



## Executive Director's Recommendation

Commission Meeting: December 6, 2018

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<b>PROJECT</b> <b>Small Cell Infrastructure Guidelines</b> Washington, DC	<b>NCPC FILE NUMBER</b> 7994
<b>SUBMITTED BY</b> District Department of Transportation	<b>NCPC MAP FILE NUMBER</b> 00:00(41.22)44850
<b>REVIEW AUTHORITY</b> Review of Plans and Projects for Consistency with the Comprehensive Plan per 40 U.S.C. § 8711(e)(2)	<b>APPLICANT'S REQUEST</b> Approve comments on draft guidelines
	<b>PROPOSED ACTION</b> Approve comments on draft guidelines
	<b>ACTION ITEM TYPE</b> Staff Presentation

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### PROJECT SUMMARY

The District Department of Transportation (DDOT) is the lead agency and liaison with cellular providers and is responsible for permitting small cell facilities within District rights-of-way. Further, DDOT has entered into a master license agreement with several cellular companies that are planning to deploy this small cell infrastructure throughout the District. DDOT developed draft small cell guidelines to inform the placement of these small cell facilities through specific criteria related to context, location and aesthetics. The Commission reviewed the draft guidelines in October 2018, and provided comments to DDOT for consideration as the guidelines are revised. NCPC staff have continued to work with DDOT throughout the process. Per the Commission's direction, staff has developed a map of proposed locations for small cell facilities for certain areas and streets in and around the federal core. This map would be used by DDOT during the application of the guidelines in the review process to allow standalone poles in the specific locations proposed. If the Commission supports the proposed map, staff will ask DDOT to include it in the final draft of the guidelines which DDOT will submit to NCPC for final comments in early 2019.

With a growing demand for wireless technology across the country, cellular companies are working to relieve the congestion on existing networks. Cellular providers (or carriers) have begun deploying small cell infrastructure, a new lower-powered antenna technology, to reduce data traffic loads on roof mounted equipment and larger cell towers. This new technology requires significant infrastructure that will potentially affect the aesthetics and function of public streets and spaces. There are multiple applications for this infrastructure, such as attaching to existing streetlights and utility poles, or employing standalone pole installations.

Therefore, the design and placement of this infrastructure is critically important, and the guidelines are intended to address this issue. The federal and cultural resources of the National Mall and its

environs are inherently unique in the District due to the unprecedented number of monumental Beaux Arts buildings, prominent entrances, historic Washington Globe and Twin-20 light fixtures, landscaped building yards, terminating viewsheds, perimeter security, and tree coverage. As such, staff completed a study of the area to understand how the guidelines might accommodate new technology and innovation while preserving the defining characteristics of the nation's most important public realm and buildings.

## KEY INFORMATION

- Small cell technology consists of antennas and related equipment that can be placed on structures such as streetlights, the sides of buildings, or poles. Small cell equipment comes in various sizes, and are essential for transmitting data to and from a wireless device.
- DDOT has entered into a master license agreement with several cellular companies (carriers) that are planning to deploy small cell infrastructure throughout the District.
- Small cell antennas have a limited signal range, and each provider may install hundreds of antennas and related equipment throughout the District to meet their independent coverage needs.
- The carriers have indicated they would like to install approximately 2,700 facilities within the District over the next five years.
- According to the carriers, the density of antennas correlates with the intensity of use for a given area.
- DDOT has worked with NCPC and other District and federal agencies to develop draft guidelines that address various aspects of the placement and design of small cell facilities.
- The draft guidelines currently prohibit placement of small cell facilities adjacent to federal buildings. Small cell facilities are also restricted adjacent to National Park Service reservations.
- The guidelines would not apply to small cell facilities proposed on federal property. Any proposed facilities on federal land within the District of Columbia would require submission by the land-holding federal agency to NCPC for review and approval.
- The District of Columbia Public Space Committee will ultimately adopt the guidelines that will be used to evaluate permit applications for small cell installation in District rights-of-way and on District assets, such as light poles.
- Small cell facilities are generally located on poles around 30 feet in height. This height is necessary to accommodate signal transmission along a street corridor. For comparison purposes, Washington Globe light poles range from 14 to 18 feet tall. Twin-20's are currently the tallest fixtures at approximately 22 feet tall, roughly two-thirds the height of a typical small cell pole. Antenna equipment can range from five to seven feet in height, and can be attached to the top or middle of the pole. Electrical cabinets and other support equipment can range from four to five feet in height and around three feet in width. Depending on the design and provider, the cabinets can be integrated into the pole base, attached to the middle or top of the pole, installed as standalone boxes near the pole, or located underground in a vault.

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- The draft guidelines currently allow attachment of small cell facilities to cobra poles. Small cell facilities are not permitted to attach to Twin-Twenty or Washington Globe poles.
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## RECOMMENDATION

The Commission:

**Recognizes** the growing demand for wireless technology and more importantly, that the need to relieve congestion on existing networks is essential for people living and working in Washington, DC, including residents, visitors and the federal workforce.

**Finds** small cell facility deployment requires significant infrastructure that will affect the aesthetic and functional aspects of the public realm.

**Notes** that as the federal planning agency for the nation's capital, NCPC has a focused interest on preserving and enhancing the form, character and experience of the nation's capital, particularly within the historic L'Enfant City and around the significant concentration of federal interests and prominent national resources found in the core of Washington, DC.

**Notes** that NCPC has not focused its analysis on other parts of the District where other issues may be of interest to various stakeholders.

### *Federal Core Interest Area Map*

**Accepts** the *Federal Core Interest Area Map* that identifies the only permissible locations for small cell facilities on District rights-of-way in the areas of highest federal interest around the National Mall.

**Requests** DDOT include the *Federal Core Interest Area Map* in the Final Guidelines for use in locating small cell facilities in this area.

**Notes** that staff identified small cell facility locations for the map in consultation with the GSA and NPS and based on the following factors:

- Discussions with DDOT and the providers regarding areas where coverage is needed;
- Spacing guidelines adopted in other cities;
- Prioritizing placement near intersections, where possible, to improve coverage along street corridors;
- Avoiding placement in front of building entrances and important public spaces;
- Avoiding impacts to important views and viewsheds; and

- Prioritizing the use of existing cobra poles.

**Notes** that NPS has been evaluating the potential for small cell coverage on the National Mall, and therefore the opportunity exists to coordinate facility locations in and around the National Mall, including Constitution and Independence Avenues.

**Directs** staff to coordinate with NPS, the Smithsonian Institution and other interested landholders in evaluating coverage needs and potential solutions that include the National Mall, Constitution and Independence Avenues over the next six months.

**Requests** that no facilities be permitted along Constitution or Independence Avenues until a more comprehensive evaluation of coverage needs and facilities placement can be developed considering National Park Service property, the Smithsonian Institution museums and other lands within the National Mall.

**Recommends** the number and placement of facilities be reevaluated in the future in consultation with NCPC, after all locations are used, technology has changed, and specific carriers provide information about their evolving needs.

#### *Review Process*

**Notes** DDOT is responsible for reviewing and approving permit applications for small cell facilities within District rights-of-way. Applications that meet the guidelines will be approved administratively, while those that require exceptions from the guidelines will be reviewed by the District's Public Space Committee.

**Requests** DDOT revise the guidelines so that if a carrier seeks an exception from the guidelines within the streets identified on the Federal Interest Area Map, or adjacent to any federal property, the exception request will require NCPC review and concurrence prior to the initiation of permit review by DDOT.

**Requests** DDOT revise the guidelines so that any proposal to move or alter temporary or permanent security elements along or adjacent to federal property will require NCPC review and concurrence prior to submitting to DDOT for permit review.

#### *Infrastructure Design*

**Notes** DDOT is considering developing a design typology for new standalone poles, working with NCPC, the U.S. Commission of Fine Arts, and carriers over the next six months. During that period, small cell facilities would be limited to existing pole locations.

**Supports** such a process and finds that the development of a unified standalone pole design will be beneficial to the District of Columbia and can be an example to other cities.

**Notes** that DDOT may remove the requirement to underground of cabinetry and equipment in the final guidelines due to the carriers' statement regarding the financial and technical challenges of doing so.

**Requests** that if undergrounding is not feasible, that DDOT require cabinetry and other equipment be integrated into the pole base instead of attached to the pole or located within a separate stand-alone box to minimize visual clutter.

*Other Guidelines*

**Notes** that NCPC staff have provided additional comments to DDOT for inclusion in the guidelines, consistent with the Commission's previous comments. They include:

- Encouraging hoteling to reduce the number of facilities, and therefore minimize the number of new elements proposed within the public realm.
- Clarifying where facilities are permitted, particularly adjacent to federal property and reservations administered by the U.S. government, outside of the Federal Core Interest Area map.
- Adding guidance regarding the placement of facilities in relationship to buildings, building architecture, and open spaces where they intersect with the streetscape.
- Clarifying guidelines regarding the placement of new poles and other components of the streetscape.

**PROJECT REVIEW TIMELINE**

<b>Previous actions</b>	<b>July 2018</b> – Information Presentation <b>November 2018</b> – Review of draft guidelines
<b>Remaining actions</b> (anticipated)	Early 2019 – Review of final guidelines

**PROJECT ANALYSIS**

**Executive Summary**

DDOT, in collaboration with several District and Federal agencies, has developed Small Cell Guidelines that will direct the design and placement of small cell infrastructure throughout the District of Columbia. The draft guidelines have been reviewed by the U.S. Commission of Fine Arts and by the Public Space Committee of the District of Columbia. NCPC reviewed and provided comments on the draft guidelines in November 2018. NCPC staff have continued to work with DDOT pursuant to the Commission's previous comments and direction. The final guidelines will ultimately be reviewed and adopted by the District Public Space Committee, and will be used to approve small cell infrastructure installations in District rights-of-way. The guidelines do not apply to federal lands that are subject to review and approval by NCPC.

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## **Analysis**

Balancing the need to accommodate increasing cellular demand while preserving public space character and function is critically important, as is the need to design and place the proposed infrastructure in an appropriate way. This is especially true in Washington, DC, the nation's capital, where the public spaces, both streets and reservations, are defining elements of the city. As the federal planning agency for the nation's capital, NCPC has a focused interest on preserving and enhancing the form, character and experience of the nation's capital, particularly within the historic L'Enfant City and around the significant concentration of federal interests and prominent national resources found in the core of Washington, DC. These include the views and setting of the U.S. Capitol, White House and National Mall, nationally significant civic spaces and institutions, national memorials and parks, and those streets, avenues and reservations that link these elements.

NCPC staff recognize the growing demand for wireless technology, and more importantly, that the need to relieve congestion on existing networks is essential for people living and working in Washington, DC, as including residents, visitors and the federal workforce. However, the installation of small cell infrastructure will affect the aesthetic and functional aspects of the public spaces we experience every day.

### *Federal Core Interest Area Map – Potential Small Cell Facility Locations*

In November, the Commission advised that, given the unique setting of the National Mall and its environs, and the concentration of federal facilities, memorials and monuments, a detailed map of preferred standalone pole locations could be used to reconcile coverage needs and impacts to the public realm, particularly if it was determined that additional coverage was needed for the area. Although excluding standalone poles adjacent to federal buildings and national parks might protect these resources, it would not ensure adequate coverage at these locations, which is also an important goal. The Commission further directed staff to prepare a map of facility locations, taking into account the regulating criteria of the draft guidelines, coverage needs, and the desire to protect the nation's most important public spaces.

Therefore, staff developed the *Federal Core Interest Area Map* (Map 1). It shows the acceptable locations for new standalone poles, as well as existing cobra poles to which new facilities could be attached, for only those streets highlighted in white. The locations were based upon site visits, GIS analysis, and also considering other provisions found in the draft guidelines. The map is focused on the area around the National Mall but is more limited than the study area that staff presented to the Commission in November 2018. The special streets identified in the map include those around concentrations of federal facilities, such as in the Federal Triangle, those adjacent to important open spaces, as well as the viewsheds that contribute to the L'Enfant Plan. Only those streets highlighted in white were analyzed by staff. Other streets would still be subject to the criteria in the guidelines.

In general, the proposed standalone poles were located near intersections, where possible, to improve coverage along street corridors. Poles were eliminated from locations in front of building entrances and important public spaces. Poles were also located to avoid impacting important views and viewsheds, particular the corridors which terminate at the U.S. Capitol and White House. The use of existing cobra poles was also prioritized, and areas under construction were also discounted as it is difficult to assess the impacts of new poles in those areas. As a baseline, staff used the previously-developed analysis and potential facility locations show in Map 2: *Application of the Draft Guidelines*. This map showed the application of the draft guidelines, and how there would be both clustering of poles as well as gaps in certain areas.

The *Federal Core Interest Area Map* allows for small cell coverage across the federal interest area, but increases the spacing of the facilities consistent with staff's analysis of the carriers' initial needs, spacing utilized in other cities and the desire to avoid unnecessary impacts to the visual and functional character of this nationally-important area. In addition, staff consulted with representatives of the General Services Administration (GSA) and National Park Service (NPS), given their significant land holdings in the area.

The Commission had previously requested that DDOT work with the carriers to prepare a composite map of proposed facilities for the area to better understand the coverage needs. Due to the proprietary nature of each provider's data, it was not possible to create a consolidated map. However, working the DDOT and the carriers, NCPC staff were able to ascertain desired facility locations for participating carriers. This information, in turn, helped inform the *Federal Core Interest Area Map*.

Staff notes that no facilities are proposed along Constitution or Independence Avenues. These two avenues are highly prominent corridors surrounded by numerous civic buildings and open spaces. While small cell coverage in these areas is desirable, the potential for negative impacts on these two avenues is also significant. Further, it will be helpful to understand what is proposed for adjacent federal lands. For example, NPS has been evaluating the potential for small cell coverage on the National Mall, and therefore the opportunity exists to coordinate facility locations in and around that area, including Constitution and Independence Avenues.

As a result, a more comprehensive evaluation of coverage needs and facilities placement should be developed considering National Park property, the Smithsonian Museums and other lands in and around the National Mall. Therefore, staff recommends the **Commission direct staff to coordinate with NPS, the Smithsonian and other interested landholders in evaluating coverage needs and potential solutions that include the National Mall, Constitution and Independence Avenues over the next six months.** Staff also recommends the **Commission requests that no facilities be permitted along Constitution or Independence Avenues until a more comprehensive evaluation of coverage needs and facilities placement can be developed considering National Park Service property, the Smithsonian Institution museums and other lands within the National Mall.**

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The proposed map will provide predictability and certainty for providers and will streamline the process for both carriers and DDOT. As such, staff recommends the **Commission accept the *Federal Core Interest Area Map* that identifies the only permissible locations for small cell facilities on District rights-of-way in the areas of highest federal interest around the National Mall.** Further, the **Commission request DDOT include the *Federal Core Interest Area Map* in the Final Guidelines for use in locating small cell facilities in this area.**

In the future, if all the facility locations are used, it may be necessary to consider additional locations or alternative sites for small cell infrastructure. Changing demand, carriers needs or changes in technology may necessitate revisiting the map in the future. As such, staff suggest the **Commission recommends the number and placement of facilities be reevaluated in the future in consultation with NCPC, after all locations are used, technology has changed, and specific carriers provide information about their evolving needs.**

#### *Review Process*

As described previously, DDOT is responsible for reviewing and permitting small cell facilities within District rights-of-way. Applications that meet the guidelines will be approved administratively, while those that require exceptions from the guidelines will be reviewed by the District's Public Space Committee. Because of the heightened federal interest, staff recommends the **Commission requests DDOT revise the guidelines so that if a carrier seeks an exception from the guidelines within the streets identified on the *Federal Interest Area Map*, or adjacent to any federal property, the exception request will require NCPC for review and concurrence prior to the initiation of permit review by DDOT.**

Thus, if a carrier seeks an exception to the locations identified on the map, they will be required to work with NCPC to seek approval for an alternative location prior to initiating the review process with DDOT. Outside the Federal Core Interest Area, if a provider seeks an exception to the guidelines, NCPC will also be notified and will have the opportunity to comment on the application, along with other stakeholders. Finally, staff recommends the **Commission also request DDOT revise the guidelines so that any proposal to move or alter any temporary or permanent security elements along or adjacent to federal property will require NCPC review and concurrence prior to submitting to DDOT for permit review.** In general, staff finds that NCPC review for these particular instances is appropriate to protect the federal interest, particularly for the area around the National Mall, and for installations adjacent to federal properties.

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*Infrastructure Design*

The Commission previously expressed support for the comments of the U.S. Commission of Fine Arts, who “advised the development of an elegant and holistic design typology for the small-cell installations...” The Secretary of the CFA also provided testimony at the November meeting, reiterating the need to develop an appropriate design for this new infrastructure. As a result, the Commission requested that DDOT work with all parties to develop a unified design typology for the new standalone poles.

In response, DDOT is currently contemplating developing a design for the new standalone poles. While the design is being developed, small cell facilities could be limited to existing poles, and a placeholder would be provided in the guidelines in the interim. Staff believes this is an appropriate approach, and therefore recommends the **Commission support such a process and find that the development of a unified standalone pole design will be beneficial to the District and can be an example to other cities.**

The guidelines previously required undergrounding of cabinetry and other equipment within the L’Enfant Plan area. The purpose of this requirement was to keep pedestrian areas clear and to minimize visual clutter within the streetscape. This requirement is likely to be removed as they carriers have indicated the requirement would be both financially and technically challenging. While undergrounding would still be preferential, if this is no longer mandated, staff suggests the **Commission request that if undergrounding is not feasible, that cabinetry and other equipment should be integrated into the pole base instead of attached to the pole or located within a separate stand-alone box to help minimize visual clutter.** The integrated base is the best approach to minimize additional clutter, either on the pole or within the streetscape.

*Other Guidelines*

NCPC staff have provided additional comments to DDOT for inclusion in the guidelines, consistent with the Commission’s previous comments. They include:

- *Encouraging hoteling to reduce the number of facilities, and therefore minimize the number of new elements proposed within the public realm.* Additional language has been suggested that recommends best technology practices to minimize the number of new elements and poles in the public realm.  
*Clarifying where facilities are permitted, particularly adjacent to federal property and reservations administered by the U.S. government.* Small cell infrastructure should not be placed adjacent to federal properties within the Federal Core Interest Area except for the locations indicated by the map. Small cell facilities adjacent to federal lands outside the Federal Core Interest Area shall comply with the guidelines. Small cell facilities are not permitted on public rights-of-way adjacent to federal reservations administered by the U.S. government.
- *Adding guidance regarding the placement of facilities in relationship to buildings, building architecture, and open spaces where they intersect with the streetscape.* Small cell facilities should not be placed in front of building entrances or other formal or

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informal spaces that are integral to a site or building's design. Additional language has also been provided regarding the location of facilities in relationship to overhangs, awnings and open spaces.

- *Clarifying guidelines regarding the placement of new poles and other components of the streetscape.* Additional language has been provided that recommends staggering new poles along block faces where possible. Additional guidance also clarify that pedestrian access between the curb and sidewalk cannot be impeded. Further, new poles cannot be located in a manner that would impact the health of an existing tree.

When a revised draft of the guidelines is made available, staff will review to see how the guidelines have addressed these and other Commission comments and recommendations.

### **Conclusion**

Overall, progress has been made to address a number of critical issues related to the installation of small cell facilities across the District. These include:

- Preparation of a *Federal Core Interest Area Map* to be included in the guidelines;
- Identifying a process for designing standalone poles;
- Setting forth NCPC review for facilities in certain cases; and
- Providing other updates and clarifications to the guidelines.

Staff will continue to work with DDOT to see how these are addressed in the revised guidelines.

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## **CONFORMANCE TO EXISTING PLANS, POLICIES AND RELATED GUIDANCE**

### **Comprehensive Plan for the National Capital**

As noted above, the planning comments are designed to ensure the proposal meets basic goals of the Comprehensive Plan. Staff has primarily relied upon the policies related to Urban Design, Historic Preservation and Visitors and Commemoration in evaluating the proposed guidelines.

### **National Historic Preservation Act**

NCPC does not have an independent responsibility to comply with the National Historic Preservation Act when providing comments on the guidelines.

### **National Environmental Policy Act**

NCPC does not have an independent responsibility to comply with the National Environmental Policy Act when providing comments on the guidelines.

## **CONSULTATION**

### **Coordinating Committee**

The Coordinating Committee reviewed the draft guidelines at their November 14, 2018 meeting. Without objection, the Committee forwarded the proposed guidelines to the Commission with the statement that the proposal has been coordinated with all participating agencies. The participating agencies included the National Park Service, General Services Administration, District Department of Transportation; the District Office of Planning; the District Office of Energy and Environment; the Washington Metropolitan Area Transit Authority; and the District of Columbia State Historic Preservation Office (DC SHPO).

### **U.S. Commission of Fine Arts**

The U.S. Commission of Fine Arts reviewed the draft guidelines at their July 19, 2018 and September 13, 2018 meetings. NCPC staff have continue to work with CFA and DDOT regarding potential options for designing the new small cell infrastructure.

## ONLINE REFERENCE

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

- Draft Guidelines - <https://ddot.dc.gov/page/ddot-small-cell>
- Project Synopsis

Prepared by Matthew Flis  
11/29/2018

## ATTACHMENTS

- Powerpoint
- Map 1 - Federal Core Interest Area Map - Potential Small Cell Facility Locations
- Map 2 – Application of the Draft Guidelines (from November 2018)
- Public Comments

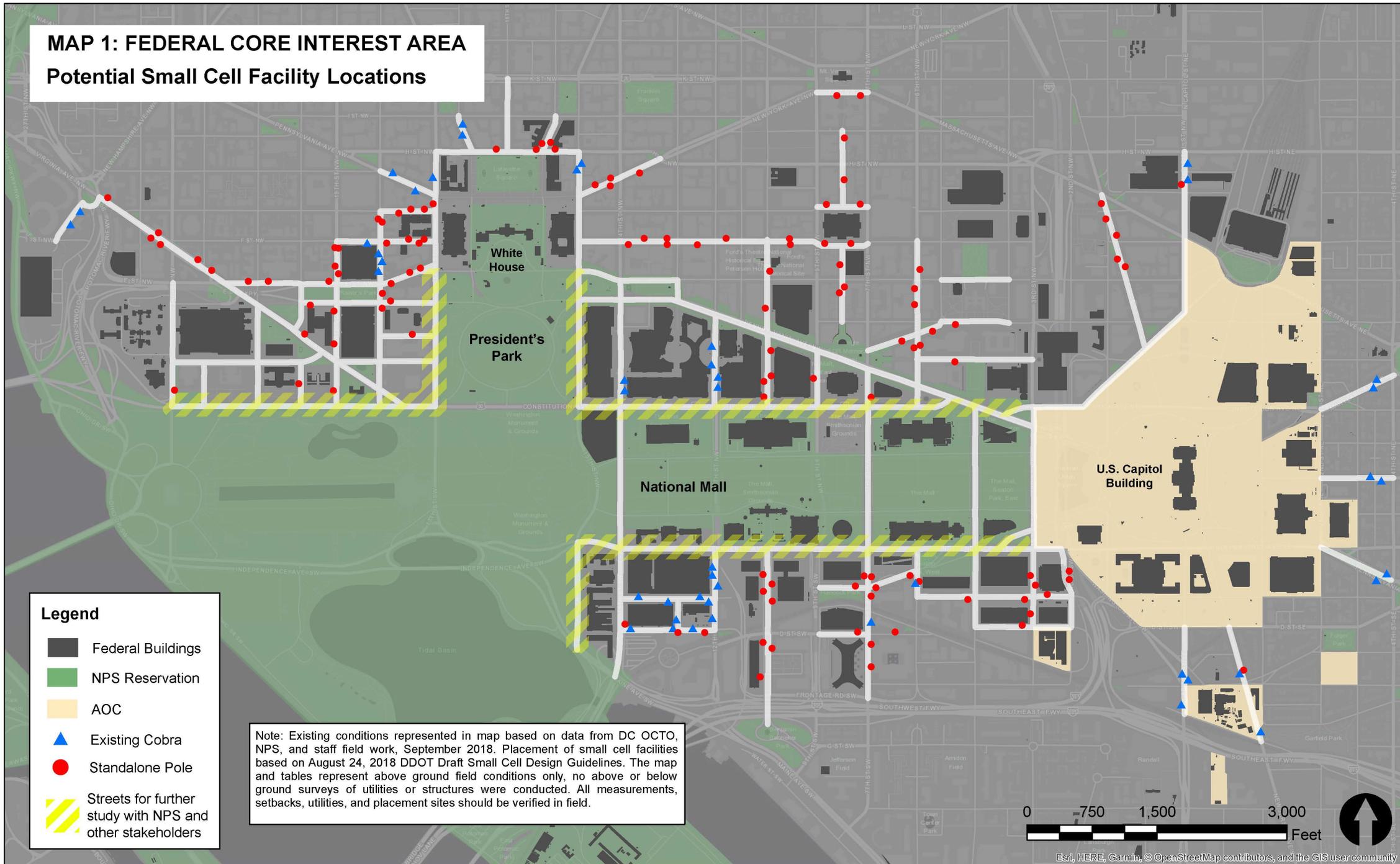
# Small Cell Infrastructure Guidelines

Washington, DC

Approval of Comments on Draft Guidelines

District of Columbia Department of Transportation

# MAP 1: FEDERAL CORE INTEREST AREA Potential Small Cell Facility Locations



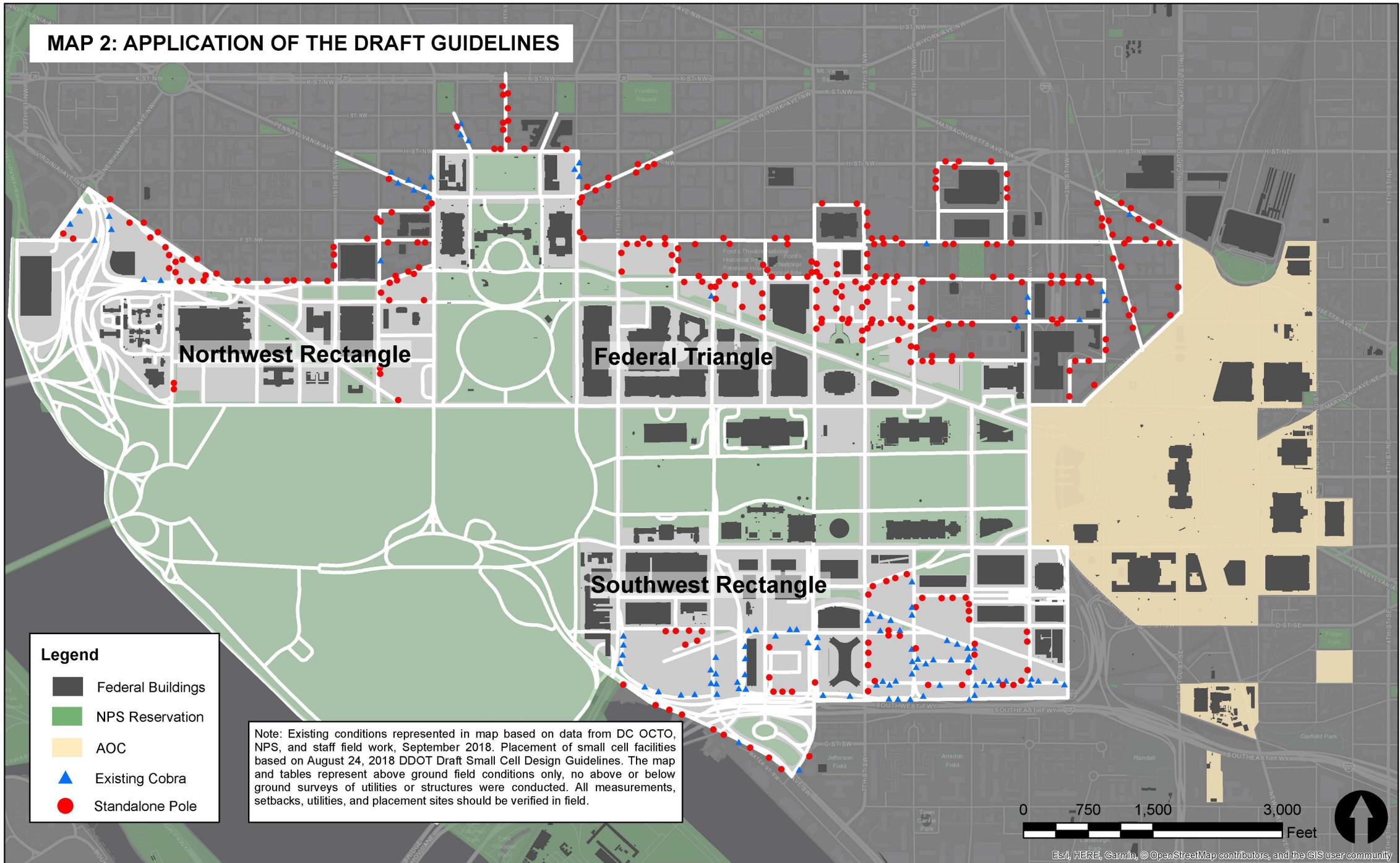
### Legend

- Federal Buildings
- NPS Reservation
- AOC
- Existing Cobra
- Standalone Pole
- Streets for further study with NPS and other stakeholders

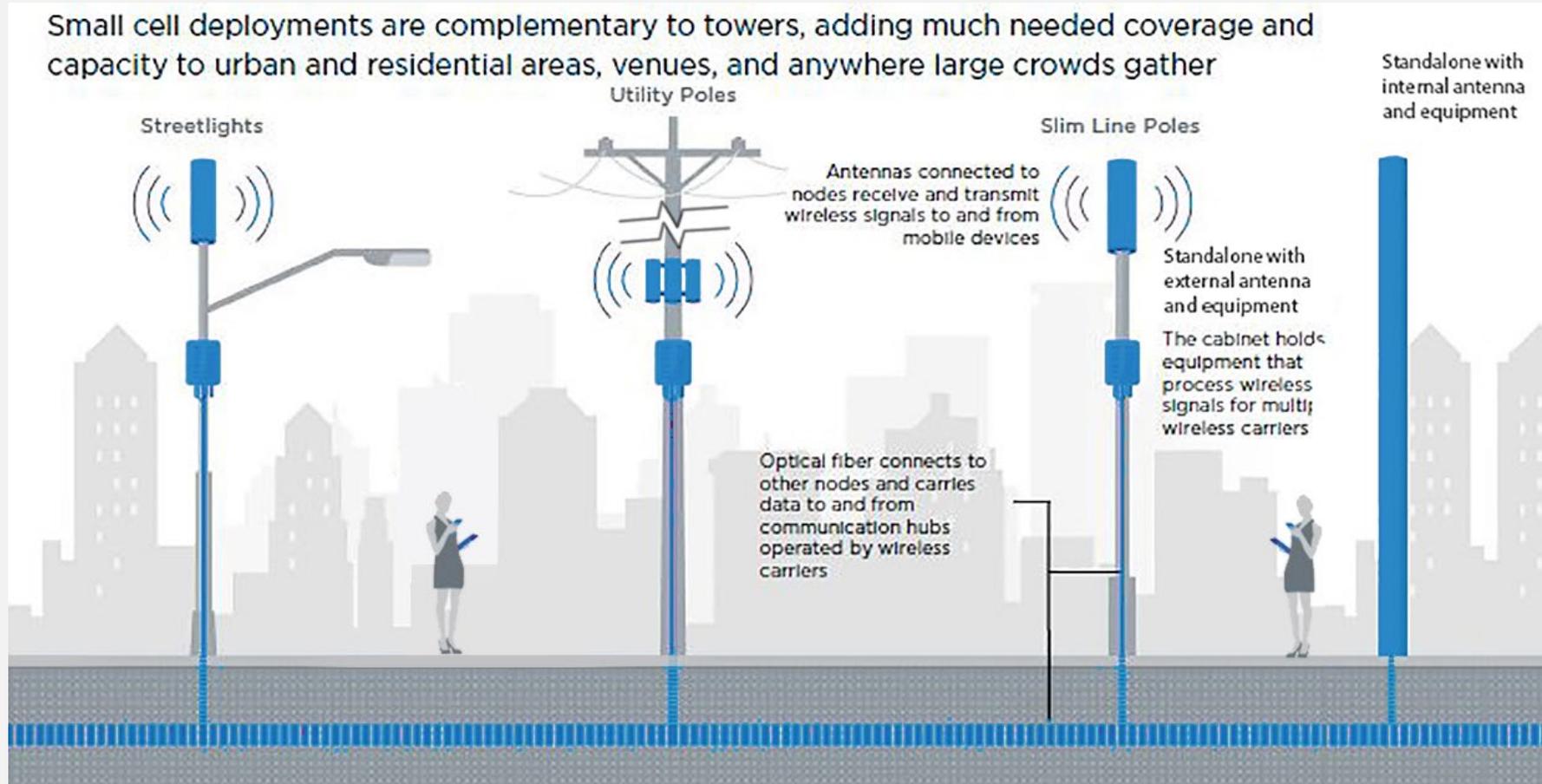
Note: Existing conditions represented in map based on data from DC OCTO, NPS, and staff field work, September 2018. Placement of small cell facilities based on August 24, 2018 DDOT Draft Small Cell Design Guidelines. The map and tables represent above ground field conditions only, no above or below ground surveys of utilities or structures were conducted. All measurements, setbacks, utilities, and placement sites should be verified in field.



## MAP 2: APPLICATION OF THE DRAFT GUIDELINES



# What is small cell technology & what does it look like?



# DRAFT SMALL CELL DESIGN GUIDELINES

AUGUST 24, 2018

The guidelines have been drafted with input from the following:



DRAFT SMALL CELL DESIGN GUIDELINES  
8/24/2018

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# Tentative Schedule

- December 6<sup>th</sup> – NCPC Meeting
- December/January – Release of revised guidelines
- Winter 2019 – NCPC final review
- Winter/Spring 2019 – District Public Space Committee  
Review of final guidelines



November 1, 2018

Mr. L. Preston Bryant, Jr., Chairman  
National Capitol Planning Commission  
401 9th Street, NW  
Suite 500N  
Washington DC 20004

Dear Chairman Bryant and members of the Commission,

On behalf of the Kalorama Citizens Association (KCA), I request that this letter be made part of the official record for the NCPC hearing on "Small Cell Infrastructure Guidelines", November 1, 2018.

The KCA has discussed this issue at its last two meetings and gave testimony to the DDOT Public Space Committee on October 15. We feel that the process underway is backward, that only after citizen comment, coupled with NCPC and CFA advice, would the relevant agencies of the DC Government then be ready to finalize Design Guidelines, which could then be incorporated into Master License Agreements.

We also look forward to the DC City Council becoming involved in this issue, as so few DC residents know much about it.

KCA supports the following:

There should be a uniform approach to small cell infrastructure for the entire City, so that all communities are treated equally and equitably. The proposed Design Guidelines contain no real design standards for the actual poles and other equipment. We doubt that the guidelines will be uniformly implemented given how much control is given to the providers.

That NCPC require more rigor for the design guidelines -- they should be binding and there should be real transparency in the permitting process so that NCPC and the CFA are alerted early in the process as to the nature and location of proposed installations instead of after DDOT determines that further review is required because there is a problem with the application.



KCA concurs with the NCPC staff report on the following points:

That the providers provide maps showing where their facilities would be deployed; and, the proposal that a single set of uniform design guidelines be established; and, continued insistence on underground installation of the cabinets.

We are concerned about the idea of taking a second look after we see how installations play out. The likelihood is that more providers will enter the marketplace, creating more demand for poles than can be managed in an orderly manner. Further, any guidelines should take into account the possibility that providers may acquire rights to existing poles to keep competitors out of the marketplace.

KCA is concerned that potential negative health impacts are being ignored in this process.

Sincerely,

A handwritten signature in blue ink that reads "Denis James".

Denis James  
denisjames@verizon.net  
202 705-7411

1608D Beekman Place, NW  
Washington, DC 20009-4021  
November 19, 2018

Dear DC Council Committee on Transportation and the Environment:

Thank you for the opportunity to comment on the proposed installation of 5G small cell infrastructure in Washington, D.C. Unfortunately I was unable to attend your November 19 hearing, so I am submitting these comments for the record.

Although I appreciate DDOT's development of draft guidelines for the installation of infrastructure that will enable the implementation of 5G small cell technology in DC, there are a number of considerations that have not been adequately addressed and sufficient time has not been allowed for their review by various organizations that have an interest in protecting the natural and constructed environment of the city and impacts on its visual quality, let alone by local citizen groups and the public in general.

The Guidelines initially cite the value of the planned and designed streetscape of DC, but then do not incorporate adequate protection for it, including the street and adjacent trees and the visual quality of the streetscape.

The following are concerns that must still be addressed:

- **Street and other trees**: Although the Guidelines state that poles shall not be located within an existing tree's critical root zone, that existing trees shall not be removed or have their critical root zones damaged for the installation of small cell infrastructure, and that poles shall not be placed where they would limit the ability of DC to plant a street tree in the future, they Do Not address the potential impacts of the installation of poles with cells installed between existing trees. This could be a disaster for these trees, because cells must have direct, unimpeded lines of communication between them, thus requiring pruning of existing trees to provide this. Unfortunately, there are many examples throughout the city of trees that have been mutilated by such pruning - some so badly that they must be removed.
- **Potential health impacts** of signals have not been addressed.
- **Impacts on Visual Quality of Streetscapes**:
  - Since there are 4 different small cell communication providers (AT&T, Sprint, T-Mobile and Verizon), there could be at least 4 separate new poles installed per block at set distances apart. Because of the weakness of the 5G signals and the fact that the poles for one carrier must be no more than 200 feet apart, there may be more than 4 poles installed in long blocks. There is also the question as to whether the line up of small cells on the numerous poles would impede each other? Would they need to be off-set, instead of in a straight line?
  - Only two carriers have agreed to be "hoteled". Hoteled poles would have a different appearance - an 18" diameter column for 2 carriers, and a 24" diameter for 3 - thus adding to the visual disparity.
  - Supposedly 5G is not yet ready to be installed in DC, so poles put up now would contain only 4G cells, with 5G to be installed later, then newer technology added as it is developed, with no assurance that previous antennae and poles would be removed, if they are no longer necessary - creating more visual chaos.
  - The Guidelines imply that different standards would be developed for different parts of the city - especially disadvantaged ones - which would be inequitable.
  - Each small cell antenna on a pole must be supported by a vault that could be the size of a refrigerator, either on the pole, at-grade or underground. Verizon has

already refused to put these vaults underground, but other carriers may follow. Depending on the specific location, putting the vaults underground may damage existing tree roots, although this would be most visually acceptable.

It is recommended that these concerns be addressed and appropriately incorporated in draft Guidelines, which would then go through further public, community, and various commissions review.

The Commission of Fine Arts advised in their review the "development of an elegant and holistic design typology for the small cell installations, rather than allowing a discordant kit of parts." They also "encouraged a more expansive study of best practices and design approaches for similar infrastructure in the US and abroad to help develop a forward-looking solution that is not merely expedient, but which appropriately integrates this technology into the public realm." The Commission has also recommended that perspectives be developed of what the various installations would actually look like, as well as models. They are also concerned that different standards are being developed for different parts of the city, often at the expense of disadvantaged ones. Consequently, they have asked that one standard be developed for application city-wide, based on the most stringent standards.

The National Capital Planning Commission supports the Commission of Fine Arts comments and "Requests that DDOT work with the US Commission of Fine Arts and NCPC to convene a meeting with carriers and industrial designers to develop a unified design typology for poles and related equipment." This request should be fulfilled.

Considering that there are so many concerns and issues to be addressed about these Guidelines, it is premature for this Committee or the DC Council to approve their adoption.

It is also problematic that these Guidelines are being considered on a state-by-state and city-by-city basis, rather than through the development of national standards with extensive public participation. This gives the impression that a "divide and conquer" approach is being followed, which should not be the case.

Sincerely,

A handwritten signature in cursive script that reads "Darwina L. Neal". The signature is written in black ink and is positioned above the typed name.

Darwina L. Neal, FASLA, HM.IFLA, F.US/ICOMOS  
Landscape Architect