

Community facilities and amenities are discussed on pages 25 to 27 of the Plan. The Master Plan addresses the potential need for a new school and fire station and describes the planned community recreation center on Travilah Road. The Master Plan indicates that "a library specializing in science and medical research may be desirable" and also indicates that it could be publicly accessible and funded through private sector contributions to an amenity fund. This could be a new model for a public-private partnership for the construction and/or operation of a library. Staff believes that the Sector Plan should identify potential locations for the library, so that the Planning Department is reminded to consider this recommendation as part of the development process.

The Plan also describes the recommended multi-use path loop and stream buffers and open spaces. Although it appears that the Master Plan intends to designate these facilities (and the proposed library) as plan amenities, the Life Science Center (LSC) zone, which is recommended for much of the planning area, does not require the provision of amenities. (Staff questions whether such a requirement should be added to the zone as it transitions from an exclusively commercial zone to a mixed-use zone that will allow residential development.) Since the CR zone does have an amenity component (and in case the LSC zone is amended to require amenities), Staff believes this language could be strengthened so that it is clear what amenities are recommended (e.g., park facilities, landscaping, etc.).

FOLLOW-UP ISSUES

Staging

The Committee previously reviewed that staging plan and agreed with the Council Staff recommendation to not allow Stage 3 to proceed until the Corridor Cities Transitway (CCT) was **completed** (instead of the Master Plan recommendation that it be under construction). Staff recommends a refinement of this to indicate that Stage 3 could begin once the CCT is **under construction, provided that no use and occupancy permit could be issued until the CCT was completed and operational.** This would give property owners the ability to obtain regulatory

approvals and even to begin construction, but new residents and employees could not occupy these buildings (and impact traffic) until the CCT is operational.

At the last meeting the Committee concurred with the Staff recommendation to include residential development in the staging plan. This removes the Master Plan rationale for excluding certain districts (LSC West and LSC South) from the staging plan and Staff recommends that staging be applied to the entire LSC portion of the planning area. Applying staging to this larger area will also make it far easier to understand the numerical limitations in the staging plan because they will relate more clearly to the total development capacity.¹ Existing and approved development is not subject to staging and changing the area covered by staging means that the existing and approved amounts shown on page 67 of the Master Plan would increase.

Zoning for C-4 Property at Corner of 28 and Travilah Road

Just before the Committee's last worksession the Council received correspondence requesting that the C-4 property at the southeast corner of the intersection of Darnestown Road (MD 28) and Travilah road (which currently has a strip shopping center with a Walgreen's, Burger King and other assorted retail and office uses) be rezoned from C-4 to the Commercial-Residential (CR) zone. Since neither the Planning Department staff nor the community had the opportunity to review this request, the Committee deferred a decision on this.

The property is south of LSC west, which is recommended for CR zoning and although the property owner has no near term plans to redevelop, they would like the option of future mixed-use development and have requested a CR 1.0: C 1.0, R 0.5, H 80-100 for the site. (The Master Plan recommends rezoning the Public Service Training Academy (PSTA) to the north CR 1.0: C 0.5, R 1.0, H 150 and confirms the Mixed-Use Neighborhood Zone (MXN) on most of the remaining area in LSC South.) The Planning Department supports the request for CR zoning but recommends limiting the density to CR 0.75: C 0.5, R 0.75, H 80. This is comparable to the density under the existing zoning, but allows a housing option. Staff supports this recommendation

Zoning for Rickman Property

The Master Plan recommends retaining the Research and Development (R&D) zone on the undeveloped 13-acre Rickman property and providing an option for PD22 zoning. (The general location of this property is shown on page 14 of the Master Plan, and Staff has asked Planning Department Staff to bring a better map to the meeting.) Staff had recommended that the Planning Department consider whether this was the best zoning option for this property, given its environmental sensitivities (including that a portion is in a Special Protection Area (SPA)). Staff also suggested that the Master Plan provide guidance related to environmental protection.

The attached language on © 19 and 20 provides new text describing the environmental features on this property and provides some guidance as to how to minimize impacts on the environment. The

¹ Pages 66 and 67 of the Plan indicate that there will be 17.7 million square feet of commercial development at the end of Stage 4. This does not match the 20 million square feet of commercial development allowed by the Plan because the staging excludes two LSC districts. Once the entire LSC area is included, the amount of development allowed at the end of Stage 4 will be the same as the total amount of development allowed by the Plan.

PD zone, with its requirement for 50% open space and flexibility to increase heights², clearly provides a better opportunity to minimize impervious surface than the R&D, which requires only 30% open space and limits heights to 50 feet (under standard method). While Staff supports the PD recommendation, Staff had recommended exploring an option for a floating commercial or mixed-use zone that would provide a better opportunity for minimizing imperviousness. The only zone that appeared to meet this objective is the Mixed-Use Planned Development (MXPDP) zone; however, it requires a minimum of 20 acres and the property is only 13 acres. Therefore Staff supports the Master Plan recommended zoning, but continues to recommend that the Master Plan be amended to indicate that the property would only be eligible for development under the PD optional method (which increases density from 0.3 FAR to 0.5 FAR) if it does not have any negative impact on the environment (e.g., no increase in impervious surfaces).

New Master Plan Names

Several Councilmembers have indicated their desire to change the name of the Gaithersburg West Master Plan. The following are options suggested by Councilmembers and Staff:

- Life Sciences Center West
- Life Sciences Village West
- Western Life Sciences Center Village
- Great Seneca Science Center
- Great Seneca Corridor
- R&D Village and Vicinity
- Mid-Seneca
- Shady Grove West

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² Heights are limited by the distance from the nearest single family detached community. If the PD development is 100 feet away, it can be 100 feet high.



March 31, 2010

MEMORANDUM

TO: Marlene Michaelson
County Council Staff

FROM: Nancy Sturgeon, Vision Division
Mary Dolan, Green Division
Steve Findley, Green Division
Montgomery County Planning Department

SUBJECT: Sustainability in Gaithersburg West Master Plan

This memo is in response to your request to explain the sustainable elements of the Gaithersburg West Master Plan, and to provide additional information for the Plan document (attached).

A Sustainable Master Plan

The compact, walkable, transit-served community proposed for **the Plan area accommodates new homes and employment in a sustainable way.**

Redevelopment of the suburban pattern of sprawling buildings with large surface parking lots will give opportunities to accommodate significant development without further disturbance of natural resources, and in some instances, improve conditions. In the case of new development on vacant properties, impacts will be minimized and environmental enhancements incorporated where appropriate.

The General Plan focuses development around transportation corridors and in an urban ring close to Washington, D.C. The remainder of the County is to be protected in rural and suburban wedges and an Agriculture and Open Space area, primarily in the northern and western parts of the County. So far, the County has been very successful in protecting these large green expanses that provide many environmental benefits to the County and to the Washington D.C. region.

The environmental recommendations for the Master Plan are designed to accommodate the projected growth in the most environmentally sustainable way. The Master Plan identifies likely environmental impacts and **makes**



recommendations for avoiding and minimizing impacts, and enhancing environmental resources as development plans are formulated. These recommendations are intended to make certain that development occurs in a way that creates a community that is **more environmentally sustainable in the future**. While certain environmental impacts, such as carbon emissions, will be higher for the Plan area than for the surrounding neighborhoods, **per capita emissions should be lower**, resulting in reduced emissions Countywide. **Stormwater runoff will likely improve** as Environmental Site Design is incorporated into redeveloped sites. While many properties have stormwater management, most of the facilities were built more than 20 years ago with less stringent standards for pollutant removal than will be required under new regulations.

Urban/Rural Comparisons

In the Plan area, Montgomery County is making its General Plan a reality. The draft Master Plan proposes to accommodate a growing population in an area that is already largely developed, adjacent to existing transportation corridors and slated for a significant new public transit system. Instead of opening the rural and agricultural areas of the County to new low density development, existing buildings and surface parking lots are to be redeveloped, saving hundreds of acres of fields and forests, avoiding habitat loss and degradation, and reducing impacts associated with new roads, sewer and water lines, and other infrastructure needed to support development. Redevelopment makes more efficient use of land that has already been developed so that other, undisturbed portions of the County can be spared. The fact remains that there is no other area of the County with better projected transit access that can accommodate this amount of additional development. We will need this amount of area plus that programmed in recent plans for Twinbrook, White Flint, and Germantown to reduce pressure on the Agricultural Reserve in the future.

If the same amount of jobs and homes were accommodated in low density greenfield development elsewhere in the County, it is likely that much more imperviousness would be created. For example, approximately 100 acres of new imperviousness in the Master Plan area would be created for up to the 4500 homes and 8.1 million square feet of commercial (the difference between the 1990 Plan and the proposed Plan). Just taking the residential component alone, an equal amount of homes would consume much more land and create much more imperviousness. The commercial uses would add considerably more.

	Homes	Total Acres (min.)	Impervious Acres(est.)
½ acre lots	4500	2250	550
6000 sq ft lots	4500	620	160

The Belward Site

The JHU Belward site exhibits the most difference when comparing the 1990 Plan (and the 1996 approved preliminary plan) and the new Master Plan. This property, encompassing about 107 acres, is “green field” development, as opposed to the redevelopment proposed in most of the rest of the Plan area. Development of this property will have the greatest environmental impacts, particularly in terms of adding impervious surfaces and reducing infiltration and groundwater recharge opportunities. It also has the greatest potential for avoiding, minimizing and mitigating impacts, because it contains areas of forest and vegetated stream buffers, and has not already had the soil layer sealed off by pavement.

The JHU Belward site already has an approved site plan for development of the property. This plan was approved in 1996, and features a traditional “office park” pattern typical of existing development in the Life Sciences Center that spreads impacts out across the site and creates large areas of surface parking. A new concept plan for Belward uses a compact, walkable, transit-served campus. The table below indicates the differences between development under the approved site plan and development projected in the new Master Plan.

Element	Approved Site Plan	Proposed Development
Parking footprint	33 acres	6 acres
Percent Imperviousness	72%	54%
Green Space	18 acres	34 acres
Protected Stream Buffers	12 acres	15 acres
Percent Green space	28%	46%

The new concept represents a substantial improvement over the existing plan when considering environmental impacts.

Subwatershed Analysis

If the impact by subwatershed is considered, **there is almost no difference in imperviousness or forest cover between the draft Master Plan and the 1990 Plan**, while the new Master Plan accommodates significantly more homes and jobs. This is because while the Belward development has much less imperviousness in the proposed concept plan, the PSTA has considerably more imperviousness when redeveloped. Both facilities are split between two watersheds (MBMB207 and MBMB305).

Imperviousness and Forest Cover in Key Subwatersheds

Subwater-shed Station #	Current Imper-viousness	1990 Plan Imper-viousness	New Master Plan Projected Imper-viousness	Existing Forest Cover	1990 Plan Forest Cover	New Master Plan Forest Cover	CSPS Water Quality Rating
MBMB207	32.0%	46.3%	46.5%	9%	9.8%	10%	Fair
MBMB305	31.5%	35.6%	35.3%	7%	6.9%	6.8%	Fair

Conclusions

The proposed Master Plan would reduce the per capita rate of carbon emissions and other air pollutants, create about the same amount of imperviousness as the 1990 Plan, improve stormwater management, and protect the rural areas of the County. It will create a walkable, transit-oriented community and greatly expand the jobs and housing opportunities for the county's residents.

Attachment: Suggested replacement language for Master plan on pages 24-25 starting with Sustainability

Sustainability

Sustainability is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. A sustainable community integrates economic viability, environmentally conscious design, social equity and renewable energy sources. The compact, walkable and green community envisioned for the plan area integrates many aspects of sustainability. It accommodates new residents and businesses while reducing land consumption and vehicle miles travelled, thereby reducing the carbon footprint from new development in the County.

Urban development patterns served by transit can reduce dependence on the automobile. Outside of the Belward site, most new development will take place over existing surface parking lots. An expanded street grid with adequate sidewalks and street trees along with the LSC Loop will encourage people to walk or bicycle to local services or destinations. Energy conservation, onsite energy generation, or renewable energy sources will reduce the costs of energy transmission and the carbon footprint of the new development. Energy efficient building design will reduce energy costs for building materials and energy usage. On-site stormwater management improves water quality and quantity. Street trees add to the tree canopy and reduce the heat island effect. Mixed uses put services in easy reach of residents. New residential development will provide more affordable housing and expand opportunities for economic diversity located near transit and services.

Sustainable development first preserves existing resources and then improves environmental conditions.

Resource Protection and Preservation

This Plan also recommends ways to restore environmental functions in the plan area as it redevelops, including: water quality protection (intercepting, detaining, evaporating, transpiring, and filtering precipitation and infiltrating it into ground water tables, preventing erosion and sedimentation, controlling flooding), air quality protection (filtering pollutants from air, producing oxygen), climate protection (sequestering and storing carbon, reducing urban heat island effect), protection of biological diversity (provision of habitat), and health benefits (clean air and water, recreational benefits, mental health benefits). Redevelopment of already disturbed areas will avoid losses of natural resources in the outer portions of the County. To preserve and enhance natural resources and their associated functions in the Life Sciences Center, this Plan:

- Creates a local street network that avoids impact to natural resource areas as much as possible (see page 43).
- Recommends that facility plans for any new roads minimize impacts to existing resources.
- Recommends creation of the Life Sciences Center Loop (see p.25-26). Existing natural resource areas are preserved through the Planning Board's Environmental Guidelines and connected by the LSC Loop.
- Where possible, use required forest and tree planting to enhance and expand existing resources.

Water Quality

Wherever development occurs, water quality impacts result primarily from the creation of impervious surfaces that seal off the soil layer and remove forests and tree canopy. Increases in imperviousness and decreases in forest cover have been associated with declines in water quality. Pollution from vehicles and road salts accumulates on roads and parking lots, and is washed off and carried into nearby streams in rain and snow events. In summer, rain water is heated on contact with unshaded impervious surfaces, creating temperature spikes in aquatic systems that can be damaging to aquatic organisms. Rainfall and snowmelt runs off impervious surfaces quickly, creating erosive flows that damage streams and carry harmful sediments into streams, rivers, and the Chesapeake Bay. Infiltration is the most difficult of the environmental functions to restore, as it requires reconnecting runoff with the soil. Approaches for improving water quality in urbanizing areas should recognize opportunities presented by both horizontal and vertical surfaces at various levels throughout the development.

Many of the techniques recommended in this Plan are included in the Environmental Site Design (ESD) stormwater treatment approaches now required by State and local laws and regulations. In addition, the county will be undertaking retrofit programs consistent with the requirements of the state stormwater permit. The result of this combination of regulation, county retrofit programs and master plan recommendations will be the restoration of natural resources and environmental functions that can be incorporated into the concentrated development pattern envisioned for this area.

To protect water quality, this Plan:

- Recommends site design and construction options that minimize imperviousness. These options include:
 - Compact development
 - Parking options such as reduced parking requirements and the use of structured parking and/or shared parking facilities (see p. 44).
- Recommends the use of bioswales, planter beds, rain gardens, pervious pavement, the incorporation of non-paved areas into open spaces, and similar techniques included in Environmental Site Design. Techniques that increase soil volume and porosity under paved areas are recommended to enhance infiltration opportunities.
- Recommends the use of vegetated roofs and walls.
- Recommends increasing tree canopy. Specific tree canopy goals are
 - Predominantly commercial mixed-use areas: 15 - 20 % minimum canopy coverage
 - Predominantly residential mixed-use areas: 20-25 % minimum canopy coverage
 - The Belward Campus, with its specialized institutional use and protection of existing natural resources, should have a minimum canopy coverage of 30%.

These goals should be met by combining forest conservation requirements with street tree plantings and landscaping plantings (see p. 74). Public and private open space areas should

strive for a minimum of 25% canopy coverage. Surface parking areas should meet or exceed 30% canopy coverage.

- Recommends incorporating tree canopy and infiltration techniques into portions of the LSC Loop that connect existing natural areas.
- Recommends incorporating tree canopy and infiltration techniques into other open spaces wherever feasible.
- Recommends landscaping with plants that do not require extensive watering or fertilization. Native plants that are adapted to grow in our area are preferred.
- Recommends the use of low-flow plumbing fixtures in buildings.
- Promotes using techniques that capture and re-use stormwater and/or graywater (graywater is water from sinks, bathtubs and showers that can be safely used for watering plants or flushing toilets). This may include the use of rain barrels and cisterns. These uses must be consistent with County health regulations.

Piney Branch SPA

Portions of the Life Sciences Center area are included in the Piney Branch Special Protection Area for water quality and contain remnants of the rare habitat provided by the serpentinite rocks that underlie parts of this area. Special Protection Areas require that a water quality plan be prepared detailing how impervious surfaces will be minimized and how advanced and redundant stormwater treatment measures will be achieved. Most of the Special Protection Area is in the LSC South District, where this Plan recommends that development be restricted to existing and approved development, with the exception of the Rickman Property. Development on this property should minimize new impervious surfaces especially on that portion of the property that drains to the Special Protection Area. A small portion of the SPA extends north of Darnestown Road into the southern portion of the LSC Central District. Most of this area is already developed.

- Future redevelopment in this area should minimize imperviousness in their site designs, particularly in the Special Protection Area (see p. 41).
- Any development that involves or is adjacent to serpentinite habitat should preserve this area and provide additional buffering wherever possible.

Air Quality

Most impacts to air quality result from the operation of motorized vehicles and regional energy production involving the combustion of fossil fuels. Impacts include the emissions of precursors of ground-level ozone, volatile organic compounds, carbon monoxide, oxides of nitrogen and sulfur, and fine particulates. Amelioration of air quality impacts involves restoring air filtering and oxygen-producing functions, reducing vehicle miles travelled, and reducing use of energy produced by burning fossil fuels.

To restore air filtering and oxygen-producing functions, this Plan:

- Recommends increasing vegetation through the use of planter beds, bioswales and rain gardens, landscaping, street trees, and vegetated roofs and walls to the maximum extent feasible through aggressive application of Environmental Site Design.

To reduce vehicle miles travelled, this Plan:

- Recommends creating compact, mixed-use development that encourages and facilitates non-motorized travel and reduces travel distances.
- Recommends providing alternatives to automobile travel, including:
 - Public transit in the form of the CCT and local bus service
 - Incorporating trails into the LSC Loop. Trails in regulated areas such as stream buffers and forest conservation easements should be natural surface; trails outside of environmentally regulated areas may be hard-surfaced to facilitate travel by bicycle (see p. 79).
 - Incorporate other pedestrian and bicycle trails throughout the Life Sciences Center, and make connections to other Countywide and local jurisdiction trail systems (see p. 79).
 - Make the existing area more walkable by improving road crossings (see p. 74).
- Encourages other measures, such as the provision of bicycle parking facilities, to promote and facilitate non-motorized travel.

Climate Protection

Carbon dioxide and other greenhouse gasses are released into the atmosphere by combustion of fossil fuels to power motorized vehicles and to provide power for lighting, heating and cooling buildings and powering electronics and appliances, and by deforestation. Summertime energy use is driven higher by urban heat island effects from radiant heating of hard surfaces. Approaches to mitigating climate impacts focus on reducing energy consumption, increasing use of renewable energy, restoring carbon sequestration and storage functions, and reducing urban heat island effect.

The carbon footprint analysis contained in the Appendix to this Plan shows that, even if we cannot account for potential improvements to building and vehicle technology or behavioral changes to reduce energy consumption, per capita carbon dioxide emissions will be significantly less with compact, transit served development than would be the case if the same number of new homes and jobs were built on vacant land in other parts of the county.

Taken in isolation, the carbon footprint of new development in the Plan area will be greater than would occur under the 1990 plan; however, the increase in the carbon footprint for the entire County will be less under this Plan. The compact, walkable, transit served community will enable people and employers to make even greater reductions in the carbon footprint. The following recommendations are aimed at reducing the carbon footprint through reduced energy consumption, promotion of renewable energy generation, increased carbon sequestration and reduced urban heat island effect.

To reduce carbon footprint, this Plan:

- Recommends development that is compact, features a mixture of land uses, is walkable and served by public transit to make efficient use of land and resources, to reduce vehicle miles travelled and facilitate non-motorized travel.
- Creates opportunities for new development and redevelopment that take advantage of existing infrastructure and adaptive re-use of existing structures where feasible.

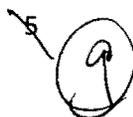
- Recommends that development meeting LEED or equivalent certification of any level obtain as many points as possible from approaches that reduce carbon emissions, including:
 - Site and building design and orientation that takes advantage of passive solar heating and lighting opportunities, maximizes potential for use of renewable solar energy systems, and permits passive cooling through proper shading and ventilation.
 - A commitment to reduce energy and water consumption
 - A commitment to use recycled building materials, locally produced materials, and local labor
 - A commitment to use building deconstruction techniques to facilitate re-use and/or recycling of building materials
 - A commitment that new buildings meet the minimum energy efficiency standards of 17.5% below the calculated baseline performance or meet the appropriate ASHRAE advanced energy design guide. Renovated buildings should commit to meet a 10.5% energy efficiency standard below the calculated baseline performance or meet the appropriate ASHRAE advanced energy design guide.
 - Incorporates renewable energy systems to supply a portion of a building's energy needs, where feasible. Such systems may include:
 - Solar power
 - Wind power
 - Use of geothermal heating and cooling systems
- Recommends maximizing tree canopy coverage. (See goals for tree canopy coverage in the water quality section).
- Recommends the use of green roofs and walls.
- Recommends the use of light-reflecting roof surfaces where green roofs cannot be used.
- Recommends increasing vegetation throughout the Life Sciences Center. Approaches include:
 - Targeting unforested portions of regulated areas for reforestation.
 - Incorporating street trees and landscaping trees throughout the Life Sciences Center.
 - Use of vegetated roofs and walls.
 - Use of planter beds, bioswales and rain gardens.
 - Incorporating vegetation into hardscaped open space areas.

Protection of Biological Diversity

Protection of biological diversity focuses on preserving existing habitat, and on restoring habitat where feasible. Biological diversity is maintained when habitat is protected and invasive species are controlled. Control of invasive species and reducing wildlife overpopulations are operational issues not appropriate to address in a master plan. While an urban environment cannot typically support highly diverse plant and wildlife populations, much can be done to improve conditions for native plants and animals.

To protect biological diversity, the Plan:

- Recommends preservation of existing natural areas, including the forest at the corner of Key West Avenue and Great Seneca Highway.



- Recommends the use of native plants and trees in landscaping and street tree planting to the maximum extent possible.
- Recommends the use of plants that serve as hosts for butterflies and other pollinator insect species.
- Recommends preservation of the 10-acre forested tract west of the power line and north of Game Preserve Road on the McGown property.
- Recommends preservation and additional buffering of the endangered *Krigia* dandelion population.

Health and Wellness

Health and wellness are promoted by providing an environment with clean air and water, by providing opportunities to exercise and recreate, and by establishing an environment that helps reduce stress. The recommendations detailed in the above sections will all help contribute to health and wellness.

In addition, this plan:

- Encourages that walkways and bicycle trails be safe and attractive to encourage walking, jogging and biking.
- Recommends that public open spaces be attractively designed destinations within the community to draw in pedestrians and cyclists.
- Encourages using some open spaces and on green roofs for use as community gardens to promote the consumption of locally-grown seasonal fruits and vegetables.
- Creates the 3.5-mile LSC Loop path which incorporates natural features, and provides non-motorized connectivity for the districts and destinations throughout the Life Sciences Center.

Insert on page 51:

The McGown property occupies about 70 mostly wooded acres near Seneca Creek State Park. The topography here includes some significant steep slope areas. Large scale development in this area will have the high potential for significant negative impacts to stream conditions unless the development is carefully designed to maintain the natural topography, and the infiltration and runoff rate of the existing landscape.

The Plan recommends that ESD techniques be employed to minimize any negative water quality impacts, but negative impacts will occur. The degree of recovery of the stream will depend on the extent to which ESD design is successfully applied to the area. Tributary streams draining the northern and southern portions of the McGown property and streams south of Great Seneca Highway east of the Seneca creek mainstem in the Quince orchard area are among those identified as priorities for stream restoration in the Great Seneca and Muddy Branch Watershed Study.

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Urban Form and Open Spaces

The LSC districts will be connected through a refined street network, transit, and trails. The highest density and building height will be concentrated at the 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.

The streets, buildings, and open spaces will create a physical environment that supports the research community and enhances opportunities for people to interact. Design guidelines for the LSC, in a separate document, 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.

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

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Public Open Spaces

A comprehensive system of public open spaces for collaboration, recreation, and other community activities 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

Page 25

Community Facilities and Amenities, Open Spaces, and Connectivity

Community facilities, services, and amenities contribute to making great places to live, work, and play. The LSC's proposed redevelopment offers an opportunity to enhance public facilities, amenities, and recreational options. An interconnected pedestrian and bike system will link 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 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. **Where possible, connections to existing neighborhoods surrounding the LSC should be created or enhanced.**

This Plan provides a site for a future elementary school in the LSC West District, should it be needed to accommodate students that could be generated from build-out of the potential residential densities. In addition, a future high school site has been reserved on the Crown Farm in the City of Gaithersburg.

A fire station is needed in this area and the northwest corner of Shady Grove Road and Darnestown Road is under consideration.



A new community center, the North Potomac Recreation Center, is planned on Travilah Road adjacent to Big Pines Local Park, as recommended in the 2002 *Potomac Subregion Master Plan*.

As the LSC grows into a major hub for life sciences research and development, a library specializing in science and medical research may be desirable. A high technology library could provide an inspiring environment for innovation and entrepreneurship, a place where students of all ages can rub shoulders with the industry's best minds. A publically accessible library could be funded through private sector development contributions to an amenity fund. The Plan recommends Belward or the JHU-MCC site in LSC Central for a specialized library.

Open Spaces

Thriving places rely on a high quality public realm. Parks and open spaces offer community gathering places, foster a sense of place and civic pride, and encourage environmental stewardship; essential components of community life. The best communities incorporate substantial green elements and open spaces that provide opportunities for recreation, outdoor socializing, collaborating, and connecting to nature. This Plan recommends that parks, publically accessible open spaces, civic gathering places, and trails be designed as part of a comprehensive system that contributes to a sustainable community. To achieve this goal, an interconnected pedestrian and bike path system should link new and existing neighborhoods to parks and other destinations.

Additional parks and open spaces (described more fully in each District) will be created to provide recreational opportunities that support and enhance the vision of the LSC. The future open space system will support a vibrant and sustainable work life community by creating open spaces that will be easily accessible by walking or transit and will provide a range of experiences for a variety of people.

This Plan recommends a series of open spaces provided through a combination of public and private efforts. Both residential and commercial development projects should provide recreational facilities, open spaces, and trail connections that shape the public realm, help implement the Plan recommendations, and serve existing and future employees and residents.

The open space system will include:

- **An extensive open space network on the Belward property with a variety of passive, active, and cultural experiences.**
- **Completion of the Muddy Branch Trail Corridor along the western edge of the Belward property.**
- **Civic greens at each CCT station.**
- **A shared park/school site in LSC West as well as a public civic green**
- **Development of Traville Local Park in LSC South**
- **Green corridors between and through major blocks linked by the LSC Loop to connect destinations and integrate passive and active spaces.**
- **An additional active use Local Park in the Quince Orchard area (outside the LSC; see page 49).**

Community Connectivity and the LSC Loop

The organizing element of the LSC open space plan is a 3.5-mile multi-use path loop connecting the districts and destinations with extensions from the core loop that link to the surrounding communities, including the cities of Gaithersburg and Rockville (see the map on page 26). Connectivity between the LSC Districts and adjacent neighborhoods is described more fully in the following District section. 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 multi-use path next to the CCT 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 (in the City of Gaithersburg), the historic Belward Farm, and the civic green and retail center on LSC West. CCT stations along the Loop include the Crown Farm, Belward, and LSC West. From the Loop, paths will connect with other destinations and activities in the area, including Falls Grove and Traville. Traville Local Park, in LSC South, is proposed to include a small rectangular field, half-court basketball, older children's playground, and a tot lot, and should be accessible from an **extension of the LSC Loop**.

The LSC's existing stream buffer areas should be 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 recreation and open space. Public parks and publicly accessible facilities and open spaces should complement each other and be seamlessly integrated to create a cohesive pattern of open space.

The LSC Loop will:

- 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, including stream valley park trails such as Muddy Branch
- 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.
- **Create extensions (from the main loop) that connect surrounding neighborhoods with the LSC, providing residents of these communities with access to the transit stations, activities, amenities, and open spaces in the LSC Districts.**

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LSC West: A New Residential Community

Most of this 75-acre district is the County's Public Safety Training Academy (PSTA), on 52 acres. 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, medical office buildings, and several single-family homes that have been assembled and are proposed for townhouse development (RT-8 Zone).

While the PSTA 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 with its limited expansion capability and has identified a site 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, bringing 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.

Creating a new community on publically-owned land in the LSC West District provides an opportunity for the County to engage outstanding practitioners of sustainable town planning, layout, and design to help implement this Plan's vision. Located between LSC Central and Belward, the new LSC West community will be a hub of activity that draws people from the other LSC Districts as well as surrounding neighborhoods. Residents of the new high density housing in this District will enliven and activate the retail uses and open spaces. An interconnected street grid will create walkable blocks with a synergistic mix of uses, including ground-floor retail and wide sidewalks to accommodate outdoor cafes. The central, civic green at the CCT station should be framed by buildings and large enough for major outdoor activities and gatherings, such as a summer concert series.

The Plan recommends the Commercial Residential (CR) Zone with a 1.0 FAR that could yield 2,000 dwelling units with supporting retail, services, **open spaces**, and community uses. The CR Zone is recommended for the PSTA and PEPCO parcels (currently zoned R-90/TDR), the Innovation Center (LSC Zone), and the small retail center (C-3) and medical office buildings (O-M) at the intersection of Darnestown Road and Key West Avenue. The following CR components will promote development of the new residential community that the Plan envisions for LSC West: CR 1.0, C 0.5, R 1.0, H 150. The Plan recommends that the two special exception uses (at 10109 and 10111 Darnestown Road) be rezoned from R-90/TDR to C-T (Commercial, Transition) and confirms the RT-8 Zone for the remainder of parcels along Darnestown Road.

Residential buildings with the most density and height should be adjacent to the CCT station and the new LSC West community should include retail, civic spaces, and, if needed, a new public elementary school. If a new elementary school is needed, it could be combined with a local park on the northern portion of LSC West. If the school is needed and if the northern area is chosen, the proposed local street (B-5 on the LSC Circulation Map) should be eliminated to create adequate space for a park/school site. If the school is not needed, a local public park for active recreation should be provided. **This park should be large enough to accommodate a regulation size rectangular field.** In addition to the park/school site, development should be accompanied by a new public urban park to serve as the central, **civic** open space for the residential community. This public green space should be near the CCT station and one-half to one acre in size to create a gathering place and focal point for the community.

The Plan recommends that impacts to the forested area at the corner of Great Seneca Highway and Key West Avenue be minimized. 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.

Future development or redevelopment of the Darnestown Road side of LSC West should be compatible with the existing residential community of Hunting Hill Woods to the south (in the 2002 Potomac Subregion Master Plan). A proposed townhouse development (on the RT-8 parcels) in LSC West along the north side of Darnestown Road addresses land use compatibility and design (with a maximum building height limit of 35 feet). If there is future redevelopment of the existing retail and office uses at the corner of Darnestown Road and Key West Avenue (zoned C-3 and O-M; recommended for CR), compatibility with Hunting Hill Woods must be addressed.

This Plan encourages improved connectivity from the residential neighborhoods south of Darnestown Road to the LSC West District. As the core of the District develops into a new community with retail, open spaces, and a CCT station, adjacent communities should have access to these amenities. The Plan recommends a Dual

Bikeway/Shared Use Path along Darnestown Road (DB-16) and there is an existing off-road shared-use path along Travilah Road (SP-57) that is recommended to extend into LSC West (LB-5). In addition, an LSC Loop extension is recommended from LSC West into LSC South (see map on page 26).

Opportunities to create new connections are limited by to the character of existing neighborhoods to the south, which are inward-facing with numerous cul-de-sacs, rear yards along Darnestown, and only one access point at Yearling Drive. As shown on the XX map, an extension of Yearling Drive (which is aligned with the access driveway to the existing office uses on the north side of Darnestown Road) may provide the best future opportunity for improved access to the LSC West District. Opportunities for a public easement through the proposed townhouse development could also be explored.

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 and PEPCO parcels from R-90/TDR to the CR Zone
- Rezone the County's Innovation Center site from the LSC Zone to the CR Zone
- Rezone the C-3 and O-M parcels to the CR Zone
- Properties rezoned to CR have the following components: C 0.5, R 1.0, H 150
- Rezone 10109 and 10111 Darnestown Road (special exception uses) from R-90/TDR to C-T (Commercial, transitional) to reflect the existing uses
- Require a Concept Plan for LSC West with the first Preliminary Plan application to address the CCT location, the placement of highest densities and building height at transit, creation of a local street network, public open spaces, and the LSC Loop
- Locate highest density housing and retail uses and the tallest buildings (150 feet) closest to the CCT station to provide convenience and activity
- **Building heights along Darnestown Road should be limited to 50 feet. The building height for the RT-8 property is a maximum of 35 feet.**
- Minimize impacts to the forest at the corner of Key West Avenue and Great Seneca Highway
- Accommodate a new public elementary school combined with a local park, and a central public open space near the proposed CCT 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, if needed
- Provide facilities for active recreation on the park/school site
- 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 area 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

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LSC Belward: A New Science and Research Community

The Belward property, owned by JHU, is surrounded by major roads and 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 undeveloped.

This Plan recommends increased density on the Belward property (1.0 FAR), 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 from the R&D Zone to the revised LSC Zone to allow ~~a mix of uses and~~ higher densities **and height** focused ~~on~~ at the CCT station. Development on the Belward property may include housing for the employees and/or visiting researchers. **Plan recommendations allow a concentrated and compact form of development for Belward that is centered around transit. This denser building pattern (with structured parking) creates opportunities for an extensive open space system. Previous plans for Belward were a conventional suburban office park model with sprawling, low-density, auto-dependent development, vast amounts of surface parking lots, and few community amenities intended for use by residents or workers not on the Belward campus.**

The design and layout of Belward should be sensitive to the residential neighborhoods that surround the site. To create appropriate transitions and minimize impacts, the Plan recommends substantial open spaces, particularly on the three sides of Belward that are adjacent to neighborhoods. Development around the north, west, and south perimeters -- adjacent to the Mission Hills buffer, the Muddy Branch Road park, and Darnestown Road -- should be compatible with surrounding neighborhoods in terms of bulk, scale, and building height. Heights should transition from the highest (150 feet maximum) in the blocks immediately surrounding the CCT station to lowest at the edges of the property (50 feet maximum) and around the historic area (60 feet maximum). Rear walls and service areas should not face the surrounding neighborhoods. Generally, parking should be located in garages that are placed in the center of blocks and surrounded by buildings.

The property's historic Belward Farm includes the 1891 farmhouse, barns, and outbuildings. A 6.98-acre environmental setting was established for the historic properties by the 1996 Preliminary Plan approval, and includes the driveway from Darnestown Road to preserve views of the site.

Due to the proposed increase in development recommended for Belward, this Plan recommends expanding the historic farmstead's environmental setting to between 10 and 12 acres. New development adjacent to and near the farmstead must be compatible in scale and graduated in height (**no higher than 60 feet**) to be sensitive to the historic resource. Views of the farmstead from Darnestown Road, as well as other vantage points within Belward

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should be incorporated into future site planning and design. Reuse of the Belward Farm offers opportunities for community-serving uses such as a cultural, recreational, or educational center that could become a destination on the CCT and the LSC Loop.

The open space system for the Belward District includes an extensive network of passive and active recreation linked by an internal path system with connections to the LSC Loop and the surrounding communities. By concentrating density in a compact form (with a limited amount of taller buildings and parking garages), substantial amounts of open space can be created. Placing parks and buffers around the edges of Belward provides compatible transitions and buffers for the adjacent single-family neighborhoods are critical. From natural, passive areas with trails next to streams to an activated urban square at the CCT station, a range of outdoor experiences are planned. As outlined below and shown on map XX, the Plan recommends nearly 50 acres of open space:

- **Muddy Branch Park will consist of a minimum of 12 acres (with a width of 300 feet along Muddy Branch Road) for active and passive recreation, including informal and organized playing fields, and tree-lined edges at the perimeter. The landmark tree in this area should be a focal point in the design of the park and open space. The Muddy Branch Trail Corridor and a countywide bikeway connection (DB-24; dual bikeway/shared use path) must be completed on the Belward side of Muddy Branch Road.**
- **Mission Hills Preserve will create a 200-foot wide buffer between the rear property line of the nearest Mission Hills homes and any buildings on the northern side of Belward. In addition, 200-foot wide stream buffers will be created around two tributaries of the Muddy Branch, limiting development in this portion of the property. Mission Hills Preserve, combined with the two stream buffers, will create a 20-acre area for reforestation and passive recreation that should include natural surface trails that connect with the other open spaces on the site.**
- **Darnestown Promenade will include a three-acre landscaped buffer (60-foot wide) along Darnestown Road that maintains vistas to the historic farmstead, includes the landmark sign, and creates a tree-lined pedestrian path that connects to the on-site path system as well as the LSC Loop. In addition, a countywide bikeway (DB-16) must be completed along Darnestown Road.**
- **Belward Commons and Historic Farmstead will include 10 to 12 acres of open space surrounding and including the historic farmstead buildings. Views of the farmstead from Darnestown Road, as well as other vantage points within the site, should be preserved. Reuse of the historic buildings offers opportunities for community-serving uses that could include active indoor recreation or cultural activities. A weekend farmers market could be established here.**
- **Urban Square at the CCT Station is envisioned as a hub of daily activity with space for special events and gatherings and some community retail for the convenience of CCT riders, workers, and area residents.**

Development in accordance with this Plan should add value and enhance the quality of life in the area by creating substantial amenities, recreational opportunities, and phasing new development with the provision of transit and infrastructure to support it. This Plan recommends that connections be created so that residents from surrounding neighborhoods have access to these amenities. Residents should be engaged throughout all phases of the Belward development review process to provide comments and suggestions on issues such as connectivity, plans for open space, and other amenities. As shown on the XX Map, the Plan recommends new streets on Belward, including one aligned with Midsummer Drive that can provide access from the Washingtonian Woods neighborhood. The bikeway and trail connections mentioned above will improve access.

Options for more direct links from the surrounding communities to Belward should be explored as development proceeds.

To meet the recreation needs of this area, as well as provide facilities for those working on-site at Belward, areas should be reserved for both active and passive recreation. Two rectangular fields for active recreation should be provided within the designated buffer areas along Muddy Branch and Darnestown Roads.

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, neighborhood buffers, **and connections.**
- 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
- Step new buildings down to 60 feet (four stories) adjacent to the Belward Farm
- 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

- Engage residents throughout all phases of the Belward development review process to provide input on issues such as connectivity, plans for open space, and other amenities.
- Concentrate the highest density and building heights (150 feet) near the CCT station
- 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 that may include natural surface trails
 - - Belward Farm environmental setting
 - - Urban square at the CCT station
 - - Urban promenade connecting buildings and public spaces.
- Provide at least ~~15~~ **20** percent of the net tract areas as public use space

- Create a ~~300-foot buffer~~ **park** along Muddy Branch Road and a 60-foot **landscaped** buffer along Darnestown Road
- Provide two rectangular fields for active recreation in these buffer areas, with permitting by the Parks Department
- Preserve and augment the trees along the northern boundary as a transition to the existing single-family houses in Mission Hills
- Provide a 200-foot 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 **on either side of** ~~around~~ the two tributaries of the Muddy Branch

LSC South: Mixed-Use Center

This 245-acre district 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.

LSC South is in the Watts Branch Watershed and is part of the Piney Branch sub-watershed, which was designated 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.

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 have 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 undeveloped. The Plan supports R&D uses on this site, but housing would also be compatible with surrounding properties. The Plan recommends the Planned Development option (PD-22) for the Rickman property and supports a waiver of the percentage requirements for dwelling unit types to encourage a compact design that respects this environmentally sensitive area. The property owner can initiate the rezoning by filing a Local Map Amendment. A Development Plan and Site Plan are required in the PD Zone.

The Piney Branch SPA bisects the Rickman Property. A key to protecting water quality in the SPA is limiting impervious surfaces. Development within this SPA requires a Water Quality Plan that details how stormwater runoff will be managed to prevent further degradation to water quality in the SPA. The Water Quality Plan is prepared by the developer and reviewed and approved during the development review process. Guidelines for the development of the Rickman property are provided below. In addition, a population of state endangered *Krigia dandelion* is located on the east side of the property along Shady Grove Road. The road was specifically aligned to avoid disturbance of this plant. Further development in this area should avoid disturbance of this population and provide a buffer area from new uses.

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 lots adjacent to Darnestown Road. Future development at these sites should create a building edge along Darnestown Road near Great Seneca Highway. On the north side of Darnestown Road, 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 and USG'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.

Recommendations

- Protect the Piney Branch sub-watershed and support the SPA by limiting development in LSC South beyond existing and approved projects to only the undeveloped Rickman parcels on Travilah Road.
- Extend Great Seneca Highway as a 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.
- Maintain the R&D Zone on the Rickman site, but recommend rezoning to PD-22 by a Local Map Amendment to encourage residential development.
 - **Minimize impacts to the SPA by orienting buildings and parking nearer Travilah Road, outside the SPA boundary**
 - **Ensure proper sediment control during construction**
 - **Consider parking underneath buildings (ground-level) for multi-family units, compact development design, and other techniques to minimize impervious surfaces**
 - **Consider placing recreation facilities that are not noise-sensitive closer to Shady Grove Road**
 - **Consider meeting afforestation requirements in the area adjacent to the existing protective strip along Shady Grove Road to enhance protection of the Krigia dandelion population**

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LSC North: Residential and Office

The 195-acre LSC North District 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.

The current CCT alignment includes a station on the north side of the DANAC property. The DANAC station should be relocated to the east side of the property as part of the CCT alignment through the LSC. The Plan recommends that the DANAC property be rezoned from the I-3 Zone to a CR Zone. Rezoning DANAC to a mixed use zone with higher density will take better advantage of this transit station location. The parcel on the southeast corner of Key West Avenue and Diamondback Drive (Lot 7) is largely undeveloped and is adjacent to the proposed CCT station on the east side of the property. The recommended Zone for this parcel (Lot 7) is: CR 2, C 1.5, R 1.5, H 150. The

remainder of the DANAC property should be zoned CR 1.0, C 0.5, R 0.5, H 80. Building height along Decoverly Drive adjacent to the residential community to the north is limited to 50 feet within 100 feet of the **Decoverly Drive** right-of-way **(not including the 50-foot transit right-of-way)**.

Each of the other office parks in LSC North has some remaining development capacity. 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 and 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. The Plan recommends the Planned Development (PD) Zone option for the 6.9 acre site in the Shady Grove Executive Center and for the 11.34 acre Bureau of National Affairs (BNA) site. These sites would be appropriate for urban, high density housing and the zoning can be requested through a Local Map Amendment. Pedestrian-oriented local retail facilities that are compatible with and provide convenience for residents are encouraged. Community serving amenities should be provided, including the LSC Loop along Omega Drive as well as pedestrian connections to CCT stations at DANAC and Crown Farm.~~

The Plan does not recommend any zoning change to the National Association of Securities Dealers site. The Plan encourages mixed-use infill on the portion of the LSC North that is east of Omega Drive (Shady Grove Executive Center District and BNA sites). To implement the mixed-use vision, the Plan recommends CR 1.5, C 1.5, R 1.5, H 100. Residential uses are encouraged, as are pedestrian-oriented local retail facilities that are compatible with and provide convenience for residents. Public benefits that improve connectivity and mobility or add to the diversity of uses and activity are encouraged. These should include the LSC Loop along Omega Drive as well as pedestrian connections to CCT stations at DANAC and Crown Farm.

- 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
- Rezone DANAC from the I-3 Zone to the CR Zone
- **Rezone the area east of Omega Drive (Shady Grove Executive Center District and BNA District) from the O-M, H-M and C-2 zones to the CR zone**
- Provide for the LSC Loop, to be accompanied with the CCT from Fields Road to Diamondback Drive, and then along Decoverly Drive and across Great Seneca to the Belward site