

# Montgomery Planning

## CLIMATE ASSESSMENT FOR ZTA 24-03, OVERLAY ZONES – GREAT SENECA LIFE SCIENCES (GSLs) OVERLAY ZONE

### PURPOSE OF CLIMATE ASSESSMENTS

The purpose of the Climate Assessments is to evaluate the anticipated impact of master plans and zoning text amendments (ZTAs) on the county's contribution to addressing climate change. These assessments will provide the County Council with a better understanding of the potential climate impacts and implications of proposed master plans and ZTAs, at the county level. The scope of the Climate Assessments is limited to addressing climate change, specifically the effect of land use recommendations in master plans and ZTAs on greenhouse gas (GHG) emissions and sequestration, and how actions proposed by master plans and ZTAs could improve the county's adaptive capacity to climate change and increase community resilience.

While co-benefits such as health and cost savings may be discussed, the focus is on how proposed master plans and ZTAs may impact GHG emissions and community resilience.

### SUMMARY

The Montgomery County Planning Board anticipates that The GSLs Overlay Zone will have moderate negative impacts and slight to moderate positive impacts on the County's goals of addressing greenhouse gas emissions, and slight positive and negative impacts on carbon sequestration. While the GSLs Overlay Zone will have both positive and negative impacts on resilience and adaptive capacity, on balance Planning Staff believes that there will be an overall positive impact on ensuring the resilience and adaptive capacity of the Great Seneca Plan's Life Sciences Center community.

### BACKGROUND AND PURPOSE OF ZTA 24-03

ZTA 24-03 creates an overlay zone to implement the land use recommendations in the Great Seneca Plan: Connecting Life and Science (GSP). The overlay zone specifically seeks to achieve the overarching purpose of the GSP to:

- Attract and retain the life sciences industry.
- Incentivize the production of housing.

- Achieve a complete community that includes a range of land uses, jobs, diverse housing options, services, and amenities that meet the needs of people within a 15-minute walk, bike ride, roll, or other trip through safe, accessible, and reliable transportation infrastructure.
- Implement recommendations of the GSP including land uses, densities, building heights, parking, and public benefits.

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## VARIABLES THAT COULD AFFECT THE ASSESSMENT

The following climate-related variables that were considered in this assessment as impacted by the ZTA. Climate related variables include the various greenhouse gas reduction, sequestration, resilience, and adaptive capacity activities in the climate assessment checklists (Tables 1 and 8) contained in the *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County*.

### CLIMATE-RELATED VARIABLES

Transportation- Vehicle miles traveled, Number of trips, Non-vehicle modes of transportation, Public transportation use.

Building Embodied Emissions – Building certifications, Building square footage, Building life span, Pavement infrastructure, Material waste produced, Use of green building materials.

Energy – Electricity usage, Electricity efficiency.

Land Cover and Management – Area of forest, Area of non-forest tree canopy, Area of green cover, Implementation of nature-based solutions.

### RESILIENCE-RELATED VARIABLES

Exposure-Related Factors – Activity in flood-risk areas, Activity in urban heat island, Exposure to other hazards (e.g. storms, wind).

Sensitivity-Related Factors – Change to forest cover, Change to non-forest tree canopy, Change to quality or quantity of other green areas, Change to impacts of heat, Change in perviousness, Change in stormwater management system treatments, Change to water quality or quantity, Change to air quality, Infrastructure design decisions.

### ADAPTIVE CAPACITY-RELATED VARIABLES

Change to accessibility or prevalence of community and public spaces, Change to emergency response and recovery capabilities, Change in access to transportation, Change to accessibility of local food sources and other goods, Change to community connectivity, Change in distribution of resources and support.

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## ANTICIPATED IMPACTS

Based on guidance in *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County*, slight to moderate positive and negative impacts on greenhouse gas emissions, sequestration, community resilience, and adaptive capacity are anticipated as described in more detail below.

### **Greenhouse Gas Emissions Quantitative Assessment Summary**

Because the GSLS Overlay Zone is intended to implement the land use recommendations of the Great Seneca Plan, the overlay zone is anticipated to have many of the same impacts on greenhouse gas emissions as those identified in the Climate Assessment for the Life Sciences Center section of the Great Seneca Plan, namely that the overlay zone will have moderate negative impacts and slight to moderate positive impacts on greenhouse gas emissions. The Quantitative Assessment done for the Great Seneca Plan estimates that total greenhouse gas emissions in the Life Sciences Center will be approximately 26% higher at buildout than the emissions from buildout of the existing GSSC Master Plan. This is because the Great Seneca Plan proposes to replace large areas of surface parking with new development and redevelopment of existing properties. While this is a much more efficient use of land, larger numbers of workers and residents living and working in the Life Sciences Center will use more energy for the heating, cooling and lighting of their homes and offices and for transportation to, from and within the LSC. Because emissions are directly associated with energy use, more emissions will result. Larger numbers of people will also generate larger amounts of material waste, and there are emissions associated with the creation, transport, and disposal of those materials.

Breaking out the components of the emissions assessments for the Great Seneca Plan, building energy use constitutes the largest source of greenhouse gas emissions under the forecast Master Plan buildout (about 42%), followed by transportation emissions (39%), then emissions from building embodied energy (12%) and building waste (7%).

These greenhouse gas emissions estimates are based on average figures for similar building types, land uses and transportation systems in comparable regions. Emissions estimates include existing buildings, transportation systems, and processes for the creation and disposal of material waste. It should be noted that the Life Sciences Center contains a concentration of land uses that require high energy inputs, such large computer systems and the high-tech health care systems at Shady Grove Adventist Hospital. The emissions projections also assume that the energy being consumed continues to be generated through the burning of fossil fuels. Transitioning to clean energy is the key to eliminating greenhouse gas emissions from our buildings and transportation systems.

The climate emission impacts specific to ZTA 24-03 result from the ability to achieve higher development densities on some sites by providing certain public benefits in exchange for the increased density. The GSLS overlay zone allows developments to increase the density allowed under their approved zoning, not to exceed 200 percent of the mapped FAR for the site.

As long as the energy needed to supply the additional growth enabled by this ZTA is generated by burning fossil fuels, the result of the additional density will be increased GHG emissions, but there is insufficient data to quantitatively assess the amount of the increase due to uncertainty regarding which sites might or might not seek incentive density, just how much incentive density might be used in each development, and whether the additional density would be residential or non-residential development. Incentive density becomes an option for developments that exceed 0.5 FAR, and the incentive density options in the ZTA allow increases in increments of 0.25 FAR up to the maximum of 200 percent of mapped density. In addition to not knowing the extent to which developments might opt to use incentive density and the kind of developments that might result, quantifying the transportation emissions would require that these increases be modeled to determine the resulting VMT changes.

Many of the incentive density public benefits offered in the GSLS Overlay Zone should reduce GHG emissions, in some cases substantially. These public benefits were assessed qualitatively for their potential impacts on climate mitigation, adaptation and resilience.

### **Greenhouse Gas Emissions, Carbon Sequestration, and Drawdown Qualitative Discussion**

The recommendations of the GSLS Overlay Zone affect the climate impacts within the Life Sciences Center in two primary ways: first, by creating opportunities for additional development density, as described in the previous section of this Assessment; and second, by creating a menu of public benefits to be provided in exchange for the increased density to achieve important County planning priorities, including addressing climate mitigation, adaptation and resilience goals. Optional density is awarded from four tiers of benefits, each tier representing an increase the value of the benefits provided and optional density granted.

There are approximately 13 public benefit options that address one or more of the climate factors in the Climate Assessment protocol available in Tier 1 that could be used to provide 0.25 FAR of optional incentive density for a project. Another 12 public benefit options are available in Tier 2 that could provide 0.50 FAR of optional incentive density, 11 public benefit options providing 1.00 FAR of incentive density in Tier 3, and 12 public benefit options providing all allowed incentive density.

Through these public benefits, a project could reduce greenhouse gas emissions associated with building embodied energy, building operational energy use, and/or transportation-related emissions. Among the Tier 4 public benefits are highly desirable “reach” goals of creating net-zero buildings and generating or utilizing 100 percent clean renewable energy.

Attached to this document is a key that numbers the public benefits that address climate change emissions, adaptive capacity and resilience (see Attachment B2).

Public Benefits that help reduce Transportation Emissions include:

- Tier 1: #1, 2, 3, 4, 5
- Tier 2: #14, 15, 16, 17
- Tier 3: #26, 27, 28
- Tier 4: #37, 38, 39, 40

These public benefits primarily incentivize expanding and enhancing the transportation network and increasing options, making travel by walking, biking, and rolling more attractive and efficient.

Public Benefits that help reduce Building Embodied Emissions include:

- Tier 1: #10, 13
- Tier 2: #22, 25
- Tier 3: #33, 36
- Tier 4: #45, 48

These public benefits incentivize adaptive reuse of buildings and achieving higher levels of sustainable building certifications (primarily LEED) that promote the use of sustainable and recycled building materials.

Public Benefits that help reduce Building Energy Emissions include:

- Tier 1: #7, 8, 9, 10, 11
- Tier 2: #19, 20, 21, 22, 23
- Tier 3: #30, 31, 32, 33, 34
- Tier 4: #42, 42, 44, 45, 46

These public benefits incentivize achieving higher levels of sustainable building certifications (primarily LEED), achieving greater building energy conservation, and generating and using clean renewable energy.

### **Adaptive Capacity and Community Resilience**

There are also public benefits that address climate goals related to adaptive capacity and resilience, including benefits that reduce exposure to heat island effect and flood risk, reduce the degree to which people are affected by climate impacts (sensitivity-related factors), and increase adaptive capacity by improving community connectivity and cohesion. These public benefits can improve emergency response capability, access to transportation options, and access to public services through expansion and enhancement of transportation systems, including improved networks for walking, biking or rolling. All of these options would contribute to creating a community that is more resilient to the disruptions caused by climate change.

Public Benefits that help mitigate Exposure-Related Factors include (see Attachment 1):

- Tier 1: #2, 3, 4
- Tier 2: #14, 14,16
- Tier 3: #26, 27, 28
- Tier 4: #37, 38

These public benefits primarily incentivize creating facilities for walking, biking and rolling that use tree canopy and other landscape features to protect people from heat island effect and flooding.

Public Benefits that help mitigate Sensitivity-Related Factors include:

- Tier 1: #2, 3, 4, 11, 12
- Tier 2: #15, 16, 23, 24
- Tier 3: #27, 28, 29, 34, 35
- Tier 4: #38, 41

These public benefits primarily incentivize the creation and expansion of green spaces, trees and landscaping to reduce the degree of heat island effect and flooding.

Public Benefits that help promote Adaptive Capacity include:

- Tier 1: #1, 2, 3, 4, 6
- Tier 2: #14, 15, 18
- Tier 3: #26, 27, 28, 29
- Tier 4: #37, 38, 39, 41

These public benefits primarily incentivize the creation and expansion of spaces where people can gather, meet, recreate and form social bonds that promote support networks, as well as expanding access to public facilities and facilitating emergency response.

### **Other Public Benefits**

There are also other public benefits available in each Tier that do not address climate change issues, but provide benefits that advance other County priorities. It is possible under this system to obtain all desired optional density without choosing public benefit options that improve the County's response to climate change. In these cases, the only mitigation provided for the increased emissions associated with the incentive density increases would be the Master Plan recommendations for mitigating climate change impacts, as noted in the Climate Assessment for the Great Seneca Plan.

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**RELATIONSHIP TO GREENHOUSE GAS REDUCTION AND SEQUESTRATION ACTIONS  
CONTAINED IN THE MONTGOMERY COUNTY CLIMATE ACTION PLAN (CAP)**

The CAP details the effects of a changing climate on Montgomery County and includes interagency strategies to reduce greenhouse gas emissions and climate-related risks to the county's residents, businesses, and the built and natural environment.

The CAP includes 86 climate actions as a pathway to meet the county's ambitious climate goals while building a healthy, equitable, and resilient community. Each county department has responsibilities for specific climate actions that are relevant to the work of that department. The following section provides a list of the CAP action items relevant to Montgomery Planning and addressed within the Great Seneca Plan. While it is not possible to know the rate of implementation, development, funding, or other implications, each action item was rated high, medium, or low for its potential to reduce GHG gasses or sequester carbon.

#### Clean Energy Actions

- E-3: Promote Private Solar Photovoltaic Systems. Medium. The ZTA includes public benefits for optional density increases in exchange for using of on-site alternative energy systems in the development.
- E-4: Public Facility Solar Photovoltaic Installations and Groundwork. Medium. The ZTA includes public benefits that incentivize the use of solar photovoltaic energy from the regional catchment area.

#### Building Actions

- B-7: Net Zero Energy Building Code for New Construction. Medium. The ZTA includes public benefits that incentivize creating Net Zero developments.

#### Transportation Actions

- T-2: Expand Active Transportation and Micro-mobility Network. High. The ZTA includes public benefit incentives to construct bicycle lanes, improve sidewalks, and increase access, stations, and frequency of public transit.

#### Carbon Sequestration Actions

- S-2: Retain and Increase Tree Canopy. Medium. The ZTA includes public benefit incentives that will tree canopy cover on open space, within the right-of-way, and on new development.

#### Climate Adaptation Actions

- A-7: Green Public Spaces. High. The ZTA includes public benefit incentives to increase and enhance green public spaces.
- A-10: Green Infrastructure. High. The ZTA includes public benefits that incentivize provision of green infrastructure.
- A-15: Water Supply Protection. High. The ZTA includes public benefits that incentivize reductions in imperviousness and increases in tree cover and green space to help protect watersheds that contribute to the County's water supply.

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## RECOMMENDED AMENDMENTS

The Climate Assessment Act requires the Planning Board to offer appropriate recommendations such as amendments to the proposed ZTA 24-03 or other mitigating measures that could help counter any identified negative impacts through this Climate Assessment.

Montgomery Planning is pursuing a new approach to awarding incentive density in exchange for public benefits through the Incentive Zoning project. The public benefit process proposed by this ZTA for the overlay zone is based loosely on the larger countywide project, in a simplified form. Many of the public benefits under consideration can mitigate greenhouse gas emissions and create adaptive capacity and community resiliency to address climate change impacts. While this ZTA represents a temporary measure to implement the GSP, it is anticipated to be replaced by a new countywide ZTA implementing the Incentive Zoning project. Planning Staff anticipates that, once approved, the new countywide ZTA will modify and/or replace the incentive density program proposed in this ZTA. Planning Staff may recommend amendments to the new countywide ZTA to incorporate changes that might improve the ability of the incentive density program to positively affect climate change issues.

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## SOURCES OF INFORMATION, ASSUMPTIONS, AND METHODOLOGIES USED

The climate assessment for the Great Seneca Plan was prepared using the methodology for master plans contained within the *Climate Assessment Recommendations for Master Plans and Zoning Text Amendments in Montgomery County, December 1, 2022*.



Public Benefits in ZTA 24-03

**b. Tier 1 Benefits**

The following public benefits are worth 0.25 FAR of incentive density:

i. Provide 20 percent GFA as a Residential use when the underlying zone is LSC.

ii. Provide the minimum required number of MPDUs plus 2.5 percent.

① iii. Design and construct offsite pedestrian and bicycle facilities for a minimum 750 linear feet.

② iv. Contribute funding for offsite portions of one of the following, at a rate of \$0.30 per GFA of the subject development application:

(a) Key West Avenue Promenade

(b) Great Seneca Greenway

(c) Life Sciences Center Loop Trail

(d) Streetscape improvements along a public street within the overlay zone

③ v. Construct an offsite portion of the Life Sciences Center Loop Trail for a minimum length of 2,500 linear feet.

④ vi. Provide offsite streetscape improvements along a public street within the overlay zone including seating, paving, street tree planting, landscaping, and lighting, for at least 5,000 linear feet based on the applicable streetscape standards of the master plan.

vii. Provide a minimum of 10,000 square feet of flexible, step-up space for life science startups.

5 viii. Achieve a minimum 10 percent mixed-use development, ensuring uses from at least two different use groups are provided, each comprising a minimum 10 percent of the total GFA, as determined at the time of sketch plan.

6 ix. Improve a minimum of 0.25 acres of an existing park or public open space within the GSLS Overlay Zone area with amenities designed to encourage use by people of all ages, cultural backgrounds, and abilities such as, but not limited to, color contrast applications on poles and pavement, accessible bathrooms, mobility device accessible play equipment, sensory playground equipment, movable seating, and art, displays, statues, and signs that recognize local history and community members.

x. Implement at least 3 of the following design excellence strategies or achieve the International WELL Building Institute's WELL Core Bronze certification for the project:

(a) Designing a building with a clear architectural base, middle, and top. The base is defined as the first one or two floors of the building; the top is defined as the uppermost one or two floors of the building; and the middle is everything between the base and the top.

(b) Providing human-scaled architectural elements at the building's base fronting all streets and public open spaces. Human-scaled architectural elements

include clearly marked entryways into ground-floor uses, awnings, canopies, transparency, storefronts, façade lighting, signage, and decorative enhancements.

(c) Providing direct entry to all ground floor residential units fronting a street or public open space.

(d) Adjusting the building massing and façade design to create street-oriented development. The building massing should parallel the street, with the building base creating a continuous frontage with a minimum of 60 percent transparency. The building middle and top façade must be designed with windows, balconies, and terraces on any elevation along a street.

(e) Lining at least 75 percent of the ground floor long all streets and public open spaces with active uses such as retail, residential units, offices, lobbies, and amenity spaces. Ground floor entrances into the building must be no further than every 100 feet.

(f) Placing all onsite parking below ground grade or wrapping all structured parking with leasable GFA like residential or commercial floor spaces.

⑦ (g) Designing the footprint, massing, and building façades to respond to solar orientation and local climate to minimize energy use, maximize daylight

exposure and incorporate passive heating, cooling, and ventilation.

(h) Reducing the floor plate for the top 2 floors by at least 20 percent to create terraces and an interesting skyline.

(i) Designing all structured parking to be adaptable for alternative uses in the future by creating flat plate parking floors with a minimum floor to ceiling clearance of 10 feet, accessed through a speed-ramp.

⑧ xi. Exceed current county code energy efficiency standards (IgCC and IECC) by a minimum of 10 percent as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

⑨ xii. Generate one-third of renewable energy onsite or utilize renewable energy from the regional catchment area as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

⑩ xiii. Meet Alternative Compliance Path for Green Code and achieve LEED Silver + 21 points as determined by the Department of Permitting Services Division of Commercial Building Construction by the final use and occupancy permit.

xiv. Design a site that includes 2 of the following sustainable elements:

(a) Two principles of biophilic design from the following list of strategies:

(1) Incorporate environmental features such as sunlight, fresh air, plants, animals, water, native landscapes, natural colors, and natural materials such as wood and stone.

(2) Utilize elements in building design to simulate and mimic shapes and forms found in nature. Examples include using tree-like columns in a building interior to support a roof that projects the feeling of a forest canopy; building shapes that simulate the appearance of bird wings; ornamentation suggestive of a natural shape like a crystal or geological feature, or others as approved by the Planning Board.

(3) Use building and site design to stimulate a variety of senses, simulate the qualities of organic growth, or reflect the processes of aging and the passage of time.

(4) Use spatial and lighting features that evoke the sense of being in a natural setting considering lighting placement, fixture design, and color temperature.

(5) Incorporate place-based relationships between buildings and the distinctive geographical, ecological, and cultural

characteristics of particular places and localities by incorporating reference to geological and landscape features, the use of local and indigenous materials, and connections to particular historic and cultural traditions.

(6) Provide an outdoor respite space, part of a garden, or green area that offers restoration through the inclusion of natural sensory experiences and opportunities for quiet reflection and stillness.

11 (b) Enhanced green roof with a minimum coverage of 10 percent of the roof (minimum 6 inches in depth).

(c) Two categories of bird-friendly design as defined in the Bethesda Downtown Plan Design Guidelines.

12 (d) Pervious pavement for 10 percent of all paved surfaces as determined by the Department of Permitting Services.

13 xv. Adaptively reuse at least 10,000 square feet of floor area of an existing building on site.

**c. Tier 2 Benefits**

The following public benefits are worth 0.50 FAR of incentive density:

i. Provide 30 percent GFA as a Residential use when the underlying zone is LSC.

ii. Provide the minimum required number of MPDUs plus 5 percent.

14 iii. Design and construct offsite streetscape improvements along a public street, including any required pedestrian and bicycle facilities, for a minimum 1,000 linear feet.

15 iv. Contribute funding for offsite portions of one of the following, at a rate of \$0.60 per square foot of GFA of the subject development application:

(a) Key West Avenue Promenade

(b) Great Seneca Greenway

(c) Life Sciences Center Loop Trail

16 v. Construct an offsite portion of the Life Sciences Center Loop Trail for a minimum length of 3,500 linear feet.

vi. Provide a minimum of 20,000 square feet of flexible step-up space for life science startups.

17 vii. Achieve a minimum 15 percent mixed-use development, ensuring uses from at least two different use groups are provided, each comprising a minimum 15 percent of the total GFA, as determined at the time of sketch plan.

18 viii. Exceed the minimum required amount of Public Open Space on site by at least 50 percent.

19 ix. Implement at least 5 of the design excellence strategies identified in Section 4.9.13.C.3.b.x above or achieve the International WELL Building Institute's WELL Core Silver certification for the project.

20 x. Exceed current county code energy efficiency standards (IgCC and IECC) by a minimum of 17.5 percent as

determined by the Department of Permitting Services  
Division of Commercial Building Construction at site  
plan.

21 xi. Generate two-thirds of renewable energy onsite or utilize  
renewable energy from the regional catchment area as  
determined by the Department of Permitting Services  
Division of Commercial Building Construction at site  
plan.

22 xii. Meet Alternative Compliance Path for Green Code and  
achieve LEED Gold as determined by the Department of  
Permitting Services Division of Commercial Building  
Construction by the final use and occupancy permit.

xiii. Design a site that includes three of the following  
sustainable elements:

(a) 4 principles of biophilic design as defined in  
Section 4.9.13.C.3.b.xiv.

23 (b) Enhanced green roof with a minimum coverage of  
15 percent of the roof (a minimum of 7 inches in  
depth).

(c) 3 categories of bird friendly design as defined in  
the Bethesda Downtown Plan Design Guidelines.

24 (d) Pervious pavement for 25 percent of all paved  
surfaces as determined by the Department of  
Permitting Services.

25 xiv. Adaptively reuse at least 25,000 square feet of floor area  
of an existing building on site.



**d. Tier 3 Benefits**

The following public benefits are worth 1.0 FAR of incentive density:

i. Provide the minimum required number of MPDUs plus 7.5 percent.

26 ii. Design and construct offsite streetscape improvements along a public street, including any required pedestrian and bicycle facilities, for a minimum 2,000 linear feet.

27 iii. Contribute funding for offsite portions of one of the following, at a rate of \$1.00 per GFA of the subject development application:

(a) Key West Avenue Promenade

(b) Great Seneca Greenway

(c) Life Sciences Center Loop Trail

28 iv. Construct an offsite portion of the Life Sciences Center Loop Trail for a minimum length of 5,000 linear feet.

v. Provide a minimum of 30,000 square feet of flexible, step-up space for life science startups.

29 vi. Provide a minimum 1.5-acre Major Public Open Space recommended per the master plan as a Privately Owned Public Open Space, with approval on the location and design determined by the Planning Board. The Public Open Space should comply with the elements listed in the Energizing Public Space Design Guidelines for "Civic Green / Plaza."

30 vii. Implement at least 7 of the design excellence strategies identified in Section 4.9.13.C.3.b.x above or achieve the International WELL Building Institute's WELL Core Gold certification for the project.

31 viii. Exceed current county code energy efficiency standards (IgCC and IECC) by a minimum of 25 percent as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

32 ix. Generate three-fourths of renewable energy onsite or utilize renewable energy from the regional catchment area as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

33 x. Meet Alternative Compliance Path for Green Code and achieve LEED Gold, and one of the following as determined by the Department of Permitting Services Division of Commercial Building Construction by the final use and occupancy permit:

(a) Full electrification

(b) Mass Timber construction

xi. Design a site that includes four of the following sustainable elements:

(a) Six principles of biophilic design as defined in Section 4.9.13.C.3.b.xiv.

34 (b) Enhanced green roof with a minimum coverage of 25 percent of the roof (a minimum of 11 inches in depth).

(c) Four categories of bird friendly design as defined in the Bethesda Downtown Plan Design Guidelines.

35 (d) Pervious pavement for 40 percent of all paved surfaces as determined by the Department of Permitting Services.

36 xii. Adaptively reuse at least 75,000 square feet of floor area of an existing building on site.

**e. Tier 4 Benefits**

If an applicant provides any one Tier 4 Benefit listed below, no additional public benefits are necessary to achieve all allowed incentive density:

i. Provide greater than 25 percent MPDUs at an average of 60 percent area median income.

37 ii. Design and construct offsite streetscape improvements along a public street, including any required pedestrian and bicycle facilities, for a minimum 5,000 linear feet within the overlay zone area.

38 iii. Contribute funding for offsite portions of one of the following, at a rate of \$2.00 per GFA of the subject development application:

- (a) Key West Avenue Promenade
- (b) Great Seneca Greenway
- (c) Life Sciences Center Loop Trail

39 iv. Provide one of the following transportation connections identified as greatly enhancing the transportation network by the Master Plan:

(a) The street connection, including the LSC Loop Trail, connecting Belward Campus Drive to Decoverly Drive, at the intersection with Great Seneca Highway.

(b) A trail connecting Darnestown Road and Medical Center Drive, located between Shady Grove Road and Great Seneca Highway.

40 (c) The street connection of Road Z between Broschart Road and Dalmatian Street.

v. Provide a minimum of 40,000 square feet of flexible step-up space for life science startups.

41 vi. Construct and dedicate or convey to Montgomery Parks a minimum 3-acre park recommended in the Master Plan. Approval of the location and design to be determined by the Planning Board. The park must comply with the elements listed in the Energized Public Spaces Design Guidelines for "Urban Recreational Park."

42 vii. Implement all 9 of the design excellence strategies identified in Section 4.9.13.C.3.b.x above or achieve the International WELL Building Institute's WELL Core Platinum certification for the project.

43 viii. Construct an energy efficient building with a net-zero rating as determined by the Department of Permitting

Services Division of Commercial Building Construction  
at site plan

- 44 ix. Generate 100 percent of renewable energy onsite or utilize renewable energy from the regional catchment area as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.
- 45 x. Meet the Alternative Compliance Path for Green Code and achieve LEED Platinum as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.
- xi. Design a site that includes the four following sustainable elements:
- (a) Six principles of biophilic design as defined in Section 4.9.13.C.3.b.xiv.
- 46 (b) Enhanced green roof with a minimum coverage of 35 percent of the roof (a minimum of 16 inches in depth).
- (c) Five categories of bird friendly design as defined in the Bethesda Downtown Plan Design Guidelines.
- 47 (d) Pervious pavement for 50 percent of all paved surfaces as determined by the Department of Permitting Services.
- 48 xii. Adaptively reuse at least 100,000 square feet of floor area of an existing building on site.

xiii. Underground all existing overhead utilities along the site frontage of the subject property, or at another offsite location within the GSLS Overlay Zone, with an estimated cost of at least \$1,000,000.

area as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

x. Meet the Alternative Compliance Path for Green Code and achieve LEED Platinum as determined by the Department of Permitting Services Division of Commercial Building Construction at site plan.

xi. Design a site that includes the four following sustainable elements:

(a) Six principles of biophilic design as defined in Section 4.9.13.C.3.b.vi.

(b) Enhanced green roof with a minimum coverage of 3% percent of the roof (a minimum of 16 inches in depth).

(c) Five categories of bird friendly design as defined in the Bethesda Downtown Plan Design Guidelines.

(d) PerVIOUS pavement for 20 percent of all paved surfaces as determined by the Department of Permitting Services.

xii. Adaptively reuse at least 100,000 square feet of floor area of an existing building on site.