Executive Director’s Recommendation
Commission Meeting: November 7, 2019

PROJECT
Monumental Core Streetscape Project - Urban Design Streetscape Framework and Lighting Policy
National Mall and vicinity
Washington, DC

SUBMITTED BY
National Capital Planning Commission

REVIEW AUTHORITY
Preparation of General Plans and Studies per 40 U.S.C. § 8711(e)(2)

NCPC FILE NUMBER
7886

NCPC MAP FILE NUMBER
00:00(00.00)45019

APPLICANT’S REQUEST
Approval of comments on concept design

PROPOSED ACTION
Approve comments on concept design

ACTION ITEM TYPE
Staff Presentation

PROJECT SUMMARY
The National Capital Planning Commission (NCPC) is submitting the Urban Design Streetscape Framework and Lighting Policy for approval of comments on concept plans. The Urban Design Streetscape Framework and Lighting Policy is the first part of the Monumental Core Streetscape Project; a multi-phased effort to update the 1992 National Mall Streetscape Manual. The purpose of the 1992 Streetscape Manual was to “provide guidelines for a coordinated and consistent streetscape treatment for roadways in the central area of the city in the vicinity of the National Mall.”

The Urban Design Streetscape Framework identifies, categorizes, and provides principles for streets of national significance that unify the capital city. The Urban Design Streetscape Framework provides the basis for developing and documenting federal and local streetscape guidance for agency use during streetscape planning, design, and construction. Specific guidance for streets identified in the Urban Design Streetscape Framework will be developed in the next tasks of the Monumental Core Streetscape Project; development of the Streetscape Design Guidelines and amendments to the Streetscape Construction Manual.

The Lighting Framework and Policy identifies and defines a hierarchy for illuminated elements in the monumental core and provides guidance for streetlighting in or adjacent to federal properties that coordinates with the District Department of Transportation and Office of Public Private Partnership’s Smart Street Lighting Project.
KEY INFORMATION

- In 1992, the Secretary of Transportation initiated the National Mall Road Improvement Program, directed by an Interagency Working Group that originally developed the 1992 Streetscape Manual, which provides guidelines for a coordinated and consistent streetscape treatment for roadways in the central area of the city in the vicinity of the National Mall.
- The 1992 Streetscape Manual was reviewed and approved by NCPC and the U.S. Commission of Fine Arts (CFA).
- In 2013, the NCPC completed the first phase of work to update the Streetscape Manual; amending it to reflect existing conditions.
- In 2018, NCPC identified the scope for the second phase of work to update the Streetscape Manual, called the Monumental Core Streetscape Project, which includes four tasks:
  1. Develop the Urban Design Streetscape Framework, including a Lighting Policy
  2. Develop the Streetscape Design Guidelines
  3. Update the Streetscape Construction Manual, including new LED Streetlight Specifications
  4. Update the Memorandum of Understanding (MOU)
- Once all four tasks of the Monumental Core Streetscape Project are complete, they will be packaged into a new Streetscape Guide.
- Interagency collaboration is important for achieving streetscape coordination and consistency because multiple jurisdictions converge within the National Mall and vicinity.
- The Monumental Core Streetscape Project is not a capital improvements plan. Rather, the Streetscape Guide will provide guidance for coordinated and consistent streetscapes as agencies implement repairs, improvements, and new development projects over time.
- It is not the project’s intent to replicate the character of the National Mall in other precincts or neighborhoods. Rather, the project goal is to respect the character and design of precincts and neighborhoods and improve streetscape coordination and consistency.
- The District Department of Transportation (DDOT) and the Office of Public Private Partnerships (OP3) are currently overseeing the Smart Street Lighting Project, which entails retrofitting all the District’s streetlights to LED. LEDs are more energy efficient but emit light that generally appears cooler colored than existing light technologies which appear warmer colored. Because streets within the downtown monumental core are administered jointly by DDOT and other federal agencies, it is important to coordinate streetlight guidance so that nighttime streetscape appearance is coordinated and consistent.
- CFA shared a letter dated May 24, 2018, with the following comments and suggestions for the project:
  o Emphasized that the manual must be an adaptable document that can anticipate technological and climatic change without being prescriptive.
  o Suggested a design competition for vendor carts and structures could improve their current appearance.
  o Recommended a formal governance and oversight structure for enforcement.
- CFA shared a letter dated June 27, 2019, with the following comments and suggestions for the project:
  o Advised that the plan should anticipate contemporary environmental issues, so that necessary adaptations of the streetscape can be planned for systematically.
Emphasized that the urban streetscape should be conceived of as performative landscape system rather than as a composition of separate elements.

Commented that the boundary drawn between the monumental core and surrounding city may suggest the location of significant thresholds (points of entry into distinct precincts and neighborhoods of the city).

Advised that the city’s major axial and diagonal roadways should be considered as the framework of the monumental city that reaches beyond the strict boundaries of the historic core and should emphasize continuity.

Expressed regret that the distinction in streetlight color temperature between the monumental core and the surrounding city may be lost and suggested exploring ways to preserve this hierarchy.

Noted that the spatial and architectural conditions of the city may be expressive enough and suggested simplifying the street lighting framework.

Encouraged local and federal stakeholder agencies to consult with innovative urban lighting designers for the testing and implementation of new lighting technology.

Encouraged constructing in-situ mockups to test the proposed criteria.

- A 1992 MOU organized the Interagency Working Group and included the following Parties: (1) Architect of the Capitol, (2) District Department of Transportation, (3) Federal Highway Administration, and (4) National Park Service.


- NCPC is developing a 2019 MOU for streets inside the 1992 Boundary that: (1) extends the 2005 MOU terms, (2) provides roles and responsibilities of the Parties and Endorsers necessary to develop the new Streetscape Guide, (3) changes NCPC’s role to that of Party, (4) adds the District Office of Planning and the Kennedy Center as Endorsers, and (5) updates out of date information.

- NCPC is also coordinating with the DCOP and DDOT to review, assess, and document existing guidance and current practices for streets identified in the Urban Design Streetscape Framework that are outside of the 1992 Boundary.

- The Kennedy Center is currently developing a master plan and anticipates defining a planning area boundary as part of the master plan. NCPC is coordinating the 1992 Streetscape Manual Boundary extension with this work.
RECOMMENDATION

Comments favorably on the Urban Design Streetscape Framework and Lighting Policy.

Supports extending the 1992 Streetscape Manual Boundary to include the Kennedy Center and Banneker Park to achieve the goals of the Legacy Plan, Monumental Core Framework Plan, and the SW Ecodistrict Plan.

Finds that the Urban Design Streetscape Framework and Lighting Policy identifies streets and principles important to carry forward in the next tasks of the project.

Directs staff to use the Urban Design Streetscape Framework and Lighting Policy as the basis to develop Streetscape Design Guidelines.

Finds that the Lighting Policy identifies principles important to carry forward in the LED Streetlight Specification Amendments to the 2013 Streetscape Manual.

Directs staff to use the Lighting Policy to inform the LED Streetlight Specification Amendments to the 2013 Streetscape Manual and coordination with the District Department of Transportation and Office of Public Private Partnership’s Smart Street Lighting Project.

Directs staff to incorporate minor changes to the Urban Design Streetscape Framework and Lighting Policy in response to comments and direction provided by the National Capital Planning Commission and the U.S. Commission of Fine Arts, any technical corrections, and necessary clarifications to the text and graphics prior to publication of the Streetscape Guide.

PROJECT REVIEW TIMELINE

<table>
<thead>
<tr>
<th>Previous actions</th>
<th>May 3, 2018 – Information Presentation on the Monumental Core Streetscape Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>September 6, 2018 – Information Presentation on the Urban Design Streetscape Framework.</td>
</tr>
<tr>
<td></td>
<td>April 4, 2019 – Information Presentation on the Lighting Policy and Framework.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preliminary/Final Review of the Monumental Core Streetscape Project’s Design Guidelines.</td>
</tr>
<tr>
<td></td>
<td>Review and accept the Monumental Core Streetscape Guide.</td>
</tr>
</tbody>
</table>
PROJECT ANALYSIS

Executive Summary

The Urban Design Streetscape Framework and Lighting Policy advance the Federal Urban Design Element Action Plan, support and expand upon existing federal and local policies, provide needed guidance for streetscape planning and design including a broader vision for the monumental core that connects to streetscape construction details and specifications, and form the basis for future work.

NCPC is submitting the urban Design Streetscape Framework and Lighting Policy for concept review to collect the Commission’s comments on this work which will provide the basis for future work tasks including developing Streetscape Guidelines, amending the Streetlight Specifications, and updating the Construction Manual.

Analysis

Urban Design Streetscape Framework

The Urban Design Streetscape Framework advances the Urban Design Element Action Plan items 5 and 9. Item 5 calls for urban design, public realm, and street guidance to strengthen linkages and the character defining elements that frame or punctuate public spaces to elevate human experience and enjoyment. Item 9 calls for working with local jurisdictions on urban design strategies to protect the visual quality of linear view corridors in consideration of both built and natural elements on the following streets: East Capitol Street; Pennsylvania Avenue, SE; New Jersey Avenue, NW; New Jersey Avenue, SE; and Maryland Avenue, NE.

The Urban Design Streetscape Framework also builds upon prior plans including the 1997 Legacy Plan, the 2009 Monumental Core Framework Plan and Planning Together partnership, and the 2013 SW Ecodistrict Plan. Streets identified in these plans and the Urban Design Element were evaluated for their significance and role while considered for inclusion in the Framework.

The Urban Design Streetscape Framework provides the basis for developing the guidelines and construction manual in subsequent work tasks. The Urban Design Streetscape Framework includes the following components and content:

1. Boundary Adjustment: adjusting the 1992 Streetscape Manual Boundary (Boundary) to encompass the Kennedy Center and Banneker Park to achieve the goals of the Legacy Plan, Monumental Core Framework Plan, and the SW Ecodistrict Plan. (See Attachment 1, page #).
2. **Urban Design Streetscape Framework**: a high-level planning framework that serves as a foundation from which to develop streetscape guidelines and the construction manual. It includes the following elements:

   a. **Street Categories**: identifying streets important to the identity of the nation’s capital and further articulating the urban design relationships to nationally significant monuments, memorials, buildings, and open spaces. (See Attachment 1, pages 10-11).

   b. **Character Areas**: identifying areas with unique character within each precinct. (See Attachment 1, pages 12-14).

   c. **Streetscape Framework and Principles**: articulating the relationship among street categories and character areas and the intent for coordinate, consistent, and continuous streetscape design, where appropriate, across jurisdictions. (See Attachment 1, pages 16-21).

   d. **Gateways, Thresholds, Approaches, and Principles**: expanding on the Urban Design Element’s gateways and identifying thresholds and approaches to address points of entry and into or between character areas and into the monumental core to improve pedestrian circulation and intuitive wayfinding to and through the monumental core. (See Attachment 1, pages 22-26).

The Urban Design Streetscape Framework CFA’s comments regarding potential threshold locations at the boundary between the monumental core and surrounding city, and the advisement that the city’s major axial and diagonal roadways should be considered as the framework of the monumental city that reaches beyond the strict boundaries of the historic core and should emphasize continuity. The Framework further differentiates Thresholds that transition into or between character areas from Approaches that reinforce continuity along axial entryways into the monumental core from the surrounding city.

The CFA’s comments regarding anticipating contemporary environmental issues and considering streetscapes as performative landscape system rather than as a composition of separate elements, will be addressed in the next work tasks; Streetscape Design Guidelines.

**Streetscape Guide MOUs (for Streets Inside and Outside the 1992 Boundary)**

NCPC staff is collaborating with the Interagency Working Group to update and extend the expired 2005 MOU. The new 2019 MOU will guide agency collaboration for the development of the new Streetscape Guide for streets inside the 1992 Boundary and adds the District Office of Planning and the Kennedy Center as Endorsers.

NCPC staff is also collaborating with DCOP and DDOT to review, assess, and document existing guidance and current practices for streets identified in the Urban Design Streetscape Framework that are outside of the 1992 Boundary.
Lighting Policy and Framework


The *Lighting Policy and Framework* builds upon the *Urban Design Streetscape Framework*, particularly the categories and principles for federal interest streets. The *Lighting Policy and Framework* will provide guidance to federal and local agencies and informs the LED Streetlight Specification Amendments to the 2013 Streetscape Manual. The Lighting Policy and Framework includes hierarchies and principles for the following:

a. **Structures**: illumination and night sky protection principles for civic buildings, monuments, memorials, and bridges (See Attachment 2, pages 10-13).

b. **Landscapes**: color temperature, brightness, and night sky protection principles for parks and open spaces (See Attachment 2, pages 14-17).

c. **Streetscapes**: streetlight color temperature, brightness, and night sky protection principles for avenues and streets (See Attachment 2, pages 18-24).

As noted above, the *Lighting Policy and Framework* informs the LED Streetlight Specification Amendments to the 2013 Streetscape Manual. Therefore, NCPC staff and the Interagency Working Group are following CFA’s encouragement to consult with urban lighting designers. Similarly, NCPC and the Interagency Working Group are encouraging DDOT/OP3 and other stakeholder agencies to construct in-situ mockups to test the LED lighting technology and the proposed LED streetlight criteria.

CONFORMANCE TO EXISTING PLANS, POLICIES AND RELATED GUIDANCE

**Comprehensive Plan for the National Capital**

As noted above, this project meets the basic goals of the Comprehensive Plan. The Urban Design Streetscape Framework advances the *Urban Design Element Action Plan* items 5 and 9. Item 5 calls for urban design, public realm, and street guidance to strengthen linkages and the character defining elements that frame or punctuate public spaces to elevate human experience and enjoyment. Item 9 calls for working with local jurisdictions on urban design strategies to protect the visual quality of linear view corridors in consideration of both built and natural elements on the following streets: East Capitol Street; Pennsylvania Avenue, SE; New Jersey Avenue, NW; New Jersey Avenue, SE; and Maryland Avenue, NE. The Lighting Policy and Framework advances lighting policies included in the 2018 *Parks and Open Space Element*, 2016 *Urban
Design Element, and 2016 Federal Environment Element of the Comprehensive Plan. In addition, the project is coordinated with the District’s Elements of Comprehensive Plan and relevant policies.

**National Historic Preservation Act**

NCPC has an obligation to satisfy the National Historic Preservation Act (NHPA) when approving projects. NHPA procedures are coordinated through the Submission Guidelines and the project review process. NHPA (Section 106) procedures are determined by the Advisory Council on Historic Preservation (ACHP). An update to the Streetscape Manual does not sustain characteristics as a federal undertaking. The proposed updates do not implement, contract, or take other actions that would preclude future consideration of the full range of alternatives to avoid or minimize harm to federal historic properties. Consequently, the proposed action does not require review pursuant to the NHPA, Section 106 process.

Related to the Streetscape Guide, the District of Columbia Department of Transportation (DDOT) has received federal funding for the Smart Street Lighting Project and has initiated Section 106 Consultation required as a federal grant recipient. NCPC is participating as a Consulting Party, as it relates to guidance included in the new Streetscape Guide. However, NCPC does not have an approval role in this project, and is only participating in an advisory capacity, and therefore, NCPC does not have a Section 106 compliance responsibility.

**National Environmental Policy Act**

NCPC has an obligation to satisfy the National Environmental Policy Act (NEPA) when approving projects. NEPA procedures are coordinated through the Submission Guidelines and the project review process. An update to the Streetscape Manual does not sustain characteristics as a federal undertaking. Consequently, the proposed action does not require review pursuant to NEPA. However, project undertakings pursuant to the Streetscape Guide, will require NEPA.

**CONSULTATION**

**Coordinating Committee**

The Coordinating Committee reviewed the proposal at its October 16, 2019 meeting. Without objection, the Committee forwarded the proposed comments on concept design to the Commission with the statement that the proposal has been coordinated with all participating agencies. The SHPO is coordinating subject to completion of the Section 106 process, as applicable. GSA noted interest in referencing coordinated security components in this presentation. The participating agencies were NCPC; the National Park Service; the US General Services Administration; the Washington Metropolitan Area Transit Authority; the District of Columbia Office of Planning; the District Department of Transportation; and the District of Columbia State Historic Preservation Officer, and the District Department of Energy and Environment.
U.S. Commission of Fine Arts

The CFA provided the following comments and suggestions at a May 17, 2018 Information Presentation on the Monumental Core Streetscape Project:

- Emphasized that the manual must be an adaptable document that can anticipate technological and climatic change without being prescriptive.
- Suggested a design competition for vendor carts and structures could improve their current appearance.
- Recommended a formal governance and oversight structure for enforcement.

The CFA provided the following comments and suggestions at a June 20, 2019 Information Presentation on the Urban Design Streetscape Framework and Lighting Policy:

- Advised that the plan should anticipate contemporary environmental issues, so that necessary adaptations of the streetscape can be planned for systematically.
- Emphasized that the urban streetscape should be conceived of as performative landscape system rather than as a composition of separate elements.
- Commented that the boundary drawn between the monumental core and surrounding city may suggest the location of significant thresholds.
- Advised that the city’s major axial and diagonal roadways should be considered as the framework of the monumental city that reaches beyond the strict boundaries of the historic core and should emphasize continuity.
- Expressed regret that the distinction in streetlight color temperature between the monumental core and the surrounding city may be lost and suggested exploring ways to preserve this hierarchy.
- Noted that the spatial and architectural conditions of the city may be expressive enough and suggested simplifying the street lighting framework.
- Encouraged local and federal stakeholder agencies to consult with innovative urban lighting designers for the testing and implementation of new lighting technology.
- Encouraged constructing in-situ mockups to test the proposed criteria.

ONLINE REFERENCE

The following supporting documents for this project are available online at [www.ncpc.gov](http://www.ncpc.gov):

- Submission Package
- Letter from the U.S. Commission of Fine Arts (May 2018)
- Letter from the U.S. Commission of Fine Arts (June 2019)

POWERPOINT (ATTACHED)
Monumental Core Streetscape Project – Urban Design Streetscape Framework & Lighting Policy

Washington DC

Approval of Comments on Concept Design

National Capital Planning Commission
Focus area within the monumental core
Purpose Statement: provide guidelines for a coordinated and consistent streetscape treatment for roadways in the central area of the city in the vicinity of the National Mall.

Parties:
- AOC
- DDOT
- FHWA
- NPS

Endorsers:
- CFA
- GSA
- NCPC
- NGA
- SI
Completed Road Improvements (1992 to 2012)

Construction Detail

PLAN

SECTION

EXISTING MANUAL BOUNDARY

AOC/DDOT Completed Road Improvements
DDOT Completed Road Improvements
NPS Completed Road Improvements
Good Examples

- Applies the Streetscape Manual’s construction materials and details well.

- Integrates stormwater management with perimeter security, and uses materials consistent with the Streetscape Manual.

Poor Examples

- Faulty construction of bioretention tree planter.

- Lack of stormwater management techniques resulting in ponding.
Scope of Work

1) Urban Design Streetscape Framework including Lighting

A high-level street category map and character area map for the monumental core.

Guidance for the District’s Smart Street Light project.

*Useful to: planners and urban designers.*

2) Streetscape Design Guidelines

Guidelines addressing emerging issues and other streetscape elements, as appropriate.

*Useful to: urban designers, landscape architects, and architects.*

3) Streetscape Construction Manual

Update the specification manual as needed and make it more user friendly.

*Useful to: facilities managers and construction/repair workers.*

4) MOU Update

Update and extend the MOU, and improve coordination.
1992 Boundary Adjustment

Legend

- 1992 Boundary
- Additions
Kennedy Center: Monumental Core Framework Plan

Kennedy Center Expansion

Monumental Core Framework Plan (2009)
Banneker Park: SW Ecodistrict Plan

Banneker Park Pedestrian Access Improvement Project

Banneker Park

SW Ecodistrict Plan (2013)
Urban Design Streetscape Framework

- Street Categories
- Character Areas
- Streetscape Elements
- Gateways, Thresholds, & Approaches
Street Categories
Street Categories

- Radiating & Edging
- Connecting & Traversing
- Local

[Diagram of street categories in the National Capital Planning Commission area]
Streetscape Categories

**Radiating & Edging Streets:**
Nationally significant. Symbolic, monumental, civic, commemorative, cultural role.

**Connecting & Traversing Streets:**
Nationally and locally significant. Civic and recreational role.

**Local Streets:**
Locally significant. Orthogonal grid with functional role.
Character Areas
Character Areas
Character Area Example

Courtesy: Smithsonian Institution    Credit: Martin Stupich

Courtesy: Architect of the Capitol
Streetscape Elements
Streetscape Elements

- Street Trees
- Street Lights
- Perimeter security
- Wayfinding
- Furnishings
- Sidewalk Pavement
- Roadway Pavement
- Right-of-Way
Streetscape Element Categories

**Highest Degree of Consistency**

**Vertical Elements**
- Street Lights
- Street Trees

**Surface Elements**
- Pavement (sidewalk and roadway)
- Pedestrian Walking Space
- Curb and Gutter
- Landscaping

**Small-Scale Elements**
- Furnishings (benches, trashcans, etc.)
- Tree Boxes/Grates
- Wayfinding Signs*
- Sidewalk Cafes
- Perimeter Security

* A consistent wayfinding system would not preclude unique wayfinding signs within character areas.
Streetscape Framework
Streetscape Framework
Gateways, Thresholds, & Approaches
Gateways, Thresholds, & Approaches
Gateways, Thresholds, & Approaches
Gateways, Thresholds, & Approaches Examples

**Capital Gateway:** looking north from Columbus Circle to Union Station

**Transitional Threshold:** looking north from 10th Street SW to Smithsonian South Mall Campus

**Axial Approach:** looking southeast from Virginia Avenue NW to the Washington Monument
Foundation for Future Work
Lighting Framework & Policy
City’s Smart Street Lighting Project

Only 5% of DC’s 75,000 lights are LED

- High Pressure Sodium (HPS) - 61359
- Incandescent - 5583
- Light-Emitting Diode (LED) - 3639
- Metal Halide (MH) - 267
- Mercury Vapor (MV) - 775

Lights attached to poles owned by DC, Verizon and PEPCO

Over 50 different types of lights/fixtures/poles — repair condition varies greatly

Credit: DDOT/OP3
Nighttime aerial view looking northwest at the U.S. Capitol Building and Washington Monument.

Credit: Architect of the Capitol
Existing Conditions

Nighttime Aerial view looking southeast from 30,000 ft elevation (date: 2012). The metal halide fixtures in the Monumental Core appear distinctly ‘whiter’ than the standard high-pressure sodium lights in the rest of the District.

- **District**: Yellow-orange high-pressure sodium light.
Illustration of Future Conditions

Nighttime Aerial view looking southeast from 30,000 ft elevation (date: 2012). The metal halide fixtures in the Monumental Core appear distinctly ‘whiter’ than the standard high-pressure sodium lights in the rest of the District.

Disclaimer: Image for illustrative purposes only.
Lighting Policy & Framework
Capital City Lighting Plans

• **London, United Kingdom**
  City of London
  • Existing lighting conditions analysis and observations
  • Lighting vision and objectives
  • Technical lighting recommendations for structures, landscapes, and streetscapes

• **Ottawa, Canada**
  National Capital Commission
  • Existing lighting conditions analysis and observations
  • Lighting vision and principles
  • Sector lighting plans and identification of priority projects

• **Canberra, Australia**
  National Capital Authority
  • Lighting policies
  • Visual nighttime hierarchy
  • Conceptual framework map
Street Categories

- Radiating & Edging
- Connecting & Traversing
- Local
Lighting Technology Evolution

- **1840s**: Gaslight
- **1910s**: Carbon Arc
- **1915**: Incandescent
- **1923**: Mercury Vapor Sodium Vapor
- **1968**: High Pressure Sodium
- **1990s**: Metal Halide
- **2010s**: LED

- **District Lights**: Yellow-Orange
- **Federal Lights**: Pure-White
- **District & Federal Lights**: Warm White
Historic Fixtures & Lighting Plans

Millet’s Washington Globe  Bacon’s Twin-20

Pennsylvania Avenue Lighting Plan

CFA Conceptual Lighting Plan

Current Lighting Policies

Current Federal Lighting Policies:
• Urban Design Element: 2 policies
• Environment Element: 1 policy
• Parks and Open Space Element: 6 policies

Current Local Lighting Policies:
• Urban Design Element: 2 policies
• Environment Element: 1 policy
Goals for Lighting Guidance

1. Create a lighting hierarchy that respects and protects symbolic meaning and nighttime appearance.

2. Recognize the nighttime appearance of the existing urban context.

3. Address contemporary street lighting issues.

4. Build upon the capital city’s historic lighting plans.
Proposed Lighting Guidance

**Tier 1 Criteria:**
- Nationally symbolic meaning
- Critical to image and identity
- Visually prominent structures
- On a major axis or entry point
- Identified in policies or historic plans

**Tier 2 Criteria:**
- Nationally or locally symbolic meaning
- Important to image and identity
- Visually prominent structures

**Tier 3 Criteria:**
- Nationally or locally important
- Symbolic meaning or visually prominent structures
- Civic uses
Lighting Framework & Policy Addresses:

- **Structures**: monuments, memorials, civic buildings, and bridges
- **Landscapes**: parks and open spaces
- **Streetscapes**: avenues and streets
Structures:
monuments, memorials, civic buildings, and bridges
Current Federal Policy:

**UD.B.1.5:** Utilize building, street, and exterior lighting that respects the U.S. Capitol and Washington Monument as the most prominent features in the nighttime skyline.

*Disclaimer: Represents symbolic importance and visual prominence. Does not represent brightness.*
Structures

Legend

Structures
- Tier 1 (7 buildings. Ex: White House, Lincoln Memorial)
- Tier 2 (17 buildings. Ex: National Cathedral, The Basilica)
- Tier 3 (49 buildings. Ex: St. Elizabeths, Frederick Douglass House)

Disclaimer: Represents symbolic importance and visual prominence. Does not represent brightness.
Structures

**Architectural Lighting**

**Building:** U.S. Capitol Dome  
**Tier:** 1

**Building:** National Portrait Gallery  
**Tier:** 2

**Building:** U.S. Institute of Peace  
**Tier:** 3
Structures

Washington DC

Credit: BigBus Tours

New York City

Credit: Shutterstock

Pittsburgh

Credit: Shutterstock
Structures

**Tier 1**

**Building:** White House

**Event:** Marriage Equality

**Duration:** 1-2 nights

---

**Tier 2**

**Building:** National Portrait Gallery

**Event:** William & Mary Bold Scholarship Campaign

**Duration:** 1-2 nights

---

**Tier 3**

**Building:** Hirshhorn Museum

**Event:** Art Installation

**Duration:** apx 8 weeks
Draft White Light Policy

*Federal buildings* should be illuminated in white light to:

- Highlight civic structures;
- Harmonize the composition of buildings within the monumental core;
- Celebrate their national significance; and
- Convey dignity and respect for their institutions and branches of government.

Colored light and projected images on *federal buildings* should only be used on a *temporary* basis to celebrate art, festivals, or special public events.

National Park Service policy prohibits directing additional lighting toward, changing existing lighting, or projecting images onto any monument or memorial.

**Definitions:**

*Federal buildings*: Nationally significant or civic buildings that include museums, offices, or other institutional buildings generally under the administration of the Architect of the Capitol, the General Services Administration, the Kennedy Center, the National Gallery of Art, and the Smithsonian Institution. Note: This does not apply to federal monuments, memorials, or bridges.

*Temporary*: For this application, temporary means several days or weeks, not to exceed 30 days total, and not to occur longer than three months if intermittent (occurring on non-consecutive days).
Landscapes:
parks and open spaces
Current Federal Policy:

**POS.A.14**: Maintain the dark, minimally lit setting of the National Mall, East Potomac Park, Columbia Island, and adjacent parkland.

**POS.B.14**: Minimize light pollution in and adjacent to parks and open spaces, with special consideration for natural parks and environmentally sensitive areas.

Disclaimer: Represents symbolic importance and visual prominence. Does not represent brightness.
Landscape Settings

Nationally Significant Open Space
- Constitution Gardens

Urban
- Farragut Square

Natural/Waterfront
- West Potomac Park

Residential
- Logan Circle
Washington, DC seen from space in 2016. The demarcation between the unshielded lighting within District boundaries and shielded lighting in Virginia and Maryland is clear.
NOTE: The intention of the light is for 85% of the light to be cast downward and 15% cast upward. Should an alternative (LED) lamp be used, it must correspond to these percentages.
Streetscapes: avenues and streets
Streetscapes

Legend

- Streetscapes
  - Radiating & Edging (Ex: Independence Ave, South Capitol Street)
  - Connecting and Traversing (Ex: Ohio Drive, Massachusetts Avenue)

Disclaimer: Represents symbolic importance and visual prominence. Does not represent brightness.

Current Local Policy:

**UD.3.1.3**: Highlight and clarify the function of different streets so that they are easier to navigate and understand for residents and visitors.
Streetscapes

Color Temperature

Nighttime Aerial view of Los Angeles street showing old high-pressure sodium lights and new LED. (date: 2013)

Credit: Los Angeles Bureau of Street Lighting

High-Pressure Sodium Lights (ranges 2,000K to 2,200K)

Light-Emitting Diode Lights (ranges 4,000K to 3,000K)

LED Color Temperatures

<table>
<thead>
<tr>
<th>Color</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm White</td>
<td>2,700K</td>
</tr>
<tr>
<td>Cool White</td>
<td>5,000K</td>
</tr>
<tr>
<td>DDOT proposal</td>
<td>3,000K</td>
</tr>
<tr>
<td>DDOT proposal</td>
<td>4,000K</td>
</tr>
</tbody>
</table>
Streetscapes

Color Temperature Diagram:

*CFA 1992 Proposal*

- Criteria:
  - L’Enfant & McMillan Plans

- Yellow Light:
  - Grid streets

- White Light (3,000K):
  - Radial and Axial streets

*Legend*

- 1992 Streetscape Manual Boundary
- Yellow Light
- White Light

Disclaimer: Illustrates color temperature, not brightness.
Streetscape Settings

**Nationally Significant Open Space**
- Independence Avenue SW
- Dimmer

**Urban**
- Pennsylvania Avenue NW
- Brighter

**Natural/Waterfront**
- Rock Creek Parkway
- Dimmer

**Residential**
- Pennsylvania Avenue SE
- Dimmer

**Brightness**
Streetscapes

Brightness

Focal point: U.S. Capitol Building

Focal point: National Portrait Gallery

Street Lighting Plan
1977 Pennsylvania Avenue

Building Lighting Plan
1987 Pennsylvania Avenue
Monumental Core
Streetscapes

Brightness

Legend
- Reciprocal Vista
- Radiating Vista
- Edging Vista
- National Mall Crossing

Disclaimer: Does not represent color temperature or brightness.
Next Steps

1) Urban Design Streetscape Framework including Lighting

2) Streetscape Design Guidelines

3) Streetscape Construction Manual

4) MOU Update

September 2018: Streetscape Framework Information Presentation
   April 2019: Lighting Policy Information Presentation
   November 2019: Concept Review

Example topics:
   • Stormwater management
   • Transportation/walkability

Construction details and specifications

Interagency collaboration
Next Steps: Landscape Systems & Resilience

Mapping & Inventory:
- Flood risk
- Sewersheds
- Permeable paving
- Bioretention trees
- LID facilities
Urban Design Streetscape Framework Briefing Packet

Table of Contents:

Introduction
Background page 3
Problem Statement page 5
Goals and Priorities page 5
Streetscape Guide Purpose page 7
Included Areas page 7
Streetscape Guide and Its Users page 8

Urban Design Streetscape Framework
Introduction page 11
Street Categories page 11
Character Areas page 12
Streetscape Elements page 15
Streetscape Framework and Principles page 16
Urban Design Streetscape Framework Summary Chart page 21
Gateways, Thresholds, Approaches, and Principles page 23

Attachments
Attachment 1: Character Area Example
Attachment 2: National Mall Streetscape Interagency Working Group Comments
Attachment 3: Letter from the U.S. Commission of Fine Arts (May 2018)
Attachment 4: Letter from the U.S. Commission of Fine Arts (June 2019)
Attachment 5: Reference Maps

Note: The Streetscape Guide will be used to guide the planning, design, and construction of streetscape projects within the Monumental Core. The Streetscape Guide is not a planned capital improvement project.
Introduction

As the nation’s capital, home to nearly 700,000 residents, and destination for over 22 million visitors, Washington’s urban design and character contributes to its national identity while respecting and shaping the precincts and neighborhoods of the local city. Washington’s streetscapes are an important component of the city’s urban design. Their character and quality contribute to how people view and experience the city. These public spaces should reinforce the city’s unique role as the nation’s capital and create a welcoming and livable environment for residents, workers, and visitors.

Within the monumental core, streetscapes reinforce a special civic quality that inspires people and cultivates a sense of pride, permanence, and dignity. The monumental core is a place where the details matter – and its streetscapes must meet these objectives at an elevated standard. The Monumental Core Streetscape Guide (Streetscape Guide) contributes to achieving these aspirations by providing conceptual and concrete guidance on the planning, design, and construction of distinguished capital city streets.

This document provides a high-level overview of the Monumental Core Streetscape Guide and includes background information on the National Mall Streetscape Manual (the current guidance within the monumental core), and existing conditions and policies that present challenges and opportunities for a new Streetscape Guide. This document focuses on:

- An overview of the Streetscape Guide’s three components: the Framework, the Streetscape Guidelines, and the Construction Manual; and
- A draft of the Streetscape Framework for Commission comments.

Background:
The Monumental Core Streetscape Guide (Streetscape Guide) is a multi-phased update of the 1992 National Mall Streetscape Manual (Streetscape Manual). The purpose of the Streetscape Manual was to “provide guidelines for a coordinated and consistent streetscape treatment for roadways in the central area of the city in the vicinity of the National Mall.” The Streetscape Manual consists of details and specifications for elements within the right-of-way including roadway, curb and gutter, and sidewalk; street furnishings including streetlights, benches, trash and recycling receptacles, bicycle racks, and pedestrian barriers.

A working group formed to oversee and coordinate roadway improvements within and around the National Mall. A memorandum of understanding (MOU) established the National Mall Streetscape Interagency Working Group, originally comprised of the Architect of the Capitol (AOC), the District Department of Transportation (DDOT), the Federal Highway Administration (FHWA), and the National Park Service (NPS). In 2005, the working group expanded the MOU to include several endorsers: the U.S. Commission of Fine Arts (CFA), the General Services Administration (GSA), the National Capital Planning Commission (NCPC), the National Gallery of Art (NGA), and the Smithsonian Institution (SI).1

1 The District Office of Planning (DCOP) joined the working group to contribute to the development of the Monumental Core Streetscape Guide, including the update of the 1992 construction manual.
By 2013, the National Mall Working Group refocused its efforts from actively managing capital improvement projects to coordinating on smaller construction projects and ongoing maintenance. At that time, they updated the Streetscape Manual with minor amendments to reflect existing conditions. They also identified the need for a more substantive update to address the working group’s evolving function and emerging issues (such as incorporating technologies and stormwater management).

The working group documented the challenges and opportunities for improving streetscapes in the National Mall area and through Washington’s monumental core. One of the key findings is that the monumental core lacks design guidance and a cohesive planning framework that aligns federal and local interests in this part of the city (see diagram below). This was the impetus for expanding beyond the 1992 Streetscape Manual’s construction details and developing the Streetscape Guide that holistically coordinates, planning, design, and construction.
Problem Statement:

Several problems were identified in the 1992 Streetscape Manual and the existing conditions of monumental core’s streetscapes. These problems fall into the following five categories:

1. Policy and Planning
   a. Current federal streetscape design guidance is lacking.
   b. It is unclear which standards apply where.

2. Manual Application
   a. Overall, agencies succeed in applying the Manual more consistently on the National Mall than off it, even though it is applicable in other areas.
   b. Agencies do not consistently administer the Manual.
   c. The Manual limits flexibility because it uses prescriptive details and specifications for all elements.

3. Precincts and Transitions
   a. The Manual did not adapt to the unique character of precincts (e.g. White House and U.S. Capitol Complex).
   b. Materials transition inconsistently across precincts, as well as between the National Mall and monumental core.

4. Function
   a. The Manual does not currently address the following functional issues: stormwater management and flooding, changing, and sustainable technologies, expanding transportation options and infrastructure needs, walkability and universal accessibility for pedestrians, wayfinding for visitor orientation, and perimeter security.

5. Coordination
   a. Right-of-way jurisdiction is unclear and enforcement for maintenance and repair work is inconsistent.
   b. The Manual is not regularly updated or used.
   c. The Manual and local standards are not coordinated.

Goals and Priorities:

The goals and priorities of the Monumental Core Urban Design Streetscape Guide (Streetscape Guide) are compatible with established federal and local plans and policies and include:

- Create a distinguished and accessible public realm of enduring quality shaped by beautiful civic infrastructure, architecture, streets, parks, and waterfronts. Connect destinations and overcome existing physical barriers with walkable landscaped corridors, interpretative and way-finding systems, and engaging views. Meet the highest standards of design, construction, and maintenance. (Planning Together, 2009)

- Establish and maintain a vision for a streetscape and public realm design program for all precincts within, and major entrances to, the monumental core, including, but no limited to the White House, U.S. Capitol, National Mall, and Federal Triangle. (UD.B.3.7 Federal Urban Design Element, 2016)
Proposed adjustments to the 1992 Boundary encompass the Kennedy Center and Banneker Park.

Key:  
- 1992 Boundary
- Proposed additions
- Create or strengthen multiple visual and functional linkages that connect reservations and civic spaces within the monumental core to the rest of the city. *(UD.B.4.3 Federal Urban Design Element, 2016)*

- Use Washington’s major avenues/boulevards to reinforce the form and identity of the city, connect is neighborhoods, and improve its aesthetic and visual character. *(UD-1.4.1 District Urban Design Element)*

**Purpose:**
The purpose of the Streetscape Guide is to aid federal and local stakeholders in creating a cohesive public realm on key streets in the capital city of Washington, DC. The Streetscape Guide will improve coordination between federal and local partners and its construction specifications will improve guidance for a coordinated and consistent streetscape treatment in the monumental core, particularly in and around the National Mall.

**Included Areas:**
The Streetscape Guide includes nationally significant avenues and streets that are important to the *Plan of the City of Washington*; these streets are important connections between the capital city’s monumental core and the city’s neighborhoods and reinforce the form and identity of the city. The monumental core is not defined with geographic boundaries, but is described in the Federal Urban Design Element as:

> The spatial and symbolic center of the city, which includes the U.S. Capitol grounds, the White House, Arlington National Cemetery, the National Mall, Federal Triangle, and the surrounding government offices and civic, cultural, and symbolic structures. The monumental core is most closely linked to the distinctive image of the capital city and the functions of federal government. While the major landmarks and resources within the core are perceived, it does not have a rigid geographic or jurisdictional boundary and continues to evolve.

For the purpose of this Guide, the *1992 National Mall Streetscape Manual* boundary (1992 Manual Boundary, as amended)² defines a portion of the monumental core within downtown Washington, DC.

---

² Proposed adjustments to the 1992 Boundary include the addition of the Kennedy Center and Banneker Park.
The Streetscape Guide and Its Users:

Building off the 1992 Streetscape Manual, the Monumental Core Streetscape Guide (Streetscape Guide) includes conceptual to detailed information, guidance, and reference material that will serve a broad audience. Readers will find different chapters most valuable according to their planning, design, implementation, or maintenance role as follows:

**The Streetscape Framework:** The Urban Design Streetscape Framework (Streetscape Framework) comprises three street categories, eleven general character areas, and streetscape elements; it also includes important transitions, gateways, and thresholds. It will be most useful to planners and urban designers to assist in the planning, design, and implementation of new streetscape capital improvement projects. See pages 10-26 for review in November 2019.

**The Streetscape Guidelines:** The Streetscape Guidelines will consist of detailed planning guidance for streetscape design character and physical quality including the configuration, placement, and alignment of streetscape elements such as streetlights, trees, pavement, and furnishings. These guidelines will supplement the Streetscape Framework’s principles. It will be most useful to urban designers, landscape architects, and architects to assist in the design and implementation of new streetscape capital improvement projects. Draft anticipated for review in 2021.

**The Streetscape Construction Manual:** The Streetscape Construction Manual will include construction details and specifications for important streetscape elements. Some specifications are performance-based, while others may be prescriptive. It will be most useful to facilities managers and construction and repair workers to assist in the installation and regular maintenance of streetscape elements. Draft anticipated for review in 2021.
Urban Design Streetscape Framework
Urban Design Streetscape Framework

Introduction

The Urban Design Streetscape Framework (Streetscape Framework) provides a conceptual organizational structure for streets within the monumental core and adjacent areas within the capital city. The Streetscape Framework provides context and principles for more detailed planning and technical guidance that will inform development of the Streetscape Guidelines and Streetscape Construction Manual, which will be developed in future tasks of work.

The Streetscape Framework includes:

- Three street categories,
- Eleven general character areas,
- Streetscape elements, and
- Gateways and thresholds.

These components, described below, inform the principles for the Urban Design Streetscape Framework found on pages 16-25.

Street Categories:

Street categories are an important foundation for the Streetscape Framework, providing a strong conceptual basis to organize streets within the capital city and its monumental core. These streets contribute to the Plan of the City of Washington. The Comprehensive Plan’s Urban Design Element identifies many of these streets as special streets. Typically, they are defined by their national and local identity. This identity is defined by the street function; its spatial and visual relationships to nationally significant structures or spaces; and its civic, ceremonial, and symbolic role. The three categories are:

1. **Radiating and Edging Streets**: the iconic avenues and streets radiating or edging the nation’s most preeminent civic buildings, reservations, monuments, memorials, or commemorative sites of national importance. These streets are associated with their historic, ceremonial, civic, or symbolic role, allowing some to stand alone as a destination. Example: Pennsylvania Avenue, NW.

2. **Connecting and Traversing Streets**: important avenues and street that edge, connect, or traverse one or more nationally and/or locally significant civic buildings or reservations, monuments, memorials, or commemorative sites. Example: K Street, NW.

3. **Local Streets**: generally, part of the Plan of the City of Washington’s orthogonal grid. These streets provide circulation through and between blocks within precincts and neighborhoods to local destinations and are locally significant. Example: 3rd Street, NE/SE.

Each category of street has guiding principles for streetscape character and quality found on pages 16-17.

---

3 National Register of Historic Places Registration Form for the L’Enfant Plan:
Character Areas:

Character Areas also contribute to the foundation for the Urban Design Streetscape Framework, providing distinctive places within the broader urban landscape of the monumental core. Character areas do not represent jurisdictions; they are areas distinguished among each other by the patterns of the built environment, landscape organization, and the streetscape infrastructure and amenities that are visible within the public realm.

Character Area boundaries are informed by the following attributes: land use, spatial organization, views and visual relationships, topography, vegetation, circulation, and architectural and landscape structures. Physical features such as a wall, path, or road may clearly define boundaries; in other circumstances, vegetation or topography may loosely delineate boundaries. Most of the character areas include one or more-character sub-areas. The sub-areas share many attributes of its overall character area, but their use, patterns, or features are distinctive enough to set it apart as a section or component of the larger character area.

The Streetscape Guide’s boundary area includes eleven general character areas (in bold); and several sub-areas, as listed below:

- U.S. Capitol Complex
- Courts and Institutions
- Potomac Hill
- Kennedy Center
- Banneker Park
- Federal Triangle and Sub-Area: Pennsylvania Avenue NHS
- The National Mall and Sub-Areas: The Mall, Mall Museums, Washington Monument, and West Potomac Park
- The White House and President’s Park, and Sub-Areas: Lafayette Park, the White House and Grounds, and the Ellipse and President’s Park South
- Downtown and Sub-Areas: Pennsylvania Avenue NHS, West End Parks and Plazas, Central Corridor, Market Square Area, East End Institutions
- Northwest Rectangle and Sub-Areas: E Street Corridor, NW Federal Workplaces, NW Institutions
- Southwest Rectangle and Sub-Areas: Southwest Institutions and Agriculture Complex, Southwest Workplaces, and Southwest Federal Workplaces

Using the attributes above, an example description of a character area is provided in Attachment 1. While the research is complete, the eleven character areas and their sub-areas will be described in the next work task, which will inform the Streetscape Guidelines and Streetscape Construction Manual.

---

Adjacent Areas:
Adjacent Areas lie beyond the 1992 Manual Boundary. The monumental core’s streets extend through and connect to adjacent areas that are comprised of local neighborhoods that have their own identity as part of the capital city. Their adjacency enriches the monumental core with their unique character, design features, and distinct sense of place. Adjacent area’s streetscapes generally conform to the District of Columbia’s Public Realm Design Manual (PRDM) or Business Improvement Districts’ streetscape guidelines. To strengthen the identity of the capital city and the monumental core, some monumental core streetscapes should appropriately transition into some adjacent areas for consistency and continuity of character.

Streetscape Element: Level of Visual Consistency

The following diagram illustrates the type of streetscape elements that either contribute to consistency or variability.

Highest Degree of Consistency

Vertical Elements
- Streetlights
- Trees

Surface Elements
- Pavement (sidewalk and roadway)
- Pedestrian Walking Space
- Curb and Gutter
- Landscaping

Small-Scale Elements
- Furnishings (benches, trashcans, etc.)
- Tree Boxes/Grates
- Wayfinding Signs*
- Sidewalk Cafes
- Perimeter Security

More Variable

*A consistent wayfinding system would not preclude unique wayfinding signs within character areas.

More information on streetscape elements’ consistency and continuity is provided in the Streetscape Framework on page 19.
**Streetscape Elements:**

Streetscape elements have an important role in informing the streetscape character, consistency, and the sense of continuity that link the monumental core with the capital city. The importance of streetscape *consistency* within the monumental core was documented in the 1992 Streetscape Manual. Many of the monumental core’s streetscapes frame nationally significant open spaces and connect to national icons. Therefore, the setting and role of these streets demand a consistent treatment that unites the identity of the monumental core and provides formal and ordered connections to important destinations.

The type, use, and application of streetscape elements contribute to the street character, its continuity, and quality of the pedestrian’s experience. Highly consistent streetscape elements are important for visual harmony, a cohesive identity, and creating well-defined streetscape corridors. The degree of variation in the type, use, and application of streetscape elements is important to set an area apart, creating a unique sense of place.

The Framework’s Street Categories require different levels of visual consistency to support their role within the framework of the monumental core and capital city.

- **High consistency** among streetscape elements is particularly important for Radiating and Edging Streets because of their direct physical and visual relationships to national icons.

- **Moderate consistency** among streetscape elements is important for Edging and Traversing Streets because they indirectly link national icons, and many are located within character areas.

- **Some consistency** among streetscape elements is suitable for Local Streets because they are part of the defining characteristics of the city.

Streetscape elements include both living and non-living elements and are usually interrelated by their role and function. For example, landscape elements such as trees, tree boxes, plantings, and stormwater systems form interconnected systems that perform ecosystem services and have ecological value in the urban environment. However, for the purposes of the Framework, streetscape elements are organized according to their formal and visual role and are categorized into vertical, surface, and small-scale elements.

- **Vertical elements**: define the edges and form outdoor rooms that establish the visual frame or corridor and sense of scale along streets. They are the most pronounced elements that contribute to continuity.

- **Surface elements**: define the ground plane and have a powerful ability to set the context of the place and either contribute to its continuity or set an area apart.

- **Small-scale elements**: contribute to the character and continuity but have the greatest potential to diversify the character and add variety to the pedestrian’s experience.
The Urban Design Streetscape Framework (Streetscape Framework) and Principles:

Street categories, character areas, and streetscape elements define the Streetscape Framework. The relationships among these attributes inform the street’s guiding principles. These attributes, together with a neighborhood’s or precinct’s uses and features, contribute to the overall sense of place of a street or given area.

Depending on the degree of consistency or variability of streetscape elements, the streetscapes either contribute the city’s national identity, local identity, or to the identity of a particular neighborhood or precinct, regardless of jurisdictional boundaries. Because streetscapes link, connect, and unify the capital city, transitions between street categories are important to establish consistency and continuity of a streetscape.

Radiating and Edging Street Principles:

1. Generally, the character of each individual street should be highly consistent across precincts, neighborhoods, and jurisdictions.

2. The vertical, surface, and small fixture elements are highly consistent as they traverse through neighborhoods and precincts to unify the monumental core and city. This reinforces the monumental core and capital city identity by tying the city together, physically and visually, to maintain a stately streetscape appearance.

3. Streetscape elements should have a continuous rhythm and be balanced and symmetrical on both sides of the street, to represent the order and stability of nation’s government, create streetscape corridors, and to direct and focus vistas and viewsheds to significant landmarks or destinations.

4. Ample pedestrian space should accommodate a range of civic and ceremonial uses.

5. The streets nationally symbolic, civic, and ceremonial role warrants the highest attention to streetscape design and quality to reinforce the street’s identity and significance in the nation’s capital.

Connecting and Traversing Street Principles:

1. Generally, the character of the streets is mostly consistent to unify the streetscape and link destinations across precincts, neighborhoods, and jurisdictions to reinforce the city’s identity and imply wayfinding cues.

2. Vertical and surface elements are mostly consistent along the street’s length to provide continuity and contribute to the capital city’s identity; however, surface and small fixture elements may adapt to character areas, highlighting a precinct or neighborhood unique qualities.

3. Streetscape elements should have a continuous rhythm and be balanced and symmetrical on both sides of the street, except where spatial relationships or edges of certain uses warrant an
asymmetrical streetscape. For example, waterfront streets like Ohio Drive may have an asymmetrical streetscape oriented to the water edge; and streets that edge different uses like 2nd Street, NE may have an asymmetrical streetscape transitioning between the US Capitol Complex and Capitol Hill neighborhoods.

4. The streets significance as a connection between important national and local civic uses warrants high attention to streetscape design and quality.

Local Street Principles:

1. Policies, guidance, and regulations for local streets are in DC’s Public Realm Design Manual or Business Improvement Districts’ Streetscape Guidelines.

2. Generally, the character of streets should be somewhat consistent across precincts, neighborhoods, and jurisdictions to define the capital city and give character and grace to neighborhoods.

3. Generally, the character of the street reflects the identity of the local city, precincts or neighborhoods that it traverses, creating a strong local identity.

4. Vertical elements are mostly consistent along the street’s length to provide continuity and contribute to the capital city’s identify and imply wayfinding cues; however, surface and small fixture elements may adapt to character areas, highlighting and reinforcing a precinct’s or neighborhood’s unique qualities.

5. Streetscape elements should have a continuous rhythm and be balanced and symmetrical on both sides of the street, except where spatial relationships or edges of certain uses warrant an asymmetrical streetscape. For example, streets that edge different uses like 1st Street, NE may have an asymmetrical streetscape transitioning between Union Station and the NOMA neighborhood.

6. The street’s significance as a connection between important national and local civic uses, or its significance to a local neighborhood or precinct may warrant streetscape treatment that is different from local standards and treatments.

Transition Principles:

1. Transitions are locations where street categories change, typically responding to urban and natural features, such as intersections, parks, circles, squares, etc. Transitions are important because they can provide a sense of continuity along longer streetscape corridors.

2. Vertical streetscape elements (streetlights and trees) are critical to providing streetscape consistency and continuity where street categories or character areas transition.
3. Parks, circles, squares, street intersections, or physical barriers (such as highways, railroads, or grade changes) should be used as transition points between street categories to minimize visual and physical disorder and provide streetscape consistency and continuity along street lengths between destinations. Streetscape consistency and continuity should continue on either side of physical barriers.

4. Where two or more different street categories intersect at parks, circles, squares, or intersections, the highest street category should be used along the interior side of the street that circumscribes the perimeter of the park, circle, square, or intersection. Symmetry, particularly among vertical elements (streetlights and trees), should be provided across both sides of the street (interior and exterior perimeters of the park, circle, or square). Surface and small-scale elements may reflect the character of the park, circle, square, or character area.

5. Avoid changing streetscape elements for short segments (e.g. one or two blocks) in order to provide consistency and continuity along street lengths.

6. Preserve vistas and viewsheds through the placement and alignment of streetscape elements and provide pedestrian and streetscape consistency and continuity particularly where elevation changes, infrastructure elements, or other barriers occur.

Character Area Principles:

1. Streets within character areas shall have a high level of consistency to reinforce the character area and sub-areas within it.

2. Streets at the edges or boundaries of character areas should defer to their street category for guidance on consistency and continuity of streetscape elements.

3. Vertical streetscape elements (streetlights and trees) shall be consistent on both sides of character areas boundary streets to provide consistency and define vistas and viewsheds.
Diagram of Streetscape Elements and Street Principles:

The following diagram illustrates how the streetscape elements relate to the street category principles, which inform the degree of streetscape consistency.

*A consistent wayfinding system would not preclude unique wayfinding signs within character areas.*
Urban Design Streetscape Framework Summary Chart

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Radiating &amp; Edging Streets</th>
<th>Connecting &amp; Traversing Streets</th>
<th>Local Streets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DEFINITION</strong></td>
<td>Preeminent L’Enfant Plan Streets</td>
<td>Notable L’Enfant Plan Streets</td>
<td>Local L’Enfant Plan Streets</td>
</tr>
<tr>
<td></td>
<td>• Symbolic/ Monumental/ Civic/ Commemorative/ Cultural Role</td>
<td>• Civic/Recreational Role</td>
<td>• Orthogonal grid with a functional role</td>
</tr>
<tr>
<td></td>
<td>• National significance</td>
<td>• National and local significance</td>
<td>• Local significance</td>
</tr>
<tr>
<td></td>
<td>• Radiate from or edge nationally significant structures or icons and open spaces</td>
<td>• Connects destinations and nationally significant open spaces</td>
<td>• Provides circulation through and between blocks within precincts and neighborhoods</td>
</tr>
<tr>
<td></td>
<td>• May stand alone as a destination</td>
<td>• Edge, connect, or traverse one or more nationally or locally significant civic buildings or reservations, monuments, memorials, or commemorative sites</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• May have Linear Viewsheds as described in the Urban Design Element&lt;sup&gt;5&lt;/sup&gt;</td>
<td></td>
<td>• Provides access to destinations</td>
</tr>
<tr>
<td><strong>GUIDANCE</strong></td>
<td>• Highly consistent streetscape</td>
<td>• Mostly consistent streetscape</td>
<td>• Somewhat consistent streetscape</td>
</tr>
<tr>
<td></td>
<td>• Streetscapes and elements unify the identity of the monumental core and capital city</td>
<td>• Elements unify the identity of the monumental core and capital city and link destinations</td>
<td>• Elements unify the identity of the capital city</td>
</tr>
<tr>
<td></td>
<td>• Cohesive and consistent across character areas and neighborhoods</td>
<td>• Responds to the character areas and neighborhoods with some variable elements</td>
<td>• Adapts to the character areas and neighborhoods with many variable elements</td>
</tr>
<tr>
<td></td>
<td>• Balanced and symmetrical with continuous rhythm</td>
<td>• Balanced and symmetrical with continuous rhythm, except where spatial relationships or character area edges warrant an asymmetrical streetscape</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Direct and focus vistas/viewshed to significant structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ample pedestrian space for civic and ceremonial uses</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>QUALITY</strong></td>
<td>• Highest durability of material in accordance with the Streetscape Construction Manual</td>
<td>• High durability of material in accordance with the Streetscape Construction Manual</td>
<td>• DC material standards and treatments</td>
</tr>
</tbody>
</table>

<sup>5</sup> Page 32 of the Urban Design Element identifies and describes Streets with Linear Viewsheds.
Gateways, Thresholds, and Approaches within the District Context
Gateways, Thresholds, and Approaches:
It is important to identify where and how streets interact with urban and natural features. These locations are moments offering a sense of arrival and typically occur at entry points, such as intersections, bridges, parks, or waterfronts. Depending on location and context, these entry points form a capital gateway, gateway, threshold, or approach as described in the Federal Urban Design Element and are further described and elaborated below.

- **Capital Gateways:** are entry points to the nation’s capital and monumental core. Capital gateways contribute to the identity and experience of the capital city by announcing entry and connecting to national icons, either as:
  - Visual connections that provide views to the most nationally significant buildings, structures, or landscapes; or,
  - Physical connections that are major axial or radial avenues and streets that link to the most nationally significant buildings or structures.

- **Gateways:** are entry points to the capital city. Gateways contribute to the identity and experience of the city by announcing arrival through a passage (possibly through a structure or building such as a bridge or train station) into the capital city, the city’s periphery, or connecting between neighborhoods.

- **Transitional Thresholds:** are entry points to or between character areas. Transitional thresholds describe where and how streetscape elements define points of entry and may support unique views or circulation patterns. Transitional thresholds:
  - Denote moments of streetscape transition to define entryways or changes in streetscape character where two or more character areas come together.
  - Occur within monumental core (as defined by the 1992 Streetscape Manual Boundary).
  - Occur between character areas or sub-areas.
  - Possess important visual and material cues to signal character change, support unique views, direct pedestrians to site and building entries, and express moments of passage and transition.

- **Axial Approaches:** define entry sequences to the monumental core, reinforcing continuity along major streets within the nation’s capital. Axial Approaches:
  - Denote moments of streetscape continuity where Radiating and Edging and Connecting and Traversing streets enter the monumental core (as defined by the 1992 Streetscape Manual Boundary).
  - Occur along major radiating and axial streets connecting to Capital Gateways or Gateways along the city periphery, as identified in the Federal and District Urban Design Elements of the Comprehensive Plan and Frederick Law Olmsted’s Highway Plan.
  - Occur along major radiating and axial streets where there are important connections to key reservations, open spaces, or destinations within the L’Enfant city, such as Virginia Avenue, 23rd Street, Pennsylvania Avenue NW, and Vermont Avenue NW.
  - Possess important visual and physical connections between points within the monumental core and key reservations, open spaces, or destinations within the L’Enfant City.
Gateways, Thresholds, and Approaches

LEGEND
- NATIONAL MALL ROADS BOUNDARY
- BUILDINGS/STRUCTURES REFERENCED IN CONTRIBUTING VISTAS
- MEMORIAL STATIONS WITH PHYSICAL ACCESS TO THE MONUMENTAL CORE

STREET CATEGORIES
- FASTNING & EDGING
- CONNECTING & TRAVING
- FUTURE CONNECTIONS SHOWN DASHED

AREAS
- CHARACTER AREAS
- L'ENFANT CITY
- NATIONALLY SIGNIFICANT OPEN SPACE

GATEWAYS/THRESHOLDS
- CAPITAL GATEWAYS (AS DESIGNATED IN THE FEDERAL COMPREHENSIVE PLAN)
- GATEWAYS (AS DESIGNATED IN THE FEDERAL COMPREHENSIVE PLAN)
- TRANSITIONAL THRESHOLDS (FUTURE GATEWAYS/THRESHOLDS SHOWN DASHED)
- AXIAL APPROACHES

MAP CREATED IN WINTERSPRING 2019 USING INFORMATION FROM EXISTING PLANNING DOCUMENTS AND DC GIS

1. 16th Street NW and North Capitol Street have northern Capital Gateways that are off the extents of this map.
2. Gateways: Benjamin Road NE and K Street Bridge are not shown because they are not connected to the proposed Streetscape Network.
Principles for each of these entry points are provided below.

**Capital Gateway and Gateway Principles:**

1. Capital gateways (such as bridges, rail lines, or major transit hubs that physically or visually connect to the monumental core) and gateways (entries into the city or its neighborhoods) should have a distinct or elevated quality to signal entry into the capital city.

2. Capital gateway and gateway bridges that carry pedestrian or bicycle modes, should provide continuity along their length by continuing the adjacent street character across the bridge through consistent lighting, pedestrian walking spaces, sidewalk pavement, curb and gutter treatment, and wayfinding.

3. Newly constructed gateway bridges with signature design elements (such as the South Capitol Street Bridge and 11th Street Bridge/Park) may have streetscape elements that are specific to the character and design of the gateway bridge elements and should be coordinated with adjacent streets’ streetscape elements with respect to placement and alignment for continuity.

**Transitional Threshold Principles:**

1. Transitional thresholds enhance connections and wayfinding to destinations within the monumental core.

2. Transitional thresholds between character areas may break from the consistency and continuity (rhythm and symmetry) of linear streetscapes to indicate an entry point; establish clear view corridors to other destinations; or direct circulation patterns.

**Axial Approach Principles:**

1. Continuous approaches enhance visual continuity and symmetry along major streetscape corridors entering the monumental core, within the nation’s capital.

2. Continuous approaches should prioritize continuity of streetscape elements including: Vertical Elements, Surface Elements, and appropriate Small-Scale Elements.
Criteria for Transitional Thresholds and Axial Approaches provide additional guidance regarding how the built environment can reinforce transition or continuity, respectively.

**Transitional Threshold Criteria:**

1. Announce entry by prioritizing the vertical and surface elements of the character area being entered.

2. Present opportunities to create welcoming and inviting spaces that capitalize on the unique character of the area.

3. May transition in scale (from monumental to pedestrian) to create a more welcoming human-scaled streetscapes.

4. May use streetscape materials and viewsheds to direct pedestrians and focus on site and building entries.

5. May have a distinct or mixed material palette to transition between diverse character area palettes.

6. Design inspiration for any transitional threshold enhancements should be derived from the National Mall’s streetscape design and program.

**Axial Approach Criteria:**

1. Vertical elements (streetlights and trees) should not obstruct open vistas and viewsheds where streetscape corridors intersect important reservations.

2. Axial approach character should reinforce continuity along the streetscape. This can be done by using similar streetscape elements (such as street trees, streetlights, or sidewalk pavement) at both the axial threshold and along the streetscape corridor; for an extent of one or more blocks, depending upon the type of entry sequence desired.

3. Design inspiration for any axial approach enhancements should be derived from the existing surroundings and relevant historic plans at the entry point to the axial approach.
Attachment 1: Character Area Example

(summaries of each agency’s character areas are in progress)

U.S. Capitol Complex

Area size: 570+ acres (see Character Area map for location)

Land Use: The general land use of the U.S. Capitol Complex is congressional office buildings, historic national landmarks, grand public open spaces and other government functions.

Spatial Organization: The U.S. Capitol is the physical center of the District of Columbia and this historic L’Enfant Plan and several important streets. Pennsylvania Avenue; North, South, and East Capitol Street; and Maryland Avenue radiate outward from the Capitol Complex creating both a grid based and radial street network. In addition, the buildings of the complex are spatially oriented toward the U.S. Capitol Building, adding to its prominence in the area.

Views and Visual Relationships: Due to the design of radiating streets from the Capitol Complex and the U.S. Capitol Building’s location on a prominent hill, the views to and from Capitol Square are significant and stunning. The peripheral buildings of the complex also help to reinforce the important views by their design and orientation to the U.S. Capitol Building.

Topography: The U.S. Capitol Building was built on a prominent hill and is easily visible above surrounding structures and areas of the city. This topographic difference is most noticeable on the west front of the U.S. Capitol Building. The change in grade in other areas of the complex is less noticeable as it is located between buildings.

Landscape and Vegetation: The Capitol complex has extensive landscape areas and vegetation for an urban area. The Capitol Square historic landscape including Olmsted walls and lanterns, Senate Parks, Union Square, the U.S. Botanic Garden, and Bartholdi Park are a few significant landscape areas and features that frame the Capitol complex.

Circulation: Circulation in and around the Capitol complex is often restricted due to security priorities. Some major streets are open to almost all vehicles, but many internal streets are closed to public traffic. This can make accessing the complex difficult and confusing. In addition, security measures added during major events can restrict more types of access to the complex.

Architectural Structures: to be developed

Landscape Structures: There are innumerable historic and fascinating landscape structures on the Capitol complex, including the Capitol Reflecting pool, monuments, memorials, Olmsted walls and lanterns, the Summerhouse, etc. These structures add significantly to the character of the complex and its streetscapes.
Attachment 2: National Mall Streetscape Interagency Working Group Comments

National Mall Streetscape Interagency Working Group representatives collaborated on the development of the Urban Design Streetscape Framework from spring 2018 through summer 2018. Working group members’ comments on the latest draft of the Streetscape Framework are noted as follows:

- The NPS National Mall (NAMA) unit strongly recommended four street categories consisting of: (1) Symbolic/Commemorative/Cultural Roads, (2) L’Enfant Plan Roads, (3) Recreational Roads, and (4) Urban Roads, rather than the proposed three street categories of: (1) Radiating and Edging Streets, (2) Connecting and Traversing Streets, and (3) Local Streets. The NPS NAMA unit also commented that the Pennsylvania Avenue NHS should be its own character area. The Streetscape Framework currently includes the Pennsylvania Avenue NHS as a sub-area to the Downtown and Federal Triangle character areas.

- The DCOP commented in support of categorizing 8th Street NW (between the National Archives and Carnegie Library) as Radiating and Edging because of its important as a cross-axis in the L’Enfant Plan. Previously, CFA working group members did not support this. However, the latest draft of the Streetscape Framework does categorize 8th Street NW as Radiating and Edging Street. The DCOP suggested reinforcing that all street categories should have continuity among streetscape elements that unify streets and define the character of the city. To this point, DCOP suggested further describing local streets within the Streetscape Framework. DCOP also suggested identifying streets from which nationally significant structures (e.g. the US Capitol Building and the White House) can be seen as important gateway experiences.

- The GSA commented on streetscape elements recommending that wayfinding signs be more consistent in support of quick and easy pedestrian recognition and wayfinding; and that sidewalk cafes be included.
Dear Mr. Acosta:

In its meeting of 17 May, the Commission of Fine Arts was pleased to hear an information presentation by the National Capital Planning Commission staff on the proposed update of the Streetscape Manual for the National Mall roads improvement program. The Commission expressed appreciation for the effort to revise the manual, and provided the following comments for its development.

In their discussion, the Commission members recognized that the manual, which has guided interagency cooperation since its creation in 1992, has become inadequate for many of the contemporary issues facing the National Mall and Washington, D.C. Therefore, they emphasized that the manual must be an adaptable document that can anticipate accommodation of technological and climatic change within the streetscape without being prescriptive. For example, they commented that new digital technologies and the form of associated infrastructure—such as antennas, signage, modifications to lighting, charging stations, or driverless vehicles—cannot be predicted before they are developed, and they cautioned that specific guidelines would soon be obsolete. They recommended instead that guiding concepts should be developed to embrace these changes, suggesting that an approach of adaptable or managed precision would help address such current issues as resilience and the effects of extreme weather on the infrastructure; this could include using performance-based criteria to evaluate new ecological technologies. While expressing support for mobile food and retail service along the roads of the monumental core, they suggested that a design competition for vendor carts and structures could improve their current makeshift appearance. Finally, they strongly recommended that a formal governance and oversight structure for enforcement of the plan is fundamental to ensuring the success of the program.

The Commission looks forward to review of the Streetscape Manual as a product of the planning effort for the protection and stewardship of this nationally significant urban landscape and its infrastructure. For the development of the next submission, please consult with the Commission staff which, as always, is available to assist you.

Sincerely,

Thomas E. Luebke, FAIA
Secretary

Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW, Suite 500-N
Washington, DC 20004

cc: Laurin Lineman, Federal Highway Administration
Jeff Macrander, D.C. Department of Transportation
Peter May, National Park Service
Dear Mr. Acosta:

In its meeting of 20 June, the Commission of Fine Arts was pleased to hear two information presentations by the National Capital Planning Commission staff on the Monumental Core Streetscape Project and its proposed frameworks and policies for streetscape and lighting design, part of a comprehensive update of the Streetscape Manual for the National Mall Road Improvement Program. The Commission expressed appreciation for the efforts to revise the manual, and provided the following comments for its development.

Urban Design Streetscape Framework

In their discussion of the streetscape framework plan, the Commission members identified several issues for further study and clarification. At the broadest level, they advised that the plan should anticipate contemporary environmental issues, such as the impact of extreme weather and localized flooding, so that necessary adaptations of the streetscape can be planned for systematically, rather than on a case-by-case basis. They emphasized that the urban streetscape should be conceived of as a performative landscape system rather than as a composition of separate elements; they cited the presentation of classifying trees as distinct vertical elements, whereas the plan should consider trees to be a complex of living organisms requiring specific infrastructure to thrive within the streetscape. They also questioned the plan’s emphasis on the thresholds identified between the National Mall and adjacent precincts within the monumental core, commenting that the boundary drawn between the broader monumental core and the surrounding city may suggest the location of significant thresholds. They advised that the city’s major axial and diagonal roadways should be considered as the framework of the monumental city that reaches beyond the strict boundaries of the historic core, and they found that the streetscapes of these corridors should emphasize continuity. Accordingly, they suggested that the design approach to thresholds should derive from the identified hierarchy of street types, emphasizing either continuity or transition.

Street Lighting Policy and Framework

In consideration of the street lighting policy, the Commission members expressed general support for retrofitting the city’s existing streetlights with light-emitting diode (LED) lamps, noting the reduced energy consumption, improved color, and more consistent background against which important buildings and monuments can be lit. However, they cited the existing hierarchy between the white light of the monumental core and the warmer light of the
surrounding city, and they expressed regret that this distinction may be lost when all streetlights are converted to the same color temperature; they suggested exploring ways to preserve this hierarchy. They noted that the spatial and architectural conditions of the city may be expressive enough without using street lighting to delineate the complex system of street classifications, and they therefore suggested simplifying the lighting framework. In general, they encouraged local and federal stakeholder agencies to consult with innovative urban lighting designers for the testing and implementation of this new street lighting technology, and they encouraged constructing in-situ mockups to test the criteria proposed in the policy.

The Commission looks forward to continued review of revisions to the Streetscape Manual as a product of the planning effort for the protection and stewardship of this nationally significant urban landscape and its infrastructure. For the development of the next submission, please consult with the Commission staff which, as always, is available to assist you.

Sincerely,

Thomas E. Luebke, FAIA
Secretary

Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW, Suite 500-N
Washington, DC 20004

cc: Laurin Lineman, Federal Highway Administration
Jeff Marootian, D.C. Department of Transportation
Peter May, National Park Service
Attachment 5: Reference Maps

i. DDOT Vehicular Functional Classification Map (2016)

ii. Historic District Map (2017)
Lighting Policy and Framework Briefing Packet

Table of Contents:

Introduction

Purpose ................................................................................................................... page 3
Goals ..................................................................................................................... page 4
Background and Context ...................................................................................... page 4

Lighting Policy and Framework

Conceptual Approach and Organization ................................................................. page 8
Structures: Civic Buildings, Monuments, Memorials, and Bridges ............... page 10
Landscapes: Parks and Open Spaces ................................................................. page 14
Streetscapes: Avenues and Streets ................................................................. page 18
Guidance Summary Chart .............................................................................. page 25

Attachments

Attachment 1: White Light Policy
Attachment 2: National Mall Streetscape Interagency Working Group Comments
Attachment 3: Letter from the U.S. Commission of Fine Arts (June 2019)
Attachment 4: Public Comments
Introduction

The Lighting Policy and Framework identifies and provides a conceptual hierarchy for illuminated components within the monumental core and surrounding federal areas within the capital city. It builds on current policies, historic principles, and the Urban Design Streetscape Framework. It also integrates existing conditions and planned street lighting improvements into a comprehensive lighting framework. To coordinate with the City’s Smart Street Light Project, the Lighting Policy and Framework addresses street lighting with greater specificity by providing more detail and technical guidance.

The Lighting Policy and Framework provides context and principles for more detailed planning and technical guidance that will inform development of the Streetscape Guidelines and updates to the Streetscape Construction Manual including LED Streetlight Specifications, which will be developed in future work tasks.

This document addresses lighting for several components of the public realm within the monumental core, and is organized as follows:

- **Structures**: Civic Buildings, Monuments, Memorials, and Bridges
- **Landscapes**: Parks and Open Spaces
- **Streetscapes**: Avenues and Streets

Lighting principles and guidance are provided for each component within their respective sections.

Purpose:

The purpose of the Lighting Policy and Framework is to provide general guidance for lighting within downtown areas of the monumental core in support of policies that state the federal government should:

> Utilize building, street, and exterior lighting that respects the hierarchy of Memorials, Monuments, and important Civic Buildings and Spaces in the nation’s capital, with the U.S. Capitol and Washington Monument the most prominent features in the nighttime skyline.

(Urban Design Element, 2016)

The Lighting Policy and Framework focuses on enhancing the character of areas with greatest national interest within the monumental core and clarifying the role street lighting plays in supporting visual connections to nationally significant destinations. The Lighting Policy and Framework builds on current policies; provides guidance on the hierarchy of nationally significant civic buildings, memorials, monuments, bridges, parks, and open spaces; and provides detailed guidance on street lighting to coordinate guidance with the city’s new Smart Street Lighting project. Coordinating guidance for streets within downtown areas of the monumental core is particularly important since the District Department of Transportation’s (DDOT) Streetlight Policy and Design Standards (2013) exempts the areas in and around the National Mall.
Goals:

Building upon the Lighting Policy and Framework’s purpose to advance implementation of the Urban Design Element, the goals of the Lighting Policy and Framework are to:

- **Create a clear lighting hierarchy** that respects and protects the symbolic meaning and nighttime appearance of iconic structures, open spaces, and streets within the monumental core.

- **Build upon the capital city’s historic lighting plans** by carrying forward important principles.

- **Recognize the nighttime appearance of the existing urban context** that surrounds the monumental core.

- **Address contemporary street lighting issues**, such as changing technologies and capabilities.

Background and Context:

City lighting is important because it fulfills a range of aesthetic and mobility needs. Streetscape and architectural lighting illuminate the city at night, provides visual access, improve safety and security, offer visual comfort, and enhance the character and spatial experience of the urban environment.

Lighting design has a long planning history in the capital city covering a range of subjects, including lighting for distinct purposes, the type and placement of light poles, and the color and type of light emitted. Over time, the primary emphasis of street lighting has gone from pedestrian comfort and safety, to the convenience of the motorist, to crime prevention, and has now become more comprehensive to address all needs. As needs have evolved, Washington’s streetlight fixtures (Washington Globes and Twin-Twenties), as originally designed in 1910 and 1923, have stood the test of time; the cast iron pole design is still in use. Vehicle speeds have increased along with demands for higher illumination to compensate for the glare of headlamps and the need to make traffic decisions quickly. Higher wattage incandescent lamps were followed by more efficacious mercury lamps (with their distressing blue-green cast) and most recently by high pressure sodium lamps (with their distorted yellow-orange color and intolerable glare).

Modernization programs to reduce energy usage and cut costs, like the City’s Smart Lighting Project and public-private partnership, introduce new challenges. Creating LED streetlight fixtures with warmer light tones (warmer color temperature) similar to incandescent and high-pressure sodium lamps, is technically challenging and expensive. The heavy glass globes, difficult to maintain and costly to purchase, have been replaced with high impact plastic, which tends to yellow over time and effect light quality.

New technologies and practices are changing the design, installation, and management of lighting in the city, affecting the long-standing lighting principles established by history and preceding plans. These changes require re-assessing lighting goals and re-visiting historical street lighting aesthetics and principles.
**Principles Carried Forward from Historic Lighting Plans:**

To balance current modernization programs and changing technologies with the capital city’s lighting legacy, it is important to carry forward the following principles from historic lighting plans:

- **Lighting should differentiate areas of national significance** (within the monumental core and radial avenues and streets) from surrounding city lighting. Historically, the monumental core had a soft white (color temperature) lighting, while the surrounding urban and residential areas had yellow to orange (color temperature) street lighting.

- **Street and building lighting should enhance views and vistas to illuminated iconic structures.** Streets with visual termini on nationally significant illuminated structures should calibrate architectural and street lighting brightness to enhance the illuminated terminus, rather than focus on the adjacent buildings or streetlights.
Contextual Considerations:

It is important to consider the urban context and relationships of monumental core lighting to city lighting and land use policies, and existing conditions, such as residential areas and Designated Entertainment Areas (DEAs) when considering architectural and streetscape illumination. The Lighting Policy and Framework may need to adapt to accommodate these areas.

The city currently has several illuminated structures whose entertainment uses draw large crowds. Entertainment uses often use brighter architectural and sign illumination for outdoor visibility, wayfinding, and amusement. For example, the Nationals Stadium uses brighter outdoor, architectural, and sign illumination for outdoor baseball games and entertainment-related signage. The Capital One Arena uses brighter architectural and sign illumination to draw crowds to its location within the Chinatown neighborhood. The Anthem concert hall at the Wharf also maintains brighter signage to advertise its music programming.

The following map illustrates the city’s Designated Entertainment Areas according to District Zoning Regulations (Chapter 9). These include: The Gallery Place Project, The Verizon Center (now the Capital One Arena), The Ballpark Area, and the SW Waterfront and Fish Market.
Lighting Policy and Framework


**Lighting Policy and Framework**

**Conceptual Approach and Organization:**

Components within the public realm are subdivided into tiers. The tiers help to distinguish the symbolic meaning, significance, and visual prominence of iconic structures and streets within the city's urban design framework. Components are further sub-categorized by their settings. The settings consider the lighting needs of the surrounding environment. General lighting guidance and principles are provided for each tier. While the tiers define a hierarchy of significance and nighttime appearance, the tiers are not intended to indicate relative brightness (or luminance) or provide specific guidance or details on how to implement building, bridge, park, or open space illumination. Specific strategies and techniques to illuminate individual civic buildings, monuments, memorials, bridges, or parks and open spaces are outside of the scope of this document and would be determined by their respective property owners and operators in consideration of the policies and objectives established within this document.

To establish a nighttime illumination hierarchy, Washington's important structures and landscapes are organized into tiers using the following criteria.

**Tier 1 Criteria:**

- Nationally significant symbolic meaning.
- Critical to the national capital nighttime image and identity.
- Visually prominent components that have relationships to other sites and open spaces beyond their immediate surroundings.
- Located on a major axis or entry point.
- Identified in policies or historic plans.

**Tier 2 Criteria:**

- National or local symbolic meaning.
- Important to the city's nighttime image and identity.
- Visually prominent components that have relationships to other sites and open spaces beyond their immediate surroundings.

**Tier 3 Criteria:**

- National or local importance.
- Civic uses.
- Either symbolic meaning or visual prominence in the city's nighttime image.
Structures, Landscapes, and Streetscapes are sub-categorized according to their settings. The settings include the following:

- **Nationally Significant Open Space**: located within or edging the National Mall and Architect of the Capitol Grounds.
- **Urban**: located in federal workforce, commercial, mixed-use, cultural, or institutional areas.
- **Residential**: located in residential neighborhoods.
- **Natural/Waterfront**: located within large parks or gardens, or edging riverfronts, channels, or basins.
**Structure Tiers: Civic Buildings, Monuments, Memorials, and Bridges:**

Federal policies support the preeminence of the Washington Monument and US Capitol building in Washington’s nighttime skyline. These structures are most visually prominent because of both their location, scale, height and architectural lighting. However, other civic buildings, monuments, and memorials such as the White House, Jefferson and Lincoln memorials are also important to Washington’s nighttime cityscape. The capital city’s civic buildings, monuments, memorials, and bridges are in a variety of settings, including nationally significant open space, urban, residential, and natural/waterfront areas. These settings establish the context and surroundings within which the structure is viewed and accessed.

The nation’s important civic buildings, monuments, memorials, and bridges, are tiered according to their national significance and spatial prominence within the city’s framework and are sub-categorized by their settings as follows:

Monumental Core Streetscape Project
Attachment 2

Gate to Navy Yard, and Pentagon (and Memorial).

Natural/Waterfront Settings: Women in Military Service for America Memorial, National War College,

Netherlands Carillon, Francis Scott Key Bridge, and Frederick Douglas Memorial Bridge.

Residential Settings: Frederick Douglas House and St. Elizabeths.

Structures Lighting Principles:

This guidance addresses the nighttime appearance of civic icons within the capital city.

1. **Nighttime appearances should convey symbolic meaning:** Within this area, civic building, monument, memorial, and bridge lighting should provide a nighttime experience that reflects their symbolic and ceremonial meaning and role.

2. **The capital city should have a clear lighting hierarchy:** Civic building, monument, memorial, and bridge lighting should have a legible illumination hierarchy – as defined by the tiers - which elevates preeminent nationally significant (Tier 1) structures in the night sky.

3. **Architectural lighting should enhance structures:** Lighting of civic buildings, monuments, memorials, and bridges shall be designed to reveal and emphasize symbolism and architectural detailing, as well as ensure readability of any quotations or inscriptions at night.

4. **Protect the night sky:** Lighting of civic buildings, monuments, memorials, and bridges should prioritize down-lighting and limit up-lighting to protect the night sky.

5. **White light is important to the city’s identity and harmony among civic buildings, monuments, memorials, and bridges:** White light reinforces a timeless image and celebrate the civic character of the capital city. (See Attachment 1: White Light Policy)

Specific technical guidance for architectural illumination is outside the scope of this document. Civic building, monument, memorial, or bridge owners and architectural lighting designers can use a variety of techniques to feature or express the symbolic meaning and showcase architectural features or details. Various techniques include:

- Down-lighting
- Up-lighting
- Interior illumination (from translucent materials)
- Facade illumination (for inscriptions or bas relief panels)

Civic building, monument, memorial, or bridge owners and lighting designers should balance architectural lighting for aesthetic purposes with other considerations including security, operations and programming, deliveries, or maintenance as well as the structure’s composition relative to important structures, settings, and open spaces.
Landscape Tiers: Parks and Open Spaces:

The city’s L’Enfant Plan establishes a network of parks and open spaces critical to the pedestrian experience that connect between civic and neighborhood destinations. The National Mall is an iconic civic destination and open space at the core of the capital city. The circles and squares, such as Columbus Circle and Farragut Square highlight the L’Enfant City structure including important relationships between the three branches of government and the capital city’s neighborhood parks and open spaces, such as Logan Circle and Eastern Market Park. The capital city’s parks and open spaces are in a variety of settings, including nationally significant open space, urban, residential, and natural areas. These settings have different sensitivities to streetlight brightness.

The nation’s important parks and open spaces are tiered according to their national significance and spatial prominence within the city’s framework. The parks and open spaces are also sub-categorized by their settings as follows:

**Tier 1:**

- **Nationally Significant Open Space Setting:** National Mall including The Mall, Washington Monument Grounds, and West Potomac Park; President’s Park including The White House, Ellipse, and Lafayette Park; and PADC parks including Pershing Park, Freedom Plaza, Market Square, Indiana Plaza, Mellon Fountain, and Marshall Park.

- **Urban Settings:** Capitol Square, Senate Parks, Columbus Circle, Judiciary Square, Mt. Vernon Square, Farragut Square, McPherson Square, Scott Circle, Washington Circle, DuPont Circle, Banneker Park, and Rawlins Park.

- **Natural/Waterfront Settings:** Arlington National Cemetery.

**Tier 2:**

- **Urban Settings:** Thomas Circle and Franklin Square.

- **Natural/Waterfront Settings:** East Potomac Park, George Washington Memorial Parkway (including Columbia Island, Arlington Ridge Park, and Theodore Roosevelt Island), Rock Creek Park, National Arboretum, Anacostia Park, Kenilworth Park and Aquatic Gardens, and Potomac and Anacostia waterfronts.

- **Residential Settings:** Logan Circle, Stanton Park, Lincoln Park, and Seward Square.

**Tier 3:**

- **Residential Settings:** Eastern Market Park, Folger Park, Marion Park, Garfield Park, and Meridian Hill Park.
Landscape Settings
**Landscape Lighting Principles:**

This guidance addresses street lighting edging the perimeter or traversing through parks and open spaces. This guidance does not address the lighting within or internal to parks and open spaces. Streetlight brightness depends on the setting, land use context, and pedestrian use of each park or open space.

1. **National Mall lighting should accentuate iconic civic structures:** Street lighting through and around the National Mall (nationally significant open space setting) should have a soft or warm white light and low ambient light levels to support a dark backdrop for highlighted civic buildings, monuments, and memorials.

2. **Perimeter park and open space lighting should highlight the L’Enfant Plan:** Street lighting along the perimeter of significant L’Enfant Plan circles, squares, parks, or open spaces should provide visual continuity through a soft or warm white light color temperature and consistent brightness, depending upon the location and setting.¹

3. **Urban areas should be brighter:** Street lighting adjacent to parks in urban and commercial areas may have higher ambient light levels to meet pedestrian visibility, safety, and security demands.

4. **Natural, waterfront, and residential areas should be dimmer:** Street lighting adjacent to parks in naturalized areas and waterfronts such as East Potomac Park, should have low ambient light levels to shield habitats, aquatic life, and protect the night sky.

Specific technical guidance for park illumination within or internal to parks and open space is outside the scope of this document. Park owners and operators can use a variety of techniques to feature or express the symbolic meaning and showcase park features or details.

- Path lighting
- Site lighting
- Spotlighting
- Underwater lighting

---

¹ This principle is compatible with the 1992 CFA Conceptual Lighting Plan.
Streetscapes: Avenues and Streets

The streetscape lighting hierarchy is defined by each avenue or street’s symbolic and visual connections, surrounding context and settings, and application of streetlight fixtures. Special streets within the capital city are organized into three categories that correspond with the Urban Design Streetscape Framework. The capital city’s avenues and streets are in a variety of settings, including nationally significant open space, urban, residential, and natural/waterfront areas. These settings have different sensitivities to streetlight brightness.

The nation’s important avenues and streets are categorized according to their national significance and spatial prominence within the city’s framework. The avenues and streets are also sub-categorized by their settings as follows:

**Streetscape Lighting Categories include:**

**Radiating and Edging Streets:**

These streets are important because of their unique symbolic role and spatial alignment providing a reciprocal, radial, or edging visual frame between nationally significant structures or open spaces (see Vista and Viewshed map). These streets generally have Twin-Twenty fixtures and are generally located in either nationally significant open space settings, urban, or federal workforce settings and include for example:

- **Nationally Significant Open Space Setting (examples):**
  - Independence Avenue SW
  - Constitution Avenue NW
  - 15th Street NW
  - 17th Street NW

- **Urban Settings (examples):**
  - Pennsylvania Avenue NW
  - 16th Streets NW
  - Virginia Avenue NW
  - New York Avenue NW
  - North and South Capitol Streets
  - Portions of East Capitol Street
  - Independence Avenue SE
  - Constitution Avenue NE

2 More information regarding Pennsylvania Avenue lighting can be found in the 1977 and 1987 PADC Lighting Plans.
**Connecting and Traversing Streets:**

These streets are important to highlight because of their physical linkages to or among nationally significant structures or open spaces. Connecting and traversing streets generally have Washington Globe fixtures and are located in a variety of urban, residential, and natural settings and include for example:

**Urban Settings (examples):**

- Massachusetts Avenue NW
- K and F Streets NW
- 7th Street NW and SW
- Rhode Island Avenue NW

**Residential Settings (examples):**

- Massachusetts Avenue NE
- North Carolina Avenue SE

**Natural/Waterfront Settings (examples):**

- Ohio Drive SW
- East and West Basin Drives

**Local Streets:**

These streets are important because they form the urban street grid and provide circulation to other precincts and neighborhoods within the capital city. These streets have a variety of fixture types ranging from Washington Globes to Cobraheads and other Pendant pole fixtures and are in a variety of urban, residential, and natural settings and include for example:

- G Street NW
- M Street SW and SE
- Portions of Maine Avenue SW
- 1st Street NE and SE
- Portions of H Street NW and NE
- Portions of 18th, 19th, 20th, 21st Sts NW
Radiating and Edging Street Lighting Principles:

1. **Street lighting should enhance nighttime views to national icons**: Lighting levels on streets with symbolic connections (particularly reciprocal, radiating, or edging vistas terminating on illuminated structures) should be dimmer than nationally significant structures or open space focal points. This supports enhancing and focusing views to important illuminated structures at avenue and street termini. Dimming of the District’s streetlights can be achieved through coordination with DDOT’s Smart Street Lighting Project.

2. **Street lighting should support the National Mall’s primary vistas and viewsheds**: Lighting levels on streets with important vistas and viewsheds (particularly streets crossing through or edging nationally significant open spaces) should be dimmer than nationally significant structures or open space focal points.

3. **Support the capital city’s nighttime image and identity**: Lighting on streets radiating from or edging nationally significant structures or landscapes should be slightly whiter (3,000K) to differentiate these streets in the historic city core from streets through naturalized or other residential areas in other parts of the city.

4. **The Nationally significant open space setting should be dimmer**: Street lighting in the nationally significant open space setting should balance dimming (to highlight nationally significant structures) with safety and security needs required for vehicles, pedestrians, and adjacent property owners.

Connecting and Traversing Street Lighting Principles:

1. **Protect the Mall’s viewshed**: Preserve the open primary viewshed within the center panel of the Mall between the U.S. Capitol Building and the Washington Monument by not permitting streetlights on north-south oriented streets in this zone.

2. **Street lighting should highlight the L’Enfant Plan**: Lighting on urban streets connecting significant structures or landscapes should be slightly whiter (3,000K) and/or brighter to differentiate these urban streets in the historic city core from streets in naturalized or residential settings in other parts of the city.

3. **Natural, waterfront, and residential settings should be dimmer**: Street lighting in natural, waterfront, or residential settings should balance highlighting nationally significant streets with safety and security needs.

---

3 This principle is compatible with the 1987 Conceptual Lighting Plan for the Pennsylvania Avenue Monumental Core recommendations.

4 Additional study and on-site evaluation may be needed for these streets to develop and implement special lighting guidance that focuses views to nationally significant civic buildings, monuments, memorials, or open spaces.

5 DDOT anticipates that Arterials (Principle and Minor) would have LED bulbs with a white 3,000 Kelvin color temperature.

6 This principle is compatible with the 1992 CFA Conceptual Lighting Plan.

7 DDOT anticipates that Arterials (Principle and Minor) would have LED bulbs with a white 3,000 Kelvin color temperature.

8 This principle is compatible with the 1992 CFA Conceptual Lighting Plan.
accommodating the needs of these sensitive settings by dimming street lighting to achieve low ambient light levels that shield habitats and aquatic life, and protect the night sky.

**Local Street Lighting Principles:**

1. **Soften the city’s street lighting:** Street lighting in residential, natural, or waterfront settings should be slightly warmer (2,700K maximum)\(^9\) and dimmer (depending on roadway class and land use) to differentiate\(^10\) the city’s streets from streets in the historic city core and to accommodate the needs of communities and environmental concerns.

---

\(^9\) DDOT anticipates that Collector and Local roads would have LED bulbs with a warm white 2,700 Kelvin color temperature.

\(^10\) This principle is compatible with the 1992 CFA Conceptual Lighting Plan.
### Guidance Summary Chart:

<table>
<thead>
<tr>
<th>Component Type &amp; Tier</th>
<th>Color Temperature Guidance</th>
<th>Brightness/Dimness Guidance</th>
<th>Other Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structures: Civic Buildings, Memorials, Monuments, and Bridges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>Soft white (3,000K)</td>
<td>Most visually prominent in the nighttime sky.</td>
<td></td>
</tr>
<tr>
<td>Tier 2</td>
<td>Soft white (3,000K)</td>
<td>More visually prominent than Tier 3 and the surrounding urban context.</td>
<td></td>
</tr>
<tr>
<td>Tier 3</td>
<td>Soft white (3,000K)</td>
<td>More visually prominent than surrounding urban context.</td>
<td></td>
</tr>
<tr>
<td><strong>Landscapes: Parks and Open Spaces</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>Soft white (3,000K) for nationally significant open space and urban settings. Warm white (2,700K) for natural/waterfront and residential settings and pedestrian walkways.</td>
<td>Brighter lighting in urban settings. Dimmer lighting in nationally significant open space, natural/waterfront, and residential settings.</td>
<td>Protect the primary nighttime vistas including the dim lighting on the Mall within the U.S. Capitol Building’s western viewshed.</td>
</tr>
<tr>
<td>Tier 2</td>
<td>Soft white (3,000K) for nationally significant open space and urban settings. Warm white (2,700K) for natural/waterfront and residential settings and pedestrian walkways.</td>
<td>Brighter lighting in urban settings. Dimmer lighting in nationally significant open space, natural/waterfront, and residential settings.</td>
<td></td>
</tr>
<tr>
<td>Tier 3</td>
<td>Soft white (3,000K) for nationally significant open space and urban settings. Warm white (2,700K) for natural/waterfront and residential settings and pedestrian walkways.</td>
<td>Brighter lighting in urban settings. Dimmer lighting in nationally significant open space, natural/waterfront, and residential settings.</td>
<td></td>
</tr>
<tr>
<td><strong>Streetscapes: Avenues and Streets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiating &amp; Edging</td>
<td>Soft white (3,000K) for nationally significant open space and urban settings. Warm white (2,700K) for natural/waterfront and residential settings and pedestrian walkways.</td>
<td>Brightness and dimness dependent on views to important illuminated structures. Generally, brighter lighting in urban settings. Dimmer lighting in nationally significant open space, natural/waterfront, and residential settings. (Streetlight dimming achievable through coordination with DDOT)</td>
<td>See the Pennsylvania Avenue Lighting Plan (1977) for more details on this street’s unique lighting design.</td>
</tr>
<tr>
<td>Connecting &amp; Traversing</td>
<td>Soft white (3,000K) for nationally significant open space and urban settings. Warm white (2,700K) for natural/waterfront and residential settings and pedestrian walkways.</td>
<td>Brightness and dimness dependent on views to important illuminated structures. Generally, brighter lighting in urban settings. Dimmer lighting in nationally significant open space, natural/waterfront, and residential settings. (Streetlight dimming achievable through coordination with DDOT)</td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>Determined by DDOT (2,700K to 3,000K)</td>
<td>Determined by DDOT</td>
<td>Determined by DDOT</td>
</tr>
</tbody>
</table>
Attachment 1: White Light Policy

Note: The White Light Policy will be included in the Urban Design Element during a future update. In the interim, this policy statement can be used to guide decisions.

**White Light Policy:**

*Federal buildings* should be illuminated in white light to:

- Highlight civic structures;
- Harmonize the composition of buildings within the monumental core;
- Celebrate their national significance; and
- Convey dignity and respect for their institutions and branches of government.

Colored light and projected images on *federal buildings* should only be used on a *temporary* basis to celebrate art, festivals, or special public events.

National Park Service policy\(^{11}\) prohibits directing additional lighting toward, changing existing lighting, or projecting images onto any monument or memorial.

Definitions:

*Federal buildings*: Nationally significant or civic buildings that include museums, offices, or other institutional buildings generally under the administration of the Architect of the Capitol, the General Services Administration, the Kennedy Center, the National Gallery of Art, and the Smithsonian Institution. Note: This does not apply to federal monuments, memorials, or bridges.

*Temporary*: For this application, temporary means several days or weeks, to a maximum of 30 days total\(^ {12}\), and not to occur longer than a cumulative total of three months if intermittent (occurring on non-consecutive days).

---


\(^{12}\) This draws from the NCPC/SI Illuminated Sign Agreement of 2018.
Dear Mr. Acosta:

In its meeting of 20 June, the Commission of Fine Arts was pleased to hear two information presentations by the National Capital Planning Commission staff on the Monumental Core Streetscape Project and its proposed frameworks and policies for streetscape and lighting design, part of a comprehensive update of the Streetscape Manual for the National Mall Road Improvement Program. The Commission expressed appreciation for the efforts to revise the manual, and provided the following comments for its development.

*Urban Design Streetscape Framework*

In their discussion of the streetscape framework plan, the Commission members identified several issues for further study and clarification. At the broadest level, they advised that the plan should anticipate contemporary environmental issues, such as the impact of extreme weather and localized flooding, so that necessary adaptations of the streetscape can be planned for systematically, rather than on a case-by-case basis. They emphasized that the urban streetscape should be conceived of as a performative landscape system rather than as a composition of separate elements; they cited the presentation of classifying trees as distinct vertical elements, whereas the plan should consider trees to be a complex of living organisms requiring specific infrastructure to thrive within the streetscape. They also questioned the plan’s emphasis on the thresholds identified between the National Mall and adjacent precincts within the monumental core, commenting that the boundary drawn between the broader monumental core and the surrounding city may suggest the location of significant thresholds. They advised that the city’s major axial and diagonal roadways should be considered as the framework of the monumental city that reaches beyond the strict boundaries of the historic core, and they found that the streetscapes of these corridors should emphasize continuity. Accordingly, they suggested that the design approach to thresholds should derive from the identified hierarchy of street types, emphasizing either continuity or transition.

*Street Lighting Policy and Framework*

In consideration of the street lighting policy, the Commission members expressed general support for retrofitting the city’s existing streetlights with light-emitting diode (LED) lamps, noting the reduced energy consumption, improved color, and more consistent background against which important buildings and monuments can be lit. However, they cited the existing hierarchy between the white light of the monumental core and the warmer light of the
surrounding city, and they expressed regret that this distinction may be lost when all streetlights are converted to the same color temperature; they suggested exploring ways to preserve this hierarchy. They noted that the spatial and architectural conditions of the city may be expressive enough without using street lighting to delineate the complex system of street classifications, and they therefore suggested simplifying the lighting framework. In general, they encouraged local and federal stakeholder agencies to consult with innovative urban lighting designers for the testing and implementation of this new street lighting technology, and they encouraged constructing in-situ mockups to test the criteria proposed in the policy.

The Commission looks forward to continued review of revisions to the Streetscape Manual as a product of the planning effort for the protection and stewardship of this nationally significant urban landscape and its infrastructure. For the development of the next submission, please consult with the Commission staff which, as always, is available to assist you.

Sincerely,

[Signature]

Thomas E. Luebke, FAIA
Secretary

Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW, Suite 500-N
Washington, DC 20004

cc: Laurin Lineman, Federal Highway Administration
Jeff Marootian, D.C. Department of Transportation
Peter May, National Park Service
Attachment 3: National Mall Streetscape Interagency Working Group Comments

National Mall Streetscape Interagency Working Group representatives collaborated on the development of the Lighting Policy and Framework from summer 2018 through spring 2019. Working group members’ comments on the latest draft of the Lighting Policy and Framework are noted as follows:

- The NPS National Mall (NAMA) staff suggested the following: (1) changing the document title to “National Capital Public Realm Lighting Policy” to better represent the broader geographic area addressed; (2) adding a framework principle that supports reducing the negative environmental impacts of Designated Entertainment Area lighting; (3) categorizing the Kennedy Center as a Tier 2 Structure (However, NCPC and CFA staff agreed that the living memorial to President Kennedy warranted placement within the Tier 1 category); (4) adding a Symbolic Avenue category for Pennsylvania Avenue and adding parking areas and freeways.

- The NPS recommended that the White Light Policy also reference current NPS policy regarding monument and memorial lighting.

- The SI staff suggested that the White Light Policy refer to the NCPC/SI illuminated signage agreement letter.

- The AOC staff suggested that all buildings framed around Capitol Square be the same tier except the Supreme Court and the Jefferson building (Library of Congress), which should be higher tiers.

- The CFA agreed with NCPC that that the living memorial to President Kennedy warranted placement within the Tier 1 category.

- The DDOT staff caveated that streetlight dimming must also account for adequate lighting coverage for pedestrian and vehicle safety.
Email 1 from Ms. Linnea Warren of Woodley Park

Dear Ms. Miller and Ms. Dowker,

I read in the Streetlight Advisory Panel’s minutes that you attended its May meeting to discuss the NCPC’s proposed revisions to its Streetscape Manual. Since I am very interested in DC’s LED conversion project, I downloaded your April 2019 Information Presentation and your presentation to the CFA to learn more about the NCPC’s proposed Lighting Policy and Framework. Though I was fascinated (and impressed) by the clever hierarchical approach it takes to highlighting DC’s architectural treasures, I have a few comments to share with you and the NCPC.

My biggest concern is the NCPC’s stated opposition to shielding our ubiquitous Washington Globes in an attempt to maintain their “historic appearance.” The 1992 Streetscape Manual specified that 15% of the light cast by each Globe was supposed to shine upward to illuminate its silhouette, but the world has changed since then; that requirement no longer is reasonable. Scattering light indiscriminately instead of directing it where it’s needed is an environmentally unacceptable waste of energy, and filling the sky with light at night has become an increasingly big problem (ironically, thanks in part to cheap outdoor LEDs). This interactive map shows how much DC’s night sky has brightened over the past few years:

https://www.lightpollutionmap.info/#zoom=9&lat=4724113&lon=-8584244&layers=0BTFFFFFFFFFF.

Light pollution here has unusually significant consequences, since instruments at the US Naval Observatory set standards that are used in all kinds of satellite-based systems (including GPS).

I appreciate the fact that your working group is looking at which “BUG” rating might best balance historic preservation values with protecting the night sky, but I hope you are aware that not all lighting experts think it is the right measure to use for LEDs. (See for example the Department of Energy’s December 2013 GATEWAY study on “Pedestrian Friendly Outdoor Lighting” and the lighting study done in 2014 for the National Park Service by the California Lighting Technology Center at UC Davis.)

Not only is illuminating an entire Globe fixture wasteful, it may not even be possible with LEDs. LED technology is totally different from what has been used over the past century. Instead of bulbs that shine in all directions, they use flat arrays of laser-like diodes. That may work in cobraheads that only face down, but it’s awkward inside a sphere.

OP3 and DDOT still don’t know if it’s even possible to retrofit our historic Globes, let alone how to ensure that their entire outline is visible at night. But they know the unpleasant side effects of LEDs are well-known and unpopular, so in public presentations they have promised that residents will be shielded from bothers like light trespass and glare.
It’s inconceivable that DDOT would develop two different retrofits, one without shields for fixtures in the NCPC’s jurisdiction and one with shields for the rest of DC. If the NCPC insists on applying a standard adopted in 1992 for outdated technology, DDOT won’t be able to fulfill its promise, which would be a disaster for all of us who live near these glaring lights. (Like me; there are about eight Globes around our building, which already cast light deep inside our home. With LEDs, it would be nightmarish.)

This photo of a street in Liberal, Kansas, perfectly illustrates the situation.

https://www.darksky.org/our-work/lighting/lighting-for-citizens/bad-streetlights/

Since one of the reasons given for updating the Streetscape Manual is to adapt to changing technologies anyway, I urge you to drop this provision now. Instead, please help us figure out a way to make attractive historical fixtures palatable under modern lighting conditions.

DC’s lighting is not strictly historically accurate anyway – I doubt that streetlights a hundred years ago were as bright as they are now. I’ve been looking at old photos recently and can’t help but wonder why the Washington Globe is THE “historic” streetlight. Lots of other styles were used before it appeared in the early 1900s, some of which are adaptable to LEDs. For example, look at the fixture in this 1891 photo from Alexander Mitchell’s “Washington, D.C.: Then and Now.” It’s actually quite similar to designs already offered by LED manufacturers. (Some are in place along the Klingle Valley trail.) Deflectors or shields still might be needed to keep light from going sideways into people’s homes, but they would be easier to install in this than in a globe.
I also have some comments on your attempts to visually delineate different areas of DC with lighting, which basically is a terrific idea. But regarding the concern expressed at your June presentation to the CFA about losing the color differences that can now be seen from above DC, I wouldn’t worry. I suspect they are due more to happenstance than design (and probably just the unintended result of the adoption of sodium vapor lights in the past.)

There is more of a color range available with LEDs than your draft suggests, though most of the available options are at the end of the spectrum that is most problematic for the environment, people’s health, animals, etc. So the “pure white light” specified for the Monumental Core in the 1992 Manual raises a big red flag in the context of LEDs, which are able to produce much whiter (and bluer) “whites” than were available then, and which are better avoided because of their serious negative effects. I would ask that you be more specific about what you want in light of LED technology, using not just words but Kelvin ratings and other technical specifications. But you may be disappointed if you expect to see a significant difference between 3000K and 2700K LEDs; the chart of page 17 of your Draft Lighting Policy and Framework may be cutting the bologna a bit too fine, since there is no exact correlation between the descriptions you use and the color temperatures indicated. For example, the terms “soft white” and “warm white” are both used to describe the same range of color temperatures.

But you could still use characteristics other than color to create the same kind of distinctions – for example, by varying the brightness of streetlights in different areas. (Or, to return to the Dark Sky issue, by reducing or even eliminating uplighting, which would emphasize the brightly lit buildings inside the Monumental Core.) DDOT is pushing for far brighter streetlights that many residents want – in some cases, 16 times the levels required by ASHHTO. Perhaps here the NCPC’s interests coincide with that of residents who are concerned that our city’s streets are
going to look like a used car lot. Perhaps we can work together to convince DDOT that more light is not always necessary OR desirable, so we should turn down the lights outside our homes.

The supposed savings of LED streetlights are just too irresistible for cities to ignore. Please help us prevent DDOT from ruining the appearance and livability of the DC just to save money (they hope.)

Thank you for all that you do to preserve the beauty of this wonderful city!

Linnea Warren

Woodley Park

Email 2 from Ms. Linnea Warren of Woodley Park

May I add one other bit of info? The citizens group that has been pushing for 2700K LEDs chose that temperature not because it is ideal but because it was the best choice available at that time. DDOT has reluctantly accepted it as the standard for some areas, though it keeps pushing for higher color temperatures (IMHO, because they result in larger cost savings and are better for taking surveillance photos.)

But even 2700K LEDs have a lot of unpleasant side effects and they aren’t uniform – there is a lot of variation among manufacturers. So some of us have asked why DC is rushing into this now, while the industry is actively developing more user-friendly LED lighting.

In fact, I just read about a company in Spain that has already installed streetlights with even lower color temperatures. I searched for it online; it’s called IGNIALight and these particular lights are “2200K PC Amber LEDs.” Even better, their entire line of outdoor luminaires apparently is available in 1800K and 2200K, along with the usual 3000K and 4000K.


https://www.ignialight.com/en/category/led-street-lighting. I wonder how many other companies are producing similar ones? Sure hope DC isn’t prematurely committing us to an unpopular option while the industry is coming out with better ones.

LEDs like these would be much better for DC’s many natural and environmentally sensitive areas, let alone its residential streets, and since their color is “warmer,” they might also help you achieve your lighting hierarchy goals. The NCPC would do a tremendous service to the entire District if it would resist DDOT’s push for 3000K lights – why not use 2700K on major thoroughfares and 1800 or 2200K in residential areas?!

Thanks very much for adding this to the email I sent yesterday, and for passing it on to Elizabeth and Meghan!

Linnea Warren