# COUNTY OF SAN MATEO PLANNING AND BUILDING DEPARTMENT

DATE: December 4, 2014

**TO:** Zoning Hearing Officer

FROM: Planning Staff

**SUBJECT:** Consideration of a Use Permit Renewal and Amendment, pursuant to

Section 6500 of the San Mateo County Zoning Regulations, to (1) allow the continued operation of an existing telecommunications facility, (2) legalize the addition of supporting equipment cabinets located within a ground lease area, and (3) install a 6-ft. to 8-ft. redwood fence around the ground equipment lease area (23'-3" by 16'-6") located within a landscaped median in the public-right-of-way at Alpine Road and Wildwood Lane in the unincorporated Weekend Acres area of San Mateo County. The Use Permit Amendment includes a fence height exception for the 6-ft. to 8-ft. redwood fence enclosure within the public right-of-way

where 4 ft. is the maximum allowed.

County File Number: PLN 1999-00726 (AT&T)

#### **PROPOSAL**

The applicant, AT&T, is requesting to continue the operation of an existing AT&T cellular facility located within a landscaped median on the east side of Alpine Road near Wildwood Lane in the unincorporated Weekend Acres area. The facility consists of four (4) short panel antennas, linked in pairs, mounted to an existing 55-ft. tall utility pole owned by Joint Power Associations and located within a landscaped median in the public right-of-way, south of the southern intersection of Alpine Road and Wildwood Lane. The antennas centers are 45 ft. above ground on the utility pole. Associated equipment cabinets are located north of the utility pole, in a separate landscaped median within the public-right-of-way on the north side of the intersection of Alpine Road and Wildwood Lane, and include the following equipment for legalization: five (5) equipment cabinets/boxes, three (3) Radio Remote Units, and one (1) GPS antenna on an extended "H" frame that were installed without permits, see Attachment G. The existing facility is painted dark brown to blend into the natural scenic area. The subject Use Permit Amendment will legalize the unpermitted ground equipment.

In response to neighbor concerns over the visual impact from expanded ground equipment over the years, the applicant proposes to install a 6-ft. to 8-ft. redwood fence around the ground equipment lease area (23'-3" x 16'-6") to screen the equipment from neighboring residential properties. Due to topography, the maximum fence height

fronting Alpine Road will be 6 ft., and fronting the single-family residences along Wildwood Lane will be 8 feet. The Use Permit Amendment includes a fence height exception for the 6-ft. to 8-ft. redwood fence enclosure, as 4 ft. is the maximum fence height allowed within the public-right-of-way.

#### **RECOMMENDATION**

That the Zoning Hearing Officer approve the Use Permit Renewal and Amendment, County File Number PLN 1999-00726, by making the required findings and adopting the conditions of approval listed in Attachment A.

#### **BACKGROUND**

Report Prepared By: Summer Burlison, Project Planner, 650/363-1815

Applicant: AT&T

Property Owner: County of San Mateo

Location: Public right-of-way across from 2499 Alpine Road (ground equipment lease

area) and 2509 Alpine Road (utility pole with antennas), Weekend Acres

APN: Public right-of-way, across from APN 074-303-430 and APN 074-303-340,

respectively

Size: N/A (public right-of-way)

Existing Zoning: R-1/S-75 (Single-family residential/5,000 sg. ft. minimum parcel size)

General Plan Designation: Medium Density Residential

Sphere-of-Influence: City of Menlo Park

Existing Land Use: AT&T wireless telecommunication site within landscaped median in

County right-of-way

Flood Zone: Zone X (area of minimal flood hazard); Community Panel No. 06081C

0312E, effective October 16, 2012

Environmental Evaluation: Categorically Exempt under Section 15303, Class 3, of the California Environmental Quality Act (CEQA) regarding the new construction of small structures.

Setting: The subject telecommunications facility is located within a landscaped median between the Alpine Road corridor and the adjacent residential development along Wildwood Lane. The Stanford Weekend Acres area is a medium-density residential

community that is partially bordered by Stanford Golf Course and largely surrounded by open space.

The existing AT&T facility consists of four (4) panel antennas, linked in pairs, mounted on an existing 55-ft. tall utility pole. The antenna centers are 45 ft. above ground on the utility pole, owned by Joint Power Association, which is located in a landscaped median south of the southern intersection of Alpine Road and Wildwood Lane. Supporting ground equipment is located north of the subject utility pole, in a landscaped median on the north side of the intersection of Alpine Road and Wildwood Lane. The existing facility is painted dark brown to blend into the natural scenic area.

#### Chronology:

<u>Date</u>		Action
March 2, 2000	-	Use Permit approved for new AT&T facility, PLN 1999-00726, at Alpine Road and Wildwood Lane.
October 26, 2005	-	Use Permit Renewal approved.
February 11, 2009	-	Minor modification approved, BLD 2009-00130, to replace one (1) equipment cabinet with three (3) smaller equipment cabinets due to upgraded technology.
June 14, 2010	-	Use Permit Renewal submitted.
June 7, 2011	-	Amendment to Use Permit Renewal submitted.
June 11, 2014	-	Revised Use Permit Renewal and Amendment application submitted.
July 28, 2014	-	Use Permit Amendment and Renewal, PLN 1999-00726, for AT&T facility deemed complete.
December 4, 2014	-	Zoning Hearing Officer public hearing.

#### **DISCUSSION**

#### A. <u>KEY ISSUES</u>

#### 1. Conformance with the General Plan

Staff has determined that the project complies with all applicable County General Plan Policies, specifically:

Policies 4.20 (*Utility Structures*) and 4.44 (*Designation of Scenic Roads and Corridors*) requires minimizing the appearance of utility structures and designates Alpine Road (from Alameda de las Pulgas to Portola Road) as a scenic County road, although not a mapped scenic corridor area.

The additional unpermitted ground equipment has resulted in slightly increased visual impacts, as the project site is located in an open land-scaped median within the right-of-way along Alpine Road. A 6-ft. to 8-ft. tall redwood fence is proposed around the ground equipment lease area (23'-3" by 16'-6") to help screen the equipment from the residential properties on Wildwood Lane, see Attachment F.

The Department of Public Works has reviewed and approved the unpermitted and proposed changes, including review to ensure there are no line of sight impacts.

#### 2. <u>Conformance with Zoning Regulations</u>

The proposed project area is zoned R-1/S-75 (Single-family residential/ 5,000 sq. ft. minimum parcel size). The zoning district standards, with exception of fence height, are not applicable since the site is located within the Alpine Road public right-of-way.

A fence height exception is being requested under the Use Permit Amendment to allow the installation of a 6-ft. to 8-ft. tall redwood fence around the ground equipment area (23'-3" x 16'-6") where 4 ft. is the maximum allowed height within the front/road right-of-way. The fence is being proposed in response to neighbor concerns of the visual impact of the expanded ground equipment area on residential neighbors. Due to the landscaped medians' topography, the fence will have a maximum height of 6 ft. along Alpine Road and 8 ft. along Wildwood Lane (residential side) to fully screen the ground equipment area.

The Department of Public Works has reviewed the proposed fence and determined that the fence exception will not jeopardize public safety. The redwood fence will provide screening from the ground equipment and will increase safety and security by limiting access to the facility's equipment area. In addition, the fence will be constructed of redwood for a natural appearance that will blend in with the natural scenic area along Alpine Road. Request for the fence height exception was included as part of the required public hearing notification sent to property owners within 300 ft. and to Stanford Weekend Acres Homeowners Association, notifying of the project's scheduled public hearing before the Zoning Hearing Officer.

### 3. Conformance with Wireless Telecommunication Facilities Ordinance

According to Section 6512.6 of the Wireless Telecommunication Facilities Ordinance, existing facilities built prior to January 9, 2009 are subject to the provisions of the Ordinance related to new facilities. Staff has reviewed the project against the provisions of the Wireless Telecommunication Facilities Ordinance and determined that the project complies with the applicable standards discussed below.

#### a. <u>Development and Design Standards</u>

Section 6512.2.B prohibits wireless facilities from being located in residentially zoned areas, unless the applicant demonstrates that no other site allows feasible or adequate capacity and coverage. Evidence shall include an alternative site analysis within 2.5 miles of the proposed facility.

The existing AT&T facility has been in operation since its establishment in 2000. While there are a few areas of non-residential zoning within 2.5 miles of the existing facility (i.e., Stanford University, West Menlo Park, Ladera), the existing facility is necessary to adequately reach the facility's intended coverage area, given the surrounding topography. Additionally, staff has determined that modifications to the existing established facility, rather than the establishment of an additional new facility is the most reasonable approach to meeting the coverage goals. Furthermore, a radio frequency (RF) report prepared by Hammett & Edison, Inc. confirms that the facility does not exceed any emission limits set by the Federal Communications Commission.

Section 6512.2.C prohibits wireless facilities from locating in areas where co-location on existing facilities would provide equivalent coverage with less environmental impact.

There are no identified existing wireless facilities immediately around the project site that would provide an opportunity for co-location.

Section 6512.2.D requires new facilities be constructed to support co-location, unless technologically infeasible.

AT&T will cooperate with any future co-location projects on the subject utility pole owned by the Joint Pole Association, as long as technically feasible.

Section 6512.2.E - G seeks to minimize and mitigate visual impacts from public views by ensuring appropriate vegetative screening, painting of equipment, or other methods of blending

equipment in with the surrounding environment are implemented and require facilities to be constructed of non-reflective materials.

To minimize visual impacts, the applicant will be required to ensure that all equipment is painted a non-reflective dark brown color to match the existing utility pole, permitted facility equipment, and rural nature of the surrounding area. Furthermore, to help screen ground-mounted equipment from neighboring residential views, the applicant is proposing to install a 6-ft. to 8-ft. redwood fence around the equipment lease area.

Section 6512.2.H requires new facilities to comply with all of the requirements of the underlying zoning district.

Refer to Section A.2 above.

Section 6512.2.K requires the overall footprint of a facility to be as minimal as possible and not cover more than 15% in area of the lot or an area greater than 1,600 square feet.

The modified AT&T wireless facility, which is located within the Alpine Road public right-of-way, has an overall footprint of less than 500 sq. ft. (including all ground equipment and utility pole/antennas).

#### b. Performance Standards

The project, as proposed and conditioned, meets the required performance standards of Section 6512.3 for lighting, licensing, provision of a permanent power source, timely removal of the facility, and visual resource protection. There is no lighting proposed, proper licenses will be maintained from both the Federal Communications Commission (FCC) and California Public Utilities Commission (CPUC), power for the facility will continue to be provided by PG&E, there will be minimal visual impact, and conditions of approval require maintenance and/or removal of the facility when necessary. Furthermore, road access to the site is existing and no noise in excess of the County's Noise Ordinance will be produced.

### 4. Conformance with Conditions of Last Approval

Indicated below are the conditions of approval from the last use permit approval letter, dated October 6, 2005. Following each condition is staff's analysis of condition compliance and whether a particular condition should be retained or modified.

#### Planning Division

 This approval applies only to the proposal as described in this report and plans originally approved by the Zoning Hearing Officer on March 2, 2000. Any minor revisions shall be subject to review and approval of the Community Development Director. Any other modifications shall be subject to a Use Permit Amendment application and public review process.

<u>Compliance with condition</u>? No. Ground equipment has been added to the facility without proper authorization/permit from the Planning and Building Department. However, this unpermitted equipment is being legalized under the subject Use Permit Amendment.

<u>Recommend to retain condition</u>? Yes, with modifications. See recommended Condition of Approval No. 1 in Attachment A.

2. The installation of equipment and improvements involved with this Use Permit shall be removed entirely at any such time that (a) this technology becomes obsolete, (b) this facility is no longer needed, or (c) if a co-location tower has been constructed on the property with a Use Permit and this facility can be relocated on that tower.

Compliance with condition? Yes.

<u>Recommend to retain condition?</u> Yes, with modifications to reflect current Wireless Telecommunications Facility Ordinance language. See recommended Conditions of Approval Nos. 9 and 12 in Attachment A.

3. This Use Permit shall be valid for a period of five years following this date of approval. If the applicant wishes to renew this Use Permit, an application for renewal must be submitted to the Planning and Building Division six months prior to expiration of this permit and shall be accompanied by the renewal application and fee applicable at that time.

<u>Compliance with condition</u>? Yes. An application for Use Permit Renewal was submitted on June 14, 2010.

<u>Recommend to retain condition</u>? Yes, with modifications to reflect a ten (10) year Use Permit term, as allowed under the County's Wireless Telecommunications Facility Ordinance. See recommended Condition of Approval No. 2 in Attachment A.

4. A minimum 30-ft. clearance of all flammable vegetation must be maintained around all structures.

Compliance with condition? Yes.

<u>Recommend to retain condition?</u> Yes, see recommended Condition of Approval No. 15 in Attachment A.

5. Any satellite dishes or other elements that may be attached to the tower in the future must have their color approved by the Community Development Director.

Compliance with condition? N/A.

<u>Recommend to retain condition?</u> No. This condition is not applicable as there is no plan for a new cellular tower to be installed in/near the subject project location. Furthermore, any changes to the existing AT&T site, or any new cellular tower, would require separate review and approval by the Planning and Building Department.

6. The applicant shall not enter into a contract with the landowner or lessee which reserves for one company exclusive use of the tower structure or the site for telecommunications facilities.

Compliance with condition? Yes.

<u>Recommend to retain condition?</u> Yes, see recommended Condition of Approval No. 8 in Attachment A.

7. The applicant shall file a copy of the current FCC Form #463, mobile radio authorization, with the County Planning Division. The applicant shall be required to keep a current copy of this form on file with the Planning Division throughout the life of this use.

Compliance with condition? Yes.

<u>Recommend to retain condition</u>? No. This condition has been replaced with Condition of Approval No. 7 in Attachment A.

8. The applicant shall provide payment of the outstanding balance due of \$482.60 prior to final approval of this Use Permit Renewal.

<u>Compliance with condition</u>? Yes. Payment of this outstanding balance was made on September 27, 2005.

Recommend to retain condition? No.

#### 5. Conformance with Use Permit Findings

Under the provisions of Section 6500, wireless communication facilities are permitted in the R-1/S-75 Zoning District subject to the issuance of a Use Permit. In order for the Zoning Hearing Officer to approve the use permit renewal and amendment, the following findings must be made:

a. That the establishment, maintenance and/or conducting of the 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.

This facility has been in operation since 2000 and has remained in substantial compliance since its original installation. The facility's antennas are not accessible to the general public due to their location on the existing utility pole. According to the radio frequency (RF) report prepared by Hammett & Edison, Inc. (Attachment H), the site complies with FCC guidelines limiting public exposure to radio frequency energy. The maximum public exposure level at ground near the site is 24% of the FCC's maximum public exposure level. Aside from legalizing unpermitted ground equipment additions and installing a redwood fence around the ground equipment area, no other changes are proposed to the existing facility.

The Department of Public Works has reviewed and approved the unpermitted and proposed changes, including review to ensure there are no line of sight impacts or public safety impacts. The redwood fence will provide screening from the ground equipment and will increase safety and security by limiting access to the facility's equipment area. In addition, the fence will be constructed of redwood for a natural appearance that will blend in with the natural scenic area along Alpine Road.

The facility will continue to be unmanned and require minimal monthly maintenance visits. The facility will not generate significant traffic or noise. Therefore, staff has determined that the project, as proposed and conditioned, will not have adverse impacts on persons or property in the vicinity.

b. That the project is necessary for the public health, safety, convenience or welfare of the community.

The project will allow for continued capacity and network coverage from the existing cellular facility to the Alpine Road area and will maintain service for private citizens and public agencies. Contiguous cellular coverage is important not only in facilitating daily business

and conversations, but also in providing assistance in emergency situations. Furthermore, there is no evidence to suggest that the operation or proposed modification of this facility has or would cause a detriment to the public health or safety.

#### B. <u>ENVIRONMENTAL REVIEW</u>

This project is categorically exempt pursuant to Section 15303, Class 3 of the California Environmental Quality Act (CEQA) related to the new construction of small structures and Section 15301, Class 1, related to the continued operation of an existing facility.

### C. REVIEWING AGENCIES

San Mateo County Building Inspection Section San Mateo County Department of Public Works San Mateo County Real Property Division Menlo Park Fire Protection District Stanford Weekend Acres Homeowners Association

#### **ATTACHMENTS**

- A. Recommended Findings and Conditions of Approval
- B. Vicinity Map
- C. Site Plan
- D. Equipment Plan
- E. Elevations
- F. Photo simulations
- G. Site Photos
- H. Radio Frequency Report, prepared by Hammett & Edison, Inc., dated June 10, 2014

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# County of San Mateo Planning and Building Department

#### RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 1999-00726 Hearing Date: December 4, 2014

Prepared By: Summer Burlison For Adoption By: Zoning Hearing Officer

**Project Planner** 

#### **RECOMMENDED FINDINGS**

#### For the Environmental Review, Find:

1. That the project is exempt from environmental review, per Section 15303, Class 3, of the California Environmental Quality Act, related to the new construction of small structures and Section 15301, Class 1, related to the continued operation of an existing facility.

#### For the Use Permit Renewal and Amendment, Find:

- 2. That the establishment, maintenance and/or conducting of the use will not, under the circumstances of the particular case, be detrimental to the public welfare or injurious to property or improvements in said neighborhood, since the site meets emission criteria as required by the Federal Communications Commission. The Department of Public Works has reviewed and approved the unpermitted equipment cabinet modifications and proposed 6-ft. to 8-ft. tall redwood fence intended to screen the ground equipment area, including review to ensure there are no line of sight impacts or public safety impacts. In addition, the non-staffed facility only requires maintenance visits on an "as needed" basis and otherwise does not generate significant traffic or noise.
- 3. That the project is necessary for the public health, safety, convenience or welfare, since the facility will continue to allow for cellular communications coverage for private citizens and public agencies that have come to rely on coverage provided by this site to facilitate daily conversation and to provide assistance in emergency situations. Furthermore, there is no evidence to suggest that the operation of this facility has caused a detriment to the public health or safety since its establishment.

#### RECOMMENDED CONDITIONS OF APPROVAL

#### **Current Planning Section**

- The approval applies only to the proposal as described in this report and materials approved by the Zoning Hearing Officer on December 4, 2014. Minor modifications to the project may be approved by the Community Development Director if they are consistent with the intent of, and in substantial conformance with, this approval.
- 2. The use permit shall be valid for ten (10) years from the date of final approval, and shall expire on December 4, 2024. Renewal of this permit shall be applied for six (6) months prior to expiration to the Planning and Building Department and shall be accompanied by the renewal application and fees applicable at that time.
- 3. Any change in use or intensity not already approved shall require an amendment to the use permit. Amendment to this use permit requires an application for amendment, payment of applicable fees, and consideration at a public hearing.
- 4. Within sixty (60) days of this final approval, the applicant shall obtain a building permit to legalize the unpermitted ground equipment and install the proposed redwood fence. Failure to comply with this condition will result in a referral to the Code Compliance Section for further enforcement.
- The applicant shall maintain the redwood fence in good condition and perform repairs as necessary to serve its function as a screening device for the equipment cabinet area. Any repairs and/or maintenance to the fence shall be of like color and materials.
- 6. If a less visually obtrusive/reduced antenna technology becomes available for use during the life of this project, the applicant shall present a redesign incorporating this technology into the project for review by the Community Development Director and any parties that have expressed an interest.
- 7. The applicant shall maintain all necessary licenses and registrations from the Federal Communications Commission (FCC) and any other applicable regulatory bodies for the operation of the subject facility at this site. The applicant shall supply the Planning Department with evidence of such licenses and registrations. If any required license is ever revoked, the applicant shall inform the Planning Department of the revocation within ten (10) days of receiving notice of such revocation.
- 8. The applicant shall not enter into a contract with the landowner or lessee which reserves for one company exclusive use of the tower structure or the site for telecommunication facilities.

- 9. This facility and all equipment associated with it shall be removed in its entirety by the applicant within ninety (90) days if the FCC license and registration are revoked or if the facility is abandoned or no longer needed. The owner and/or operator of the facility shall notify the Planning Department upon abandonment of the facility.
- 10. There shall be no external lighting associated with this use. Wireless telecommunication facilities shall not be lighted or marked unless required by the FCC or Federal Aviation Administration (FAA).
- 11. Construction activities associated with the project shall be limited to 7:00 a.m. to 6:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturdays. Construction activities shall be prohibited on Sundays and any nationally observed holiday.
- 12. This approved installation is to be dismantled and removed in its entirety from the property at that time when this technology becomes obsolete or this facility is no longer needed.
- 13. Any necessary utilities leading to, or associated with, the facility shall be underground.
- 14. This permit does not allow for the removal of any trees. Removal of any tree with a circumference of 38 inches or greater, as measured 4.5 ft. above the ground, shall require the submittal and approval of a separate Tree Removal Permit Application, along with any associated application fees.
- A minimum 30-ft. clearance of all flammable vegetation must be maintained around all structures.

#### **Building Inspection Section**

16. The applicant shall apply for and obtain a building permit to legalize the unpermitted ground equipment and proposed redwood fence.

#### **Department of Public Works**

17. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued.

#### Menlo Park Fire Protection District

18. The applicant shall provide address numbers on the exterior gate/fence of AT&T's enclosure. The address shall be visible from the street and contrasting in its background.

- 19. The applicant shall provide emergency contact information on the exterior gate/fence of AT&T's enclosure.
- 20. Approved plans and letter from the Menlo Park Fire District must be on-site at the time of inspection.
- 21. Prior to final building inspection, contact Fire Inspector, Ron Keefer, of the Menlo Park Fire Protection District at 650/688-8428 to schedule a final fire inspection. A 48-hour notice is required for all inspections.

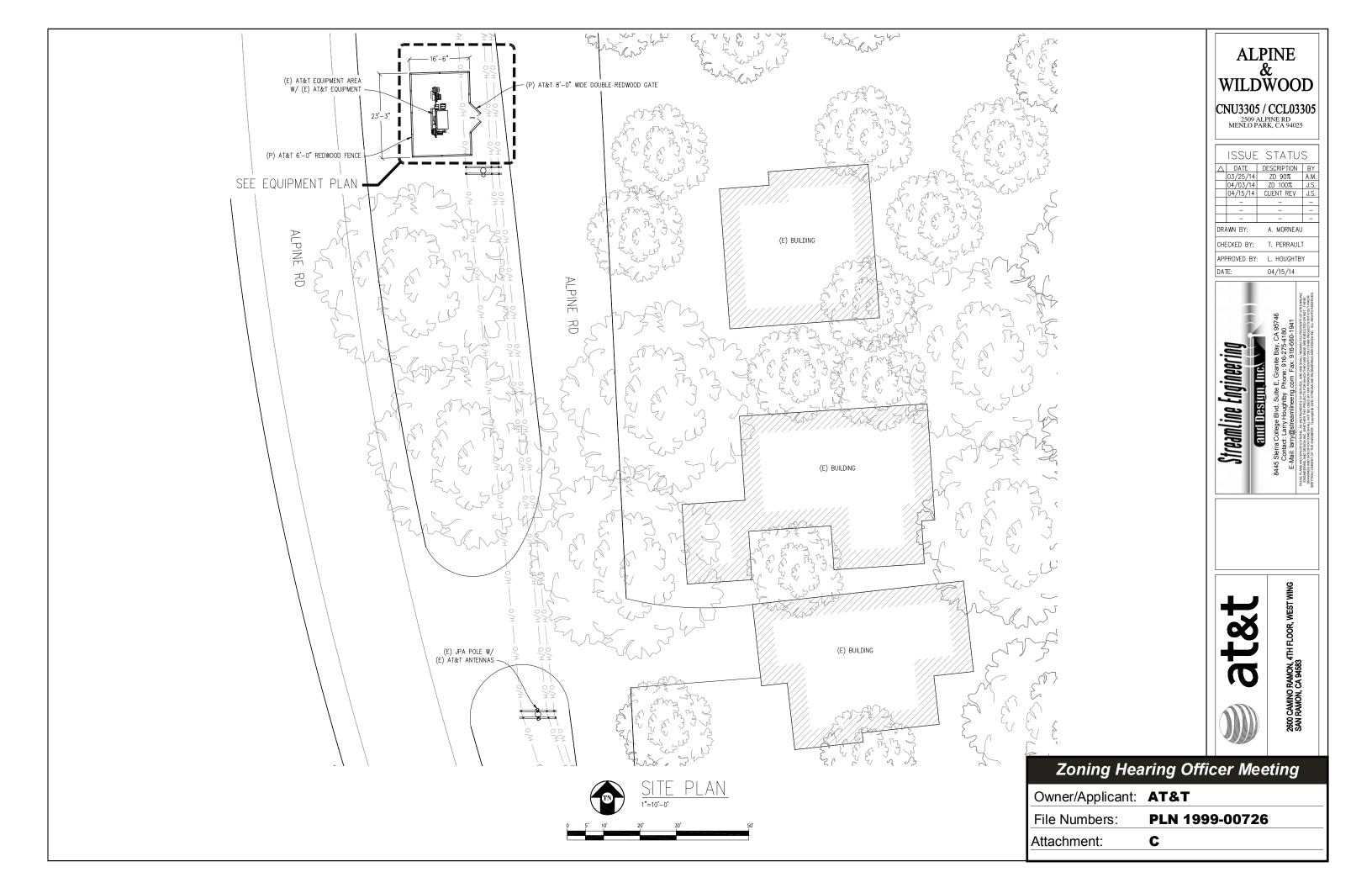
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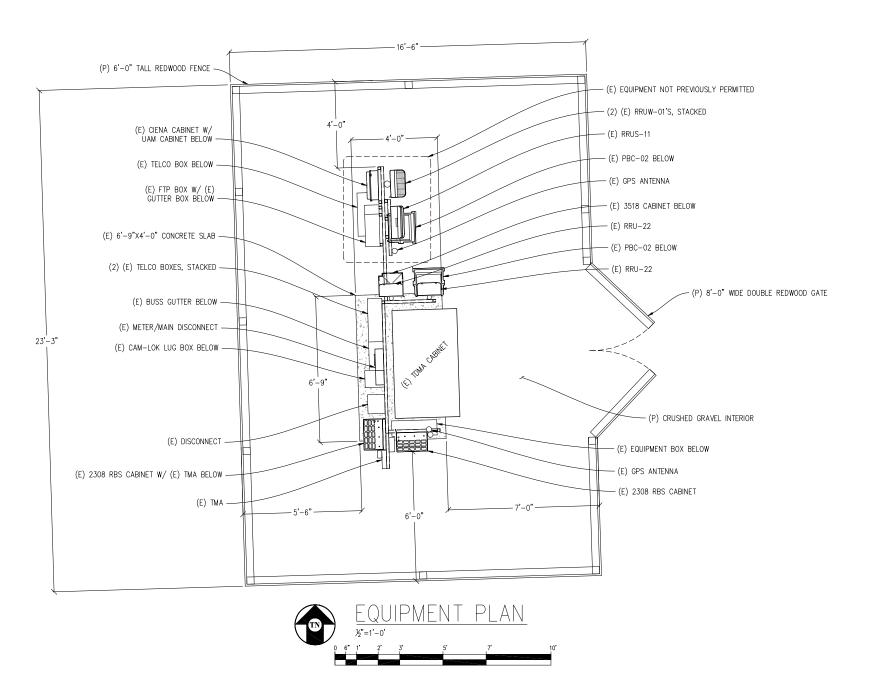
## **San Mateo County**

### **VICINITY MAP**

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.









CNU3305 / CCL03305

2509 ALPINE RD
MENLO PARK, CA 94025

ISSUE STATUS						
Δ	DATE	DESCRIPTION	BY			
	03/25/14	ZD 90%	A.M.			
	04/03/14	ZD 100%	J.S.			
	04/15/14	CLIENT REV	J.S.			
	-	-	-			
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DRAWN BY: A. MORNEAU						
CHECKED BY: T. PERRAULT			Г			

APPROVED BY: L. HOUGHTBY 04/15/14





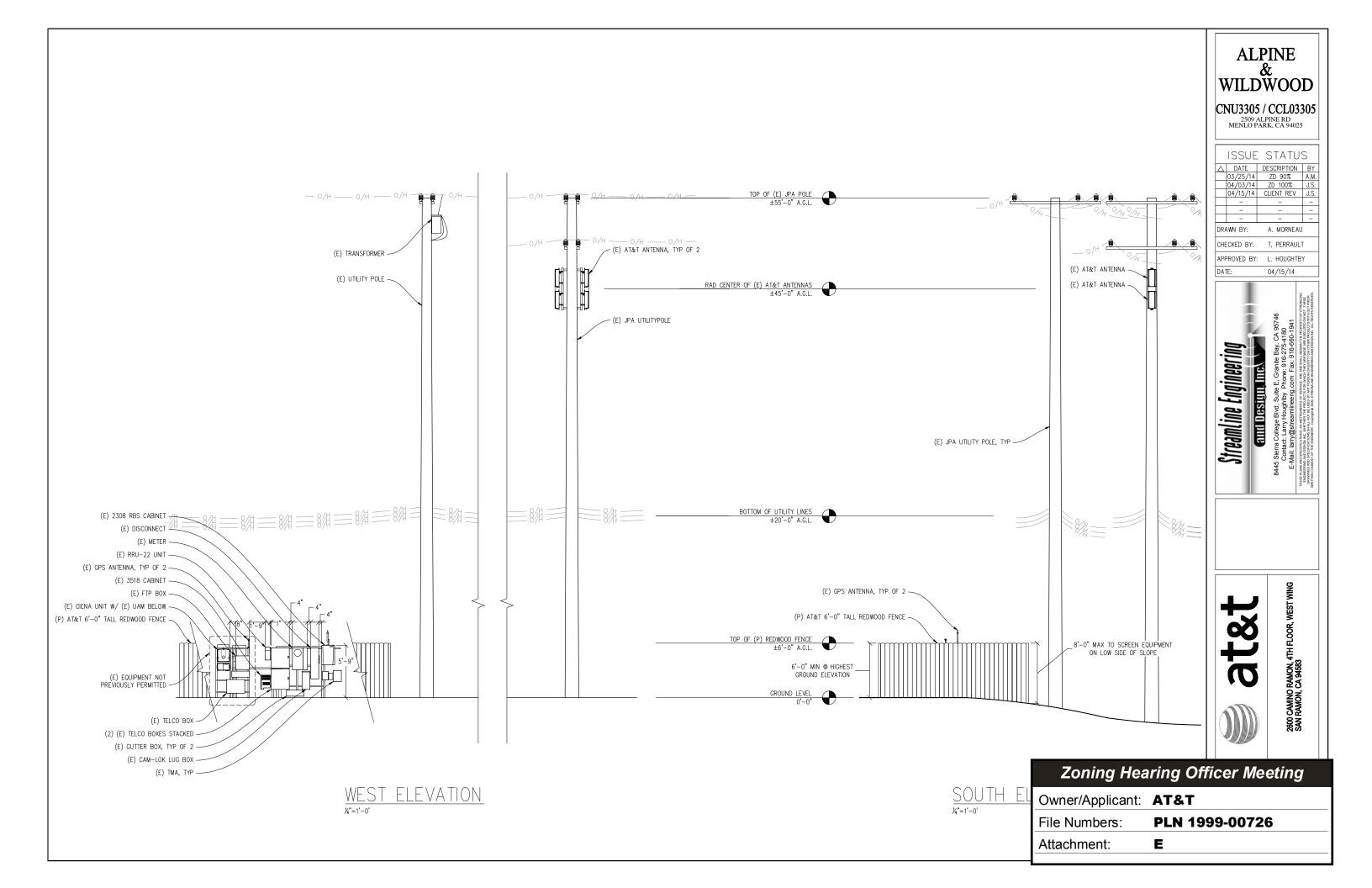
2600 CAMINO RAMON, 4TH FLOOR, WEST WING SAN RAMON, CA 94583

## **Zoning Hearing Officer Meeting**

Owner/Applicant: ÁAT&T

PLN 1999-00726 File Numbers:

D Attachment:







F

Attachment:





AdvanceSimple Simulation Solutions Contact (925) 202-8507

AT&T Wireless

CNU3305 Alpine & Wildwood 2509 Alpine Road, Menlo Park, CA





# AT&T Mobility • Base Station No. CNU3305 2509 Alpine Road • Menlo Park, California

#### Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by AT&T Mobility, a wireless telecommunications carrier, to evaluate its existing base station (Site No. CNU3305) located at 2509 Alpine Road in Menlo Park, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

### **Executive Summary**

AT&T had installed directional panel antennas on the wood utility pole located near 2509 Alpine Road in Menlo Park. All exposure levels under the existing conditions for anyone in publicly accessible areas nearby were well below the federal standard.

#### **Prevailing Exposure Standards**

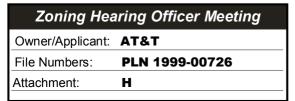
The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin 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 wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000-80,000 MHz	$5.00 \text{ mW/cm}^2$	$1.00 \text{ mW/cm}^2$
BRS (Broadband Radio)	2,600	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[most restrictive frequency range]	30-300	1.00	0.20

#### **General Facility Requirements**

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "cabinets") that are connected to traditional copper or fiber telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A GPS antenna is installed, with a clear view of the sky, for coordination with other sites in the carrier's network; that antenna is receive-only. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the transmitting antennas require line-of-sight paths for





# AT&T Mobility • Base Station No. CNU3305 2509 Alpine Road • Menlo Park, California

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.

#### Site Description

The site was visited by Mr. David Kelly, a qualified field technician employed by Hammett & Edison, Inc., during normal business hours on May 29, 2014, a non-holiday weekday. AT&T had installed four directional panel antennas, stacked in arranged pairs, on the tall utility pole sited on the east side of Alpine Road, north of the south end of Wildwood Lane, in Menlo Park. Access to the antennas was restricted by their mounting height, accessible only to authorized personnel, who presumably have received appropriate RF safety training and comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves. There were observed no other wireless telecommunications base stations located at this site or nearby.

#### Measurement Results

The measurement equipment used was a Wandel & Goltermann Type EMR-300 Radiation Meter with Type 18 Isotropic Electric Field Probe (Serial No. C-0010). The meter and probe were under current calibration by the manufacturer. The maximum observed power density level for a person at ground near the site was 0.00048 mW/cm<sup>2</sup>, which is 0.24% of the most restrictive public limit. The three-dimensional perimeter of RF levels equal to the public exposure limit did not reach any publicly accessible areas.

#### Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the AT&T Mobility base station located at 2509 Alpine Road in Menlo Park, California, as installed and operating at the time of the visit, complies with the FCC guidelines limiting public exposure to radio frequency energy and, therefore, does not for this reason cause a significant impact on the environment.

# AT&T Mobility • Base Station No. CNU3305 2509 Alpine Road • Menlo Park, California

### **Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2015. 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.

E-19028 M-20676 Exp. 6-30-2015

Villiam F. Hammett, P.E.

707/996-5200

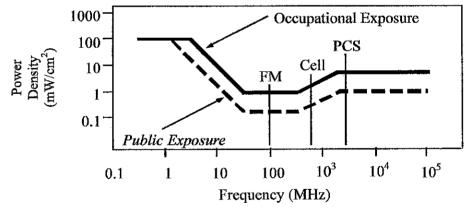
June 10, 2014

#### **FCC Radio Frequency Protection Guide**

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:

Frequency	Electromagnetic Fields (f is frequency of emission in MHz							
Applicable Range (MHz)	Field S	ctric trength /m)	Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )			
0.3 - 1.34	614	614	1.63	1.63	100	100		
1.34 - 3.0	614	823.8/f	1.63	2.19/f	100	180/f²		
3.0 - 30	1842/ f	823.8/f	4.89/ f	2.19/f	900/ f <sup>2</sup>	$180/f^2$		
30 - 300	61.4	27.5	0.163	0.0729	1.0	0.2		
300 - 1,500	3.54√f	1.59√f	$\sqrt{f}/106$	$\sqrt{f/238}$	f/300	f/1500		
1,500 - 100,000	137	61.4	0.364	0.163	5.0	1.0		



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.

