City of Palo Alto (ID # 9959)

City Council Staff Report

Report Type: Action Items **Meeting Date: 4/15/2019**

Summary Title: Ordinance Amending Chapter 18.42.10 (Wireless Facilities)

Title: PUBLIC HEARING: Adoption of an Ordinance Amending Section 18.42.110 (Wireless Communication Facilities) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning) of the Palo Alto Municipal Code (PAMC) to Update the Code to Reflect Recently Adopted FCC Regulations. The Planning and Transportation Commission Recommended Approval of the Ordinance With Minor Modifications on March 27, 2019 (6-0 Roohparvar absent) CEQA: This Ordinance is Exempt from Environmental Review Under CEQA Guidelines Sections 15061(b)(3) and 15305

From: City Manager

Lead Department: Planning and Community Environment

RECOMMENDATION

Staff recommends that the City Council: (1) adopt the attached Resolution (Attachment A) adopting detailed objective standards for Wireless Communications Facilities on streetlights and wood utility poles in the public rights of way; and (2) adopt the attached Ordinance (Attachment B) amending Section 18.42.110 (Wireless Communication Facilities) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning). The City Council may also consider direction to staff for additional federal legislative advocacy regarding the regulation of Wireless Communications Facilities.

BACKGROUND

Over the past two years, the City of Palo Alto has received a large and increasing number of applications for "small cell" Wireless Communication Facilities (WCFs) in the public rights-of-way (PROW). Staff expects the high volume of PROW applications to continue or even increase as wireless carriers seek to improve capacity of existing networks and begin to roll out new 5G technologies. In particular, staff understands that equipment for 5G technologies will have lower power and shorter range, therefore requiring greater density of WCFs to support a network.

The City's discretion in reviewing WCF applications is significantly limited by state and federal laws, including the federal Telecommunications Act of 1996 and California Government Code sections 65850.6 and 65964.1. Federal law prohibits the City from discriminating among wireless services providers and from regulating certain issues such as electromagnetic radiation and other technical requirements of wireless services. In addition, under federal law, the City may not regulate WCF applications in a manner that would "prohibit or have the effect of prohibiting" an entity from providing telecommunications service or personal wireless services. Under state law, if the City fails to act within the timeframes established by the FCC, an applicant may assert that the application is deemed approved as proposed.

On September 26, 2018, the Federal Communications Commission ("FCC") adopted a Declaratory Ruling and Third Report and Order relating to the Acceleration of Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment (the "September 2018 Order"). These regulations build upon a long history of state and federal legislation and earlier rulings by the FCC that significantly limit local control over the deployment of Wireless Communications Facilities ("WCFs").

Among other changes, the September 2018 Order defines a subset of WCFs, "Small Wireless Facilities," which are commonly deployed on streetlights and utility poles in the public rights of way, and requires that local governments act upon most Small Wireless Facility applications within 60 or 90 days. Previously, the City had either a 90- or 150-day "shot clock" to process these applications, depending on the nature of the application. In addition, the September 2018 Order declares that in order to comply with federal law, local aesthetic regulations must be reasonable, objective, non-discriminatory, and published in advance. The FCC order gives local governments until April 15, 2019 to adopt such regulations.

The September 2018 Order has been challenged by several coalitions of municipalities and that litigation is pending in the Ninth Circuit Court of Appeals. In January 2019, the courts denied a request by the municipalities to "stay" the FCC order until the litigation was resolved. The FCC order therefore went into effect on January 14, 2019.

On the same day, Representative Anna Eshoo introduced a bill, H.R. 530, which would invalidate the September 2018 Order. The bill has been referred to the House Committee on Energy and Commerce. On February 7, 2019, the City of Palo Alto sent a letter of support for H.R. 530 (https://www.cityofpaloalto.org/civicax/filebank/documents/68906). The City of Palo Alto remains actively involved with cities and other local agencies in supporting H.R. 530 as well as other federal actions to reconsider current FCC orders and support both local regulation as well as further study of appropriate technology rollouts. The City's Intergovernmental Affairs page maintains information on recent activities (https://www.cityofpaloalto.org/gov/city_information/intergovernmental_affairs.asp).

ARB Review of Objective Aesthetic Standards for PROW Applications

As noted above, the September 2018 Order requires that cities adopt objective aesthetic standards by April 15, 2019. Objective standards are generally understood to be those that can be applied without the exercise of personal judgment on the part of the public official. For example, a standard prescribing maximum dimensions is objective, while a standard requiring "high aesthetic quality" is not. After April 15, 2019, the City will not be able to require compliance with its subjective architectural review findings and will not be able to regulate aesthetic impacts of WCFs unless and until it adopts objective standards.

Staff presented two sets of objective standards, for WCFs on streetlights and for WCFs on wood utility poles, to the Architectural Review Board (ARB) on March 21, 2019 (Staff report: https://www.cityofpaloalto.org/civicax/filebank/documents/69895; meeting video: https://midpenmedia.org/architectural-review-board-74-3212019/). These standards essentially define the types of WCF designs the City will accept in the PROW. At the March 21 hearing, a majority of the ARB's members expressed support for: (1) inclusion of top-mounted, sunshield, and street-sign design options for both streetlights and wood utility poles; (2) removal of integrated pole design options for streetlights; (3) removal of side-mount and strand-mount design options for wood utility poles; (4) a requirement that all applications show potential placement of 5G equipment, regardless of whether such equipment is currently proposed; and (5) encouragement of WCF designs that house equipment within desirable street furniture, subject to ARB review.[1] Objective standards, including the above revisions directed by the ARB, are included as Exhibit 1 (for streetlights) and Exhibit 2 (for wood utility poles) to the attached resolution (Attachment A).

Many cities across the country have updated their ordinances and adopted objective standards in response to the September 2018 Order, while others had transitioned to objective standards even before the September 2018 Order was adopted. Some examples of standards include:

- City of San Jose: November 2018, Street Light Pole-Mounted Small Cell Design Guidelines (http://sanjoseca.gov/DocumentCenter/View/81282)
- City of San Rafael: December 2018, Resolution 14621, Adopting Policies, Procedures, Standards, and Limitations for Submittal and Review of Small Wireless Facilities Within the Public Right-of-Way (https://storage.googleapis.com/proudcity/sanrafaelca/uploads/2019/01/Resolution-14621.pdf)

[1] Note that the Architectural Review Board has the following item on their April 4, 2019 agenda: Review of Draft Letter to City Council Regarding Small Cell Telecommunication Facilities (https://www.cityofpaloalto.org/civicax/filebank/documents/70113).

- City and County of Denver: April 2018, Small Cell Infrastructure Design Guidelines (https://www.denvergov.org/content/dam/denvergov/Portals/705/documents/guidelines/PWES-016.0-Small_Cell_Infrastructure_Design_Guidelines.pdf)
- City of Huntington Beach: November 2017, Department of Public Works Standard Plans (https://www.huntingtonbeachca.gov/files/users/public_works/standard_plans_2008_full_document.pdf#page=128)

PTC Review of Draft Ordinance Amending PAMC 18.42.110

Staff first presented a draft ordinance addressing the September 2019 Order to the PTC on December 12, 2018 (staff report: https://www.cityofpaloalto.org/civicax/filebank/documents/68093; meeting minutes: https://www.cityofpaloalto.org/civicax/filebank/documents/68690).

Based on feedback from the public and PTC at the December 12, 2018 meeting and following extensive review of similar ordinances adopted by other municipalities, staff presented a revised ordinance to the PTC on March 27, 2019 (staff report: https://www.cityofpaloalto.org/civicax/filebank/documents/69988; meeting video: https://midpenmedia.org/planning-transportation-commission-63-3272019/). The PTC recommended that the Council (1) adopt the ordinance; (2) direct staff to convene a resident working group to recommend minimum distances from residences and schools, and to continue gathering information regarding health impacts of WCFs; and (3) direct staff to return to review implementation of the ordinance after one year.

DISCUSSION

A. Resolution Adopting Detailed Objective Standards for PROW Applications

The attached resolution (Attachment A) establishes detailed objective aesthetic standards for WCFs proposed to be installed on streetlights and wood utility poles in the public rights of way. These standards, included as Exhibits 1 and 2 to the resolution, represent staff's effort to prepare an initial set of reasonable and objective aesthetic regulations that do not prohibit the provision of wireless services and that are capable of being applied within a 60-day timeframe.

The standards are proposed to be adopted by resolution to facilitate periodic updates and potential repeal in the event the September 2018 Order is modified or invalidated. The standards would go into effect immediately upon adoption of the attached resolution.

Each set of standards defines a number possible wireless communication facility designs recommended for inclusion by the ARB and that staff believes are among the smallest, least

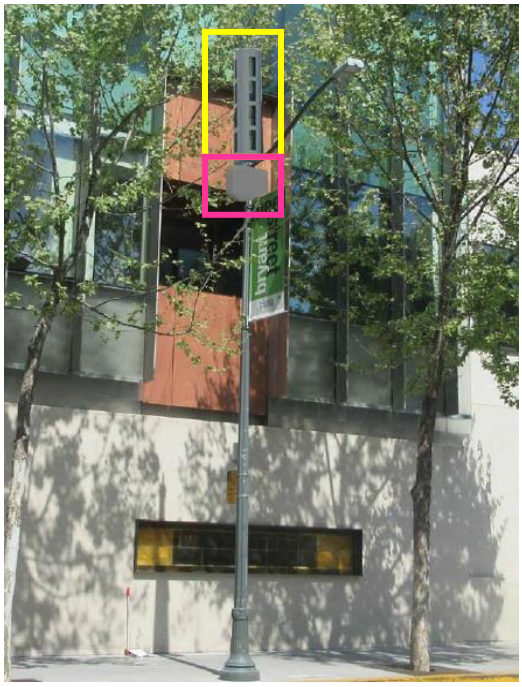
conspicuous, camouflaged, and/or stealth options available.[2] Based on ARB feedback, the standards include the following designs for both streetlights and wood utility poles:

[2] Additional illustrations of designs considered and rejected by the ARB, either at its March 21, 2019 meeting or in previous review of individual WCF applications, are available in Attachment C.

1. Underground vaulting design

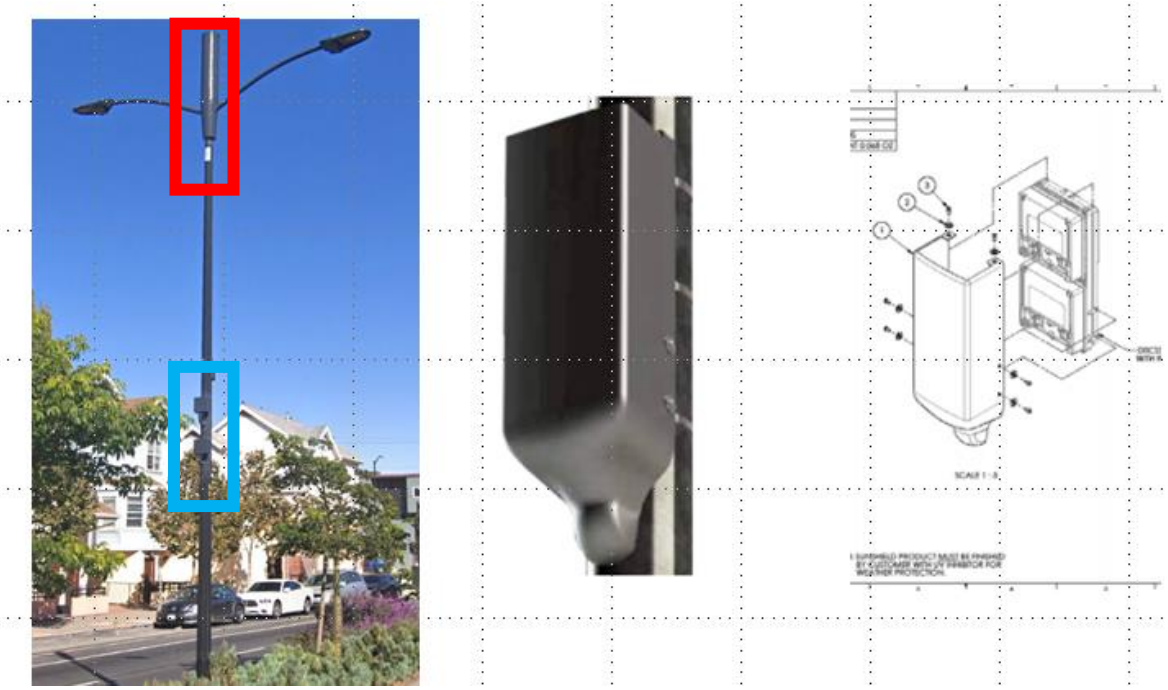
Google Street View 2019 (Highridge Road in Rancho Palos Verdes); Antennae outlined in red and radio equipment vault outlined in blue.

2. Top-mounted with shroud design



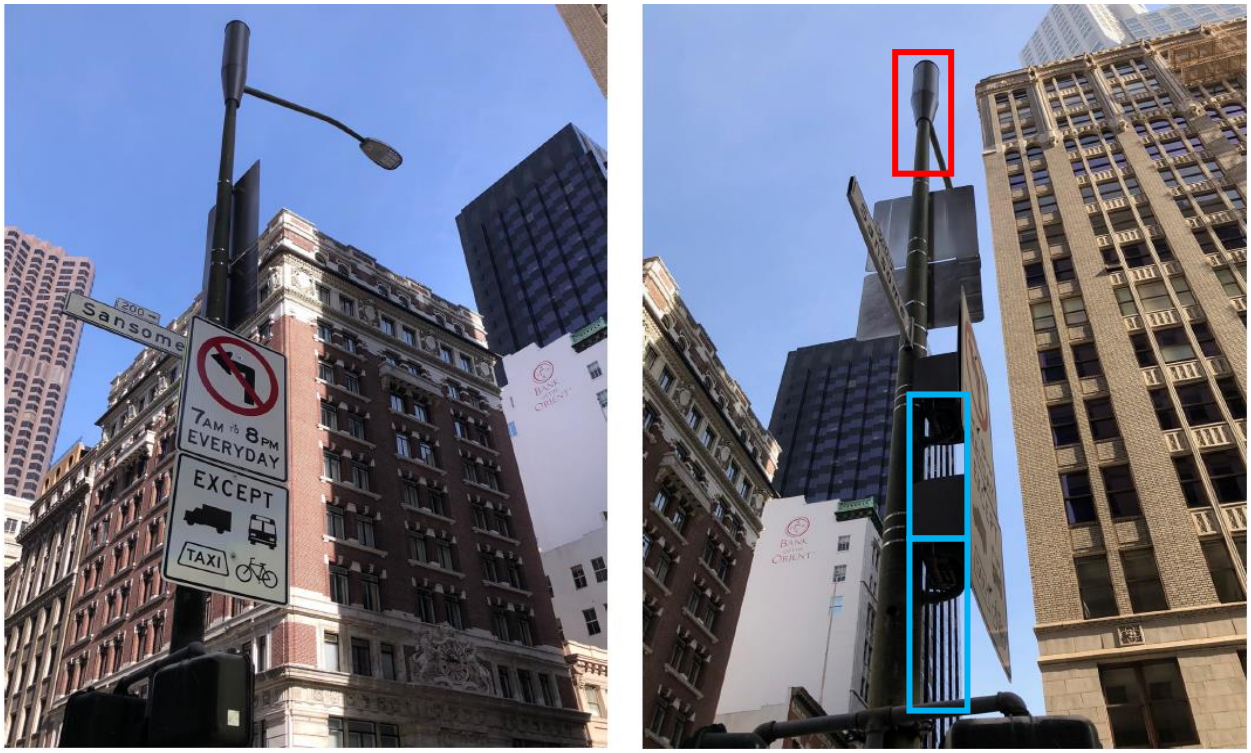
Left – AT&T Preliminary ARB streetlight application showing top-mounted 4G radio/antenna shroud above light mast (outlined in yellow) and 5G radio/antenna attachment below light mast (outlined in pink). Right – ConcealFab 14” or 18” diameter pole top shroud on wood pole.

3. Sunshield side-mounted design



Left – Google Street View 2019 (Cesar Chavez Blvd. in San Francisco); Antenna shroud outlined in red and radio sunshield outlined in blue. Right – ConcealFab Dual SUP Sunshield

4. Existing street signs design



Photographs provided by Verizon Wireless showing radio equipment concealed behind street signage (outlined in blue) with antenna shroud outlined in red.

5. 5G equipment

The standard designs described above have been developed for 4G equipment, but some may not be feasible in combination with newer 5G technology. Staff understands that 5G equipment has been designed to integrate radios and antennae into a unit or units that are smaller than most 4G equipment. However, due to the nature of 5G technology, signals do not travel very far and are easily blocked by intervening material. Thus 5G networks will likely require a greater number of WCF nodes. In addition, several carriers have asserted that 5G equipment cannot be shrouded with the same materials typically used to shroud 4G equipment. The draft standards for both streetlight poles and wood utility poles attempt to accommodate the technical limitations of 5G equipment by allowing equipment that cannot be shrouded in one of the standard designs to occupy up to an additional 2.5 cubic feet on the pole. This is consistent with the recent preliminary architectural review application submitted by AT&T, which is the first application the City has received portraying both 4G and 5G equipment.

B. Policy Considerations Related to Objective Standards

Although the City's effort to draft these standards is driven largely by need to comply with the September 2018 Order, the adoption of objective standards also represents an opportunity for the City. First, the standards allow the City to proactively define the types of WCF installations it deems appropriate in the PROW, rather than simply reacting to designs proposed by an applicant. Standards would also promote greater uniformity of WCF designs throughout the

City. While carriers could still apply for alternative designs, they would face the difficult task of showing that a network is not feasible using the City's standards or that the strict application of the standards would otherwise violate federal law. Second, adoption of objective standards would allow for more efficient review and help to alleviate the significant burden on staff resources and ARB agendas created by the influx of WCF applications. In the past, the City has struggled to schedule multi-departmental reviews, ARB hearings, and a potential City Council appeal within a 150-day shot clock. Even in the absence of the new 60-day shot clock for "small wireless facilities," the City would likely need to explore ways to streamline its review.

With respect to the standards themselves, the Council may wish to prioritize certain designs over others. For example, the ARB considered, but did not have majority support for, a requirement that applicants utilize an underground vault design, unless vaulting is shown to be infeasible. Should the Council wish to include this provision, staff would recommend defining infeasibility as follows:

(1) There are no locations within a 100 foot cable run from the antenna that could accommodate a vault while maintaining a five foot clearance from the pole foundation and existing utilities (except for water, gas, and electric service laterals).
(2) There are no locations within a 100 foot cable run from the antenna that could be excavated without removal of a protected tree, as determined by Urban Forestry.
(3) The ventilation equipment required will result in noise exceeding the thresholds provided in these standards.

In addition, the ARB also discussed, but did not formally recommend action on, the following topics:

- Relaxation of comprehensive plan noise thresholds in residential neighborhoods, which are more stringent than the City's noise ordinance, to the extent necessary to permit underground vaults to be installed.
- Establishment of a working group to further develop objective standards, including spacing between WCFs, setbacks from specified uses, and new designs utilizing desirable street furniture and integrated poles.
- Special attention required for WCF placement near second story windows and similar features.

C. Ordinance Amending PAMC Section 18.42.110

The attached ordinance serves two primary functions: First, the ordinance recognizes the concept of objective aesthetic standards that the City Council may adopt by resolution and defines the process by which an applicant may seek an exception from these standards.

Second, the ordinance corrects a weakness in the current code by referencing state and federal law rather than simply repeating it in the municipal code. This represents a best practice that avoids the possibility of creating rights for applicants at a local level that may exceed those guaranteed by state or federal law. It also responds directly to a concern raised by the PTC and members of the public about whether the City would need to enact additional ordinances in the event the September 2018 Order is modified or invalidated. Under the proposed ordinance, if the September 2018 Order is repealed, the City Council could act quickly by resolution to repeal objective standards, thereby reinstating the City's former processes.

More specifically, the changes to Section 18.42.110 of the Palo Alto Municipal Code can be summarized as follows:

1. The ordinance updates several definitions in subsection (b) to expressly reference the federal statutes or regulations from which they are drawn. This, in combination with a statement of purpose, ensures that the Palo Alto Municipal Code will not be interpreted to codify the provisions of federal law in the event such provisions are changed or invalidated by a court. In addition, as recommended the PTC in December 2019, some definitions are further clarified to ensure they do not apply more broadly than necessary.

2. Along similar lines, the ordinance replaces the lengthy restatement of various "shot clock" timelines and permit review procedures in subsection (e) with a simple statement that the City will process WCF permit applications in a manner consistent with state and federal law. As with the updated definitions, this change makes the wireless code more flexible in the event there is a change in the law.

3. The ordinance updates the findings required in subsections (g) and (h) to approve Tier 2 and Tier 3 WCF permits to recognize that the City Council may adopt of objective standards by resolution to comply with the FCC's recent order. These objective standards take the place of the City's subjective architectural review findings and this change is necessary under the September 2018 Order for the City to continue to enforce local aesthetic values after April 15, 2019. In the event the FCC's new requirements for aesthetic standards are invalidated and the City Council repeals these objective standards, the ordinance provides that the City's architectural review findings will once again apply.

4. The ordinance updates development standards in subsection (i) to provide objective guidance that will apply in the absence of more specific standards adopted by resolution. At the moment, staff has prepared draft standards for projects in the public rights-of-way. The generally applicable standards in subsection (i) will apply to projects

on private property unless and until the City Council adopts more detailed standards for such projects by resolution.

5. The ordinance adds new conditions of approval in subsection (j) applicable to all WCF applications. One of these conditions requires that applicants update the equipment deployed in WCFs as new technology becomes available that is less visually obtrusive. The ordinance also codifies existing standard conditions stating that a permit for the PROW is subject to future City uses and requiring timely construction in order to maintain an approval.

6. The ordinance creates a new subsection (k), which sets forth several requirements for an applicant seeking exceptions from the objective standards adopted by the City Council or other restrictions imposed by the City's wireless code. The ordinance requires the applicant to identify any exceptions being sought at the time of application submittal. The ordinance further places the burden on the applicant to demonstrate that an exception is required under controlling state or federal law and requires the applicant to submit all evidence supporting its claim. Finally, the ordinance allows the City to hire independent consultants, at the applicant's expense, to evaluate the issues raised by the applicant.

7. The ordinance adds a new subsection (n), which states that unless otherwise specified, WCF permits are valid for a period of ten years, after which they will need to be extended or renewed. For some facilities in the public rights-of-way or on City property, however, the timeframe for which a WCF may be permitted to remain on a site may be governed instead by the City's lease or license agreements with a wireless carrier.

8. Finally, the ordinance contains a number of minor, non-substantive, "clean-up" changes based on staff's experience implementing the wireless code since it was last updated in 2015. As these are not intended to affect substantive rights of the City or an applicant, they are not discussed in detail here.

D. Public Comment and Correspondence

In addition to public comment at ARB and PTC hearings, the City has received voluminous public correspondence on both the draft ordinance and the proposed objective standards. Recurring themes include concerns over health effects of radiofrequency (RF) exposure and concerns that other jurisdictions are regulating WCFs more aggressively than Palo Alto. In addition, industry representatives have spoken and submitted correspondence suggesting that the City's proposed standards are too restrictive, exceed the City's authority under federal law, and should include additional design options. Some industry representatives expressed interest in ongoing dialog or workshops to develop additional design standards. Staff anticipates further

comments from members of the public and carriers in coming weeks. Compilations of public correspondence received thus far can be found online at the following weblinks:

- Public correspondence February 26, 2019 – March 20, 2019 (https://cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=56007.27&BlobID=70183)
- Public correspondence March 20, 2019 – March 26, 2019 (https://cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=56007.27&BlobID=70184)
- Public correspondence March 26, 2019 – April 3, 2019 (https://cityofpaloalto.org/civicax/filebank/blobdload.aspx?t=56007.28&BlobID=70185).

Health Impacts

With respect to RF emissions, federal law precludes the City from regulating RF emissions or exposure, except to verify that WCFs comply with FCC standards. Moreover, the City cannot establish other regulations on the basis of health effects of RF emissions. Section 332(c)(7)(B)(iv) of the Telecommunications Act of 1996 states: "No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

The City currently requires applicant to provide reports demonstrating compliance with the FCC's RF standards. In addition, prior to issuing a decision, the City requires peer review of these reports by the City's consultant at the applicant's expense. Finally, in the event a WCF is approved and constructed, the City's standard conditions of approval require an additional report demonstrating compliance with the FCC's RF standards within one year of commencement of operation.

For recent WCF applications, both applicant reports and the City's peer review have found that maximum exposure for larger facilities on utility poles range from 1.5% of the FCC's public exposure limits at ground level to 4.5% of the limit at the upper story of the closest adjacent building. For the types of facilities that would be permitted under the proposed standards in Attachment A, the maximum theoretical exposure ranges from 0.35% of the public exposure limit at ground level to 0.89% of the public exposure limit at a second story.

The City's sole post-installation report pertains to 19 nodes installed downtown in 2016. The measured exposure for these nodes at ground level ranged from 0.027% to 0.35% of the FCC's public exposure limit.

WCF Regulations Adopted by Other Jurisdictions

Staff has closely monitored actions taken by other jurisdictions with respect to WCF regulations. For the most part, Palo Alto's wireless ordinance, Master License Agreements (MLAs), policies, and practices already include the types of regulations and resident protections commonly cited as best practices. Where staff found that Palo Alto's policies or practices could be improved, staff has recommended inclusion of such provisions in either the objective standards or the proposed ordinance. The table below summarizes staff's research into other jurisdictions' WCF regulations.

WCF / SMALL CELL REGULATION	STAFF COMMENT
Undergrounding/screening/camouflaging requirements	Included in objective standards; as discussed above, Council could direct preference for certain designs (e.g. undergrounding) over others.
Follow up RF testing	Currently required by PAMC
Noise limit and/or acoustic analysis	Currently required by PAMC and included in proposed objective standards
Encroachment permit necessary for work in ROW	Currently required by PAMC
Public notice to property owners within specified radius of the proposed project site	Currently required by PAMC
Indemnification Requirement	Currently required by PAMC and MLAs
Performance Bond Requirement	Currently required by MLAs
Liability insurance Requirement	Currently required by MLAs
Requirement that facilities be removed or relocated for City projects	Currently required by MLAs and added as a provision in proposed ordinance
Future modification with less visually intrusive materials	Added as a standard condition in proposed ordinance
Permit automatically expires within 10 years	Added as a provision in proposed ordinance, to the extent not superseded by existing MLA obligations
Adoption of objective standards by resolution to facilitate amendment or repeal	Added as a provision in the proposed ordinance and incorporated into staff recommendation
Minimum distance between WCF nodes	ARB and PTC recommended further study of this item
Minimum distance from specified uses	ARB and PTC recommended further study of this

(e.g. schools)	item
WCFs "prohibited" in residential zones (without an exception)	Staff recommends against this approach as explained below

Some cities have adopted regulations that do not permit installation of WCFs in residential zones. The examples staff has reviewed all contain provisions permitting an applicant to request exceptions to the extent the regulations would violate federal law, for example, by prohibiting, or effectively prohibiting the provision of personal wireless services in those zones. Notably, some of these ordinances suggest that the jurisdictions have yet to receive any applications for small cells in the PROW,[3] while Palo Alto currently has several pending applications. Staff believes a similar approach in Palo Alto would result in a large number of exception requests and may ultimately reduce the City's ability to exercise local control, as an applicant would have a relatively easier task in establishing the need for an exception if it is effectively prohibited from siting facilities in broad swaths of the City.

POLICY IMPLICATIONS

The proposed ordinance is consistent with recently adopted FCC regulations, which went into effect in January 2019. Under the FCC order, cities have until April 15, 2019 to adopt reasonable, non-discriminatory, and objective aesthetic standards. In the absence of such action, the City will be unable to enforce local control over aesthetic issues relating to WCFs. Several provisions of the ordinance have been prepared to facilitate a return to the City's existing regulations should one or more elements of the September 2018 Order be invalidated by a court or through legislation.

RESOURCE IMPACT

The attached ordinance is not anticipated to result in any resource impact. Although the FCC regulations create new presumptively reasonable fees for Small Wireless Facilities, the City is entitled and will continue to collect the full amount of its objectively reasonable costs for application processing and ongoing pole attachments.

ENVIRONMENTAL REVIEW

[3] Ordinances adopted by Mill Valley, CA and Fairfax, CA state: "The wireless telecommunications industry has expressed interest in submitting applications for the installation of 'small cell' wireless telecommunications facilities in the [City's/Town's] public rights-of-way. Other California cities have already received applications for small cells to be located within the public right-of-way."

The attached ordinance is exempt from environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guideline sections 15061(b), 15301, 15302 and 15305 because it simply provides a comprehensive permitting scheme.

Attachments:

Attachment A: 2019-04-03 WCF Standards Resolution (PDF)
Attachment B: 2019-04-02 Ordinance Amending Section 18.42.110 (PDF)
Attachment C: Design Options for Further Review or Disfavored (PPTX)

NOT YET ADOPTED

Resolution No. _____
Resolution of the Council of the City of Palo Alto Adopting
Objective Aesthetic, Noise, and Related Standards for
Wireless Communication Facilities in the Public Rights of Way

The Council of the City of Palo Alto RESOLVES as follows:

SECTION 1. Findings and Declarations.

a. The tremendous growth in personal wireless services has created an increased demand for new wireless antennas and equipment. Wireless service providers are increasingly seeking to utilize public rights of way to deploy small wireless facilities to improve and expand coverage.

b. The unregulated installation of wireless facilities, including small cell antennas, in public rights-of-way and in other locations, poses a threat to the public health, safety and welfare, including: traffic and pedestrian safety hazards due to unsafe siting; negative and irreversible impacts to trees, landscaping, and infrastructure; noise concerns; and visual and aesthetic blight due to excessive height and lack of camouflaging, negatively impacting the unique character of the City.

c. The reasonably regulated and orderly deployment of wireless telecommunications facilities in the public right-of-way is desirable, and unregulated or disorderly deployment represents a threat to the health, welfare and safety of the community.

d. The regulations of wireless installations are necessary to protect and preserve the aesthetic character of the community and to ensure that all wireless telecommunications facilities are installed using the least intrusive means possible.

e. The City Council has adopted a Wireless Communication Facilities (WCFs) code to regulate the various health, welfare, and safety impacts presented by the proliferation of WCFs and to balance these impacts with the interests of consumers in receiving the benefits of wireless technologies.

f. Federal and state law place significant limits on the City's exercise of local control over WCF matters. On September 26, 2018, the Federal Communications Commission adopted a Declaratory Ruling and Third Report and Order (WT Docket No. 17-79; WC Docket No. 17-84; FCC 18-133), further limiting local control.

g. The regulations adopted herein represent reasonable, objective, and non-discriminatory controls on aesthetic, noise, and related impacts of WCFs in the Public Rights-of-Way.

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SECTION 2. Adoption of Objective Standards for WCFs on Streetlight Poles in the Public Rights-of Way.

The City Council hereby adopts the standards in Exhibit 1, attached to and incorporated into this resolution as if fully set forth herein, for Wireless Communication Facilities on Streetlight in the Public Rights-of-Way

SECTION 3. Adoption of Objective Standards for WCFs on Wood Utility Poles in the Public Rights-of-Way.

The City Council hereby adopts the standards in Exhibit 2, attached to and incorporated into this resolution as if fully set forth herein, for Wireless Communication Facilities on Wood Utility Poles in the Public Rights-of-Way

SECTION 4. If any section, subsection, clause or phrase of this resolution or the attached standards is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the resolution and exhibits. The Council hereby declares that it should have adopted the resolution and exhibits, and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 5. Environmental Review. The Council finds that this ordinance is exempt from the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061 of the CEQA Guidelines, because it does not authorize the construction of Wireless Communication Facilities in any locations where such facilities are not already permitted; therefore it can be seen with certainty that there is no possibility that the ordinance will have a significant effect on the

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environment. The ordinance is further exempt under CEQA Guidelines sections 15301, 15302, 15303 and 15305 because it simply represents a comprehensive regulatory scheme governing minor alterations to existing facilities or small structures.

INTRODUCED AND PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

_____
City Clerk

_____
Mayor

APPROVED AS TO FORM:

APPROVED:

_____
Deputy City Attorney

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City Manager

_____
Director of Planning and Community Environment

Streetlight Poles

Standard designs for WCFs located on Streetlights – An applicant proposing to attach to a Streetlight in the public right of way shall utilize one of the other designs specified herein.

a) **Underground design:** Radio equipment shall be placed in an underground vault in the pedestrian right of way. The antennae shall be placed in a shroud at the top of a nearby pole.
   i) Underground vaults shall be the minimum volume necessary to house WCF equipment. Application materials should explain why the proposed dimensions are required. In no event shall vault dimensions exceed 5 feet 8-inches x 8 feet 2-inches x 5 feet 7-inches or 260 cu. ft., excluding space required for ventilation or sump pump equipment.

b) **Top-mounted design:** All equipment shall be enclosed within a shroud at the top of the pole containing both radio and antenna equipment.
   i) Top-mounted equipment shrouds shall not exceed 5.5 feet from the top of the streetlight pole and shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15" at their widest.

c) **Minimal sunshield design:** Radio equipment shall be enclosed within one or two sunshields not exceeding 8 inches wide nor 0.75 cubic feet in volume each, mounted directly to the side of the pole. Sunshields shall be attached at least 12 feet above ground level. To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

d) **Existing signage:** Radio equipment shall be attached to a pole behind existing signage under the following conditions:
   i) Radio equipment shall be placed within a shroud that does not exceed the dimensions of the sign in height and width, nor 4 inches in depth, including any required mounting bracket.
   ii) In no event shall WCF equipment obscure or interfere with the visibility or functioning of the signage.
   iii) To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

General standards for all WCFs located on Streetlights

WCF equipment and shrouds

1) Antennae shall be the smallest antennae possible to achieve the coverage objective. Except in the case of top-mounted designs, antennae shall not exceed 3 feet from the top of the streetlight pole and the associated "antenna skirt" shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15" at their widest.
2) All shrouds and equipment shall be painted to match Public Works Department (PWD) standards or the existing pole, as applicable.
3) All shrouds and equipment shall be designed without gaps between materials or sky visible between component surfaces.
4) Equipment that cannot propagate an adequate signal within the shrouding required by the standard designs shall be attached to a streetlight pole at a height of 2 feet below the light mast or higher. Each instance of such equipment shall not exceed 0.85 cu. ft. nor shall the total volume of such equipment and any shrouding exceed 2.6 cu. ft. per streetlight pole.

Height

5) Except for top-mounted designs, poles and all attachments will not exceed the height of similar surrounding poles by more than 3 feet. For top-mounted designs, poles and all attachments shall not exceed the height of similar surrounding poles by more than 6 feet.

6) Replacement poles will conform to PWD style guidelines where the City has adopted standards and will match the pole being replaced where no standards exist. For integrated pole designs, poles shall incorporate decorative elements (e.g. fluting, decorative mast arm and luminaire, etc.) from PWD standards or existing poles, as applicable.

Landscaping

7) At the direction of the Urban Forestry division, Applicant shall provide street trees and/or smaller amenity trees that interrupt direct views of WCF equipment where Urban Forestry determines appropriate space exists within 35 feet of the pole.
8) Any existing landscaping removed or damaged by installation shall be replaced in kind.

Noise

9) Noise shall comply with PAMC Chapter 9.10 and shall be consistent with noise-related Comprehensive Plan goals and policies.
    a) In residential areas with an average 24-hour noise level (L_{dn}) at or below 60 decibels (dB), noise generated by WCF equipment shall not cause the L_{dn} exceed 60dB or to increase by 5.0 dB or more, even if the resulting L_{dn} would remain below 60 dB.
    b) In residential areas with an L_{dn} above 60 dB, noise generated by WCF equipment shall not cause the average to increase by 3.0 decibels (dB) or more.

Curb clearances

10) If placed below 16' above ground level, attachments shall not be placed closer than 18" to the curb, nor shall they extend over the sidewalk (Caltrans Highway Design Manual Section 309).
11) WCF node equipment must be at least 3' from a curb cut.

Miscellaneous

12) WCF installations shall not require any changes in the City's existing banner marketing program.
13) All cabling shall be routed entirely within the pole or an attached shroud.
14) Safety signage shall be the smallest size possible to accomplish its purpose.
15) Power disconnects shall be placed in a vault near the base of the pole.
16) Except as provided in these standards, no equipment cabinets may be placed at grade.
17) Light mast orientation, height, color temperature and other photometric information shall comply with PWD standards.

Pole location

18) Nodes shall utilize existing streetlight pole locations. Any new pole locations are prohibited unless approved through PWD/CPAU pole placement application.
19) Streetlight nodes at a designated gateway location or along a scenic corridor shall not utilize a top-mounted design.

Wood Utility Poles

Standard designs for WCFs located on Wood Utility Poles – An applicant proposing to attach to a wood utility pole in the public right of way shall utilize one of the other designs specified herein.

a) **Underground design:** Radio equipment shall be placed in an underground vault in the pedestrian right of way. The antennae shall be placed in a shroud at the top of a nearby pole.
   i) Underground vaults shall be the minimum volume necessary to house WCF equipment. Application materials should explain why the proposed dimensions are required. In no event shall vault dimensions exceed 5 feet 8-inches x 8 feet 2-inches x 5 feet 7-inches or 260 cu. ft., excluding space required for ventilation or sump pump equipment.

b) **Top-mounted design:** All equipment shall be enclosed within a shroud at the top of the pole containing both radio and antenna equipment.
   i) Top-mounted equipment shrouds shall not exceed 5.5 feet from the top of the pole or bayonet attachment, if one is used, and shall taper to meet the pole above the mast arm. The diameter of the antenna and shroud shall not exceed 15" at their widest.

c) **Minimal sunshield design:** Radio equipment shall be enclosed within one or two sunshields not exceeding 8 inches wide nor 0.75 cubic feet in volume each, mounted directly to the side of the pole. To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

d) **Existing signage:** Radio equipment shall be attached to a pole behind existing signage under the following conditions:
   i) Radio equipment shall be placed within a shroud that does not exceed the dimensions of the sign in height and width, nor 4 inches in depth, including any required mounting bracket.
   ii) In no event shall WCF equipment obscure or interfere with the visibility or functioning of the signage.
   iii) To the extent separate antennae are required, antennae shall be placed in a shroud at the top of the pole.

General standards for all WCFs located on Wood Utility Poles

WCF equipment and shrouds

1) Antennae shall be the smallest antennae possible to achieve the coverage objective. Antennae shall not exceed 5.5 feet from the top of the pole or bayonet attachment, if one is used. The diameter of the antenna and shroud shall not exceed 15" at their widest.
2) Bayonet attachments and equipment or antennae at the top of the shroud shall be covered by a single integrated shroud and "antenna skirt" that shall meet the pole without any gaps.
3) All conduit shall be mounted flush to the pole.
4) All shrouds and equipment shall be painted to match PWD standards or the existing pole, as applicable. Paint shall be maintained regularly and shrouds shall be repainted if necessary to match changes in pole color over time.
5) All shrouds and equipment shall be designed without gaps between materials or sky visible between component surfaces.
6) Equipment that cannot propagate an adequate signal within the shrouding required by the standard designs shall be attached to the top of the pole or on a cross arm or brace protruding from the pole to the minimum extent necessary to comply with safety standards including GO95. Such cross arm shall be placed as high on the pole as technically feasible. Each instance of such equipment shall not exceed 0.85 cu. ft. nor shall the total volume of

such equipment exceed 2.6 cu. ft. per wood utility pole.

Height

7) For wood utility poles carrying power lines, replacement poles and pole-top bayonet attachments shall be the minimum height necessary to provide GO-95 mandated clearance between WCF equipment and power lines.
8) For wood utility poles without power lines, any pole top equipment shall not increase the height of the pole by more than six feet.
9) In no event shall the total height of a pole or replacement pole, including all equipment exceed 55 feet.
10) Replacement poles will conform to all standards adopted by CPAU.

Landscaping

11) At the direction of the Urban Forestry division, Applicant shall provide street trees and/or smaller amenity trees that interrupt direct views of WCF equipment where Urban Forestry determines appropriate space exists within 35 feet of the pole.
12) Any existing landscaping removed or damaged by installation shall be replaced in kind.

Noise

13) Noise shall comply with PAMC Chapter 9.10 and shall be consistent with noise-related Comprehensive Plan goals and policies.
    a) In residential areas with an average 24-hour noise level (L_{dn}) at or below 60 decibels (dB), noise generated by WCF equipment shall not cause the L_{dn} exceed 60dB or to increase by 5.0 dB or more, even if the resulting L_{dn} would remain below 60 dB.
    b) In residential areas with an L_{dn} above 60 dB, noise generated by WCF equipment shall not cause the average to increase by 3.0 decibels (dB) or more.

Curb clearances

14) If placed below 16' above ground level, attachments shall not be placed closer than 18" to the curb, nor shall they extend over the sidewalk (Caltrans Highway Design Manual Section 309).
15) WCF node equipment must be at least 3' from a curb cut.

Miscellaneous

16) Safety signage shall be the smallest size possible to accomplish its purpose.
17) Power disconnects shall be placed on the wood pole or in a vault near the base of the pole.
18) Except as provided in these standards, no equipment cabinets may be placed at grade.
19) If applicable, light mast orientation, height, color temperature and other photometric information shall comply with PWD standards.

Pole location

20) Nodes shall utilize existing streetlight pole locations. Any new pole locations are prohibited unless approved through PWD/CPAU pole placement application.
21) Wood utility poles at a designated gateway location or along a scenic corridor shall not utilize a top-mounted design.
22) WCF equipment and antennas shall be located on poles such that they do not fall within the horizontal plane defined by a 45 degree angle extending 50 feet from the center point of upper story windows, doors, balconies, and other openings.

Ordinance No. _____
Ordinance of the Council of the City of Palo Alto Amending Section 18.42.110 (Wireless Communication Facilities) of Chapter 18.42 (Standards for Special Uses) of Title 18 (Zoning) of the Palo Alto Municipal Code to Update the Code Consistent with the FCC's Declaratory Ruling and Third Report and Order (FCC 18-133)

The Council of the City of Palo Alto ORDAINS as follows:

SECTION 1. Findings and Declarations. The City Council finds and declares as follows:

A. The tremendous growth in personal wireless services has created an increased demand for new wireless antennas and equipment. Wireless service providers are increasingly seeking to utilize public rights of way to deploy small wireless facilities to improve and expand coverage.

B. The unregulated installation of wireless facilities, including small cell antennas, in public rights-of-way and in other locations, poses a threat to the public health, safety and welfare, including: traffic and pedestrian safety hazards due to unsafe siting; negative and irreversible impacts to trees, landscaping, and infrastructure; noise concerns; and visual and aesthetic blight due to excessive height and lack of camouflaging, negatively impacting the unique character of the City.

C. The reasonably regulated and orderly deployment of wireless telecommunications facilities in the public right-of-way is desirable, and unregulated or disorderly deployment represents a threat to the health, welfare and safety of the community.

D. Local jurisdictions must reasonably allow wireless telecommunication facilities to be located in public rights-of-way, but may impose regulations based on published aesthetic standards.

E. The regulations of wireless installations are necessary to protect and preserve the aesthetic character of the community and to ensure that all wireless telecommunications facilities are installed using the least intrusive means possible.

F. The City Council has adopted a Wireless Communication Facilities (WCFs) code to regulate the various health, welfare, and safety impacts presented by the proliferation of WCFs and to balance these impacts with the interests of consumers in receiving the benefits of wireless technologies.

G. Federal and state law place significant limits on the City's exercise of local control over WCF matters. On September 26, 2018, the Federal Communications Commission adopted

a Declaratory Ruling and Third Report and Order (WT Docket No. 17-79; WC Docket No. 17-84; FCC 18-133), further limiting local control.

H. The purpose of the amendments herein is to establish uniform and comprehensive standards and regulations regarding the siting, development, and operation of wireless telecommunication facilities within the City in a manner consistent with State and Federal law.

SECTION 2. Section 18.42.110 of Chapter 18.42 is hereby amended to read as follows:

18.42.110 Wireless Communication Facilities

(a) Purpose and Interpretation

The purpose of this section is two-fold: (A) to implement within the jurisdictional boundaries of the city the applicable zoning, land use and other laws, rules, regulations and policies and procedures applicable to siting applications filed with the city by wireless communications facilities infrastructure owners and operators and wireless communications service providers, which seek to install or attach their facilities at locations in Palo Alto; and (B) to accommodate new wireless technologies and continued improvements to existing wireless communications facilities while minimizing their adverse visual and structural health and safety impacts. Consistent with that purpose, the provisions of this section are to be construed in a manner that is consistent with (1) the interest of consumers in receiving the benefits of the deployment of ultra-high-speed and -capacity broadband wireless communication facilities technology and innovations and the delivery of ultra-high-speed and -capacity broadband wireless communications facilities services, (2) the interest in safeguarding the environment, preserving historic properties, and addressing aesthetics and other local values, and (3) the interest in promoting the public health, safety and welfare in Palo Alto. Although this Section implements and references provisions of preemptive state and federal law, nothing in this Section shall be interpreted to create an independent source of the rights provided an applicant by such state or federal law.

A wireless communications facility is permitted to be sited in Palo Alto subject to applicable requirements imposed by this chapter~~, which may include an architectural review process, a conditional use permit application process, or both~~. These processes are intended to permit wireless communications facilities that blend with their existing surroundings and do not negatively impact the environment, historic properties, or public safety. The procedures prescribed by this ~~chapter~~ Section are tailored to the type of wireless communication facility that is sought. Building-mounted wireless communications facilities and collocation of facilities are preferred and encouraged, subject to all other provisions of this section.

(b) Definitions

The following abbreviations, phrases, terms and words shall have the meanings assigned in this section or, as appropriate, in Section 18.04.030 and Section 1.04.050 of the Palo Alto Municipal Code, as may be amended from time to time, unless the context indicates

otherwise. Words that are not defined in this section or other chapters or sections of the Palo Alto Municipal Code shall have the meanings as set forth in Chapter 6 of Title 47 of the United States Code, Part 1 of Title 47 of the Code of Federal Regulations, and, if not defined therein, their common and ordinary meaning.

(1) **"Antenna"** means a that part of a wireless communications facility designed to radiate or receive radio frequency signals or electromagnetic waves for the provision of personal wireless services, as defined in 42 U.S.C. § 332(c)(7)(C)(i). This definition does not include antennas designed for amateur or household use. ~~wireless antenna and its associated equipment. The term includes a macrocell antenna and a microcell antenna.~~

(2) **"Associated equipment"** means any and all on-site equipment, including, without limitation, back-up generators and power supply units, cabinets, coaxial and fiber optic cables, connections, shelters, radio transceivers, regular power supply units, and wiring, to which a wireless antenna is attached in order to facilitate mobile broadband service and personal wireless service delivered on mobile broadband devices.

(3) **"Base Station"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: a structure or equipment at a fixed location that enables FCC-licensed or authorized wireless communications between user equipment and a communications network. The term does not encompass a tower as defined herein or any equipment associated with a tower. Base Station includes, without limitation:

~~(i)~~a. Equipment associated with wireless communications services such as private, broadcast, and public safety services, as well as unlicensed wireless services and fixed wireless services such as microwave backhaul.

~~(ii)~~b. Radio transceivers, antennas, coaxial or fiber-optic cable, regular and backup power supplies, and comparable equipment, regardless of technological configuration (including Distributed Antenna Systems ("DAS") and small-cell networks).

~~(iii)~~c. Any structure other than a tower that, at the time the relevant application is filed with the city under this section, supports or houses equipment described in paragraphs (i)-(ii) above and has been previously reviewed and approved by the city.

(4) **"Collocation"** means the same as defined in valid regulations promulgated by the FCC, including 47 C.F.R. §§ 1.6002(g) or 1.6100(b), as those sections may be amended from time to time. For the purpose of convenience only, the definition provided in 47 C.F.R. § 1.6100(b), for eligible facilities requests, is stated as follows: the mounting or installation of transmission equipment on an eligible support structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.

(5) **"Eligible Facilities Request"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: any request for modification of an existing tower or base station that, within the meaning of the Spectrum Act, does not substantially change the

physical dimensions of that tower or base station, and involves (a) the collocation of new transmission equipment, (b) the removal of transmission equipment, or (c) the replacement of transmission equipment.

(6) **"Eligible Support Structure"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: any existing tower or base station that exists at the time the application is filed with the city.

(7) **"Existing"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: ~~for~~ a constructed tower or base station~~, means that the tower or base station~~ is existing for purposes of an eligible facilities request if has been previously reviewed and approved under the applicable city zoning or siting process, or under another applicable state or local regulatory review process, provided that a tower that has not been reviewed and approved because it was not in a zoned area when it was built, but was lawfully constructed, is "Existing" for purposes of this definition.

(8) **"FCC"** means the Federal Communications Commission or successor agency.

(9) **"Project"** means a WCF to be located in Palo Alto for which a permit is required by the city.

(10) **"RF"** means radio frequency on the radio spectrum.

(11) **"Spectrum Act"** means Section 6409(a) of the Middle Class Tax Relief Act and Job Creation Act of 2012, 47 U.S.C. § 1455(a) (providing, in part, "… a State or local government may not deny, and shall approve, any Eligible Facilities Request for a modification of any existing wireless Tower or Base Station that does not substantially change the physical dimensions of such Tower or Base Station.").

(12) "Small Wireless Facility," means the same as defined in any valid regulations adopted by the FCC. For purposes of convenience only, the definition provided at 47 C.F.R. Section 1.1312(e)(2) is stated here as follows: a facility that meets each of the following conditions:

a. The structure on which antenna facilities are mounted:

(I) Is 50 feet or less in height, or

(II) Is no more than 10 percent taller than other adjacent structures, or

(III) Is not extended to a height of more than 10 percent above its preexisting height as a result of the collocation of new antenna facilities; and

b. Each antenna (excluding associated antenna equipment) is no more than three cubic feet in volume; and

c. All antenna equipment associated with the facility (excluding antennas) are cumulatively no more than 28 cubic feet in volume; and

d. The facility does not require antenna structure registration under 47 C.F.R. Section 17; and

e. The facility is not located on Tribal lands, as defined under 36 C.F.R. § 800.16(x); and

f. The facility does not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified by the FCC.

(~~12~~13) **"Substantially Changes"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: in the context of an eligible support structure, a modification of an existing tower or base station where any of the following criteria is met:

~~(i)~~a. For a tower not located in the public rights-of-way:

(~~a~~I) The height of the tower is increased by (I) more than ten (10) percent, or (II) by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty (20) feet, whichever is greater; or

(~~b~~II) There is added an appurtenance to the body of the tower that would protrude from the edge of the tower by (I) more than twenty (20) feet, or (II) more than the width of the tower at the level of the appurtenance, whichever is greater.

~~(ii)~~b. For a tower located in the public rights-of-way and for all base stations:

(~~a~~I) The height of the tower or base station is increased by more than ten (10) percent or ten (10) feet, whichever is greater; or

(~~b~~II) There is added an appurtenance to the body of that structure that would protrude from the edge of that structure by more than six (6) feet; or

(~~c~~III) It involves the installation of ground cabinets that are more than ten (10) percent larger in height or overall volume than any other ground cabinets associated with the structure; or

(~~d~~IV) It involves the installation of any new equipment cabinets on the ground if there is no pre-existing ground cabinet associated with that structure.

~~(iii)~~c. For any eligible support structure:

(~~a~~I) It involves the installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four (4) cabinets; or

(~~b~~II) There is entailed in the proposed modification any excavation or deployment outside of the current site of the tower or base station; or

(~~c~~III) The proposed modification would cause the concealment/camouflage elements of the tower or base station to be defeated; or

(~~d~~IV) The proposed modification would not comply with the conditions associated with the prior siting approval of construction or modification of the tower or base station, unless the non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that does not exceed the corresponding thresholds in this section.

~~(iv)~~d. To measure changes in height for the purposes of this section, the baseline is:

(~~a~~I) For deployments that are or will be separated horizontally, measured from the original support structure;

(~~b~~II) For all others, measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved by the city prior to February 22, 2012.

~~(v)~~e. To measure changes for the purposes of this section, the baseline is the dimensions that were approved by the city prior to February 22, 2012.

(~~13~~14) **"Tower"** means any structure built for the sole or primary purpose of supporting any FCC-licensed or -authorized antenna, including any structure that is constructed for wireless communications service. This term does not include a base station.

(~~14~~15) **"Transmission Equipment"** means the same as defined by the FCC at 47 C.F.R. § 1.6100(b), as it may be amended from time to time. For the purpose of convenience only, this definition is stated as follows: equipment that facilitates transmission of any FCC-licensed or authorized wireless communication service.

(16) **"Wireless Communications Facility"** or **"WCF"** means any antenna, associated equipment, base station, ~~small cell system,~~ Small Wireless Facility, tower, and/or transmission equipment located in Palo Alto, but does not include :

a. A facility that qualifies as an amateur station as defined by the FCC, 47 C.F.R. Part 97, or its successor regulation;

b. An antenna facility that is subject to the FCC Over-The-Air-Receiving Devices rule, 47 C.F.R. Section 1.4000, or any successor regulation;

c. Portable radios and devices including, but not limited to, hand-held, vehicular, or other portable receivers, transmitters or transceivers, cellular phones, CB radios, emergency services radio;

d. Mobile services providing public information coverage of news events of a temporary nature.

e. Telecommunications facilities owned and operated by any government agency or emergency medical care provider.

~~(16) **"Wireless Communications Service"** means, without limitation, all FCC-licensed back-haul and other fixed wireless services, broadcast, private, and public safety communication services, and unlicensed wireless services.~~

(c) Types of WCF Permits Required

(1) A Tier 1 WCF Permit shall be required for an eligible facilities request, as defined in this section.

(2) A Tier 2 WCF Permit shall be required for:

~~(i)~~a. Any modification of an eligible support structure, including the collocation of new equipment, that substantially changes the physical dimensions of the eligible support structure on which it is mounted; or

b. Any collocation of a Small Wireless Facility; or

~~(ii)~~c. Any other collocation not eligible for a Tier 1 WCF Permit.

(3) A Tier 3 WCF Permit shall be required for the siting of any WCF, including a Small Wireless Facility, that is not a collocation subject to a Tier 1 or 2 WCF Permit. An application shall not require a Tier 3 WCF Permit solely because it proposes the replacement in-place of an existing streetlight or wood utility pole.

(d) WCF Application Requirements

All applications for a WCF Permit shall include the following items:

(1) Any applicant for a WCF Permit shall participate in an intake meeting with the Planning and Community Environment Department ~~to file~~ when filing an application;

(2) The applicant must specify in writing whether the applicant believes the application is for an eligible facilities request subject to the Spectrum Act, and if so, provide a detailed written explanation as to why the applicant believes that the application qualifies as an eligible facilities request;

(3) The applicant shall complete the city's standard application form, as may be amended from time to time;

(4) The applicant shall include a completed and signed application checklist available from the city, including all information required by the application checklist;

(5) Payment of the fee prescribed by the Municipal Fee Schedule;

(6) The application must be accompanied by all permit applications with all required application materials for each separate permit required by the city for the proposed WCF, including a building permit, an encroachment permit (if applicable) and an electrical permit (if applicable);

(7) For Tier 2 and 3 WCF Permits, the applicant must host a community meeting at a time and location designed to maximize attendance by persons receiving notice under this subparagraph to provide outreach to the neighborhood around the project site. The applicant shall give notice of the community meeting to all residents and property owners within 600 feet of the project site at least 14 days in advance of the community meeting. ~~The~~ Before an application may be considered complete, the applicant shall provide a proof of notice affidavit to the city that contains:

~~(i)~~a. Proof that the applicant noticed and hosted the community meeting ~~before filing the application~~;

~~(ii)~~b. A summary of comments received at the community meeting and what, if any, changes were made to the application as a result of the meeting;

(8) For Tier 3 WCF Permits, the plans shall include a scaled depiction of the maximum ~~permitted~~ increase in the physical dimensions of the proposed project that would be feasible and permitted by the Spectrum Act, using the proposed project as a baseline; and

(9) Satisfy other such requirements as may be, from time to time, required by the Planning and Community Environment Department Director ("Director"), as publically stated in the application checklist.

(e) Permit Review ("Shot Clock") Time Periods. The City shall review and act upon application materials in a manner consistent with any timeframes provided in controlling state or federal law, including valid regulations and orders promulgated by the FCC.

~~(1) City review of application materials. The timeframe for review of an application shall begin to run when the application is submitted, but shall be tolled if the city finds the application incomplete and provides notice of incompleteness that delineates the missing information in writing. Such requests shall be made within 30 days of submission of the~~

~~application. After submission of additional information, the city will notify the applicant within 10 days of this submission if the additional information failed to complete the application. If the city makes a determination pursuant to Section 18.42.110(e)(2)(i) that an application submitted as a Tier 1 eligible facilities request should be processed as a Tier 2 or Tier 3, then the Tier 2 or Tier 3 processing time, as applicable, shall begin to run when the city issues this decision.~~

~~(2) Tier 1 processing time. For Tier 1 WCF Permit applications, the city will act on the WCF application, together with any other city permits required for a proposed WCF modification, within 60 days, adjusted for any tolling due to requests for additional information or mutually agreed upon extensions of time.~~

~~(i) If the city determines that the application does not qualify as a Tier 1 eligible facilities request, the city will notify the applicant of that determination in writing and will process the application as a Tier 2 or Tier 3 WCF Permit application, as applicable.~~

~~(ii) To the extent federal law provides a "deemed granted" remedy for Tier 1 WCF Permit applications not timely acted upon by the city, no such application shall be deemed granted until the applicant provides notice to the city, in writing, that the application has been deemed granted after the time period provided in Section (e)(2) above has expired.~~

~~(iii) Any Tier 1 WCF Permit application that the city grants or that is deemed granted by operation of federal law shall be subject to all requirements of Section 18.42.110(i)(3), (5), (6) and (7) and 18.42.110(j)(1), (2), (3), (4), (5) and (6).~~

~~(3) Tier 2 processing time. For Tier 2 WCF Permit applications, the city will act on the application within 90 days, adjusted for any tolling due to requests for additional information or mutually agreed upon extensions of time.~~

~~(4) Tier 3 processing time. For Tier 3 WCF Permit applications, the city will act on the application within 150 days, adjusted for any tolling due to requests for additional information or mutually agreed upon extensions of time.~~

~~(5) Denial of application. If the city denies a WCF application, the city will notify the applicant of the denial in writing of the reasons for the denial.~~

(f) Tier 1 WCF Permit Process and Findings

(1) A Tier 1 WCF Permit shall be reviewed by the Director. The Director's decision shall be final and shall not be appealable;

(2) The Director shall grant a Tier 1 WCF Permit provided that the Director finds that the applicant proposes an eligible facilities request;

(3) The Director shall impose the following conditions on the grant of a Tier 1 WCF Permit:

~~(i)~~a. The proposed collocation or modification shall not defeat any existing concealment elements of the support structure; and

~~(ii)~~b. The ~~proposed WCF shall comply with the development standards in Section 18.42.110(i)(3), (5), (6) and (7), and the~~ conditions of approval in Section 18.42.110(j).

(g) Tier 2 WCF Permit Process and Findings

(1) A Tier 2 WCF Permit shall be reviewed by the Director, who may, in his or her sole discretion, refer an application to the Architectural Review Board. The Director's decision shall be appealable directly to the City Council. An appeal may be set for hearing before the City Council or may be placed on the Council's consent calendar, pursuant to the process for appeal of architectural review set forth in Section 18.77.070(f).

(2) The Director, or Council on appeal, shall grant a Tier 2 WCF Permit provided the proposed WCF complies with ~~the development standards in Section 18.42.110(i) and~~ the conditions of approval in Section 18.42.110(j)~~,~~ and all objective standards adopted and amended from time to time by resolution of the City Council or the development standards in Section 18.42.110(i). If such objective standards are repealed, an application shall not be granted unless, in addition to the other requirements of this section, ~~and~~ all of the architectural review findings in Section 18.76.020(d) can be made.

(3) The Director, or Council on appeal, shall deny a Tier 2 WCF Permit if the above findings cannot be made.

(h) Tier 3 WCF Permit Process and Findings

(1) A Tier 3 WCF Permit shall be reviewed by the Director, who may, in his or her sole discretion, refer an application to the Architectural Review Board and/or Planning and Transportation Commission. The Director's decision shall be appealable directly to the City Council. An appeal may be set for hearing before the City Council or may be placed on the Council's consent calendar, pursuant to the process for appeal of architectural review set forth in Section 18.77.070(f).

(2) The Director or Council on appeal shall grant a Tier 3 WCF Permit provided the conditional use permit findings in Section 18.76.010(c) can be made and the proposed WCF complies with the ~~development standards in Section 18.42.110(i) and~~ the conditions of approval in Section 18.42.110(j), and all objective standards adopted and amended from time to time by resolution of the City Council or the development standards in Section 18.42.110(i). ~~and all of the architectural review findings in Section 18.76.020(d) and the conditional use permit findings in Section 18.76.010(c) can be made~~. If the City Council repeals all objective standards, an application shall not be granted unless, in addition to the other requirements of this section, all of the architectural review findings in Section 18.76.020(d) can be made.

(3) The Director, or Council on appeal, shall deny a Tier 3 WCF Permit if the above findings cannot be made.

(i) Generally Applicable Development Standards

Unless the City Council has adopted more specific standards, and ~~E~~ except as otherwise provided in this section, a proposed WCF Project shall comply with the following standards:

(1) Shall utilize the smallest ~~footprint possible~~ antennae, radio, and associated equipment, as measured by volume, technically feasible to achieve a network objective;

~~(2) Shall be designed to minimize the overall height, mass, and size of the cabinet and enclosure structure;~~

(~~3~~2) Shall be screened from public view;

(~~4~~3) When attached to an existing structure, shall be shrouded or screened using materials or colors found on existing structure ~~Shall be architecturally compatible with the existing site~~;

(~~5~~4) Shall be placed at a location that would not require the removal of any required landscaping or would reduce the quantity of landscaping to a level of noncompliance with the Zoning Code;

(~~6~~5) An antenna, base station, or tower ~~shall be designed to minimize its visibility from off-site locations and~~ shall be of a "camouflaged" or "stealth" design, including concealment, screening, and other techniques to hide or blend the antenna, base station, or tower into the surrounding area, such as the use of a monopine design;

~~(7) A building-mounted antenna, base station, or tower shall be architecturally compatible with the existing building on which the antenna, base station, or tower is attached;~~

(~~8~~6) ~~For any Tier 2 or Tier 3 WCF proposed to~~ Shall not be attached on a~~n~~ historic structure/site, as designated by Chapter 16.49~~, historic review shall also be required~~;

(~~9~~7) Except as otherwise permitted by the Spectrum Act, a building-mounted WCF may extend no more than fifteen (15) feet beyond the permitted height of the building in the zone district;

(~~10~~8) Except as otherwise permitted by the Spectrum Act, a tower or other stand-alone Tier 3 WCF Project shall not exceed beyond sixty-five (65) feet in height; and

(~~11~~9) A tower or other stand-alone Tier 3 WCF may encroach into the interior/street side and rear setback.

(j) Conditions of Approval

In addition to any other conditions of approval permitted under federal and state law and this Code that the Director deems appropriate or required under this Code, all WCF Projects approved under this chapter, whether approved by the Director or deemed granted by operation of law, shall be subject to the following conditions of approval:

(1) Permit conditions. The grant or approval of a WCF Tier 1 Permit shall be subject to the conditions of approval of the underlying permit, except as may be preempted by the Spectrum Act.

(2) As-built plans. The applicant shall submit to the Director an as-built set of plans and photographs depicting the entire WCF as modified, including all transmission equipment and all utilities, within ninety (90) days after the completion of construction.

(3) Applicant shall hire a radio engineer licensed by the State of California to measure the actual radio frequency emission of the WCF and determine if it meets FCC's standards. A report, certified by the engineer, of all calculations, required measurements, and the engineer's findings with respect to compliance with the FCC's radio frequency emission standards shall be submitted to the Planning Division within one year of commencement of operation.

(4) Indemnification. To the extent permitted by law, the applicant shall indemnify and hold harmless the city, its City Council, its officers, employees and agents (the "indemnified parties") from and against any claim, action, or proceeding brought by a third party against the indemnified parties and the applicant to attack, set aside or void, any permit or approval authorized hereby for the Project, including (without limitation) reimbursing the city for its actual attorneys' fees and costs incurred in defense of the litigation. The city may, in its sole discretion and at Applicant's expense, elect to defend any such action with attorneys of its own choice.

(5) Compliance with applicable laws. The applicant shall comply with all applicable provisions of the Code, any permit issued under this Code, and all other applicable federal, state and local laws (including without limitation all building code, electrical code and other public safety requirements). Any failure by the City to enforce compliance with any applicable laws shall not relieve any applicant of its obligations under this code, any permit issued under this code, or all other applicable laws and regulations.

(6) Compliance with approved plans. The proposed Project shall be built in compliance with the approved plans on file with the Planning Division.

(7) Subject to City Uses. Any permit to install or utilize poles or conduit in the public rights of way is subject to the City's prior right to use, maintain, expand, replace or remove from use such facilities in the reasonable exercise of its governmental or proprietary powers. Such permit is further subject to the City's right to construction, maintain, and modify streets, sidewalks, and other improvements in the public rights of way. The City, in its sole discretion, may require removal or relocation of a permittee's equipment, at permittee's sole cost and expense, if necessary to accommodate a City use.

(8) Replacement. Where feasible, as new technology becomes available, the applicant shall place above-ground equipment below ground and replace equipment remaining above-ground with smaller equipment, as determined by volume. The applicant shall obtain all necessary permits and approvals for such replacement.

(9) Permit length. WCFs permits shall be valid for the time provided in Section 18.42.110(n), except that a permit shall automatically expire after twelve months from the date of approval if within such twelve month period, the applicant has not obtained all necessary permits to commence construction. The director may, without a hearing, extend such time for a maximum period of twelve additional months only, upon application filed with him or her before the expiration of the twelve-month limit.

(k) Exceptions

(1) The decision-making authority may grant exceptions to objective standards adopted by City Council resolution or any provision of this Section 18.42.110, upon finding that:

a. The proposed WCF complies with the requirements of this Section 18.42.110 and any other requirements adopted by the City Council to the greatest extent feasible; and either
b. As applied to a proposed WCF, the provision(s) from which exception is sought would deprive the applicant of rights guaranteed by federal law, state law, or both; or
c. Denial of the application as proposed would violate federal law, state law, or both.

(2) An applicant must request an exception at the time an application is initially submitted for a WCF permit under this Section 18.42.110. The request must include both the specific provision(s) from which exception is sought and the basis of the request, including all supporting evidence on which the applicant relies. Any request for exception after the City has deemed an application complete constitutes a material change to the proposed WCF and shall be considered a new application.

(3) If the applicant seeks an exception from objective standards adopted by City Council resolution or generally applicable development standards, the Director may refer the application to the Architectural Review Board for recommendation on whether the application complies with such standards to the greatest extent feasible.

(4) The applicant shall have the burden of proving that federal law, state law, or both compel the decision-making authority to grant the requested exception(s), using the evidentiary standards applicable to the law at issue. The City shall have the right to hire independent consultants, at the applicant's expense, to evaluate the issues raised by the exception request and to submit rebuttal evidence where applicable.

(~~k~~l) Removal of Abandoned Equipment

A WCF (Tier 1, Tier 2, or Tier 3) or a component of that WCF that ceases to be in use for more than ninety (90) days shall be removed by the applicant, wireless communications service provider, or property owner within ninety (90) days of the cessation of use of that WCF. A new

WCF permit shall not be issued to an owner or operator of a WCF or a wireless communications service provider until the abandoned WCF or its component is removed.

(~~l~~m) Revocation

The Director may revoke any WCF Permit if the permit holder fails to comply with any condition of the permit. The Director's decision to revoke a Permit shall be appealable pursuant to the process applicable to issuance of the Permit, as provided in subdivisions (f), (g), and (h) of this section.

(n) Expiration

Except as otherwise provided in the permit or in a lease or license agreement with the City of Palo Alto, WCF permits shall be valid for a period of ten years from the date of approval. An applicant may seek extensions of an approved WCF permit in increments of no more than ten years and no sooner than twelve months prior to the expiration of the permit. The Director shall approve an extension request upon finding that that applicant has complied with all conditions of approval for the WCF permit and will comply with all other requirements applicable to WCFs at the time the extension is granted. Prior to issuing a decision on an extension request, the Director may seek additional studies and information to be prepared at the applicants expense.

SECTION 3. If any section, subsection, clause or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the Ordinance. The Council hereby declares that it should have adopted the Ordinance and each section, subsection, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 4. The Council finds that this ordinance is exempt from the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061 of the CEQA Guidelines, because it does not authorize the construction of Wireless Communication Facilities in any locations where such facilities are not already permitted; therefore it can be seen with certainty that there is no possibility that the ordinance will have a significant effect on the environment. The ordinance is further exempt under CEQA Guidelines sections 15301, 15302, 15303 and 15305 because it simply provides a comprehensive permitting scheme governing minor alterations to existing facilities or small structures.

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SECTION 5. This ordinance shall be effective on the thirty-first day after the date of its adoption.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

_____ _____

City Clerk Mayor

APPROVED AS TO FORM:

_____ _____

Deputy City Attorney Director of Planning & Community Environment

Attachment C

Table of Contents:

Street Furniture Designs: Note antenna, radio and ancillary equipment would be housed within the envelope of existing or new street furniture, such as a bus shelter. Other options include screening radio and ancillary equipment within benches or trash cans. **The ARB recommended that street furniture designs return for further review in a study session.**

Ericsson unveils connected bus stop

Posted on June 4, 2015 by IEEE Connected Vehicles

Ericsson demonstrated a connected bus stop concept at UITP World Congress and Exhibition that incorporates 3G, LTE or Wi-Fi small cell technology. The connected bus stop's small cell infrastructure will provide public transport operators with an additional source of revenue, as it can be leased to telecom mobile operators as a means of densifying their networks.

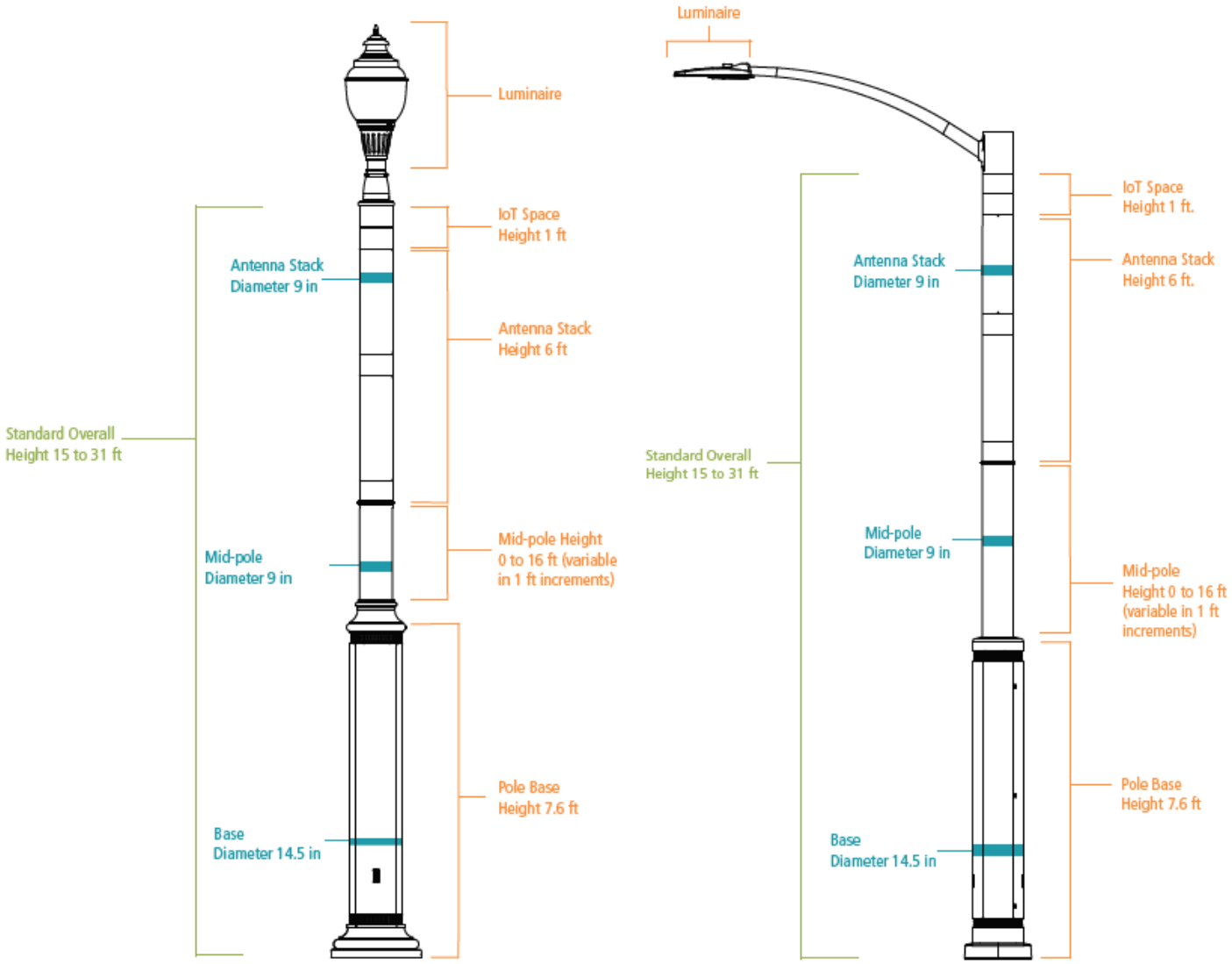
©Ericsson

Ericsson demonstrated a connected bus stop concept at UITP World Congress and Exhibition, the world's biggest public transport event, that incorporates 3G, LTE or Wi-Fi small cell technology. The connected bus stop's small cell infrastructure will provide public transport operators with an additional source of revenue, as it can be leased to telecom mobile operators as a means of densifying their networks. In addition to conventional consumer uses for mobile broadband, the connected bus stop will support functionality that is particularly useful for commuters. This could include screens that display real-time information about bus movements and touch-screens that provide access to interactive maps, local news, tourist information and advertising. In addition, a closed-circuit television (CCTV) camera, panic button and push-to-talk functionality could be incorporated to increase security and make it easy for commuters to contact emergency services or the police.

In dense urban environments such as shopping, business, entertainment and financial districts, capacity is often stretched to the limit and many networks can't consistently deliver high downlink speeds. The connected bus stop alleviates this problem by creating a separate small cell access network that is integrated with telecom operators' transmission networks. Ericsson provides the technology and associated services in a partnership with transport operators and local telecom network operators.

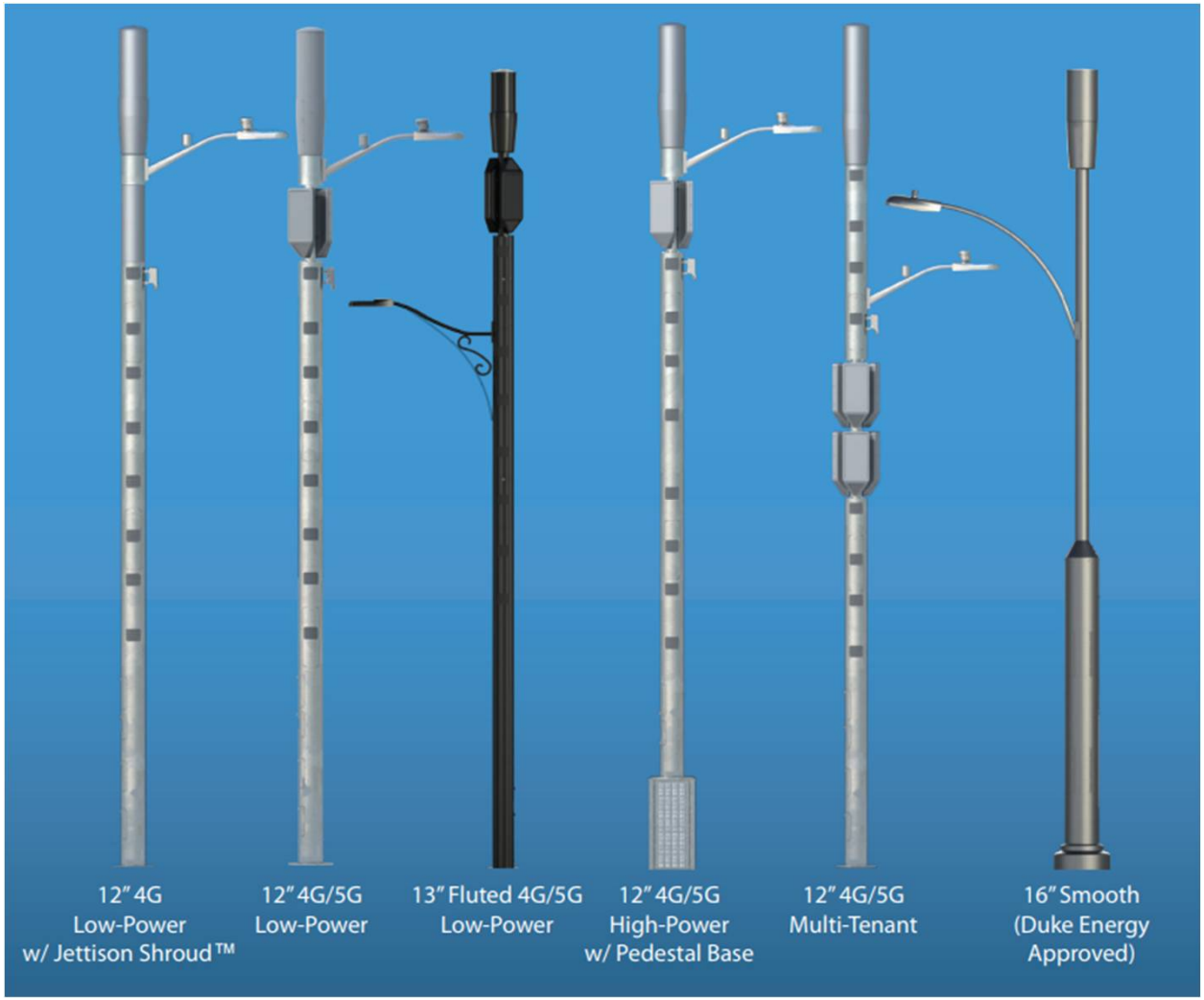
Source: Ericsson via the IEEE website: http://sites.ieee.org/connected-vehicles/2015/06/04/ericsson-unveils-connected-bus-stop

Streetlight Pole Integrated Pole Designs: Note that there are options for both roadway and pedestrian streetlight poles, poles come in decorative styles, and it is possible they could be adapted to match the City's guidelines. Removable panels provide access to equipment inside the pole. Radio and other ancillary equipment are internal to a streetlight pole with a wider diameter than the City's existing streetlight standards and conduit and cabling are inside the pole. This example shows antennas inside the pole as well. **The ARB recommended that integrated pole designs return for further review in a study session.**



Source: Smart Fusion Pole

Streetlight Pole Integrated Pole Designss: Note that there are options for both roadway and pedestrian streetlight poles, poles come in decorative styles and it is possible they could be adapted to match the City's guidelines. Removable panels provide access to equipment inside the pole. Radio and other ancillary equipment are internal to a streetlight pole with a wider diameter than the City's existing streetlight standards and conduit and cabling are inside the pole. Designs are emerging that accommodate both 4G and 5G technologies (4G equipment is housed inside the pole or in a wider base, while 5G equipment is attached to the exterior of the pole). **The ARB recommended that integrated pole designs return for further review in a study session.**



Source: ConcealFab Product Catalog 2018 and 2019

Streetlight Pole Pedestal Designs: Note the pedestal wrap around the base of the streetlight pole in the first two examples below. **This was not favored by the ARB or Utilities**. The third example is a pedestal design where radio and other ancillary equipment are placed in a pedestal underneath the base of the streetlight pole and cabling and conduit are inside the pole. **This was not favored by the ARB.**

Source: Crown Castle Cluster 2 Visual Simulations (2018)

Source: AT&T Preliminary Architectural Review Draft Visual Simulations (2017)

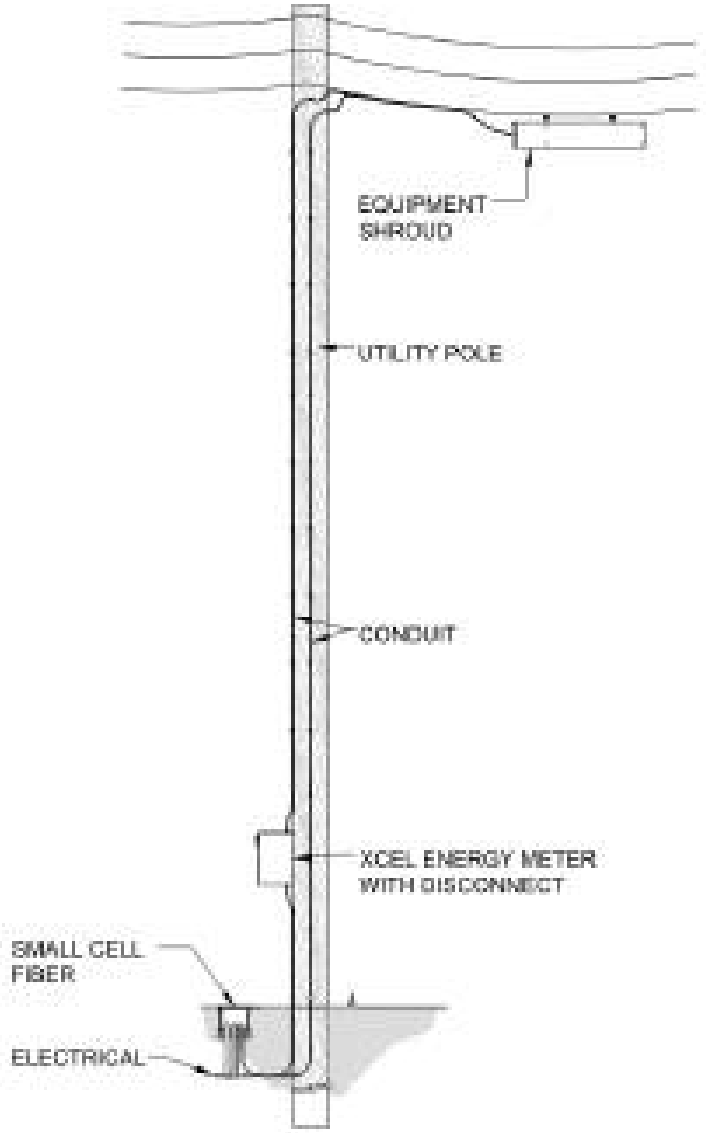
Source: Verizon Site Photo of Node in Cupertino

Streetlight Pole Side-Mounted and Ground-Mounted Equipment Designs: Note equipment storage in faux mailbox close to curbline on a narrow sidewalk, note equipment in side-mounted shroud close to curbline over a narrow sidewalk, et cetera. **These designs were not favored by the ARB.**

Source: Crown Castle Cluster 2 Visual Simulations

Wood Utility Pole Strand-Mount Design: Note antenna, radio and other ancillary equipment are clamped to the steel cable strand that runs between poles that supports other telephone and cable company cables. The design would use one or two shrouds. Cabling and conduit would be closely attached the cable strand. **This design was not favored by the ARB.**

Source: Ericsson via Ericsson website
(https://www.ericsson.com/en/networks/offerings/small-cells/small-cell-evolution)



Source: City and County of Denver
Figure 2-2 Small Cell Infrastructure Design Guidelines

Wood Utility Pole Side-Mounted Designs: Radio and other ancillary equipment are either unshrouded or housed in shroud mounted to the side of the pole. **The ARB did not favor the first five of these example designs for many reasons. Additionally, the ARB did not favor continuing with side-mounted designs that use larger shrouds (see last example to the far right). Consequently, even recently conditionally approved side-mounted designs for wood utility poles with these larger shrouds are recommended to require an application for an exception to the objective wireless administrative standards.**

Source: Vinculums/Verizon
Cluster 1 Visual Simulations

Source: AT&T Preliminary
Architectural Review Draft
Project Plans

Source: Crown Castle
Cluster 3 Visual Simulations

Source: Vinculums/Verizon
Cluster 1 Visual Simulations