COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: May 2, 2024

TO: Zoning Hearing Officer

FROM: Planning Staff

SUBJECT: Consideration of a Use Permit Renewal, pursuant to Sections 6500 and 6513 of the San Mateo County Zoning Regulations, to allow the continued operation of an existing telecommunications facility on an existing water tower located at 83 Loop Road in the unincorporated San Mateo Highlands area of San Mateo County.

County File Number: PLN1999-00847 (AT&T Mobility)

PROPOSAL

The project applicant, New Cingular Wireless PCS, LLC, proposes on behalf of AT&T Mobility to renew an existing Use Permit (PLN1999-00847) to allow the continued operation of a wireless telecommunication facility located at 83 Loop Road. The existing facility consists of six Verizon Wireless panel antennas mounted at various locations (two antennas are mounted on the lower crossarm at approximately 30 feet above grade and four antennas are mounted to the upper crossarm approximately 58 feet above grade) on a 110-foot water tower and an associated equipment compound near the base of the tower. Since the 1991 Use Permit approval, several building permits have been issued to allow minor modifications and amendments, which qualify for Federal preemption under the Middle-Class Tax Relief and Job Creation Act of 2012, including the replacement and installation of antennas and associated equipment.

RECOMMENDATION

That the Zoning Hearing Officer approve the Use Permit Renewal, County File No. PLN 1999-00847 by making the required findings and adopting the conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Randall Cohen, Project Planner; rcohen@smcgov.org

Applicant: Andrew Lessa (New Cingular Wireless PCS, LLC) for AT&T.

Owner: County of San Mateo

Public Notification: Ten (10) day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the hearing posted in the San Mateo County Times.

Location: 83 Loop Road, San Mateo Highlands

APN(s): 041-320-120

Size: Approximately 77.18 acres

Existing Zoning: RE/S-11 (Residential Estates /1-5-acre minimum parcel size)

General Plan Designation: Institutional

Existing Land Use: Various institutional uses and telecommunication facilities.

Flood Zone: FEMA Flood Insurance Rate Map designation indicates parcel as Zone X (Area of Minimal Flooding), Community Panel No. 06081C0165E, dated October 15, 2012.

Environmental Evaluation: The project is categorically exempt pursuant to Section 15301, Class 1, of the California Environmental Quality Act (CEQA) Guidelines for the continued operation of existing public or private facilities involving little or no physical changes or expansion of use.

Setting: The subject parcel and surrounding area consist of several existing institutional uses to the east, south, and west including PG&E transmission towers, the Hillcrest Probation Center, San Mateo County Central Library Headquarters, and Cal-Fire offices. To the north of the project site is the residential subdivision known as the San Mateo Highlands. To the west is the I-280 Freeway, a designated State Scenic Corridor. The subject wireless facility is co-located with other wireless carriers that have antennas mounted on the water tank. Each carrier also has its respective equipment shelters nearby and located along both sides of the access road leading to the water tank. The existing facility consists of multiple cellular panel antennas mounted at various locations on a 110-foot water tower and an associated equipment compound near the base of the tower.

DISCUSSION

A. KEY ISSUES

1. Conformance with the San Mateo County General Plan

The proposal has been reviewed against and found to be consistent with all applicable General Plan Policies. The applicable policies are listed and discussed below.

a. Visual Quality Policies

The project is consistent with Policies 4.15 (*Appearance of Development*), 4.21 (*Utility Structures*), and 4.36 (*Urban Area Design Concept*) because it minimized the visual impact of the antenna facilities by installing them on an existing water tower (rather than constructing a new free-standing tower structure) and painting the equipment (antennas, etc.) to match the water tower to which they are affixed.

2. Conformance with Zoning Regulations

The project site is located within the Residential Estate Zoning District. Wireless telecommunications facilities are allowed in any zoning district pursuant to a Use Permit, which this facility seeks to continue operating under; no expansion of the facility is proposed.

3. Conformance with Wireless Telecommunications Facilities Regulations

Effective January 9, 2009, the San Mateo County Board of Supervisors adopted a Wireless Telecommunication Facilities (WTF) Ordinance. Renewals of Use Permits approved after the effective date of the WTF Ordinance shall only be approved if all conditions of the original Use Permit have been satisfied and will continue to be met. Continued compliance with applicable standards is discussed below:

a. Development and Design Standards.

The water tower is a utility structure located at 83 Loop Rd. Section 6512.2.E – G seeks to minimize and mitigate visual impacts to public views by designing facilities to blend in with the surrounding environment, maintaining exterior equipment to blend with the surrounding environment and/or buildings and requiring facilities to be constructed of non-reflective materials.

The existing AT&T antennas help to minimize negative visual impacts, particularly since they have been painted the same color as the tower and are constructed of non-reflective materials. The existing antennas are mounted at varying heights on the water tower and do not protrude above the top of the tower.

b. Performance Standards.

Based on the Radio Frequency (RF) emissions analysis submitted in 2021 when the last modifications were made by AT&T Mobility, composite exposure levels will be a maximum of 5.476% of the FCC's public exposure limit for a person at ground level. This estimate of RF

emissions includes worst-case assumptions (all antennas operating at full power at the same time for all carriers) and actual exposure levels are often well below these maximum values. Based on the findings illustrated in this report, the facility generates exposure levels that are in compliance with the FCC's standards and do not pose any significant health risks.

The facility is required to obtain and maintain all necessary licenses and registrations from the Federal Communications Commission (FCC), California Public Utilities Commission (CPUC), and any other applicable regulatory bodies. AT&T Mobility is also required to supply the Planning and Building Department with evidence of these licenses and registrations. If any license is ever revoked, AT&T Mobility is obligated to inform the Planning and Building Department of the revocation within 10 days of receiving such notice.

4. Use Permit Findings

In order to approve this Use Permit renewal to allow the continued operation of this facility, the Zoning Hearing Officer must make the following findings:

a. *That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, be detrimental to the public welfare or injurious to property or improvements in said neighborhood.*

The water tank has supported wireless communication facilities from various providers since 1995. Individual Use Permits have been obtained by each provider and each has remained in compliance with all conditions of approval since their respective initial installations. The radio frequency analysis submitted with this Use Permit renewal application indicates that the facility continues to comply with the Federal Communications Commission (FCC)'s current prevailing standards for limiting human exposure to RF energy. As this is an unmanned communication facility, the operation does not create additional traffic, noise, or intensity of use of the property.

Staff has also reviewed the project file, conducted a site inspection, reviewed previous conditions of approval, and found no letters in the project file concerning non-compliance with Planning and Building Department requirements or issues from neighboring parcels in the vicinity. The continued operation of this facility is not likely to result in any impacts that would be detrimental to the public welfare or injurious to property/improvements in the area.

b. *That the approval of this Use Permit renewal for this cellular telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community.*

The use is for personal telecommunication services. The FCC has established the desirability and need for mobile and wireless telephone service to facilitate communication between mobile units and the existing wire-dependent telephone system. The wireless network supported by this antenna facility provides greater mobility and accessibility than the landline networks can offer. The system is considered necessary for public health, safety, convenience, and welfare.

5. Conformance with Conditions of last Permit Approval

Staff has reviewed the previous conditions of approval for this Use Permit, last approved on March 17, 2011, and has determined that AT&T Mobility is in compliance with all previous conditions. Previous conditions that remain relevant are included in Attachment A of this staff report.

B. ENVIRONMENTAL REVIEW

The proposed telecommunications facility is categorically exempt from the California Environmental Quality Act (CEQA) under provisions of Guidelines §15301, Class 1 of the California Environmental Quality Act for the continued operation of existing public or private facilities involving no physical changes or expansion in use.

C. REVIEWING AGENCIES

County of San Mateo Planning and Building Department

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map
C. Project Elevations
D. Photos of Existing Wireless Telecommunication Facility
E. Radio Frequency Emissions Compliance Report

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN1999-00847 Hearing Date: May 2, 2024

Prepared By: Randall Cohen
Project Planner

For Adoption By: Zoning Hearing Officer

RECOMMENDED FINDINGS

For the Environmental Review, Find:

1. That the project is categorically exempt from the California Environmental Quality Act (CEQA) under provisions of Guidelines §15301, Class 1, for the continued operation of existing public or private facilities involving no additional physical changes and no expansion of use.

For the Use Permit Renewal, Find:

2. That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, be detrimental to the public welfare or injurious to property or improvements in said neighborhood as a search of County records has shown that the site has operated in full compliance with the previous conditions of approval, is in compliance with the Federal Communications Commission (FCC)'s current prevailing standards for limiting human exposure to RF energy, and is compliant with the County's Wireless Telecommunication Facilities Ordinance due to the design, location, and available opportunities for future co-locations.

3. That the approval of this Use Permit renewal for an existing cellular tele-communication facility is necessary for the public health, safety, convenience, or welfare of the community as the site provides telecommunications coverage to the surrounding community, which serves as a benefit to both private and public users.

CONDITIONS OF APPROVAL

1. This approval applies only to the proposal, documents, and plans described in this report and submitted to and approved by the Zoning Hearing Officer on May 2, 2024. Minor modifications that are largely consistent with this approval may be approved at the discretion of the Director of Planning and Building.

2. This permit shall be valid for ten (10) years from the date of this approval and shall expire on May 2, 2034. If continuation of this use is desired, the applicant shall file a Use Permit renewal application with the Planning and Building Department six months prior to its expiration and pay the fees applicable at that time.

3. The applicant shall continue to maintain the color of all existing facilities in a manner that is consistent with the color samples on file. Over time paint colors fade and, as result, facilities may become more visually prominent than initially proposed. The applicant shall continue to take all necessary measures to ensure that the site remains consistent with all previously approved colors. This includes all antennas and related tower-mounted equipment.

4. This installation shall be removed in its entirety at that time when this technology becomes obsolete, when the facility is no longer needed to achieve coverage objectives, or if the facility remains inactive for six consecutive months. If any of these circumstances occur, the entire facility, including all antennas and associated equipment, cables, power supplies, etc., shall be removed and the site shall be returned to its pre-construction state to the extent practicable.

5. The applicant shall continuously maintain a lease agreement between AT&T Mobility and San Mateo County, the property owner.

6. The applicant shall continue to keep their FCC license active and in good standing through-out this permit's 10-year term. The applicant shall immediately notify the Planning and Building Department if any changes to their license occur.

7. The area around the water tower shall not be fenced. Collar-type security measures may be installed around each leg of the water tower.

8. The applicant shall ensure that any hardware and cables associated with the facility remain securely installed to the water tower so that it will not rattle or create noise.

9. The antenna panels shall be bolted to the water tower and shall be checked regularly by maintenance personnel as this area is subject to high winds.

10. The applicant shall maintain a 30-foot clearance of all flammable vegetation around the structure and generator.

11. The applicant shall maintain a Knox Box on the gate to allow Fire Department entry in case of emergency.

San Mateo County

LOCATION MAP - APN: 041-320-120

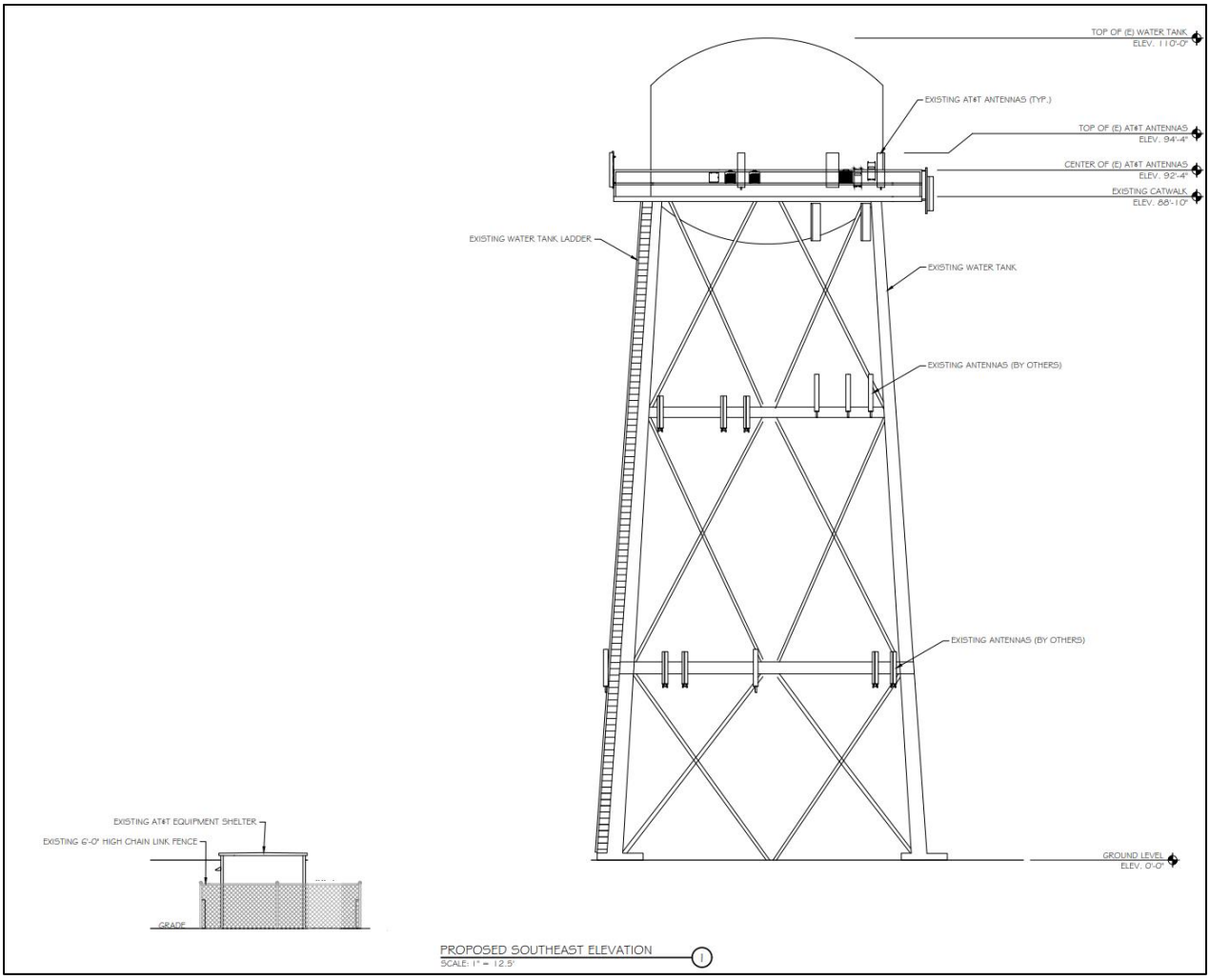
Attachment B

0.14 0 0.07 0.14 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 4,514

Attachment C



Attachment D

WATERFORD

Radio Frequency Emissions Compliance Report For AT&T Mobility

Site Name:	**Hillcrest**	**Site Structure Type:**	**Water Tank**
Address:	**20 Tower Road**	**Latitude:**	**37.5130031**
	San Mateo, CA	**Longitude:**	**-122.3405181**
Report Date:	**October 21, 2021**	**Project:**	**Modification**

Compliance Statement

Based on information provided by AT&T Mobility and predictive modeling, the Hillcrest installation proposed by AT&T Mobility will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310. RF alerting signage at the base of the Water Tank and restricting access to authorized climbers that have completed RF safety training is required for Occupational environment compliance. The proposed operation will not expose members of the General Public to hazardous levels of RF energy at ground level or in adjacent buildings.

Certification

I, David C. Cotton, Jr., am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's OET Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.

REGISTERED PROFESSIONAL ENGINEER
DAVID CHARLES COTTON, JR.
NO. 18838
2021-Oct-26
ELECTRICAL
STATE OF CALIFORNIA

David Charles Cotton, Jr.
Registered Professional Engineer (Electrical)
State of California, 18838

General Summary

The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limits.

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.

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Table 1: FCC Limits

Frequency (MHz)	*Limits for General Population/ Uncontrolled Exposure*		*Limits for Occupational/ Controlled Exposure*	
	Power Density (mW/cm^2)	**Averaging Time (minutes)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
30-300	0.2	30	1	6
300-1500	f/1500	30	f/300	6
1500-100,000	1.0	30	5.0	6

f=Frequency (MHz)

Based on the computational guidelines set forth in FCC OET Bulletin 65, Waterford Consultants, LLC has developed software to predict the overall Maximum Permissible Exposure possible at any location given the spatial orientation and operating parameters of multiple RF sources. The power density in the Far Field of an RF source is specified by OET-65 Equation 5 as follows:

$$S = \frac{EIRP}{4 \cdot \pi \cdot R^2} \ (\mathrm{mW/cm^2})$$

where EIRP is the Effective Radiated Power relative to an isotropic antenna and R is the distance between the antenna and point of study. Additionally, consideration is given to the manufacturers' horizontal and vertical antenna patterns as well as radiation reflection. At any location, the predicted power density in the Far Field is the spatial average of points within a 0 to 6-foot vertical profile that a person would occupy. Near field power density is based on OET-65 Equation 20 stated as

$$S = \left(\frac{180}{\theta_{BW}}\right) \cdot \frac{100 \cdot P_{in}}{\pi \cdot R \cdot h} \ (\mathrm{mW/cm^2})$$

where P_{in} is the power input to the antenna, θ_{BW} is the horizontal pattern beamwidth and h is the aperture length.

Some antennas employ beamforming technology where RF energy allocated to each customer device is dynamically directed toward their location. In the analysis presented herein, predicted exposure levels are based on a statistical distribution of all beams being spread in different directions during the 6-minute averaging time. This statistical approach equates to a "power reduction factor" and conservatively utilizes the lowest 95th percentile value {b-IEC TR 62669}. With a technology duty cycle of 0.75 for Time Division Duplexing associated with downlink transmissions, the actual maximum power (averaged over 6 minutes) is therefore 25% of the maximum power. These results are supported by carriers as well as equipment manufacturer measurement testing.

Analysis

AT&T Mobility proposes the following installation at this location:

- REMOVE AND REPLACE (6) EXISTING PANEL ANTENNAS, TYP. (2) PER SECTOR

The antennas will be mounted on a 105-foot Water Tank with centerlines 88.5 feet above ground level. Proposed antenna operating parameters are listed in Appendix A. Other appurtenances such as GPS antennas, RRUs and hybrid cable below the antennas are not sources of RF emissions. Panel antennas have been installed at this site by other wireless operators. Operating parameters for these antennas considered in this analysis are also listed in Appendix A.

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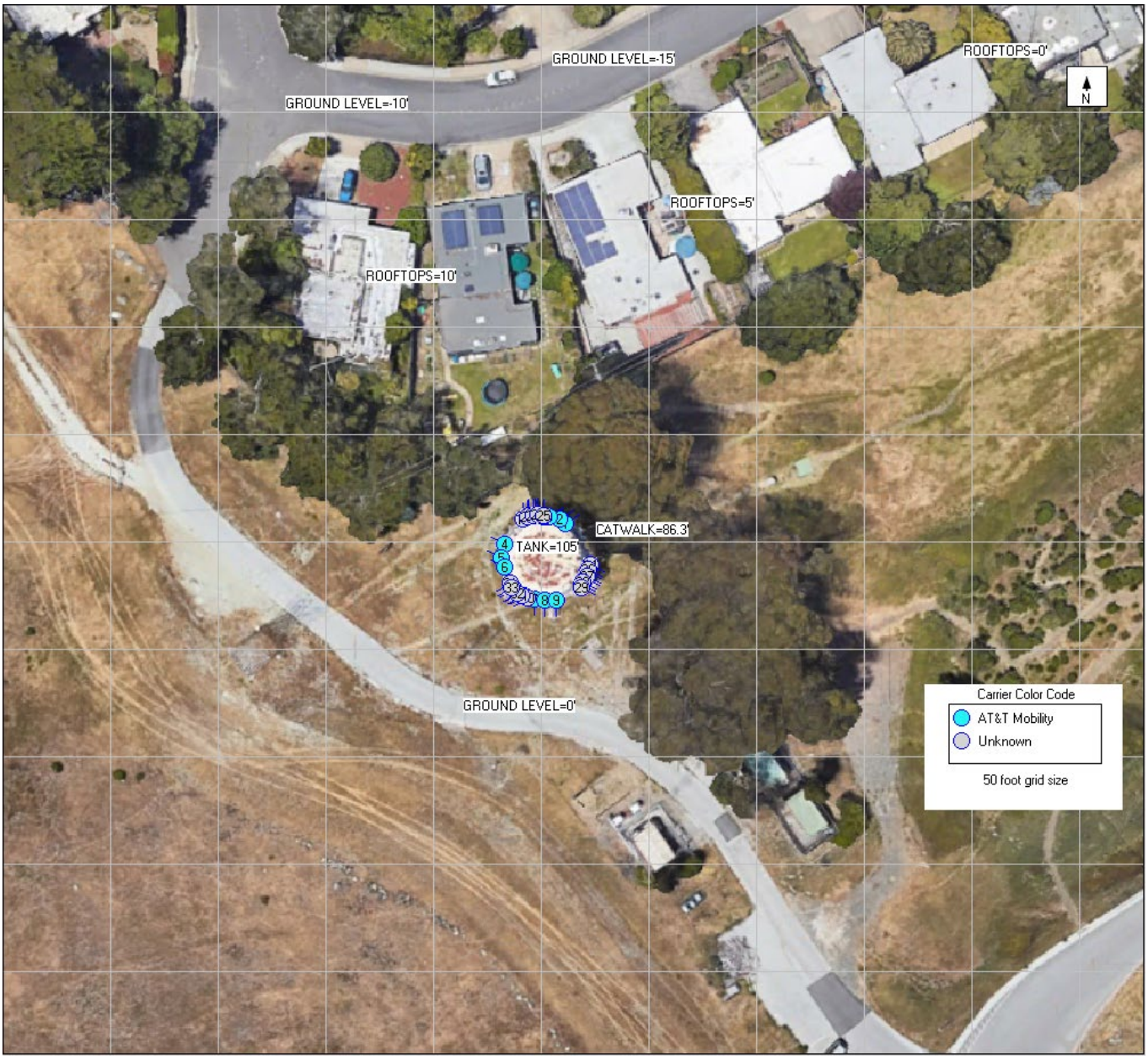

Power density decreases significantly with distance from any antenna. The panel-type antennas to be employed at this site are highly directional by design and the orientation in azimuth and mounting elevation, as documented, serves to reduce the potential to exceed MPE limits at any location other than directly in front of the antennas. For accessible areas at ground level, the maximum predicted power density level resulting from all AT&T Mobility operations is 5.476% of the FCC General Population limits. Based on the operating parameters in Appendix A, the cumulative power density level at this location from all antennas is 5.8382% of the FCC General Population limits. Incident at adjacent buildings depicted in Figure 1, the maximum predicted power density level resulting from all AT&T Mobility operations is 5.9834% of the FCC General Population limits. Based on the operating parameters in Appendix A, the cumulative power density level at this location from all antennas is 5.9859% of the FCC General Population limits. The proposed operation will not expose members of the General Public to hazardous levels of RF energy at ground level or in adjacent buildings.

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Waterford Consultants, LLC recommends posting RF alerting signage with contact information (Caution 2B) at the base of the Water Tank to inform authorized climbers of potential conditions near the antennas. These recommendations are depicted in Figure 2.

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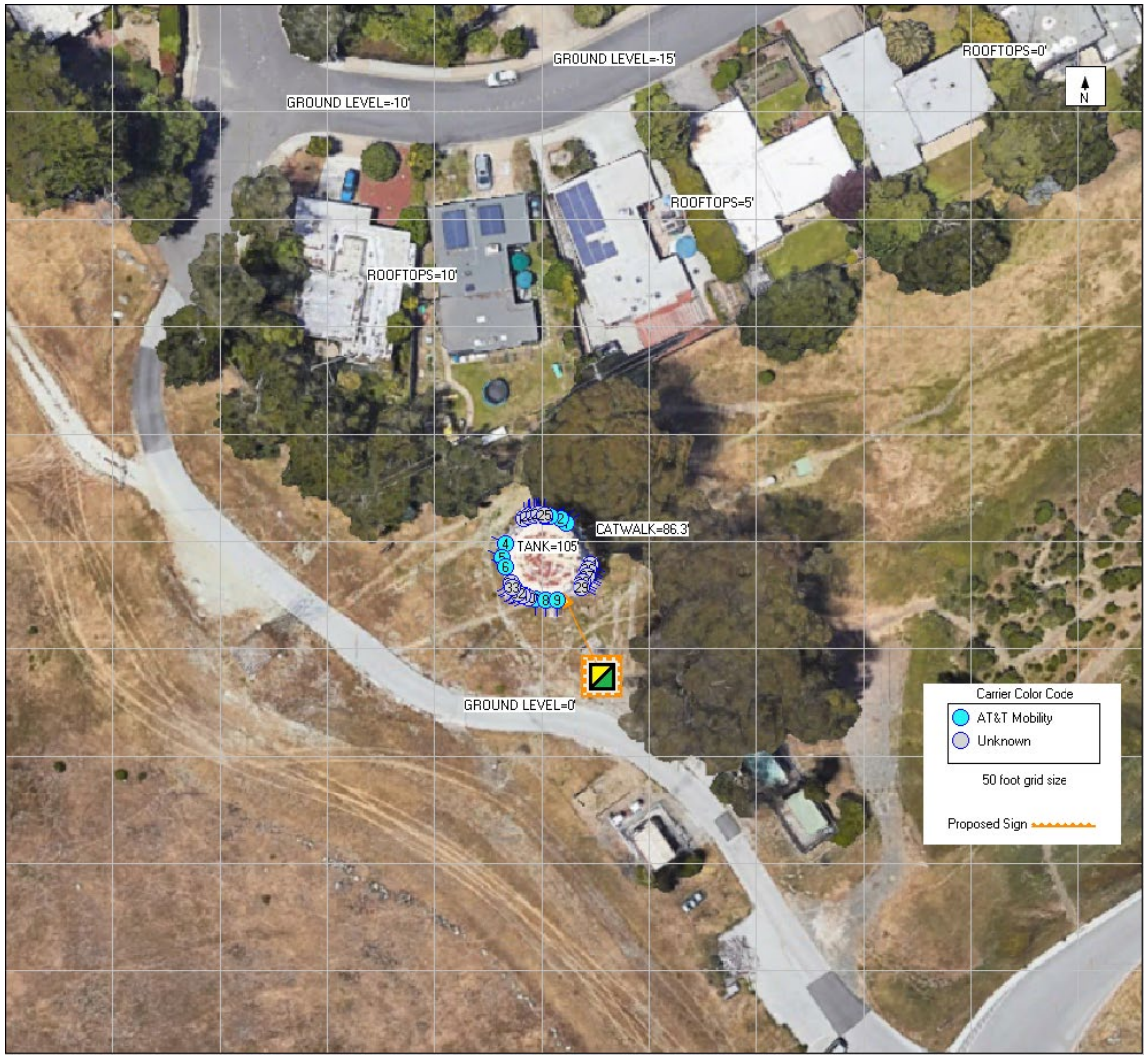
Compliance Requirement Diagram (Access Location)



Recommendations

AT&T Mobility Access Location
Caution 2B posted at the climbing leg of the water tank

Materials
1 Caution 2B Sign

Figure 2: Mitigation Recommendations

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Appendix A: Operating Parameters Considered in this Analysis

Antenna #:	Carrier:	Manufacturer	Pattern:	Band (MHz):	Mech Az (deg):	Mech DT (deg):	H BW (deg):	Length (ft):	TPO (W):	Channels:	Loss (dB):	Gain (dBd):	ERP (W):	EIRP (W):	Rad Center (ft):
1	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	700	60	0	74	4.6	40	4	0	10.35	1734	2845	88.5
1	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	850	60	0	66	4.6	40	4	0	11.55	2286	3751	88.5
1	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	1900	60	0	58	4.6	40	4	0	15.35	5484	8997	88.5
2	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	700	60	0	75	4.9	40	4	0	10.56	1820	2986	88.5
2	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2100	60	0	64	4.9	60	4	0	14.94	7485	12280	88.5
2	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2300	60	0	57	4.9	25	4	0	15.66	3681	6039	88.5
3	AT&T	ERICSSON	SON_AIR6449 NR TB 3700 AT&T	3700	60	0	11	2.8	108.4	1	0	23.55	24549	40274	88.5
4	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	700	300	0	74	4.6	40	4	0	10.35	1734	2845	88.5
4	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	850	300	0	66	4.6	40	4	0	11.55	2286	3751	88.5
4	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	1900	300	0	58	4.6	40	4	0	15.35	5484	8997	88.5
5	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	700	300	0	75	4.9	40	4	0	10.56	1820	2986	88.5
5	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2100	300	0	64	4.9	60	4	0	14.94	7485	12280	88.5
5	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2300	300	0	57	4.9	25	4	0	15.66	3681	6039	88.5
6	AT&T	ERICSSON	SON_AIR6449 NR TB 3700 AT&T	3700	300	0	11	2.8	108.4	1	0	23.55	24549	40274	88.5
7	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	700	180	0	74	4.6	40	4	0	10.35	1734	2845	88.5
7	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	850	180	0	66	4.6	40	4	0	11.55	2286	3751	88.5
7	AT&T	COMMSCOPE	NNHH-65A-R4 02DT	1900	180	0	58	4.6	40	4	0	15.35	5484	8997	88.5
8	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	700	180	0	75	4.9	40	4	0	10.56	1820	2986	88.5
8	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2100	180	0	64	4.9	60	4	0	14.94	7485	12280	88.5
8	AT&T	COMMSCOPE	NNH4-65A-R6H4 02DT	2300	180	0	57	4.9	25	4	0	15.66	3681	6039	88.5
9	AT&T	ERICSSON	SON_AIR6449 NR TB 3700 AT&T	3700	180	0	11	2.8	108.4	1	0	23.55	24549	40274	88.5
10	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	700	0	0	65	6	80	2	0	12.3	2711	4448	59.5
11	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	850	0	0	60	6	20	8	0	12.6	2938	4821	59.5
12	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	1900	0	0	69	6	40	4	0	15.7	5875	9638	59.5
13	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	2100	0	0	64	6	40	4	0	16.2	6701	10993	59.5
14	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	700	120	0	65	6	80	2	0	12.3	2711	4448	59.5
15	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	850	120	0	60	6	20	8	0	12.6	2938	4821	59.5
16	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	1900	120	0	69	6	40	4	0	15.7	5875	9638	59.5
17	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	2100	120	0	64	6	40	4	0	16.2	6701	10993	59.5
18	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	700	240	0	65	6	80	2	0	12.3	2711	4448	59.5
19	Unknown	COMMSCOPE	NHH-65B-R2B 02DT	850	240	0	60	6	20	8	0	12.6	2938	4821	59.5
20	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	1900	240	0	69	6	40	4	0	15.7	5875	9638	59.5
21	Unknown	COMMSCOPE	NHH-65B-R2B 00DT	2100	240	0	64	6	40	4	0	16.2	6701	10993	59.5
22	Unknown	COMMSCOPE	F-65C-R1 02DT	600	0	0	60	8	30	4	0	13.6	2730	4479	30
23	Unknown	AMPHENOL	HEX336CW0000x-T00	700	0	0	36	6.1	30	2	0	13.7	1407	2308	30
24	Unknown	AMPHENOL	HEX336CW0000x-T00	1900	0	0	33	6.1	40	2	0	16.4	3492	5729	30
25	Unknown	AMPHENOL	HEX336CW0000x-T00	2100	0	0	34	6.1	40	2	0	16.7	3742	6139	30
26	Unknown	COMMSCOPE	F-65C-R1 02DT	600	120	0	60	8	30	4	0	13.6	2730	4479	30
27	Unknown	AMPHENOL	HEX336CW0000x-T00	700	120	0	36	6.1	30	2	0	13.7	1407	2308	30
28	Unknown	AMPHENOL	HEX336CW0000x-T00	1900	120	0	33	6.1	40	2	0	16.4	3492	5729	30
29	Unknown	AMPHENOL	HEX336CW0000x-T00	2100	120	0	34	6.1	40	2	0	16.7	3742	6139	30
30	Unknown	COMMSCOPE	F-65C-R1 02DT	600	240	0	60	8	30	4	0	13.6	2730	4479	30

Antenna #:	Carrier:	Manufacturer	Pattern:	Band (MHz):	Mech Az (deg):	Mech DT (deg):	H BW (deg):	Length (ft):	TPO (W):	Channels:	Loss (dB):	Gain (dBd):	ERP (W):	EIRP (W):	Rad Center (ft):
31	Unknown	AMPHENOL	HEX336CW0000x-T00	700	240	0	36	6.1	30	2	0	13.7	1407	2308	30
32	Unknown	AMPHENOL	HEX336CW0000x-T00	1900	240	0	33	6.1	40	2	0	16.4	3492	5729	30
33	Unknown	AMPHENOL	HEX336CW0000x-T00	2100	240	0	34	6.1	40	2	0	16.7	3742	6139	30

Notes: Table depicts recommended operating parameters for AT&T Mobility proposed operations. Co-located antenna parameters based on industry standards.

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