National Mall and Memorial Parks Telecommunication Infrastructure Plan

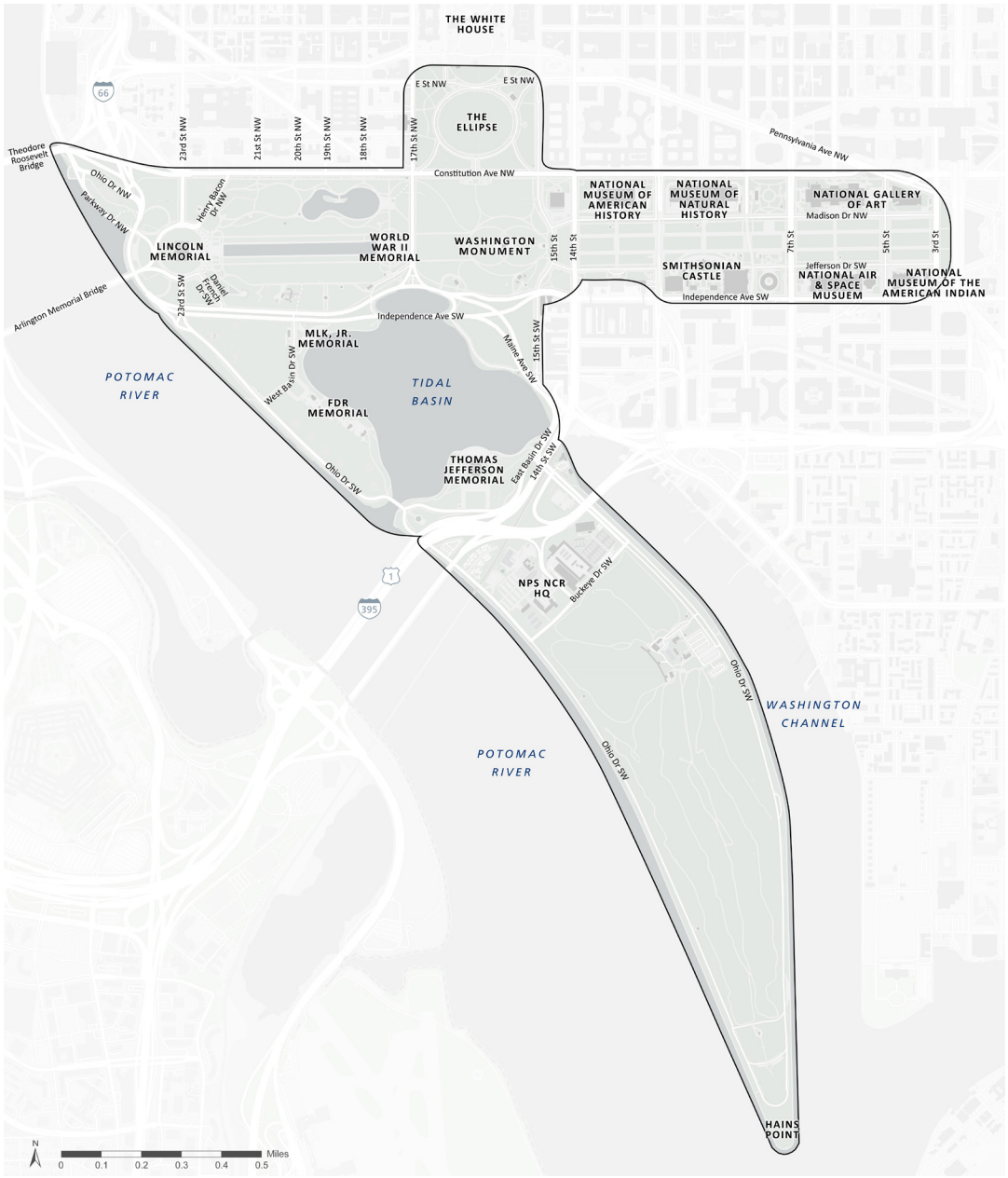
U.S. Commission of Fine Arts Informational Presentation

July 17, 2025

Introduction

Project Purpose

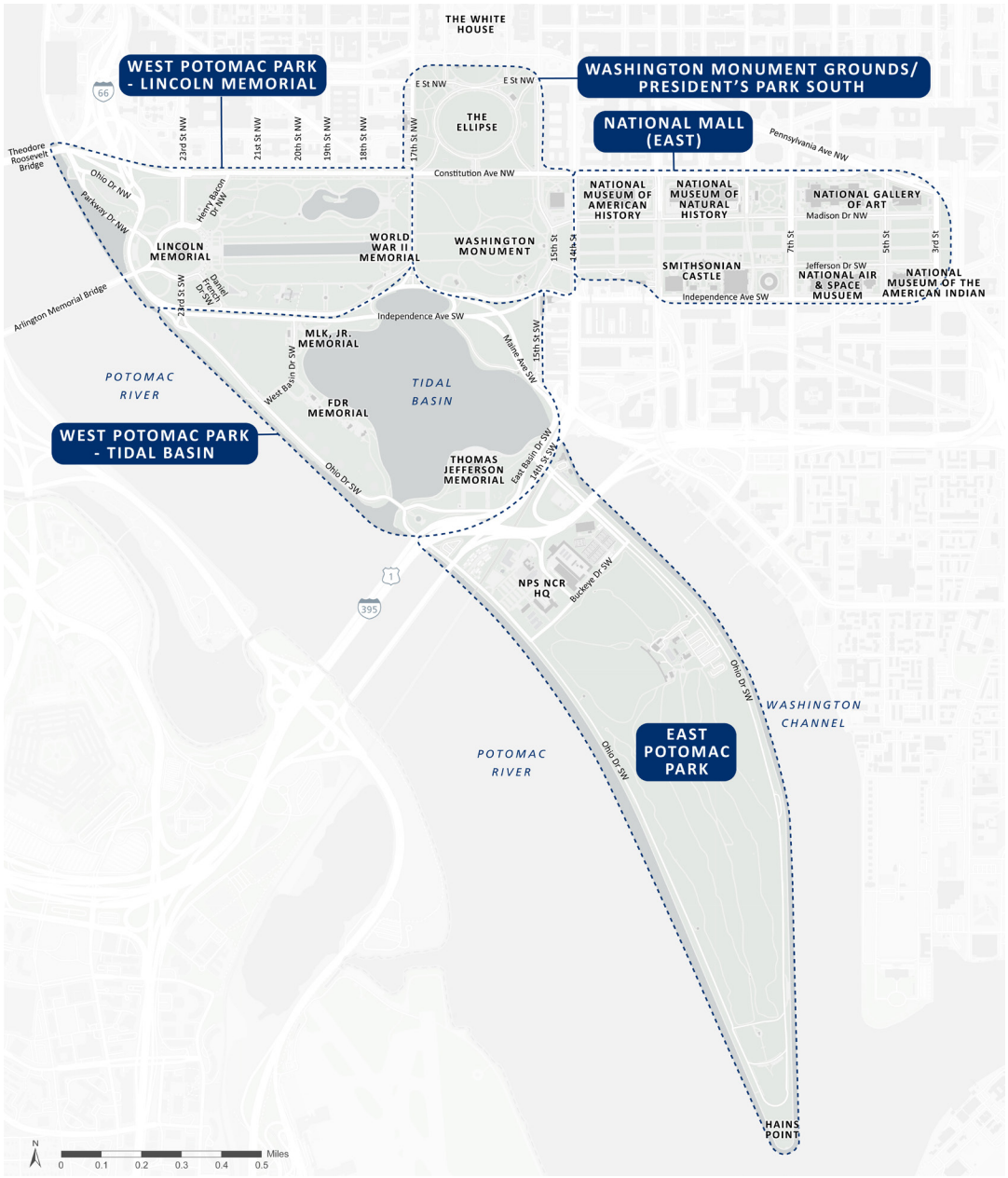
- Provide the NPS with a framework and guidance for the future construction and operation of communications infrastructure
- Describe how to provide 5x (400%) increase in mobile network capacity
- The project will not design communications infrastructure



Study Area

Methodology

- Evaluated existing conditions
- Intent is to reach 5x service
- Evaluated most effective options with minimizing resource impacts
- Divided Study Area into five areas:
  - National Mall (East)
  - Washington Monument Grounds/ President's Park South
  - West Potomac Park – Lincoln Memorial
  - West Potomac Park – Tidal Basin
  - East Potomac Park

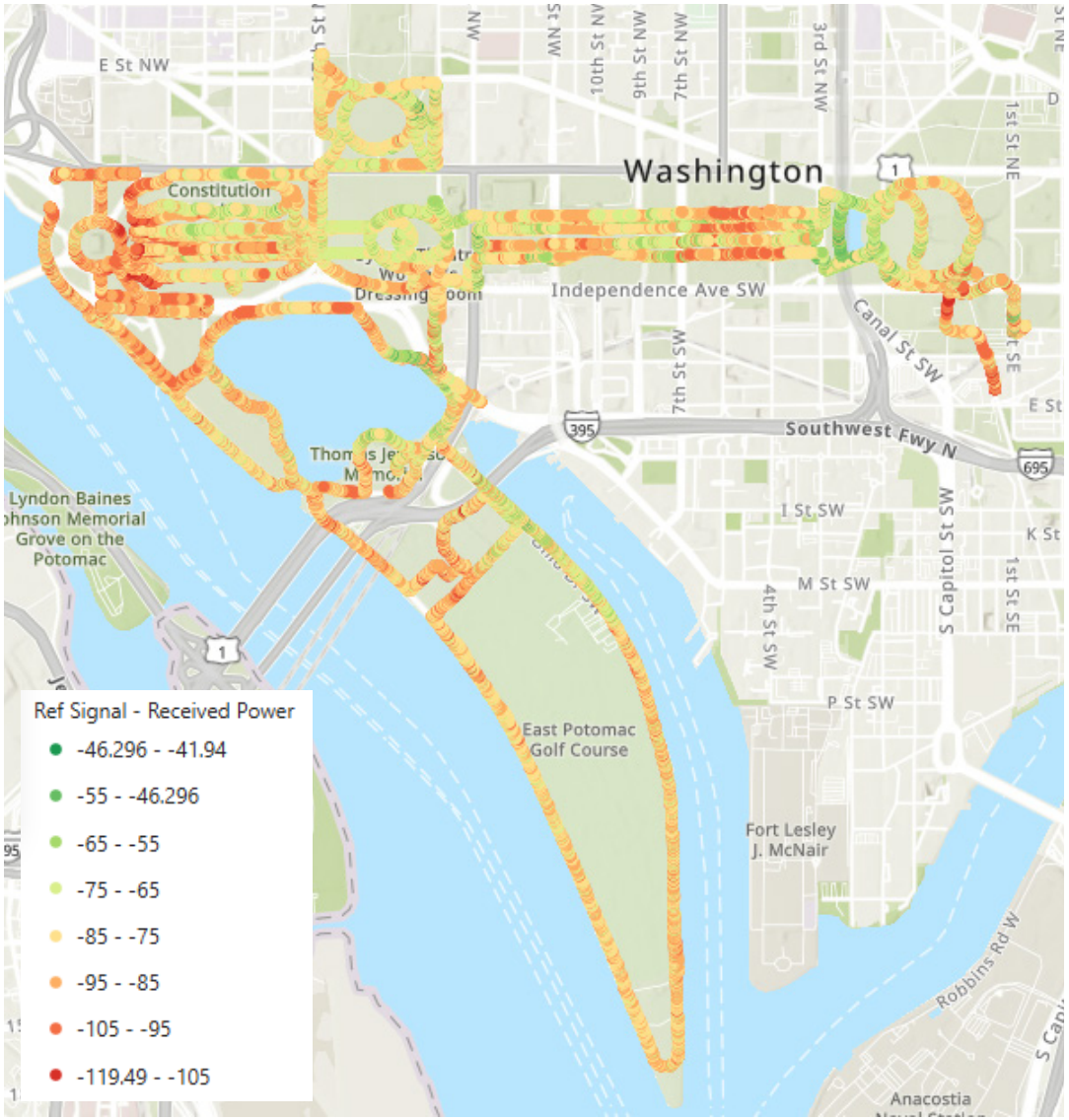


Five areas

Existing Conditions

The Plan is needed to address the following key concerns:

- **Inadequate Network Coverage and Capacity**: Current networks do not adequately meet the needs of the high number of daily visitors, event participants, and federal agencies operating within the National Mall area.
- **Demand for Modern Telecommunications Services**: There is growing demand for reliable 4G-LTE and 5G-NR services that support both routine public use and large-scale national events. Existing networks are unable to meet this need.



Rough illustration of one operator's coverage or signal strength for one of multiple frequency bands

Existing Conditions

The Plan is needed to address the following key concerns (continued):

- **Non-conforming Infrastructure:** Temporary outdated telecommunications installations may not align with federal aesthetic and safety standards.
- **Operational and Maintenance Challenges:** The lack of a coordinated, long-term plan for telecommunications infrastructure has led to inconsistent equipment types and siting practices; streamlining infrastructure can reduce long-term maintenance demands and improve reliability.

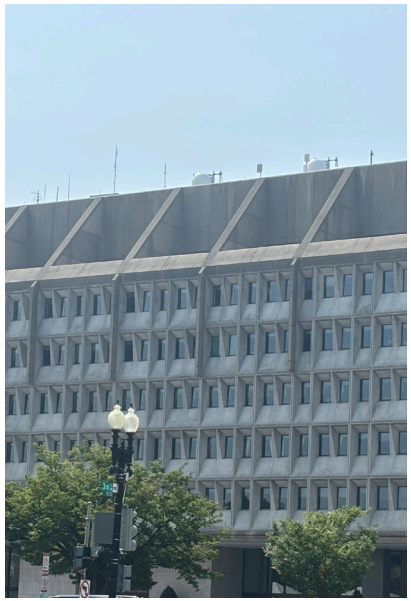
Overall Approach

Overview of Cell Site Types

- Permanent Cell Sites
  - Macros – Collection of high power network cell sites located on surrounding buildings
  - Small Cell – Lower power network cell sites typically with small antennas placed near the ground
- Temporary Solutions
  - Cells on Wheels (COWs) – Occasionally deployed during major events

Overview of Cell Site Types

Examples of existing small cells in DC

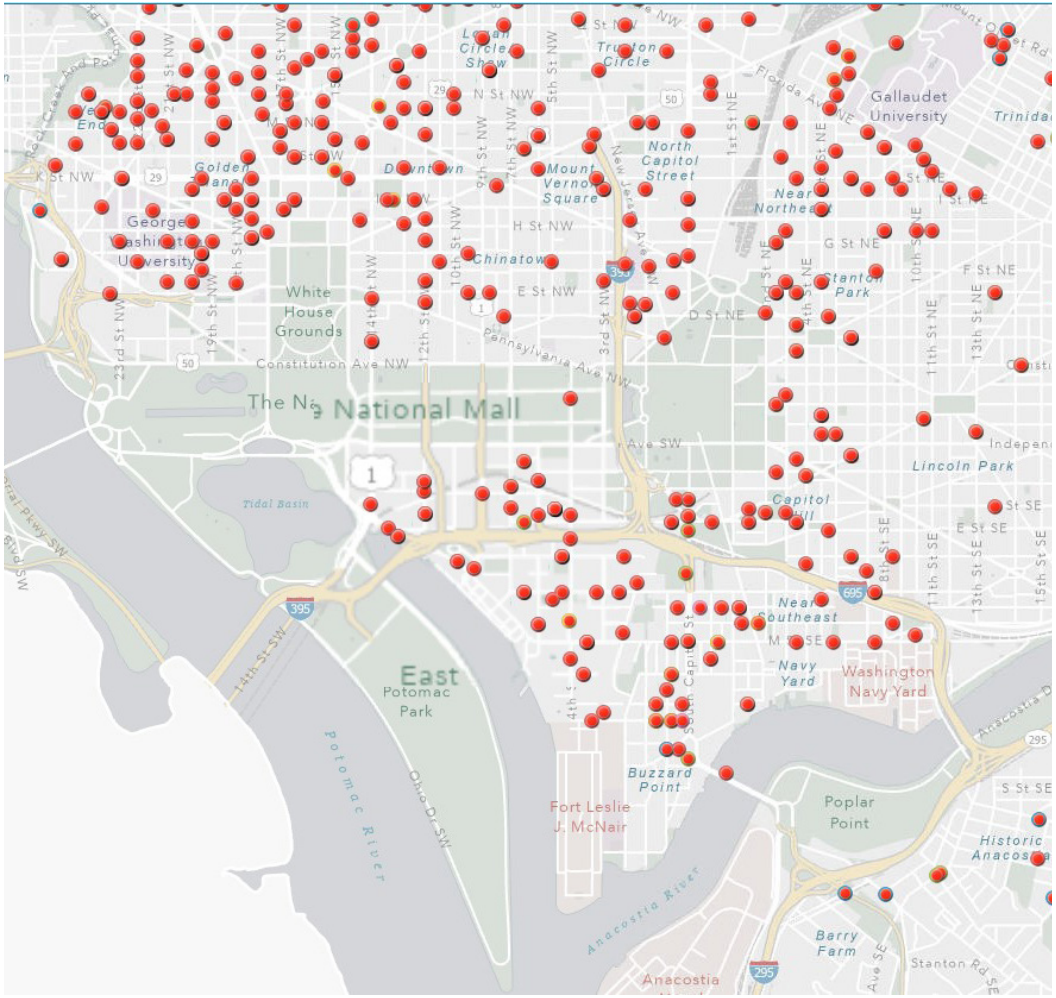


Example of existing Macro infrastructure in DC

Temporary COW within the project area

Existing Small Cell Pole Infrastructure

- Small cell infrastructure is present on DDOT streetlights and 3rd party poles throughout DC
- However, there are gaps in existing small cell infrastructure within the study area



Small Cell 3rd Party Pole and DDOT Streetlight Locations

Source: https://dcgis.maps.arcgis.com/apps/mapviewer/index.html?webmap=a04f4cf3af8c47329c1c82d404653244

Constraints

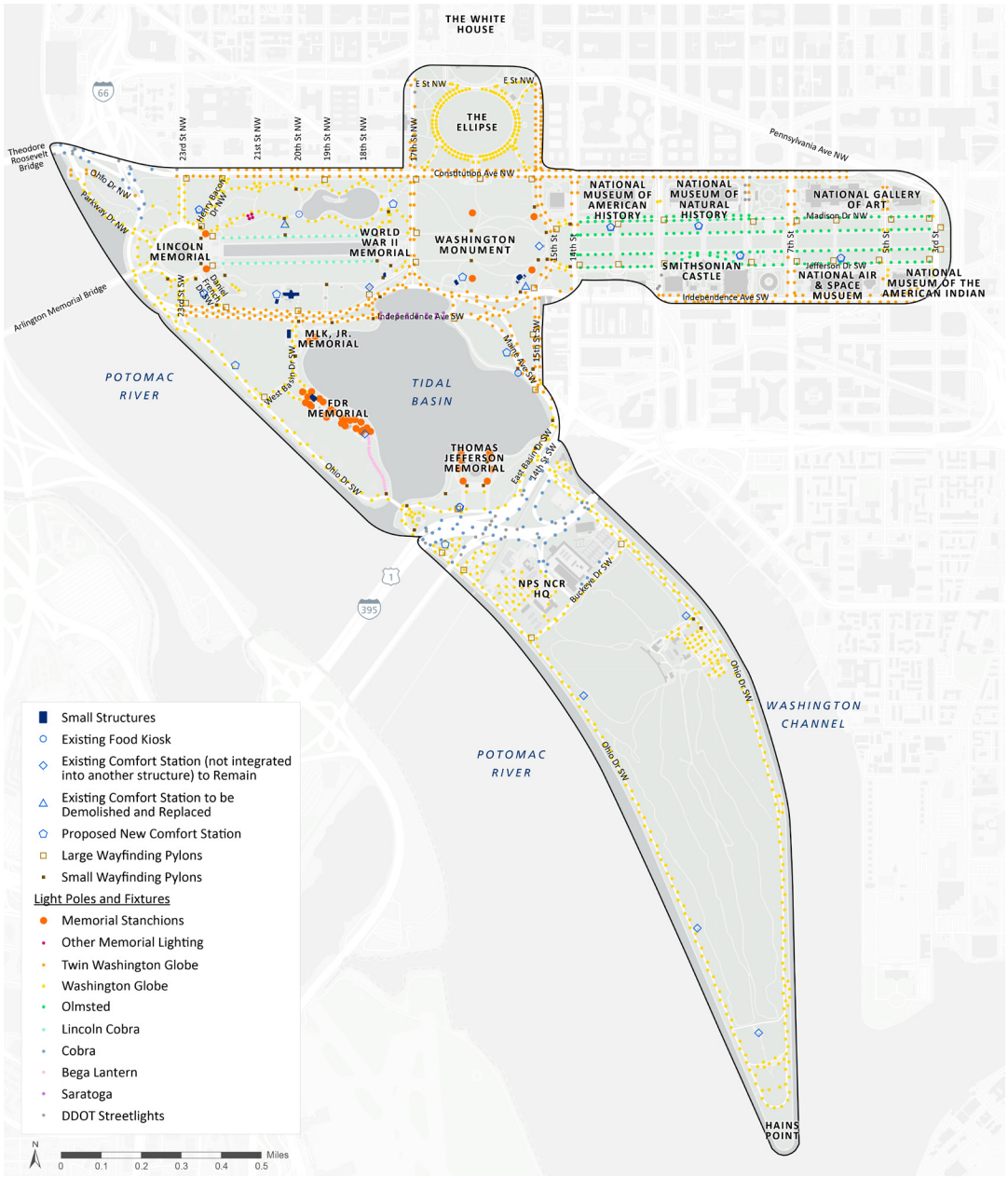
- Tree canopy blocks signal for many locations within study area, including along the outer edges of the National Mall
- The entire study contains cultural resources, with multiple historic properties and cultural landscapes
- Low scale of existing buildings without network sites limit the potential effectiveness of mounted antennae
- Existing macros located on buildings limit opportunity to add new facilities
- Physical site properties need to be accommodated:
  - Antenna size
  - Housing size
  - Antenna mounting
- Site coverage

Methodology

- Minimize impacts on cultural resources
- Use existing non-contributing architectural features when possible
- Reduce maintenance requirements
- Consider the number of sites

Types of Architectural Features in the Study Area

- Light poles
- Stanchions
- Wayfinding Pylons
- Structures
- Small-Scale Features (not shown on map)



Architectural Features

Types of Architectural Features in the Study Area

Existing Light Poles

Olmsted (Approx. 23')

Washington Globe (Approx. 12' to 15')

Washington Twin Globe (Approx. 23')

Bega Lantern

Saratoga

Lincoln Cobra

Cobra

Types of Architectural Features in the Study Area

Existing Stanchions

Washington Monument

Thomas Jefferson Memorial

Lincoln Memorial

Types of Architectural Features in the Study Area

Wayfinding Pylons

Small

Large (Approx. 9')

Types of Architectural Features in the Study Area

Structures

Comfort Station (existing)

Comfort Station (future)

Concessions Kiosk

Types of Architectural Features in the Study Area

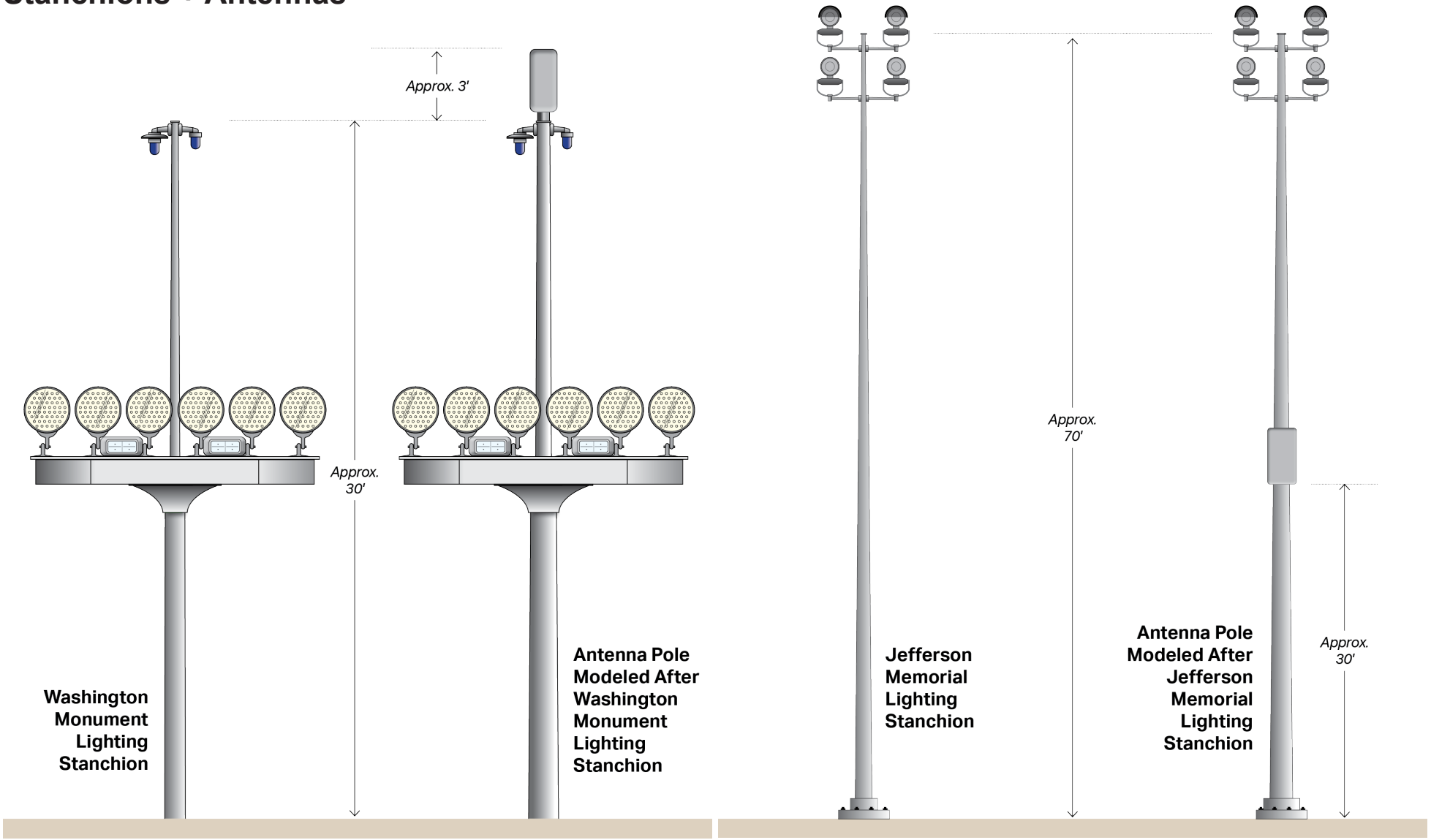
Small-Scale Features

Benches

Trash/Recycling Cans

Types of Solutions

Stanchions + Antennas



Note: Diagrams for illustrative purposes only

Conceptual Node Locations

Conceptual Node Locations Overview

- Divided Study Area into five areas:
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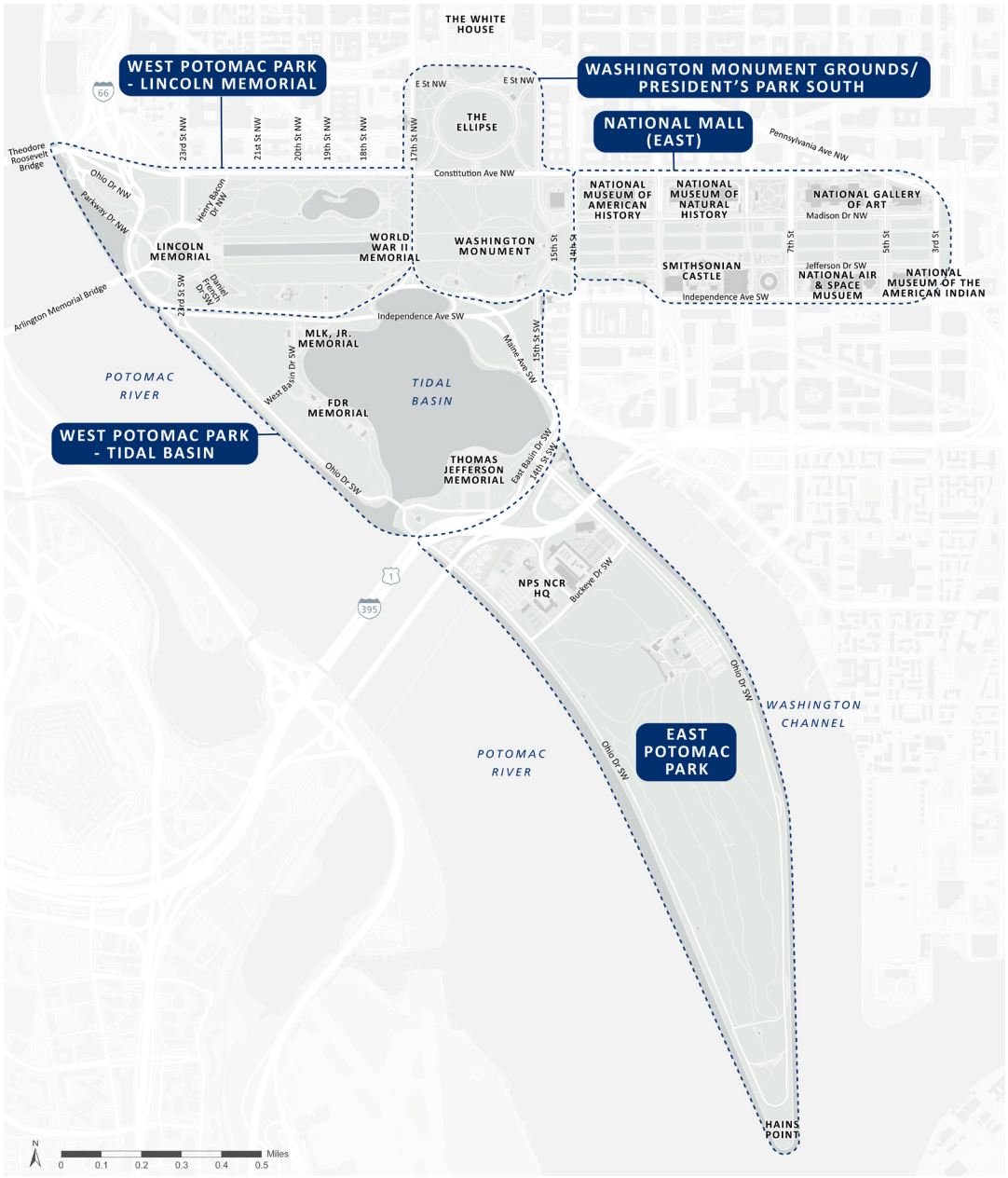
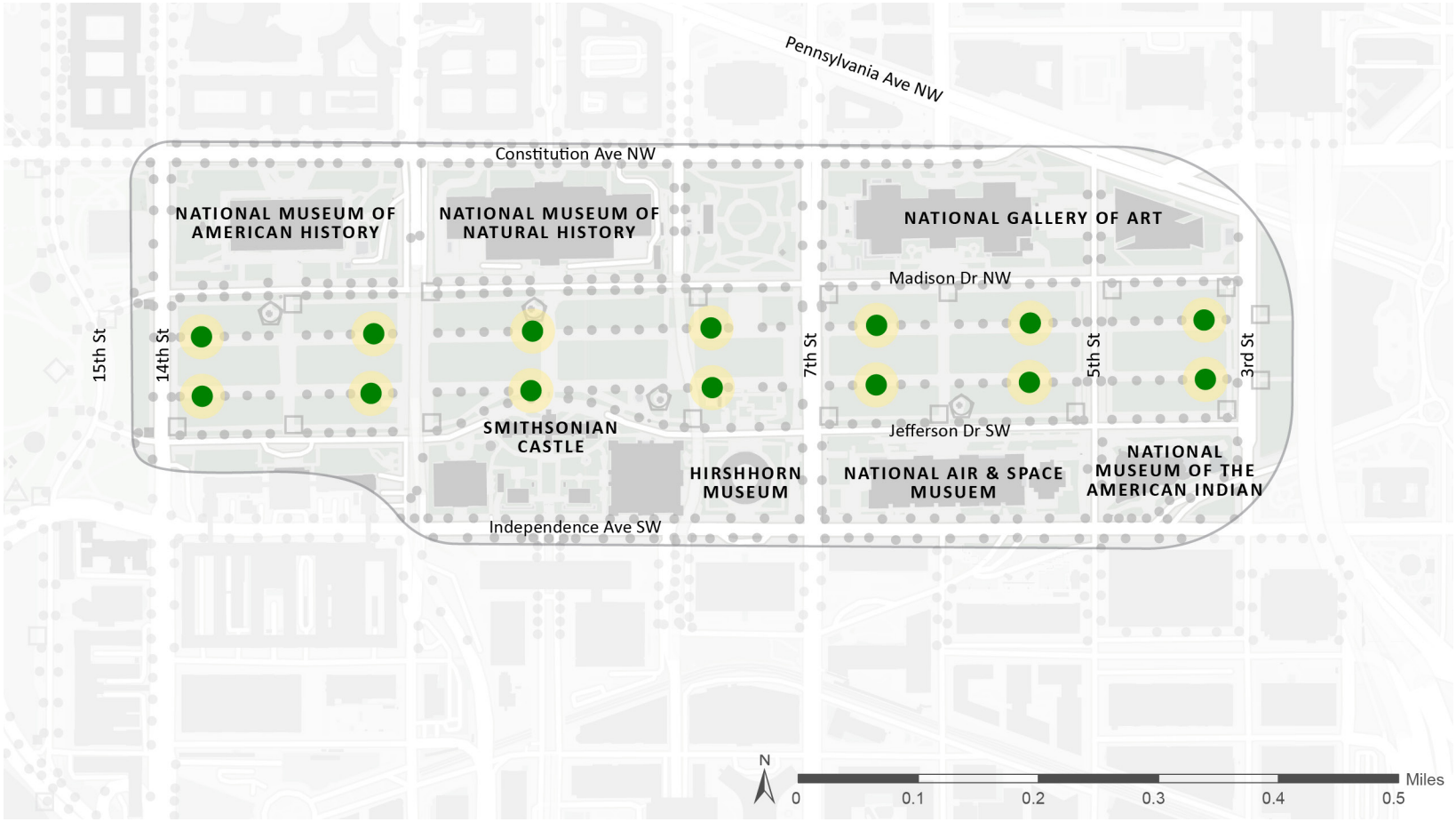
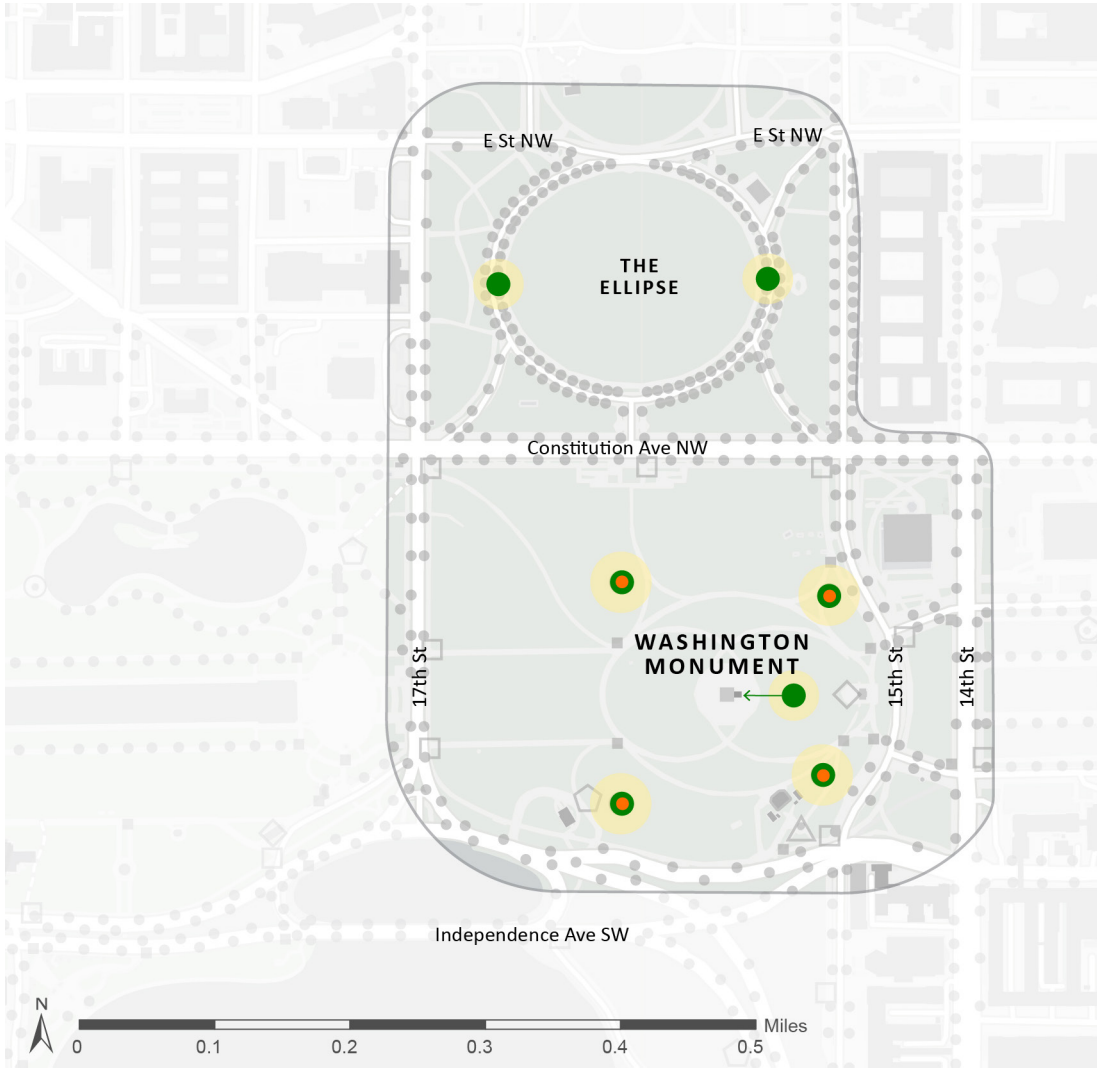


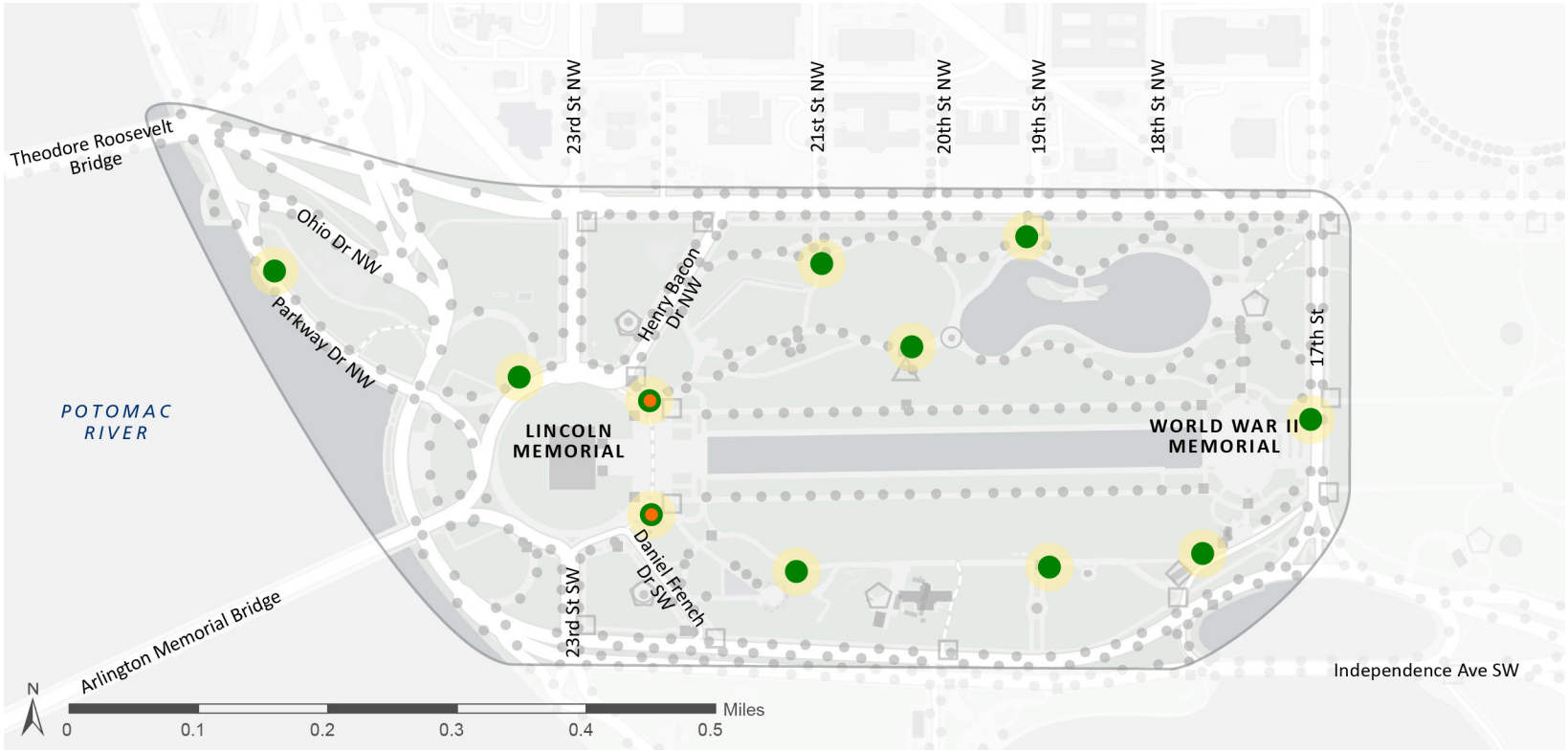
National Mall (East)



Washington Monument Grounds/President's Park South

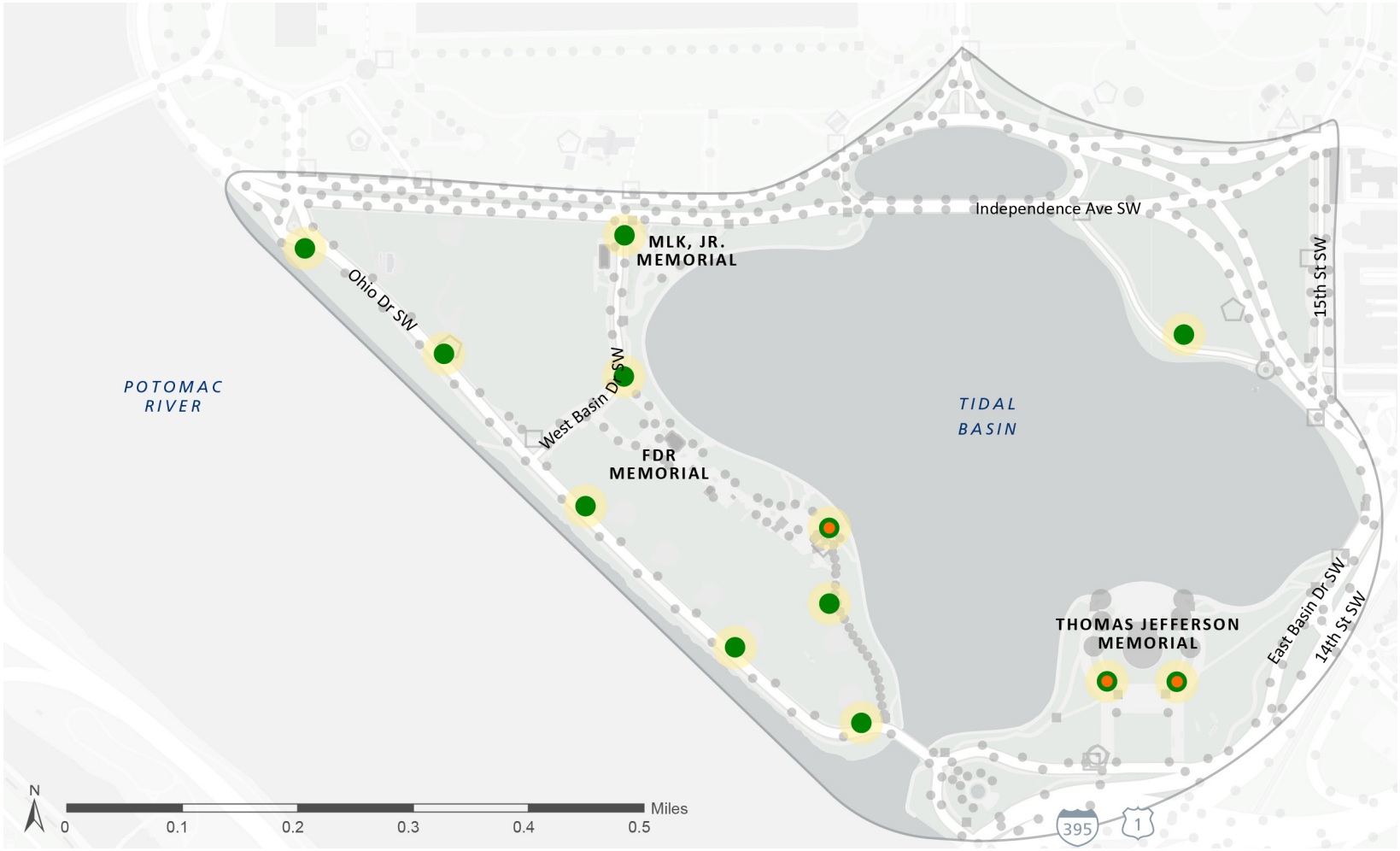


West Potomac Park - Lincoln Memorial



Conceptual Location Memorial Stanchion

West Potomac Park - Tidal Basin

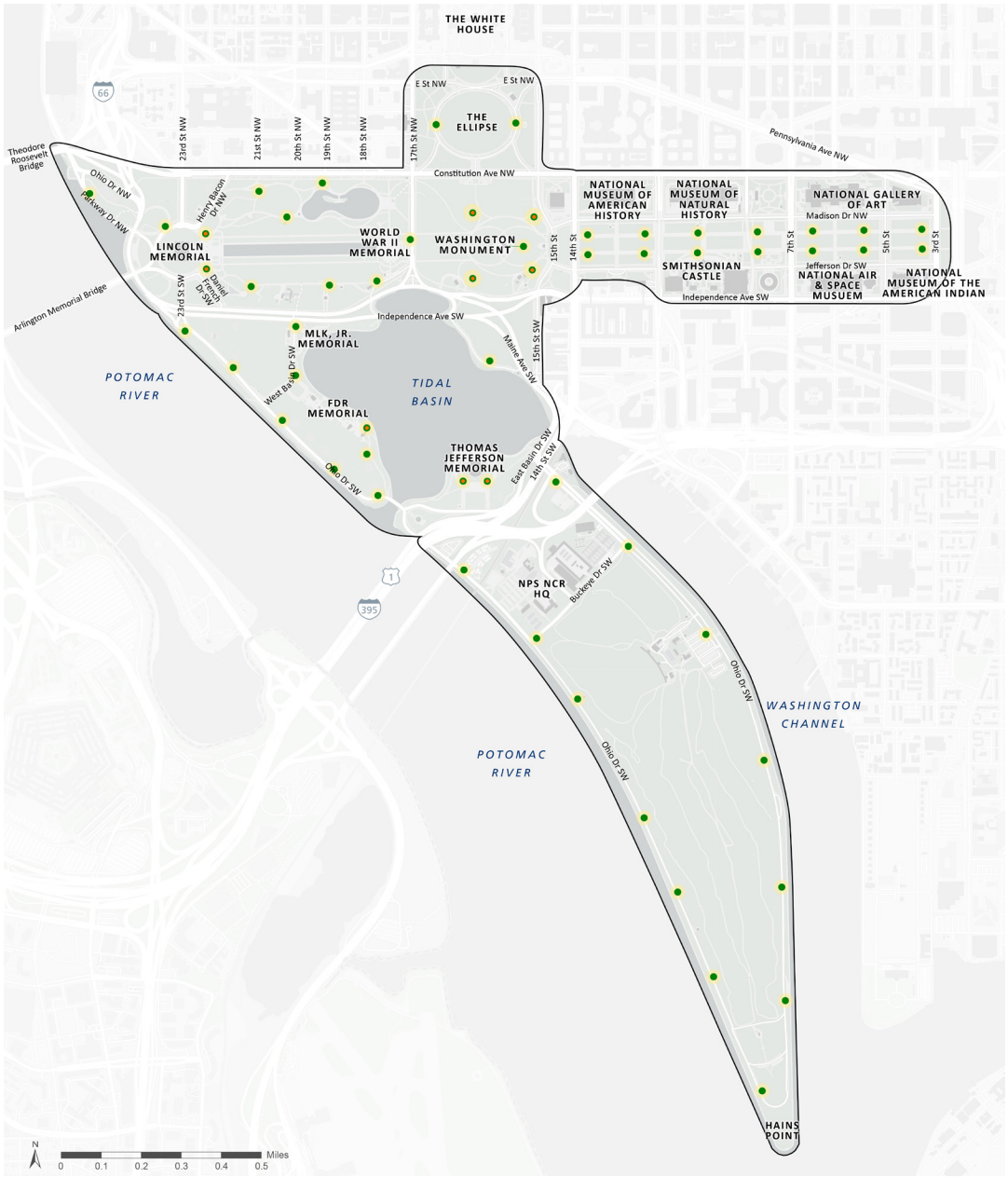


Conceptual Location Memorial Stanchion

East Potomac Park

- Conceptual Location
- Memorial Stanchion

Conceptual Node Locations Overview



Next Steps

- Fall 2025
  - Conduct 30-day public scoping period
  - NCPC Concept Review
  - CFA Concept Review
- Winter 2025
  - Release Environmental Assessment
- Future
  - Operators to provide location and design proposals for approval