

# POLICY REPORT: SMALL CELL FACILITIES IN BOULDER, CO

## PLANNING AHEAD FOR AN EVOLVING LEGAL REGIME



**POLICY REPORT:**  
**Small Cell Facilities in Boulder, CO**  
Planning Ahead for an Evolving Legal Regime

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## **About the Report:**

The primary goal of *Small Cell Facilities in Boulder, CO: Planning Ahead for an Evolving Legal Regime* (“Small Cell Facilities Report” or “Report”) is to inform decision makers in the City of Boulder (“Boulder”), as well as other interested governments, about how to most effectively regulate small cell facilities in accordance with local, state, and federal laws. As discussed in the Report, local governments would be wise to employ proactive legal tactics since many of the applicable laws and rules are in flux.

While there are strong opinions for and against the deployment of SCFs in Boulder, particularly with regards to 5G, this Report attempts to maintain neutrality in order to best assist local government, rather than reflecting the interests of any particular stakeholder. That being said, the Report’s primary author did receive a small payment to complete this Report from local citizens who are concerned about 5G.

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# I. Introduction

The telecommunications (“telecom”) industry is laying the groundwork for a national 5G network by rapidly installing small cell facilities (SCFs) in communities across the country. “Let it rip!” exclaimed Larry Kudlow, Director of the National Economic Council, at a White House 5G summit in late-2018.<sup>1</sup> With the small cell market expected to be worth \$5.2 billion in 2024,<sup>2</sup> driven largely by LTE and 5G, there is a huge economic interest pushing deployment nationwide.

Some local governments are eager to modernize their cell networks with 5G. The industry asserts that it offers a significant speed boost, and it already downloads as much as 20 percent faster than maxed out LTE.<sup>3</sup>

Other local governments want to take a pause, citing a variety of potentially significant, but not fully understood, impacts to human health, the environment, home values, and services such as weather forecasting. In addition to these concerns, many local governments are also worried about the impact of SCFs on a community’s aesthetics and safety. Finally, community leaders

Despite these uncertainties, the telecom industry is installing SCFs by the thousands. If fully built out, they could number anywhere from a few hundred thousand to a few million in the U.S.<sup>4</sup>

Local governments who are concerned about SCFs and 5G have largely been unable to stop deployment. Local governments can essentially only review aesthetic and limited safety impacts from SCFs due to national and state laws and Federal Communications Commission (FCC) rules that preempt local authority. Local governments cannot consider human health, environmental, or other concerns, other than verifying that radio-frequency (RF) exposure standards set by the FCC are being met. In turn, industry insiders heavily influenced applicable FCC rules. Agit Pai, FCC Chair and a former Verizon lawyer, strongly promote industry interests.<sup>5</sup>

The telecom industry has also managed to influence state laws on SCFs. Over 20 states, including Colorado, passed legislation that preempts local control on SCFs based on model language endorsed by the American Legislative Exchange Council (ALEC), a non-profit organization of conservative state legislators with

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<sup>1</sup> Roslyn Layton, “‘Let It Rip!’ Says Larry Kudlow On White House 5G Summit,” *Forbes* (Sept. 28, 2018).

<sup>2</sup> Kendra Chamberlain, “Mobile Experts Predicts Small Cell Market to Hit \$5.2B by 2024,” *FierceWireless* (Apr. 10, 2019).

<sup>3</sup> SDX Central, “How Is 5G Different From 4G LTE?”

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<sup>4</sup> Allam Holmes, “5G Wireless Pits Cities Against Telecoms and Their Friends in the FCC,” *The Center for Public Integrity* (Mar. 2, 2018).

<sup>5</sup> See e.g., Sharon Buccino, “5G and the FCC: 10 Reasons Why You Should Care,” *NRDC* (Feb. 13, 2019), at: <https://www.nrdc.org/experts/sharon-buccino/5g-and-fcc-10-reasons-why-you-should-care>.

significant industry influence. The goal of these laws is to preempt local authority from regulating public rights-of-way and to pave the way for the massive proliferation of 5G within a short timeframe.

However, FCC rules are being challenged in federal court by cities and advocacy groups. If they do survive these challenges, a potential new administration in 2020, if Donald Trump is not reelected, could change the telecom regulatory framework. What is true today might not be true tomorrow.

Considering rapid developments in the governance of SCFs, as well as a growing amount of legitimate concern over the impacts of 5G, this Report concludes that the City of Boulder should implement a flexible legal regime, one that can be updated quickly, while regulating SCFs to the maximum extent allowable by the law.

## II. Frequently Asked Questions

### **What is a Small Cell Wireless Facility?**

A small cell facility (SCF) (sometimes called a “small cell wireless facility” or “small wireless facility”) is a cellular network that delivers high transmission data transfer speed at a lower range, typically 500 to 1,000 feet. The “small” in “small cell facility” refers to a device’s range, not its physical size. In practice, many SCFs are the size of a picnic cooler or a mini fridge. In Colorado, per HB17-1193, SCFs are not to exceed three cubic feet for the antenna nor seventeen cubic feet for the primary equipment enclosure, excluding some pieces of equipment.<sup>6</sup> Typically, SCFs are installed in the public rights-of-way on existing and replacement utility poles and street lights.<sup>7</sup>

### **How is 5G Different From Other Wireless Networks?**

5G differs from other wireless signals by using millimeter waves at the top of the radio spectrum, whereas previous generations operated on a lower wavelength. This allows for the faster transfer of data.

### **What are Some Potential 5G Harms?**

A growing number of experts argue that 5G presents significant environmental, human health, and other risks that warrant concern and underscore the need for additional

research. For example, 5G uses mostly “high band” frequency millimeter waves, which can potentially cause skin temperatures to rise and present unknown long-term health impacts, according to experts,<sup>8</sup> particularly since tens of thousands of 5G transmitters could be placed in a single urban area. In 2018, two large studies found that non-ionizing radiation from cell phone networks increased cancer risks in lab animals.<sup>9</sup> Another potential impact is major interference with weather forecasts (as reported by the head of NOAA).<sup>10</sup> Finally, SCFs, particularly when installed en masse, can degrade a community’s aesthetics and decrease home values.<sup>11</sup> and impair a community’s sense of place. Together, the deployment of 5G amounts to an experiment on human and environmental well-being. For this reason, countries such

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<sup>8</sup> See e.g. comments of Suresh Borkar, senior lecturer of electrical and computer engineering at the Illinois Institute of Technology, as quoted in: Ally Marotti, "5G is Here. Is It a Technological Leap Forward — Or a Health Concern?," Chicago Tribune (May 1, 2019).

<sup>9</sup> Charles Schmidt, "New Studies Link Cell Phone Radiation with Cancer," Scientific American (Mar. 29, 2018), at: <https://www.scientificamerican.com/article/new-studies-link-cell-phone-radiation-with-cancer/?redirect=1>.

<sup>10</sup> Jason Samenow, "Head of NOAA Says 5G Deployment Could Set Weather Forecasts Back 40 Years. The Wireless Industry Denies It," The Washington Post (May 23, 2019).

<sup>11</sup> See e.g., Realtor Magazine, "Cell Towers, Antennas Problematic for Buyers" (Jul 25, 2014), at: <https://magazine.realtor/daily-news/2014/07/25/cell-towers-antennas-problematic-for-buyers>.

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<sup>6</sup> See HJB17-1193 Sections 2(4)(a)(II)(A)-(B).

<sup>7</sup> City of Monterey, "Small Cell Wireless Facility: Frequently Asked Questions," at: <https://monterey.org/Portals/0/FAQs/Wireless-Facility-FAQ-FINAL.pdf>.

as Belgium and Switzerland have started to slow down 5G rollout while they evaluate health risks. Additionally, many other politicians, civil society groups, and concerned citizens across the world are rallying to slow or halt 5G.

### **Do All Small Cell Facilities Already House 5G?**

No. SCFs can house 3G, 4G, 4G LTE, and/or 5G. Currently, in most cities, the SCFs being installed are employing 4G LTE technology because 5G is not yet available aside from a handful of locations. However, these same units can be retrofitted to add 5G technology. Since 5G networks require 4G to function, many SCFs will house both networks. Overall, SCFs are essential to the telecom industry's plans to rapidly deploy 5G nationally in the coming months and years.

### **Can SCF Applications Be Denied Based on Environmental Impacts?**

No, so long as the RF emissions from a SCF meet FCC regulations the SCF application will not be denied. However, cities can

require that SCF applicants prove that their proposed facility will meet FCC standards.

### **What Police Powers Do Local Governments Maintain for SCFs?**

Local governments still maintain their traditional police powers to the extent that they are preserved by applicable federal and state regulatory frameworks, which are described further below. For example, federal law preserves the authority of local governments to exercise authority over the public right-of-way, including reasonable time, place, and manner restrictions on constructing and installing SCFs. However, in exercising their community discretion, local governments may not effectively prohibit the deployment of SCFs, including those to be used for 5G. In some instances, a local government may be legally required to approve a facility even if it does not comply with local rules. Concerned about their lack of local control, dozens if not hundreds of local governments have taken action against the preemption of their longstanding police powers to regulate communications facilities.



# III. Laws and Regulations

## State Law

In the past several years, twenty-one states (including Colorado) have passed laws that curtail local authority over SCFs. As noted above, these laws are largely inspired by industry-influenced model legislation from ALEC. Or, in the view of proponents, the legislation “streamlines regulations to facilitate the deployment of 5G small cells.”<sup>12</sup> Typically, these state laws require local governments to allow SCFs on public right-of ways, such as utility poles, and restrict zoning requirements for installing telecom facilities.

In 2017, Colorado passed House Bill 17-1193 (“HB 17-1193”). The law expedites the permitting process for SCFs and small cell networks (SCNs) and clarifies the right of providers to locate SCFs and SCNs on local government entities’ light poles, light standards, traffic signals, or utility poles in the rights-of-ways owned by local government (other than those with tolling collection or enforcement equipment). It also limits the fees that local governments may charge providers in accordance with the federal Telecommunications Act of 1996.

## Federal Law

**47 U.S.C. § 332:** Section 332 restricts the authority of state and local governments to

regulate wireless communications facilities in some areas and reaffirms that authority in others. For example, local authorities are authorized to make decisions on the placement, construction, and modification of wireless communications facilities.<sup>13</sup> However, they cannot unreasonably discriminate among providers of functionally equivalent services—which means they cannot, for example, discriminate against 5G versus 4G LTE services. Nor can they prohibit or have the effect of prohibiting the personal wireless services. Finally, local authorities cannot regulate siting based on RF emissions. Instead, they may only require that facilities comply with FCC RF standards.

**47 U.S.C. § 253:** Section 253 establishes that state and local governments cannot prohibit, or prohibit in effect, an entity from providing telecom services. But it does have limitations in the form of two “safe harbors.” First, it maintains the authority of State and local governments to “impose [...] requirements necessary to preserve and enhance universal service, protect the public safety and welfare, ensure the continued quality of telecommunications service...” (47 U.S.C. § 253(b)). Second, it also maintains the authority of State or local governments “to manage the public rights-of-way or to require fair and

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<sup>12</sup> Heather Morton, “Mobile 5G and Small Cell 2019 Legislation,” National Conference of State Legislators, at: [www.ncsl.org/research/telecommunications-and-information-technology/mobile-5g-and-small-cell-2019-legislation.aspx](http://www.ncsl.org/research/telecommunications-and-information-technology/mobile-5g-and-small-cell-2019-legislation.aspx).

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<sup>13</sup> “Except as provided in this paragraph, nothing in this chapter shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities.” Section 332(c)(7)(A).

reasonable compensation from telecommunications providers.” (47 U.S.C. § 253(c)).

### **Other Relevant Laws**

**47 U.S.C. § 1455(a) ("Section 6409(a) of the Spectrum Act"):** Requires State or local governments to approve certain requests for modifications of existing wireless towers or base stations that do not substantially change its physical dimensions.

**AB 57 (Quirk) (codified under Gov. Code § 65964.1):** Wireless applicants may assert that a wireless telecommunications facility application is "deemed granted" if a city or county has not acted on an application within the “reasonable time period” for that particular type of facility, which is known as the “shot clock.”

### **FCC Order**

The FCC’s 5G Order on Small Cell Siting (“FCC Order”) was passed on Sept 26, 2018 and entered into force Jan 14, 2019. It specifically pertains to 5G wireless infrastructure. The Order ensures minimal local and state restrictions for SCFs that support 5G. The Order also sets accelerated timelines for approving new sites (through the “shot clock”), limits aesthetic review, and restricts costs and fees associated with SCF applications.

The “shot clock” requires acting on all SCF applications (including batch applications) for deployment on existing structures within 60 days and on new structures within 90 days. If, however, a locality notifies the applicant within 30 days of the submission date that the application is incomplete, the shot clock is paused. After this, the locality can pause the clock again if

it provides written notice within 10 days that the supplementary submission did not provide the information identified in the original notice.

According to the FCC Order, local governments cannot pass laws that prohibit small cell deployment. There are, however, certain regulations that a local government can pursue if they adhere to three principles. They must be: “(1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) published in advance.”

One power maintained by local governments, if compliant with the three requirements above, is the regulations of aesthetics, including spacing/separation requirements. On the other hand, there are powers that the Order prohibits. For example, if a facility complies with applicable FCC regulations governing radio frequency emissions, local agencies are precluded from rendering a decision based on public health and safety.

The Order also sets “Safe Harbor Fee Levels,” which are state and local fees or SCs that presumptively comply with the Telecommunications Act. As guided by the Order, recurring fees should be capped at \$270 per small cell site per year—significantly less than the average \$500 communities traditionally charged SCFs. Non-recurring fees, such as application fees, can be up to \$500 for a single up-front application that includes up to five small wireless facilities, with an additional \$100 for each small wireless facility beyond five (or \$1,000 for a new pole to support a facility).

## **Legal Challenges**

There has been significant opposition to the FCC Order from local governments, environmental groups, grassroots organizations, and others. The U.S. Conference of Mayors stated that the FCC Order "...misapplies federal law to federalize local public property as part of its efforts to bestow upon a class of private companies special rights to access local rights-of-ways and public property."<sup>14</sup>

Local Governments Lawsuit - City of San Jose v. FCC (19-70144): A series of municipalities filed petitions for review in the Ninth Circuit, alleging the FCC Order exceeds the FCC's statutory authority, is arbitrary and capricious and an abuse of discretion, and is otherwise contrary to law. A group of mobile service providers also filed petitions for review in numerous appellate courts, arguing that the FCC's failure to adopt a "deemed granted" remedy was "arbitrary and capricious." The majority of these petitions were consolidated to the Tenth Circuit and then transferred to the Ninth Circuit as *City of San Jose v. FCC (19-70144)*.<sup>15</sup> Over 60 municipalities are represented in the lawsuit, almost all by Best Best & Krieger LLP. A decision is expected to be made in the coming months. If the FCC Order is invalidated, municipalities will have significantly more leeway to regulate SCFs, including those capable of transmitting 5G.

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<sup>14</sup> John Eggerton, "FCC Approves 5G Rollout-Related Reforms," *Multichannel News* (Sept. 26, 2018), at: <https://www.multichannel.com/news/fcc-approve-s-5g-rollout-related-reforms>.

<sup>15</sup> Congressional Research Service, at: <https://fas.org/sqp/crs/misc/LSB10265.pdf>.

NRDC Lawsuit - NRDC v. Federal Communications Commission: On May 14, 2018, the Natural Resources Defense Council (NRDC)—along with nineteen Indian tribes, National Association of Tribal Historic Preservation Officers and the National Trust for Historic Preservation—sued the FCC for its Order exempting SCFs from public participation and environmental review, which they allege violates the National Environmental Policy Act and the National Historic Preservation Act.

## **Proposed Legislation**

Rep. Anna Eshoo (D-Calif.) introduced legislation that would overturn the FCC Order. Called the "Accelerating Wireless Broadband Development by Empowering Local Communities Act of 2019" (H.R. 530), the legislation deems that the FCC Order "shall have no force or effect."<sup>16</sup> Meanwhile, there is movement in a number of states to repeal the restrictive state laws based on model legislation from ALEC, along with other quickly-moving legal developments that stand to quickly shift the laws pertaining to SCFs. Therefore, local governments should assume that the legal landscape will change quickly and plan accordingly.

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<sup>16</sup> H. R. 530, Introduced in House Jan. 14, 2019, available at: <https://www.congress.gov/bill/116th-congress/ho-use-bill/530/text>.

## IV. Learning from Cutting-Edge Small Cell Wireless Laws Across the U.S.

In reaction to the FCC Order and state laws, many local governments have passed ordinances and resolutions that maximize their oversight of SCFs within allowable limits. Some have employed creative but effective strategies to ensure robust oversight of SCFs despite the attempt of state and federal government to almost totally preempt their local authority.

The below information summarizes some of the tactics employed by local governments. Additional information can be found in the Appendix, including sample laws from a variety of local governments. To interpret and apply the below information, the City of Boulder would be wise to work with a respected telecom law firm to craft a law that meets local needs.

### **1. Minimum distances between SCFs.**

Local governments can establish minimum distances between SCFs for aesthetic purposes only. For example, Calabasas, Petaluma, Fairfax, Mill Valley, and San Ramon (all California) require 1,500 feet between SCFs. Danville, CA requires 500 feet. In Warren, Connecticut, all applicants for new telecom facilities have to show “evidence of need,” including demonstration that existing facilities do not provide adequate coverage and/or adequate capacity to the area.

**Recommendation:** Establish as much separation as possible between SCFs

without effectively prohibiting them. That could be, perhaps, a 1,000 foot distance requirement between cell facilities. Another option is to have a relatively large minimum distance between SCFs with an exception if an applicant can prove that a shorter distance is necessary. Finally, the City of Boulder could require applicants to demonstrate that existing cell facilities do not provide adequate coverage and/or adequate capacity, as defined, for all SCF applications.

**Justification:** A local ordinance cannot have the effect of prohibiting SCFs from functioning per federal law and FCC guidelines.<sup>17</sup> Recall that aesthetic and other requirements must be 1) reasonable, 2) no more burdensome than those applied to other types of infrastructure deployments, and 3) objective and published in advance.<sup>18</sup> Nor can minimum distance requirements be based on anything other than aesthetics. While some ordinances required 1,500 feet between small cell wireless locations prior to the 2018 FCC rules, this may now be illegal. A legally-justifiable minimum distance between small cell facilities might correspond to the range of a SCF, which, is often 500 to 1,000 feet each.

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<sup>17</sup> See Small Cell Order at ¶ 82; see also Telecommunications Act of 1996, Sections 253(a) and 332(c)(7)(B)(i)(II).

<sup>18</sup> 2018 Small Cell Order at ¶¶ 86-87.

## **2. Setbacks from Residences and Other Specific Places**

Many communities have created a required setback distance of SCFs from residences. Some communities also ban SCFs in residentially-zoned areas. The setback for Calabasas, CA is 1,000 feet, in San Ramon, CA its 300 feet, and in Montgomery County its 60 feet for existing structures and 300 feet for new structures.

Communities, such as those in Marin County, have also tried to implement buffers around medical child care facilities, medical facilities, and schools. However, it is unknown as to whether this would hold up in court since the justification seemingly relies upon potential human health impacts, which the FCC Order preempts as a consideration.

Recommendation: This is a grey area, but a 300 to 500 foot setback might be legally safe. If Boulder does a larger setback, such as 1,000 feet, the industry may not challenge this since they have not done so in other communities. Additionally, as with above, Boulder could create a relatively large setback with an exception if an applicant can prove that a shorter distance is necessary.

Justification: As with above, local laws cannot have the effect of prohibiting SCFs. A 300 to 500 foot setback would seemingly meet this requirement since the range of SCFs is still sufficient to reach its customers. By contrast, a ban of a SCF, even if just in a certain district, would likely be deemed in violation of the FCC Order. (Note: Boulder may wish to speak with a community such as Ross, California, to learn about their experiences banning SCFs in

certain zoning districts, although these bans seem to have predated the FCC Order.)

## **3. Preferred Locations**

While 5G bans in certain areas are likely illegal, some communities promote a hierarchy of zoned areas in which new communications facilities should be built. For example, a proposed Larkspur resolution prioritizes the installation of communications facilities (not just small cell) in certain preferred locations: Industrial Zoning Districts, Commercial Zoning Districts, etc., and the resolution disfavors installation in places such as Historic Overlay Zoning Districts, residential areas, public parks, etc. Applicants must show that a lower-ranked location is not technically feasible when applying for a higher-ranked location. Bellevue, Washington, similarly requires that an applicant consider a land use hierarchy for installing wireless communications facilities, with nonresidential land use districts being the most preferred. (See also Hempstead, New York.)

Recommendation: Boulder should create a hierarchy of preferred zoning districts for communications facilities (not just SCFs) that requires applicants to justify in detail requests to install communications facilities in lesser-preferred zoning districts.

Justification: In practice, a hierarchy of preferred zoning districts will ensure that SCFs and other communications facilities are built in more desirable locations. However, this approach does have limitations since it is quite easy for an applicant to show that a facility needs to be in a residential district if that district is not already within a coverage area.

#### **4. Health Considerations**

Some communities, such as Mill Valley, require annual EMF readings to ensure that wireless facilities comply with federal and state laws.

Recommendation: The City of Boulder should similarly require annual EMF readings to ensure that wireless facilities comply with federal and, if applicable, state laws. Meanwhile, the City of Boulder should call upon federal lawmakers to conduct a robust scientific review of RF safety levels, particularly for 5G, since the FCC has not updated its regulations regarding RF safety since 1996, and those regulations do not consider the higher frequencies and amount of installations associated with 5G technology.

Justification: Recall that local governments currently cannot regulate SCFs based on human health impacts other than ensuring the RF measurements are in accordance with federal law and FCC regulations. However, a local government is justified in, at minimum, ensuring that RF standards are met. Furthermore, considering the risks associated with 5G that require further study, the City of Boulder should join the many other governments worldwide demanding more information regarding safety and other impacts.

#### **5. Mockups, Drawings, Surveys, etc.**

Monterey, CA, has an application requirement for full-size mock-ups of all proposed SCFs to consider aesthetics, fire hazards, and threats to anything historic. Larkspur has proposed that all SCF applications include construction drawings, a site survey, and photo simulations

Recommendation: Like Monterey, CA, the City of Boulder should require a full-size mock-up of proposed SCFs and other pertinent information in order to adequately consider the same potential impacts. It also may want to adopt Larkspur's approach to require construction drawings, a site survey, and photo simulations. It could also implement rules to prevent other legitimate hazards, such as by requiring an engineer to review installation plans.

Justification: This requirement will ensure that applicants give careful consideration to the individual and cumulative impacts of SCFs and that the City of Boulder has all the information it requires to make a formal decision.

#### **6. Other Aesthetic Requirements**

In addition to minimum distances between SCFs and setbacks from residences, there are other aesthetic requirements that seemingly meet the requirements of the FCC Order and other applicable laws. Recall that according to the FCC Order, aesthetics requirements must be (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) objective and published in advance. With regards to condition (1), the FCC Order specifies that aesthetic requirements are reasonable if they are "technically feasible and reasonably directed to avoiding or remedying the intangible public harm of unsightly or out-of-character deployments."

Law firm Baller Stokes & Lide highlighted the following aesthetic considerations that local governments can consider:

- "Size of antennas, equipment boxes, and cabling;

- Painting of attachments to match mounting structures;
- Use of shrouds, stealth techniques, or other camouflage;
- Flush-mounting of antennas;
- Placement of equipment in the pole base rather than on the outside of the pole;
- Consistency with the character of historic neighborhoods;
- Minimum spacing between attachments;" and
- Aesthetic standards for residential neighborhoods, including "any minimum setback from dwellings, parks, or playgrounds and minimum setback from dwellings, parks, or playgrounds; maximum structure heights; or limitations on the use of small, decorative structures as mounting locations."<sup>19</sup>

Municipalities across the United States have also developed a number of other requirements, including the following:

- Provisions to address impacts on heritage trees, landscaping, historic districts, views, and other aesthetic features;
- Requiring all proposed and existing wireless facilities be placed on an online map in a timely fashion with public access;
- Camouflage requirements; and
- Height limitations in accordance with the FCC order.

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<sup>19</sup> Strategies to Protect State and Local Property After The FCC's Small Cell Preemption Order, Baller Stoke & Lide PC (Nov. 12, 2018), at: [www.baller.com/2018/11/ten-strategies-to-protect-state-and-local-property-after-the-fccs-small-cell-preemption-order](http://www.baller.com/2018/11/ten-strategies-to-protect-state-and-local-property-after-the-fccs-small-cell-preemption-order).

Finally, recall that incomplete applications can pause the "shot clock." Additionally, it might be possible to pause the shot clock on an entire batch application if a single application therein is incomplete (see Larkspur, CA, draft resolution).

These are only some of the potential considerations; see sample laws in Appendix or consult a telecom lawyer for more information.

Recommendation: The City of Boulder should engage in a significant technical and legal analysis to fully exercise its police power to impose legitimate aesthetic requirements. Even those municipalities that already published aesthetic standards can, and should, revise them from time-to-time to maximize local control.<sup>20</sup> At the same time, Boulder should strive to impose the same or similar aesthetic requirements on SCFs and other wireless infrastructure as it does on similar non-wireless infrastructure in order to ensure that aesthetic requirements requirements are "reasonable" (and, in particular, non-discriminatory) per the Telecommunications Act and FCC guidelines.

Justification: With thousands of SCFs being deployed in single municipalities, they have a significant cumulative aesthetic impact. SCFs can be quite large, the size of a small refrigerator, and disrupt the unique aesthetics of a historic town such as the City of Boulder. Therefore, the full gambit of

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<sup>20</sup> The FCC noted in the Order that it expected localities to publish their aesthetic standards within 180 days of publication of the Order in the Federal Register. But it did not limit revisions of these aesthetic standards.

aesthetic regulations and oversight should be utilized.

### **7. Charging Appropriate Fees, Even Beyond the “Safe Harbor” Fees**

Fee levels from the FCC Order are not absolute. Rather, they are “safe harbor” fees that the FCC determined (1) are not an “effective prohibition”<sup>21</sup> and (2) are “fair and reasonable compensation”<sup>22</sup> per the Telecommunications Act of 1996. In other words, these fees are presumptively reasonable in compliance with the Telecommunications Act. But the FCC Order does not preclude exceeding the “safe harbor” fees if they are still reasonable.

Communities who charge more than the “safe harbor” fees may wish to conduct a cost study to determine how much it actually costs to review and permit wireless siting applications. For the application fee, these costs could include time spent by staff, legal counsel, IT costs, contractors, etc. to review permits for completeness; ensure compliance with local, state, and national laws; conduct field inspections before and after installation; carry-out public notice processes, and so forth.<sup>23</sup> If

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<sup>21</sup> See Section 253(a) or Section 332(c)(7)(B)(i)(II), Telecommunications Act of 1996.

<sup>22</sup> See Section 253(c), Telecommunications Act of 1996.

<sup>23</sup> See Memorandum to Curt Witynski et al., Re: “FCC 2018 Small Cell Order<sup>1</sup> and Model Ordinance for Siting of Wireless Facilities in Local Rights-of-Way” (Feb. 4, 2019), at: [www.lwm-info.org/DocumentCenter/View/2539/19-2-Gallucci-Small-Cell-Memo](http://www.lwm-info.org/DocumentCenter/View/2539/19-2-Gallucci-Small-Cell-Memo); see also Strategies to Protect State and Local Property After The FCC’s Small Cell Preemption Order, Baller Stoke & Lide PC (Nov. 12, 2018), at: [www.baller.com/2018/11/ten-strategies-to-protect](http://www.baller.com/2018/11/ten-strategies-to-protect)

there is ever a challenge to fees, this cost study would be used defensively. For the annual operation fee, these costs could include field inspections, lost opportunities from foregoing use for other purposes, IT investments to track and manage data, and maintenance, repair, or replacement costs for a particular mounting.<sup>24</sup>

**Recommendation:** The City of Boulder should conduct a cost study to determine actual costs associated with overseeing SCFs. The City should also work with a respected telecom law firm during this process to ensure that the actual costs are still “reasonable” per the Telecommunications Act of 1996, particularly if the costs are significantly more than the “safe harbor” fees from the FCC Order.

**Justification:** A massive influx of SCF applications could be a massive financial burden on the City of Boulder if the proper amount of costs are not recouped during the process.

### **8. Public Notification**

Some local laws require SCF applicants to notify local residents within a certain proximity of plans to install SCFs. For example, in San Anselmo, CA, people within 300 feet of a proposed 5G antenna are to be notified. Some advocates recommend a larger notification area, such as 1,500 feet.<sup>25</sup>

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[t-state-and-local-property-after-the-fccs-small-cell-preemption-order](http://t-state-and-local-property-after-the-fccs-small-cell-preemption-order).

<sup>24</sup> *Id.*

<sup>25</sup> Last Tree Laws, Wireless Infrastructure Ordinances & Opposition, at: <https://www.lasttreelaws.com/ordinances.html>.



Some communities require that applicants facilitate the local notifications. For example, Cerritos, California, requires applicants "[s]ubmit a mailing list, gummed mailing labels printed with all addresses on the mailing list, and a base map for all properties and record owners of properties within a 500-foot radius from the project site."

Some local laws also require public hearings on SCF applications, such as an ordinance in San Anselmo, CA ordinance. Note that a public hearing does not pause the 60 and 90 day shot clocks for acting on an SCF application.

Recommendation: The City of Boulder should include a notification clause, such for those people who live within 300, 500, 1,000, or 1,500 feet (public input on this provision might help the City of Boulder decide what proximity of residents to notify). The City of Boulder, if resources are

available, would also be wise to allow for regular public hearings on the all telecom facility applications. The City of Boulder should also require that all SCF applications be posted online once received.

Justification: Public notification, opportunity for public hearings, and other methods of engaging Boulder's active community will ensure that interested members of the community can inspect telecom applications.

## **CONCLUSION**

These are just some of the tools available to Boulder to regulate 5G despite restrictive state law and federal rules. See the appendix and consult a respected telecom law firm to learn more.

## V. Recommendations for Boulder

### **1. Hold a public hearing on 5G to consider the full scope of advice from experts, civil society, businesses, and the public.**

This report only offers some of the options that the City of Boulder has for regulating SCFs and other infrastructure. With a world-class community of experts, civil society, businesses, and members of the public, Boulder would be wise to hold thorough public hearings on SCFs, including 5G, in order to ensure that it considers all available information on the topic before making a fully-informed decision.

### **2. Pass a strong resolution and/or ordinance.**

The resolution or ordinance should use the recommendations outlined in this Report to regulate wireless facilities with the assistance of a respected telecom lawyer.

### **3. Utilize Boulder's authority to pass an emergency ordinance.**

If time is of the essence, the City of Boulder can pass an emergency ordinance first, then a regular ordinance that would extend the regulations upon expiration of the urgency ordinance.

### **4. Strive not to discriminate between telecommunications facilities.**

Where possible, do not discriminate between SCFs and other wireless cell facilities. Similarly, where possible, do not discriminate between wireless cell facilities and other infrastructure. This is because FCC Order precludes requirements for SCFs that are no more burdensome than those

applied to other types of infrastructure deployments.

### **5. Be prepared to act quickly to increase local protections when the legal landscape for SCFs changes.**

The law firm Best Best & Krieger recommends that cities "develop regulations that provide you with maximum flexibility to make substantive determinations that you would be comfortable making — even if the FCC had not changed its rules — while still complying with procedural requirements, such as shot clocks that, if not complied with, may result in a loss of rights."<sup>26</sup>

### **6. Ensure maximum flexibility.**

*(a) Consider the "administrative guidelines" approach* - The City of Boulder could pass an ordinance (including an emergency ordinance) that stipulates the city manager has the authority to approve small cell wireless facilities that are consistent with administrative guidelines (in some cases called a "Council Policy" or other approach), with such administrative guidelines being developed in parallel to the ordinance (see e.g., City of Ventura Administrative Policy & Procedures - Small Wireless Facilities). This

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<sup>26</sup> Best Best & Krieger, "New FCC Shot Clocks and Other Rules Preempting Local Authority Over Wireless Take Effect Today" (Jan. 14, 2019), at: [https://www.bbklaw.com/news-events/insights/2019/legal-alerts/01/new-fcc-shot-clocks-and-other-rules-preempting-loc?utm\\_source=Constant>Contact&utm\\_medium=read\\_more&utm\\_campaign=LA\\_FCC\\_10th\\_Circuit&utm\\_content=Legal\\_Alert](https://www.bbklaw.com/news-events/insights/2019/legal-alerts/01/new-fcc-shot-clocks-and-other-rules-preempting-loc?utm_source=Constant>Contact&utm_medium=read_more&utm_campaign=LA_FCC_10th_Circuit&utm_content=Legal_Alert).

ensures that the City of Boulder has maximum flexibility to act quickly to update these administrative guidelines as the legal landscape shifts. It also saves money, since passing follow-up ordinances would be expensive.

(b) An ordinance can also be mixed with a resolution that incorporates administrative guidelines.

The ordinance can create new processing requirements and amend the City Code as necessary. Additionally, the resolution can adopt administrative guidelines that regulates location and design standards, which can apply to SCFs and other utility infrastructure (so as not to discriminate). These administrative guidelines can further be amended through additional resolutions.

#### **7. Issue conditional permits only and/or require annual recertification per permits.**

The City of Boulder should include qualifying language in all approved permits for SCFs that trigger certain actions if the FCC rules are overturned or invalidated or if other substantial legal changes occur. Such actions could include termination of the permit, increasing fees for use of the rights-of-way or other public property rates beyond the maximum established by the FCC rules, or other actions that are protective of Boulder.<sup>27</sup> Currently, Bellevue, Washington, includes contingencies in its

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<sup>27</sup> Best Best & Krieger, "New FCC Shot Clocks and Other Rules Preempting Local Authority Over Wireless Take Effect Today" (Jan. 14, 2019), at: [https://www.bbklaw.com/news-events/insights/2019/legal-alerts/01/new-fcc-shot-clocks-and-other-rules-preempting-loc?utm\\_source=Constant>Contact&utm\\_medium=read\\_more&utm\\_campaign=LA\\_FCC\\_10th\\_Circuit&utm\\_content=Legal\\_Alert](https://www.bbklaw.com/news-events/insights/2019/legal-alerts/01/new-fcc-shot-clocks-and-other-rules-preempting-loc?utm_source=Constant>Contact&utm_medium=read_more&utm_campaign=LA_FCC_10th_Circuit&utm_content=Legal_Alert).

master licensing agreement that would allow the City to increase the rent on annual rent per pole if the FCC Order is invalidated.

Similarly, the City of Boulder could choose to require the recertification of SCFs on an annual basis in order to ensure that they comply with the most up-to-date state, federal, and local laws and regulations after a year has passed.

#### **8. Include a severability clause.**

While the City of Boulder should strive to pass a legally-defensible ordinance, it could include a severability clause in order to maintain the bulk of its ordinance in the case of legal challenges.

#### **9. Create a Telecommunications Infrastructure Committee.**

The City of Boulder should establish a standing committee (e.g., a "Telecommunications Infrastructure Committee") that includes experts (e.g., engineers), lawyers, residents, and other interested parties to monitor the development, implementation, and revision of rules and guidelines governing wireless facilities. This committee could also work to promote fiber optic infrastructure in Boulder, amongst other functions. As an example, Monterey, CA completed its wireless ordinance after city officials formed a wireless subcommittee.<sup>28</sup> And Fairfax, CA, has an ad-hoc committee to study the possibility of a fiber-optic cable network instead of a 5G network.

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<sup>28</sup> Carly Mayberry, "Monterey Adopts New Wireless Ordinance," Monterey Herald (Oct. 3, 2018), at: <https://www.montereyherald.com/2018/10/03/monterey-adopts-new-wireless-ordinance>.

**10. Join coalitions of like-minded governments.**

The City of Boulder should consider joining the National League of Cities' effort to oppose bills that further decrease local authority over telecom facilities.

**11. Call for changes to the state and federal laws governing SCFs.**

Local government has very limited authority to consider the cumulative impacts of SCFs unless Colorado and/or the Federal Government replace current rules in favor of an approach that respects local police powers. The City of Boulder could urge the state government to repeal HB 17-1193 (the "Small Cell Facilities Permitting and Installation" bill) and replace it with a common sense bill that maintains reasonable local control over SCFs. Similarly, it could call for changes to the FCC rules or even the Telecommunications Act of 1996. This could be done through, for example, a resolution or a letter.

**12. Look at other communities as models.**

**Monterey, CA:** Conversations with telecommunications insiders have determined that the City of Monterey, CA, has one of the most robust local ordinances for SCFs in order to protect local interests in accordance with state and federal law.

**Hillsborough, CA:** This is an example of a community taking a three-tiered approach

of an emergency ordinance, then a regular ordinance, and also a resolution that adopts a Council Policy (which contains most of the substantive wireless cell facility rules). This is the approach taken by Hillsborough, CA.

**Other Local Governments:** The City of Boulder may wish to speak with any of the communities involved in the lawsuit against the FCC, those communities referenced in this Report, and other communities that are taking a more proactive stance than merely adopting industry-recommended standards.

**13. Require an additional review process when SCFs transition to 5G.** As stated above, 5G is still relatively sparse in the United States. Many telecom companies are installing SCFs that could later be retrofitted to add 5G technology to existing 4G. If and when this occurs, the proponent should be required to file an additional application, in part because the RF will be different and must be verified to be in accordance with FCC standards.

**14. Encourage the public to be involved.** In Fairfax, California, strong public support was cited as the most important driver behind passing a progressive law to wisely regulate SCFs. It is crucial for the public to be involved in order to ensure the best possible regulatory scheme for Boulder.

## VI. Resources

### Useful Reports on Small Cell Wireless

1. Best Best & Krieger Law, "Wireless Infrastructure In Public Rights-of-Way: Federal Broadband Initiatives and Recent California Case Law" (May 3, 2018), at: <https://www.bbklaw.com/BBK/media/Library/pdf/KARISH-2018-Cal-League-Spring-Attorney-Conference-Paper-vFINAL-c2.pdf>
2. National League of Cities, "Small Cell Wireless Technology in Cities: Municipal Action Guide" (2018), at: [https://www.nlc.org/sites/default/files/2018-08/CS\\_SmallCell\\_MAG\\_FINAL.pdf](https://www.nlc.org/sites/default/files/2018-08/CS_SmallCell_MAG_FINAL.pdf).

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