

# Wireless Telecommunication Facility

**SITE:**

**AT&T Site CCL04011  
Cupertino Sports Center**



**Address:**

**2111 Stevens Creek Blvd  
Cupertino, CA. 95014**

**REPRESENTATIVE:**

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## **Introduction:**

New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility (“AT&T”) is a registered public utility, licensed and regulated by the California Public Utilities Commission and the Federal Communications Commission (“FCC”). As a public utility, AT&T Mobility is mandated by the FCC to provide wireless communication services throughout California. AT&T is dedicated to providing customers with wireless technology designed to enrich their lives as their mobility is increasing. AT&T’s vision is to simplify the wireless experience for its consumer and business customers by offering easy-to-understand, affordable rate plans and excellent customer service. AT&T is bringing next-generation wireless data products - from corporate e-mail to downloadable ringtones - to customers nationwide through its advanced networks. The network performance goals include providing the best quality, lowest level of blocking, easy access to the network and continuous drop-free connections.

AT&T's wireless network is based on LTE technology. These technologies are wireless communication standards that require reusing specific frequencies across defined frequency bands. Due to the need for frequency reuse, LTE require numerous sites to provide customers with suitable signal strength to deliver services. These sites are typically built on existing buildings, lattice towers and freestanding poles in order to provide a network of sites that provide seamless coverage over an area.

In addition to these 3G wireless service gap issues; AT&T is in the process of deploying its 4G LTE service in the County of Santa Clara with the goal of providing the most advanced personal wireless experience available to residents of the Cities. AT&T holds a license with the FCC and has a responsibility to utilize this spectrum to provide personal wireless services in the City. 4G LTE is capable of delivering speeds up to 10 times faster than industry-average 3G speeds. LTE technology also offers lower latency, or the processing time it takes to move data through a network, such as how long it takes to start downloading a webpage or file once you’ve sent the request. Lower latency helps to improve the quality of personal wireless services. What's more, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience. This is particularly important in the City of Cupertino because of the likely high penetration of the new 4G LTE iPad and other LTE devices.

Efforts are currently underway in the City to establish the required infrastructure. AT&T is currently seeking the review and approval of a Minor Development Permit to allow the construction, operation, and maintenance of an unmanned wireless telecommunications facility in this A zoned property (“Proposed Facility”).

## **Background:**

AT&T serves millions of voice and data customers across the United States. Wireless communications continue to change the future of telecommunications with easy-to-use, lightweight and highly mobile communications devices including: smartphones, tablets, e-readers and notebook computers. Wireless communications provide voice, e-mail,

texting and high-speed Internet access capabilities for customer's communications needs virtually anywhere and at any time.

The wireless network being developed by AT&T uses state of the art digital technology. The benefits include call privacy and security, improved voice quality, high-speed data, texting, video conferencing, visual voicemail, and an expanded menu of affordable products and services for personal and professional communications needs.

The Proposed Facility will enhance the area's public safety infrastructure by providing wireless communication services to the surrounding neighborhood and local community. The general public, police, fire fighters, and other emergency personnel rely heavily on wireless communications for fast and dependable communications at all times, but especially during natural disasters or other emergencies, such as earthquakes and fires.

Like other carriers in the industry, AT&T is working diligently to respond to the customer demand for mobile services, by expanding services to its customers from where they have historically used mobile phones, while traveling in the vehicle at their offices to where they are demanding more and more service in the residential communities, in-building coverage in their homes.

AT&T is requesting the review and the approval of a permit to allow the construction, operation, and maintenance of an unmanned wireless telecommunications facility ("WTF"). The project is proposed to close a significant service coverage gap and enhance personal wireless services in the area surrounding the site. AT&T's service coverage area in the city must be improved to handle the growing number of voice calls and wireless data usage. To remain competitive, AT&T must improve services in the areas where consumers are increasingly using their phones and data services.

**The project consists of:**

Installation of up to sixteen (16) panel antennas which will be located on a new 80' tall stealth monopine. Also proposed are (21) remote radio units (RRUs), and (5) surge suppressors. As part of this installation there will be a new equipment shelter placed within a new fenced compound adjacent to this tower. The subject site is also located in the area where there are several large mature pine trees that will help with natural screening of this facility.

Once constructed and operational, the Proposed Facility will provide 24-hour service to customers seven (7) days a week. Apart from initial construction activity, an AT&T technician will service the facility on a periodic basis. It is reasonable to expect that routine maintenance/inspection of the facility will occur about once a month during normal working hours. Beyond this intermittent service, AT&T requires 24-hour access to the Proposed Facility to ensure that technical support is immediately available if and when warranted.

### **Height Justification:**

The height of this tower has been increased to a total height of 80' in order to adequately screen the antennas from public view. Due to the nature of this design, the antennas are taking 2 positions on this tower which requires an increase in height in order to achieve the necessary coverage and have the antennas over the existing large pine trees that are on site. Currently the top of the pine trees are at approximately 45' to 50' in height. The base of the proposed antennas will be at 57' which will be roughly 7' above the tops of the pine trees. This will allow the signal to be unobstructed by the existing trees. If the tower were to be lowered then it would begin to have interference by the existing trees and degrade the service area. Pine trees, in particular, cause interference with signal propagation due to the metallics in the pine needles. Since antenna signals are line of sight technology, any material that is in proximity of the antenna will cause this interference. DeAnza College is a heavily trafficked area for the network and optimum service is needed to handle this capacity.

### **Overview of Site Design/Location Criteria**

The network of AT&T cell sites throughout the region is "location dependent," meaning that there is a necessary and logical interrelationship between each proposed site. Eliminating or relocating a single cell site can lead to gaps in the system and prohibit AT&T from providing uninterrupted or reliable service to customers in a defined coverage area. Further, the elimination or relocation of a cell site will most often have a "domino" effect on other cell site locations and necessitate significant design changes or modifications to the network.

In identifying the proposed location, AT&T network deployment personnel have selected the Proposed Facility because it meets the technical objectives of RF engineering and provides the best site option with regard to other key criteria including, but not limited to, accessibility, utility connections, zoning compatibility, minimal or no visual impact, liability and risk assessment, site acquisition, maintenance and construction costs.

### **Description of Coverage Area**

AT&T's objective in locating a WCF at this site is to provide improved in-building and in-transit wireless coverage. The Proposed Facility is needed to close a significant service coverage gap in personal wireless service and provide improved coverage in an area along near Stelling Road and Stevens Creek Blvd. The Proposed Facility will improve coverage to the surrounding residential areas and support De Anza Community College.

### **Site Development Standards and General Plan**

The location, size, design, and operating characteristics of the Proposed Facility will not create unusual noise, traffic or other conditions or situations that may be objectionable, detrimental or incompatible with the surrounding land uses. The proposed use is consistent with this finding in that:

The proposed equipment associated with the telecommunication structure operates quietly or virtually noise free.

The equipment does not emit fumes, smoke, or odors that could be considered objectionable.

The Proposed Facility will be unmanned and only requires periodic maintenance, which equates to approximately one trip per month. The Proposed Facility will not result in conditions or circumstances contrary to the public health, safety and the general welfare. The proposed use is consistent with this finding in that:

Unlike other land uses, which can be spatially determined through the General Plan or other land use plans, the location of WTFs are based on technical requirements such as network design criteria, service area, elevations, topography, heights of nearby structures, alignment with neighboring sites and customer demand.

The Proposed Facility will be unmanned, have no impact on circulation systems, and generate no noise, odor, smoke, or any other adverse impacts to adjacent land uses. The proposed facility will allow commuters and residents within the coverage area wireless access to the rapidly expanding communications infrastructure by providing voice and data transmission services not currently available. The installation of antenna sectors and transmission equipment will not result in any material changes to the character of the local community. This Proposed Facility will operate in full compliance with applicable state and federal laws, including the Telecommunications Act of 1996.

### **Regulating Agencies**

AT&T is regulated by the FCC and is authorized to operate in the frequencies established for PCS operators. AT&T's WTFs operate at the lowest possible power levels and are well below established standards used by the FCC for safe human exposure to radio frequency electromagnetic fields. These standards have been tested and proved safe by the American National standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE). As explained in the RF engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers, submitted with this Application, the Proposed Facility will operate well within all applicable FCC public exposure limits.



## Alternative Sites

- 1) De Anza Community College- This candidate was deemed not viable for lack of interest by the College. There were multiple attempts over several months to try and engage interest with the College but no return interest was ever provided. Further this project is to help offload the campus traffic and a site on the campus was the desired location.



- 2) Union Church of Cupertino- 20900 Stevens Creek Blvd. This location was determined interested by the church but due to residential setbacks it was ruled as not viable.



Please feel free to contact me if you have any questions.

Regards,

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