

MCPB Item No.: Date: 1-28-16

Supplement to the 2010 Urban Design Guidelines for the 2010 Great Seneca Science Corridor Master Plan

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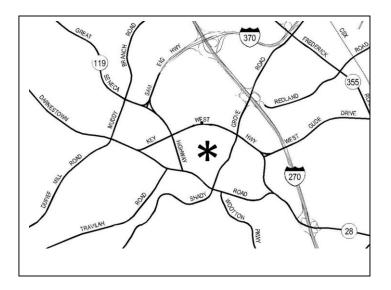
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 Image: Construction of the state of

Description

- Revise the 2010 Urban Design Guidelines for the Great Seneca Science Corridor Master Plan by incorporating more detailed design recommendations for the LSC Loop trail.
- Located in the Life Sciences Center of the 2010 Great Seneca Science Corridor Master Plan area.

Staff Report Date: 1/20/16



Summary

- Staff requests approval to revise the 2010 Urban Design Guidelines for the 2010 *Great Seneca Science Corridor Master Plan* by incorporating the 2015 LSC Loop Design Guidelines.
- Staff also requests that the Planning Board send a letter to the County Council supporting the County Executive's recommendation that funding for Facility Planning for the LSC Loop trail be included in the County's upcoming six-year CIP.

Background

The vision of the 2010 *Great Seneca Science Corridor (GSSC) Master Plan* is to establish "a blueprint for the LSC [Life Sciences Center] that includes an expanded, first-class medical center, research facilities, academic institutions, and an array of services and amenities for residents, workers, and visitors. It will have an open space system that incorporates the area's natural environmental features into a larger network, connecting destinations by paths and trails, and providing opportunities for a range of outdoor experiences" (GSSC Master Plan page 15).

One of the key recommendations of the GSSC Master Plan is to "Create the LSC Loop as the organizing element of the open space plan to connect districts and destinations, incorporate natural features, and provide opportunities for recreation and non-motorized transportation" (GSSC Master Plan, page 10). References to the LSC Loop throughout the GSSC Master Plan make it clear that this trail is intended to be both a placemaking amenity feature as well as a functional transportation and recreation facility. The LSC Loop's importance to the functioning of the transportation infrastructure of the Life Sciences Center is underscored by the inclusion of a Master Plan staging element that requires funding of the LSC Loop prior to opening Stage 2 of the Master Plan's development. (Note: Stage 1 of the Master Plan is already closed to new non-residential development capacity.) Provision of non-auto oriented transportation facilities is also critical given additional Master Plan staging requirements to incrementally increase the Non-Auto Driver Mode Share for commuters within the LSC. Thus, development in the LSC cannot proceed past a certain level until: 1) the LSC Loop is funded and 2) a specific mode share goal is achieved. The Master Plan says that "Creation of the loop (including landscaping and facilities such as benches) will be the primary amenity requested of property owners" (GSSC Master Plan page 32). The specific staging language for the trail in the Master Plan (page 79) states:

"Before Stage 2 begins, all of the following must occur:

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

Urban design guidelines are companion documents to master plans that help implement a plan's overall vision as well as specific recommendations. Design guidelines are approved by the Planning Board for use by Planning Department staff in developing and evaluating proposed building projects and other applications. They also convey a set of expectations to potential applicants. The design guidelines are more nimble and flexible than master plans and, as stated on page 5 of the 2010 GSSC Urban Design Guidelines, they are intended to be revised and updated as necessary. While the 2010 GSSC Guidelines provide some information for the LSC

Loop trail, it is insufficient to create cost estimates to include in the County's six-year CIP or to guide developers in designing and constructing any portion of the trail they may become responsible for as part of their development approval.

In order to create cost estimates and provide better guidance to developers, staff recognized that a more detailed concept plan for the LSC Loop trail was needed. In the summer of 2014, a Planning Department proposal to create a concept design and implementation strategy for the LSC Loop was awarded a Transportation-Land Use Connections (TLC) grant from the Metropolitan Washington Council of Governments (MWCOG). Through this grant, the Planning Department was able to hire the Alexandria, Virginia-based consulting firm of Rhodeside & Harwell to assist in the creation of the concept plan and implementation strategy. Rhodeside & Harwell began their work with Planning staff in November 2014 and completed their work at the end of June 2015. Throughout this process, the GSSC Implementation Advisory Committee (IAC) served as a sounding board to review and provide input into development of the LSC Loop concept plan and implementation strategy.

Staff is requesting that the 2010 GSSC Urban Design Guidelines be revised by incorporating the 2015 LSC Loop Design Guidelines (see Attachment 1). This additional, detailed information about the LSC Loop will assist staff in the review and approval of site plans where the Loop may be a component of the plan. Staff has also identified references and images on pages 16 and 17 of the 2010 Urban Design Guidelines that discuss an LSC Loop alignment that would parallel the CCT in the middle of the road. This conflicts with the recommendation in the 2015 LSC Loop Design Guidelines that the LSC Loop alignment should be outside the curb line on the inside of the road for the length of the trail alignment; these references and images will be edited to eliminate the conflict. Staff also requests permission to make any other minor changes necessary if additional conflicts are found between the 2015 LSC Loop Design Guidelines and the 2010 Urban Design Guidelines.

Staff recommends adding the 2015 LSC Loop Design Guidelines as a chapter of the 2010 GSSC Urban Design Guidelines with a reference in the table of contents as well as on page 16, where the LSC Loop is discussed. (As currently proposed, Chapter 50, Section 4.4.2.D.1 and Section 4.4.3.A.1 would require any Preliminary Plan to substantially conform with the recommendations of the applicable Master Plan, while Chapter 59, Section 7.3.4.A.4 currently requires any Site Plan to substantially conform with the recommendations of the applicable master plan and approved guidelines.")

Staff also requests that the Planning Board submit a letter to the County Council supporting the County Executive's recommendation that funding for a Facility Plan for the LSC Loop be included in the County's next six-year CIP (CIP No. P501742 in the County Executive's FY17 Recommended Capital Budget and FY 17-22 Capital Improvements Program (CIP) – see Attachment 2). Creation of a Facility Plan would provide a fully engineered plan, enabling the development of accurate cost estimates for inclusion in the CIP, and facilitating construction by developers if required as part of site plan approval. An additional advantage of having a Facility Plan is to have a "shovel-ready" project, which is a requirement of certain grant programs that

could provide substantial funding for the project. Creative funding is a goal of the implementation strategy of the LSC Loop.

The Vision

The following vision for the LSC Loop is taken from the introduction to the 2015 LSC Loop Design Guidelines:

"The Life Sciences Center (LSC) Loop Trail will serve as a major multi-use connector, organizing element, and placemaking feature for the emerging Life Sciences Center. Much more than a standard shared-use path, the LSC Loop Trail will function as an identifiable public amenity that helps make the Life Sciences Center an attractive place to live, work, and visit. The trail will incorporate distinctive design elements – special paving, furniture, landscaping, art, signage, and stormwater management features – as well as public amenity/park spaces adjacent to the trail route. By connecting major employers, residences, open spaces, schools, transit stations, and other destinations, the LSC Loop Trail will play an important role in reducing reliance on automobiles as a transportation mode and will help foster the healthy living philosophy of the Life Sciences Center."

Relationship to the Bicycle Master Plan and the Corridor Cities Transitway

Development of the 2015 LSC Loop Design Guidelines has aligned with two other significant transportation efforts that have been advancing at the same time. The Bicycle Master Plan began with an early focus on the Life Sciences Center of the GSSC in March 2015. This was done at the request of the GSSC Implementation Advisory Committee (IAC) in order to coordinate efforts to create a robust bicycle infrastructure in the Life Sciences Center. The original concept for the LSC Loop envisioned separating pedestrians and casual bicyclists from bicycle commuters, where space allows. The separated bike lane network now being proposed for the Life Sciences Center in the Bicycle Master Plan provides a separate facility for bicycle commuters that otherwise would have become part of the LSC Loop trail design. This allows the design of the LSC Loop to emphasize amenities and placemaking features, as intended by the GSSC Master Plan. The Bicycle Master Plan's separated bike lanes will be accommodated primarily within the road right-of-way between the existing curbs while the LSC Loop will include the right-of-way beyond the curbs. Although these are separate facilities, they are complementary. Amenities provided by the LSC Loop will also be available to riders using the separated bike lane system.



LSC Loop, Separated Bike Lanes, and CCT Alignment

Planning for the LSC Loop has also been coordinated with the 30% design plans being developed for the Corridor Cities Transitway (CCT) by the Maryland Transit Administration (MTA). Some segments of the LSC Loop are parallel to the CCT and use a portion of the CCT right-of-way provided for a shared-use path. In some places where the CCT and the LSC Loop are directly adjacent, the MTA will provide space for the LSC Loop, although they will not build it. Providing non-auto transportation access to the CCT is one of the important functions of the LSC Loop trail.

Outreach

In addition to the ongoing work with the GSSC IAC in developing these Design Guidelines, Planning Staff also has been engaged in additional outreach to the community and other agencies. Comments received are summarized in Attachment 3. Outreach has included the following meetings:

2015

- April 30: Presentation to Commercial Property Owners
- Oct. 14: MCDOT Master Plan Review Committee
- Oct. 26: City of Gaithersburg
- Nov. 2 : Presentation to County Executive Staff
- Nov. 16: Presentation to MC Office of Management and Budget
- Dec. 8 : GSSC IAC update (see letter from GSSC IAC, Attachment 4)
- Dec. 15: Joint Community Meeting, LSC Bicycle Master Plan and LSC Loop

2016

- Jan. 4: Presentation to Upcounty Citizens Advisory Board
- Jan. 28: Montgomery County Planning Board Hearing

Attachment 1: 2015 LSC Loop Design Guidelines

Attachment 2: LSC Loop Recommended CIP item for Facility Planning

Attachment 3: Public and Agency Comments on the LSC Loop Design Guidelines

Attachment 4: Letter from GSSC Implementation Advisory Committee

ATTACHMENT 1



MONTGOMERY COUNTY LIFE SCIENCES CENTER LOOPTRALL DESIGN GUIDELINES DRAFT 07/10/15

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INTRODUCTION

THE VISION

The Montgomery County Life Sciences Center (LSC) Loop Trail will serve as a major multi-use connector, organizing element and placemaking feature for the emerging Life Sciences Center district. Much more than a standard shared use path, the LSC Loop Trail will function as an identifiable public amenity that helps make the Life Sciences Center an attractive place to live, work and visit. The trail will incorporate distinctive design elements-special paving, furniture, landscaping, art, signage and stormwater management features—as well as public amenity/park spaces adjacent to the trail route. By connecting major employers, residences, open spaces, schools, transit stations and other destinations, the LSC Loop Trail will play an important role in reducing reliance on automobiles as a transportation mode and will help foster the healthy living philosophy of the Life Sciences Center.

LSC LOOP TRAIL DESIGN GUIDELINES

The concept for the 3.5-mile LSC Loop Trail was funded by a Transportation / Land-Use Connections (TLC) grant from the Metropolitan Washington Council of Governments to the Montgomery County Planning Department. A central feature of Great Seneca Science Corridor Master Plan, the LSC Loop Trail also constitutes a major staging requirement for advancing implementation of the Master Plan and must be fully funded prior to opening Stage 2 of Master Plan Development.

The typical LSC Loop Trail cross-section includes a 12-foot-wide shared use path with planted buffers on both sides of the trail, with a 10-foot-wide shared use path in the most constrained trail segments. The trail will function as a recognizable placemaking element through the incorporation of distinctive paving treatments, a cohesive family of furnishings and signage, street trees and other plantings, low-impact development (LID) features and public art elements. Public amenity spaces-including areas for seating and other activities-are incorporated along the trail. In addition, special design treatments are recommended for major nodes, gateways and urban activity areas. The concept envisions that a potential separated bike lane will complement the trail, per the County's ongoing Bicycle Master Plan. The LSC Loop Trail will serve as a County model for multi-modal design, as well as an important connection in the County's non-motorized transportation system.

The Loop Trail design guidelines establish a framework to guide subsequent design and engineering. It is anticipated that the next phase of design will address engineering considerations and additional design details.



EXISTING CONDITIONS

EXISTING CONDITIONS PLAN



DECOVERLY DRIVE (North of Diamondback Drive)



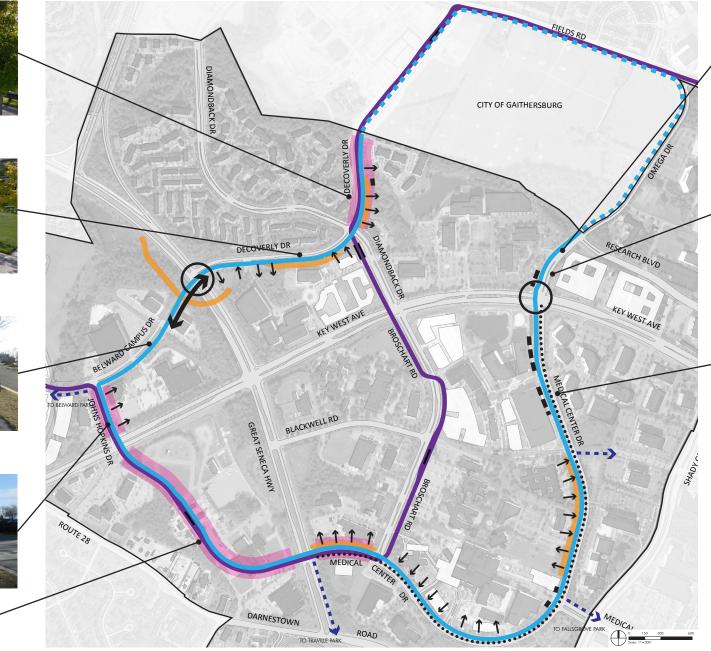
DECOVERLY DRIVE (South of Diamondback Drive)



BELWARD CAMPUS DRIVE



JOHNS HOPKINS DRIVE PSTA PROPERTY: NEW ROAD 4 | LSC Loop Trail Design Guidelines



OMEGA DRIVE (Northern Segment)



OMEGA DRIVE (Southern Segment)



MEDICAL CENTER DRIVE

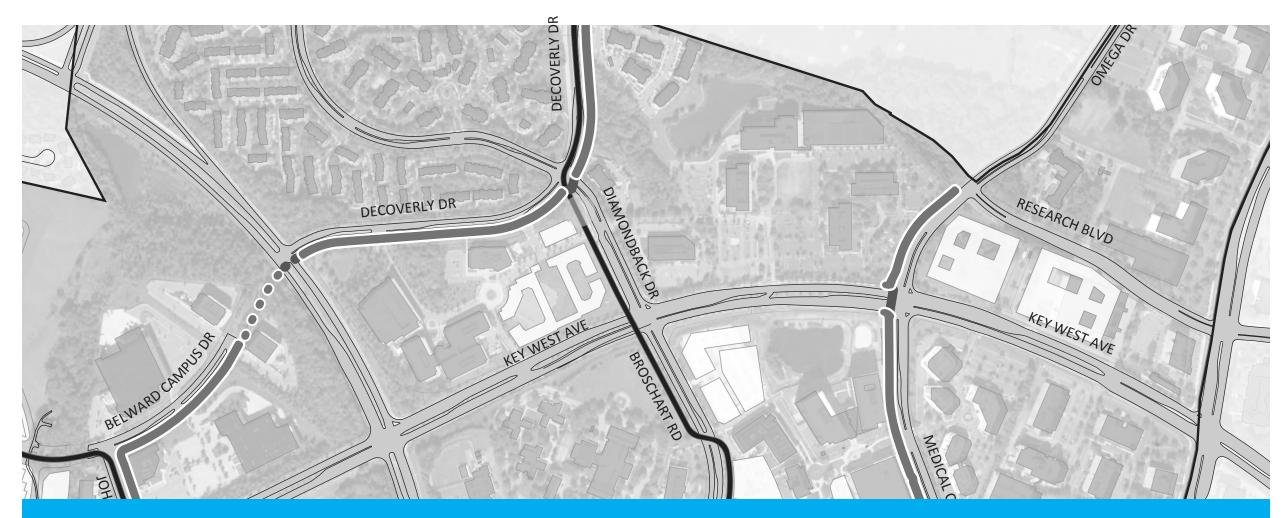
- Potential Loop Trail
- Future CCT
- Future CCT station
- CCT/Roadway Reconstruction
- ---> Possible Loop Extension

Existing Conditions Analysis

- Transit Easement
- ↓↑ Slope at Inner Edge
- Mature Trees
- --- Structure

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- ← Missing Connection
 - Major Road Crossing



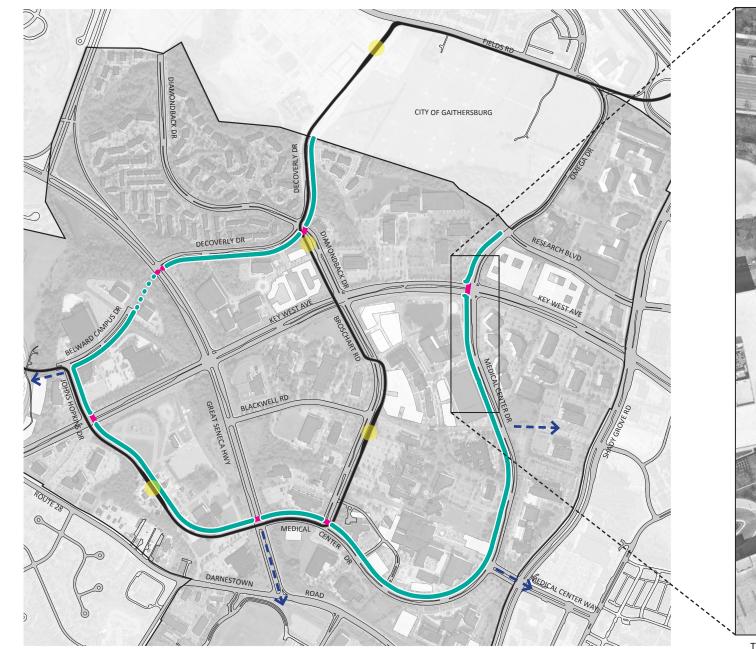
OVERALL PLAN

OVERALL PLAN

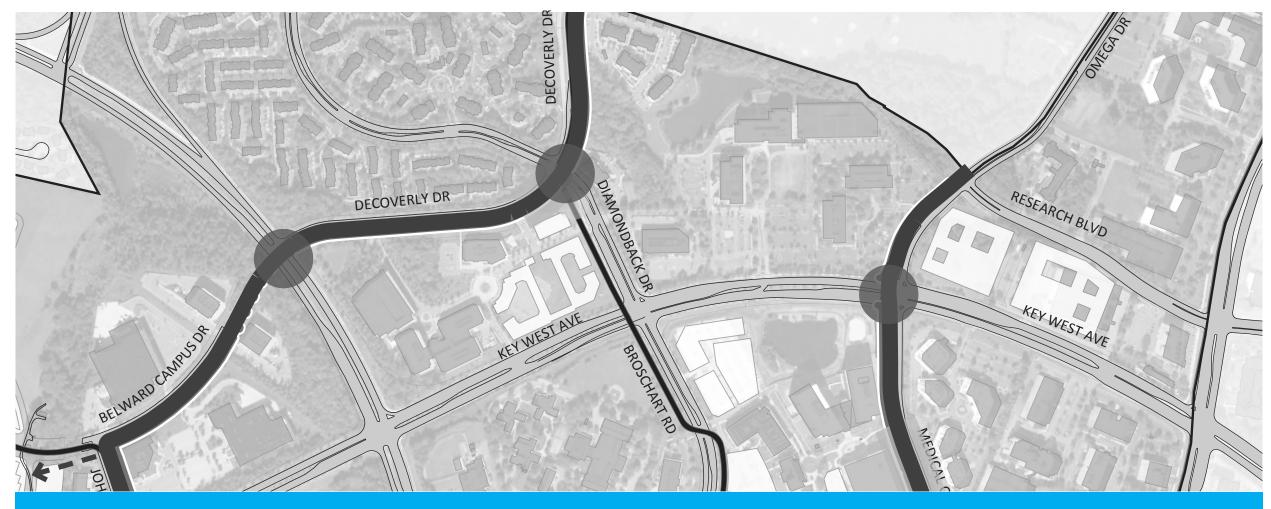
- The trail is positioned on the inside of the LSC Loop.
- Typical trail cross section includes a paved shared use path with planted buffers on each side.
- The trail is located outside of existing curblines except where the roadway is to be realigned as part of CCT construction or future development.
- Enhanced street crossings are recommended for all intersections.
- Potential trail spurs should connect to routes and destinations beyond the LSC Loop Trail.







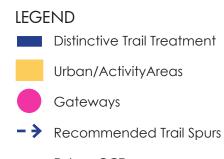




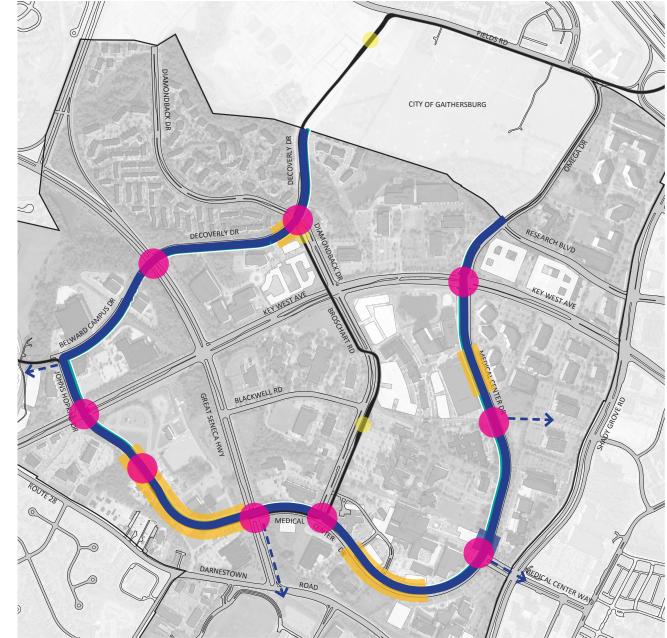
AMENITIES & ENHANCEMENTS

AMENITIES & ENHANCEMENTS PLAN

- Enhancements along the Loop Trail include a distinctive paving treatment; a continuous line of street trees (preserved or planted in all possible locations); seating areas along the trail; signage/wayfinding elements; and public art in select locations.
- Urban/Activity Areas should incorporate special paving and furnishings, larger gathering areas, enhanced plantings, and public art elements.
- Gateways can use art pieces and informational signage to emphasize entry into new areas and direct users to their destinations.



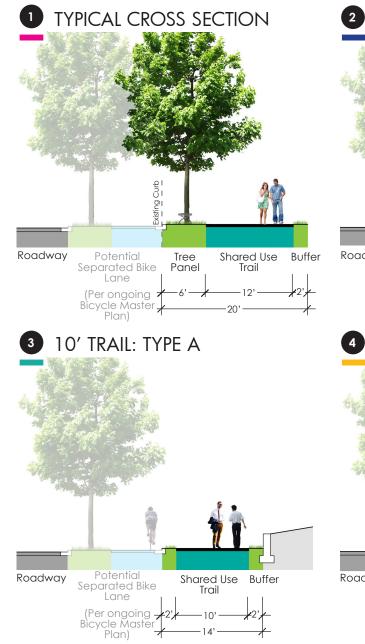
Future CCT
8 | LSC Loop Trail Design Guidelines

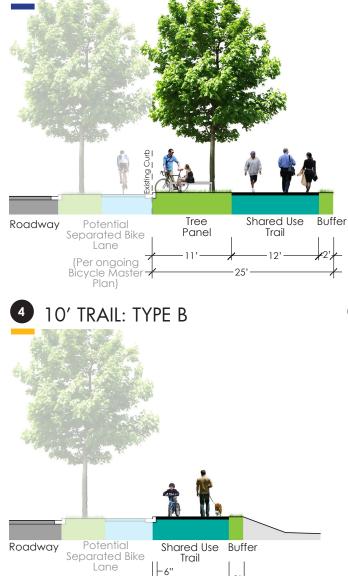




TRAIL CROSS SECTION

CROSS SECTION TYPES





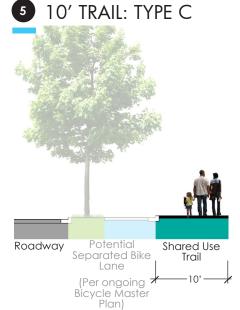
(Per ongoing

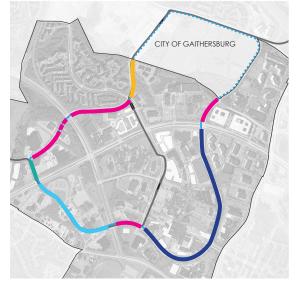
Bicycle Master

Plan)

WIDE TREE PANEL

- 1 Typical cross section design should be used in all areas where feasible.
- 2 A wider tree panel is required on Medical Center Drive to preserve existing trees and create safe clear zones for path users.
- 3 Spatial constraints along the planned Corridor Cities Transitway (CCT) allow for a narrow planted buffer only or 4 a grade separation only between the Loop Trail and a potential separated bike lane (per ongoing Montgomery County Bicycle Master Plan).
- 5 Right-of-way width on the Medical Center Drive Extension (PSTA property)allows for a grade separation only between the Loop Trail and a potential separated bike lane.
- Additional tree panels may be included in the design of a potential separated bike lane.





Key Plan

^{10 |} LSC Loop Trail Design Guidelines



CHARACTER AREAS

URBAN/ACTIVITY AREAS

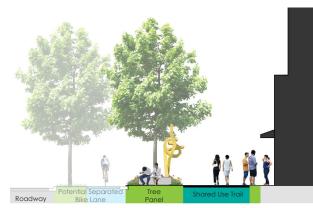
• Urban/Activity Areas include more intensive land uses near transit stops or where building entrances are located close to the trail edge.



Plazas and outdoor seating along trail (outside of right-of-way)





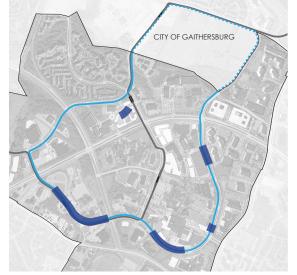


Furnishings and public art in tree panel

Note: Trail cross section may differ from conditions shown above. 12 | LSC Loop Trail Design Guidelines



Precedent Images

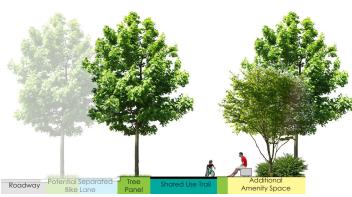


Key Plan

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OPEN SPACE/NATURAL AREAS

• Open Space/Natural Areas include undeveloped vegetated zones, parks, and school yards.



Seating areas







Play or fitness equipment

Note: Trail cross section may differ from conditions shown above.



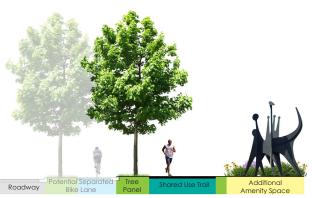
Precedent Images



Key Plan

GATEWAYS

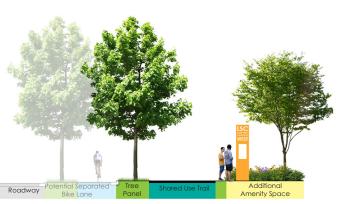
• Gateways refer to major intersections, transit nodes, and entrances into private campuses or office parks.



Public art, vibrant plantings, and informational signage at major intersections





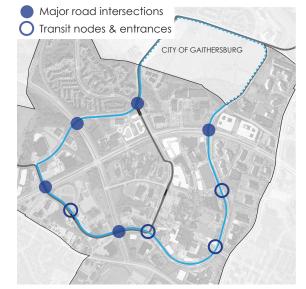


Plantings and informational signage at transit nodes and entrances Note: Trail cross section may differ from conditions shown above. 14 | LSC Loop Trail Design Guidelines

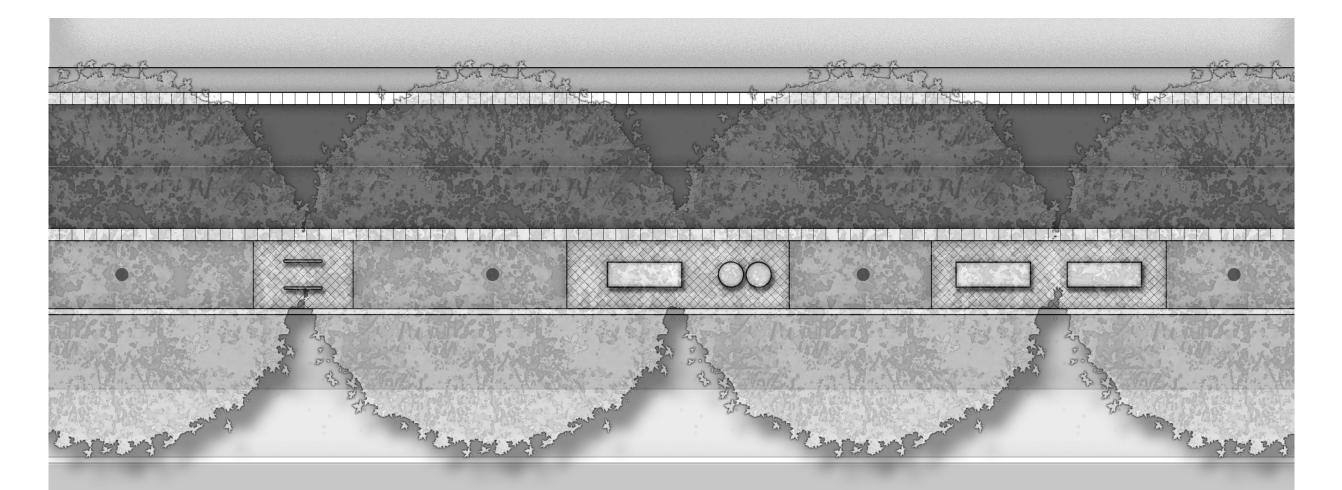


Precedent Images



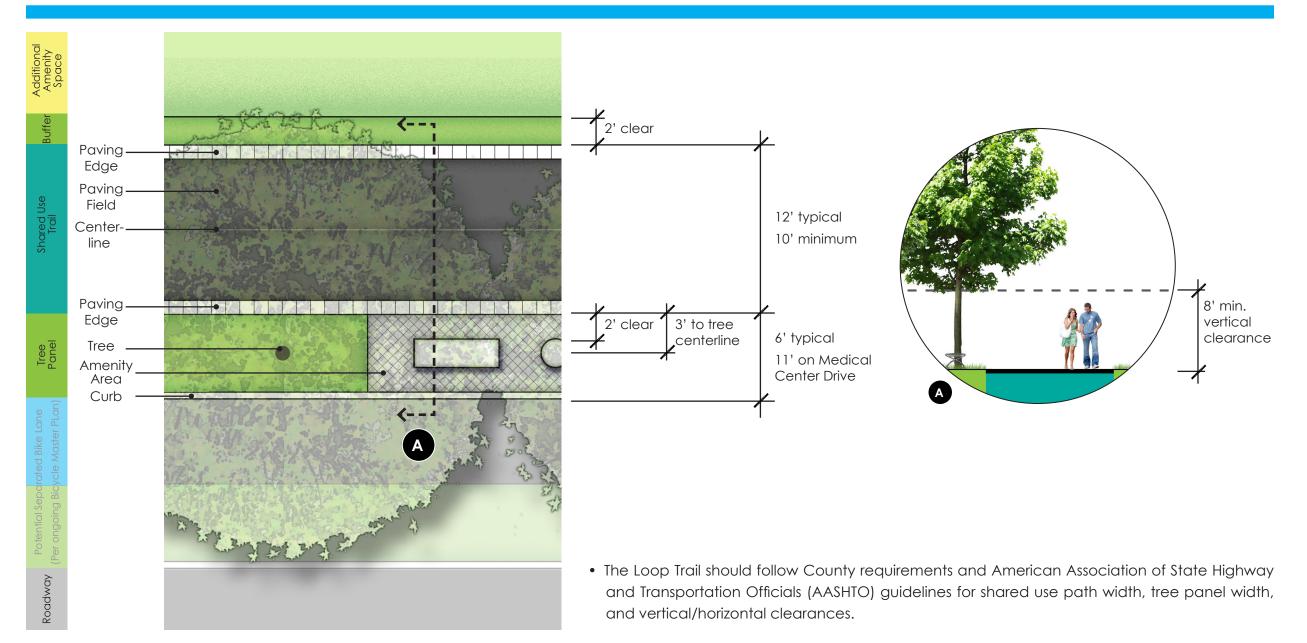


Key Plan



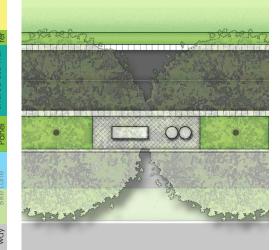
TYPICAL PLAN DETAILS

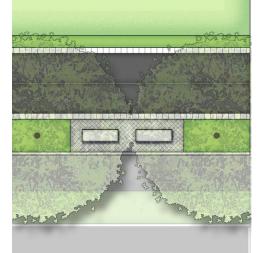
RECOMMENDED OFFSETS AND DIMENSIONS



AMENITY AREAS IN THE TREE PANEL

TYPICAL AMENITY AREAS





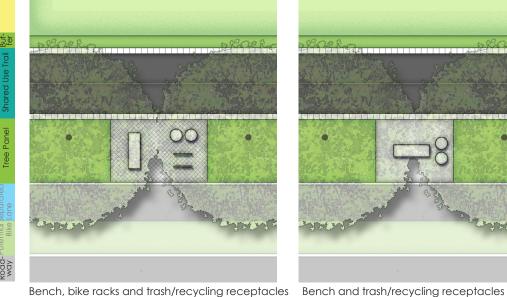


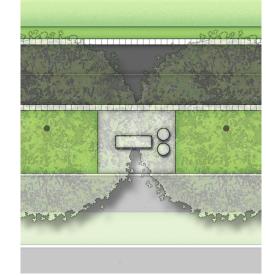
Bench and trash/recycling receptacles

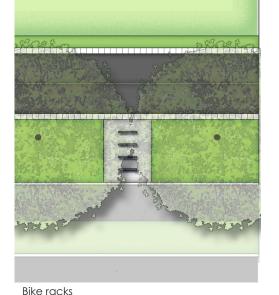
Multiple benches

Bike racks

AMENITY AREAS IN WIDE TREE PANEL (MEDICAL CENTER DRIVE)







- Amenity areas should include seating, trash/recycling receptacles, bike racks, and pedestrian lighting.
- Furnishings should be situated to provide access from the Loop Trail or the potential separated bike lane.
- The wider tree panel on Medical Center Drive can accommodate larger amenity areas, but these must be designed to limit disturbance of existing mature trees.



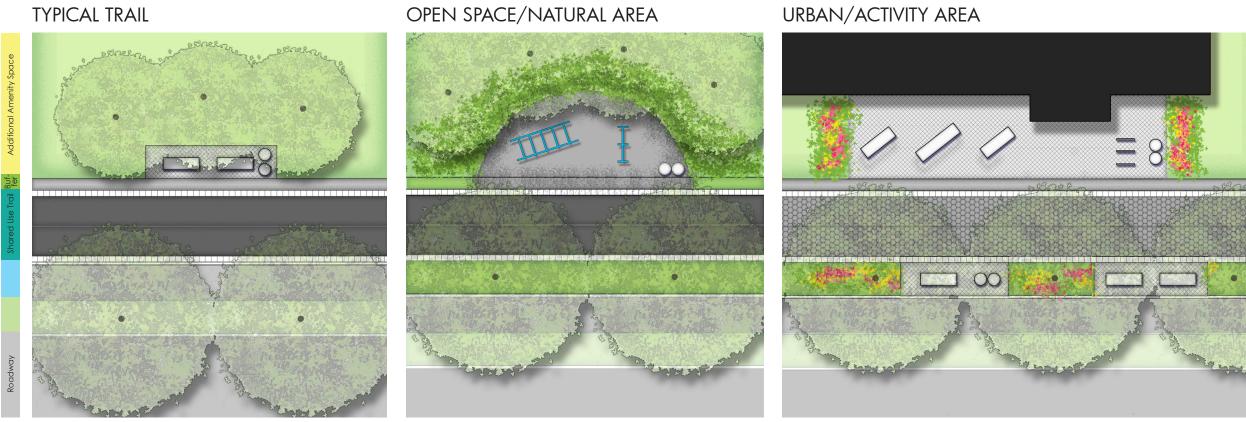


Precedent Images



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ADDITIONAL AMENITY AREAS

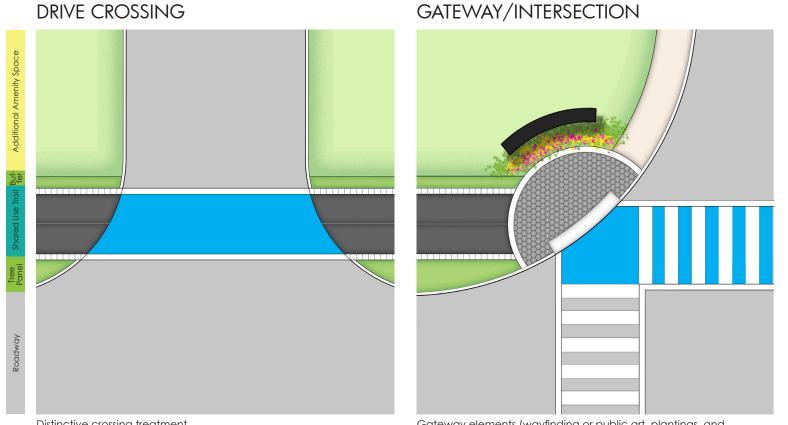


Benches and trash/recycling receptacles (may also include bike racks)

Benches, bike racks and trash/recycling receptacles (may also include tables and chairs, public art, play/exercise equipment, etc.) May include distinctive paving treatments.

- Additional amenity areas inside the Loop Trail (within or outside of the right-ofway) can provide amenity space in locations where a tree panel in not situated immediately adjacent to the Loop Trail.
- These additional amenity areas can also provide play or exercise opportunities in Open Space/Natural Areas and larger gathering spaces or plazas in Urban/ Activity Areas.

DRIVE CROSSINGS, GATEWAYS AND INTERSECTIONS



Distinctive crossing treatment

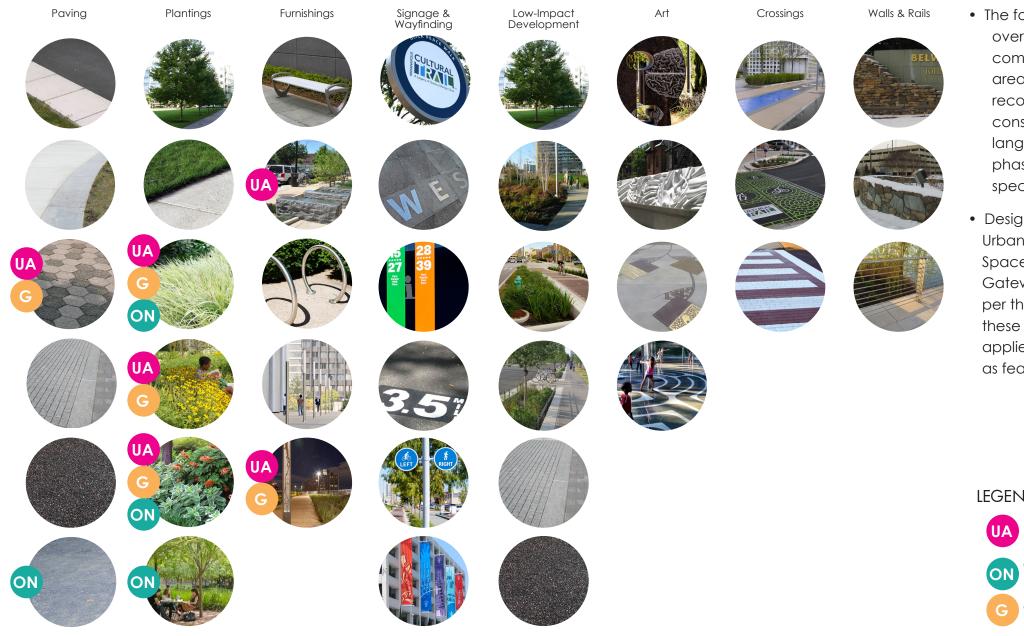
Gateway elements (wayfinding or public art, plantings, and distinctive paving and crossing

- At street intersections and drive crossings, distinct high-visibility crosswalk treatments should be considered to indicate continuation of the trail route and alert drivers and trail users of potential conflict points.
- Gateways may incorporate public art, vibrant plantings, informational signage, and distinct paving treatments.



DESIGN LANGUAGE

DESIGN ELEMENTS



 The following section provides an overall design language for both common design elements and areas with special treatments. The recommended design elements constitute a suggested style language to guide subsequent phases of design, rather than specific design specifications.

 Design elements most appropriate for Urban/Activity Areas (UA), Open Space/Natural Area (ON), and Gateways (G) are labeled as such, per the legend; however, if desired, these design treatments may be applied to other segments of the trail, as feasible.



PAVING



Paver edging with asphalt path



Unit pavers

Permeable pavers





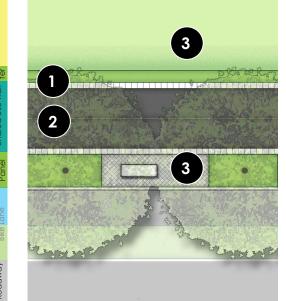
Flexible Porous Paving



Crushed stone

Concrete edging with concrete path

- 1 Paving band at trail edges should be uniform in material, color, and dimensions along the entire length of the Loop Trail. Unit pavers or scored concrete can be used.
- 2 Paving field may be comprised of tightly-jointed unit pavers and asphalt or concrete. Pavers should be used in Urban/Activity Areas to designate higheractivity zones. A dividing line at center of loop trail can be marked with contrasting pavers in paver areas or painted striping in asphalt or concrete areas.
- 3 Permeable pavers or flexible porous paving should be used in amenity areas along the trail. Crushed stone can be considered for amenity areas in Open Space/Natural Areas.
- Special pavement markings such as striping or texturing should be used at merge zones and intersection approaches to alert users of potential conflict points.



Paving Diagram



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PLANTINGS



Continuous line of street trees



Tall grasses and colorful perennials



Layered shrubs, perennials, and trees 24 | LSC Loop Trail Design Guidelines



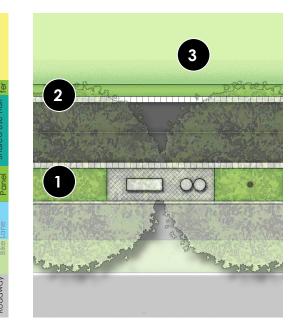
Mown turf





Clustered shade trees at seating/gathering areas

- 1 Tree panels should be planted with a continuous line of shade trees and turf grass. Shrubs and perennial plantings can be considered to enhance amenity zones, particularly within Urban/Activity Areas.
- 2 The 2' buffer should be planted with mown turf only so as to not impede travel along the trail and use as a pull-off shoulder.
- 3 Plantings can vary within additional amenity spaces along the Loop Trail (within or outside of the right-of-way). Shrubs, perennial plantings, and clustered shade trees can be considered to frame seating and activity areas and emphasize gateways. Where parking lots or secondary roadways are adjacent to the trail, wider planted buffers should be used.





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FURNISHINGS AND LIGHTING



Backless benches can be accessed from both sides



Distinctive custom benches

- Furnishings along the Loop Trail should include seating, trash and recycling receptacles, pedestrian lighting, and bike racks.
- A palette of simple metal furnishings should be selected and used consistently along the trail to reinforce the loop identity.
- Custom furnishings may be used in Urban/Activity Areas, Open Space/Natural Areas, and in additional amenity spaces outside of the right-of-way.
- Furnishings can incorporate branding elements associated with the Loop Trail or with destinations along the trail.



Circular bike racks



Pedestrian lights





Distinctive lighting elements



SIGNAGE, WAYFINDING, & BRANDING







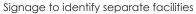


Branding or wayfinding on trail surface



Painted or embedded mile markers









Mounted banners

- Signage should serve a functional role and create an identifiable visual image or brand for the trail.
- Highly visible and distinctive signage should be used to alert passers-by to the presence of the trail.
- Wayfinding elements can be incorporated as signage or on-ground markings.
- Opportunities for institutional or corporate branding may be integrated.





Distinctive signage system 26 | LSC Loop Trail Design Guidelines

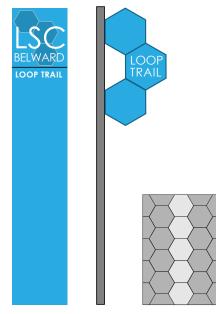


SIGNAGE, WAYFINDING, & BRANDING, CONT.

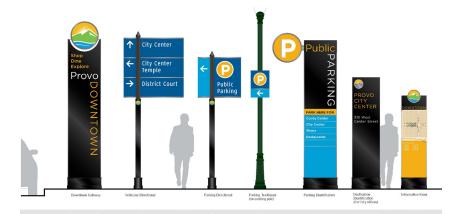


Location-specific wayfinding signage (names shown above serve as examples only and are subject to change)

Wayfinding/branding on the trail surface



Example of a motif repeated in signage and paving



Example of a family of wayfinding elements

- Signage can be used to identify different areas within the Life Sciences Center and help user orient themselves along the Loop.
- An identifiable family of wayfinding elements should incorporate a repeating motif selected to represent the Life Sciences Center.

SO

• Loop Trail wayfinding elements may be coordinated with vehicular and bicycle signage.

LOW-IMPACT DEVELOPMENT OPPORTUNITIES



Shade trees



Permeable pavers and flexible porous paving



Planted bioretention areas



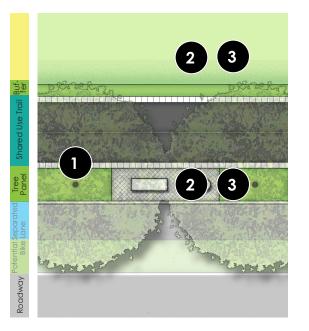
Bioretention in tree boxes



- Preserve existing trees as possible and plant a continuous line of shade trees along trail.
- 2 Permeable pavers flexible porous paving should be used in amenity areas along the trail.
- 3 Bioretention may be incorporated in planting areas along the trail, including tree boxes, planting strips, and larger planted areas.
- Low impact development (LID) should serve as both a stormwater management tool and a placemaking element.



Tree panel on Medical Center Drive should be widened to allow more space between tree and adjacent paving.



PUBLIC ART







Patterns or words embedded in paving

- Public art should be integrated into the loop trail to support placemaking and create a more vibrant, engaging environment.
- Art may be included anywhere along the trail but particularly at Urban/Activity Areas and Gateways
- Art elements can be incorporated into the trail in a variety of forms, including sculptural pieces as focal points, patterns or words embedded in paving, sculptural walls and other vertical elements, or interactive water features.



Sculptural pieces as focal points



Art integrated into walls and other vertical elements



Interactive light or water elements

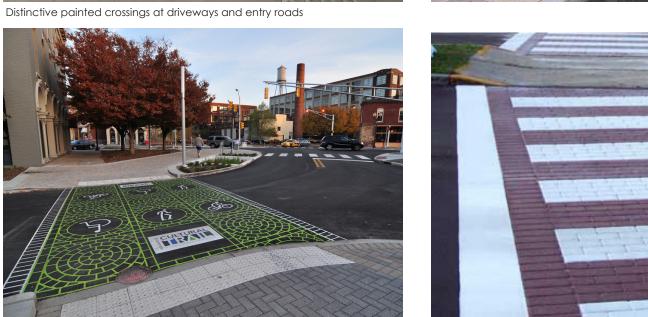




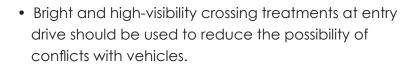
CROSSINGS





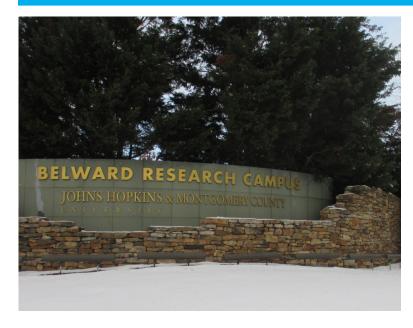


Identifiable crosswalks at road intersections



- Distinctive roadway crossings should be considered to clearly identify the Loop Trail route.
- Driveway crossings should be highlighted by distinctive paving treatments.

WALLS





Existing walls in the Life Sciences Center



Metal guara rail

- Where needed, retaining walls on the inner edge of the Loop Trail should reference existing site walls, if present.
- If required, guard railing should be simple and unobstrusive.
- Seat walls may provide additional seating where feasible.





Potential retaining walls along the trail

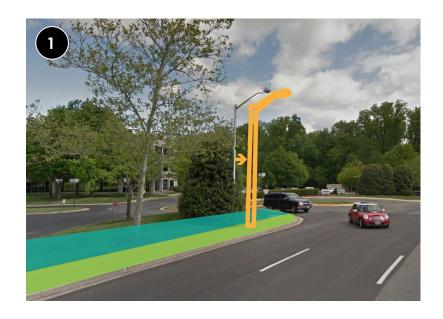
UTILITY CONFLICTS

TYPICAL UTILITY CONFLICTS



OMEGA DRIVE/KEY WEST AVENUE

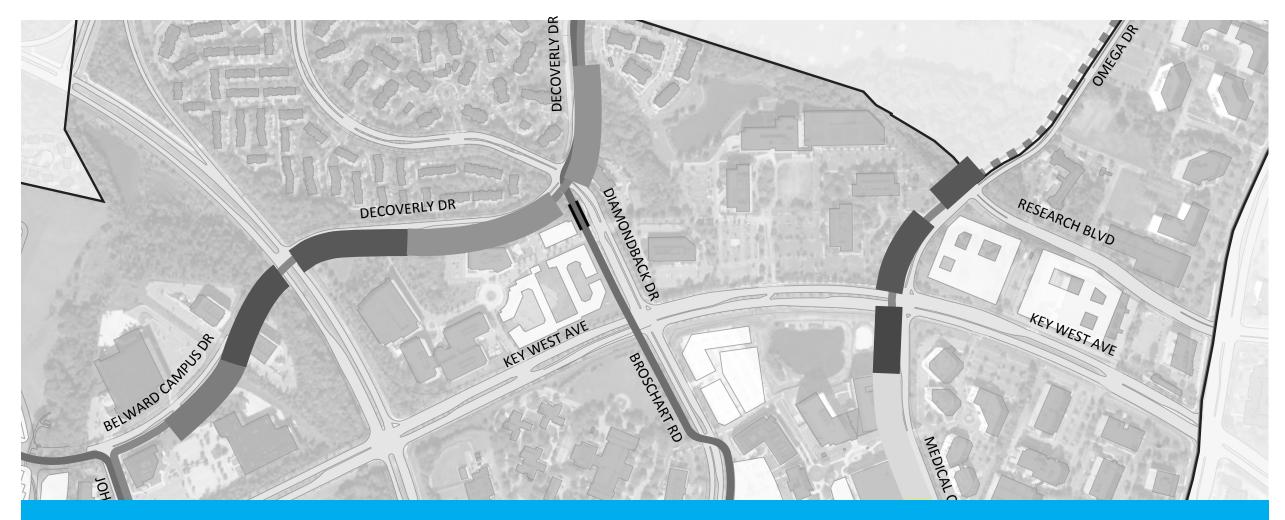






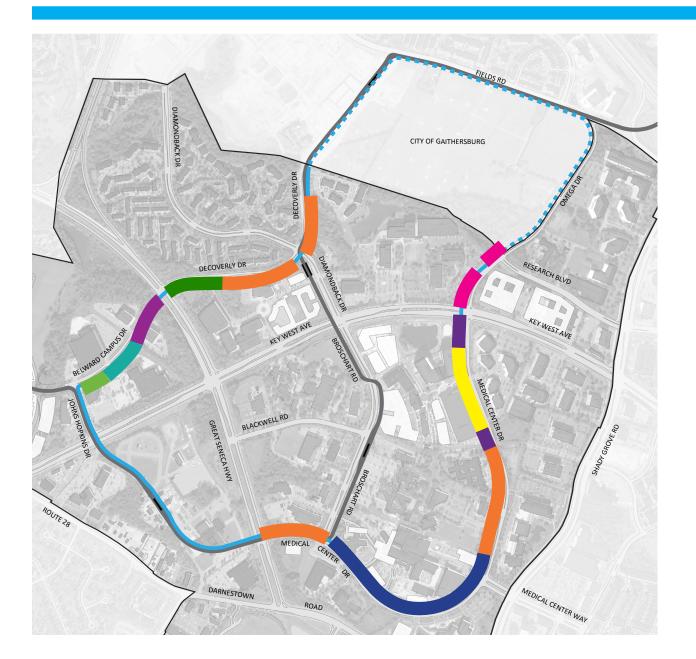
- Where feasible, relocate utilities out of trail path or construct trail around utility covers.
- 2 Where utilities cannot be moved, trail may be narrowed or rerouted.
- Underground utility locations and their potential impact upon the Loop Trail requires further study.

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ADDITIONAL CONSIDERATIONS

EASEMENTS REQUIRED



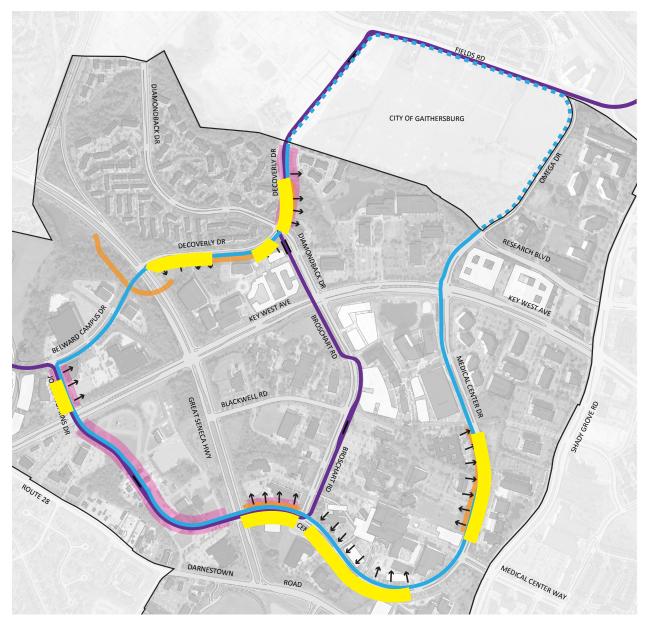
KEY	OWNER	WIDTH	AREA
	JPMCC 2005-CIBC13 Omega Drive LLC	0 - 9.5 LF	2,880 SF
	JBG/Rockville NCI Campus LLC	14.5 - 16.75 LF	4,095 SF
	Johns Hopkins University	12.25 - 15.75 LF	15,826 SF
	Adventist Healthcare, Inc.	7.5 - 17 LF	20,219 SF
	GP Rock One LLC	7.5 - 8.5 LF	1,773 SF
	Maryland Economic Development Corp.	10 - 14.75 LF	6,060 SF
	BMR-9900 Campus LLC	12.5 LF *	678 SF *
	Jaeger, John F TR	2.5 - 6.25 LF	4,804 SF

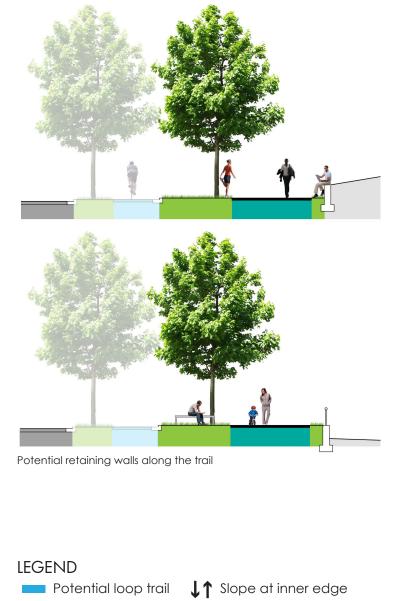
Unused transit easements

* Extension of the trail between Belward Campus Drive and Great Seneca Highway may require a larger easement area.

Note: Easement requirements associated with CCT construction are not included. Greater easements may be required where grade changes are necessary (e.g., slopes, retaining walls, etc.).

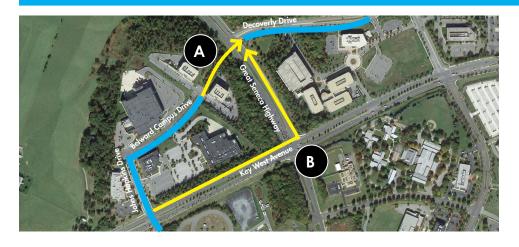
POTENTIAL RETAINING WALL LOCATIONS





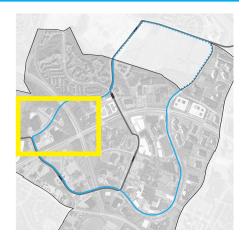
Future CCT

BELWARD CAMPUS DRIVE CONNECTION



A LOOP CONTINUATION PER MASTER PLAN

- Missing roadway connection per GSSC Master Plan between Belward Campus Drive and Great Seneca Highway/Decoverly Drive leaves a gap in the Loop Trail.
- If roadway is constructed per Master Plan recommendation, the Loop Trail should be incorporated according to the Loop Trail Design Guidelines typical alignment and cross section.
- Options A and B, below, provide alternatives to continue the trail which do not require construction of this roadway.



PROS:

- Achieves Master Plan loop trail alignment
- Provides direct connection between Belward Campus Drive and Decoverly Drive

CONS:

- Requires significant regrading and removal of existing vegetation
- May require encroachment into forest conservation easement
- No existing crossing at Great Seneca Highway (would need to be coordinated with SHA)*

*Crossing of Great Seneca Highway may be (1) two-stage unsignalized crossing utilizing existing median, (2) signalized with continuous crosswalk (if area-wide development necessitates a signal at this intersection), or (3) grade separated crossing. To be determined in consultation with SHA.

< 5% slope with switchbacks

B ALTERNATE OR INTERIM ROUTE



≈ 6.5% slope



Existing conditions on Key West Ave and Great Seneca Hwy 36 | LSC Loop Trail Design Guidelines

PROS:

- Does not require significant regrading and removal of existing vegetation
- Does not require new crossing at Great Seneca Highway

CONS:

- Creates "dead end" at Belward Campus Drive
- Does not achieve Master Plan loop trail alignment
- Existing sidewalks may not be sufficient to support shared use*

* If alternate route is determined to be a permanent measure, long-term trail design should conform with typical trail cross section and design language described in this document.



IMPLEMENTATION STRATEGY

IMPLEMENTATION STRATEGY

A strategy for implementing the LSC Loop Trail will necessarily evolve with the trail design, as management and funding needs are explored and resolved and as planned development and construction projects in the area are implemented. The following section describes both immediate actions to advance the trail design and a range of longer-term implementation considerations to ensure effective management and operations, design and branding, and trail phasing and prioritization.

A. IMMEDIATE ACTIONS

Two immediate actions are necessary to ensure that the LSC Loop Trail design process advances without delay and capitalizes on current momentum and support for the trail:

- 1. Allocate funds for Facility Planning in the County's CIP. To ensure that the LSC Loop Trail is included in the CIP, it is recommended that the County project team and the GSSC Implementation Advisory Committee immediately begin introducing the project to key County decision-makers and to the public, in order to build support for the project in the near term and ensure that Facility Planning is funded under the CIP to be adopted in early 2016. Specific actions include:
 - Meet with the County Executive's Office to introduce the project and share the concept design.

- Meet with members of the County Council to introduce the project and its current status.
- Conduct a public roll-out of the project, including public presentations to raise awareness of and support for the LSC Loop Trail. Presentations could include a presentation to the Planning Board, relevant Council committees (i.e., Transportation, Infrastructure, Energy and Environment) and to the general public at public meetings and events.
- Prepare a formal recommendation letter, from the GSSC Implementation Advisory Committee to the County Executive, recommending that facility planning for the LSC Loop Trail be included in the CIP.
- Solicit additional letters of support from key stakeholders and property owners.
- Meet with County agencies, such as the Department of Parks and MCDOT, that could potential oversee the design and construction process.
- 2. Identify and/or form a Steering Committee to guide and oversee subsequent phases of design and implementation. As the project transitions from design guidelines to the Facility Planning phases, final design and construction documents, it will be important to identify an entity to champion the

project and provide the necessary oversight. As the GSSC Implementation Advisory Committee has served this role to date during the concept design phase, in collaboration with Planning Department staff, this committee (or a subgroup composed of its members) is a logical entity to continue to the champion the project. Alternatively, a newly-formed Steering Committee composed of a representative cross-section of area stakeholders or a combination of Advisory Committee representatives and other stakeholders are other options.

B. FACILITY PLANNING

In addition to advancing the LSC Loop Trail to a more detailed level of design, the Facility Planning process will need to include further study and refinement of a number of unresolved design issues. In addition, there will be a need for further coordination with other agencies, property owners and key stakeholders to coordinate the Loop Trail design process with other development and construction projects as well as with residents of the surrounding communities. Specific actions include:

- 1. Conduct additional studies as needed as part of the Facility Planning process. Issues requiring further attention at a more-detailed level of design include:
 - Land Acquisition/Dedication: Confirm and clarify the amount of additional land outside the public

right-of-way that is required to accommodate the trail alignment, associated buffers and amenity spaces, any required grading or retaining walls, and any required stormwater management facilities.

- Easements: Identify and mitigate any conflicts with utilities within public utility easements; obtain legal confirmation that unused transit easements and open space easements along the trail route may be utilized to accommodate the trail alignment and/or associated amenities; and identify any additional easements required to accommodate stormwater management facilities.
- Utilities: Identify options for mitigating conflicts with other underground and above-ground utilities along the trail route.
- Retaining Walls and Grading: Study the need for and land area affected by grading or retaining walls required to accommodate the trail alignment.
- Stormwater Management (SWM): Conduct a stormwater management study to assess how stormwater management can be accommodated within the right-of-way and whether additional land is required, based on existing state and local stormwater management requirements.

- Belward-to-Decoverly Connection: Further study options to complete the trail loop between Belward Campus Drive and Decoverly Drive, across Great Seneca Highway, based on traffic, safety, engineering and environmental considerations.
- 2. Coordinate subsequent phases of design with relevant agencies, property owners, and community stakeholders, including:
 - CCT / MTA, to coordinate the design of the trail with design and construction of the CCT.
 - Department of General Services, to coordinate the trail design with planning and development of the PSTA property.
 - MCDOT / SHA, to coordinate crossings of Key West Avenue and Great Seneca Highway, as well as potential interim or alternative solutions to the Belward-to-Decoverly connection along Key West Avenue and Great Seneca Highway.
 - Property owners along the trail route, to coordinate necessary land acquisition and developer/owner contributions.
 - The surrounding community, including residents of Montgomery County, Rockville and Gaithersburg, as well as the Universities at Shady Grove.

• The Montgomery County Planning Department, to coordinate the trail design with the County's Bicycle Master Plan update and a recommended separated bike lane parallel to the trail alignment.

A critical element of consideration in selecting the County agency responsible for the Facility Planning phase of the project will be the ability of that entity to carry out the concept design as defined in this document. This will require a level of flexibility to depart from typical County facility standards in order to create a Loop Trail that sets a new amenity standard for the county, the region, and the country.

C. MANAGEMENT, MAINTENANCE, OPERATIONS AND FUNDING

As the LSC Loop Trail advances through subsequent phases of design, it will be important to identify (1) how and by whom the Loop Trail design, construction and operations will be managed, as well as which entities will be responsible for ongoing maintenance of the trail and (2) a strategy for funding the Loop Trail and the range of funding opportunities to be pursued. Potential management entity options for the LSC Loop Trail include:

 A non-profit corporation, such as those established for the Indianapolis Cultural Trail, Atlanta BeltLine, and The 606 (Chicago), as well as numerous other "Friends of" groups around the country.

- A Business Improvement District, Benefit Assessment District or equivalent, in which property owners pay additional taxes or assessments to fund area improvements and maintenance.
- A County agency. Candidate agencies discussed during the concept design process include the Department of Parks and/or MCDOT.
- A public-private partnership, which may include one or more of the above entities.

The Facility Planning phase of design could be led by a County entity that then transfers or shares responsibilities to a private or non-profit entity (a public-private partnership).

It is anticipated that the appropriate management structure and a funding strategy will be determined as the trail design advances and once the full cost of the project can be estimated. Potential funding opportunities include:

- Funding all or a portion of the cost of the project in the county CIP
- Developer contributions
- Owner contributions

- Grant funding, including federal grants (i.e., TIGER grants), state grants (i.e., Maryland Bikeways Program, Maryland Transportation Alternatives Program) and grants from private foundations.
- Sponsorship opportunities and naming rights for locations or segments along the trail route.

D. DESIGN AND BRANDING

As individual segments or phases of the trail are constructed, it will be important to have a carefullydeveloped set of design guidelines in place to ensure overall design coordination, consistency and distinctiveness, in order for the trail to "read" as a single, coordinated amenity. Recommended actions include:

- 1. Prepare guidelines to ensure consistent selection and incorporation of design elements throughout the trail route and ways to preserve the distinctiveness of the design within the determined project budget. Specific design elements requiring coordination include:
 - Paving and other hardscape elements
 - Lighting / furnishings
 - Plantings/landscape
 - Signage
 - Public art

To help control costs while still establishing an identifiable and recognizable design character, the concept design recommends concentrating higher-cost design treatments (i.e., special pavers, custom furnishings, and larger amenity spaces) in the most prominent locations—urban areas, gateways, activity nodes—and applying a less-expensive, though still distinctive and visually appealing, design treatment (i.e., asphalt or concrete with edging and standard furnishings) to other segments of the trail.

- 2. Coordinate the trail with an overall image and brand identity. Ideally, such a brand identity would extend beyond the Loop Trail and would begin with the establishment of a brand strategy for the entire Life Sciences Center district.
- 3. Establish a design and marketing approach to balance the collective identity and image of the Loop Trail with the individual needs and design expressions of property owners along the trail route (through sponsorship and naming rights, signage, art and other expressions of individual property owner identity).

E. PHASING AND PRIORITIZATION

The sequence and timing of trail implementation—as well as whether the trail is constructed all at once or in phases—is dependent, in part, on the implementation of other development and construction projects in the area, available funding for the trail, infrastructure

requirements and other strategic considerations. Nevertheless, a range of factors should be considered when determining the phases and priorities for trail development. Potential phasing criteria include:

- The timing of new development and construction, including: construction of the CCT transit system and stations, development of the PSTA property and the roadway through the property, and the implementation of other planned development on properties in the vicinity of the trail alignment.
- The relative importance of individual trail segments as a connectors to destinations and other trails in the surrounding area.
- The visibility and prominence of individual trail segments, to ensure that any early phases of the trail "advertise themselves" and begin to establish a distinctive identity for the trail and the LSC as a whole.
- Infrastructure requirements, such as the Master Plan-recommended Belward-Decoverly roadway connection, stormwater management and culvert upgrades adjacent to the trail, utilities, roadway reconstruction as part of the CCT, and any other necessary preconditions to constructing certain segments of the trail.

Potential Pilot Project

To generate excitement about the trail and "test" the design, the County and any other implementing entities may wish to consider a pilot (or demonstration) project to construct one initial segment of the trail. One candidate segment to consider for a pilot project is the segment along Medical Center Drive adjacent to the National Cancer Institute. This segment is particularly relevant as a pilot project given its high profile (National Cancer Institute as an anchor), adjacent commercial uses, lack of technical constraints to constructing the trail, existing wide tree panel (which could accommodate amenity spaces within the public right-of-way), existing mature shade trees, and its visibility from Key West Avenue.

ATTACHMENT 2

Life Sciences Center Loop Trail (P501742)

Category Sub Category Administering Agency Planning Area	Transportation Pedestrian Fac Transportation Gaithersburg		ays		Date Last Modified 11/17/14 Required Adequate Public Facility Relocation Impact Status Planning Stage							
		Total	Thru FY15	Est FY16	Total 6 Years	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	Beyond 6 Yrs
				EXPENDIT	A	Area		· · · · ·			1 1 4.40	
Planning, Design and Supervision		400	0	0	400	50	350	0	0	0	0	o
Land		0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Ut	ilities	0	0	0	0	0	0	0	0	0	0	0
Construction		0	0	0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0	0	0
	Total	400	0	0	400	50	350	0	0	0	0	0
				FUNDIN	G SCHEDU	LE (\$000s)				,	*****	
Current Revenue: General		400	0	0	400	50	350	o	0	0	о	0
•	Total	400	0	0	400	50	350	0	0	0	0	0

APPROPRIATION AND EXPENDITURE DATA (000s)

Expenditure / Encumbrances			0
Cumulative Appropriation			0
Transfer			0
Supplemental Appropriation Request	manananana		0
Appropriation Request Est.	FY	18	0
Appropriation Request	FY	17	400

Date First Appropriation FY 16	
First Cost Estimate	
Current Scope FY 17	400
Last FY's Cost Estimate	. 0

Description

The project provides for the planning of the of 3.5 mile Life Sciences Center Loop Trail, a 12 to10-foot wide shared use path that is a central feature of the Life Sciences Center (LSC) area of the Great Seneca Science Corridor Master Plan. The Life Sciences Center Loop Trail is a critical staging element to increasing the non-auto driver mode share (NADMS) prior to the expansion of stage 2 of the master plan's development. The shared use path will widen existing sidewalks along certain existing or planned streets in the Life Science Center (Omega Drive, Medical Center Drive, Johns Hopkins Drive, Belward Campus Drive, Decoverly Drive) as well as new roadways through the Public Safety Training Academy (PSTA) property and Crown Farm. The planning and design will create a trail design that is able to respond to varying right-of-way widths and other local conditions while providing a trail system that is recognizable and will attract walkers. runners and bicycle riders and will contribute to the LSC's sense of place. The design will enable both private developers and the county to build their respective pieces of the LSC loop in a consistent manner.

Estimated Schedule

Preliminary design will begin FY 17 and be completed in FY 18.

Justification

This project will enhance and improve pedestrian and bicycle mobility, help meet master plan non-auto-driver mode share (NADMS) goals and support the critical staging element to advance to stage 2 of the master plan's development.

Other

The Executive asserts that this project conforms to the requirements of relevant local plans, as required by the Maryland Economic Growth, Resource Protection, and Planning Act.

Disclosures

A pedestrian impact analysis has been completed for this project.

Coordination

Chambers of Commerce, City of Gaithersburg, City of Rockville, Department of General Services, Department of Permitting Services, Maryland-National Capital Park and Planning Commission, Maryland State Highway Administration, Maryland Transit Administration, Regional Service Centers, Universities at Shady Grove, Urban Districts, Utility Companies, Washington Metropolitan Area Transit Authority

ATTACHMENT 3

Public Hearing Issues Worksheet 1

	Loop Design Guid	ennes		Staff Board				
	Issue to Be Resolved			Response	Board Decision			
D	esign Guidelines							
	Trail speed limit	Public Comment	Suggest lower posted speed limit for LSC Loop than separated bike lanes.	Many bicycles do not have speedometers, so it is hard for a rider to know their speed. Most faster cyclists will prefer the adjacent separated bike lanes.				
•	Visibility of obstacles	Public Comment	Make certain obstacles in or adjacent to trail are highly visible.	Agreed.				
5.	Paving surface options	Public Comment	Permeable pavers are not good for bikes.	The facility plan will consider paving type. Performance measures should be developed as part of the facility plan to guide selection of pavement type.				
•	Public Art	Public Comment	Use a consistent base for art work for uniformity.	Good suggestion, but art is highly variable and individual. Not all art work may be appropriate for a standard base. Public art work proposed to compliment the LOOP should be reviewed by the Montgomery County Public Art Panel.				
5.	Maintenance	Public Comment	Suggested reference: Winter Sidewalk Maintenance by the University of Delaware.	Noted. We will forward the reference for use in developing the facility plan.				
j.	General	Public Comment	Ensure that signage, pavement marking and striping is consistent with the Md. Manual of Uniform Traffic Control Devices (Md. MUTCD).	Noted. Graphics in the Design Guidelines are examples to consider. Signage, pavement marking and striping will be determined in the facility plan.				
•	Education	Public Comment	Consider promoting bicycle education for adults so as to not be so dependent on engineering solutions to promote bicycling. Montgomery College Rockville campus has a 1 credit Introduction to Bicycling class.	Noted. While beyond the specific scope of the LSC Loop Trail project, staff hopes that the focus on providing high quality facilities will foster interest in, and appreciation for walking and cycling.				
	Encourage bicycling	Public Comment	Look at ways to promote/encourage bicycling. Lamp post banner are inexpensive and effective, for example.	Noted.				
	Protected bike lanes	Public Comment	Not all bicyclists need protected bike lanes. Currently State law requires bicyclists to use bike lanes. Consider calling bike lanes "cycle tracks."	The Montgomery County Council adopted the term "separated bike lanes" in 2014. Potential changes to the State code are being discussed that would allow cyclists to ride in the road where there are bike lanes.				
0.	. General	Public Comment	Brochure seems like it is more pedestrian- oriented than for bicyclists. If for both modes show more bicyclists and bike amenities (e.g. Bike Route signs).	Noted.				
.1.	. On-road facilities	Public Comment	Ensure on-road facilities are still available for bicyclists.	Agreed. This is the goal of both the LSC LOOP Design Guidelines, and the Bicycle Master Plan recommendations for this area.				
2.	. Document	Public Comment	Each page should be numbered.	Agreed.				

LSC Loop Design Guidelines

.SC	Loop Design Guid	elines		Public Hearing	ng Issues Worksheet 2
	Issue to Be Resolved			Staff Response	Board Decision
13.	Follow Md MUTCD	Public Comment	Revise sentence under "Recommended Offsets and Dimensions" to read "The Loop Trail should follow Maryland Manual of Uniform Traffic Control Devices and County requirements."	Noted.	
14.	Crosswalk color	Public Comment	Page 19, titled "Drive Crossings, Gateways, and Intersections," the crosswalk colors should be green, not blue. Green is likely the color to be adopted in the next edition of the Federal MUTCD. Blue is reserved for disabled uses.	Agreed. Pavement marking and striping will be determined in the facility plan.	
15.	Mile markers	Public Comment	Under title "Signage, Wayfinding and Branding," do not use painted mile markers on pavement if intended to be seen by bicyclists. Follow MUTCD guidance instead in Chapter 9.	Noted. The facility plan will determine the wayfinding approach.	
16.	Crossings	Public Comment	Under "Crossings," upper right hand photo should be green not blue (see comment above).	Agreed. Pavement marking and striping will be determined in the facility plan.	
17.	Development	Public Comment	Encourage ground floor shopping, particularly restaurants adjacent to loop trail and provide tables and chairs for eating.	The Great Seneca Science Corridor Master Plan lays out the vision for development in the Life Sciences Center. The Master Plan particularly encourages development of commercial nodes, including restaurants, around the CCT Transit Stations and associated plazas near or adjacent to the LSC Loop Trail in several locations.	
18.	Amenities	Public Comment	Consider water features, particularly misters for hot, humid days.	Noted. Amenities will be determined in the facility plan.	
19.	Safety	Public Comment	Concern over number of crossings, especially of major roads like Key West Avenue and Great Seneca Highway, and effect on safety of users.	Safety will be a major factor in design during facility planning. Safety should be enhanced over the current condition, where there are few formal accommodations for cyclists and pedestrians.	
Age	ency Comments			· · · · · ·	
1.	Crosswalks	MCDOT Comment	Crosswalk ramps should be ADA compliant.	Agreed. Crosswalk ramps will be determined in the facility plan.	
2.	Amenities	MCDOT Comment	Permanent amenities such as benches, walls, steps are generally not permitted in the right-of- way.	Noted. This subject merits further discussion during formulation of the facility plan. As this is a new kind of facility, new approaches to amenities and maintenance should be part of ongoing discussions.	
3.	Paving	MCDOT Comment	Any hardscape or paving that is not standard and in the County right-of-way is usually maintained by the developer. Who will pay for the maintenance of the different streetscape improvements?	Noted. The ultimate disposition of maintenance responsibilities should be determined by the time the facility plan is completed. The Implementation Strategy in the Design Guidelines suggests creative and cooperative approaches to determining maintenance responsibilities. As this is a new kind of facility, new	

.SC	Loop Design Guide	elines		Public Heari	ng Issues Worksheet 3
	Issue to Be Resolved			Staff Response	Board Decision
				approaches to maintenance should be part of ongoing discussions.	
4.	Transit info.	MCDOT Commuter Services Comment	Real time transit info: Discussion of Urban/Activity Areas near transit stops & building entrances should include recommendation to include real time signage for transit stops at significant interchange points. Also could be included in discussion of Gateways and Info. Kiosks.	Noted. These kinds of amenities should be considered in the facility plan, in coordination with MTA. Could be stand-alone devices or could direct transit riders to a smartphone app.	
5.	Drinking water	MCDOT Commuter Services Comment	In discussion of Amenity Areas and Furnishings should include recommendation that drinking water be provided along the LSC Loop, incorporated into infrastructure, particularly in areas where larger gathering may occur and at major transit interchange points.	Noted. Drinking water amenities can be considered in the facility plan.	
5.	Restrooms	MCDOT Commuter Services Comment	Any opportunity to address provision of those along the LSC Loop? (Even if just as a future amenity that we should try to find a way to provide – there are self-contained units available but of course still presents maintenance/servicing issues.)	Noted. Provision of restroom facilities can be considered in the facility plan.	
7.	Paving/signage	MCDOT Commuter Services Comment	Consider highlighting opportunity for differentiated paving/pavement markings for cycling areas vs. pedestrian areas, in addition to signage.	Noted. The facility plan will consider paving type and signage. Performance measures should be developed as part of the facility plan to guide selection of pavement type, including consideration of differentiated pavement appearance to distinguish cycling vs. pedestrian areas.	

End Notes

ATTACHMENT 4

GSSC Implementation Advisory Committee (IAC)

Casey Anderson, Chair Montgomery County Planning Board M-NCPPC 8787 Georgia Ave. Silver Spring, MD 20910

Dear Chairman Anderson,

For the past year, the GSSC Implementation Advisory Committee (IAC) has been reviewing the Design Guidelines for the LSC Loop trail and providing feedback to the consultant who has been developing the design under the direction of Planning Department staff. We now urge the Planning Board to approve these LSC Loop Design Guidelines as an amendment to the Urban Design Guidelines for the Great Seneca Science Corridor Master Plan.

Since our committee began meeting to consider the implementation of the Great Seneca Science Corridor Master Plan, it has been clear that transforming the Life Sciences Center from an auto-oriented, suburban office park into a dynamic live-work center will be challenging. One key to catalyzing the transformation is the provision of an attractive non-auto transportation infrastructure to give workers and residents a viable alternative to driving. Both the LSC Loop and the area-specific recommendations in the new Bicycle Master Plan create a framework for bringing this non-auto transportation system to life, and the GSSC IAC strongly endorses both efforts.

In addition, the LSC Loop Design Guidelines establish a vision for a facility that will become a unique placemaking feature in the Life Sciences Center. As drawn, the Guidelines present options for creating much more than a simple shared-use path. The trees and planting areas, amenity spaces, public art, and possible branding opportunities offer the potential to create a feature that will attract attention to the Life Sciences Center and enhance the desirability of the area as a place to live and work.

The IAC further urges that, upon approval of this amendment to the GSSC Urban Design Guidelines, funding be established in the County's six-year CIP to complete a facility plan for the LSC Loop. This will permit the refinement of cost estimates sufficient to include funding in the CIP for project construction. Completion of a facility plan and creation of a CIP item will also put the LSC Loop in position to apply for construction grants and establish a mechanism to receive and distribute outside funds (grants and contributions) to allow creative financing of the project.

The GSSC IAC has appreciated the opportunity to work with the Planning Department on creating these Design Guidelines and providing input into the Bicycle Master Plan recommendations for the Life Sciences Center.

Sincerely,

R (Feit

Marilyn Balcombe Phil Usatine Co-chairs, GSSC Implementation Advisory Committee (IAC)