RESOLUTION NO. P18-005

A RESOLUTION OF THE PLANNING COMMISSION

DENYING USE PERMIT UP-17-0335 FOR A NEW PERSONAL WIRELESS SERVICE (PWS) FACILITY ATTACHED TO AN EXISTING UTILITY POLE LOCATED IN THE PUBLIC RIGHT-OF-WAY IMMEDIATELY ADJACENT TO 277 MAR VISTA DRIVE AND 7 CUESTA VISTA DRIVE

WHEREAS, ExteNet Systems ("ExteNet"), the applicant, submitted a Use Permit application to install a new personal wireless service ("PWS") facility on an existing wood utility pole within the public right-of-way near 277 Mar Vista Drive and 7 Cuesta Vista Drive;

WHEREAS, the proposed support structure is a 43' 8" tall wood utility pole that currently supports a cross arm, guy wire, and power and communication lines;

WHEREAS, ExteNet proposes to install an omnidirectional antenna within a fiberglass shroud on side arm bracket mount, an electric meter and disconnect switch, two remote radio units ("RRUs"), two diplexers and a fiber splice box mounted on the pole;

WHEREAS, the City of Monterey Planning Office determined the project is exempt from the California Environmental Quality Act ("CEQA") Guidelines (Article 19, Section 15303, Class 3, for "construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures") because the project involves construction of one small cell PWS facility on an existing wood utility pole. Furthermore, the project does not qualify for any of the exceptions to the categorical exemptions found at CEQA Guidelines Section 15300.2.

Exception “a” - Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located - a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies. The project site is located within an established urban environment and there are no potential issues related to an environmental resource of hazardous or critical concern. Furthermore, the project is not located within or near an environmental resource of hazardous or critical concern that has been designated, precisely mapped, or officially adopted pursuant to law by federal, state or local agencies. While historically designated sites exist within the Monterey Heights neighborhood, the nearest historic resource (86 Ave Maria, zoned R-1-12-H1) is located approximately 2000 feet from the project location. Moreover, the proposed PWS facility, which will be mounted on an existing wood utility pole, is not anticipated to have an impact on this potentially sensitive resource because it will not be particularly noticeable and is not considered to have any potential to adversely affect the significance of the nearest historically designated sites.

Exception “b” - Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant. The project site is located within an established urban environment. The project is one of a total of 13 PWS facilities proposed across an area of approximately 450 acres. All 13
are either not a project due to a recommendation by staff to deny the application, or categorically exempt from CEQA under Class 3. None of the sites pose foreseeable environmental impacts. The City has not received any future facilities of the same type and in the same place. None are imminent or can be considered reasonably foreseeable. Therefore, no cumulative effect is anticipated.

Exception "c" - Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances. The project site is located within an established urban environment where existing wooden utility poles with small power, cable and other telecommunications equipment attached to them are a commonplace feature, and there are no unusual environmental circumstances. The Skyline Forest neighborhood is designated as a Very High Fire Danger zone. The City of Monterey's Fire Chief, and the Unit and Fire Chief for CAL FIRE, San Benito-Monterey, are not aware of any data classifying PWS facilities as causing, or contributing to a fire hazard. Therefore, there are no unusual environmental circumstances.

Exception "d" - Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified Environmental Impact Report ("EIR"). The project site is not located on, nor is it visible from, a designated state scenic highway.

Exception "e" - Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Government Code Section 65962.5. The project site is not located on a hazardous waste site pursuant to Government Code Section 65962.5.

Exception "f" - Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. As the project site does not contain any historical resources, there will not be any substantial adverse change in the significance of a historical resource. While historically designated sites exist within the Monterey Heights neighborhood, the nearest historic resource (86 Ave Maria, zoned R-1-12-H1) is located approximately 2000 feet from the project location. Moreover, the proposed PWS facility, which will be mounted on an existing wood utility pole, is not anticipated to have an impact on this potentially sensitive resource because it will not be particularly noticeable and is not considered to have any potential to adversely affect the significance of the nearest historically designated sites;

WHEREAS, on October 5, 2017, the Zoning Administrator held a duly noticed public hearing on the subject application, together with the other 12 similar applications;

WHEREAS, more than 100 interested persons attended the Zoning Administrator hearing, and the Zoning Administrator referred the subject application, together with the other 12 similar applications, to the Planning Commission due to the significant public interest in these projects;

WHEREAS, on November 3, 2017, the City and ExteNet entered into a tolling agreement to extend the applicable timeframe for review under the federal Telecommunications Act of 1996 to January 31, 2018 for all 13 applications;
WHEREAS, on November 14, 2017, the ExteNet conducted a community meeting attended by more than 100 community members and other interested parties;

WHEREAS, on January 31, 2018, at ExteNet's request, the City and ExteNet entered into a tolling agreement to extend the applicable timeframe for review under the federal Telecommunications Act of 1996 to March 31, 2018, for the subject application and four others, and also entered a separate tolling agreement that covered the remaining eight applications;

WHEREAS, on February 7, 2018, the City announced that the applications would be separated into two different public hearings (the first five applications would be heard on March 15, 2018, and the remaining eight applications would be heard by June 29, 2018);

WHEREAS, on February 23, 2018, the City amended its planned public hearing schedule and announced that all 13 applications would be considered at the same public hearing on March 15, 2018, to avoid any potentially improper piecemealing prohibited under CEQA;

WHEREAS, on March 15, 2018, the Planning Commission held a duly noticed public hearing on the subject application and received public comments; and,

WHEREAS, notice is hereby given that decisions of the Planning Commission are appealable to the City Council within 10 days of the date of this action pursuant to Monterey City Code section 38-206.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF MONTEREY that it hereby denies ExteNet's application for Use Permit UP-17-0335 to install a new PWS facility located in the public right-of-way near 277 Mar Vista Drive and 7 Cuesta Vista Drive, as shown in the plans attached hereto as Exhibit A, and based on the following findings:

1. The proposed use is in accord with the objectives of Monterey City Code Chapter 38 and the purposes of the zone.

   Chapter 38 generally provides that the zoning ordinance is intended to protect and promote the public health, safety and general welfare, and to implement the policies in the General Plan. An evaluation under Zoning Ordinance Section 38-112.4 is an appropriate means to evaluate compliance with Chapter 38 and the General Plan because Section 38-112.4 regulates PWS facilities in a manner consistent with the objectives and purposes in both Chapter 38 and the General Plan. As more fully discussed below, the proposed PWS facility does not comply with all the applicable provisions in Zoning Ordinance Section 38-112.4, and therefore the proposed PWS facility is not in accord with the objectives and purposes in Chapter 38 and the General Plan.

2. The proposed use and the proposed conditions under which it would be operated or maintained will be consistent with the General Plan; and, will not be detrimental to the public health, safety, or welfare of persons residing or working in or adjacent to the neighborhood of such use.
This finding is divided into three separate findings: whether the proposed use (1) is consistent with the General Plan; (2) will be detrimental to public health, safety or welfare; and (3) will be detrimental to properties or improvements in the vicinity or to the general welfare.

First, the proposed PWS facility is not consistent with the General Plan because it does not comply with all applicable design and development standards. The Land Use Element classifies the proposed site location as residential and the Monterey City Code provides that PWS Facilities are a major utility subject to a use permit in all residential zones. An evaluation under Zoning Ordinance Section 38-112.4 is an appropriate means to evaluate compliance with the General Plan because Section 38-112.4 regulates PWS facilities in a manner consistent with the objectives and purposes in the General Plan. As more fully discussed below, the proposed PWS facility does not comply with the applicable provisions in Zoning Ordinance Section 38-112.4 (subject to conditions), and therefore the proposed PWS facility is not in accord with the objectives and purposes in the General Plan.

Second, the PWS facility is detrimental to the public health, safety or welfare because it would (1) not be equipped with automatic fire detection or shutdown systems, (2) be installed on a pole that is potentially structurally unsound, and (3) surrounded by dry trees that pose a fire danger.

3. The proposed use will comply with any specific condition required for that use.

The proposed PWS facility does not comply with any specific condition required for the use because, subject to conditions, the facility is not compliant with the applicable provisions in the Zoning Ordinance.

4. The facility is not detrimental to the public health, safety and welfare.

The PWS facility is detrimental to the public health, safety or welfare because it would (1) not be equipped with automatic fire detection or shutdown systems, (2) be installed on a pole that is potentially structurally unsound, and (3) surrounded by dry trees that pose a fire danger.

5. The facility complies with all applicable design and development standards in the City Code.

The proposed PWS facility, does not comply with all applicable design and development standards because:

a. The proposed PWS facility design is not the most-preferred under the circumstances because the more-preferred building-mounted designs, undergrounded equipment configurations and locations in commercial areas appear to be technically feasible.

b. The proposed PWS facility would be located in a discouraged location.
c. The antenna would not be obscured from view from nearby residences and the intersection of Mar Vista and Soledad Place.

d. Pursuant to Zoning Ordinance Section 38-5.B, the public right-of-way is subject to the zoning regulations applicable to the nearest abutting private property parcel. There is no setback requirement for major utility infrastructure within R-1 districts. Accordingly, the proposed PWS facility would be compliant with Zoning Ordinance Section 38-112.4.F.4.c.

e. The proposed PWS facility design does not necessarily preclude collocation by future facilities, as additional antennas could be mounted above the proposed antenna and underground vaults could be placed in the vicinity. Accordingly, the PWS facility complies with Zoning Ordinance Section 38-112.4.F.4.d because it could potentially accommodate future collocated facilities.

f. The proposed PWS facility avoids illumination impacts to adjacent properties to the maximum extent feasible because ExteNet does not propose to install any lights. Accordingly, the PWS facility complies with Zoning Ordinance Section 38-112.4.F.4.f.

g. The only signage proposed is a notice for utility workers and others who might attempt the scale the utility pole that an antenna is placed within the shroud. The proposed PWS facility does not include any commercial signage or advertisements. Accordingly, the PWS facility complies with Zoning Ordinance Section 38-112.4.F.4.g.

h. The PWS facility unreasonably subjects the public use to inconvenience, discomfort, trouble and/or annoyance because there appears to be more-preferred alternatives with the ability to underground equipment and/or locations in a commercial area, such as the Monte Vista Market approximately 0.6 miles from the proposed location.

i. The proposed PWS facility is not consistent with the City’s undergrounded equipment requirements.

6. The facility is designed to be resistant to and minimize opportunities for unauthorized access, climbing, vandalism, graffiti, and other conditions that would result in hazardous conditions, visual blight or attractive nuisances.

   The proposed PWS facility is not designed to automatically shut down in the event of a fire. The equipment vault must be environmentally controlled and watertight. The equipment vault must also be able to temporarily contain any fire.

7. The facility does not unreasonably impair or diminish views of and vistas from adjacent properties and designated scenic corridors.

   The proposed PWS facility unreasonably impairs and/or diminishes views of and/or from adjacent properties.
8. The facility is necessary or desirable for, and compatible with, the neighborhood or community. The City may consider a number of factors, which may include, but shall not be limited to, the proportionality and scale of the facility relative to the surrounding natural and/or manmade environment, the proximity of the facility to residential structures, the compatibility of the facility with uses on adjacent and nearby properties, the surrounding topography, the surrounding tree coverage and foliage, and the compatibility with the values and objectives expressed in the General Plan and any applicable specific plan.

The proposed PWS facility is not necessary, desirable for, and compatible with, the neighborhood or community because the record does not demonstrate a coverage gap and the proposed location and design does not comply with the Zoning Ordinance.

A limited exception is not warranted because the record reflects that there is no gap in Verizon Wireless’ service coverage and there are less intrusive alternatives, such as undergrounded equipment and locating in a commercial zone approximately 0.6 miles from the proposed site (Monte Vista Market).

PASSED AND ADOPTED BY THE PLANNING COMMISSION OF THE CITY OF MONTEREY this 15th day of March, 2018, by the following vote:

AYES: 7 COMMISSIONERS: Millich, Dawson, Brassfield, Ezekiel, Fletcher, Latasa, Reed
NOES: 0 COMMISSIONERS: None
ABSENT: 0 COMMISSIONERS: None
ABSTAIN: 0 COMMISSIONERS: None

APPROVED:

ATTEST:

[Signature]
Planning Commission Chair

[Signature]
Project Planner
Extenet Systems Small Cell Site: SW-CA-CTMONTRE-00011

Project Description – Alternatives Analysis

Utility Pole at 273-275 Mar Vista Dr., Monterey, CA 93940

Introduction:

Extenet Systems, Inc. is a utility company that installs and owns communications infrastructure through which a broad range of clients transmit their signals, including wireless (cellular) companies, local jurisdictions and others. Extenet is licensed to deploy its infrastructure in the public rights-of-way pursuant to its Certificate of Public Convenience and Necessity (CPCN) granted by the California Public Utilities Commission (CPUC).

Extenet is a member of the Underground Services Alert (USA) and the Northern California Joint Pole Association (JPA). Extenet’s JPA membership entitles Extenet to own portions of the joint utility poles to which it attaches equipment to.

Extenet is seeking Zoning Administrator approval of a Use Permit to allow the installation of a Small Cell Wireless Communications Site on an existing utility pole located at 273-275 Mar Vista Dr., Monterey, CA 93940. Extenet has identified a need for coverage in the Monterey Heights neighborhood and seeks to enhance coverage and capacity with this facility as well as others proposed throughout the area. Please see overall project map attached.

The Monterey Heights neighborhood is primarily residential with an underlying Zoning Designation of R-1. Therefore, there are few, if any commercial and/or industrial properties on which to locate wireless communications facilities. Existing utility poles and City light poles present an ideal opportunity to place antennas and related small cell equipment without proposing new tower structures thereby minimizing visual and aesthetic impacts.

GO95 Regulations:

GO95 or Government Order 95 is a set of rules adopted by the CPUC for the State of California, that formulate the installation requirements for overhead utility line design, construction, and maintenance, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead lines and to the public in general.

GO95 designates that certain vertical portions of utility poles be reserved for electrical/power uses, communication cables/telephone, cable TV, fiber cables, and street lighting fixtures. As a utility company proposing to place equipment within the “Communications Area” of utility poles, Extenet is subject to the following minimum clearances in order to comply with GO95 Regulations.

A. 6 ft. From the top/bottom of antenna to any power wire
B. 2 ft. From top/bottom of antenna to any communication cable
C. 1 ft. From fiber to other attachments
D. 1 ft. From top of street lights
E. 2 ft. Below street light
Project Description:

The Small Cell facility will be attached to an existing utility pole in the public right of way utilizing a 9.2 ft. antenna concealed in a shroud attached to the utility pole using a side arm mounted bracket. The overall height of the antenna/shroud is: 27 ft. above ground level. The ancillary radio and electrical equipment will be attached to the pole and contains:

(2) Ericsson 32 RRUs (Remote Radio Units)
(1) Fiber Splice Box
(4) Diplexers

Each Small Cell facility requires a PG&E Smart Meter and electrical disconnect switch which will be mounted to the pole. All new antenna and radio/electrical equipment will be painted to match the existing pole color. No new overhead utility service lines are proposed for this facility. The facility will be un-manned and will operate 24 hours a day, 7 days a week. A Wireless Field Technician will visit the site approximately once per month for maintenance and to ensure continued operation.

Alternatives Analysis:

Extenet proposes that a series of carefully chosen Small Cells attached to exiting utility infrastructure would be the preferred solution to meet the coverage objectives in this area and satisfy the growing demand for wireless voice, data, and Internet services. Extenet has selected the location of these facilities based on the requirements contained within the City of Monterey's Personal Wireless Facilities Ordinance: 38—112.4 as well as the GO95 guidelines and minimum clearance requirements from other utilities.

Please see attached photos which identify the proposed candidate as well as additional alternative candidates that were considered but found to be unsuitable to place the antenna and/or equipment.

Attachments:

Radio Frequency Exposure Report:

Extenet has completed a Radio Frequency Study that demonstrates that the proposed Small Cell facility will comply with the FCC guidelines concerning radio frequency emissions.

Noise Study:

Extenet has completed a Noise Study that demonstrates that the Small Cell wireless facility and equipment will comply with the City's Noise Ordinance — whether the equipment is mounted to the pole or placed in an underground vault.

Photo Simulations:

Extenet has completed photo simulations that illustrate the appearance of the proposed Small Cell Facility.
ExteNet/Verizon Wireless Small Cell Deployment – City of Monterey

Radio Engineer’s Statement

I am the ExteNet Radio Frequency (RF) Engineer assigned to the proposed wireless network deployment in the City of Monterey. Based on my knowledge of the area, and familiarity with Verizon Wireless’ network, I can attest that the work associated with the permit requests is needed to close a significant wireless service coverage gap in the Monterey area.

The service coverage gap is caused by inadequate Verizon infrastructure in the area. Verizon’s existing facilities do not adequately serve its customers in the desired area, nor address rapidly increasing data usage. To remedy this service gap, Verizon needs to deploy new small cell wireless communications facilities.

Industry standard propagation tools are used to identify the areas where the signal strength is too weak to provide reliable service quality. Propagation modeling tools use computer algorithms in conjunction with terrain and clutter databases to simulate wireless coverage.

At all small cell locations the current industry standard technology, LTE will be deployed. This fourth generation (4G) technology will provide users in Monterey with the most advanced personal wireless experience available. 4G LTE is capable of delivering speeds up to 10 times faster than those of 3G. LTE technology also offers lower latency (delay) for data transmissions. In addition, LTE uses spectrum more efficiently than previous technologies, in turn providing more network capacity. Ultimately, users in the Monterey area will have a better experience on their wireless devices performing such functions as making voice calls, watching videos, searching the internet, and mapping out driving directions.

I have a MS Degree in Telecommunications from the University of Colorado, Boulder and I have worked in the field of Radio Frequency Engineering for over 22 years.

Greg A. Seff
RF Engineer
ExteNet Systems

May 31, 2017
GENERAL CONSTRUCTION NOTES

ANTENNA MOUNTING:
1. ALWAYS AND CONSTRUCTION OF ANY ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/AIA-1 OR APPLICABLE LOCAL CODES.
2. ALL STEEL ANCHORS SHALL BE INSTALLED AFTER FABRICATION IN ACCORDANCE WITH ANSI A300.1 "PRECAST OR PRECASTED CONCRETE "CONCRETE"

3. ALL REBAR ANCHORS AND MORTAR MIXTURES SHALL BE LACED WITH OUTDOOR WIRE "CONCRETE" IN ACCORDANCE WITH ANSI A108.1 "TYPICAL BAND (1/2") OR STEEL HARDWARE. USE FRAMING HARDWARE TO INSTALL.

4. DAMAGED DAMAGED ANCHORS SHALL BE REPAIRED WITH DRY MORTAR IN ACCORDANCE WITH ANSI A108.1.

ALL ANCHOR MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHOULDER NUTS TO MATCH MORTAR"S RECOMMENDATIONS.

6. CONTRACTOR SHALL INSTALL ALL HARDWARE AS PER MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND MAINTENANCE.

7. FIRE SITES ANTENNA SUPPORTS AND CONNECTORS, CONTRACTOR CONTRACTOR SHALL CHECK THE ANTEATER WITH THE TERMINAL AND SHOULDER THAT THEY ARE ALIGNED. ANTEATER SUPPORTS SHALL BE PLACED IN THE MORTAR AND SHOULDER WITHIN 3/4" OF THE ADJACENT MORTAR. ANTEATER ADJACENTS SHALL BE TIGHTEN TO MATCH MORTAR"S RECOMMENDATIONS.

TORQUE REQUIREMENTS:
1. ALL NUT CONNECTIONS SHALL BE TIGHTENED TO A TIGHTENING TIGHTEN WITH A TORQUE WRENCH OR TIGHTENED IN A CORNER STRETCH FROM BOTH SIDES OF CONNECTIONS.

4. ALL Mdam HARDWARE SHALL BE TIGHTENED TO 5 Lb-ft (54 kNm).

6. ALL Mdam HARDWARE SHALL BE TIGHTENED TO 5 Lb-ft (54 kNm).

7. ALL Mdam HARDWARE SHALL BE TIGHTENED TO 5 Lb-ft (54 kNm).

8. AT LEAST TWO CONNECTORS SHALL BE INSTALLED IN A CORNER STRETCH FROM BOTH SIDES OF CONNECTIONS.

9. ALL Mdam HARDWARE SHALL BE TIGHTENED TO 5 Lb-ft (54 kNm).

10. ALL NUT CONNECTIONS SHALL BE TIGHTENED TO A TIGHTENING TIGHTEN WITH A TORQUE WRENCH OR TIGHTENED IN A CORNER STRETCH FROM BOTH SIDES OF CONNECTIONS.

ROW UTILITY POLE CONNECTIONS:
1. NO BOLT TIGHTENING TO OVER 1"/T" (25 kNm)

2. ALL NUTS LOCK IN PLACE FROM REAR END OF MORTAR.

3. ALL CAM LOCKS MUST BE CONSECUTIVE AND MUST BE TIGHTENED WITH A TORQUE WRENCH.

4. NO NUTS LOCK IN PLACE FROM REAR END OF MORTAR.

5. NO NUTS LOCK IN PLACE FROM REAR END OF MORTAR.

DEFINITIONS:
1. TOPICAL, OR TOP, MEANS THAT THIS ITEM IS SUBSTANTIALLY THE SAME ACROSS SIMILAR CONDITIONS. "TOP" SHALL MEAN N/A TOPICAL WHERE OCCURS AND SHALL NOT BE CONSIDERED AS Jahren EXCEPT AS PER SPECIFICATION OF SPECIAL CONDITION.

2. "TIGHT" MEANS COMPATIBLE TO CODE/STANDARDS FOR THE CONSTRUCTION HOLE, CONFORMING TO CODE/STANDARDS OR PLAN.

3. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

4. "FIELD" MEANS ACCURATE LOCATION AT OR RESIDENCE N/A MORTAR IN THE FIELD PLAN.

5. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

6. ALL RECEIVED MORTAR N/A MORTAR IN THE FIELD PLAN.

7. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

8. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

9. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

10. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

11. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

12. THE "RECEIVED" MEANS AS RECEIVED BY CONTRACTOR EXCEPTED CODE/STANDARDS OR PLAN.

WELDING NOTES:
1. WELDING TO BE PERFORMED BY AND CERTIFIED WELDER FOR THE TYPE OF ROOSTER RECOMMENDED. ALL WORK MUST BE IN CONFORMITY WITH LOCAL CODES OF AND TRAI.

2. RACKS TO BE WELDED TO WITH NEEDLE CHARGE. PLOW HEAD, TO WELDING TO RECOMMEND ALL WELDING WHICH MAY SUBSEQUENTLY BE CONSIDERED AS NEEDLED. APPROPRIATE COMPOUND AFTER WELDING.

3. WELDING TECHNIQUE MUST BE USED COMPATIBLE WITH THE INTEGRITY OF THE RACK AS WELL AS MODERN INTEGRITY. USE AN NON-AMMERICANS ENDURANCE, USE LARGE CHARGE ELECTRODE COMPATIBLE WITH WELDING CONTINUED AND MATERIAL. USE TANGENT IN VARIOUS WELDING TOWARDS WELDING ELECTRODE MATERIAL AND WELDING ELECTRODE MATERIAL FROM MANUFACTURER'S HANDOUTS. NOTIFY FOR ADDITIONAL USE.

4. WELDING TO PROTECTIVE THERMOPRINTS TO BE USED STANDARDS 349-12 "WELD IN WELDING AND CONTRAST" FOR PROPER PRECIPITATION.
EXHIBIT A
ExteNet Systems CA, LLC • Proposed DAS Node (Site No. CTMONTRE-00011C)
273-275 Mar Vista Drive • Monterey, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of ExteNet Systems CA, LLC, a wireless telecommunications facilities provider, to evaluate the addition of Node No. CTMONTRE-00011C to the ExteNet distributed antenna system ("DAS") in Monterey, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

ExteNet proposes to install a cylindrical antenna on a utility pole sited in the public right-of-way at 273-275 Mar Vista Drive in Monterey. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC’s exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

<table>
<thead>
<tr>
<th>Wireless Service</th>
<th>Frequency Band</th>
<th>Occupational Limit</th>
<th>Public Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microwave (Point-to-Point)</td>
<td>5,000–80,000 MHz</td>
<td>5.00 mW/cm²</td>
<td>1.00 mW/cm²</td>
</tr>
<tr>
<td>BRS (Broadband Radio)</td>
<td>2,600</td>
<td>5.00</td>
<td>1.00</td>
</tr>
<tr>
<td>AWS (Advanced Wireless)</td>
<td>2,100</td>
<td>5.00</td>
<td>1.00</td>
</tr>
<tr>
<td>PCS (Personal Communication)</td>
<td>1,950</td>
<td>5.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Cellular</td>
<td>870</td>
<td>2.90</td>
<td>0.58</td>
</tr>
<tr>
<td>SMR (Specialized Mobile Radio)</td>
<td>855</td>
<td>2.85</td>
<td>0.57</td>
</tr>
<tr>
<td>700 MHz</td>
<td>700</td>
<td>2.35</td>
<td>0.47</td>
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<tr>
<td>[most restrictive frequency range]</td>
<td>30–300</td>
<td>1.00</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

General Facility Requirements

Wireless nodes typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to a central "hub" (which in turn are connected to the traditional wired telephone lines), and the passive antenna(s) that send the wireless signals created by the radios out to be received by individual subscriber units. The radios are often located on the same pole as the
antennas and are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65; “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna’s radiation pattern is not fully formed at locations very close by (the “near-field” effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the “inverse square law”). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

**Site and Facility Description**

Based upon information provided by ExteNet, including drawings by Trylon, dated May 19, 2017, it is proposed to install one JMA Wireless Model CX06OM1236-01-H 2-foot tall, directional cylindrical antenna, on a cross-arm to be added to a utility pole sited in the public right-of-way in front of the residences located at 273-275 Mar Vista Drive in Monterey. The antenna would employ no downtilt, would be mounted at an effective height of about 26 feet above ground, and its principal direction would be oriented toward 260°T. Verizon proposes to operate from this facility with a maximum effective radiated power in any direction of 1,840 watts, representing simultaneous operation at 940 watts for AWS and 900 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.27 mW/cm², which is 27% of the applicable public exposure limit. The maximum calculated level at any nearby building is 7.3% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels from the proposed operation.
Recommended Mitigation Measures

Due to its mounting location and height, the ExteNet antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training be provided to all authorized personnel who have access to the antenna. No access within 12 feet directly in front of the antenna itself, such as might occur during certain maintenance activities on the pole, should be allowed while the node is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory signs on the pole at or below the antenna, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned’s professional opinion that operation of the node proposed by ExteNet Systems CA, LLC, at 273-275 Mar Vista Drive in Monterey, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Training personnel and posting signs is recommended to establish compliance with occupational exposure limitations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-21306, which expires on September 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

May 26, 2017

* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.
The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in italics and/or dashed) up to five times more restrictive:

<table>
<thead>
<tr>
<th>Frequency Range (MHz)</th>
<th>Electric Field Strength (V/m)</th>
<th>Magnetic Field Strength (A/m)</th>
<th>Equivalent Far-Field Power Density (mW/cm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3 - 1.34</td>
<td>614</td>
<td>1.63</td>
<td>100</td>
</tr>
<tr>
<td>1.34 - 3.0</td>
<td>614</td>
<td>1.63</td>
<td>100</td>
</tr>
<tr>
<td>3.0 - 30</td>
<td>1842/f</td>
<td>4.89/f</td>
<td>900/f²</td>
</tr>
<tr>
<td>30 - 300</td>
<td>614</td>
<td>0.163</td>
<td>1.0</td>
</tr>
<tr>
<td>300 - 1,500</td>
<td>3.54V/f</td>
<td>1.59V/f</td>
<td>9300, 615000</td>
</tr>
<tr>
<td>1,500 - 100,000</td>
<td>137</td>
<td>0.364</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.
RFR.CALC™: Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.
Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density \( S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}, \) in mW/cm²,

and for an aperture antenna, maximum power density \( S_{\text{max}} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}, \) in mW/cm²,

where \( \theta_{BW} = \) half-power beamwidth of the antenna, in degrees, and
\( P_{net} = \) net power input to the antenna, in watts,
\( D = \) distance from antenna, in meters,
\( h = \) aperture height of the antenna, in meters, and
\( \eta = \) aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.
OET-65 gives this formula for calculating power density in the far field of an individual RF source:

\[
S = \frac{2.56 \times 1.64 \times 100 \times \text{RFF}^2 \times \text{ERP}}{4 \times \pi \times D^2}, \text{ in mW/cm}^2,
\]

where \( \text{ERP} = \) total ERP (all polarizations), in kilowatts,
\( \text{RFF} = \) relative field factor at the direction to the actual point of calculation, and
\( D = \) distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 \((1.6 \times 1.6 = 2.56)\). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.
Existing VZW Macro Cell Coverage
Node 11C Coverage
All Small Cell Coverage & Existing VZW Macro Cell Coverage