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CITY COUNCIL STAFF REPORT

Meeting: July 16, 2019

Subject

Study Session on Small Cell Facilities within the Public Right of Way.

Recommended Action

For the City Council to conduct a study session on legal requirements related to installation of small cellular facilities on City street light poles in the public right of way, and related City of Cupertino guidelines and procedures, and provide any input.

Background

Various wireless providers have approached the City of Cupertino regarding installation of small cellular equipment on City-owned street light poles. Small cellular equipment includes antennae and associated cellular facilities that help enhance the coverage and capacity of cellular networks. Such small cell facilities will help to make implementation of the fifth generation of cellular services, or "5G", more effective.

Relative to macrocell towers, small cell antennae are characterized by their smaller size, lower power output, smaller coverage area, and potentially higher signal frequency and faster transmission speeds with the implementation of 5G technology. For example, a typical macrocell tower has a power output between 20-40 watts, whereas a small cell antenna has a considerably lower power output that ranges between 1-5 watts. The higher frequency signals do not travel as far and have a harder time penetrating materials, including vegetation and structures.

The available spectrum licensed for cellular use is extremely scarce and expensive, and given that cellular usage by the public has increased exponentially in the last 20 years, wireless providers have needed to find ways to overcome this limitation in available frequency. Small cell facilities achieve this by repeating and reusing the same frequencies at different locations in a geographic area, and therefore have been recognized by industry leaders as an important method of increasing a wireless provider's cellular network capacity, quality and coverage, as each small cell acts as an individual node for the carrier's licensed spectrum.

The City of Cupertino has established agreements with five companies for installation of small cell facilities on City-owned street light poles in the City's right of way. The five companies include Verizon, AT&T, Extenet, Crown Castle, and Mobilitie.

Of these five companies, Verizon and AT&T are actively seeking permits for small cell installations in the right of way throughout the City, both in commercial areas and within residential zones, in order to improve the data capacity and coverage of their networks. Verizon has installed approximately twelve of these facilities in commercial zones such as along De Anza Boulevard and Stevens Creek Boulevard, and is seeking permits for additional locations.

Federal Requirements on Placement of Small Cell Facilities

Federal law places certain limits on a local jurisdiction's ability to regulate wireless facilities generally and on September 27, 2018 Federal Communications Commission (FCC) order placed additional limits on local jurisdictions' regulation of small cell facilities installed in the public right of way. Key limits on local regulation are summarized below:

- Denying Wireless Applications Based on Radio Frequency Health Concerns

Under federal law, the City may not base its regulation of wireless facilities, including a decision to deny a wireless project, on radio frequency (RF) emissions from a facility, as long as those emissions meet FCC emission standards. Concerns over the effects of RF emissions from cellular equipment, including small cell facilities, include concerns regarding the health effects of these emissions. This means that the City may not deny a permit application for a cellular facility based on concerns over the health effects of the equipment's RF emissions.

- Regulation with the Effect of Prohibiting Wireless Service

Federal law also prevents a local government from regulating wireless service in a manner that prohibits or has the effect of prohibiting the provision of personal wireless services. Thus, local jurisdictions cannot establish rules or regulations that would ban wireless facilities outright, or that would effectively prohibit installation of wireless facilities. The FCC's September 2018 order specified further that denying applications for facilities that are intended to improve a carrier's existing service would amount to effective prohibition on wireless services. This means that a jurisdiction cannot deny a service provider's wireless facility application on the basis that the jurisdiction finds the provider's existing coverage adequate. The FCC's order also prohibits the City from enforcing a blanket prohibition on installation of small cell facilities in a particular area or neighborhood. However, the City could have grounds to deny a specific placement if there is a reasonable alternative available.

- "Shot Clocks" for Review of Small Cell Facility Applications

Federal law also requires local governments to act on applications for new wireless facilities within "a reasonable period of time." The FCC's September 2018 order sets new time limits, or "shot clocks," defining presumptively reasonable periods of time for review of small cell

facility applications. Under the FCC's order, a jurisdiction has 60 days to review an application for placement of a small cell facility on a preexisting structure—such as an existing streetlight, utility pole, or traffic signal—and 90 days for review of an application for attachment of small cell facility to a new or replacement structure. The shot clocks begin to run the day after an application is submitted. Once submitted, the City has 10 days to review the application for completeness. If the City notifies the applicant that its application is incomplete, the shot clock is paused while the applicant gathers the information needed to complete the application. Overall, the City is required to review and make a determination on small cell applications in a relatively short amount of time, placing additional pressure on the application process.

The City's current process for accepting and reviewing applications for small cell facilities in the public right of way involves the following steps:

1. Identifying Placement of Facilities – An applicant reaches out to the City and proposes a location and a design, and City staff reviews the location to ensure the facility will not cause a public safety issue, such as obstructing vehicular and pedestrian sight lines, or result in a barrier to ADA access. City staff also works with the applicant to ensure that each proposed location is the least intrusive location in the surrounding vicinity.
2. Initial Submittal - Conceptual drawings are provided to City staff for review and comment. This package includes a vicinity map, a photo of the pole, and a photo simulation showing the layout and location of proposed equipment. The City reviews the Initial Submittal for compliance with the City's guidelines, for location concerns, and for aesthetic qualities and features of the equipment.
3. Notification - After the Initial Submittal has been reviewed and approved, the applicant is required to mail courtesy letters to all residents within 300' of the facility. Cupertino's notification process is comparable to the processes of other jurisdictions, which have notification radii ranging from 250' up to 600'. Property owners notified of a small cell installation have 14 days to respond to the notification. Each applicant provides a representative to act as a point of contact for notified property owners. The representative retains a report of all inquiries received and the disposition of each. These inquiries are then provided to City staff for review. While the City cannot deny a permit application based on concerns regarding the health effects of RF emissions, as noted above, all concerns are reviewed and any concerns that the City has the ability to act on are considered and incorporated where possible.
4. Final Submittal – The applicant submits a complete construction application package to the Public Works Department that addresses the City Engineer's comments and concerns. Once all requirements have been addressed, the Public Works Department will issue the necessary permits to the applicant.

Using the above process, the City has been able to review and approve applications within the shot clock timeframe. City staff has found that working collaboratively with service providers and establishing a clear and predictable timeline has facilitated the application process.

Discussion

Federal requirements have left cities limited room to regulate the placement of small cell facilities. City staff has worked proactively to establish reasonable guidelines to ensure both that these facilities do not interfere with or visually detract from the City's right of way, and that the City remains compliant with legal requirements. City staff held numerous meetings with AT&T, Verizon, Crown Castle, Mobilitie, and PG&E on design and aesthetic standards for new small cell facilities in Cupertino. From these meetings, a common design and dimension standard was established that accommodates each service provider's equipment (and PG&E), and that integrates well with the appearance of the existing infrastructure. (See Attachment A). The standard design effectively shrouds the facilities and ensures a consistent look among the carriers. This design standard was presented to the City Council on May 16, 2017, and the Council accepted the standard with the approval of the license agreements with the wireless service providers.

An additional issue, not directly related to legal requirements or aesthetics, is whether small cell facilities may negatively affect property values. On this point, City staff reviewed a 2012 report, *Wireless Facilities Impact on Property Values*, prepared by Joint Venture Silicon Valley in conjunction with the Silicon Valley Association of Realtors and the Santa Clara Realtors Association. The report states that the distance from a wireless facility to a home had no apparent impact on the value or sale price of homes in the Silicon Valley area. (See Attachment B and the link below). Staff is unaware of any other studies that have evaluated the correlation of property values and proximity to cellular facilities.

(<https://jointventure.org/images/stories/pdf/WirelessFacilitiesImpactOnPropertyValues.pdf>)

Sustainability Impact

No sustainability impact for hearing this report.

Fiscal Impact

No fiscal impact for hearing this report.

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Reviewed by: Roger Lee, Director of Public Works

Approved for Submission by: Deborah Feng, City Manager

Attachments:

A- Small Cell Design Standards

B- *Wireless Facilities Impact on Property Values*, November 2012 – Joint Venture Silicon Valley Network