

Monumental Core Streetscape Design Guidelines: Draft Small-Scale Elements

Washington DC

Information Presentation

National Capital Planning Commission

Overview

I. Recap Monumental Core Streetscape Project

- *Purpose and Background*
- *Urban Design Framework*

II. Status Update on Vertical and Surface Streetscape Elements

III. Draft Small-Scale Elements Streetscape Design Guidelines

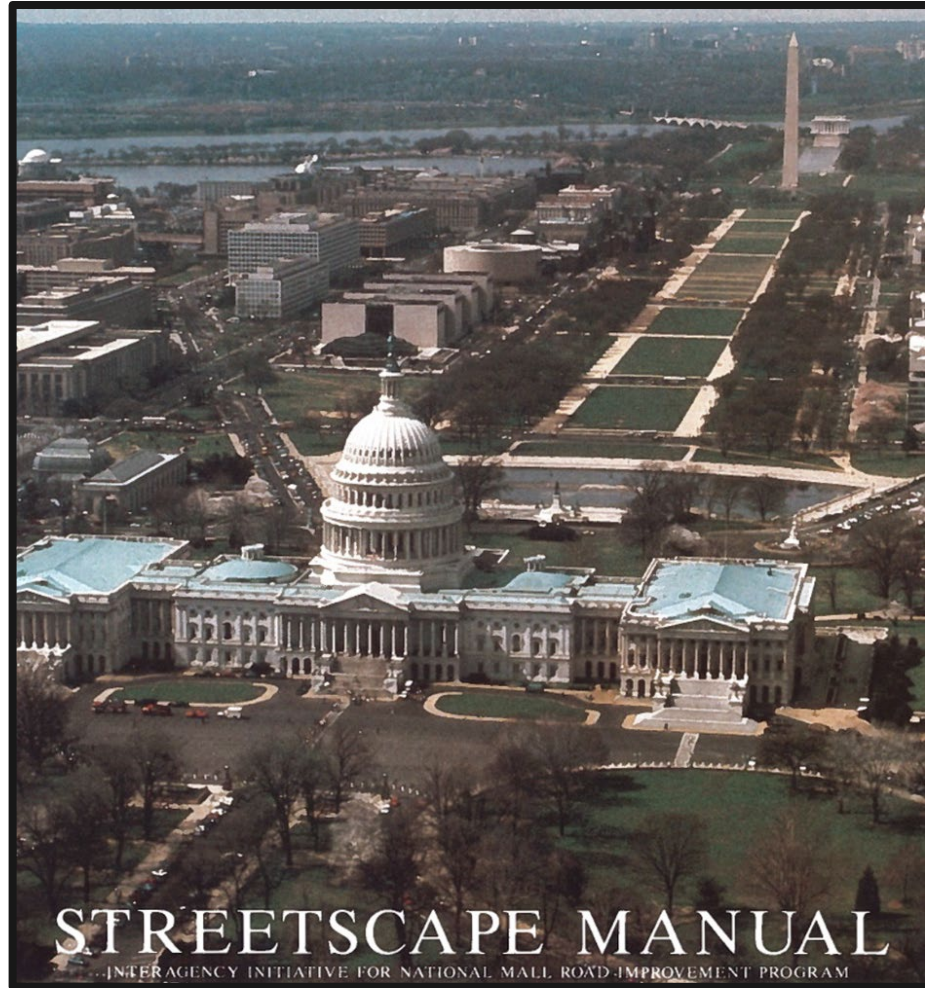
- *Furnishings*
- *Civic Infrastructure*

IV. Next Steps



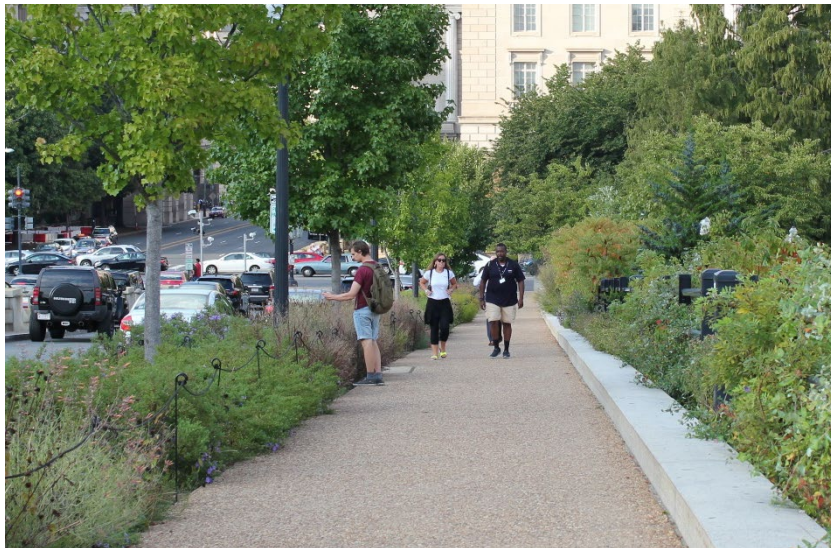
Monumental Core Streetscape Project Recap: Purpose and Background

Purpose of the 1992 Streetscape Manual



Purpose: To achieve a coordinated and consistent streetscape for roadways in the central area of the city in the vicinity of the National Mall.

Manual Update



Interagency Working Group Collaboration

Interagency Working Group

Parties:

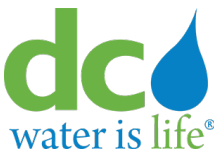
- Architect of the Capitol (AOC)
- District Department of Transportation (DDOT)
- Federal Highway Administration (FHWA)
- National Capital Planning Commission (NCPC)
- National Park Service (NPS)

Endorsers:

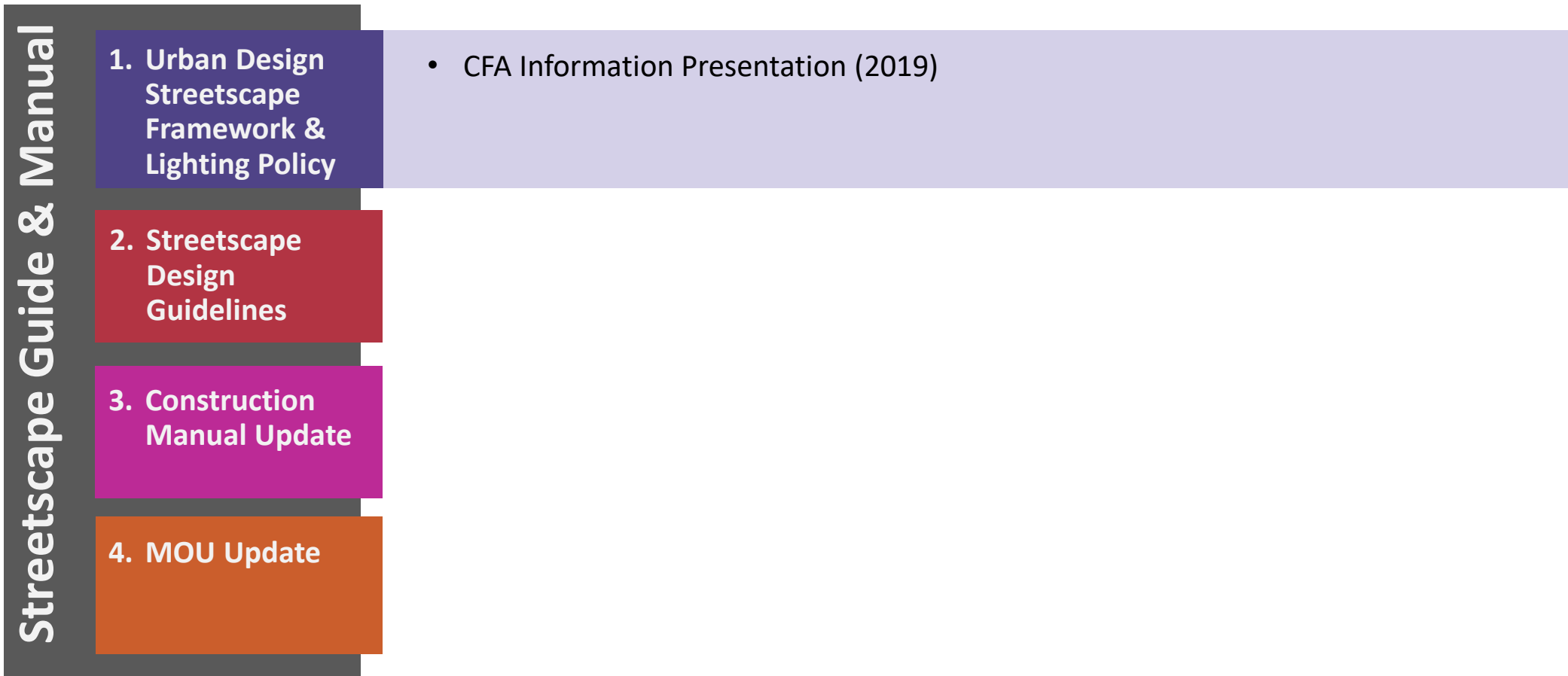
- Commission of Fine Arts (CFA)
- District of Columbia Office of Planning (DCOP)
- General Services Administration (GSA)
- Kennedy Center
- National Gallery of Art (NGA)
- Smithsonian Institution (SI)

Agency Subject Matter Experts

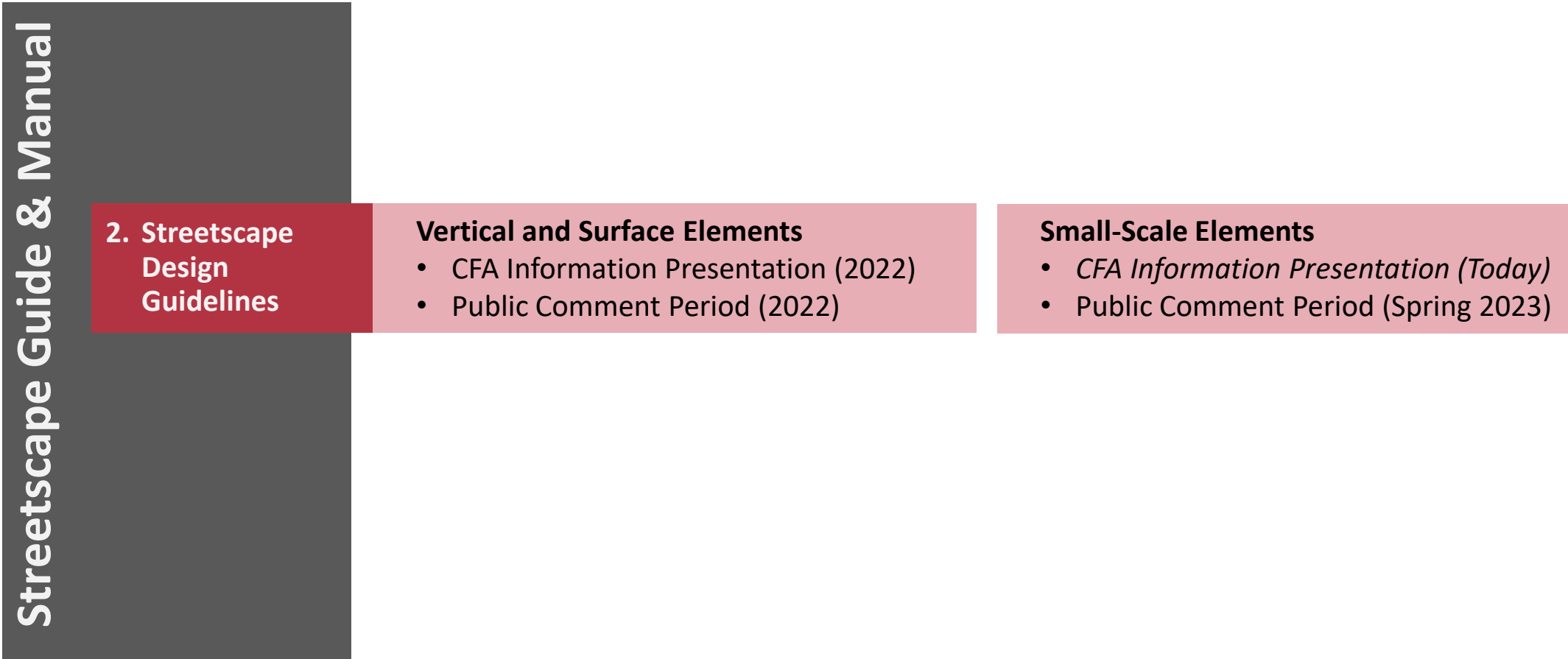
- Arborists
- Architects
- Bicycle Specialists
- Environmental Engineers
- Historic Preservationists
- Landscape Architects
- Lighting Designers



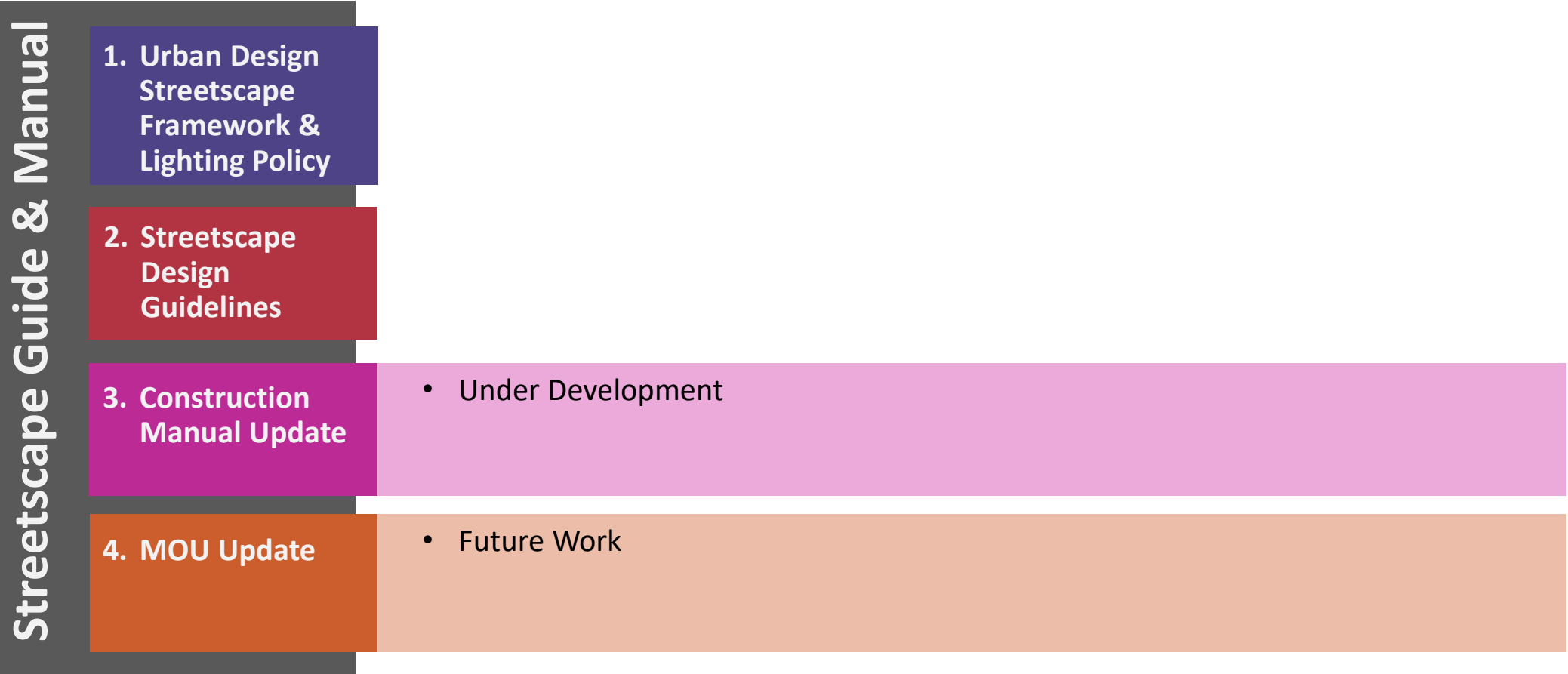
Project Phases



Project Phases



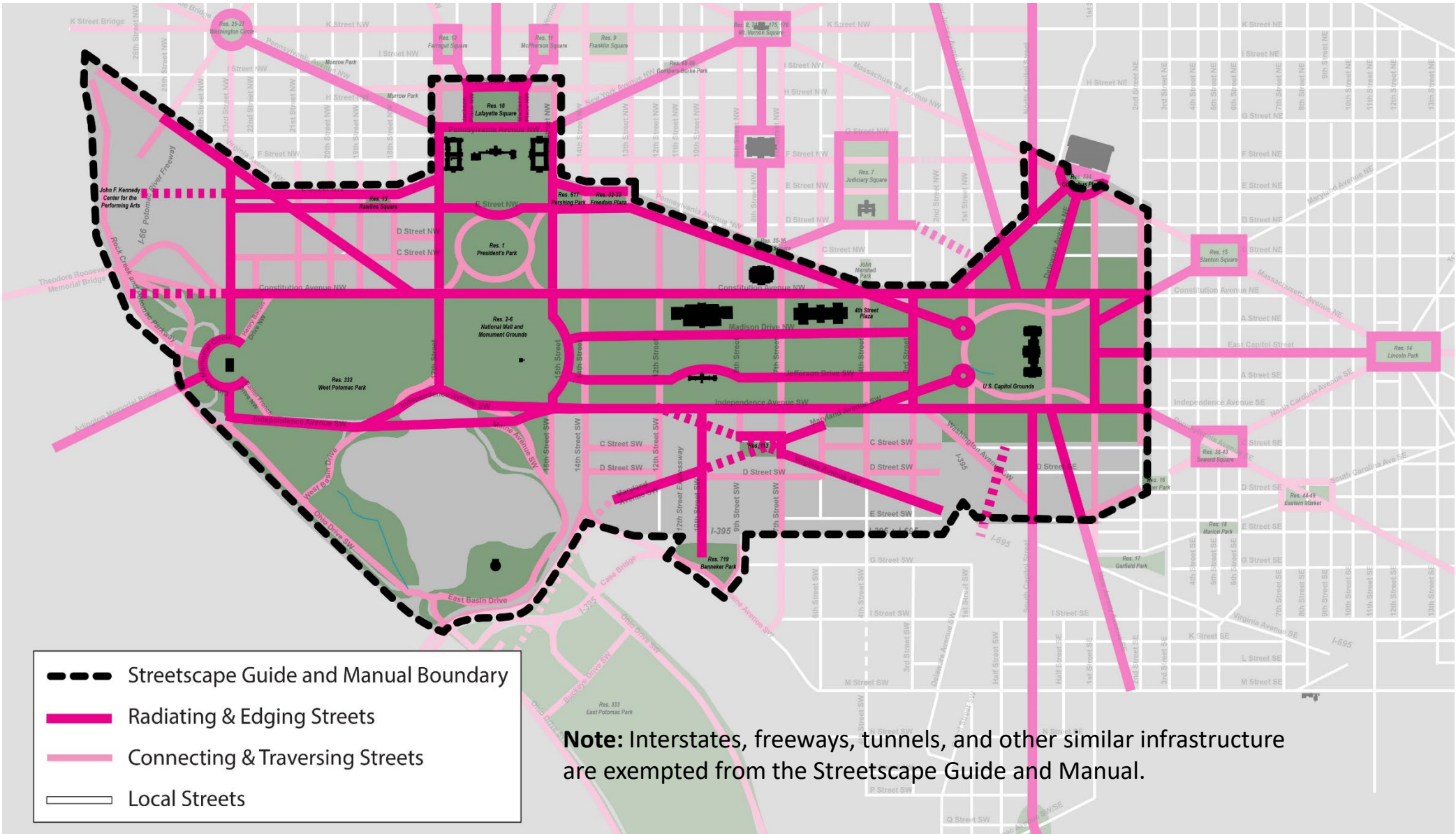
Project Phases



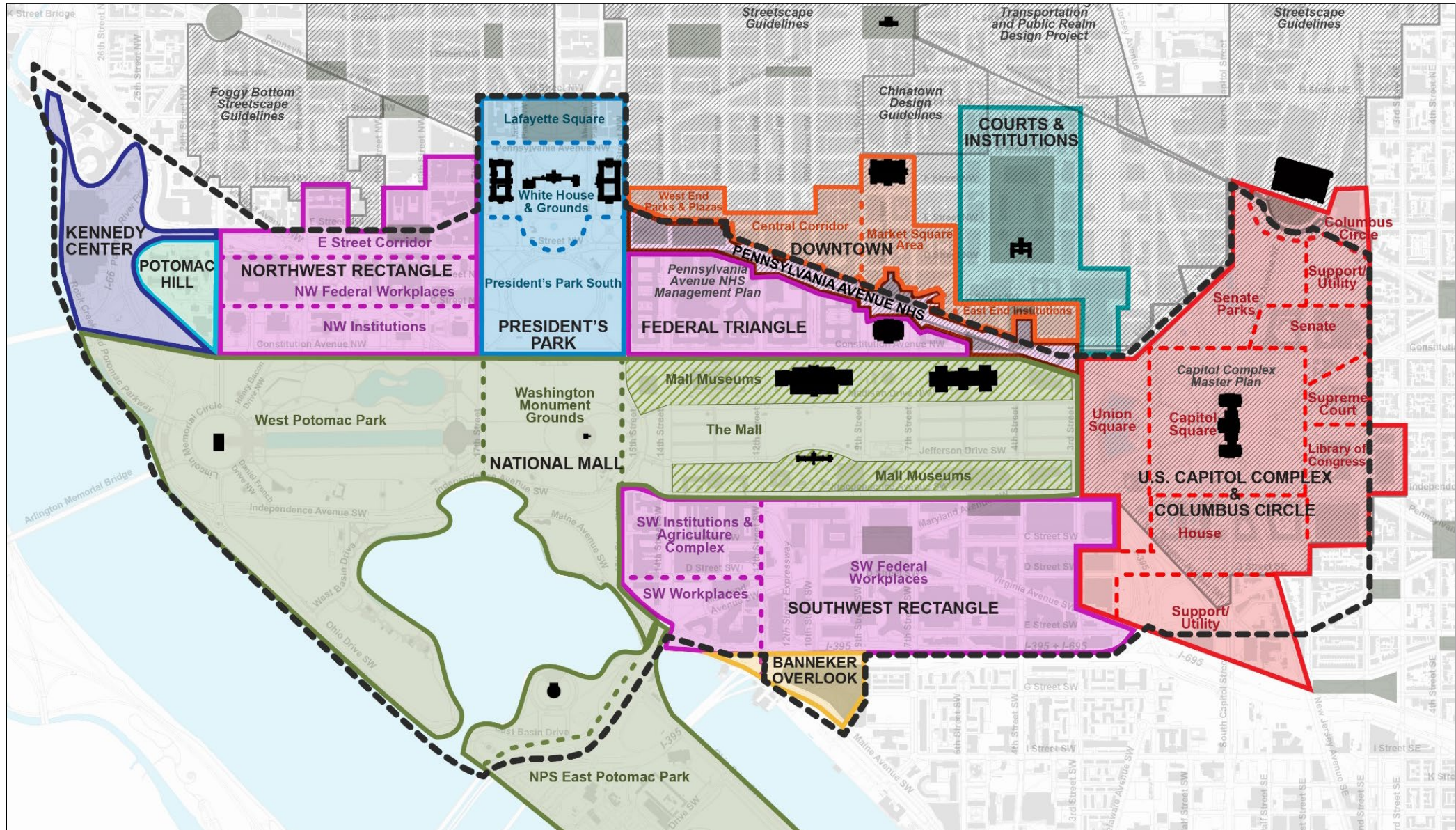


Monumental Core Streetscape Project Recap: Urban Design Framework

Urban Design Streetscape Framework



Character Areas



Streetscape Elements

Property Line

Public Space

Today

Vertical Elements (i.e. Streetlights, Trees)

Surface Elements (e.g. Pavements, Tree Box)

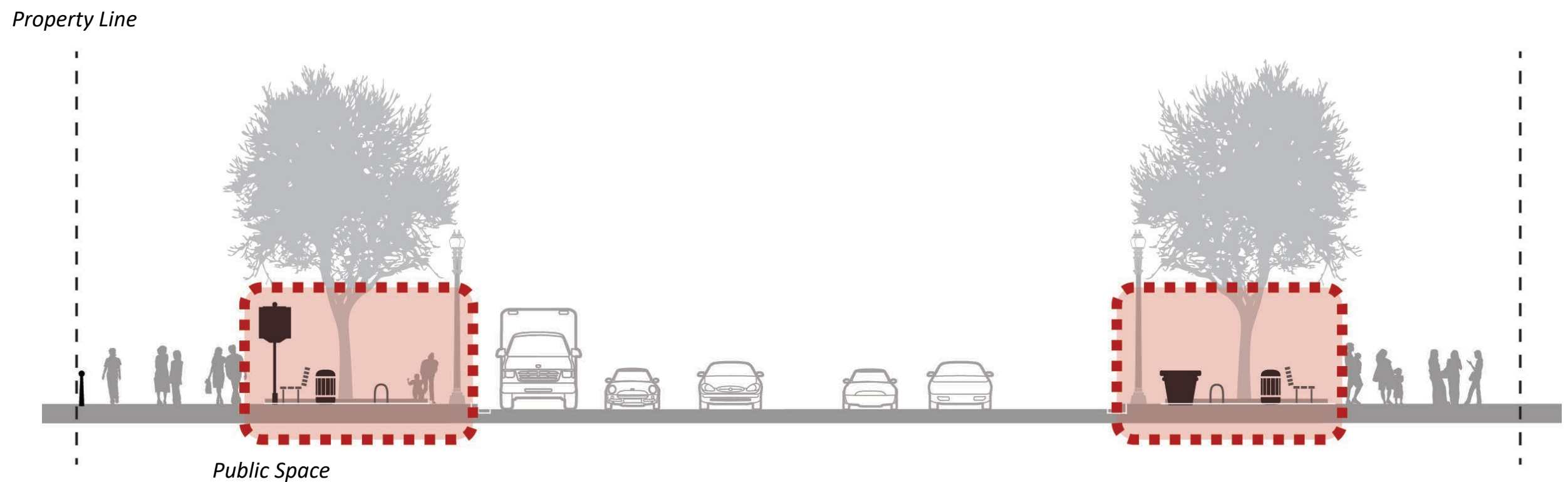
Small-Scale Elements

- Benches
- Trash Receptacles
- Bicycle Racks
- Post-and-Chain
- EV Charging Stations
- Parking Pay Stations
- Water Stations
- Fire Hydrants
- Utility Boxes
- Small-Cell Cross References

Illustrative Sections – Not to Scale

Small-Scale Elements

- Furnishings
- Civic Infrastructure



An aerial photograph of the U.S. Capitol grounds in Washington, D.C., featuring the Capitol building at the top, the reflecting pool, and various surrounding buildings and trees. The entire image is covered with a semi-transparent green filter.

Status Update: Vertical and Surface Streetscape Elements

Vertical and Surface Element Guidelines



1. Preface.....	i
2. Acronyms.....	i
3. Introduction	2
4. Vertical Elements:	
<i>Streetlights</i>	6
<i>Trees</i>	9
5. Surface Elements:	
<i>Landscapes and Plantings</i>	20
<i>Stormwater Management</i>	24
<i>Pavements</i>	28
<i>Pedestrian Circulation</i>	35
6. Endnotes	43
7. Appendices	45

Monumental Core Streetscape Design Guidelines: Vertical and Surface Elements



Content Layout


Component

Surface Elements

Stormwater Management

Introduction	24
Stormwater Best Management Practices	24
Application of Stormwater Management Best Management Practices	25
Environmental Function and Design	27
Maintenance	28

Figure SM-1: Bioretention outside Herbert C. Hoover Building (U.S. Commerce Department) along 14th Street, NW.



Topics

Introduction

This guidance addresses stormwater management in the public right-of-way (ROW) within the capital city's downtown monumental core. Stormwater management should improve environmental and aesthetic quality, contribute to the consistency of the ROW and streetscape, and enhance the streetscape using the principles established in the Urban Design Streetscape Framework.

Importance and Background:

Stormwater management contributes to the environmental quality of the streetscape. Best practices retain, detain, and convey stormwater to reduce ponding and flooding; help filter pollutants from stormwater; and take pressure off both Municipal Separate Storm Sewer System (MS4) and Combined Sewer Overflow (CSO)³⁰ systems. Within the monumental core, both federal and local stormwater management requirements apply. Federal regulations require new development projects to capture and retain stormwater from a 1.7-inch rainfall event for a contributing drainage area per Section 438 of the Energy Independence and Security Act of 2007 (EISA). Local regulations require new development projects to capture and retain stormwater from a 1.2-inch to 1.7-inch rainfall event for a contributing drainage area per the District Department of Energy and Environment (DOEE) Stormwater Management Regulations and Stormwater Management Guidebook (SMG). More information regarding the District's floodplains, stormwater permits, and interagency management and maintenance agreements are included in **Appendix A-SM-1, A-SM-2, and A-SM-3.**

Topics Address by these Guidelines:

The Stormwater Management Guidelines are organized into the following topics:

- **Stormwater Best Management Practices (BMPs):** Identifies priority areas and best practices for stormwater management in the monumental core.
- **Application of Stormwater BMPs:** Applies stormwater BMPs considering street categories, vistas and viewsheds, circulation, cultural and historic resources, and aesthetics.
- **Environmental Function and Design:** Addresses the design of stormwater BMPs to maximize the function of green infrastructure³⁸ and the water management.
- **Maintenance:** Addresses maintenance best practices.

Green Infrastructure Maintenance:

Guidelines that focus on stormwater BMP upkeep include: Stormwater Management Guidelines SM-37, SM-38, and SM-39 and address maintenance of stormwater management BMPs.

Monumental Core Streetscape Guidelines: Storm Water Management

Principle

Stormwater Best Management Practices

Principle: Use Stormwater Best Management Practices (BMPs) to maximize retention, conveyance, and filtration of stormwater within monumental core area ROWs to address the most significant flooding or water quality issues considering the natural and man-made conditions within a given watershed.

SM-1. Prioritize stormwater BMPs that work with existing topography and integrate with existing stormwater management elements to establish a more efficient stormwater system.

SM-2. Maximize use of retention, conveyance, and detention (prioritizing retention and practices to capture stormwater within the 100-year floodplain, 500-year floodplain, and Anacostia Waterfront Development Zone (AWDZ). See **Appendix A-SM-1: 100-Year and 500-Year Floodplains, and Anacostia Waterfront Development Zone.**

SM-3. Maximize use of retention and filtration stormwater practices to capture, slow, and clean stormwater within MS4 and to capture and slow stormwater within CSO areas outside the 100-year and 500-year floodplains, and to reduce pressure on infrastructure within the AWDZ.

SM-4. Use streetscape bioretention, vegetated filtration strips, and permeable pavers³⁰ with subsurface retention as the BMPs to retain stormwater and slow the rate at which stormwater enters the storm sewer system.

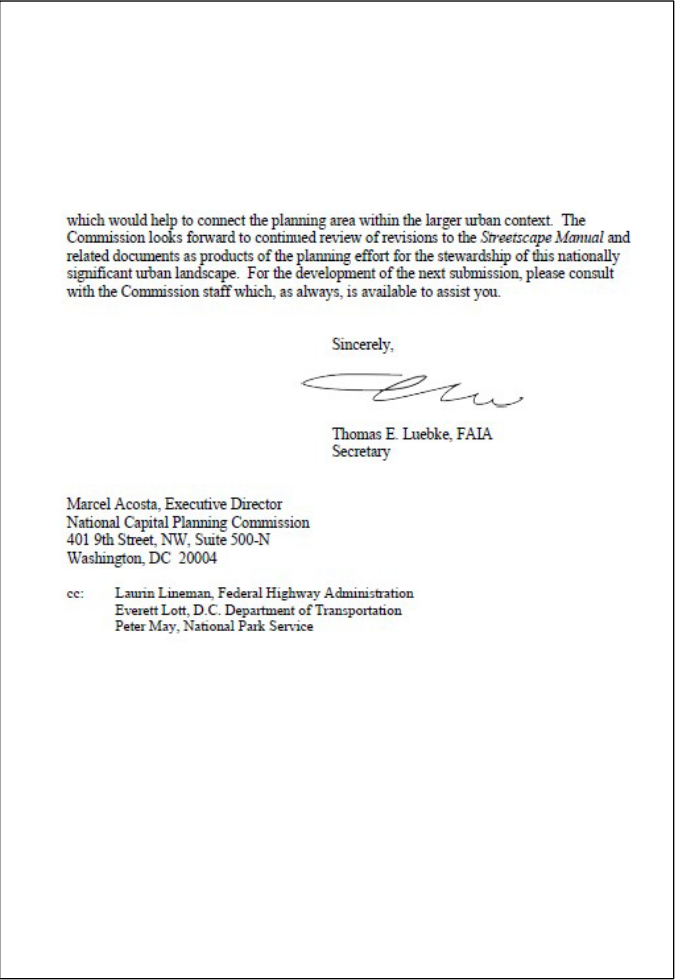
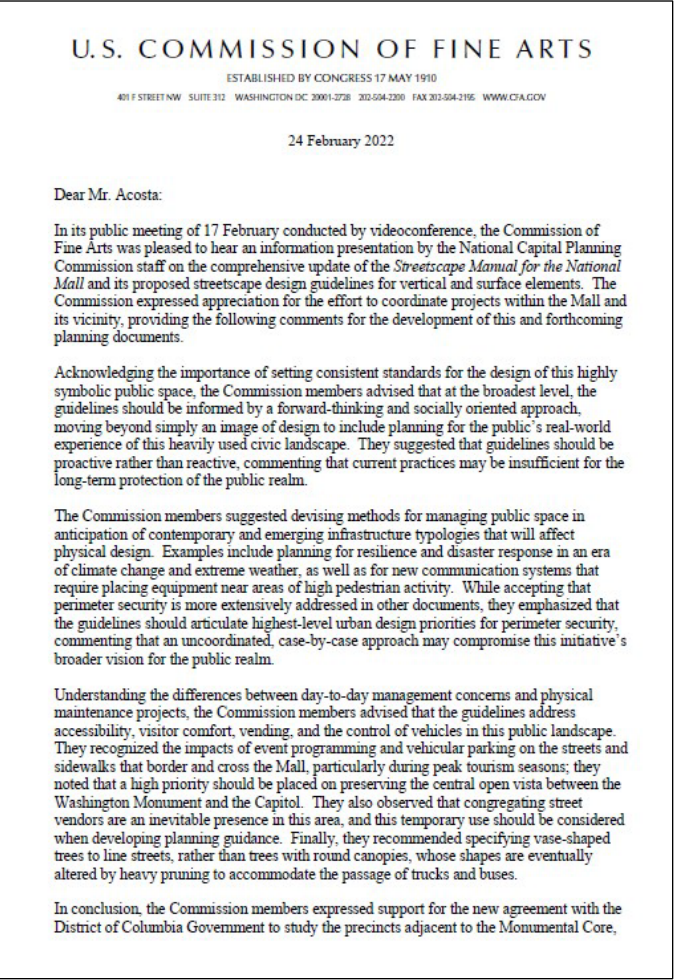
SM-5. Use bioswales and dry swales as the best practices to capture and convey stormwater to the storm sewer system.

SM-6. Use sand filter systems and permeable surface materials as the best practices to filter pollutants from stormwater and to capture stormwater, slowing the pace at which it enters the sewer system.

Guideline #

Call-Out Box

CFA Comment Letter (February 2022)



Comment Topics

1. Socially-Oriented Approach
2. Resilience and Disaster Response
3. Perimeter Security
4. Vending
5. Vase-Shaped Trees

Summary of Staff Response to CFA Comments

1. Socially-Oriented Approach

- Streetlight guidelines 1, 4
- Tree guidelines 38, 39, 40, 43, 45
- Pedestrian Circulation guidelines 5, 8, 9, 11, 13, 31

2. Resilience and Disaster Response

- Streetlight guideline 4
- Tree guidelines 1, 6, 13, 14, 21, 22, 27, 28, 41-44
- Landscapes and Plantings guidelines 1, 19, 20-23
- Stormwater Management guidelines 1-6, 25, 32
- Pavement guidelines 25, 41-44

T-39. Enhance pedestrian comfort by planting trees near benches or placing benches near trees, to provide shaded seating and resting areas.	d. Pruning and maintenance needed to ensure street trees do not block downward light emitted from streetlights.	• Provide safe pedestrian conditions. • Protect tree root zones from pedestrian compaction. • Protect tree boxes from negative aesthetic impacts of pedestrian use such as eroded planting beds. • Minimize sidewalk damage from tree roots.
T-40. Enhance pedestrian comfort by planting trees nearby bus stops to provide shade for pedestrians while not visually obscuring the bus stop sign and/or shelter.	e. Coordination between agencies responsible for streetlights and street trees.	
T-41. Plant trees that will significantly contribute to stormwater best management practices. See Stormwater Management Guidelines for more information.	T-45. Plant trees in areas with high levels of particulate matter to improve air quality and community health.	T-50. Maintain landscape consistency along streetscape corridors by using consistent tree box materials and designs, and consistent planting height, density, and character.
T-42. Plant inundation-tolerant tree species within the 100- and 500-year floodplains and the Anacostia Waterfront Development Zone (AWDZ), which encompasses an area in the southeastern portion of the monumental core, to improve urban tree canopy resilience to flood and storm events and improve stormwater retention.	T-46. Promote tree canopy expansion and healthy tree growth by minimizing conflicts with tree roots and utilities.	T-51. To ensure visual consistency within the National Mall and downtown monumental core (Streetscape Manual Boundary), bioretention and non-bioretention tree boxes should share a complementary design and material palette.
T-43. Plant large shade trees in areas with higher daytime temperatures, dark impervious surfaces (e.g., surface parking lots), and/or other sites with high heat exposure to improve quality-of-life and reduce the urban heat island effect.	T-47. Reduce conflicts with tree planting and sidewalks, underground utilities, below grade buildings, and other infrastructure elements. <i>Note: Existing overhead wires are not a common condition on monumental core streets.</i>	T-52. A single tree fence should be designed for bioretention and non-bioretention tree boxes to visually unify streetscapes in the downtown monumental core and distinguish them from elsewhere in the District. The tree fence design should:
T-44. Where possible, mitigate both urban heat island effect and urban sky glow by planting street trees that both shade roadways from sunlight exposure and shield upward light trespassing from streetlights into the night sky. Consider the following:	T-48. Consider projected tree root growth to avoid roots lifting sidewalks or multi-use trails, which create a hazard to pedestrians.	a. Be visually cohesive and harmonious along streetscape corridors. b. Be appropriate to the monumental core character and setting. c. Complement the multiple architectural styles of the National Mall and monumental core such as Victorian, Neoclassical, and modern. d. Complement historic and existing National Mall furniture, such as streetlights, benches, and waste/recycling receptacles. e. Have appropriate height that is clearly visible to motorists. <i>Note: The District and other municipalities use a variety of tree fences. f. Be distinct from DDOT's ornamental fence.</i>
a. Heights and spacing of both streetlights and street trees, including:	Tree Box Treatments	Socially-Oriented Design:
i. Where possible, select large and/or medium canopy trees that can be trained to grow over shorter streetlights (less than 20 feet tall). See Appendix A.1.1: Tree List for recommended tree species.	Principle: Tree box treatments should protect and define the tree box zone, promote tree health, augment stormwater management, enhance the streetscape, provide for safe pedestrian movement, and achieve visually cohesive streetscapes.	Guidelines that focus on the public's comfort, safety, and experience include:
ii. Provide at least 15 to 20 feet between streetlights and street trees, depending on the tree species.	Tree Box Treatments address the following elements:	Streetsight guidelines S-1 and S-4 support safety and human scale.
b. When planting street trees 15 to 18 feet from streetlights, select trees with mature heights twice the height of streetlights. For additional spacing guidance, see the University of Florida's Guidance for Planting Trees within 40 feet of wires or street lights.	• Tree Box Design: Urban design, configuration and location, function and performance, materials, and maintenance • Tree Box Sub-Bases: Recommended practices • Tree Box Plantings: Planting configurations and materials	Trees guidelines T-38, T-39, T-40, T-43, and T-45 support trees contributing to quality-of-life, emotional and community health, and enhance pedestrian comfort.
c. Roadway and sidewalk lighting levels required for vehicular and pedestrian safety.	Tree Box Design URBAN DESIGN	Pedestrian Circulation Guidelines PC-5, PC-8, PC-9, PC-11, PC-13, and PC-31 support pedestrian circulation for both everyday and event-based use, universal accessibility, and pedestrian level of comfort including low-stress circulation routes.
T-49. The goals for the tree box design guidelines are to:	T-49. The goals for the tree box design guidelines are to:	
• Achieve compatibility with the quality and character of the National Mall and monumental core.	• Achieve compatibility with the quality and character of the National Mall and monumental core.	

Socially-Oriented Design Call-Out Box

Summary of Staff Response to CFA Comments

3. Perimeter Security

- Small-Scale Element guidelines address perimeter security topic

4. Viewsheds and Vending

- Call-out box highlighting NPS regulations on street vending

5. Vase-Shaped Trees

- The Interagency Working Group discussed CFA's recommendation and found that:
 - It would hamper biodiversity goals
 - Tree and vehicle conflicts are primarily due to low tree heights

Viewsheds and Vending:

Vending is not permitted on sidewalks and roadways within the National Mall without a NPS permit per:

- Title 36 CFR 50.24 requires NPS permit for vending on NPS lands
- Title 8 DC Code 144 states NPS controls sidewalks and some roadways within the National Mall

Additionally, parking is not permitted on streets crossing the Mall.



Note: Current conditions, as shown above, are not authorized.

Viewsheds and Vending Call-Out Box

An aerial photograph of the U.S. Capitol grounds in Washington, D.C., featuring the Capitol building in the distance and various other government buildings and green spaces in the foreground. The image is overlaid with a semi-transparent green filter.

Small-Scale Element Guidelines: Furnishings

- *Benches*
- *Waste Receptacles*



Benches Guidelines

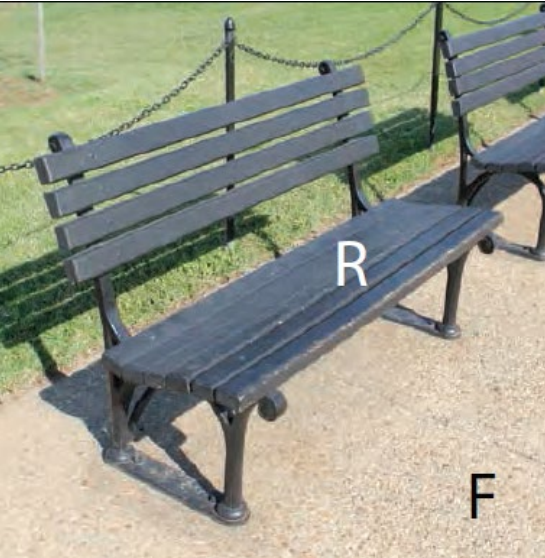
- *Placement*
- *Appearance*
- *Function*

Existing Conditions: Bench Styles

Bench with Arms



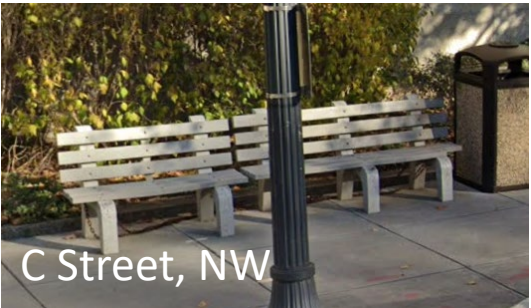
NPS Armless Bench



Paley



Victorian



Existing Conditions Map: Bench Style



-  NPS Bench

-  Victor Stanley C-12 Bench

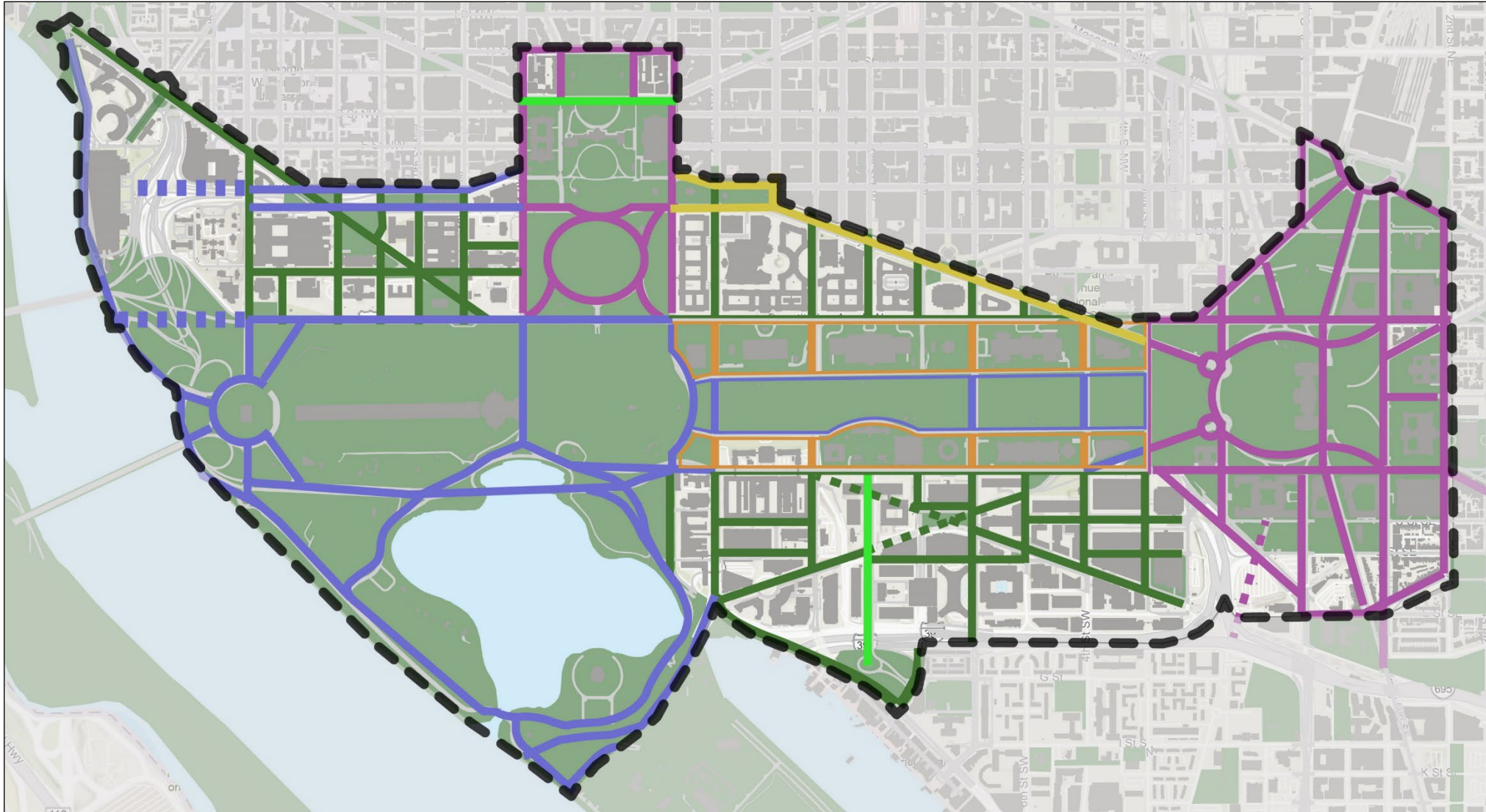
-  District Bench

-  Penn Ave Bench

-  Victorian Bench

-  Other Bench

Proposed Guidance: Bench Styles



NPS Bench



District Bench



Penn Ave Bench



Victorian Bench



Victor Stanley Bench



Special Bench

Draft Guidelines Summary: Benches

Placement

- Provide benches to improve pedestrian comfort and experience

Appearance

- Benches should be compatible and complementary with other streetscape elements and may reflect the qualities of the character area provided they are cohesive across character areas

Function

- Provide durable, convenient, and serviceable seating for people of all ages and abilities

Parallel to Curb



Jefferson Drive, SW at Arts and Industries Building

Perpendicular to Curb



Madison Drive, NW at National Museum of Natural History



Waste Receptacles Guidelines

- *Placement*
- *Appearance*
- *Function*

Existing Conditions: Receptacle Styles



NPS trash and recycling receptacles

Victor Stanley Style



Modified Style

PADC receptacles



Original



12 Street, SW at Whitten Building



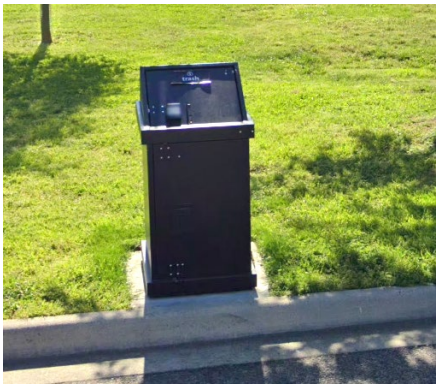
12th Street, SW



Virginia Ave, NW



E Street, NW

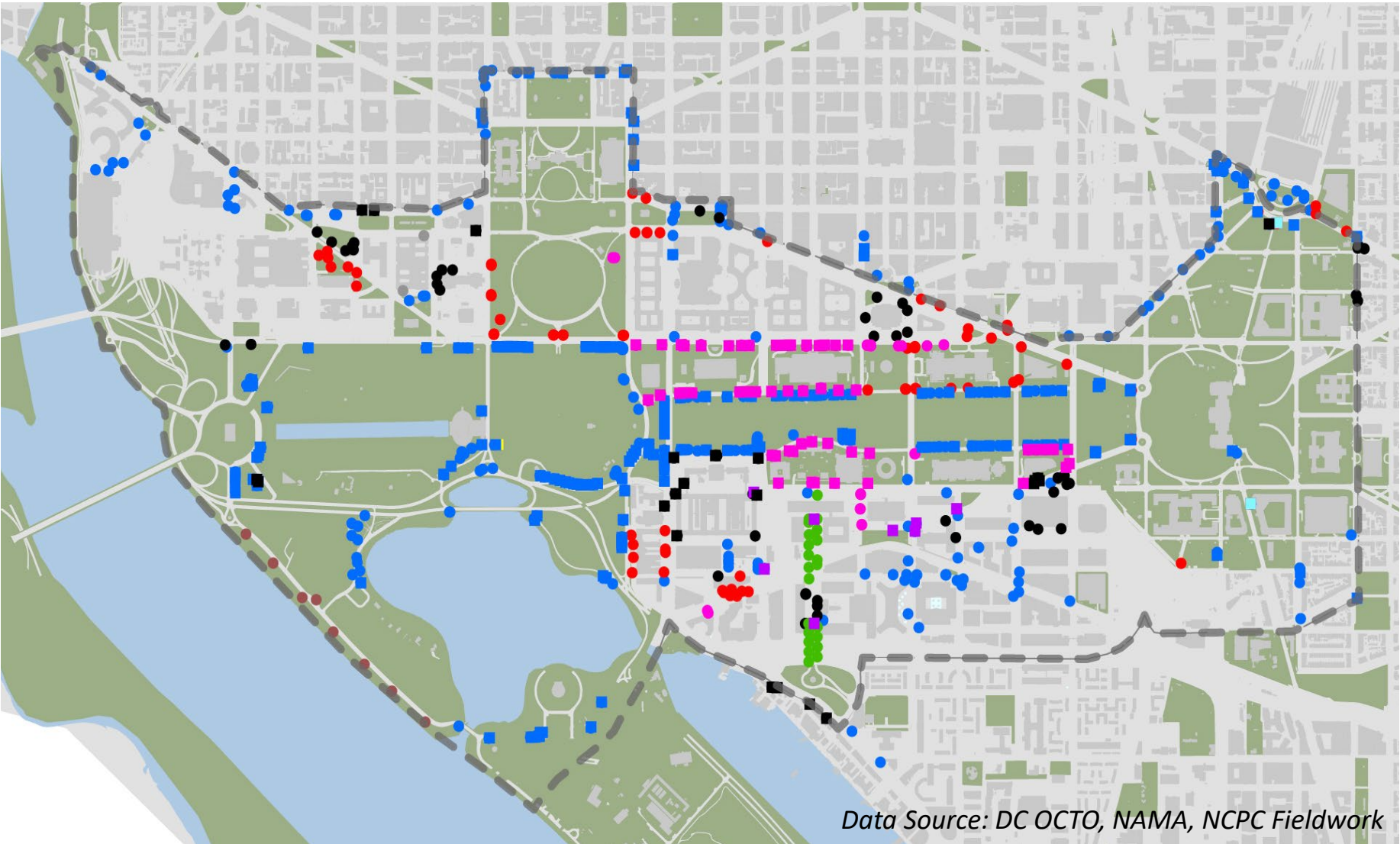


Hains Point

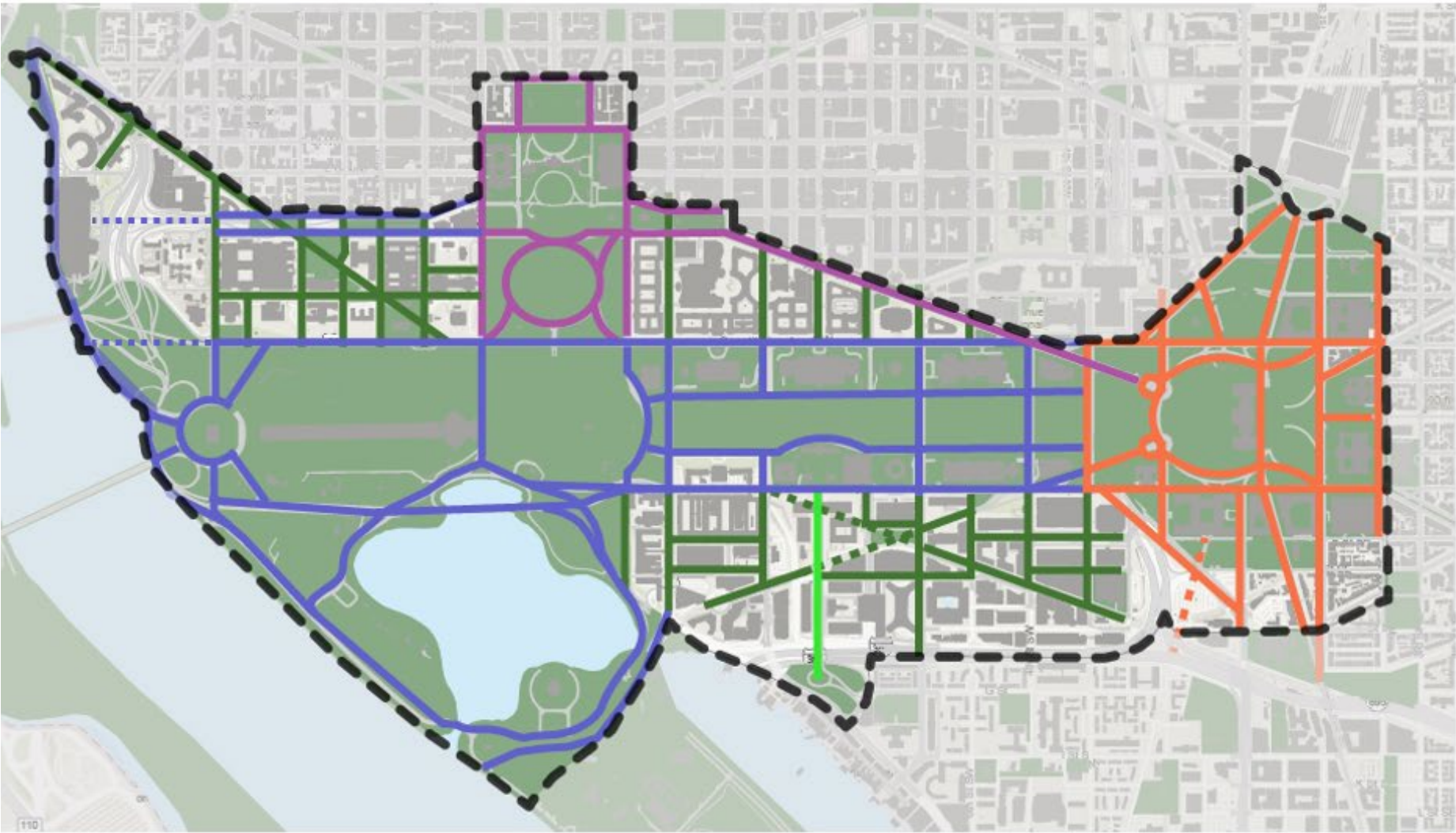


10th Street, SW

Existing Conditions Map: Receptacle Styles



Proposed Guidance: Receptacle Styles



Legend

Victor Stanley
S-Series



Victor Stanley
S and ES



Original PADC



Victor Stanley RS-12



10th Street



Draft Guidelines Summary: Receptacles

Placement

- Locate trash and recycling receptacles to create a welcoming streetscape that minimizes pedestrian conflicts and clutter

Appearance

- Compatible and complementary with other streetscape elements and cohesive across character areas

Function

- Improve the pedestrian experience and promote recycling, pest mitigation, and efficient waste removal operations

Proposed Guidance: New Receptacle Design Considerations

- Diverse waste types, including recycling, trash, compost, and pet waste
- Promote recycling, pest mitigation, and efficient waste removal operations
- Surrounding architectural styles and other streetscape elements
- Unify and distinguish the monumental core character and setting





Small-Scale Element Guidelines: Civic Infrastructure

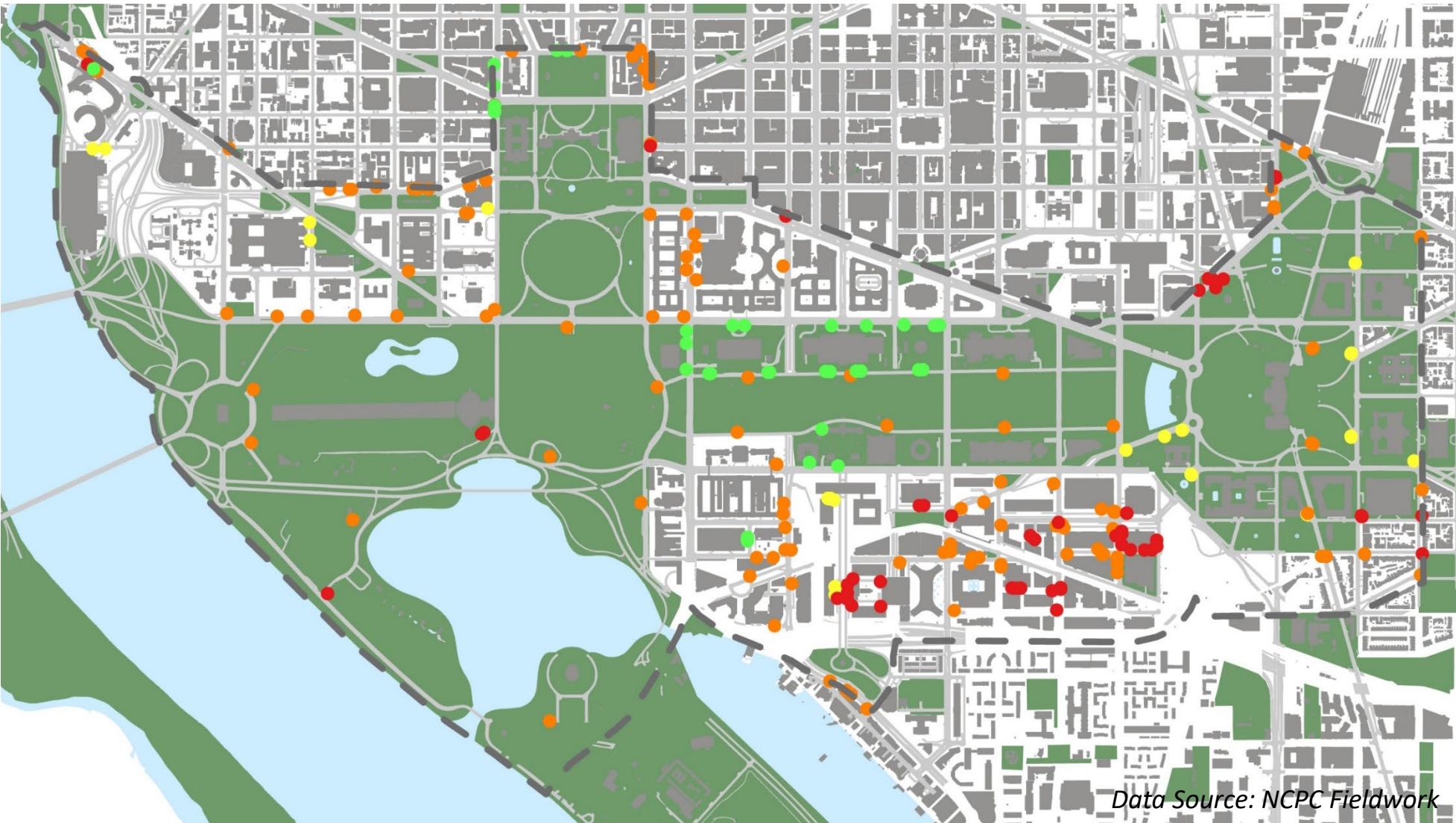
- *Bicycle Racks*
- *Post-and-Chain*
- *EV Charging Stations*
- *Parking Pay Stations*
- *Water Stations*
- *Fire Hydrants*
- *Utility Boxes*
- *Small-Cell Reference*

A photograph of a parking lot with several cars and a row of bicycles parked in a black metal rack. The bicycles are of various colors, including green, yellow, and red. A red car with a Texas license plate 'HSL-8627' is visible in the background. The scene is outdoors with trees and a clear sky.

Bicycle Rack Guidelines

- *Placement*
- *Appearance*
- *Function*

Existing Conditions Map: Bicycle Racks



Data Source: NCPC Fieldwork

● U Rack



● Post and Hitch Rack

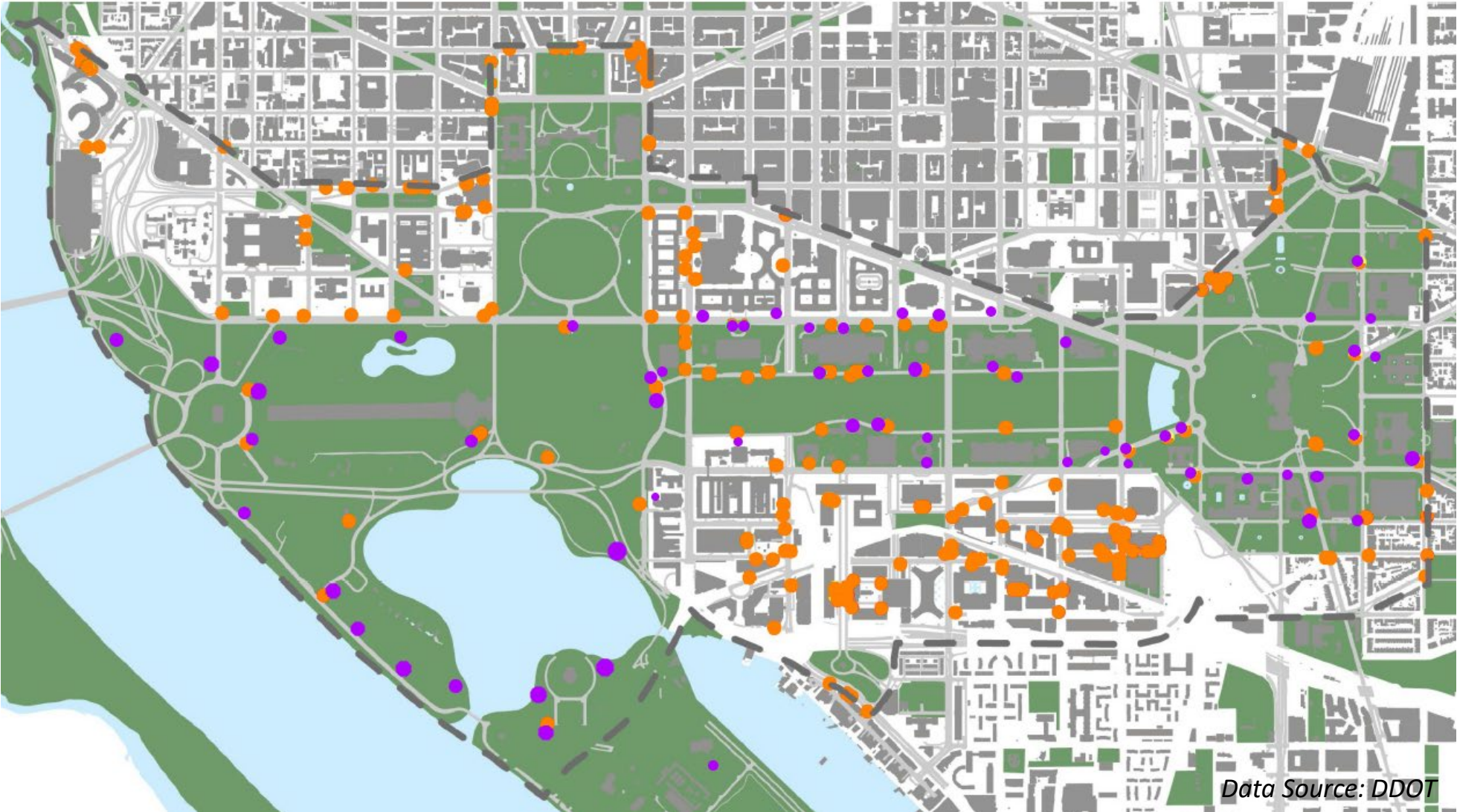


● Wave Rack



● Other Racks

Proposed Guidance: Bicycle Racks



- U Rack
 - High Demand Bike Parking
- Note:** Each circle indicates 3-6 bike racks



Bicycle Racks: Draft Guidelines Summary

Placement

- Provide bicycle racks to support multi-modal transportation options and provide civic infrastructure to secure bicycles and other micromobility vehicles in appropriate locations

Appearance

- Bicycle rack design should be simple, user-friendly, and compatible and complementary with other streetscape elements

Function

- Provide durable and serviceable bicycle racks



A photograph of a row of black posts with chain links, likely a stanchion system, set in a grassy field with scattered autumn leaves. The posts are arranged in a line, receding into the distance. The chains are silver-colored and connect the posts in a series of loops.

Post-and-Chain Guidelines

- *Placement*
- *Appearance*

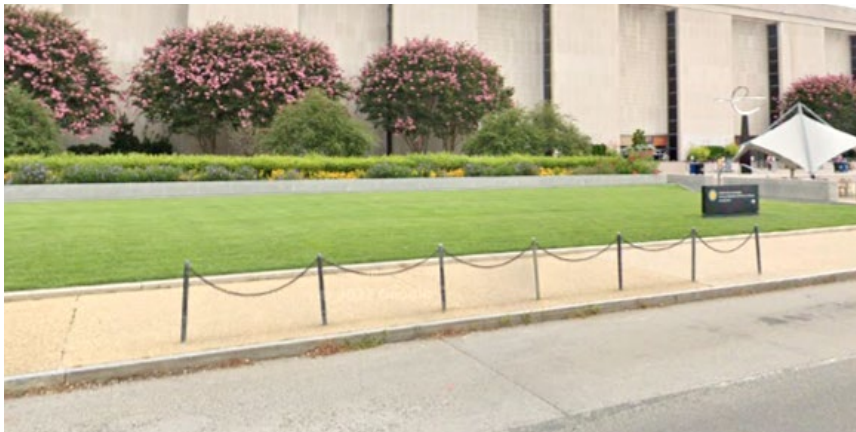
Existing Conditions: Post-and-Chain



Arts and Industries Building



Whitten Building

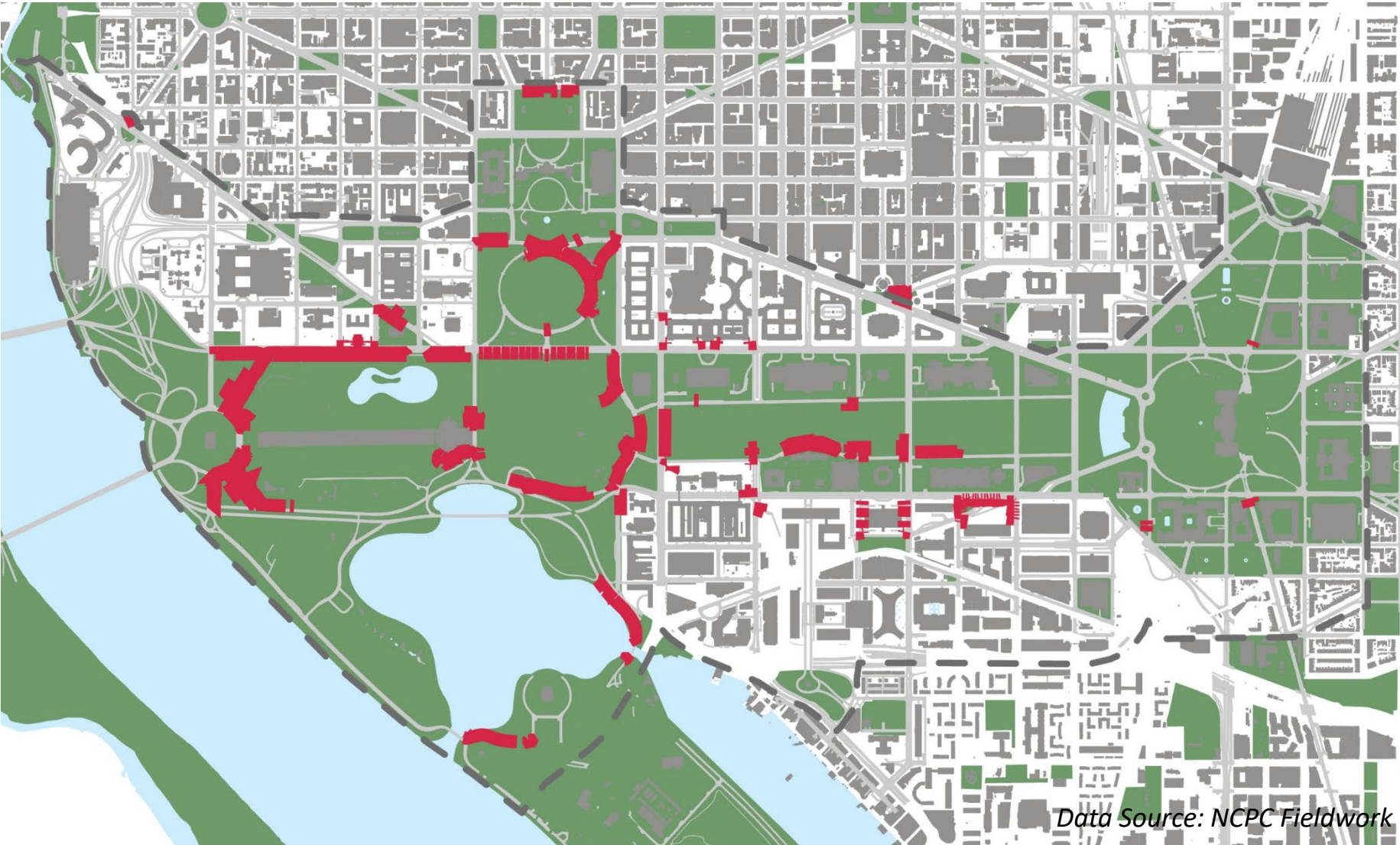


National Museum of American History

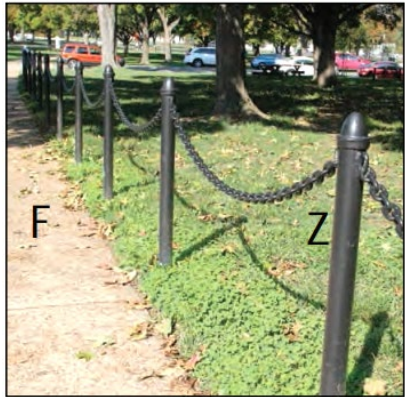


US Capitol Grounds

Existing Conditions Map: Post-and-Chain



Post-and-Chain



Draft Guidelines Summary: Post-and-Chain

Placement

- Use post-and-chain to guide pedestrian movement and to protect sensitive environments where appropriate

Appearance

- Design post-and-chain barriers to be compatible and complementary with other streetscape elements





Electric Vehicle Charging Station Guidelines

- *Placement*
- *Appearance*
- *Function*

Overview: Types of EV Charging Stations

Level 1



**Private Residence
(e.g. Single Family Homes)**

Level 2

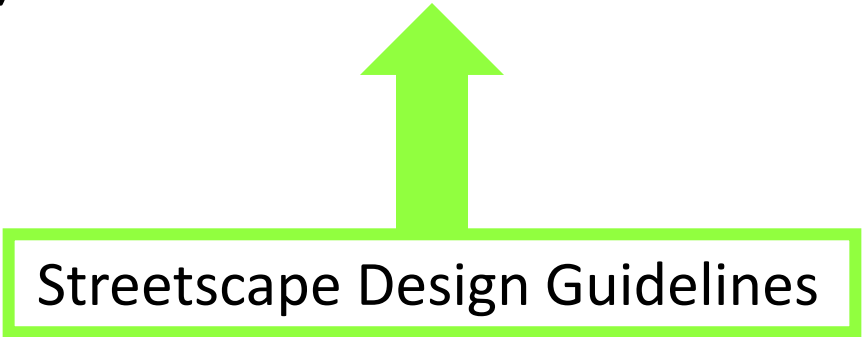


Curbside

Level 3



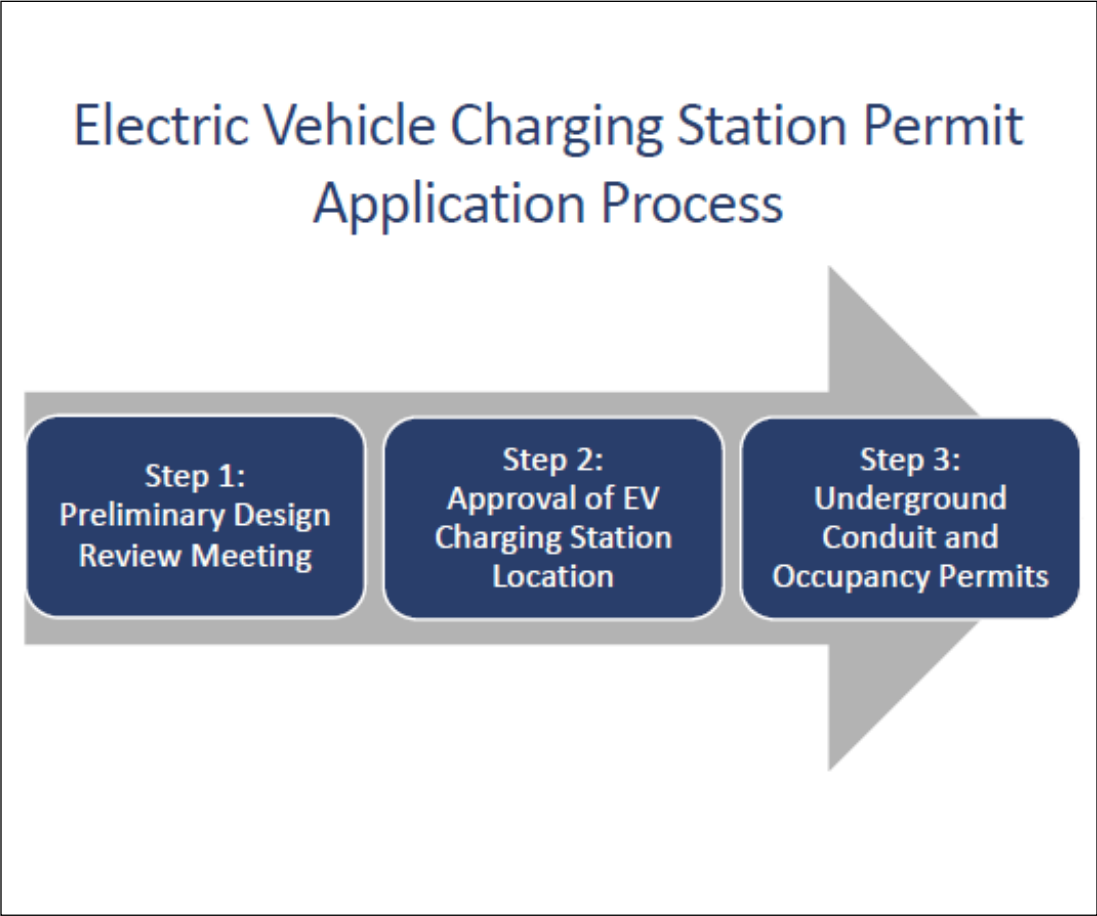
**Parking Garages
at Grocery Stores
and Office Buildings**



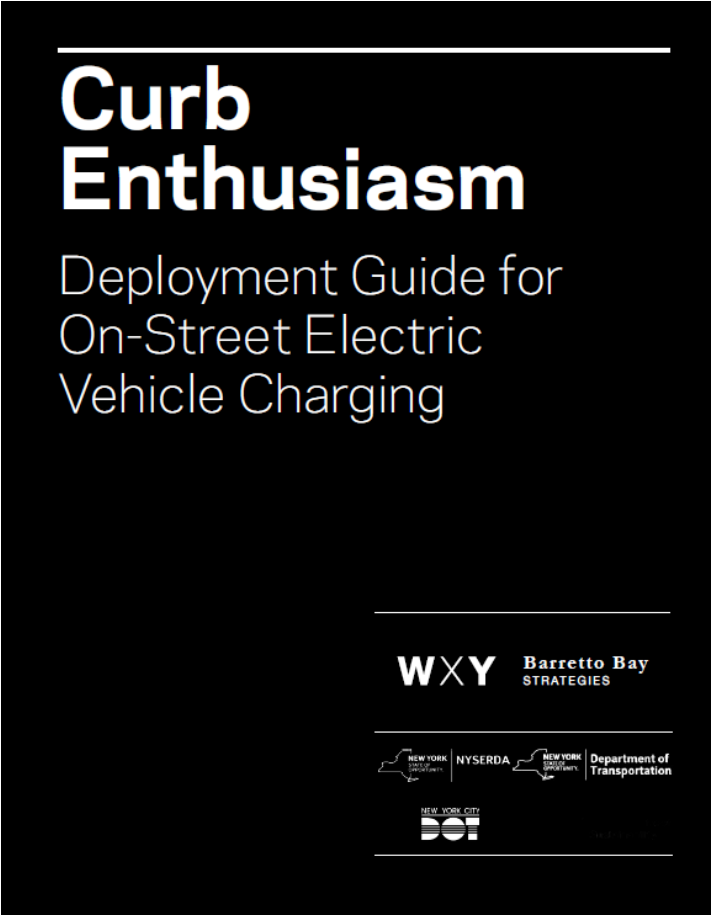
Streetscape Design Guidelines

Overview: Emerging Technology

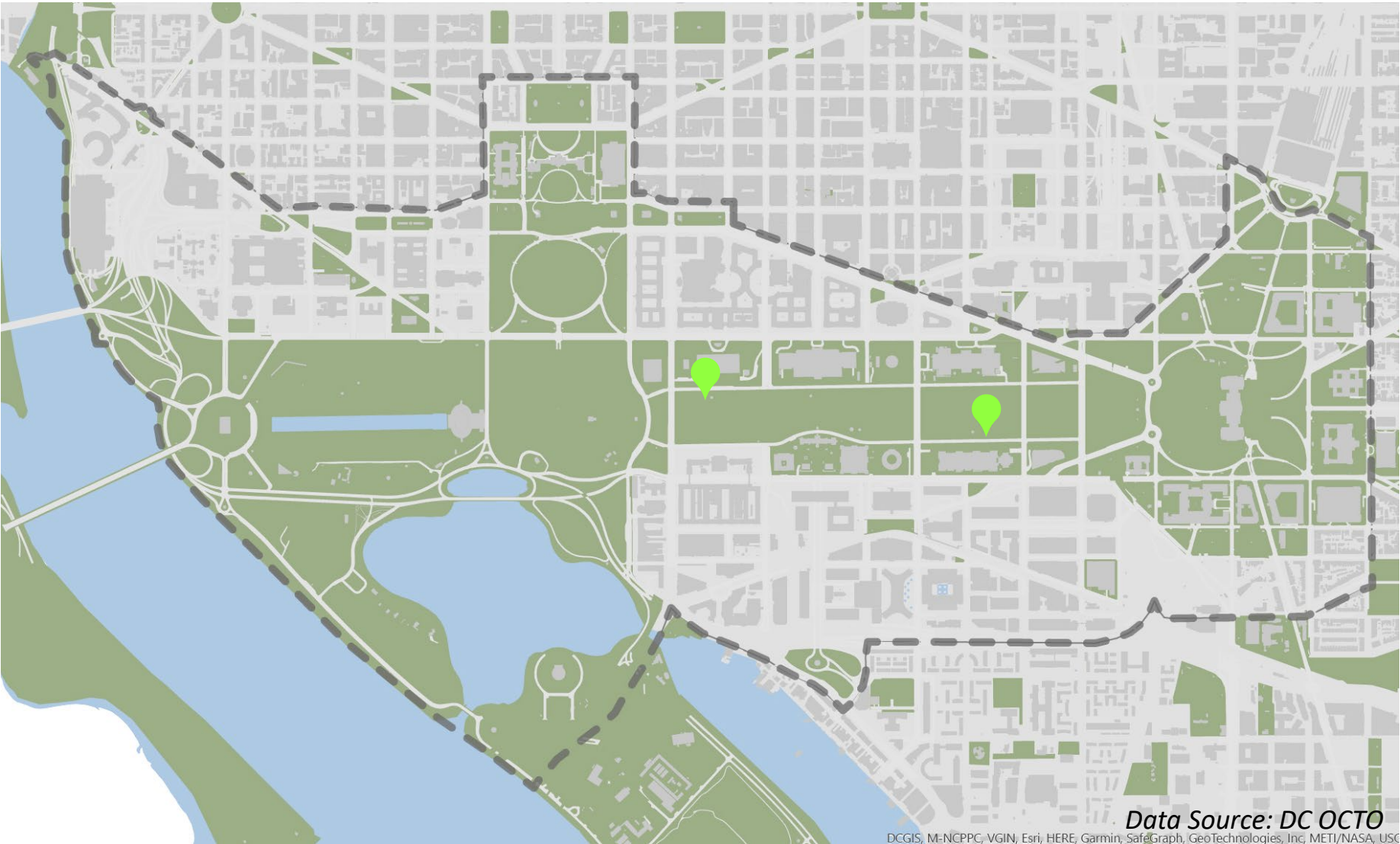
DDOT's EV Curbside Charging Station Program



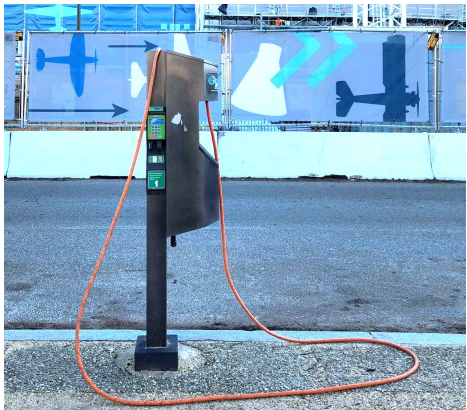
NYC DOT's EV Handbook



Existing Conditions Map: EV Charging Stations



EV Charger



Draft Guidelines Summary: EV Charging Stations

Placement

- Promote a network of EV charging infrastructure to encourage the use of EV in a manner that is well coordinated with curbside uses and streetscape elements

Appearance

- EV chargers should be compatible and complementary with other streetscape elements

Function

- EV chargers should be designed and located to be convenient to drivers and minimize potential disruptions in public space

Cordless NPS Charger



DDOT Charger with Cable





Parking Pay Station Guidelines

- *Placement*
- *Appearance*
- *Function*

Existing Conditions Map: Parking Pay Stations



▲ Parking Pay Station

Draft Guidelines Summary: Parking Pay Stations

Placement

- Provide parking pay stations to reduce streetscape clutter, provide convenience for drivers, and improve the pedestrian experience

Appearance

- Parking pay stations should be compatible and complementary with other streetscape elements

Function

- Provide convenient and serviceable parking pay stations for people of all abilities





Water Station Guidelines

- *Placement*
- *Appearance*
- *Function*

Existing Conditions: Water Station Styles



NPS Water Station - Old



NPS Water Station - New

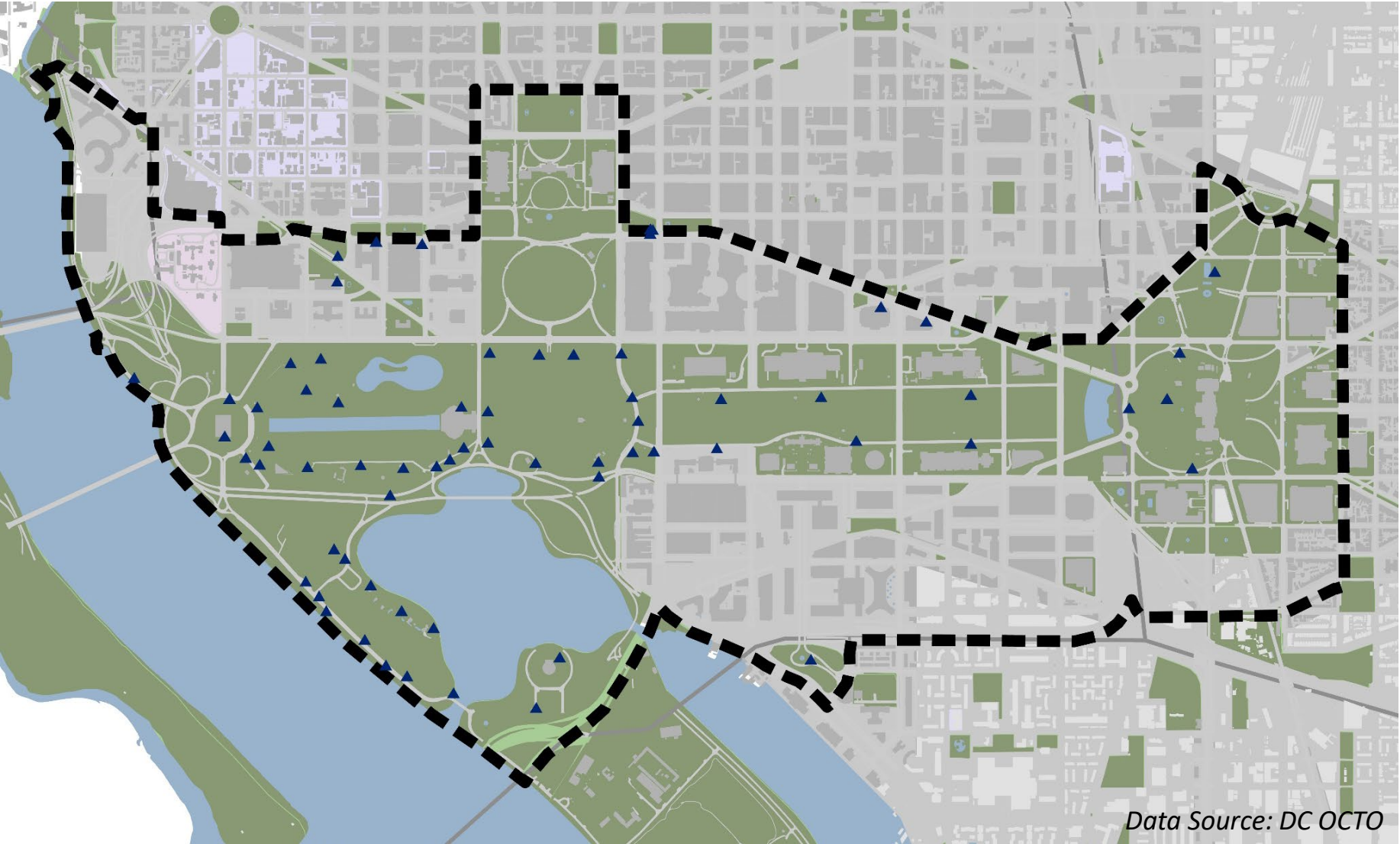


*Grotto at Summerhouse
(U.S. Capitol Grounds)*



First Street, NW

Existing Conditions Map: Water Stations



▲ Water Station

Data Source: DC OCTO

Draft Guidelines Summary: Water Stations

Placement

- Increase availability of water stations to enhance pedestrian comfort throughout the downtown monumental core, particularly in areas with large pedestrian volumes

Appearance

- Water stations should be compatible and complementary with other streetscape elements and consistent across character areas

Function

- Provide universally accessible and serviceable water stations

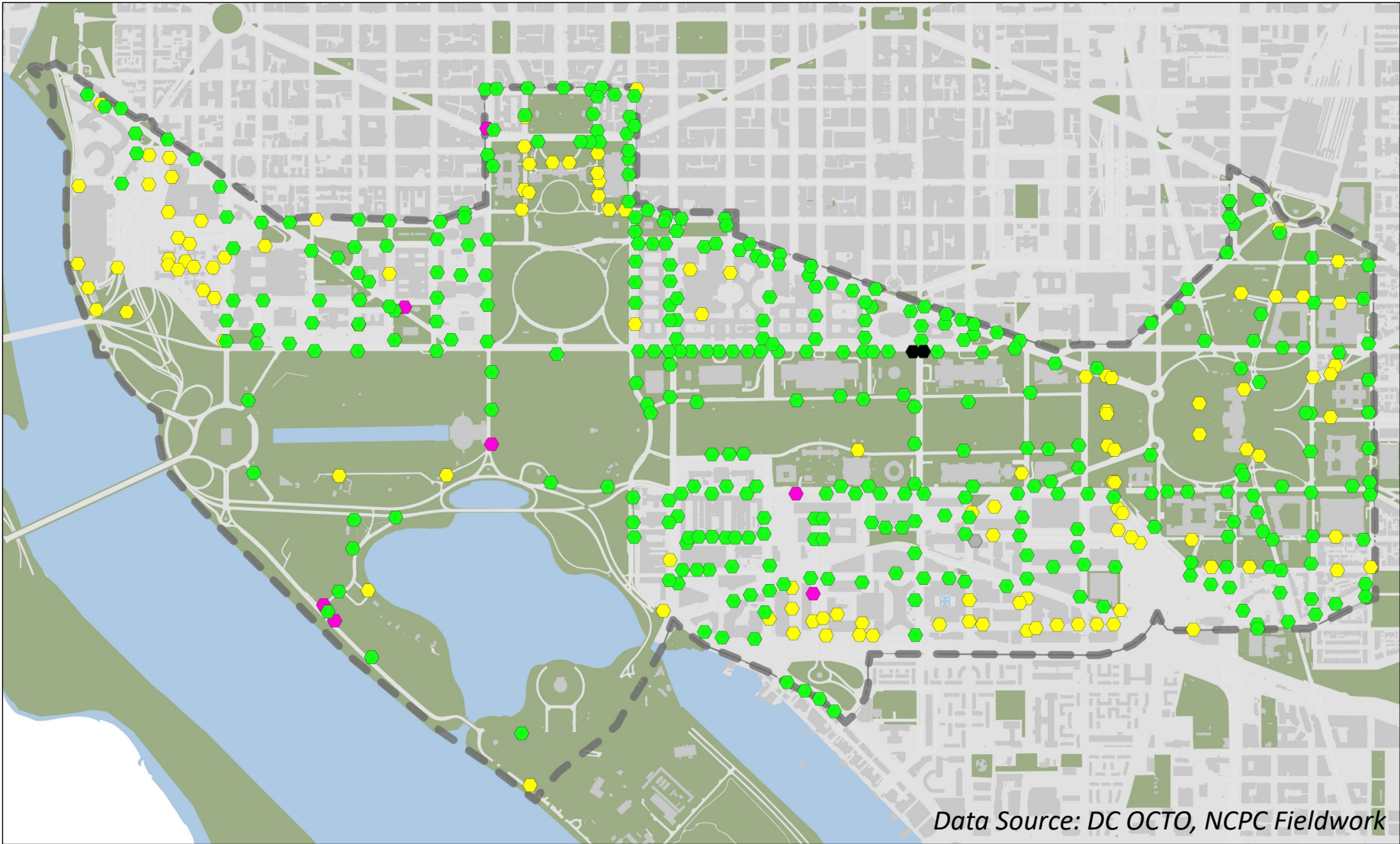


A green fire hydrant is positioned on a grassy area next to a paved road. The hydrant has a white band around its middle and a chain hanging from its side. The background shows a grassy lawn and a white curb.

Fire Hydrant Guidelines

- *Placement*
- *Appearance*
- *Function*

Existing Conditions Map: Fire Hydrants



- Green
- Black
- Other Color
- No Data



Draft Guidelines Summary: Fire Hydrants

Placement

- Provide fire hydrants for access to water supply for public safety

Appearance

- Fire hydrant designs should be compatible with other streetscape elements and meet color safety codes

Function

- Fire hydrants should maintain safe and efficient operations and maintenance











Reflective color bands indicate water pressures



Utility Box Guidelines

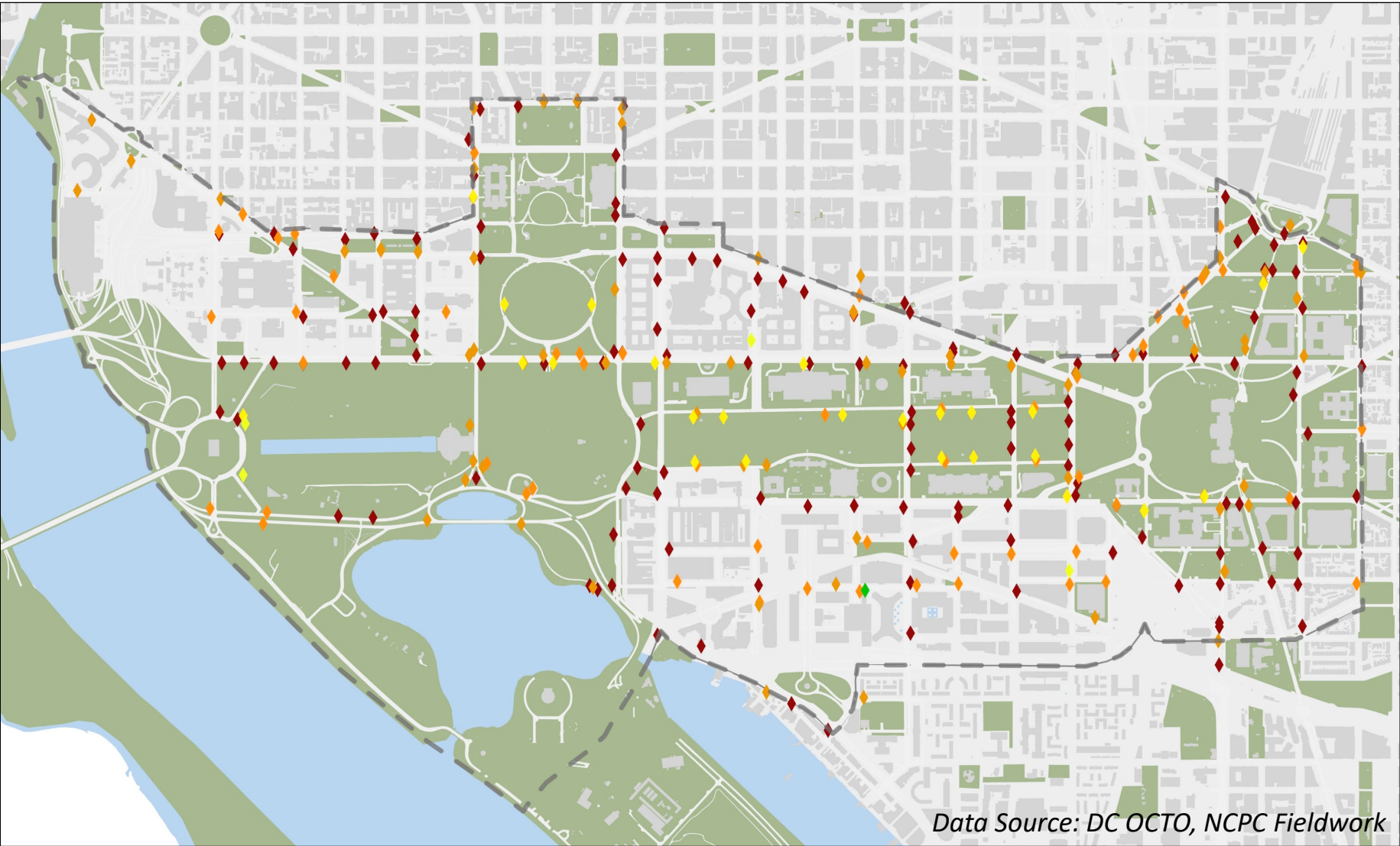
- *Placement*
- *Appearance*
- *Function*

Overview: Utility Boxes

Type of Utility	Examples			
Traffic (DDOT)	 Traffic Control			
Communications (DDOT)	 Telecom			
Electric (Pepco)	 Transformer	 Manhole Cover		
Water (DC Water)	 Auto Flusher	 Backflow Preventer	 Sensor Instruments	 Manhole Cover

Note: The guidelines do not address security communication systems.
5G small cell is addressed under Small Cell Cross References.

Existing Conditions Map: Utility Boxes

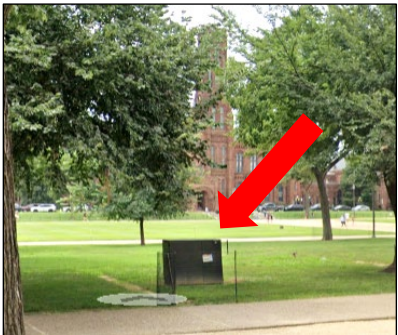


- 1 foot
- 2 feet
- 3 feet
- 4 feet
- 5 feet
- 6 feet



Proposed Guidance: Utility Box Colors

Utility Box Type	Sun-Exposed Paved Areas	Sun-Exposed Landscaped Areas	Shaded Landscaped Areas
Traffic			
Communications			
Electric			
Water			



Draft Guidelines Summary: Utility Boxes

Placement

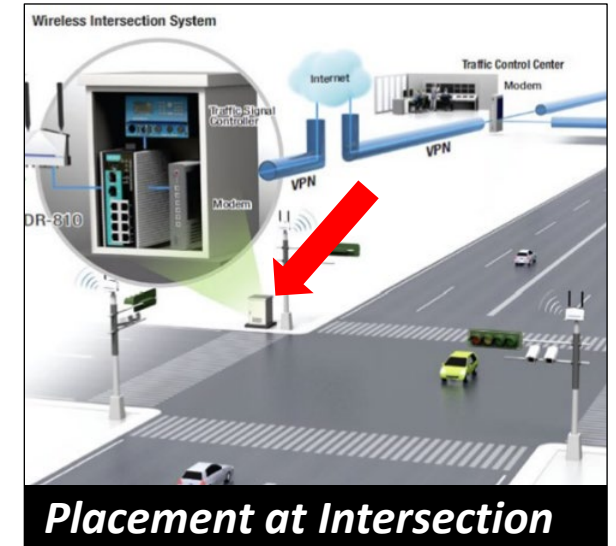
- Minimize impacts to pedestrian circulation and public space

Appearance

- Blend in with surroundings and not detract from viewsheds and vistas or other streetscape elements

Function

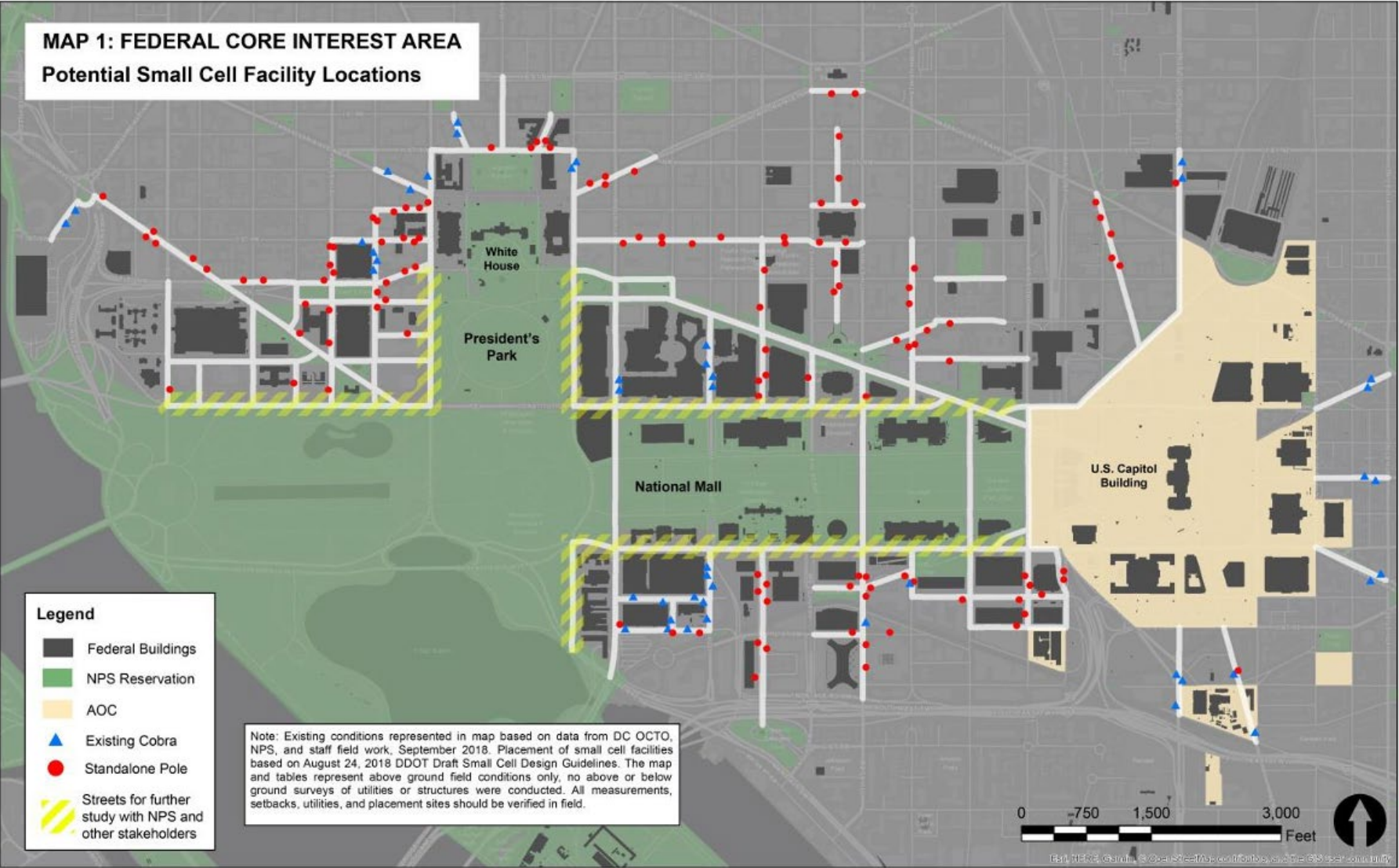
- Ensure safe and efficient operations and maintenance



The background image shows a wide-angle view of a city street. On the right side, there is a large, multi-story building with a light-colored facade and many windows. The building has a classical architectural style with columns and arches. In the foreground, a dark-colored car is parked on the street. To the left of the car, there is a red brick sidewalk and a black lamppost. A pedestrian is visible on the sidewalk in the distance. The overall scene is a typical urban environment.

Small-Cell Cross References

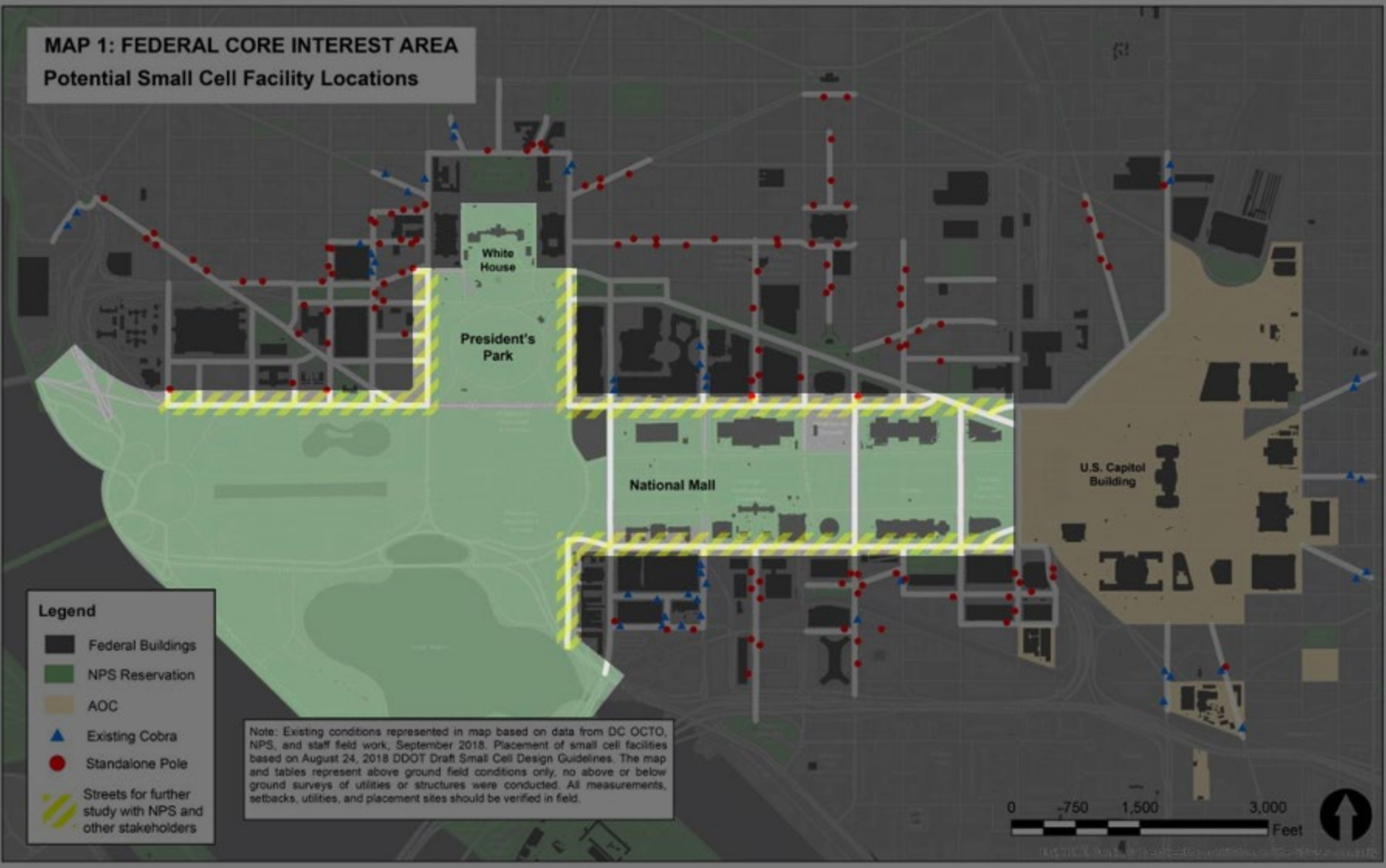
Small-Cells: Stand-Alone Poles Around the National Mall



DDOT's Small-Cell Design Guidelines were adopted in 2019



Small-Cells: For National Mall



An aerial photograph of the U.S. Capitol grounds in Washington, D.C., featuring the Capitol building at the top, the reflecting pool, and various other government buildings and trees. The entire image is covered with a semi-transparent green filter.

Next Steps

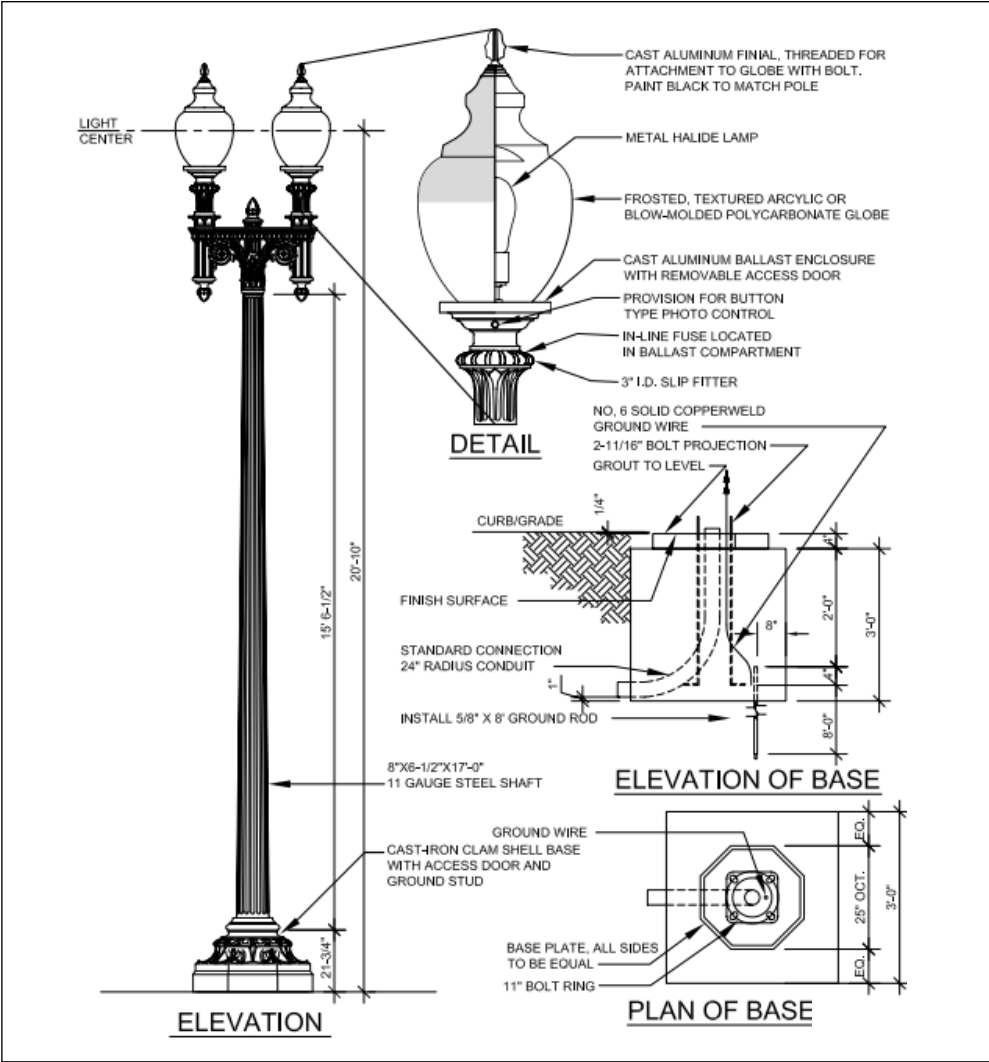
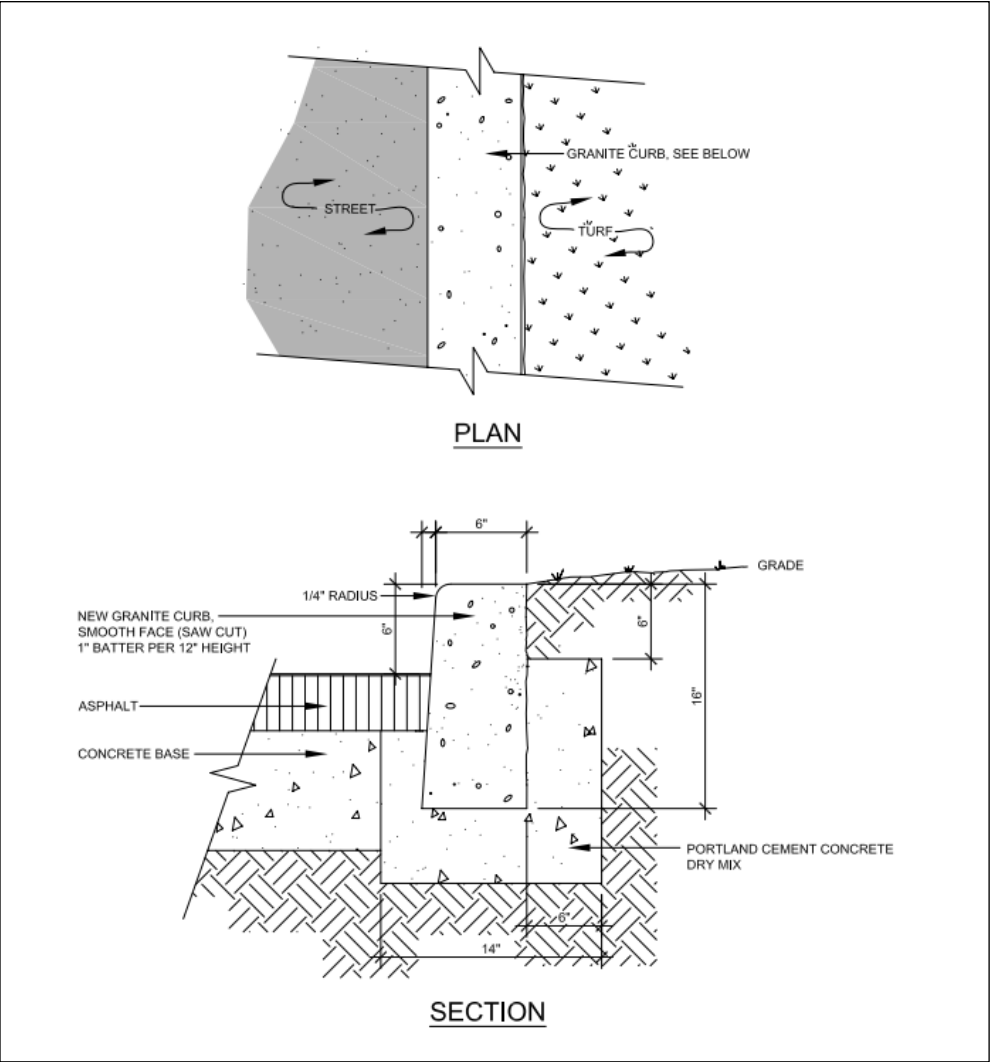
Next Steps: Phase 2 (Small-Scale Elements)

- 60-Day Public Comment Period (April 17 to June 20, 2023)

Public Meetings

- Tuesday, May 9, 12:30-1:30pm
- Wednesday, May 17, 6-7:30pm

Next Steps: Phase 3 (Construction Manual)



Next Steps: Phase 3 (Construction Manual Update)

