The 5G Wireless Revolution: Pointers and Pitfalls for Land Use Boards

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Presentation Overview

• This presentation will be a primer on wireless technology in New York State and will provide guidance on processing applications for small cell wireless telecommunications facilities and FCC eligible facility requests. The presentation will also provide statutory, regulatory and legal updates in the area of wireless telecommunications technology, including a discussion of the FCC's Small Cell Order, adopted September 26, 2018.

• Michael Musso of HDR, Inc., who provides technical guidance to land use boards in the Hudson Valley, will offer technical insight into wireless telecommunications facilities and small cell technologies including the anticipated roll-out of 5G technology in the region.
Presentation Outline

• Discussion Small Wireless Technology
• Discussion on FCC’s Previous Declaratory Rulings
• Discussion on the FCC’s Declaratory Ruling and Third Report and Order
• Discussion of SEQRA Requirements in Light of Shot Clock Limitations
• Discussion of Recommended Practices
What is a small wireless facility?

The FCC defines “small wireless facility” as a facility that meets each of the following conditions:

1. The structure on which antenna facilities are mounted—
   a. Is 50 feet or less in height, or
   b. Is no more than 10 percent taller than other adjacent structures, or
   c. Is not extended to a height of more than 10 percent above its preexisting height as a result of the collocation of new antenna facilities; and
2. Each antenna (excluding associated antenna equipment) is no more than three cubic feet in volume; and
3. All antenna equipment associated with the facility (excluding antennas) are cumulatively no more than 28 cubic feet in volume; and
4. The facility does not require antenna structure registration under part 17 of this chapter;
5. The facility is not located on Tribal lands; and
6. The facility does not result in human exposure to radio frequency radiation in excess of the applicable safety standards specified in [federal law].
What Are Small Cell Deployments?

Small cell deployments are complementary to towers, adding much needed coverage and capacity to urban and residential areas, venues, and anywhere large crowds gather.

- Streetlights
- Utility Poles
- Slim Line Poles

Antennas connected to nodes receive and transmit wireless signals to and from mobile devices.

The cabinet holds equipment that processes wireless signals for multiple wireless carriers.

Optical fiber connects to other nodes and carries data to and from communication hubs operated by wireless carriers.

Traditional Cell Towers
Small Wireless Facilities on Utility Poles

Small Wireless Facilities on Light Poles
Eligible Facilities Requests

- Any request for modification of an existing tower or base station that does not substantially change the physical dimensions of such tower or base station, involving:
  - (i) Collocation of new transmission equipment;
  - (ii) Removal of transmission equipment; or
  - (iii) Replacement of transmission equipment.

What is 5G Technology?

Potential Benefits
- 5G technology allows for ultra-fast downloads, telemedicine, alternate reality (AR) gaming, and self-driving cars.
- It is around 100x faster than 4G or LTE technology.
- It will lower latency, or network response time.
- It will add capacity for millions more devices.

Challenges
- Many thousand more small cell antennas are required to power the 5G network.
- The biggest limitation for 5G technology is the distance the signal can travel. 4G signals can travel about 10 miles, while 5G signals can only travel about 1,000 feet.
- There are high projected costs associated with 5G technology.
- You will need a new phone to connect to the 5G network.
Where is 5G technology in the U.S.?

- Cities in New York with AT&T 5G
  - Albany
  - Binghamton
  - Buffalo
  - New York City
  - Orange County
  - Otsego County
  - Rochester
  - Syracuse
  - Utica-Rome

- Cities with Sprint 5G
  - New York City

- Cities with T-Mobile mmWave 5G
  - New York City
  - Cities with Verizon 5G
  - New York City

https://www.digitaltrends.com/mobile/5g-availability-map/

FEDERAL COMMUNICATIONS COMMISSION’S PREVIOUS REPORTS AND ORDERS
FCC’s Previous Reports and Orders

• On October 17, 2014.
  ▫ The FCC adopted the first Report and Order in the Matter of Acceleration of Broadband Deployment providing wireless deployments relief from certain requirements of the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA).

• On March 22, 2018.
  ▫ The FCC adopted a Second Report and Order in the Wireless Infrastructure proceeding which clarified and revised its National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA) review processes relating to the deployment of wireless infrastructure.

• On August 3, 2018.
  ▫ The FCC barred state and local governments from implementing moratoria on telecommunications services.

THE DECLARATORY RULING AND THIRD REPORT AND ORDER
The Declaratory Ruling and Third Report and Order

• Adopted by the FCC on September 26, 2018 and became effective on January 14, 2019.
• The Third Report and Order is part of a national strategy to promote the timely buildout of small cell wireless telecommunication facilities across the country.
• Providers are rapidly installing small cell infrastructure at significantly more locations to meet the increasing demand for wireless services and prepare for 5G technology.

The Declaratory Ruling and Third Report and Order

1. Clarifies the scope and meaning of Sections 253 and 332(c)(7) of the Telecommunications Act of 1996,
2. Identifies specific fee levels for small wireless facility deployments that presumably comply with the relevant standard.
3. Establishes shot clocks for state and local approvals for the deployment of small wireless facilities, and
4. Provides guidance on streamlining state and local requirements on wireless infrastructure deployment.
Gap in Coverage

• In the Declaratory Ruling, the FCC states that a state or local legal requirement constitutes an effective prohibition if it “materially limits or inhibits the ability of any competitor or potential competitor to compete in a fair and balanced legal and regulatory environment.”

• An effective prohibition occurs where a state or local legal requirement materially inhibits a provider’s ability to engage in any of a variety of activities related to its provision of a covered service. This test is met not only when filling a coverage gap but also when densifying a wireless network, introducing new services or otherwise improving service capabilities.

Reasonable Fees

• Right-of-way access fees, and fees for the use of governmental property in the right-of-way, as well as application or review fees and similar fees imposed by a state or local government as part of their regulation of deployment of small wireless facilities inside and outside the right-of-way, violate Sections 253 and 332(c)(7) unless:
  ▫ The fees are reasonable approximation of the state or local government’s costs,
  ▫ Only objectively reasonable costs are factored into those fees, and
  ▫ The fees are no higher than the fees charged to similarly-situated competitions in similar situations.
Reasonable Fees

• The FCC advised, based on the FCC’s pole attachment rate formula, that the following fees would not be prohibited by Section 253 or Section 332(c)(7) of the Federal Telecommunications Law:
  ▫ $500 for a single up-front application that includes up to five small cell facilities, with an additional $100 for each small cell facility beyond five, and
  ▫ $270 per small cell facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally owned structures in the ROW.

Regulating Aesthetics

• The FCC found that aesthetic requirements for small cell facilities are not preempted if such requirements are:
  ▫ Reasonable;
  ▫ No more burdensome than those that apply to other types of infrastructure; and
  ▫ Published in advanced
Shot Clock Requirements

- With regard to shot clock requirements, the Wireless Infrastructure Order:
  - Creates a new set of shot clocks tailored to support the deployment of Small Wireless Facilities,
  - Clarifies that a municipality’s failure to issue a decision on an application during the shot clock period constitutes a presumptive prohibition, and
  - Addresses a number of issues that are relevant to all of the FCC’s shot clocks, including the types of authorizations subject to these time periods.

2009 Shot Clock Requirements

- In 2009, the Commission concluded that municipalities should use shot clocks to define a presumptive “reasonable period of time” beyond which state or local inaction on wireless infrastructure siting applications would constitute a “failure to act” within the meaning of Section 332.2.
- At that time the FCC adopted a 90-day clock for reviewing collocation applications and a 150-day clock for reviewing siting applications other than collocations.
2019 Shot Clock Requirements

• FCC adopted two new Section 332 Shot Clock Requirements for Small Cell Wireless Facilities:
  □ 60 days to review an application for collocation of Small Wireless Facilities using a preexisting structure
  □ 90 days to review an application for attachment of Small Wireless Facilities using a new structure.

When does the shot clock period begin?

• The shot clock period begins to run when an application is first submitted, not when the application is deemed complete.
• For Small Wireless Facilities applications, the siting authority has 10 days from the submission of the application to determine whether the application is incomplete.
• The shot clock then resets once the applicant submits the supplemental information requested by the siting authority.
Batched Applications

- A single application seeks authorization for multiple Small Wireless Facility deployments, “then the presumptively reasonable period of time of the application as a whole is equal to that for a single deployment within that category.”
- If an applicant files multiple siting applications on the same day for the same type of facilities, each application is subject to the same number of review days by the siting agency.

New Remedy for Violations of the Small Wireless Facilities Shot Clocks

- A “failure to act” constitutes a presumptive prohibition materially limiting or inhibiting the introduction of new services or the improvement of existing services.
- In cases where state or local governments fail to issue all necessary permits within a reasonable period, the FCC believes that the applicant would have a straightforward case for obtaining expedited relief in court.
Litigation

- Administrative appeal exhausted and denied.
- Multiple appeals were filed in various circuits. These appeals were consolidated in the U.S. Court of Appeals for the 10th Circuit following a lottery.
- The U.S. Court of Appeals for the 10th Circuit denied the cities’ request for a stay.
- In a second order, the 10th Circuit remanded the cities’ motion to review their petitions against the Order back to the U.S. Court of Appeals for the 9th Circuit.
- The 9th Circuit was already considering a lawsuit against the FCC’s August Order banning municipal moratoria, which is basically part of the same rule making as the Small Cell Order. So with the transfer, both the moratoria and the Small Cell Order will be examined by the same court.
- This litigation will continue to play out in federal court in 2020. Oral arguments were held on February 10, 2020 (*Spring Corporation v. FCC* (19-70123) and *City of Portland v. USA* (18-72689)).

More Changes To Come?

- The FCC may implement changes sought by the wireless industry to make it easier for carriers to modify existing wireless equipment for 5G.
- The Wireless Infrastructure Association (“WIA”) and Cellular Telecommunications and Internet Association (“CTIA”) argue that some municipalities are refusing carriers’ requests to modify their wireless facilities over aesthetic and other issues.
- Carriers also argue that they having difficulty gaining access to some utility-owned light poles.
- The groups are calling on the FCC to clarify the 2012 law to ensure that they can modify their existing facilities and access utility-owned poles to promote 5G deployment.
The Growth of 5G

“Secure 5G networks will absolutely be a vital link to America’s prosperity and national security in the 21st century.” President Trump, April 12, 2019

- South Korea and China have been the leaders in developing 5G networks.
- The Trump Administration supports the development and expansion of 5G networks in order to “win the race to be the world’s leading provider of 5G cellular communications networks.”
- The race to 5G is a race the United States wants to win. The Trump Administration wants to lead the world in cellular technology to develop secure strong 5G.
- The approach is private-sector driven and private-sector led.
Streamlining 5G Approvals in NY

- In the 2020-2021 Budget Proposal, the Governor included legislation to amend the general municipal law, in relation to authorizing municipal corporations to charge for use and occupancy of fiber-optic lines on municipally owned rights of way and establish a uniform process for the siting of small cell wireless facilities; and to amend the highway law, in relation to statewide master license agreements.

SEQRA REGULATIONS AND SHOT CLOCK REQUIREMENTS
New York State SEQRA Regulations and the FCC’s Shot Clocks

- On June 27, 2018, the Department of Environmental Conservation adopted substantive amendments to the implementing regulations of SEQRA.
- The amendments add several new categories of Type II actions that are exempt from environmental review including the installation of telecommunications cables in existing highway or utility rights of way and utilizing trenchless burial or aerial placement on existing poles.
- The exemption is limited to telecommunications “cables” and, therefore, does not include small cells, “nodes” or Distributed Antenna Systems (DAS).

Will SEQRA Review Violate the TCA?

*Crown Castle NG East LLC v. City of Rye, 2017 WL 6311693 (S.D.N.Y. 2017)*

- In 2015, Crown Castle sought to expand its DAS network. The City Council began a the SEQRA review process despite Crown Castle’s argument that the DAS expansion was a Type II action exempt from SEQRA review.
- The City Council issued a “positive declaration” under SEQRA, making the process subject to mandatory environmental impact review under state law. Crown Castle then challenged the City Council’s determination with respect to SEQRA on various grounds.
Recommended Practices

- Know the Rules
- Make A Record
- Reasonable Conditions
Know the Rules

• Make sure Staff tracks the application
• Send all Notices of Incomplete applications in writing
• Have a tracking system with a cover sheet on each application
• Get agreements to adjourn in writing
• Asks for adjournments
• Remember, no default approval on small cell and wireless

Mark Your Calendars!

10 Day Review of Amended Applications

Incomplete with Reset

Small Cell On Existing Structure

Incomplete for Non-Small Cell

Small Cell On New Structure

6409 Co-location

New Cell on New Structure

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<thead>
<tr>
<th>10 Days</th>
<th>30 Days</th>
<th>60 Days</th>
<th>90 Days</th>
<th>150 Days</th>
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Applicable FCC Shot Clock Requirements

1. A municipality may not deny and shall approve any eligible facilities request for modification of an eligible support structure that does not substantially change the physical dimensions of such structure.

2. In order to toll the wireless telecommunications facility application, the siting authority must notify the applicant within the required period of time that the application is materially incomplete, and clearly and specifically identify the missing documents or information and the specific rule or regulation creating the obligation to submit such documents or information.

3. The shot clock date for siting an application is determined by counting forward, beginning on the date when the application was submitted, by the number of calendar days of the shot clock period, provided that if the date calculated is a legal holiday, the shot clock date is the next business day after such date.

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### Applicable FCC Shot Clock Requirement by Type of Wireless Facility

<table>
<thead>
<tr>
<th>Time to determine if initial application is complete</th>
<th>Small Wireless Facility</th>
<th>Non-Small Wireless Facility</th>
<th>Eligible Facility Request (6409 of the Spectrum Act)</th>
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</thead>
<tbody>
<tr>
<td>10 days after receipt of application. Shot clock date calculation shall restart at zero on the date on which the applicant resubmits.</td>
<td>10 days</td>
<td>30 days after receipt of application. Shot clock date calculation shall restart at zero on the date on which the applicant resubmits.</td>
<td>30 days. After receipt of application. Shot clock begins running again when the applicant resubmits.</td>
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<tr>
<th>Time to determine whether subsequent submission is complete following a notice of deficiency</th>
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<tbody>
<tr>
<td>10 days</td>
<td>10 days</td>
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<tr>
<th>Time to render final decision for colocation applications using an existing structure</th>
<th>Small Wireless Facility</th>
<th>Non-Small Wireless Facility</th>
<th>Eligible Facility Request (6409 of the Spectrum Act)</th>
</tr>
</thead>
<tbody>
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Applicable FCC Shot Clock Requirement by Type of Wireless Facility

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<tr>
<th>Time to render final decision when application involves a new structure required</th>
<th>Small Wireless Facility</th>
<th>Non-Small Wireless Facility</th>
<th>Eligible Facility Request* (6409 of the Spectrum Act)</th>
</tr>
</thead>
<tbody>
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<td>150 days</td>
<td>N/A</td>
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Making The Record

• Document alternatives considered
• Document view sheds
• Document character of neighborhood (industrial/commercial/residential)
• Challenge assertions (can’t make it lower. Why?)
• Ask questions
• Ask for information
• Respond to public comments on health concerns
• Fees – safe harbor; not a cap. Can be more than FCC
Recommended Practices

• Train staff on intake to identify type of application
• Understand what you can and cannot regulate, condition or control
• Be aware of the regulations or policies your municipality has adopted that specifically concern small cell wireless facilities.
• Encourage your municipality to adopt small cell wireless facility regulations or design standards

Recommended Practices

• Review the Aesthetic Guidelines periodically
• Enter into written agreements with the applicant to toll the applicable shot clock.
• Review adopted regulations and practices after a year.
• Monitor and evaluate processing of small cell applications.
Questions to Ask Applicants

• What other locations have you considered for this facility? Why did the applicant not pursue those locations?
• Can the applicant implement any stealth? 
• Did the applicant consider the aesthetics of existing street lights and street furniture in the neighborhood of the proposed small cell locations.

Questions You Should Not Ask

• Don’t ask about the health impacts.
• Do ask for certification application meets FCC emission standards
Reasonable Conditions

- Conditions to require equipment should match the aesthetics of the pole and surrounding poles.
- Prohibiting lights on the equipment unless required by Federal law.
- Prohibiting ground mounted equipment, unless applicant demonstrates that no other feasible options for containing the necessary equipment are available.

Reasonable Conditions

- Limits the lowest height of equipment on the pole. (i.e. The lowest point shall not be lower than eight (8) feet from the grade directly below the equipment enclosure.)
- Requiring camouflaging/stealth requirements
- Minimum space requirements
- Requiring undergrounding of certain equipment and wires, where feasible
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