EXECUTIVE SUMMARY
MAYOR AND BOARD OF ALDERMEN

Submitted and Presented By: Tracy Ann Coleman, City Engineer
Rachel S. Depo, Assistant City Attorney

Date Submitted: 2/9/2018

Other Staff Present:

Meeting Date:

Workshop: 2/14/2018

Agenda Item: Introduction to Distributed Antenna Systems (DAS)/Small Cell Infrastructure in the Public Rights of Way

Background Information:

The City of Frederick (the "City") has been approached by representatives of companies seeking to install certain DAS and/or small cell infrastructure in our rights-of-way, particularly in the downtown areas of the City. Like many other local governments, the City has no regulations in place to adequately deal with this new technology. Staff has been working on developing such regulations and associated documents. The purpose of this workshop is to introduce the issues to the Mayor and Board of Aldermen and obtain guidance to assist staff as we continue to work through this process.

DAS and Small Cell Infrastructure

> *Small cells are low-powered wireless base stations that function like cells in a mobile wireless network. They typically cover targeted indoor or localized outdoor areas ranging in size from homes and offices to stadiums, shopping malls, hospitals, and metropolitan outdoor spaces. Wireless service providers often use small cells to provide connectivity to their subscribers in areas that present capacity and coverage challenges to traditional wide-area macrocell networks, such as coverage gaps created by buildings, tower siting difficulties, and challenging terrain. These cells cover significantly less area than traditional macrocells, so networks that incorporate small-cell technology can make greater reuse of scarce wireless frequencies. This greatly increases spectral efficiency and data capacity within the network footprint.*
>
> *DAS networks distribute RF signals from transceivers at a central hub to a specific service area where the signals are needed because of poor coverage or inadequate capacity. The network typically consists of a number of remote communications nodes deployed throughout the desired coverage area (each with at least one antenna for transmission and reception), a high capacity signal transport medium that connects each node to a central communications hub site, and radio transceivers at the hub site to process or control the communications signals transmitted and received through the antennas. DAS deployments offer robust and broad coverage without the visual and physical impacts of multiple macrocells. In contrast to small cells, which usually are operator-managed and support only a single wireless service provider, DAS networks*

often can accommodate multiple providers using different frequencies and/or wireless air interfaces.

Small wireless technologies have a number of advantages over traditional macrocells. The facilities deployed at each node are much smaller than macrocell antennas and associated equipment and do not require the same elevation, so they can be placed on light stanchions, utility poles, building walls, rooftops and other small structures either privately owned or in the public rights-of-way. As a result, providers can deploy these technologies in areas where traditional towers are not feasible or in areas where wireless traffic demands would require an unrealistic number of macrocells. DAS and small cells can also be deployed in indoor environments to improve interior wireless services. The facilities are smaller and less visible than macrocells, so providers can more easily deploy them with stealth measures such as concealment enclosures. One of the challenges of these technologies, though, is that providers must often deploy a substantial number of nodes to achieve the seamless coverage of a single macrocell.

DAS and small-cell deployments are a comparatively cost-effective way of addressing ever increasing demand for wireless broadband services, and, accordingly, providers are rapidly increasing their use of these technologies. There are estimates that more than 37 million small cells will be deployed by 2017 and that 16 million DAS nodes will be deployed by 2018. One study projects that aggregate small-cell capacity will overtake macrocell capacity by 2016-2017.

Excerpted from FCC Public Notice DA 15-865, Released July 28, 2015

Draft Ordinance

The draft ordinance (attached) would add a new article to Chapter 22 of the City Code and would relate to all telecommunications facilities and other utilities in the City right of way. The ordinance would be used in conjunction with regulations that are currently in the very early stages of development, as well as right-of-way use agreements and other related documents, all of which collectively would establish a comprehensive process for the permitting, installation, and maintenance of certain facilities in our rights of way.

Next Steps

Staff from multiple City departments, with input from industry representatives and others, continues to work to develop regulations and associated documents for the ultimate approval by the Board of Aldermen. This is a highly complex undertaking and will likely require several workshops before being presented at a public hearing.

Committee Recommendations if Applicable:

Fiscal Impact:

Recommendation:

Supporting Documentation: *Draft ordinance
*FCC Public Notice DA 16-1427, December 22, 2016
(for purposes of general background information only)

* BB&K article
*Photos submitted by Crown Castle

Director: _____ **Date:** _____

Concurrence Needed:

	Initials	Date	Email
☐ **Legal:**	_____	_____	☐
☐ **Budget:**	_____	_____	☐
☐ **Finance:**	_____	_____	☐
☐ **Purchasing:**	_____	_____	☐
☐ **Public Works Operations:**	_____	_____	☐
☐ **Engineering:**	_____	_____	☐
☐ **Parks and Recreation:**	_____	_____	☐
☐ **Planning:**	_____	_____	☐
☐ **Police:**	_____	_____	☐
☐ **Human Resources:**	_____	_____	☐
☐ **Economic Development:**	_____	_____	☐
☐ **Other:**	_____	_____	☐

DRAFT
January 2018

THE CITY OF FREDERICK
MAYOR AND BOARD OF ALDERMEN

ORDINANCE NO: G-18-_____

AN ORDINANCE concerning

Telecommunications facilities and other utilities in the public right-of-way

FOR the purpose of establishing certain requirements for the installation of certain utilities within City-controlled rights of way; and otherwise pertaining to telecommunications facilities and other utilities.

BY adding
Chapter 22
Article VI
The Code of the City of Frederick, 1966 (as amended)

SECTION I. BE IT ENACTED AND ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF FREDERICK that Chapter 22, Article VI of The Code of the City of Frederick, 1966 (as amended) is hereby added to read as follows:

ARTICLE VI. TELECOMMUNICATIONS FACILITIES AND OTHER UTILITIES IN THE CITY RIGHT OF WAY

Sec. 22-58. Authority.

The City derives the authority for this article from the City Charter, Article X, § 1 and from the Annotated Code of Maryland, Local Government Article, § 5-204. This article and any rules, regulations, specifications, and agreements adopted pursuant to this article comply with all applicable federal and state law, including but not limited to 47 U.S.C. Section 253; 47 U.S.C. Section 332(c)(7); and 47 U.S.C. Section 1455 (Section 6409).

Sec. 22-59. Scope.

(a) **In general.** This article establishes conditions of occupancy and construction for all users of the City's rights of way, including those seeking to perform work, excavation, provision of services, or to install, construct, maintain, or repair facilities or any equipment thereon, including, but not limited to public service companies, adjacent landowners, and entities that the City may permit to place or maintain permanent facilities in the rights of way, including but not limited to providers of cable services and providers of personal wireless services.

(b) **Types of users.** Except as otherwise provided in this article or the regulations adopted pursuant to Sec. 22-60 of this article, this article is applicable to any applications for placement, attachment, construction, reconstruction, repairs or maintenance of any facility, including but not limited to those serving or providing telephone,

communications, cable, electric, natural gas, water and sewer, or any other utility or utility service provider,

(c) **Existing users.** This article applies to installation of any and all facilities, including poles, wires, equipment or any fixtures of any kind by any person within City controlled rights of way, but shall not be applied to create any conflict with applicable state law or applicable and enforceable agreements or easements, including the state law provisions, pre-existing agreements or easements specified in the regulations adopted pursuant to Sec. 22-60 of this article.

(d) **Public use.** Except as otherwise provided by Maryland law, any use of the right of way by any user will be subordinate to the City's use and use by the public. The City expressly reserves the right to exercise its powers as to the use, management, and control of City rights of way.

Sec. 22-60. Regulations.

(a) **Adoption.** The Board of Aldermen, by ordinance or resolution, shall adopt regulations (referred to in this article as the "Regulations") to implement, clarify, and expand upon the provisions of this article. The Regulations shall have the force and effect of law.

(b) **Scope.** The Regulations will include provisions relating to, among other things, minimum requirements for permit applications; the permitting process; requirements for installations; excavations, repair, and restoration; inspections, relocation and removal of facilities; liability and insurance; maintenance and inspections; appeals; regulations applicable to wireless facilities; and base station location requirements.

Sec. 22-61. Definitions.

Terms used in this article will have the meanings ascribed to them in the Regulations.

Sec. 22-62. Purpose and intent.

(a) **In general.** This article recognizes the City's primary role as the chief steward of the rights of way in the City and the City's duty to its citizens to manage the rights of way and any incursions into the rights of way, which are intended for public use for transportation for pedestrians and vehicles, while recovering the costs of doing so, as well as minimizing disruption, visual impact or inconvenience to the public, preserving the public health, safety and welfare; and complying with all applicable local, state and federal law. It is the intent of this article to ensure that the City knows what entities are occupying its rights of way and what facilities have been installed by them; to ensure that entities understand their obligations with respect to use of the rights of way; to ensure that entities occupying the rights of way do not harm the public or property, or unduly interfere with, or delay public or private projects that require use of the rights of way or otherwise unnecessarily incommode the public; and in order to advance public safety; to minimize clutter and enhance the appearance of the community; and to minimize the size and number of facilities in the City rights of way.

(b) **Nondiscrimination.** In establishing these conditions, the intent of this article is to, to the extent required by law, treat each applicant or right-of-way user in a competitively neutral

and nondiscriminatory manner with considerations that may be unique to the technologies and situation and legal status of each particular applicant or request for right-of-way use.

Sec. 22-63. Administration.

The Director is authorized and charged with administering, interpreting, and enforcing the provisions of this article and the Regulations. The Director may adopt procedural rules and technical details as deemed necessary in the course of these duties, provided the rules and details are not in conflict with any provision of this article or the Regulations.

Sec. 22-64. Permits.

(a) **Master permits.** Except as otherwise provided in the Regulations or as otherwise required by law, any person that will have facilities occupying the City rights of way shall obtain a master permit for any work performed by it or on its behalf in the rights of way.

(b) **Special permits.** A person seeking to perform any work in the rights of way may be required to obtain special permits such as building permits, excavation permits and permits for placement of wireless facilities.

(c) **Conditions.** The Regulations will identify minimum conditions that may apply to authorizations to use the rights of way, the master permits, and the special permits.

(d) **Process.** The Regulations will establish a process for meeting with potential applicants to discuss proposed projects, identify what permits may be required, and to work out a process for staging and managing the process in order to simplify deployment.

(e) **Additional requirements.** The requirement for the issuance of permits is in addition to, and not in lieu of, the requirement of any user to obtain a franchise, license or consent from the City to use and occupy the rights of way or to obtain a lease, license, or easement if required to use or occupy other public or private property.

(f) **Revocation.** The Director may revoke any permit issued pursuant to this article or the Regulations in the event of a breach of the terms and conditions of this article, the Regulations, or the permit itself. The Director may refuse to issue permits to any person that repeatedly violates the provisions of its permits, this article, or the Regulations without adequate assurance that existing deficiencies will be cured, and that future work will conform to the applicable requirements.

Sec. 22-65. Franchise agreements.

Except as otherwise provided in this article or as may be required by law, every entity occupying the City rights of way must have a franchise, license, or similar consent that describes generally what it may place in the rights of way, and what services can be provided via the facility, and conditions upon the exercise of the rights granted.

Sec. 22-66. City facilities.

(a) **Permits.** No permit granted by the Director to allow installation or attachment of any facility for any purpose shall extend, or be deemed to extend, to any City-owned poles or any other municipal facilities. The Director will require an entity that wishes to use City facilities to negotiate with the City. As part of those negotiations, the City will be exercising rights that any proprietary owner could be expected to exercise, including defining precisely what may be permitted, how it will integrate with the existing facilities and the price for use.

(b) **Conditions.** While the City retains all its rights with respect to permitting attachments to its properties, the Regulations will establish standardized conditions on use so that the City may promptly respond to requests for use of the facilities.

Sec. 22-67. Enforcement.

The Regulations shall include provisions for the enforcement of this article and the Regulations, including but not limited to the removal of facilities installed in a right of way without all required permits or other authorizations.

SECTION II. BE IT FURTHER ENACTED AND ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF FREDERICK that in the event any provision, section, sentence, clause, or part of this ordinance shall be held to be invalid, such invalidity shall not affect or impair any remaining provision, section, sentence, clause, or part of this ordinance, it being the intent of the City that such remainder shall be and shall remain in full force and effect.

SECTION III. BE IT FURTHER ENACTED AND ORDAINED BY THE BOARD OF ALDERMEN OF THE CITY OF FREDERICK that this ordinance shall take effect on the date it is approved by the Mayor and all other ordinances or parts of ordinances inconsistent with the provisions of this ordinance will as of that date be repealed to the extent of such inconsistency.

PASSED: **DATE:**

_____ _____

Michael C. O'Connor, President,
Board of Aldermen

APPROVED: **DATE:**

_____ _____

Michael C. O'Connor, Mayor

DRAFT
January 2018

Approved for Legal Sufficiency:

_____

City Attorney

* FOR BACKGROUND INFORMATION PURPOSES ONLY *

PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: https://www.fcc.gov/
TTY: 1-888-835-5322

DA 16-1427
December 22, 2016

COMMENT SOUGHT ON
STREAMLINING DEPLOYMENT OF SMALL CELL INFRASTRUCTURE
BY IMPROVING WIRELESS FACILITIES SITING POLICIES;
MOBILITIE, LLC PETITION FOR DECLARATORY RULING

WT Docket No. 16-421

Comment Date: February 6, 2017
Reply Comment Date: March 8, 2017

The Wireless Telecommunications Bureau (WTB) invites public input on potential Commission actions to help expedite the deployment next generation wireless infrastructure by providing guidance on how federal law applies to local government review of wireless facility siting applications and local requirements for gaining access to rights of way. This Public Notice seeks comment on ways in which the Commission could promote wireless infrastructure deployment by issuing a declaratory ruling, including but not limited to those suggested in a Petition for Declaratory Ruling filed by Mobilitie, LLC, on November 15, 2016.[1]

To satisfy consumers' rapidly growing demand for wireless broadband and other services, wireless companies are actively expanding the network capacity needed to maintain and improve the quality of existing services and to support the introduction of new technologies and services. In particular, many wireless providers are deploying small cells and distributed antenna systems (DAS) to meet localized needs for coverage and increased capacity in outdoor and indoor environments.[2] Although the facilities used in these networks are smaller and less obtrusive than traditional cell towers and antennas, they must be deployed more densely – *i.e.*, in many more locations – to function effectively. As a result, local land-use authorities in many areas are facing substantial increases in the volume of siting

[1] *See* Mobilitie, LLC Petition for Declaratory Ruling, *Promoting Broadband for All Americans by Prohibiting Excessive Charges for Access to Public Rights of Way* (filed Nov. 15, 2016) (Mobilitie Petition).

[2] For a description of DAS and small cells, *see infra* note 16.

applications for deployment of these facilities.[3] This trend in infrastructure deployment is expected to continue, and even accelerate, as wireless providers begin rolling out 5G services.[4]

This creates a dilemma. We recognize, as did Congress in enacting Sections 253 and 332 of the Communications Act,[5] that localities play an important role in preserving local interests such as aesthetics and safety. At the same time, the Commission has a statutory mandate to facilitate the deployment of network facilities needed to deliver more robust wireless services to consumers throughout the United States.[6] It is our responsibility to ensure that this deployment of network facilities does not become subject to delay caused by unnecessarily time-consuming and costly siting review processes that may be in conflict with the Communications Act.

The Commission has regulatory tools to help resolve this dilemma. Sections 253 and 332(c)(7) of the Communications Act[7] and Section 6409(a) of the Spectrum Act[8] are designed, among other purposes, to remove barriers to deployment of wireless network facilities by hastening the review and approval of siting applications by local land-use authorities. The Commission has exercised its authority to interpret and implement these provisions by, among other things, clarifying the maximum presumptively reasonable time frames for review of siting applications and the criteria local governments may apply in deciding whether to approve them.[9] The Commission now has an opportunity to build on these actions by issuing a new declaratory ruling to further expedite the deployment of new network infrastructure that can give consumers across the country access to superior wireless services.

We are issuing this public notice to develop a factual record that will help us assess whether and to what extent the process of local land-use authorities' review of siting applications is hindering, or is likely to hinder, the deployment of wireless infrastructure. In turn, such a data-driven evaluation will make it possible to reach well-supported decisions on which further Commission actions, if any, would most effectively address any problem, while preserving local authorities' ability to protect interests within their purview. In the first section of this Public Notice, we summarize information gathered from public sources regarding new and emerging wireless technologies and services, and we discuss the progress of

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[3] For instance, Montgomery County, Maryland has approximately 200 pending applications, and "has had more applications filed in the past four months than in the past 18 years." *See* Montgomery County Council, Most Frequently Asked Questions about Cell Towers and County's Authority to Regulate (Oct. 25, 2016), http://www.montgomerycountymd.gov/COUNCIL/Resources/Files/FAQsCell%20AntennasFinalapprovedbyTedi10-25-16.pdf.

[4] 5G refers to the 5th generation of wireless technologies; requirements for these technologies are projected to be set by standards bodies by early 2017 with specifications to follow by 2020. *See* Phillip Tracy, 5G Standards Process: ITU and 3GPP Lay Groundwork, (Jul. 19, 2016), http://www.rcrwireless.com/20160719/internet-of-things/5g-standards-process-tag31-tag99.

[5] 47 U.S.C. §§ 253, 332(c)(7).

[6] 47 U.S.C. § 151.

[7] *See* Telecommunications Act of 1996, Pub. L. 104-104, §§ 101, 704 (codified at 47 U.S.C. §§ 253, 332(c)(7)).

[8] *See* Middle Class Tax Relief and Job Creation Act of 2012 (Spectrum Act), Pub. L. No. 112-96, 126 Stat. 156, § 6409(a) (2012) (codified at 47 U.S.C. § 1455(a)).

[9] In particular, *see Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7) to Ensure Timely Siting Review*, Declaratory Ruling, 24 FCC Rcd 13994, 14020, para. 67 (2009) (*2009 Declaratory Ruling*), *aff'd, City of Arlington v. FCC*, 668 F.3d 229 (5th Cir. 2012), *aff'd*, 133 S. Ct. 1863 (2013); *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies*, Report and Order, 29 FCC Rcd 12865, 12866-69, 12878-81, paras. 2-8, 29-34 (2014) (*2014 Infrastructure Order*), erratum, 30 FCC Rcd 31 (2015), *aff'd, Montgomery County v. FCC*, 811 F.3d 121 (4th Cir. 2015).

deploying infrastructure needed to supply such services and satisfy consumer demand. We invite commenters to provide updated, corrected, or more detailed information on these issues. In the following sections, we discuss the applicable legal framework, including federal statutes, Commission rulings, and court decisions, as well as relevant state and local enactments and land-use authorities' decision-making on siting applications. We then discuss specific statutory interpretations on which we invite comment. We also generally seek comment on issues raised in Mobilitie's Petition for Declaratory Ruling.

I. TECHNOLOGICAL AND LEGAL DEVELOPMENTS AFFECTING WIRELESS INFRASTRUCTURE DEPLOYMENT

A. Technological Developments

Current generation 3G and 4G services have fueled mobile wireless data consumption via smartphones, tablets and mobile-enabled PCs to the tune of 1.8 Exabytes[10] per month in 2016 in North America alone, and this consumption is expected to grow six fold by 2022, according to a report by Ericsson.[11] It also estimates that, on a per smartphone basis, mobile data traffic is expected to increase from 5.1 Gigabytes per month in 2016 to 25 Gigabytes by 2022.[12] This demand for mobile wireless data is expected to continue to grow even more with the proliferation of the Internet of Things (IoT), with an expected 400 million IoT devices connected to cellular networks by the end of 2016 and projected to grow to 1.5 billion devices by 2022,[13] made possible by advances in 4G services and next generation 5G services. While we cannot be sure exactly what 5G will bring, next generation services have the potential to revolutionize the mobile wireless experience by making the IoT widely available through the connection of billions of smart devices to the Internet. The ubiquitous connection of smart digital devices, particularly machine-to-machine connections such as sensors, wireless utility meters, industrial systems, home automation devices and appliances, connected cars, consumer electronics, and smart medical devices,[14] is expected to enable smart-city energy grids, safer transportation networks (including automated driving and in-vehicle services), mobile health care (devices that monitor human health and wellness), smart homes (with enhanced security and automation of household chores), smart factories (optimizing equipment and operations), and immersive entertainment (greatly enhanced resolution and virtual reality).

The Commission has repeatedly recognized the extraordinarily promising benefits of such 5G services and has acknowledged the need for deployment of small wireless facilities,[15] such as small cells

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[10] An Exabyte equals one billion Gigabytes.

[11] Ericsson, Ericsson Mobility Report at 13 (Nov. 2016), https://www.ericsson.com/assets/local/mobility-report/documents/2016/ericsson-mobility-report-november-2016.pdf.

[12] *Id.* at 12.

[13] *Id.* at 33.

[14] *See, e.g.*, Joint Venture Publications, Bridging the Gap: 21st Century Wireless Telecommunications Handbook at 8 (Sept. 2016), http://www.jointventure.org/publications/joint-venture-publications/1473-bridging-the-gap-21st-century-wireless-telecommunications-handbook (Bridging the Gap Report).

[15] *See, e.g., 2014 Infrastructure Order*, 30 FCC Rcd at 12867-70, 12878-81, paras. 2-10, 29-34; *Use of Spectrum Bands Above 24 GHz for Mobile Services*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8020, para 7 (2016) (*Spectrum Frontiers Order*); *Applications of XO Holdings and Verizon Communications Inc. For Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, WC Docket No. 2016, DA 16-1281, ¶¶ 57-58 (WCB, IB, and WTB, rel. Nov. 16, 2016).

and DAS,[16] to enable providers to deliver those services to consumers. In order to improve spectrum efficiency, future 4G and 5G services will require significant densification of small wireless facilities, including DAS and small cells, so that these facilities, which serve smaller geographic areas, can be located close to end users to provide higher quality connections with higher bandwidth and lower latency.[17] For instance, in its recent order adopting service rules for four spectrum bands above 24 GHz in preparation for the transition to 5G services, the Commission acknowledged that these high spectrum bands "do not propagate well over long distances."[18] Thus small wireless facilities are the kinds of technologies the Commission envisions needing to enable the 5G network in those bands.[19] Because these cells are significantly smaller in coverage area than traditional macrocells, networks that incorporate such technologies can more intensely reuse scarce wireless frequencies, thus greatly increasing spectral efficiency and data capacity within the network footprint.[20] For example, deploying ten small cells in a coverage area that could be served by a single macrocell could result in a tenfold increase in capacity while using the same quantity of spectrum.[21] Such speed and capacity would require the construction and strategic placement of a large number of small cells, frequently placed close together to ensure each cell is shared by a small number of users.

To meet the growing demand, the wireless industry is currently deploying and planning for additional construction of a large number of small cells, and the number of these facilities is expected to grow rapidly over the next decade.[22] S&P Global Market Intelligence estimates that between 100,000 and

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[16] Small cells are low-powered wireless base stations that function like traditional cell sites in a mobile wireless network but, typically, cover targeted indoor or localized outdoor areas ranging in size from homes and offices to stadiums, shopping malls, hospitals, and metropolitan outdoor spaces. DAS networks use numerous antennas (DAS nodes), similar in size to small cells that are connected to and controlled by a central hub. Antennas and associated equipment deployed at each small cell site or DAS node are physically much smaller than those at a macrocell site and do not require the same elevation; therefore, they can be placed on light stanchions, utility poles, building walls and rooftops, and other small structures either on private property or in the public rights of way without creating the visual and physical impacts of macrocell towers. Illustrative examples of such small facility deployments may be viewed at https://www.fcc.gov/file/3813/download. Typically, the vast majority of outdoor DAS networks and most indoor DAS systems deployed in large structures involve ten, fifty, or even more DAS nodes. Outdoor DAS networks cover areas ranging from several blocks, to whole neighborhoods, to entire cities. *See* Patrick Lau, How do DAS and small cells compare?, (Sept. 21, 2015), http://telecoms.com/opinion/how-do-das-and-small-cells-compare/; Small Cell Forum, Small cell definition, http://www.smallcellforum.org/about/about-small-cells/small-cell-definition/; HetNet Forum, Distributed Antenna Systems (DAS) and Small Cell Technologies Distinguished (Feb. 2013), http://www.hetnetforum.com/resources/send/2-resources/24-das-and-small-cell-technologies-distinguished.

[17] Bridging the Gap Report at 14-15; Ixia, Small Cells, Big Challenge: A Definitive Guide to Designing and Deploying HetNets at 41 (Nov. 2013), https://www.ixiacom.com/resources/small-cells-big-challenge. The coverage of small cells varies between 10 meters to several hundreds of meters, as opposed to the tens of kilometers served by macrocells. Each DAS node services a smaller geographic area with better capacity and signal strength than would be possible with a single, larger macrocell antenna.

[18] *Spectrum Frontiers Order*, 31 FCC Rcd at 8028, para. 33 (*citing Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, Notice of Proposed Rulemaking, 30 FCC Rcd 11878, 11912, para. 111 (2015)).

[19] *Spectrum Frontiers Order*, 31 FCC Rcd at 8020, para 7.

[20] *See Amendment of the Commission's Rules with Regard to Commercial Operations in the 3350-3650 MHz Band*, Notice of Proposed Rulemaking and Order, 27 FCC Rcd 15594, 15596, para. 4 (2012).

[21] *Id.*

[22] *See* Kelly Hill, 6 predictions for the small cell market, (Feb. 27, 2016), http://www.rcrwireless.com/20160227/featured/6-predictions-for-the-small-cell-market-tag6-tag99.

150,000 small cells will be constructed by the end of 2018, and that small cell deployments are expected to reach 455,000 by 2020 and nearly 800,000 by 2026.[23] AT&T has reported that the substantial majority of its infrastructure deployments over the next five years will be small cell sites.[24] In addition, Verizon is deploying small cells in several urban areas, including New York, Chicago, Atlanta, and San Francisco.[25] Sprint announced last year a goal of deploying 70,000 small cells within two years.[26]

B. Federal Statutory and Regulatory Framework

The successful deployment of wireless networks depends in large part on how quickly providers are able to obtain the necessary regulatory approvals.[27] As noted above, Congress enacted Sections 253 and 332 of the Communications Act, as well as Section 6409 of the Spectrum Act, *inter alia*, in order to address concerns about state and local governments' unduly restrictive zoning rules and unfounded denials or delays in the processing of permit applications for constructing wireless facilities.[28] These statutory provisions explicitly preserve state and local governments' authority to control the "placement, construction, and modification of personal wireless service facilities"[29] and to manage "use of public rights-of-way,"[30] but they prohibit state and local governments from using certain unreasonable criteria in making such decisions.

Both Sections 253 and 332 prohibit state and local government actions that "prohibit or have the effect of prohibiting" any entity's ability to provide personal wireless service or any other telecommunications service or that "unreasonably discriminate among providers of functionally equivalent services."[31] Section 253 expressly provides that state or local governments may require telecommunications providers to pay "compensation" for the use of public rights-of-way, but specifies that the amounts of such compensation must be "fair and reasonable," "competitively neutral and nondiscriminatory," and "publicly disclosed."[32] Section 253 also authorizes the Commission to issue orders that "preempt the enforcement" of state or local statutes, regulations, or legal requirements that preclude any entity from providing telecommunications service.[33] In addition, many courts, relying on

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[23] S&P Global Market Intelligence, John Fletcher, Small Cell and Tower Projections through 2026, SNL Kagan Wireless Investor (Sept. 27, 2016).

[24] *See* Ken Schmidt, AT&T Forecasts 6,700 New Macrocells from 2017-2022, (Jun. 9, 2016), http://www.steelintheair.com/Blog/2016/06/att-forecasts-6700-new-macrocells-from-2017-2022.html.

[25] *See* Phillip Tracy, Small cells: Backhaul difficulties and a 5G future, (Jul. 11, 2016), http://www.rcrwireless.com/20160711/network-infrastructure/small-cells-tag31-tag99.

[26] *See* Martha DeGrasse, Carrier small cells appear slowly but surely, (May 24, 2016), http://www.rcrwireless.com/20160524/carriers/carrier-small-cells-tag4.

[27] *See e.g.*, Ben Munson, Small Cell Deployment Estimates 'Radically off' the Mark, Analyst Says, Fierce Telecom (Jul. 13, 2016).

[28] *See T-Mobile South, LLC v. City of Roswell*, 130 S. Ct. 808, 815 (2015) (in enacting Section 332(c)(7), "Congress intended to place specific limitations on the traditional authority of state and local governments regarding cell phone tower siting applications"); *City of Rancho Palos Verdes v. Abrams*, 544 U.S. 113, 115-16 (2005) (same).

[29] 47 U.S.C. §332(c)(7)(A).

[30] 47 U.S.C. § 253(c).

[31] *Id.*, §§ 253(a), 332(c)(7)(B)(i)(II).

[32] *Id.*, § 253(c).

[33] *Id.*, § 253(d). The Commission has issued numerous preemption orders applying Section 253 in other contexts, but has not preempted any state or local government action (or inaction) involving wireless facilities siting to date.

their authority under the Constitution's Supremacy Clause and various jurisdictional statutes, have issued orders interpreting, and in some cases enjoining violations of, some or all provisions of Section 253.[34]

Section 332 requires state and local land-use authorities to act on requests for authority to place, construct, or modify personal wireless service facilities within a reasonable period of time after such requests are filed.[35] Section 332 also provides that state and local governments may not deny wireless facilities siting applications "on the basis of the environmental effects of radio frequency emissions," a matter over which the Commission has exclusive jurisdiction.[36] Pursuant to Section 332(c)(7)(B)(v), a person adversely affected by a state or local government agency's "final action" or "failure to act" on a personal wireless service facilities siting application "within a reasonable period of time after the request is duly filed" may sue such an agency "in any court of competent jurisdiction."[37] The Supreme Court has made clear, however, that courts may order only injunctive relief, not monetary remedies, in such actions.[38]

Section 6409(a) establishes that state and local governments "may not deny, and shall approve," any "request for a modification of an existing wireless tower or base station that does not substantially change the [facility's] physical dimensions."[39] It specifies that applications for authorization to collocate new transmission equipment or to remove or replace existing equipment qualify for such treatment.[40] Section 6409(a) does not specify an enforcement mechanism.

The Commission's *2009 Declaratory Ruling* and *2014 Infrastructure Order*[41] resolved a number of controversies by adopting definitive interpretations of ambiguous provisions in Section 332(c)(7) and Section 6409(a) and interpreting how their substantive and procedural requirements should be applied. On judicial review of the *2009 Declaratory Ruling*, the Fifth Circuit[42] and the Supreme Court confirmed

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In the *2009 Declaratory Ruling*, the Commission made clear that it would consider Section 253 preemption requests only "within the factual context of specific cases" based on "sufficient information or evidence of a specific controversy on which to base such action or ruling." 24 FCC Rcd at 14020, para. 67. The courts, however, have established a substantial body of case law applying Section 253. *See infra* note 34.

[34] *See* U.S. Const. art. VI; 28 U.S.C. §§ 1331, 1367. *See also TCG New York v. City of White Plains*, 305 F.3d 67, 73-76 (2d Cir. 2002); *TCG Detroit v. City of Dearborn*, 206 F.3d 618, 622-24 (6th Cir. 2000); *City of Auburn v. Qwest Corp.*, 260 F.3d 1160, 1172, 1175 (9th Cir. 2001), *abrogated on other grounds*, *Sprint Telephony PCS L.P. v. County of San Diego*, 543 F.3d 571 (9th Cir. 2008) (*en banc*); *BellSouth Telecomm's, Inc. v. Town of Palm Beach*, 252 F.3d 1169, 1189 (11th Cir. 2001). *But see Qwest Corp. v. City of Santa Fe*, 380 F.3d 1258, 1265-67 (10th Cir. 2004) (Section 253 creates no private right of action).

[35] *Id.*, § 332(c)(7)(B)(ii).

[36] *Id.*, § 332(c)(7)(B)(iv).

[37] *Id.*, § 332(c)(7)(B)(v). To facilitate such review, state or local authorities' decisions must be "in writing and supported by substantial evidence contained in a written record." *Id.* § 332(c)(7)(B)(iii). A claim that a state or local action was impermissibly based on the environmental effects of radio frequency emissions may alternatively be brought before the Commission for relief. *Id.* § 332(c)(7)(B)(v).

[38] *City of Rancho Palos Verdes*, 544 U.S. at 121.

[39] 47 U.S.C. § 1455(a)(1).

[40] *Id.*, § 1455(a)(2)(A), (B), and (C).

[41] *Supra* note 9. The specific issues addressed in those orders are discussed below.

[42] *City of Arlington v. FCC*, 668 F.3d at 247-54.

that the Commission has authority to render such binding statutory interpretations and that courts must accord them *Chevron* deference.[43]

C. Local Governments' Review of Siting Applications

Notwithstanding the federal statutes and Commission decisions described above, some industry participants assert that local permitting and zoning processing for both new tower and small cell builds continue to encounter frequent delays. According to some firms, it frequently takes two years or more from small cell site acquisition to completion.[44] Many municipalities reportedly review small cells the same way they review macrocells because they have either a telecommunications siting process designed for macrocells or no special process for telecommunications facilities.[45] As a result, applicants are frequently required to contend with a long and costly process.[46]

Wireless industry representatives report that some localities impose high initial fees and excessive recurring charges for the deployment of infrastructure on public rights of way.[47] According to Mobilitie, many localities request "multiple, exorbitant fees that unlawfully discriminate against wireless technology and impair new or improved service."[48] Mobilitie asserts that many local governments impose fees that "appear to be set to recover what localities believe the 'market' rate is for the use of their rights of way,"[49] rather than to recover "fair and reasonable compensation" for localities' expenses.[50] Mobilitie states that the impact of these fees is "compounded because they are recurring [and] must be paid to the locality every year, meaning that over time they can far exceed all other deployment costs."[51] Mobilitie also

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[43] *City of Arlington v. FCC*, 133 S. Ct. at 1863; *see Chevron USA, Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984). The Fifth Circuit also ruled that the Commission's issuance of such statutory interpretations in a declaratory ruling, after according parties notice and an opportunity to comment, was not improper, 668 F.3d at 239-47, and, on the merits, affirmed the reasonableness of the Commission's interpretations. *Id.* at 255-61. The Supreme Court did not address the latter issues. *See also* 47 C.F.R. § 1.2; *National Cable & Telecomm. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 985 (2005) (FCC's interpretation of an ambiguous provision of the Communications Act overrides earlier court decisions interpreting the same provision).

[44] *See e.g.*, Colin Gibbs, Small Cells: Still Plenty of Potential despite Big Challenges, (Sept. 1, 2016) http://www.fiercewireless.com/wireless/small-cells-still-plenty-potential-despite-big-challenges.

[45] *See e.g.*, Sean Maddox and Daniel Shaughnessy, Regulatory Challenges with Small Cells, (Jun. 23, 2016) http://www.md7.com/2016/06/the-challenges-in-developing-regulatory-framework-to-accelerate-small-cell-deployments/.

[46] *See e.g.*, Small Cell Forum, Small Cell Siting: Streamlining Administrative Processes and Procedures at 7, (Oct. 2016) http://scf.io/en/documents/190_-_Small_cell_siting_Streamlining_administrative_processes_and_procedures.php.

[47] *See e.g.*, Letter from D. Zachary Champ, Director, Governmental Affairs, PCIA - The Wireless Infrastructure Association to Intergovernmental Advisory Committee, Federal Communications Commission at 6-7 (filed May 6, 2016).

[48] Mobilitie Petition at 14.

[49] *Id.* at 16.

[50] Note, however, that there is judicial precedent for considering the totality of the circumstances, including market-based pricing for comparable use of rights-of-way, in determining whether the compensation charged by a locality constitutes, in the words of 47 U.S.C. § 253(c), "fair and reasonable compensation . . . for use of public rights-of-way." *See, e.g.*, *TCG Detroit v. City of Dearborn*, 206 F.3d 618, 624-25 (6th Cir. 2000); *Qwest Corp. v. City of Santa Fe*, 380 F.3d 1258, 1272-3 (10th Cir. 2004).

[51] *Id.* at 17.

submits that many localities require providers to pay fees based on a percentage of their annual gross revenues, including fees as high as six to seven percent of revenues in some localities in Oregon and Washington and five percent in certain jurisdictions in California, Massachusetts, New York and other parts of Oregon.[52] In addition, we have heard anecdotally that some local governments allow only a single company to attach facilities to a particular pole or structure, and that some require unreasonable minimum distance limitations between wireless facilities in rights-of-way.

On the other hand, some local governments have guidelines designed to facilitate small cell deployments by clearly specifying approval timelines for such applications and identifying preferred site locations. In particular, a number of local governments have amended their zoning and telecommunications ordinances to expedite their decisions on small cell siting requests, and in some cases have created a separate, less burdensome administrative process for requests to add small cells to existing structures like poles or water towers. Cities also have developed master agreements for access to public rights of way in order to expedite attachment of small wireless facilities to city-owned infrastructure.[53] For instance, New York City has established Mobile Telecommunications Franchise Agreements that allow companies to "install and operate telecom equipment on street light poles, traffic light poles, and utility poles to facilitate wireless communications in the five boroughs."[54] These agreements feature a relatively low fee structure and streamlined processes for review of small wireless facility siting applications. In Baltimore, the City Council approved similar franchise agreements to enable companies to build DAS in public rights of way.[55] Boston also has entered numerous non-exclusive agreements with providers for small cell installation across city-controlled rights of way.[56]

II. DISCUSSION

A. Determining How Local Land-Use Regulations or Actions Affect Wireless Infrastructure Deployment

The Commission relied on a substantial body of factual evidence as the basis for taking action in the *2009 Declaratory Ruling* and the *2014 Infrastructure Order*.[57] We invite commenters to submit

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[52] *Id.* at 18.

[53] Wireless Infrastructure Association, Unleashing the Economic Benefits of Mobile Broadband Expansion at 10 (Oct. 26, 2016), http://wia.org/wp-content/uploads/WIA_UnleashingEconomicBenefits_2016.pdf.

[54] The New York City Department of Information Technology & Telecommunications, Mobile Telecom Franchises, http://www1.nyc.gov/site/doitt/business/mobile-telecom-franchises.page (last visited Dec. 22, 2016).

[55] *See, e.g.*, Baltimore City Council, Franchise - Extenet Systems, Inc. (Aug. 17, 2015), https://baltimore.legistar.com/LegislationDetail.aspx?ID=2266530&GUID=80896099-02BD-44B0-8416-4F50971742D5&Options=ID%7CText%7C&Search=0528/; Baltimore City Council, Franchise – Crown Castle NG Atlantic LLC, (Nov. 6, 2015), https://baltimore.legistar.com/LegislationDetail.aspx?ID=2383059&GUID=85B0666B-129D-40CA-9119-F39D235224DF&Options=&Search.

[56] City of Boston, Licensed Wireless Providers in Boston, https://www.boston.gov/departments/cable-and-broadband/licensed-wireless-providers-boston (last visited Dec. 22, 2016).

[57] *See, e.g., 2009 Declaratory Ruling*, 24 FCC Rcd at 14005-06, paras. 33-34 (citing evidence that, as of mid-2008, over 20 percent of the siting applications then pending before local jurisdictions had been awaiting action for over a year and about four percent had been pending for more than three years); *2014 Infrastructure Order*, 29 FCC Rcd at 12869-70, paras. 8-10 (observing that providers were continuing to encounter delays and undue costs, even for deployments that did not present significant concerns, due in part to the cumbersome and time-consuming processes

updated information that would help us evaluate whether further Commission action is warranted.[58] Do the concerns that motivated the Commission to take action in 2009 and 2014 still exist? Have they become less or more salient? Which, if any, local government actions (or inaction) have the effect of hindering the introduction of new services, obstructing efforts to improve existing services or make networks more robust, or deterring prospective service providers from entering markets? Commenters should provide specific information and detailed explanations and, to the extent possible, should quantify any such effects. We will accord greater weight to systematic data than merely anecdotal evidence.

At present, how much time typically elapses between the filing of complete facility siting applications and the approval or denial of such applications by local land-use authorities? We seek information from providers and local governmental authorities on the process for reviewing and making decisions on siting applications for small wireless facilities (including DAS and small cells), particularly the amount of time it takes to complete this process. In this regard, we request that commenters explain the extent to which siting review procedures for small wireless facilities are the same as those in place for macrocells. How long does it typically take local governments to process macrocell siting applications and how does this compare to the review of small wireless facilities or DAS applications? Are there greater coverage gaps in specific states or localities where applications are processed more slowly or where more stringent showings are required? If so, to what extent are these gaps attributable to such factors regarding the processing and consideration of siting applications?

We also seek comment on how often local land-use authorities approve or deny siting applications. How often are applications denied on the basis of (i) their inadequacy or incompleteness; (ii) engineering defects or other technical problems; (iii) environmental impacts; (iv) aesthetic concerns; (v) perceptions of excessive or overly dense deployment of wireless network facilities in particular areas; or (vi) other reasons? Are some parties' applications granted more frequently or reviewed more expeditiously than others, and if so, why? We seek comment on the extent to which litigation ensues as a result of delay or denial of siting applications. Do litigants invoke Sections 253 or 332 of the Communications Act, Section 6409(a) of the Spectrum Act, or other sources of law in support of their positions? How long does it take for such lawsuits to be resolved? How often are cases settled and how often do they proceed to final judgment?

We refer to a small sample of legislation, ordinances, and regulations proposed or adopted by state and local governments in Section I.C above. We invite parties to submit other examples and explain which of these have been most successful in reducing or restraining administrative burdens, costs and delay, whether such approaches could be employed more generally, and whether they should serve as models for other states or localities to follow. Commenters also should identify legislation, ordinances and regulations that impose legal requirements that parties view as problematic. To what extent do they unduly restrict (i) locations where facilities may be deployed; (ii) the technical configurations of network facilities; or (iii) access to rights-of-way owned or controlled by state and local governments? Do they

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of obtaining siting approvals from local land-use authorities and the environmental and historic preservation review processes).

[58] *Cf. Acceleration of Broadband Deployment: Expanding the Reach and Reducing the Cost of Broadband Deployment by Improving Policies Regarding Public Rights of Way and Wireless Facilities Siting*, Notice of Inquiry, 26 FCC Rcd 5384, 5389-95, paras. 12-33 (2011) (identifying and seeking information about "broad categories" of issues including "(1) timeliness and ease of the permitting process; (2) the reasonableness of charges; (3) the extent to which ordinances or statutes have been updated to reflect current communications technologies or innovative deployment practices; (4) consistent or discriminatory/differential treatment; (5) presence or absence of uniformity due to inconsistent or varying practices and rates in different jurisdictions or areas; [and] (6) other rights of way concerns including 'third tier' regulation or requirements that cover matters not directly related to rights of way use or wireless facilities siting.").

promote or thwart deployment of small cell or DAS facilities or other types of network infrastructure? To the extent they tend to thwart such deployment, is there any legitimate justification for maintaining these requirements in their current form? As discussed in greater detail in Section II.B.3 below, we also seek comment on the types of fees that local governments currently impose on providers for building facilities in rights of way, including both up-front fees for processing applications and recurring usage charges.

B. Potential Issues to Address in Declaratory Ruling

We seek comment on whether the Commission should take additional steps, by interpreting relevant statutory provisions, to help promote deployment of needed wireless infrastructure while protecting localities' legitimate interests. In the *2014 Infrastructure Order*, the Commission clarified certain issues related to the interpretation of Section 332(c)(7) that it had not addressed in the *2009 Declaratory Ruling*, but declined to revisit any aspect of that earlier ruling. We now solicit comments on whether the Commission should issue a declaratory ruling to further clarify any issues addressed in its 2009 and 2014 rulings or to fine-tune or modify any of its past statutory interpretations in light of current circumstances.

1. *Local Governments' Practices that "Prohibit or Have the Effect of Prohibiting" Provision of Service*

As discussed above, Sections 253(a) and 332(c)(7) establish that "[n]o State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity" to provide personal wireless services or other telecommunications services.[59] The Commission has held that those statutory provisions "proscribe[ ] State and local legal requirements that prohibit all but one entity from providing telecommunications services in a particular State or locality," and that state or local government decisions to deny a siting application on the basis that one or more carriers other than the applicant already provides wireless service in the geographic area should be construed to "prohibit or have the effect of prohibiting" the provision of service.[60] More generally, the Commission has framed the question of whether a locality's actions have the effect of prohibiting the provision of service in terms of whether the action "materially inhibits or limits the ability of any competitor or potential competitor to compete in a fair and balanced legal and regulatory environment."[61]

Aside from that basic interpretation, however, the Commission has not addressed in detail the meaning of the statutory phrase "prohibit or have the effect of prohibiting" or the demonstration needed to establish that a state or local government's actions have prohibited or had the effect of prohibiting the provision of service for purposes of either Section 253 or 332. Numerous courts have construed the section, however. Courts generally agree that a carrier may establish that a land-use authority's denial of its siting application "prohibits or has the effect of prohibiting" the provision of service by showing that it has a significant gap in service coverage in the area and a lack of feasible alternative locations for siting facilities, but they disagree about the showings needed to satisfy this standard. The First, Fourth, and Seventh Circuits have imposed a "heavy burden" of proof to establish a lack of alternative feasible sites, requiring the applicant to show "not just that *this* application has been rejected but that further reasonable

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[59] 47 U.S.C. § 253(a); *cf. id.* § 332(c)(7)(B)(ii).

[60] *Classic Telephone, Inc.*, Memorandum Opinion and Order, 11 FCC Rcd 13082, 13095, para. 25 (1996); *2009 Declaratory Ruling*, 24 FCC Rcd at 14016-19, paras. 56-65.

[61] *California Payphone Association Petition for Preemption*, 12 FCC Rcd 14191, 14206, para. 31 (1997).

efforts to find another solution are so likely to be fruitless that it is a waste of time even to try."[62] By contrast, the Second, Third, and Ninth Circuits have held that an applicant must show only that its proposed facilities are the "least intrusive means" for filling a coverage gap in light of the aesthetic or other values that the local authority seeks to serve.[63] The Ninth Circuit has ruled that once an applicant makes a prima facie showing that its proposal is least intrusive, the burden shifts to the locality to rebut that showing by demonstrating a "potentially available and technically feasible alternative."[64]

Should the Commission, as the expert agency, attempt to reconcile or otherwise resolve these or other differences of interpretation among the courts, and if so, how? For instance, does an action that prevents a technology upgrade "have the effect of prohibiting" the provision of service? Should the Commission address other disputed issues regarding the meaning of the phrase "prohibits or has the effect of prohibiting"?

2. *Reasonable Period of Time for Review of Siting Applications*

In the *2009 Declaratory Ruling*, the Commission found that a "reasonable period of time" under Section 332(c)(7)(B)(ii) is presumptively 90 days for state or local governments to process collocation applications and presumptively 150 days to process all other applications.[65] If a state or local government does not act upon an application within the relevant timeframe, then a "failure to act" has occurred and the provider may seek relief in a court of competent jurisdiction under Section 332(c)(7)(B)(v). In the *2014 Infrastructure Order*, the Commission further clarified that these presumptively reasonable timeframes (or "shot clocks") apply regardless of state or local governments' purported moratoria on processing siting applications, and that the same shot clocks apply to DAS and small-cell applications.[66]

The presumptive timeframes established in the *2009 Declaratory Ruling* may be longer than necessary and reasonable to review a small cell siting request. On the other hand, if small cell siting applications are filed dozens at a time, those presumptive timeframes may not be long enough. We therefore seek comment on whether different presumptive timeframes are "reasonable" in the small cell context. We also seek comment on whether the timeframes should vary depending on whether a state or local government receives siting requests proposing one small cell deployment at a time or consolidated

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[62] *Green Mountain Realty Corp. v. Leonard*, 750 F.3d 30, 40 (1st Cir. 2014); *accord New Cingular Wireless PCS, LLC v. Fairfax County*, 674 F.3d 270, 277 (4th Cir. 2012); *T-Mobile Northeast LLC v. Fairfax County*, 672 F.3d 259, 266-68 (4th Cir. 2012) (*en banc*); *Helcher v. Dearborn County*, 595 F.3d 710, 723 (7th Cir. 2010).

[63] *Sprint Spectrum, LP v. Willoth*, 176 F.3d 630, 643 (2d Cir. 1999); *APT Pittsburgh Ltd. P'ship v. Penn Township*, 196 F.3d 469, 480 (3d Cir. 1999); *American Tower Corp. v. City of San Diego*, 763 F.3d 1035, 1056-57 (9th Cir. 2014); *T-Mobile USA, Inc. v. City of Anacortes*, 572 F.3d 987, 995-99 (9th Cir. 2009).

[64] *American Tower Corp. v. City of San Diego*, 763 F.3d at 1056-57; *T-Mobile USA, Inc. v. City of Anacortes*, 572 F.3d at 995-99.

[65] *2009 Declaratory Ruling*, 24 FCC Rcd at 14012, para. 45.

[66] *2014 Infrastructure Order*, 29 FCC Rcd at 12971-72, 12973-24, paras. 265-66, 270-72. The Commission's *2014 Infrastructure Order* also clarified the meaning of "may not deny, and shall approve" in Section 6409(a)(1) – a term that does not appear in Sections 253 or 332. The Commission ruled that state or local government agencies may review applications for up to 60 days after such applications are filed to determine whether they qualify as "eligible facilities requests" under the criteria specified in Section 6409(a)(2), but if an agency fails to rule on an application within that time frame, the application is deemed granted. *Id.* at 12955-58, paras. 211-221. Local governments may challenge claims that siting applications have been deemed granted, and applicants may challenge local governments' denials of their applications, by bringing suit within 30 days of the relevant event. *Id.* at 12961-64, paras. 226-36. The *2014 Infrastructure Order* also made clear which types of applications qualify for the "deemed granted" remedy by adopting specific interpretations of statutory terms such as "transmission equipment," "tower," and "base station." *Id.* at 12926-51, paras. 145-204; *see also* 47 C.F.R. § 1.40001 (codifying these determinations).

applications that request authority for a single provider to deploy multiple small cells (*i.e.*, a "batch" of small cell siting proposals).

We seek comment on whether the presumptive deadlines adopted in the *2009 Declaratory Ruling* reflect an approach more appropriate for traditional macrocells than for the types of cells discussed here, which are much smaller and can be placed on light poles, utility poles, buildings, and other structures either on private property or in the public rights of way. Due to their size and placement, small cells may have less potential for aesthetic and other impacts than macrocells. We therefore seek comment on whether our interpretation of a "reasonable period of time" under Section 332(c)(7)(B)(ii) should be shorter for state and local governmental review of small cell facility applications. We also seek comment on how the Commission could define "small cell" for this purpose.

In addition, there may be efficiencies associated with a review process in which state and local governments would consider deployment of multiple small cells in a single consolidated application (*i.e.*, a batch of small deployment proposals from a single entity), particularly in light of their uniformity in size and appearance in many cases. A batched set of siting applications may be quicker to review than the same number of siting proposals submitted separately, but at the same time, we recognize it may take longer to review an application consisting of large numbers of cell siting proposals submitted at one time than to review small batches or single site applications. Therefore, we seek comment on whether the presumptively reasonable timeframe should be longer when many facilities requests are submitted at once. Could we interpret the Act so as to encourage the practice of processing a "batch" of siting requests by finding longer timeframes to be reasonable if the local government accommodates batched submissions, while holding to the existing, shorter timeframe if it only accepts individual applications? For example, should the Commission consider presumptions of 120 days for processing batches of collocation applications and 180 days for processing batches of applications for deployments other than collocations? If so, what should be the minimum number of sites to qualify as a "batch" for this purpose? Should there be multiple tiers depending on how many poles or antennas are involved?[67]

We seek information from providers and local governmental authorities on the process for reviewing and making decisions on siting applications for small wireless facilities (including DAS and small cells), particularly the amount of time it takes for the completion of this process. In this regard, we request that commenters explain the extent to which siting review procedures for small cells are the same as have been in place for macrocells. How long does it typically take local governments to process macrocell siting applications and how does this compare to the review of small cells? We also request that commenters provide information on the extent to which "batching" is currently used by the industry and local governments for the review of small cell deployments and to explain how well that process has been working to expedite the process and provide local governments with the information they need to make decisions on siting applications.

3. Application Processing Fees and Charges for Use of Rights-of-Way

Section 253(c) provides that "[n]othing in this section affects the authority of a State or local government to manage the public rights-of-way or to require fair and reasonable compensation from telecommunications providers, on a competitively neutral and nondiscriminatory basis, for use of public rights-of-way on a nondiscriminatory basis, if the compensation required is publicly disclosed by such

[67] *Cf.* 47 C.F.R. § 1.1420(g)(1)-(5) (allowing utilities progressively greater amounts of time to respond to pole attachment requests if such requests identify, respectively, fewer than 200 poles; 200-3000 poles; and 3000 or more poles in a state).

government."[68] The Commission did not address the meaning of this provision in its 2009 or 2014 rulings. We now seek comment on whether the public interest would be served by issuing clarifications of any of the terminology in Section 253(c), as Mobilitie requests in its Petition.

According to Mobilitie, the phenomenon of excessive and unfair fees for use of rights of way "is not confined to a few outlier localities – it exists nationwide. Across the country, Mobilitie is being confronted with multiple fees, often being asked to pay not only up-front fees but also annual recurring fees which escalate by mandatory amounts year after year."[69] We invite comments on whether these assertions are well-founded. How do local governments determine the up-front fees for applications and permits or the recurring fees for usage of rights of way? Do they set up-front fees based on the costs they incur in reviewing such applications or related administrative tasks such as monitoring the provider's construction of facilities, ensuring compliance with local building codes and excavation regulations, and verifying liability insurance? Are recurring charges set based on localities' ongoing costs of managing use of rights of way? To what extent are localities imposing charges based on other considerations, such as percentages of gross revenues or other indicia of the value of the use of the right-of-way?

The Circuit Courts of Appeals are split on whether the fees local governments charge to a telecommunications provider to use public rights of way must be directly related to the provider's use of the right of way and the costs that use imposes on the local government.[70] In *Puerto Rico Tel. Co., Inc. v. Municipality of Guayanilla*, the First Circuit held that the fees local governments collect from telecommunications providers must at the very least be *related* to the actual use of rights of way and that "the costs [of maintaining those rights of way] are an essential part of the equation."[71] Similarly, in *City of Auburn v. Qwest Corp.*, the Ninth Circuit found that certain city ordinances could have the "effect of prohibiting the provision of telecommunications services" where, *inter alia*, they imposed "fees… [that were] not based on the costs of maintaining the right of way, as required under the Telecom Act.[72]

Other circuits have sustained municipal ordinances that considered factors in addition to costs in setting fees for use of rights-of-way. In *TCG Detroit v. City of Dearborn*, the Sixth Circuit determined that a 4% gross revenue fee was fair and reasonable based on the amount of the use contemplated, the amount other providers would be willing to pay, and the impact on the profitability of the business.[73] But we note that in *TCG New York, Inc. v. City of White Plains*, the Second Circuit held that the city could not require the provider to pay a franchise fee equal to five percent of its gross revenue because that fee did not apply to the incumbent provider, and Section 253(c) "forbids fees that are not competitively neutral, period, without regard to the municipality's intent."[74]

We solicit comment on whether and how the Commission should interpret Section 253(c) for the purpose of ensuring that fees imposed on providers for using rights of way do not exceed fair and reasonable compensation. Should the Commission, as the expert agency, issue a declaratory ruling addressing the issues referred to above or to address other issues that the courts have not resolved to date? In particular, we seek comment on the proposals raised in Mobilitie's Petition. Mobilitie requests that the

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[68] 47 U.S.C. §253(c).

[69] Mobilitie Petition at 15.

[70] *See, e.g., N.J. Payphone Ass'n Inc. v. Town of West York*, 299 F.3d 235, 244 (3d Cir. 2002).

[71] 450 F. 3d 9, 22 (1st Cir. 2006).

[72] 260 F.3d 1160, 1176 (9th Cir. 2001).

[73] 206 F.3d 618, 625 (6th Cir. 2000). See also *supra* at note 50.

[74] 305 F.3d 67, 80 (2d Cir. 2002).

Commission interpret the phrase "fair and reasonable compensation" in Section 253(c) to mean that local governments may receive compensation to recover their costs to review and issue permits, as well as to manage their rights of way, but that any additional charges are unlawful.[75] How should the statutory term "fair and reasonable compensation" be defined? What are the appropriate criteria for state and local governments to apply in establishing fair and reasonable compensation? Must up-front fees or recurring compensation for use of local governments' rights of way be based on cost? If so, what measures of costs would be appropriate? Do the rules governing the computation of cost-based rates for pole attachments and access to private utilities' rights of way provide useful analogs for the "reasonable compensation" that state or local governments may assess? Why or why not? What types of expenses may local authorities recover through up-front and recurring charges, respectively? We seek comment on Mobilitie's proposal that recurring charges be limited to "incremental personnel and other costs for monitoring the facilities (for example, to ensure they are maintained in compliance with signage and other requirements)."[76]

Mobilitie also argues that the Commission should deem fees to be "competitively neutral and non-discriminatory" within the meaning of Section 253(c) only if they "do not exceed those imposed on other providers for similar access."[77] We also seek comment on Mobilitie's request that the Commission interpret Section 253(c)'s "competitively neutral and nondiscriminatory" provision as requiring that fees imposed on a provider for access to rights of way may not exceed the charges that were imposed on other providers for similar access to the rights of way.[78] Is this an appropriate or the best definition for the statutory phrase "competitively neutral and non-discriminatory"? If not, we seek comment on alternative definitions. What factors could properly be taken into account if the Commission were to interpret the statutory nondiscrimination requirement, as Mobilitie proposes, based on "a comparison of the relevant charges and the reasons for them," so that fees paid by different providers could vary only if "they cover dissimilar deployments, or where one deployment imposes materially greater burdens on a right of way than another." We seek comment on the extent to which discriminatory charges imposed by local governments on providers are a widespread occurrence that needs to be addressed.

Finally, we seek comment on Mobilitie's request that the Commission address the provision in Section 253(c) that compensation for the use of rights of way be "publicly disclosed by such government." Should the Commission adopt Mobilitie's proposal to "declare that localities must at least disclose to a carrier upon request the charges they have imposed on all carriers for access to rights of way," including "not only the amount of the charges" but also "how they [were] calculated"?[79] We seek comment on the extent to which this information is unavailable from local governments and whether lack of information is a widespread problem.

III. PROCEDURAL MATTERS

This proceeding has been designated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[80] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral

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[75] Mobilitie Petition at 24-31.

[76] *Id.* at 24.

[77] *Id.* at 31-34.

[78] *Id.* at 32.

[79] *Id.* at 35.

[80] 47 C.F.R. §§ 1.1200 *et seq.*

ex parte presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

For further information, contact: Paul D'Ari, 202-418-1550 or paul.dari@fcc.gov, or David Sieradzki, 202-418-1368 or david.sieradzki@fcc.gov, or Rachael Bender, 202-418-0563 or rachael.bender@fcc.gov.

Media contact: Cecilia Sulhoff, (202) 418-0587 or cecilia.sulhoff@fcc.gov.

Action by the Chief, Wireless Telecommunications Bureau.

BEST BEST & KRIEGER LLP

Small Cells and Distributed Antenna Systems

What is the technology?

Nearly everyone knows what a traditional cell tower is, but the terms "small cell" and "distributed antenna system" ("DAS") are not nearly as familiar. They should be. An increasing number of small cells and DAS are appearing in the streets of America's cities and counties across the country.

Like a "macro" cell-site facility, a small cell is equipment that transmits a wireless signal to and from a defined area. But because a small cell uses lower power than a traditional macro cell, it also provides coverage to a significantly smaller space. Small cells present two key benefits, however. First, networks that employ small cells often use spectrum more efficiently, which leads to capacity gains. For example, a network of 10 small cells can use the same spectrum as a single macro cell and have 10 times the overall capacity. Second, because of their size, a small cell may fit where it would be impossible or infeasible to place a macro cell. Providers currently use small cells to cover targeted indoor or outdoor areas, including stadiums, shopping malls, hospital, and other outdoor spaces. Different forms of small-cell technology include femtocells, picocells, metrocells, and picocells. Small cells are typically operated by the wireless provider that delivers wireless service.

A distributed antenna system also uses smaller facilities than traditional macro cells, but it uses the equipment in a different way. A DAS typically consists of: (i) a number of communications nodes, each with an antenna; (ii) fiber-optic cable that connects each node to a central site; and (iii) radio transceivers at the central site that process or control the signals that the antennas transmit and receive. Unlike a small cell, a DAS processes the communications at the central site, not at the site of each antenna. Some companies that place a DAS do not provide traditional wireless service at all. Instead, the DAS provider operates as a "carriers' carrier": it transmits the wireless provider's traffic over the DAS, but the wireless provider typically operates and owns all the processing equipment at the central site. The DAS provider often uses the same DAS to serve multiple wireless providers.

How does the technology affect local government?

Small cells and DAS present new challenges to local governments as regulators and as property managers.

On the regulatory side, many local governments developed their zoning codes to address only macrocells. As a result, local ordinances may not clearly apply to the placement of smaller facilities in the rights-of-way—including on utility poles, street lights, and other similar facilities—even though small cells and DAS also can present safety, aesthetic, and environmental issues. In addition, because small cells operate at lower power, a provider typically must place many more facilities in a City's rights-of-way. A local government therefore may need to develop an efficient and effective way to review and process a larger number of applications. The regulatory issue is complicated further by Section 6409(a) of the Middle Class Tax Relief and Joe Creation Act of 2012, which requires that local governments approve requests to collocate facilities that do not "substantially change the physical dimensions" of certain preexisting facilities. Some local governments are concerned that if they approve small facilities, providers could use the statute to expand the small facilities later—in ways that harm the community.

Small cells and DAS also present new difficulties as local governments manage and lease their property. For example, a DAS may require the operator to place fiber in the rights-of-way, an asset that local governments often own and manage, and to attach antennas and other equipment to City-owned streetlights or other structures. Local governments may find that their traditional "leasing" models do not fit this new technology. Some small-cell providers also have sought blanket licenses to place their equipment on City property. This may not be the right approach to protect against harms in particular areas, or to maximize the value of your assets.

What are local governments doing about it?

Local governments are working to ensure that their regulations and leasing models keep pace with this changing wireless technology. Many local governments welcome small facilities and better coverage, but they also want to ensure that these new developments do not lead to unwanted or unexpected harms. Some recent examples of local government action include:

- Local governments revisiting their zoning codes and their property-leasing models to ensure that they are tailored to small cells and DAS.
- Local Governments closely monitoring how providers are using these technologies.
- Many communities have also engaged the Federal Communications Commission to oppose the wireless industry's calls for the agency to preempt local oversight in this area.

Legal Issues To Watch Out For:

Small Cells and DAS raise many potential legal questions for local governments, including:

- Does your zoning ordinance apply to smaller facilities in the rights-of-way?
- Will your regulatory process allow you to review a request to place a number of facilities at multiple sites in a timely way?
- Can you ensure that small facilities, once approved, will not expand into harmful facilities later?
- Does the DAS provider have wireless customers, or is it only placing facilities with the hope of obtaining them?
- Have you developed an approach to leasing government-owned property for new wireless uses that protects the community and maximizes the value of your assets?

Matthew Schettenhelm is an attorney in Best Best & Krieger's Washington, D.C. office. He focuses his practice on assisting local governments and other clients with appellate litigation and communications matters. His work on communications matters includes preparing and filing comments with the Federal Communications Commission on issues including the National Broadband Plan, cable franchising, wireless-facility siting, PEG channels, and public-safety communications. Matthew can be reached at Matthew.Schettenhelm@bbklaw.com.


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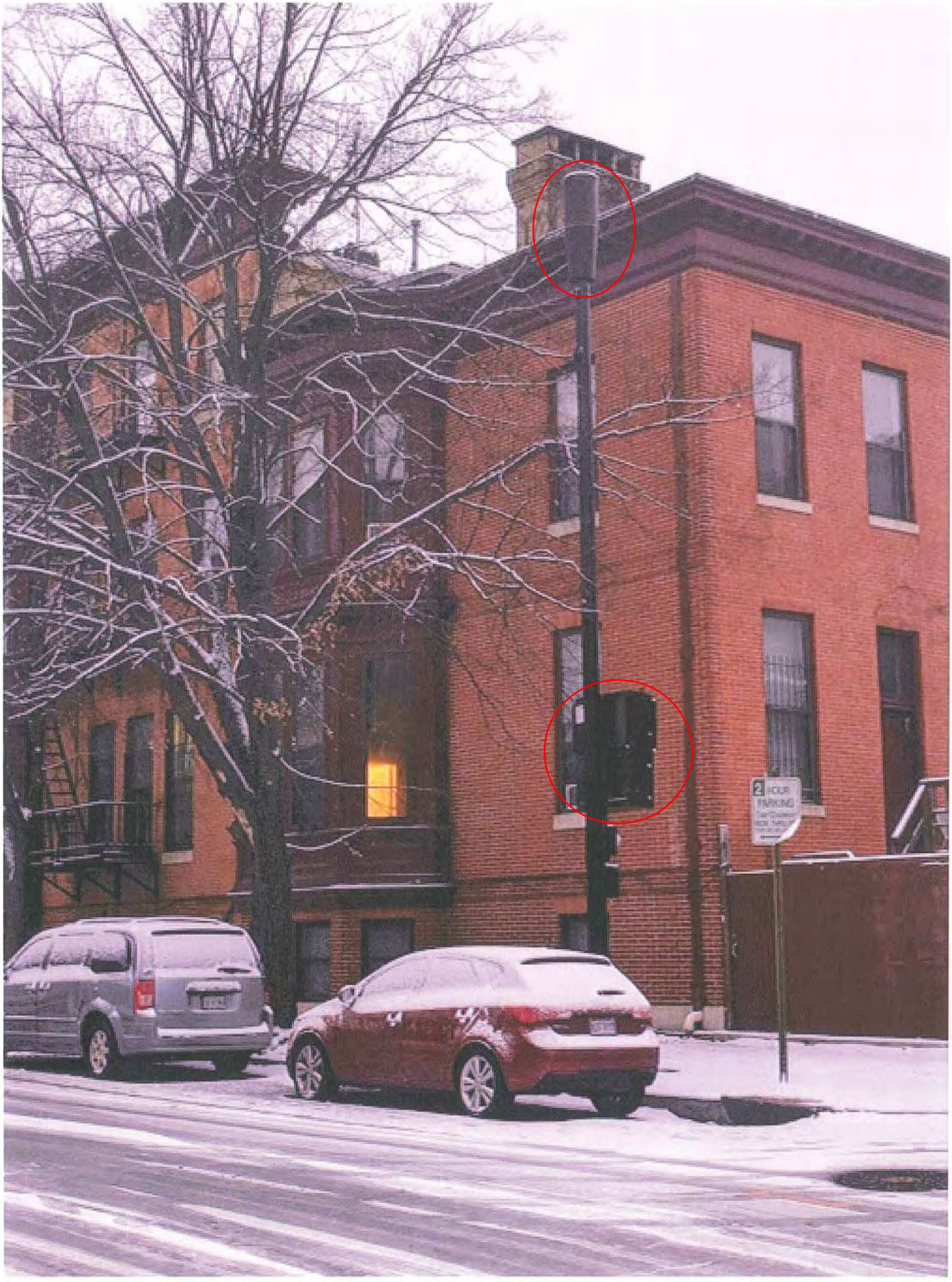
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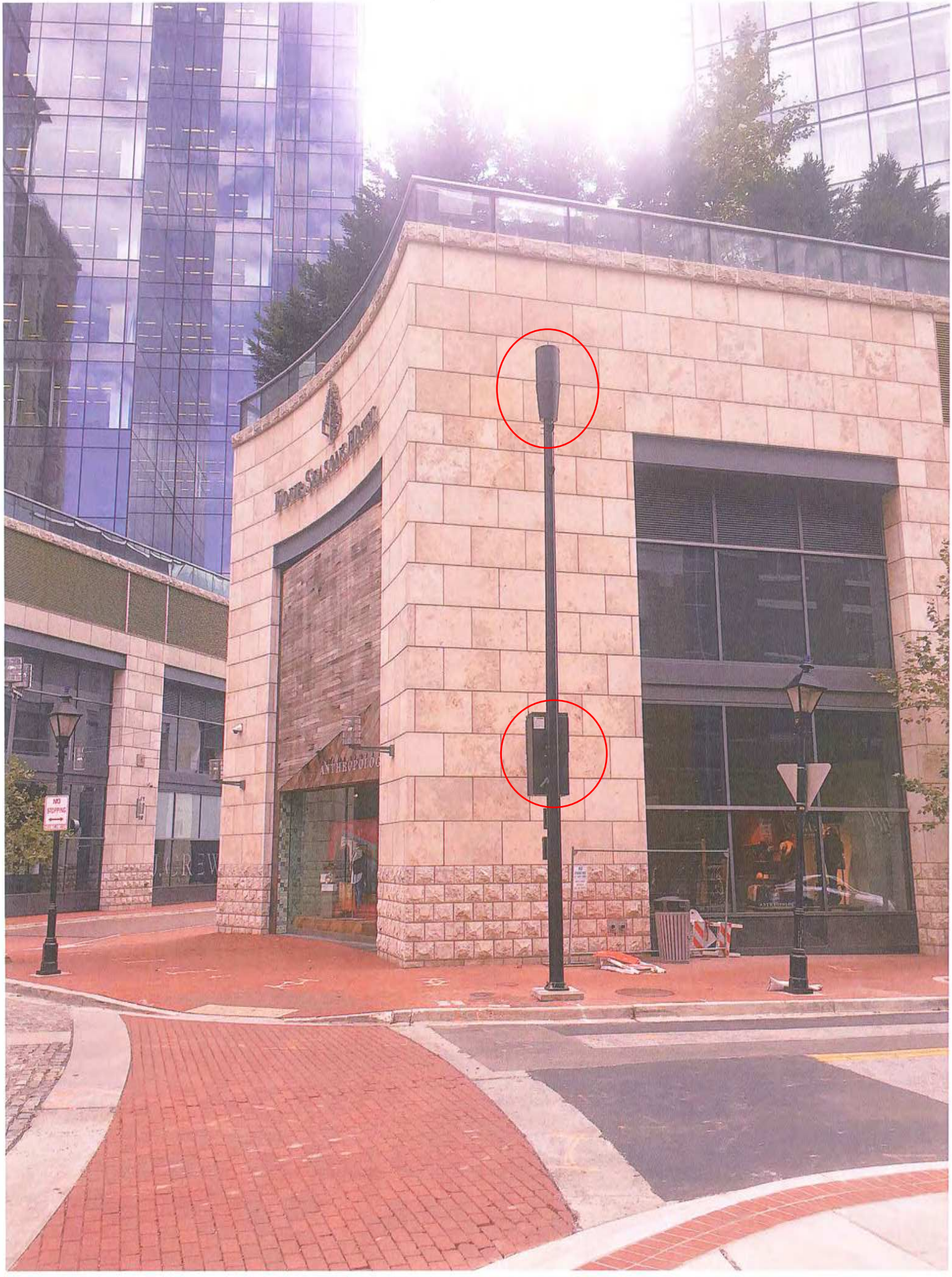
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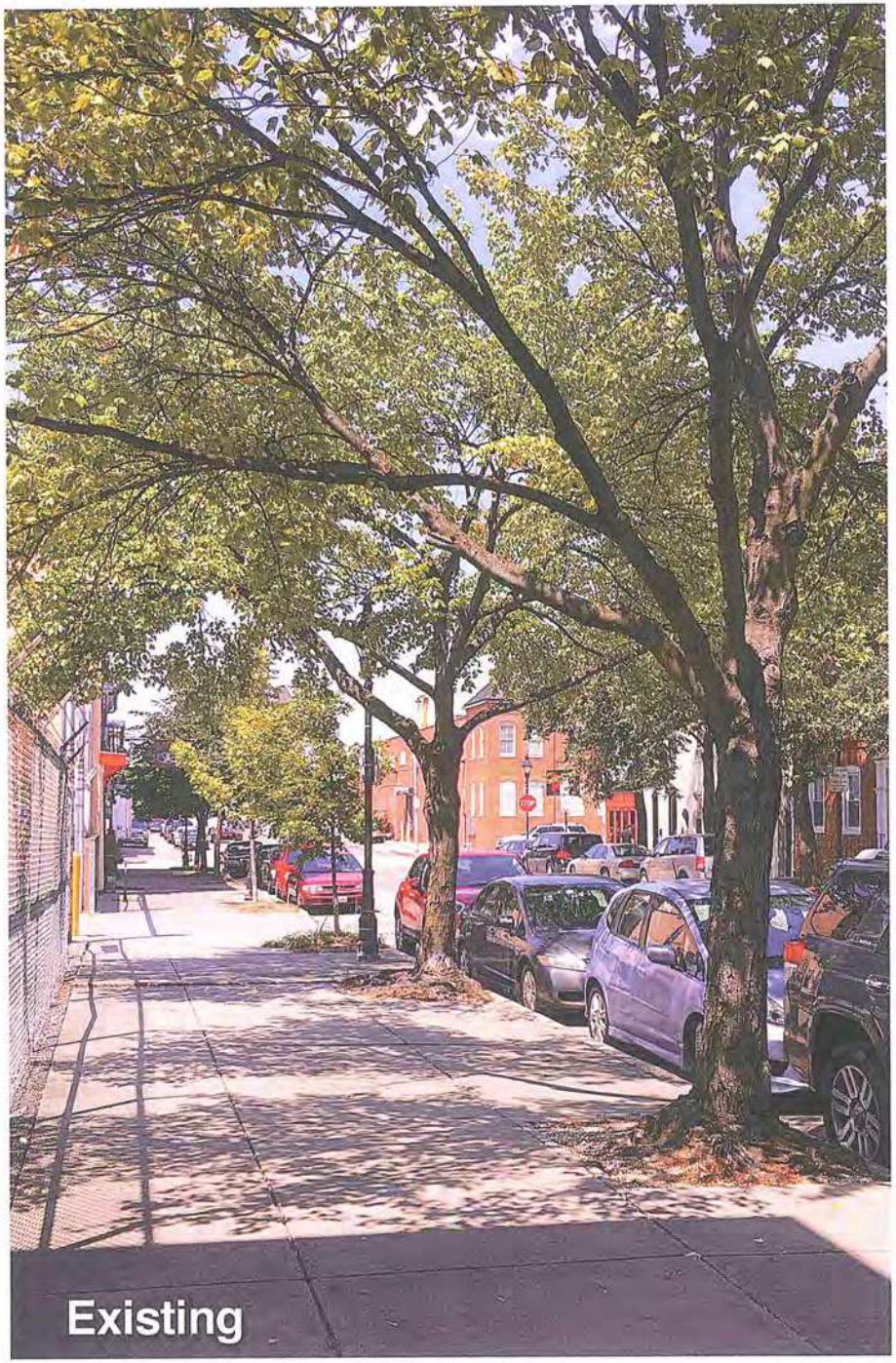

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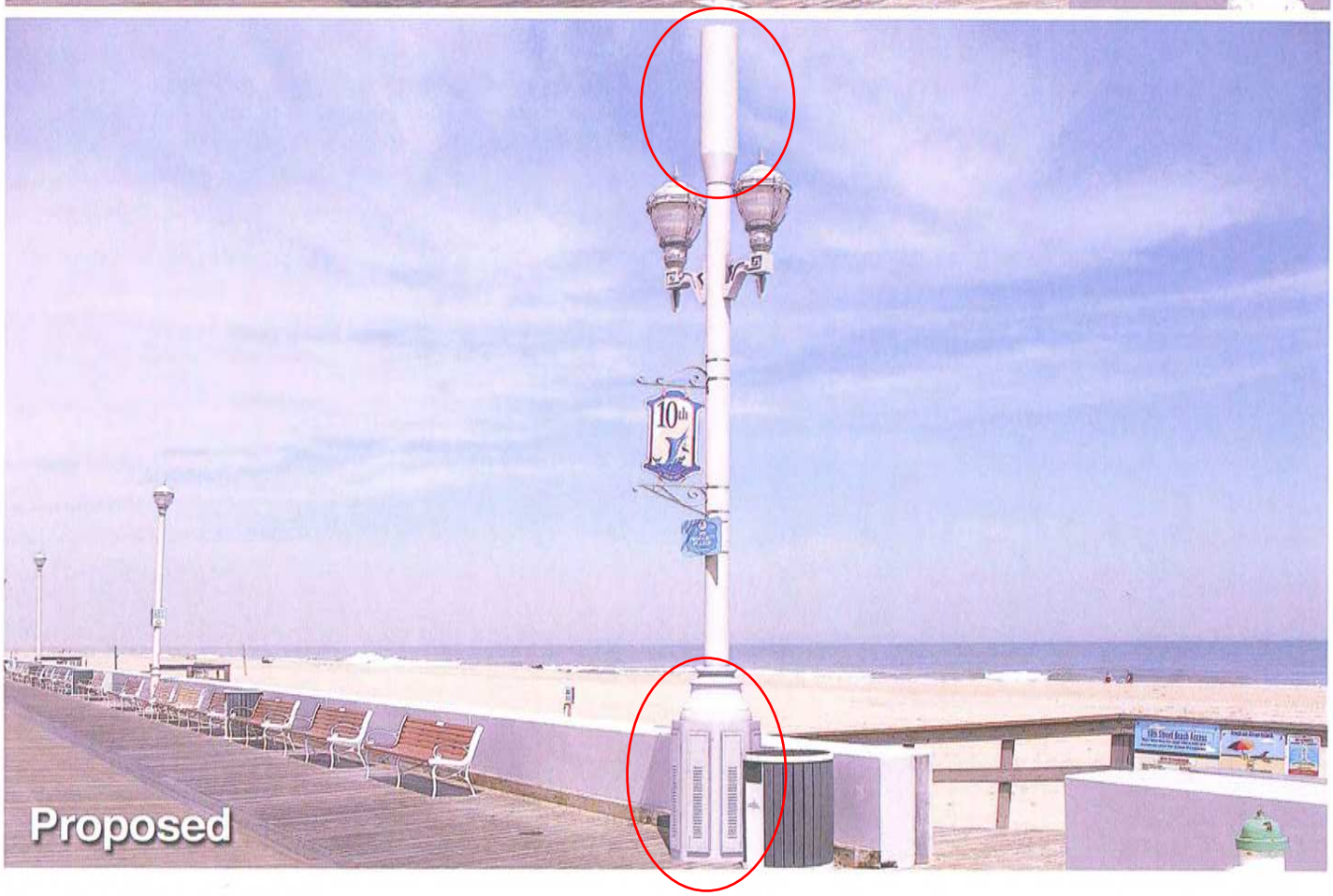

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