

Planning Application #: 15-099

Date Received: 12/1/15  
 Fee Paid: \$3,101.00  
 Receipt #: 91785

# City of Albany

## PLANNING APPLICATION FORM NON-RESIDENTIAL

Please complete the following application to initiate City review of your application. Please be aware that staff may have additional application requirements. For projects requiring Planning and Zoning Commission review, please schedule an appointment with Planning Division staff. The Community Development Department office is open to accept applications Monday, 8:30 AM to 7:00 PM, Tuesday through Thursday 8:30 AM to 5:00 PM, and Friday 8:30 AM to 12:30 PM (closed Noon – 1PM, Mon. – Thu.) at 1000 San Pablo Avenue, Albany, CA 94706 (510) 528-5760.

*1/2* ↙

**Fee Schedule (FY 2013-2014)**

<input checked="" type="checkbox"/> Design Review*	\$2,072/ Admin. \$1,101
<input type="checkbox"/> Parking Exceptions/Reductions - see separate handout*	\$Actual Cost/Min \$2,072
<input checked="" type="checkbox"/> Conditional Use Permit (major)*	\$Actual Cost/Min <u>\$2,072</u>
<input type="checkbox"/> Conditional Use Permit (minor)*	\$1,101
<input type="checkbox"/> Sign Permit	\$1,479/\$461 Admin.
<input type="checkbox"/> Temporary/Seasonal Conditional Use Permit*	\$461
<input type="checkbox"/> Lot Line Adjustment*	\$Actual Cost/Min \$1,101
<input type="checkbox"/> Secondary Residential Unit*	\$1,101
<input type="checkbox"/> Parcel/Subdivision Map; Planned Unit Development; Condo Conversion*	\$3,357
<input type="checkbox"/> Variance*	\$2,072
<input checked="" type="checkbox"/> Other(s): <u>Zoning Clearance + Deposit</u> <u>\$1101 + \$2000</u>	\$

\*When obtaining more than one planning approval, the full amount for the highest fee will apply and 1/2 fee will be charged for any other ones.

General Plan Update Fee \$45 included in the fees above. This fee only needs to be paid once for each separately submitted application.

**\*\*If applying for a Conditional Use Permit, please complete the Supplemental Questionnaire\*\***

Job Site Address: 1600 Posen Ave. APN: 065-2428-001		Zoning District:
Property Owner(s) Name: St. Mary's College High School of Berkeley	Phone: 510 559-6259 Fax:	Email: mheadley@stmchs.org
Mailing Address: 1294 Albina Ave.	City: Albany	State/Zip: CA, 94706
Applicant(s) Name (contact person): Christian Hill / Cortel for T-Mobile	Phone: 707 342-2096 Fax:	Email: christian.hill@cortel-llc.com
Mailing Address: 2 Glen Alpine Road	City: Piedmont	State/Zip: CA, 94611

**PROJECT DESCRIPTION (Please attach plans)**

Modification of an existing telecommunications facility. Swap (3) existing 4' antennas for (3) new 6' antennas behind existing screening. Install (3) new RRU's near antennas. Upgrade existing 60A cabinet breaker for new 100A breaker.  
 Re-use existing power / fiber cables for new RRUs and antennas.

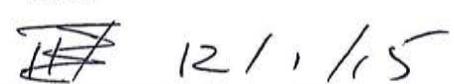
**TERMS AND CONDITIONS OF APPLICATION**

I, the undersigned owner (or authorized agent) of the property herein described, hereby make application for approval of the plans submitted and made part of this application in accordance with the provisions of the City's ordinances, and I hereby certify that the information given is true and correct to the best of my knowledge and belief.

I understand that the requested approval is for my benefit (or that of my principal). Therefore, if the City grants the approval with or without conditions, and that action is challenged by a third party, I will be responsible for defending against this challenge. I therefore agree to accept this responsibility for defense at the request of the City and also agree to defend, indemnify and hold the City harmless from any costs, claims, penalties, fines, judgments, or liabilities arising from the approval, including without limitation, any award or attorney's fees that might result from the third party challenge.

For this purposes of this indemnity, the term "City" shall include the City of Albany, its officers, officials, employees, agents and representatives. For purposes of this indemnity, the term "challenge" means any legal or administrative action to dispute, contest, attack, set aside, limit, or modify the approval, project conditions, or any act upon which the approval is based, including any action alleging a failure to comply with the California Environmental Quality Act or other laws.

The signature of the property owner is required for all projects. By executing this form you are affirming that you are the property owner.

_____ Signature of Property Owner	_____ Date
 Signature of Applicant (if different)	 Date

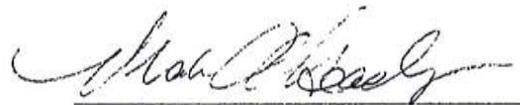
Site Number: BA02145A  
Site Name: PL145 St Mary's College H

City of Albany  
DEC 01 2015  
Community Development

**LETTER OF AUTHORIZATION**

Application for Use Permit Renewal/Building Permit

St. Mary's College High School as owner of property ( APN 65-2428-01) located at 1294 Albina Road. Albany, CA. ("Owner"), does hereby appoint **T-Mobile West LLC, a Delaware limited liability company** as agent for the purpose of applying for and attaining any permit or other necessary governmental requirement to use and construct improvements to the property leased to them for the purpose of constructing, operating and maintaining a telecommunications facility. I/We understand that the application may be denied, modified or approved with conditions and that such condition or modifications must be complied with prior to building permit issuance.



Signature of Property Owner or Representative

MARK A. HEADLEY

Printed Name of Property Owner or Representative

Date: 11-17-15

**Owner Contact Information:**

Phone: 510-559-6259

Cell Phone: 510-347-0885

Email: MHEADLEY@STMCHS.ORG

Preferred method of communication: E-MAIL

November 8 2015

Attn: St. Mary's College High School- President

Site: 1294 ALBINA AVE in Albany, Ca. 94706

RE: T-Mobile Cellular Antenna Facility – BA02145A (Site) - 700 MHz Project  
Communications Site Lease Agreement dated 4-5-2002 between St. Mary's College High School and T-Mobile West LLC, a Delaware limited liability company, formerly known as T-Mobile West Corporation, as successor-in-interest to TMO CA/ NV LLC, formerly known as Pacific Bell Wireless, LLC, successor-in-interest to Pacific Bell Mobile Services (T-Mobile), with respect to the real property located at 1294 ALBINA AVE in Albany, Ca. referred to herein as the (Site Agreement)

Dear Owner:

This letter is to advise you that it will be necessary within the near future for T-Mobile to make certain modifications/ additions to their Site at the above referenced location. These improvements are being undertaken in order to ensure the continued technical and economic feasibility of T-Mobile's facility, and are required for T-Mobile to make optimal use of the Site for the purposes intended by the Site Agreement / Amendment signed by Edmund LaRouche on 3-28-2002. As described below, these modifications will have no significant impact on the Owner's property or operations thereon. T-Mobile respectfully requests that the Owner acknowledge notice and consent to the following modifications:

The scope of work for this modification of the existing T-Mobile Site shall consist of the addition of three (3) antennas and associated equipment mounted within the existing leased space. The addition of this equipment will not exceed the equipment allowed under the Site Agreement and the Premises will not be expanded.

The Owner's acknowledgement of notice and consent will not increase the size or amount of space authorized to be utilized by T-Mobile under the Site Agreement.

Please indicate your acknowledgement and consent by signing below and returning one copy of this letter to my attention in the enclosed self addressed and stamped envelope. If your consent letter is not received within fifteen (15) calendar days from the date hereof, your approval and consent shall be deemed granted.

City of Albany  
DEC 01 2015  
Community Development

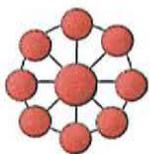
Existing  
screened  
structure



EXISTING

PROPOSED: Install (3) new panel antennas, (3) RRUs inside existing rooftop screened structure

Proposed modification  
cannot be seen inside  
screened structure

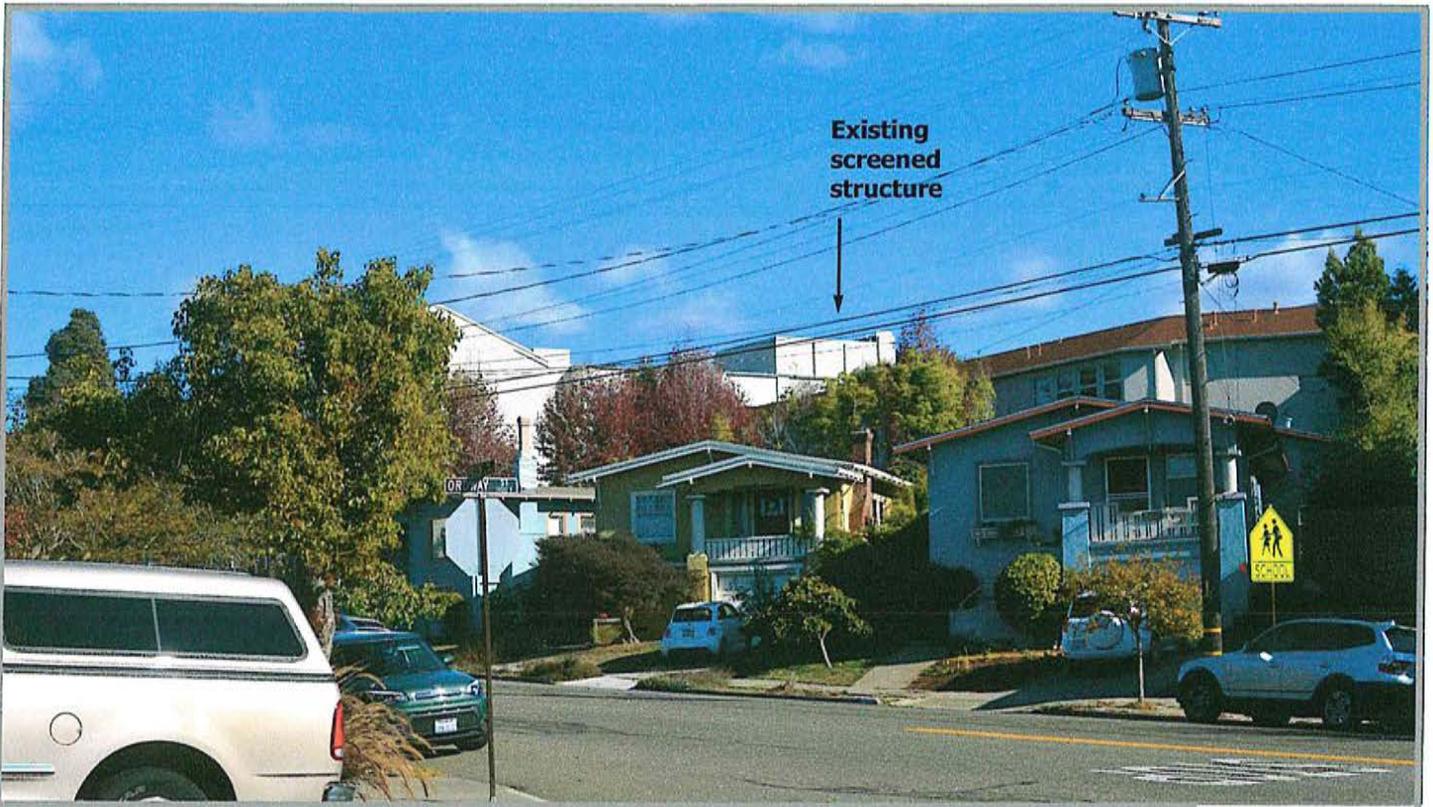


**Cortel**  
Photosims

View 1 of 2

T-Mobile

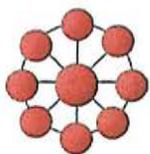
**BA02145A**  
1600 Posen Ave  
Albany CA 94706



EXISTING

PROPOSED: Install (3) new panel antennas, (3) RRUs inside existing rooftop screened structure

Proposed modification cannot be seen inside screened structure



**Cortel**  
Photosims

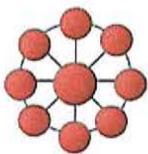
View 2 of 2

T-Mobile

**BA02145A**  
1600 Posen Ave  
Albany CA 94706



IEWS



**Cortel**  
Photosims

[View Chart](#)

T-Mobile

**BA02145A**  
1600 Posen Ave  
Albany CA 94706



#319 19292 60th Ave  
Surrey, BC V3S 3M2  
T 604.546.0221  
E [info@comtech.ca](mailto:info@comtech.ca)  
[www.comtech.ca](http://www.comtech.ca)

City of Albany  
DEC 01 2015  
Community Development

**FEDERAL COMMUNICATIONS COMMISSION (FCC)  
COMPLIANCE STUDY ON  
ELECTROMAGNETIC FIELDS  
EXPOSURE**

Prepared for:

**T-Mobile**

**T-Mobile West LLC**

**Base Station BA02145A**

**PL145 ST MARY'S COLLEGE H  
1600 POSEN AVENUE  
ALBANY  
CA 94706**

**NOVEMBER 23<sup>rd</sup> 2015**

Revision 1

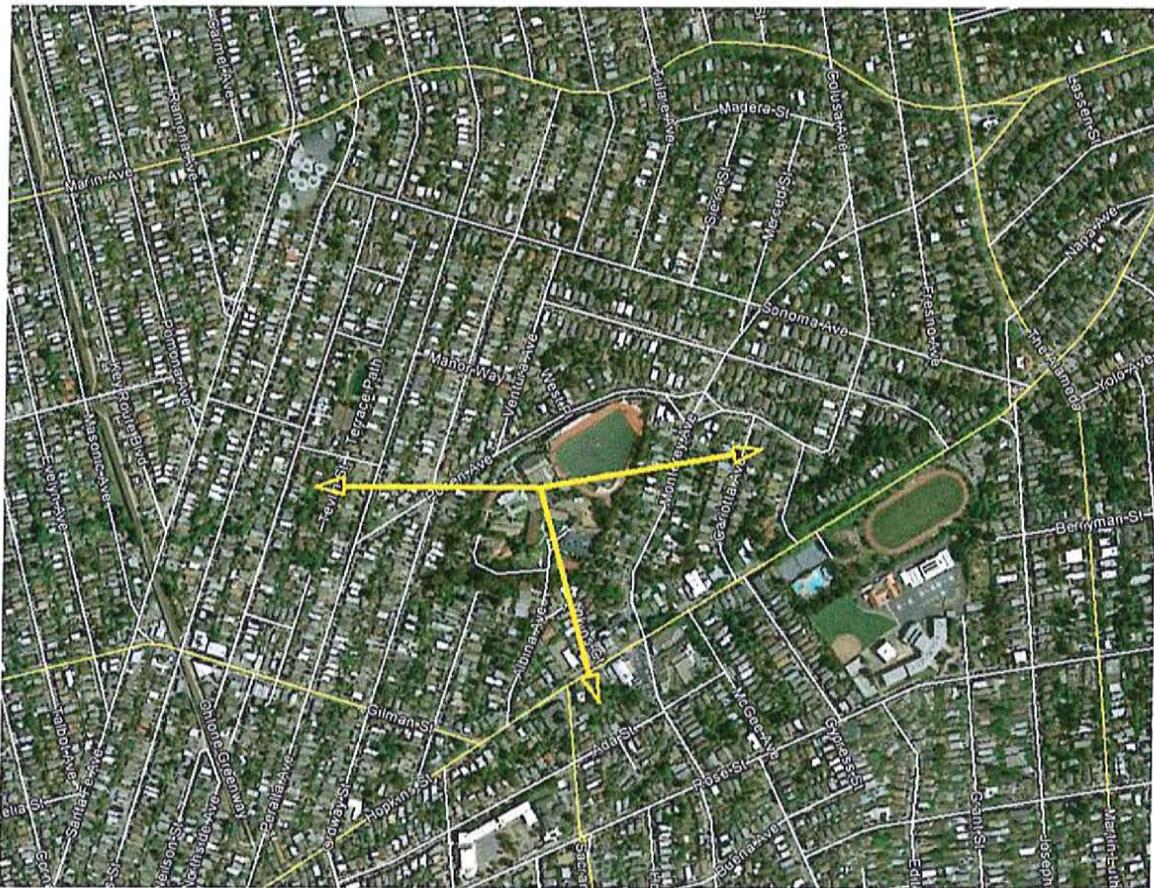


**SITE DESCRIPTION:**

<b>Carrier:</b>	T-Mobile		
<b>Site Address:</b>	1600 Posen Avenue, Albany, CA 94706		
<b>Type of Service:</b>	i) GSM	ii) UMTS	iii) LTE
<b>Sectors:</b>	3 (80°, 165°, 270°)		
<b>Antenna Type:</b>	Ericsson AIR-21 B2A/B4P, AIR-21 B4A/B12P-B8P		
<b>Number of Antennas:</b>	6 (3 existing + 3 new)		
<b>Frequencies (MHz):</b>	i) 1900	ii) 1900	iii) AWS/700
<b>Maximum Power (ERP):</b>	i) 1000W	ii) 1653W	iii) 1198/1240W
<b>Antenna Height:</b>	40'-0"±, 37'-0", (radiation center AGL)		

**Table 1.** T-Mobile RF summary

T-Mobile is proposing to add new 700 MHz LTE service to its wireless communication facility at the above address (Figure 1). Three of the six existing antennas will be replaced with three new antennas within the FRP structure on a building rooftop.



**Figure 1.** Facility and surrounding area

There is also an existing wireless facility on the same building roof. It has panel antennas installed within the FRP screen. The RF information of the facility for worst-case analysis is summarized as follows:

<b>Carrier:</b>	Sprint
<b>Frequencies (MHz):</b>	LTE 2500
<b>Maximum Power (ERP):</b>	2000 W
<b>Antenna Height:</b>	37'± (radiation center AGL)

**Table 2.** Sprint RF summary

The RF power density contributions due to the operation of this facility will be included in the calculations of the maximum total RF exposure level.

**PROTOCOL:**

This study, and the calculations performed therein, is based on OET Bulletin 65<sup>1</sup>, which adopts ANSI C95.1-1992 and NCRP standards. In particular, equation 10 from section 2 of the guideline is used as a model (in conjunction with known antenna radiation patterns) for calculating the power density at different points of interest. This information will be used to judge the RF exposure level incident upon the general population, and any employee present in the area. It should be noted that ground reflection of RF waves has been taken into account.

**FCC'S MAXIMUM PERMISSIBLE EXPOSURE (MPE) LIMIT:**

In order to evaluate the RF exposure level, the power densities at different locations of interest have been examined. Equation 10 from Bulletin 65 is reproduced here as equation 1:

$$S = \frac{33.4 F^2 ERP}{R^2} \quad (1)$$

Where: S = Power density [ $\mu W/cm^2$ ]  
 ERP = Effective radiated power [W]  
 R = Distance [m]  
 F = Relative field factor (relative numeric gain)

<sup>1</sup> Cleveland, Robert F, et al. Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. OET Bulletin 65, Edition 97-01, August 1997.

### Scenario 1: Standing near the facility on ground level

The RF exposure level of a six-foot tall person standing on ground level in the surrounding area of the site is evaluated. For the worst-case scenario, we assume that the antennas are transmitting the maximum number of channels at the same time, with each channel at its maximum power level. The azimuths of the antennas of both carriers are assumed to be in the direction of the studied location.

The Maximum Permissible Exposure (MPE) limit for 1900 MHz (PCS), 2100 MHz (AWS) and 2500 MHz facilities<sup>2</sup> for general population/uncontrolled exposure is 1000  $\mu\text{W}/\text{cm}^2$ , and 467  $\mu\text{W}/\text{cm}^2$  for 700 MHz facility. The maximum cumulative power density in the surrounding area of the facility is calculated to be 2.3% of the MPE limit.

### Scenario 2: Nearby buildings

There are residential and school buildings in the surrounding area of the facility. The RF exposure levels on the nearby buildings are evaluated. We assume again, the antennas are transmitting with maximum power level. The maximum cumulative power density on a nearby building is calculated to be approximately 1% of the MPE limit.

### Scenario 3: Facility Rooftop

Access to the roof is restricted to authorized personnel only. The radiation center of the T-Mobile antennas varies approximately from 9' to 12' from the roof deck. There are areas on the rooftop where a person may be partially exposed within the main beam path of an antenna. In this situation, the occupational/controlled exposure limits will apply, as long as the person has been made fully aware of the potential for the exposure.

Under worst-case circumstances, the calculated maximum power density from the T-Mobile antennas is approximately 63% of the FCC occupational/controlled MPE limit.

### Conclusions:

Under "worst-case" conditions, the calculations predict that the maximum RF exposure is 2.3% of the MPE limit for general population/uncontrolled exposure in the surrounding area of the facility, and 63% of the FCC occupational/controlled MPE limit on the facility roof. There is a relatively low level of RF energy directed either above or below the horizontal plane of the antennas, and there are no locations in the surrounding area near the T-Mobile facility will have RF exposure levels close to the MPE limits.

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<sup>2</sup> Ibid., page 67. are shown

### **MITIGATION MEASURES:**

Due to the mounting locations of the T-Mobile antennas, they would not be accessible to the general public. In order to establish access control, and raise awareness of RF exposure to a person who needs to work near the antennas, control measures including the use of signage should be maintained:

- Notice: to provide information and notify workers that there are active antennas installed and provide guidelines for working in RF environments. It should be posted at the first point of access to the site.
- In Case of Emergency: to provide T-Mobile emergency contact information. It should also be posted at the first point of access to the site.
- Warning: to alert individuals that they are entering an area where the power density emitted from transmit antennas could exceed the FCC's maximum permissible exposure limit for the general public, but is less than the occupational exposure limit. It should be posted near the antennas.

In order to establish compliance with occupational exposure limitations, explanatory warning signs should be posted near the antennas, and readily visible from any angle of approach to persons who might need to work near the antennas.

### **FCC COMPLIANCE:**

Based on the information provided by Cortel Inc. and the analysis above, the proposed modifications to the T-Mobile facility at 1600 Posen Avenue, Albany, California, will comply with the prevailing standards for public exposure limit on RF energy. The general population / uncontrolled exposure near the facility, including persons on ground level, in nearby open areas, and inside or on existing nearby buildings will have RF exposure much lower than the "worst-case" scenario, which is well below the MPE limit.



*November 23<sup>rd</sup>, 2015*

Sei Yuen Sylvan Wong, PE  
California PE Reg. No. E 16850