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Regulating Wireless Facilities in Public Rights-of-Way

Regulating Wireless Facilities in Public Rights-of-Way

(Written at the Request of the American Planning Association – Original Draft)

By L.S. (Rusty) Monroe

In virtually every state across the nation there is a new type of player who wants to place support structures (monopoles) ranging in height from **60 to 180 feet in the public-right-of-way (PROW).** The primary purpose of these installations is to provide backhaul service to carriers.

Communities, nationwide, are being faced with a new wireless facility siting issue: applicants claiming the need and right to locate new 60' to 180' tall communications support structures, and related equipment in public rights-of-way (PROW). When first discussing the issue of new support structures and wireless facilities in the public right-of-way (PROW), all-too-frequently we hear comments such as these from local officials and staff:

- "No one ever told us the law allowed . . ."
- "We were told most of this issue was preempted and we had little to say about it anymore."
- "With all the changes in the law and technology, we don't even know what policy choices we have."
- "Why weren't we told about this and how to do it before?"
- "We just took the company's word as regards limitations on our rights."
- "How are we expected to deal with the number of applications the FCC and other experts say to expect?"
- "No one ever explained it like this from our perspective before . . ."

As one can imagine, it's disheartening to hear such comments, and to hear the frustration in their voices. This article is intended to end that frustration and enable local officials to better understand the issue in context, appreciate the significant regulatory rights communities still have in most states, and make informed decisions related to the issue of siting wireless facilities and support structures in the PROW.

Understanding the Matter in Context

The wireless carriers face a demand by the consuming public for ever-increasing capacity, speed and reliability. The challenge to meet this multi-faceted demand is brought about by the seemingly endless number of new wireless services being offered, coupled with the new myriad uses of the internet, many of which seemed like mere pipe dreams less than a decade ago. Because of this, carriers are having to reduce the traffic on each original 'macro' site by building a number of smaller sites, each serving only a portion of the original area and thus reducing the amount of traffic on any given site. This in turn, coupled with the shorter transmission and receive distances involved, is intended to result in the increased capacity, speed and reliability demanded by the public. This means that communities will be faced with the challenge of finding ways to accommodate the number of new facilities needed to meet the public's demand, but without upsetting a large segment of the same public by allowing structures that change the nature and character of their neighborhood and the community in general, negatively impact property values for residences in the immediate vicinity of a facility and that do not present a threat to the public safety. It's the classic NIMBY (not-in-my-backyard) situation.

What's Coming?

The wireless industry has (finally) acknowledged that the number of new sites it needs over the next several years is a magnitude greater than currently exists. Currently there are slightly more than 300,000 wireless facilities, nationally. However, going forward (make sure you're sitting down) <u>each carrier is going to need (at a minimum) a site to serve no more than 50 to 75 of its customers.</u> (You can do the arithmetic for your community.) In some communities it may be twice as many sites as that, depending upon the number of living units and the demand/traffic in a particular area of the community. Of course, in densely populated areas containing large apartment and/or condominium complexes, the density of sites will be significantly greater, as many complexes will need multiple sites to serve that complex.

The need for the number of new sites is because of the [exponentially] ever-increasing demand for bandwidth, the very limited range of the newly available higher frequencies, the emergence of the Internet of Things (IoT), and the desire to use the most economical means of "backhauling" the signal to the local or network switch. Experts estimate the demand for bandwidth may be as much as 1,000 times the bandwidth used three years ago. Meanwhile, the higher the frequency of the transmission, the less robust the signal, meaning higher frequency signals have a maximum useable

range that is significantly less than has historically been the case. Most experts agree that the amount of traffic on the IoT— the demand created by Internet-enabled appliances, vehicles, buildings, and other objects—is expected to exceed that of the entire Internet today. Combined, this situation is creating a sea change, both for the industry and for those charged with regulating wireless facilities.

The area served by a typical macrocell site today covers an area of about one mile radius or two miles in diameter. Going forward this same service area could require a half-dozen or more sites (for each carrier), with each site covering a few hundred yards in each direction. In most instances this will be done using DAS (distributed antenna system) or "small cell" technologies. DAS is a system that accommodates multiple carriers using a single smaller and lower powered antenna and a single central base station, with all antenna sites (nodes) connected via optical fiber cables, thus creating a (local or regional) network. Small cell is another newer technology employing smaller, lower-powered antennas, but serving only a single carrier and the sites are not connected via fiber.

In most communities, these new sites will need to be located in all zoning designations, and frequently the request will be to locate in the PROW, often attaching to existing utility poles, light standards, signs, and similar structures.

A New Type of Player

The new player on the block wants to place support structures (monopoles) ranging in height from **60 to 180 feet in the public-right-of-way (PROW).** The primary purpose of these installations is to provide backhaul service to carriers. Backhaul refers to the links between cell sites, controllers, and switches. Generally, the traffic arriving at a cell site is backhauled to a central location, which is the local switch or the operator's mobile switch. This new player typically wants to use microwave transmissions to provide this function, but microwave is not the only way to accomplish backhaul. In many instances it's simply the least costly and can often allow the wireless signals of multiple carriers to be aggregated.

The companies who want to install these taller support structures may claim to have all the rights of a regulated utility. In fact, many communities have received a letter from one of these companies that makes certain assertions regarding who they are, what they do, and what rights they have, as well as implicitly what rights communities do not have with respect to the siting of their facilities. Based on the letters and proposals to communities we have seen (coast-to-coast), and those we have dealt with in the context of applications, the visual and physical impact of such facilities can be significant. However, in most cases, most of the negative effects can be prevented and still allow for a win-win situation . . . if the community knows how.

It's important to understand that these entities are not wireless carriers or Internet Access Providers (IAP), and without a specifically identified carrier or IAP as a joint applicant, they have no standing (i.e., benefits) under federal law or Federal Communications Commission (FCC) rules. They're tower/wireless support structure companies and nothing more and the structure is erected on speculation, i.e. in hopes that some carrier or IAP will someday use it. The problem is that they often claim, and convince communities, that they are exempt from local zoning, land-use, or similar regulations, simply because they have a "Certificate of Necessity and Convenience" (or the functional equivalent) from the applicable state's utility regulatory agency. This assertion is not factually correct and in most states is an example of putting a self-serving "spin" on the law.

These companies are not utilities in the traditional sense. They do not provide a retail service to the consuming public as do utilities, and their operations, rates, rate-of-return on invested capital, and customer service standards are not regulated by the state's utility regulatory agency, as is the case with utilities. We have spoken with several state utility regulatory agencies and not one could explain how or in what manner they were regulated by the agency. They are simply the holder of a certificate that effectively gives them the right to locate in the public rights-of-way (if permitted under local law and regulation), and in a few states (e.g., New York) enables them to be subject to somewhat less stringent zoning variance or waiver standards. However, they are still subject to local regulations, including but not limited to zoning, construction, land-use, and safety regulations (FCC 14-153§(A)(249,259)&(B)(3)). In no state that we know of does the certificate they hold exempt them from properly adopted local regulations dealing with the location, size/height, aesthetics/appearance, physical design, construction, safety, and maintenance of the facility.

Contrary to what many local officials and staff have been [mis]led to believe, under current federal law and FCC rules, local governments still retain most of their regulatory authority over these issues, including compliance with operational safety regulations. These include compliance with the FCC's OET 65 EMF radiation standards and TIA ANSI 222. TIA ANSI 222 is part of the ANSI Code and expressly deals with the issue of tower safety, including the design and the ongoing physical state or condition of a tower and the equipment attached to it. Compliance with TIA 222, or in a few states' the functional equivalent, is the elephant in the room that few applicants are addressing. In handling hundreds of applications for modifications or co-locations for communities in just the last 24 months, we've found it to be the exception rather than the rule when a wireless facility passes a TIA 222 safety inspection (done by a third party). It's largely a matter of how that authority is implemented and administered, rather than the existence of the authority itself. The authority exists, but as with all things it must be implemented and administered in accordance with the law.

Backhauling Options

While the new player's business model involves erecting (tall) monopoles in the PROW to enable carriers and IAP's to use microwave to backhaul the signal to the switch, **microwaving is not a technical necessity**, but rather simply an alternative means of backhauling the signal. The alternative is fiber. Consequently, a community that prohibits new, separate wireless communications support structures in the PROW that are taller than the existing poles or light standards should not run afoul of the federal prohibition against communities acting in a manner that has the effect of "prohibiting" the provision of service (47 U.S.C. §332(c)(7,B,II).

A New Type of Support Structure

There has been a new development in support structures specifically for use in the PROW. These new structures allow accommodation of multiple carriers, with all antennas housed internally, and they do not exceed the height of the adjacent utility or light poles. They can function as a utility pole for incumbent utilities and others such as a fiber transport company, and can also be designed as a light pole, or both. However, before local governments can effectively

promote these structures as alternatives to tall monopoles, the owner(s) of the existing utility or light poles must be on board with the concept, and there must be someone on staff, or available to staff, who truly knows the applicable laws that allow local governments to achieve their goals. That person also needs to know and understand the new technology and its true siting needs, as opposed to the merely asserted need. Then the two areas of knowledge can be "married" to create a win-win regulatory situation.

HR 6409 and FCC Rulemaking 14-153

In addition to the 1996 Telecommunications Act, the federal legislation and FCC rules that are most directly applicable to the deployment of new facilities and the modification of existing facilities today are HR 6409 (of the Middle Class Tax Relief and Job Creation Act of 2012), the FCC Declaratory Ruling 09-99, and the FCC Report and Order 14-153 (clarifying HR 6409 and Declaratory Ruling 09-99).

With regard to the process for reviewing an application for an "eligible" facility under Section 6409(a), the legislation establishes two categories of wireless-related applications: an "eligible" facility and a "substantial" modification. Notably, it does not do anything as regards permitting new support structures/towers or "substantial" modifications of existing facilities. There have been numerous articles published that discuss in detail the specifics of what constitutes an "eligible" facility, so that is not addressed in this article.

Notably, Section 6409(a) applies only to state and local governments acting in their role as land-use regulators and does not apply to them acting in their proprietary capacities (i.e., as the owners of public property, including the PROW vis-à-vis franchise or encroachment agreements). These remain contractual in nature and are not encumbered by the new regulations.

What's Preempted Under 6409 and 14-153?

The FCC Report and Order 14-153 expressly protects and reconfirms local authority to enforce and condition approval on compliance with generally applicable building, structural, electrical, and safety codes and with other laws codifying objective standards reasonably related to health and safety, including local zoning and wireless siting, design, and construction regulations. However, 6409 and 14-153 do preempt the following:

- The definitions of what constitute an "eligible facility" and a "substantial modification" of a facility, both inside the PROW and outside the PROW.
- The maximum time allowed for determination of completeness/incompleteness and action on an application (i.e., the "Shot Clock" requirement). The allowed time periods are 60 days for an "eligible facility" and 150 days for a "substantial modification" or for a new support structure/tower (unless a longer period of time is mutually agreeable).
- Certain NEPA requirements, under certain conditions, for an "eligible facility" application.
- Proof-of-technical- need for 'eligible' facilities.

Attaching Conditions to Eligible Facilities Permits

Given that a community must permit an eligible facility application, and may not deny it, a key issue is that of being able to attach conditions. We are not aware of any FCC rule or case law that prohibits attaching conditions to a wireless facility permit, including eligible facility applications. However, for an eligible facility application on an existing structure, the law does prohibit attaching any condition(s) in excess of, or that are more stringent, than are needed to assure compliance with the permit issued for the original facility.

Handling Today's Situation

The current situation, as it has developed, is a game-changer for planners and local officials. Regrettably, in our experience many, if not most, municipalities are unprepared for what will be the large number of applications, often submitted simultaneously, for small cell sites, DAS nodes, and microwave backhaul installations, especially in the public rights-of-way. We have seen communities as small as 1,500 residential units have as many as a half dozen applications filed simultaneously by a single carrier. In other larger communities as many as 20 applications, or notices of intent for as many, if not more, applications have been filed simultaneously by a single applicant. Both of these situations place an unreasonable burden on staff and, because of the Shot Clock requirement, often force them to place these applications ahead of other types of applications awaiting action. Consequently, staff is often forced to "rubber stamp" the applications (as submitted), rather than having the time to review the applications in the detail needed, and intended by both Congress and the FCC.

Because the requests to place new [tall] wireless facilities in the PROW is new territory for many municipalities, we recommend that they start immediately thinking carefully about the end result(s) they want to achieve. This includes what they want to prevent, what they want to encourage, and what they want to assure happens, as well as the policies needed to achieve those results. As examples, does the community want to regulate any of the following vis-à-vis the PROW?

- The maximum allowable height of facilities in the PROW.
- The minimum separation distances between wireless facilities.
- The location in the PROW, e.g. in front of residences.
- Appearance/aesthetics (e.g., camouflaging to make it unrecognizable as a wireless facility to a layperson and thus minimize the impact on the nature and character of the area).
- Setback distances.
- Placement and appearance of ancillary equipment (e.g., equipment enclosures).
- The amount of rent charged for the private, commercial use of the PROW.

Since these facilities will likely be needed throughout most communities, and are often attempted to be placed directly in front of residences and in sensitive historic preservation and view shed areas, planners and local officials should be very careful in making the necessary new policy decisions regarding placement, size, and appearance in or near the PROW. In doing so, it is critical to keep in mind the law of unintended or unforeseen consequences. A reasonably indepth knowledge of the industry, and especially what it considers its confidential and proprietary plans and goals, is the

key to preventing this! To attempt to do this without an intimate knowledge of the industry can be dangerous and can have both short and long term undesired consequences.

Recommendations

The following are recommended for consideration by planners and local officials and are based upon what have to date been unchallenged policies and practices.

Priority of Types of Permits

Make sure the community's wireless/tower regulations expressly state that even though a new structure may be proposed to go in the PROW, and notwithstanding anything else to the contrary, such a new structure, regardless of its location, height, or appearance, should be defined as first, foremost, and always a [wireless] communications tower or facility, and is subject to the local wireless/tower regulations. Any other permitting regulations should be secondary to this and should require a zoning or land-use permit under the local wireless/tower regulations before obtaining any other permit.

Maximum Permitted Height

We recommend that communities establish a maximum permitted height for wireless facilities in the PROW. Communities may want to consider different height limits for different zoning districts, or different geographic parts of the community regardless of the zoning district. For taller facilities proposed in less restrictively zoned districts, such as industrial or commercial districts, but near more restrictively zoned districts, such as residential districts, there is an easy way to mitigate the impact and hopefully prevent a good deal of political dissatisfaction from the public. A community may want to require that, within a given distance of the boundary of an adjacent zoning district that is more restrictive (e.g., within 1,000 feet of an R-1 zoning district), the height limit is the same as the more restrictive district. Otherwise, residents living on or near the district border will likely have to live the effects of a facility only a short distance from their home that would not otherwise be allowed in the residential district. In many states, if a structure is allowed in a zoning district there is a presumption that it is in harmony with the area, so it is critical that the local regulations place restrictions on facilities that are in keeping with the nature and character of the particular zoning district. By the same token, the PROW can be deemed a separate de facto 'district' with its own requirements and restrictions.

An example could be that the maximum permitted height in the PROW (or within reasonable proximity to the PROW) may be no taller than the existing, immediately adjacent utility poles or light standards. This is not an unreasonable limit, since the vast majority of the new wireless facilities going in the PROW are for capacity and are not primarily to increase coverage. They are intended to serve only a portion of the area currently served, and thus increased coverage is not normally an issue, other than to hopefully improve service to residents in some small areas on the border of the current service area. The goal is to have no service 'borders'. Since they're generally going to be serving only a portion of the area currently served, these sites seldom need to be taller than the existing adjacent utility poles. Providers may need to construct two shorter facilities, rather than a single taller facility or one shorter facility in combination with a colocation on an existing structure, but most communities would prefer either of these situations to a single tall facility (that's really not needed technically).

Something that is seldom known or understood is that federal law does not require a community to grant a permit for a single (tall) facility if two or more smaller/shorter facilities can achieve substantially the same result, or better; nor does it require a community to take into account the capital cost to a carrier to achieve what it desires while complying with land use and zoning regulations. Notably, under federal law those costs are allowed to be capitalized under an accelerated depreciation schedule. This has significant tax benefits to a business.

Minimizing Visual Impact in the PROW

To minimize the visual impact and control the appearance of a specific facility in the PROW, as the number one siting priority communities might want to consider requiring that any proposed [new] array of antennas be mounted on a structure that enables the antennas to be placed inside the support structure, unless the applicant can prove (by clear and convincing technical evidence) that doing so would serve to "prohibit" the provision of service to at least a substantial portion of the area intended to be served by the new facility (47 U.S.C. §332(c)(7,B,II). This is a very high bar that Congress intentionally set, and in most instances it is extremely difficult to prove technically that doing so would serve to "prohibit: the provision of service, assuming that one knows and understands the technical intricacies and nuances involved. Another slightly different approach would be to prohibit any new antenna array from being visibly identifiable as such to the average person—different wording, but the same effect. An example of the extent to which the visual impact can be controlled, and that has been complied with by the industry, is the Adirondack Park Agency's policy (in upstate New York) that new towers and wireless facilities be "substantially invisible".

Rather than just accepting another [ugly] new array of antennas attached to an existing utility pole or light standard, and notwithstanding 6409(a), there are communities who require that, instead of just co-locating on an existing utility or light pole with the antennas mounted on the outside around the pole, an applicant must arrange to have the pole replaced with one that houses the antenna(s) inside. They may still locate in the PROW, but they must do it in accordance with this 'stealth' or 'camouflaging' policy in the community's tower and wireless facilities siting regulations.

Revenue/Rent

For reasons of generating revenue for the community, a community may prefer new wireless facilities to be located in the PROW as the #1 siting priority. The rent for the commercial use of the PROW can be deemed an encroachment fee, a franchise fee, or any functional equivalent. In most states this can be accomplished easily in the local regulations. This rent can be significantly more than many communities realize they may demand and regrettably all-too-many undervalue this asset or are convinced that charging less will gain them something or prevent some negative effect. In more than four decades assisting hundreds of communities, we do not recall a single instance when a community gained something significant or prevented something negative by charging a low rent. Rent for the private commercial use of the PROW should be a set amount, which could potentially be dependent upon the location. If done for legitimate purposes, this could be a significant tool to incent or dis-incent specific types of locations. On a related note, think

outside the box when negotiating lease agreements and pay particular attention to the often seemingly innocuous and detailed language of the less "sexy" issues in the proposed agreement. A number of issues are buried there to avoid scrutiny, and seldom is the language in the lessor's favor.

One example of this is the industry preference to slip in what seems a 'reasonable' requirement for a periodic rent escalator to be a percent increase, e.g. fifteen percent, over the initial rent every five years. If this every-five-year approach is accepted for the common twenty to thirty year lease, the community (unknowingly) gives up more than half the revenue it would otherwise have realized from the rent.

Another example is the trap of tying the initial rent to the 'prevailing' rent paid in the area. That sounds reasonable, doesn't it? But most current as well as older leases, for both towers and antennas attached to other structures, were signed for significantly less rent than the landlord could have obtained, commonly as much as two-thirds less. In such instances, If all the rents in the area are based on the 'prevailing' amount at the time the first leases were signed, by definition that base amount never changes, not unlike with rent controlled apartments. This creates a 'Catch-22' situation until the lease expires and comes up for renewal and the landlord has hopefully either learned what it gave up originally or has hired someone experienced in negotiating leases for towers and co-located antennas. Caution: One should never attempt to negotiate something that they don't the true value of to both parties. Not what the lessee says the value is or isn't, but what you know the true value to be. Also, unless required to do so by state law, do not negotiate these leases as real estate deals, as that can limit a community's options and even its rights. They should be negotiated as arms-length business deals, and not tied or related to any 'comparables'.

When the State Prohibits Requiring the Use of the Community's Property

Some states, such as North Carolina, prohibit communities from requiring the use of their property. However, there are almost always multiple owners of the PROW in a community (e.g., the municipality, the county or the state). Simply requiring that the PROW in general (not just the ones owned by the community) are deemed to be the number one siting priority should steer clear of state prohibitions against requiring the use of "the community's" property. It then becomes a general land use issue which is permissible, not substantially any different than designations for industrial, commercial or residential property, and is not tied to the ownership of the land.

For those preferring that these facilities be located on the PROW, the community could require that for a facility to be located outside the PROW, but within a given distance of the PROW, the applicant must provide "clear and convincing" (technical) evidence of the inability to locate in the PROW, perhaps even using a couple of sites instead of just one, and still accommodate the need or goal of the carrier, and likely provide even better service. In this scenario there would be no "prohibition" of the provision of service vis-a-vis federal law. Conversely, if the community wants to minimize the location of new facilities in the PROW, the PROW can be placed further down in the list of siting priorities, perhaps even last.

Conclusion

The rise in applications for wireless facilities in the PROW is a classic NIMBY situation, but in this case it's one that actually has solutions. In spite of what many local officials and their staff and attorneys have been erroneously led to believe, for the most part communities can create win-win situations without giving up rights or regulatory control. Permitting can be done so that carriers can get what they need technically, but with a minimum of public controversy and with minimal visual intrusion (virtually undetectable) and impact on property values.

The industry often tries to get Planning staff and local officials to believe that if they have the type of regulations they really need and should have, it will discourage and slow down deployment by the industry. History has shown this to not to be factually accurate. One need only compare the situation in communities that have strict regulations crafted with an in-depth knowledge of the industry and the law, to the situation in communities with minimal or even no regulation. Arguably, some of the best wireless service in the Nation is found in communities with strict regulations and less stringent regulations often lead to less than desired service in the community.

Officials, staff, and municipal attorneys should never make assumptions, unless they know for a fact that their assumptions are correct. Communities should consider retaining an expert consultant (who has no ties with the industry) and discuss with that person their objectives and the several options they have to achieve their policy goals. However, be careful of people with just several FCC licenses and a bunch of acronyms after their name, as that doesn't not make them knowledgeable of the industry or technical experts. Be equally cautious with those holding a PE license, but with only a single specialty area of practice such as 'structural'. Many times such persons are not qualified to proffer 'expert' opinion or testimony outside their specialty, especially as regards proof-of-technical-need for what's requested. Conversely, there are those with no engineering degree, but who are quite experienced with analyzing technical date and can be qualified as 'experts' based on practice and experience, similar to a 'Mustang' NCO in the military.

The industry sees a large part of its job as being to avoid regulations, and is constantly looking for ways around, or inherent legal problems with, regulations, whether the regulations are federal, state, or local. That doesn't necessarily make them bad actors, though. They're simply not charged with protecting the public interest as are local officials. They're charged with maximizing the company's bottom line. However, if handled carefully, both sides can end up on the same page. It's up to the local officials to see that they and their staff know, or have access to, an expert who knows how to assure that both the public and the public interest are protected. The industry representatives need to be shown that abiding by local regulations can still get them what they need technically, in a timely manner, and that they can discuss issues with people who are knowledgeable and informed and who understand their needs and limitations and various ways of achieving their goal. With all the new developments that require different approaches, there is little benefit to be derived from limiting one's approach to thinking 'inside' the traditional box.

In the meantime, the best advice we can proffer is to not make assumptions and trust only those who are proven experts, and those who do not work both sides of the street, and whose primary duty and obligation is to serve you, and not a member of the industry.

About the Author

L.S. (Rusty) Monroe is an owner of Monroe Telecom Associates, LLC and a co-owner of The Center for Municipal Solutions (CMS), both of which for 20 years have assisted local governments in dealing with the regulation of towers

and wireless facilities. These entities currently represent approximately 900 communities in 38 states. Mr. Monroe has conducted workshops and seminars for more than thirty local and national government organizations on the regulation of towers and wireless facilities, including multiple times for a number of them. Questions may be sent to lmonroe8@nc.rr.com.

WHAT YOU DON'T HAVE TO ACCEPT



Traditional Multiple Small Cell antennas on utility pole



Traditional Monopole with multiple carriers in PROW



Mobilitie 120' microwave backhaul facility in R-O-W



120' Monopole in just outside R-O-W

WHAT YOU DON'T HAVE TO ACCEPT



Traditional 100' Monopole in PROW in Residential Neighborhood



Traditional 80' Monopoles in PROW in Residential Neighborhoods (Two were built, because the community didn't know how to prevent the second one)



Single-carrier DAS Node on Long Island

BETTER ALTERNATIVES









BETTER ALTERNATIVES (continued)



New approach: 35' Combination Utility/Light Pole/Cell Site



New Approach: 30' in Residential Neighborhood

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