COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: March 6, 2025

TO: Zoning Hearing Officer

FROM: Planning Staff

SUBJECT: Consideration of a Use Permit Renewal, pursuant to Sections 6500 and 6512.6 of the San Mateo County Zoning Regulations, to allow the continued operation of an existing telecommunications facility operated by T-Mobile. The project is located at 2965 Alpine Road in the unincorporated Ladera area of San Mateo County.

County File Number: PLN2009-00205 (T-Mobile)

PROPOSAL

The project applicant, Crystal Shea on behalf of T-Mobile, is proposing to renew an existing Use Permit (PLN2009-00205) to allow the continued operation of a wireless communications facility located at 2965 Alpine Road in the unincorporated area of Ladera in San Mateo County. The existing facility consists of three antennas mounted atop a utility pole with two external TMA's mounted on a wood extension that raises the pole's height to 85 feet, 10 inches, two junction boxes, three pole-mounted equipment cabinets, one meter, and one disconnect. The antennas are concealed beneath a 16-inch cylinder (also known as a radome). No changes are proposed to the existing approved facility under this renewal.

RECOMMENDATION

That the Zoning Hearing Officer approve the Use Permit Renewal, County File No. PLN2009-00205, by making the required findings and adopting the conditions of approval listed in Attachment A.

BACKGROUND

Report Prepared By: Dinora Ochoa, Project Planner; dochoa1@smcgov.org

Applicant: Crystal Shea, on behalf of T-Mobile

Owner: Joint Pole Authority

Public Notification: Ten-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 on February 22, 2025.

Location: 175 feet east of the intersection of Alpine Road and La Cuesta Drive

APN: None. The site is located within the County right-of-way between APNs 074-483-030 and 077-151-030

Existing Zoning: Residential Estates /1-5-acre min. parcel size (R-E/S-11)

General Plan Designation: Medium Low Density Residential

Sphere-of-Influence: Portola Valley

Existing Land Use: Utility pole in the public right-of-way

Flood Zone: FEMA Flood Zone X (Area of Minimal Flood Hazard), FEMA Panel No. 06081C 0314E; effective October 16, 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 property is located 175 feet east of the intersection of Alpine Road and La Cuesta Drive. To the north are residences in the unincorporated area of Ladera. To the south is a plant nursery and to the west is the Ladera Country Shopper shopping center. East of the site is I-280 and the Stanford Linear Accelerator Center (SLAC). The right-of-way is flat: no structure, other than the existing utility pole, are present on this site. San Francisquito Creek is located south of Alpine Road, and the existing utility pole is less than 100 feet from the Creek.

Chronology:

Date		Action
August 19, 2010	-	Use Permit approved by the Zoning Hearing Officer for the telecommunications facility (PLN2009-00205).
October 10, 2010	-	Building Permit issued under BLD2010-01356 to install three antennas and mount equipment on utility pole.
March 16, 2011	-	Confirmation that the project has complied with the final approval conditions, with non-reflective grey or blue colors used for the antennas and GPS device to blend with the sky, and earth-tone colors for other equipment to match the utility pole.
November 21, 2013	-	Use Permit amendment to remove pole-mounted equipment and installing an equipment cabinet on the ground 5 feet

away from the pole approved by the Zoning Hearing Officer (PLN2009-00205).

Ultimately no changes to the equipment were made.

November 11, 2014 - Building Permit ready to be issued under BLD2014-00173 to remove pole-mounted equipment and replace with equipment cabinet on the ground.

February 16, 2016 - No changes to the equipment were made and BLD2014-001473 has expired.

November 14, 2024 - Application for Use Permit Renewal submitted and application fees paid.

March 6, 2025 - Zoning Hearing Officer public hearing.

DISCUSSION

A. KEY ISSUES

1. Conformance with the San Mateo County General Plan

Staff has reviewed the project for conformance with the visual quality policies contained in the General Plan and has determined that the project is in conformance. The policies applicable to this project include the following:

a. Chapter 4 – Visual Quality

The project is consistent with Policy 4.21 (*Utility Structures*), minimization of visual impacts generated by utility structures. The wireless telecommunication facility is on an existing utility pole. There are no proposed changes to the pole or equipment as part of this Use Permit Renewal. The subject utility pole is surrounded by vegetation which provides partial screening when seen from Alpine Road. The antennas are painted to a non-reflective grey and blue to blend with the sky and reduce the visual impact. The pole mounted equipment is painted a brown earth tone color that matches the utility pole. The antenna and equipment color has been maintained in this way and continues to minimize visibility. There is no evidence that the existing facility has resulted in significant visual impacts and no changes are proposed under the subject renewal.

b. Chapter 7 – General Land Use

The project is consistent with Policy 7.16 (*Land Use Objectives for Urban Areas*), maximization of efficiency of public facilities, services, and utilities, because it is utilizing an already developed site to

continue filling in coverage gaps that existed previous to its inception as an essential service. Additionally, by continuing the use on this site, the applicant eliminates the need to introduce this use to a location where it does not currently exist.

2. Conformance with the Zoning Regulations

The project complies with the R-E/S-11 zoning regulations apart from the height, which is addressed under the Use Permit Section (Section A.5). The zoning district standards, with the exception of height, are not applicable since the site is located within the Alpine Road public right-of-way.

3. Conformance with Wireless Telecommunications Facilities Regulations

Staff has determined that the project complies with the applicable standards of the Wireless Telecommunication Facilities (WTF) Ordinance, as discussed below:

a. Development and Design Standards

Section 6512.2.A of the WTF Ordinance discusses location, minimizing visual impacts, maximum height, and future co-location of wireless facilities. The existing T-Mobile facility is located within the Alpine Road public right-of-way near a residential neighborhood, the Ladera Shopper and an existing nursery.

The maximum height of the facility will remain at 85-feet 10-inches, which exceed the allowable 75 feet per Section 6512.2(I.2) of the WTF Ordinance for the S-11 District. The request to renew the permit allowing an over-height cellular facility, pursuant to Section 6405 of the Zoning Code, is discussed below.

Section 6512.2.B discourages locating telecommunications facilities in residential zones unless no other locations provide feasible service or adequate capacity or coverage. The sites' location adjacent to a residential zone was approved in 2010, and there have been no complaints or incidents necessitating the relocation of the facility.

Section 6512.2.C requires that co-locations be investigated as an alternative to a new facility if it can provide equivalent coverage with less environmental impact. The project conforms to these standards because it does not involve any new construction and is not considered a new facility.

Section 6512.2.D states that, except in cases where aesthetically inappropriate, new facilities should be constructed to support co-location. Joint Pole Authority (JPA) owns the utility pole. Therefore, any future co-location requires approval of the JPA and also design

feasibility consideration given the location of the existing T-Mobile site. The facility does not prevent additional future co-location activities.

Section 6512.2.E states that adverse visual impacts should be limited through: (1) siting out the public view, (2) use of existing and new vegetation, (3) prevent excessive height, (4) screening using non-invasive or native plant material, (5) painting the equipment to blend with existing landscaping, and (6) design the site to blend with the surrounding environment.

The existing facility meets these regulations. The site utilizes an existing utility pole, located in the public right-of way, and already blend with the existing mature trees that surround it. The utility pole already exceeds the height of the existing trees and although the permitted project extends the pole an additional 12-feet, the additional height extension is necessary to meet minimum JPA separation requirements from the utility lines near the top of the pole. The antennas and equipment above the tree canopy are further camouflaged, as conditioned in the original approval of this project, to be painted a non-reflective grey/blue color to blend with the sky. The remaining cabinet boxes and equipment located at or below the tree canopy are painted a non-reflective brown earth-tone color to match the pole. The existing utility pole is well screened on the east and west sides by mature trees, and no houses face the area. The renewal of this permit conforms to these standards as the camouflaging efforts have been maintained and are not proposed to be changed as part of this project.

Section 6512.2.F requires paint color to be used to minimize visual impact of the WTF facility and to blend with the surrounding environment.

See staff's response to Section 6512.2E above.

Section 6512.2.G requires that WTF facilities shall be constructed of non-reflective materials.

See staff's response to Section 6512.2E.

Section 6512.2.H requires that the WTF facility shall comply with all the requirements of the underlying zoning districts setbacks. The facility is located on an existing JPA utility pole within a public right-of-way and is not subject to the S-11 development standards regarding setbacks.

Section 6512.2.I permits ground-mounted structures to be built at a greater height than the limit established for the zoning district. The project will maintain the existing height of 85-feet 10-inches,

exceeding the allowed height for the S-11 District. However, Section 6405 of the Zoning Ordinance allows radio towers and similar structures to be built to a greater height than the limit established for the district which the building or structure is located, up to 150 feet.

b. Performance Standards

The project meets the required performance standards of Section 6512.3 for lighting, licensing, provision of a permanent power source, timely removal of the facilities, and visual resource protection. No physical changes to the facility are proposed with this renewal, the facility operates under licenses issued from both the Federal Communications Commission (FCC) and the California Public Utilities Commission (CPUC), power for the facilities will continue to be provided by PG&E, visual impacts will continue to be minimal, and conditions of approval will require maintenance and/or removal of the facility when no longer in operation. Road access to the site is existing and no noise in excess of the County's Noise Ordinance will be produced.

4. Conformance with 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 use will not, under the circumstances of this particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood.**

Cellular communications facilities proposals, such as this project, require the submittal and review of radio frequency (RF) reports to ensure that the RF emissions from the proposed antennas do not exceed the Federal Communications Commission public exposure limits. The applicant submitted a radio frequency radiation report. The report concluded that the greatest radiation exposure at ground level would be 2 percent of the RF limit for the general public.

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.**

This project will continue to provide the clarity, range, and capacity for the existing cellular network in the area and will continue to provide service for the public in general. A cellular facility in this location is

necessary for the convenience of cellular users and will not be detrimental to the public welfare.

5. Conformance with Conditions of Last Use Permit Approvals

Staff has reviewed the previous use permit conditions of approval for this permit (PLN2009-00205), last approved November 21, 2013, and has determined that the commercial carrier is in compliance with all previous conditions (see Attachment E). No physical changes are proposed as part of this renewal. Previous conditions that remain relevant, along with new conditions, 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 the provision of Section 15301, Class 1, for the continued operation of existing public or private facilities involving no physical changes or expansion in use.

C. REVIEWING AGENCY

Woodside Fire Protection District

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map
C. Project Plan
D. Site Photos
E. PLN2009-002005 Conditions from the 2010 Use Permit Approval
F. RF Report

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT A

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN2009-00205 Hearing Date: March 6, 2025

Prepared By: Dinora Ochoa, 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 the provisions of Section 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, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood. 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 telecommunication facility is necessary for the public health, safety, convenience, or welfare of the community. The site provides telecommunications coverage to the surrounding community, which serves as a benefit to both private and public users.

RECOMMENDED CONDITIONS OF APPROVAL

Current Planning Section

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 March 6, 2025. Modifications beyond those approved by the Zoning Hearing Officer will be subject to review and approval by the Director of Planning and Building and may require review at a public hearing. 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 10 years from the date of this approval and shall expire on March 6, 2035. If continuation of this use is desired, the applicant shall file a Use Permit renewal application six months prior to its expiration with the Planning and Building Department, by submitting the applicable application forms and paying the application fees.

3. Any modification to this facility or changes in use or intensity will require a use permit amendment. If an amendment is requested, the applicant shall submit necessary documents and fees for consideration at a public hearing.

4. The applicant shall maintain the radome and antennas in a non-reflective gray, or light blue color to blend with the sky and pole mounted equipment shall maintain a nonreflective brow earth-tone color to match the utility pole. In the event that the equipment needs to be repainted, they shall be repainted the same non-reflective colors. The facility's non-reflective colors shall be maintained to the satisfaction of the Director of Planning and Building.

5. 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, etc., shall be removed and the site shall be returned to its pre-construction state to the extent practicable.

6. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays, and 9:00 a.m. to 5:00 p.m. on Saturdays. Said activities are prohibited on Sundays, Thanksgiving, and Christmas (San Mateo County Ordinance Code Section 4.88.360).

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 10 days of receiving notice of such revocation.

8. The facility shall maintain compliance with the performance standards contained with the County's Wireless Telecommunication Facilities Ordinance.

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT B

San Mateo County

PLN2009-00205 VICINITY MAP

0.04 0 0.02 0.04 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

1: 1,128

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.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT C

CUP RENEWAL

T-Mobile®

SITE NUMBER: SF53938A
SITE NAME: PG&E L-CAP ALPINE ROAD
SITE TYPE: UTILITY POLE
CITY: PORTOLA VALLEY
COUNTY: SAN MATEO
JURISDICTION: SAN MATEO COUNTY

PROJECT SUMMARY

SITE ADDRESS:
2965 ALPINE RD
PORTOLA VALLEY, CA 94028

PROPERTY OWNER CONTACT:
SAN MATEO COUNTY

APPLICANT:
T-MOBILE WEST LLC
1200 CONCORD AVE, 5TH FLOOR
CONCORD, CA 94520

REPRESENTATIVE:
T-MOBILE PROJECT MANAGER: BRANDON GEPHART
PROJECT MANAGER: LYNDA McCLUNG

BUILDING SUMMARY

OCCUPANCY CLASSIFICATION: U (UNMANNED TELECOMMUNICATIONS FACILITY)
CONSTRUCTION TYPE: IIB
PROPERTY TYPE: PUBLIC RIGHT OF WAY
LAND USE: PUBLIC RIGHT OF WAY
ZONING: PUBLIC RIGHT OF WAY
APN: ROW

PROJECT DESCRIPTION

THE PROJECT ENTAILS:

T-MOBILE IS REQUESTING A RENEWAL OF THE CONDITIONAL USE PERMIT FOR THE CONTINUED USE AND OPERATION OF THEIR EXISTING WIRELESS TELECOMMUNICATIONS FACILITY:
(3) EXISTING ANTENNAS
(2) EXISTING TMAs
(2) EXISTING JUNCTION BOXES
(3) EXISTING POLE MOUNTED EQUIPMENT CABINETS
(1) EXISTING METER
(1) EXISTING DISCONNECT

LEGAL DESCRIPTION

PUBLIC RIGHT OF WAY

PROJECT TEAM

SAC/ZONING/PERMITTING:
NETWORK CONNEX
655 N. CENTRAL AVE., #1520
GLENDALE, CA 91203
CONTACT: CRYSTAL SHEA
PHONE: (312) 758-7915
E-MAIL: cshea@networkconnex.com

LATITUDE / LONGITUDE

LAT:	37° 24' 13.30" N	LAT:	37.403694°
LONG:	120° 11' 33.43" W	LONG:	-122.192619°

UTILITY PURVEYOR

POWER:
COMPANY: PG&E

TELCO:
COMPANY: AT&T

APPROVAL

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL CONSTRUCTION DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND ANY CHANGES AND MODIFICATIONS THEY MAY IMPOSE.

	PRINT NAME	SIGNATURE	DATE
LANDLORD:			
ZONING MGR:			
DEVELOP. MGR:			
CONST. MGR:			
PROJECT MGR:			
SR. RF ENGINEER:			
RF ENGINEER:			
OPERATIONS:			
SAC REP.:			
UTILITIES:			
REAL ESTATE MGR:			

DRAWING INDEX

SHEET	DESCRIPTION
T-1	TITLE SHEET
A-1	EXISTING OVERALL SITE PLAN
A-2	EXISTING EQUIPMENT AND ANTENNA LAYOUT PLANS
A-3	EXISTING ELEVATIONS

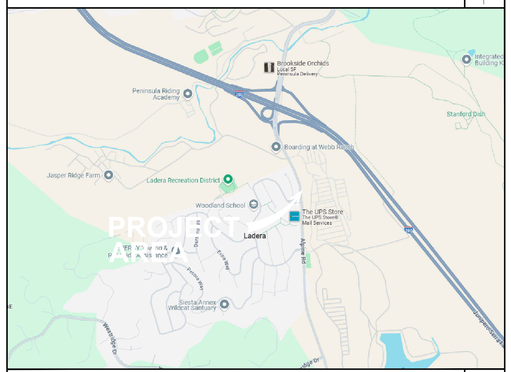
ACCESSIBILITY REQUIREMENTS

THE FACILITY IS UNMANNED AND NOT FOR CONTINUOUS HUMAN HABITATION.
HANDICAPPED ACCESS IS NOT REQUIRED PER CBC 2022,
SECTION 1103.2.7 (LIMITED ACCESS SPACES)
SECTION 1103.2.9 (EQUIPMENT SPACES)

CODE COMPLIANCE

1. CALIFORNIA ADMINISTRATIVE CODE (INCL. TITLES 24 & 25) 2022
2. CALIFORNIA BUILDING CODE 2022
3. CALIFORNIA ELECTRICAL CODE 2022
4. CALIFORNIA MECHANICAL CODE 2022
5. CALIFORNA PLUMBING CODE 2022
6. ANSI / TIA-222-H-2017
7. LOCAL BUILDING CODE
8. CITY / COUNTY ORDINANCES
9. CALIFORNIA FIRE CODE 2022 EDITION
10. ASCE 7-16 WITH SUPPLEMENT
11. ACI 318-19
12. STEEL CONSTRUCTION MANUAL, 15TH EDITION

GENERAL LOCATION MAP



VICINITY MAP

DRIVING DIRECTION

FROM LOCAL T-MOBILE OFFICE, 1200 CONCORD AVE., CONCORD, CA 94520:

HEAD NORTH TOWARD CONTRA COSTA BLVD; TURN LEFT ONTO CONCORD AVE; TURN RIGHT ONTO CONTRA COSTA BLVD; TURN RIGHT TO MERGE ONTO I-680 S; MERGE ONTO I-680 S; USE THE RIGHT LANE TO TAKE EXIT 36 FOR CROW CYN RD; USE THE RIGHT 2 LANES TO TURN RIGHT ONTO CROW CANYON RD; CONTINUE ONTO GROVE WAY; USE THE LEFT 2 LANES TO TURN LEFT ONTO CENTER ST; CONTINUE ONTO B ST; PASS BY BMO (ON THE RIGHT IN 1.2 MI); TURN LEFT ONTO WATKINS ST; TURN RIGHT AFTER TOGO'S SANDWICHES (ON THE RIGHT)
CONTINUE TO FOLLOW CA-92 W; TOLL ROAD; USE THE RIGHT 2 LANES TO TAKE EXIT 8 FOR I-280 N/I-280 S TOWARD SAN JOSE/SAN FRANCISCO; USE ANY LANE TO TAKE THE INTERSTATE 280 S RAMP TO SAN JOSE
MERGE ONTO I-280 S; TAKE EXIT 22 FOR ALPINE RD; USE THE RIGHT LANE TO TAKE THE RAMP TO PORTOLA VALLEY; MERGE ONTO ALPINE RD
2965 ALPINE RD PORTOLA VALLEY, CA 94028

T-Mobile
Stick Together ®
1200 CONCORD AVENUE 5TH FLOOR
CONCORD, CA 94520

PROJECT INFORMATION:
(CUP RENEWAL)
SF53938A
PG&E L-CAP ALPINE ROAD
2965 ALPINE RD
PORTOLA VALLEY, CA 94028
SAN MATEO COUNTY

CURRENT ISSUE DATE:
10/31/24

ISSUED FOR:
ZONING

REV.:	DATE:	DESCRIPTION:	BY:
A	10/30/24	90% ZD, ISSUED FOR REVIEW	ZS
0	10/31/24	100% ZD	ZS

PLANS PREPARED BY:
NETWORK CONNEX
655 N. CENTRAL AVE., #1520
GLENDALE, CA 91203
OFFICE: (818) 840-0808 FAX: (818) 840-0708

CONSULTANT:
NETWORK CONNEX
655 N. CENTRAL AVE., #1520
GLENDALE, CA 91203
OFFICE: (818) 840-0808 FAX: (818) 840-0708

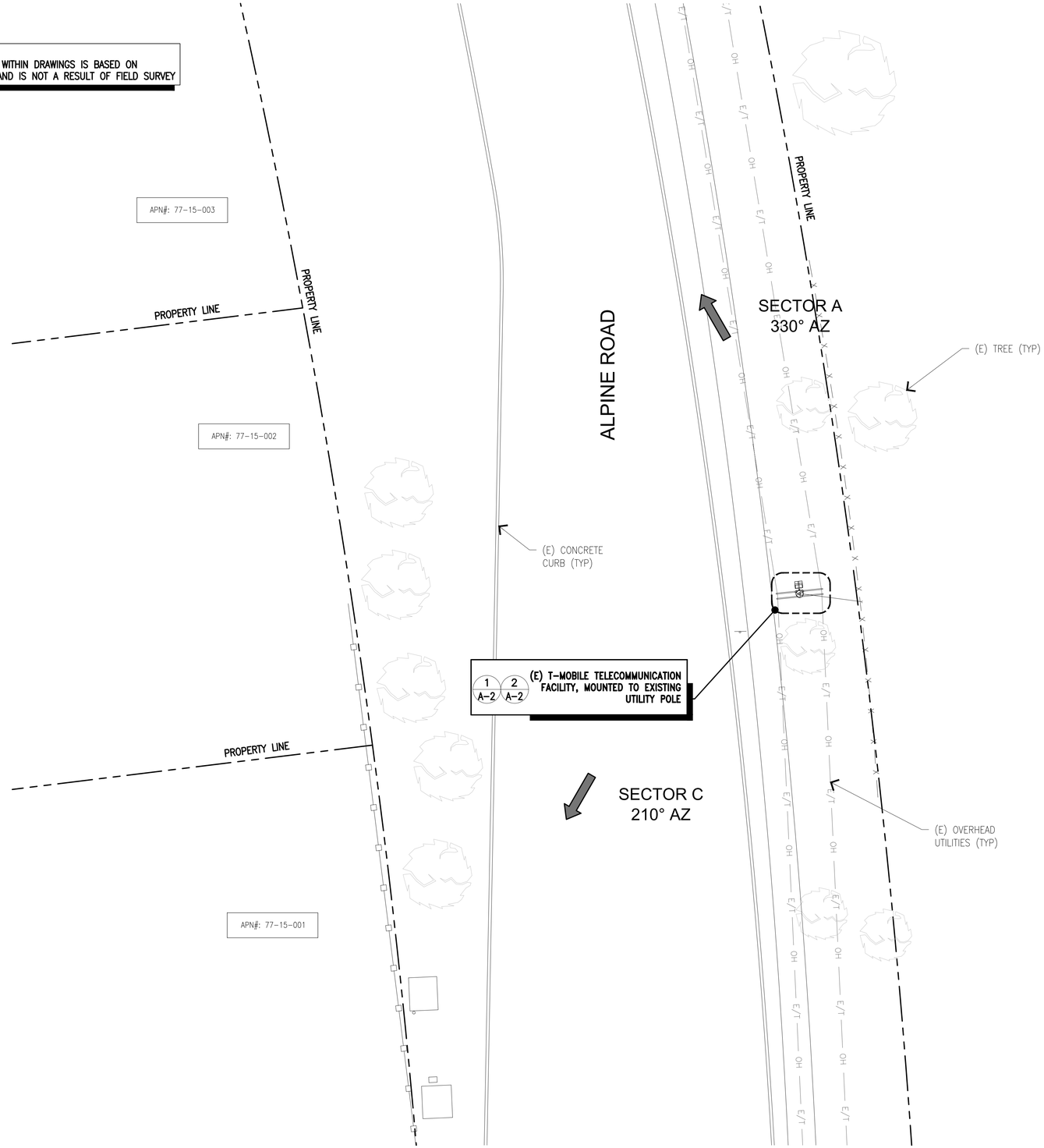
DRAWN BY:	CHK.:	APV.:
ZS	LM	LM

LICENSURE:

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:	REVISION:
T-1	0
	SF53938A

NOTE:
INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT A RESULT OF FIELD SURVEY



EXISTING OVERALL SITE PLAN

SCALE: 1"=10'-0" (0 5' 10' 20')

1

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CONCORD, CA 94520

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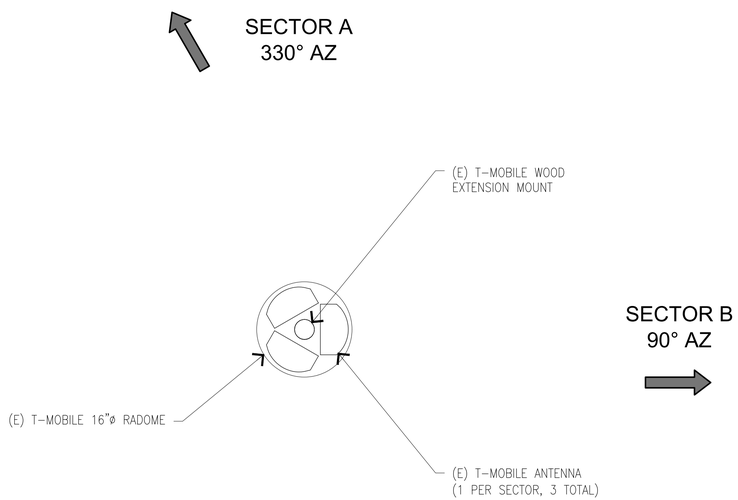
DRAWN BY:	CHK.:	APV.:
ZS	LM	LM

LICENSURE:

SHEET TITLE:

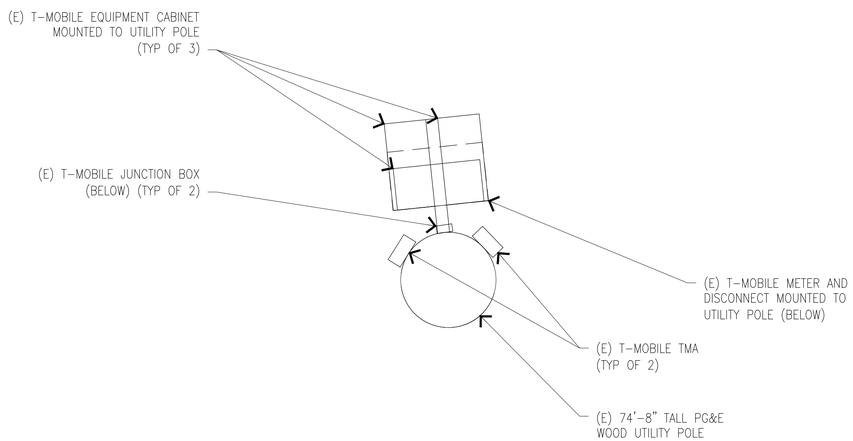
EXISTING OVERALL SITE PLAN

SHEET NUMBER:	REVISION:
A-1	0
	SF53938A



(E) ANTENNA LAYOUT PLAN

SCALE: 1"=1'-0" | 0 5' 10' 20' | 2



(E) EQUIPMENT LAYOUT PLAN

SCALE: 1"=1'-0" | 0 5' 10' 20' | 1

T-Mobile
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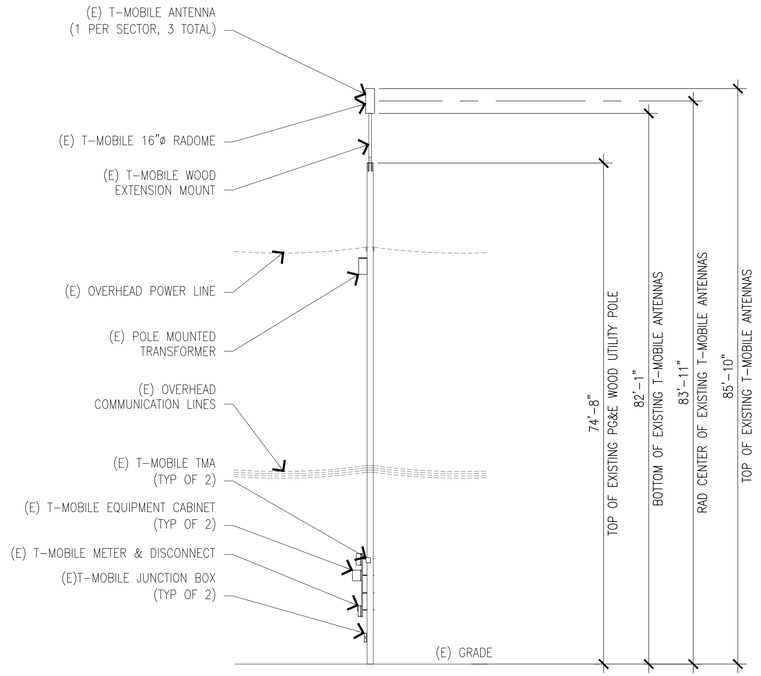
DRAWN BY:	CHK.:	APV.:
ZS	LM	LM

LICENSURE:

SHEET TITLE:
(E) EQUIPMENT AND ANTENNA LAYOUT PLANS

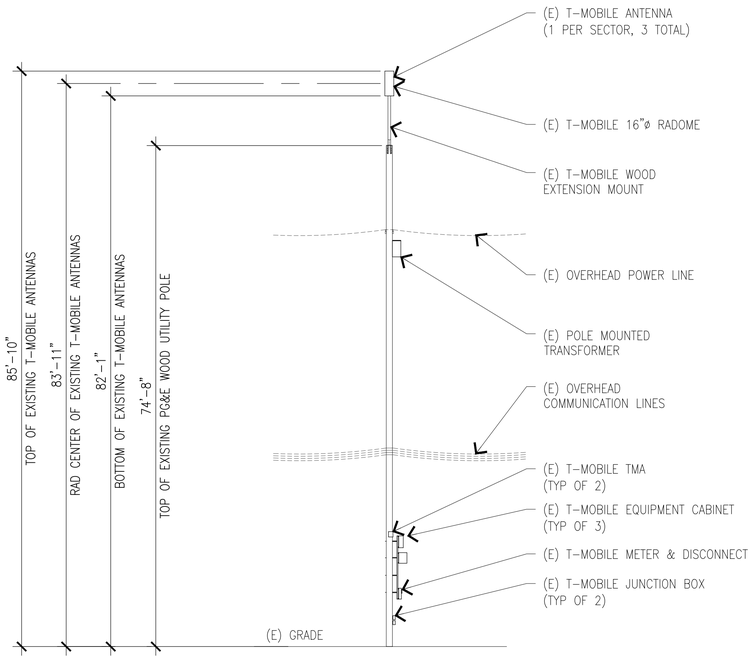
SHEET NUMBER:	REVISION:
A-2	0
	SF53938A



EXISTING WEST ELEVATION

SCALE: 1/8"=1'-0" (0 2' 5' 10' 15')

2



EXISTING EAST ELEVATION

SCALE: 1/8"=1'-0" (0 2' 5' 10' 15')

1

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0	10/31/24	100% ZD	ZS

PLANS PREPARED BY:

NETWORK CONNEX
655 N. CENTRAL AVE., #1520
GLENDALE, CA 91203
OFFICE: (818) 840-0808 FAX: (818) 840-0708

CONSULTANT:

NETWORK CONNEX
655 N. CENTRAL AVE., #1520
GLENDALE, CA 91203
OFFICE: (818) 840-0808 FAX: (818) 840-0708

DRAWN BY:	CHK.:	APV.:
ZS	LM	LM

LICENSURE:

SHEET TITLE:

EXISTING ELEVATIONS

SHEET NUMBER:	REVISION:
A-3	0
	SF53938A

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT D


Regular Gasoline
514 9/10
Plus Gasoline
534 9/10
V-Power Gasoline
554 9/10
Diesel #2
489 9/10
CASH PRICES
DIESEL
499
Monday, September 30, 2024
9:54:05am
9:54:05 EST


Monday, September 30, 2024
9:54:07am
9:54:07 EST


NO
PARKING
ANY
TIME
nday, September 30, 2024
5:18am
9:55:18 E

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT E

Planning & Building Department
455 County Center, 2nd Floor
Redwood City, California 94063
650/363-4161 Fax: 650/363-4849

Mail Drop PLN122
plngbldg@co.sanmateo.ca.us
www.co.sanmateo.ca.us/planning

PROJECT FILE

Please reply to: Olivia Boo
650/363-1818

August 19, 2010

T-Mobile
Attn: Alex Marin
1888 Golden Gate #20
San Francisco, Ca 94115

Subject: **PLN2009-00205**
Location: **Intersection of Alpine Road and La Cuesta Drive, Ladera**
APN: **Right of Way (near 074-483-030)**

On August 19, 2010, the Zoning Hearing Officer considered your request for a Use Permit, pursuant to Section 6500 of the San Mateo County Zoning Regulations, and a Negative Declaration pursuant to the California Environmental Quality Act, to allow a new cellular facility consisting of one GPS antenna, three panel antennas, and four associated equipment cabinets on an existing 70-foot tall utility pole. The pole mounted panel antennas and associated equipment will extend the pole an additional 12 feet higher for a total of 82 feet. The project site is located near the intersection of Alpine Road and La Cuesta Drive, in the unincorporated Ladera area of San Mateo County.

The Zoning Hearing Officer made the findings and approved this project subject to the conditions of approval as attached.

Any interested party aggrieved by the determination of the Zoning Hearing Officer may appeal this decision to the Planning Commission within ten (10) working days from such date of determination. The appeal period for this project will end on **September 2, 2010 at 5:00 p.m.**

If you have any questions concerning this item, please contact the Project Planner above.

Very truly yours,

Matthew Seubert
Zoning Hearing Officer

Zhd0819U_5_dr

cc: Public Works Department
Building Inspection Section
Assessor's Office
Ladera Community Association
Pacifica Gas & Electric
Lennie Roberts

Attachment A

County of San Mateo
Planning and Building Department

FINDINGS AND CONDITIONS OF APPROVAL

Permit or Project File Number: PLN 2009-00205 Hearing Date: August 19, 2010

Prepared By: Olivia Boo, Project Planner Adopted By: Zoning Hearing Officer

FINDINGS

Regarding the Negative Declaration, Found:

1. That the Negative Declaration is complete, correct and adequate, and prepared in accordance with the California Environmental Quality Act and applicable State and County Guidelines.

2. That, on the basis of the Initial Study and comments hereto, there is no evidence that the project, subject to the mitigation measures contained in the Negative Declaration, will have a significant effect on the environment.

3. That the Negative Declaration reflects the independent judgment of San Mateo County.

4. That the mitigation measures identified in the Negative Declaration, agreed to by the applicant, placed as conditions on the project, and identified as part of this public hearing, have been incorporated into the Mitigation and Reporting Plan in conformance with California Public Resources Code Section 21081.6.

Regarding the Use Permit, Found:

5. 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 the property or improvements in said neighborhood because the project will meet the current FCC standards and has been conditioned to maintain a valid FCC and CPUC license.

6. That this telecommunications facility is necessary for the public health, safety, convenience or welfare of the community because the addition of this facility will provide increased and improved cellular service in this area to the public and provide assistance in emergency situations.

7. That the Use Permit to exceed height limitations, as requested by the applicant, is necessary in order to achieve the minimum clear distance between the proposed facility and the existing electrical equipment on the utility pole, as well as between the proposed facility and the existing tree canopy.

CONDITIONS OF APPROVAL

Current Planning Section

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 August 19, 2010. Minor revisions or modifications

may be approved by the Community Development Director if they are consistent with the intent of and in substantial conformance with this approval.

2. This use permit shall be for the proposed project only. Any change or intensity in use 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.

3. This installation shall be removed in its entirety at that time when this technology becomes obsolete or this facility is no longer needed.

4. This permit shall be valid for ten years until August 19, 2020. If the applicant seeks to renew this permit, renewal shall be applied for six months prior to expiration with the Planning and Building Department and shall be accompanied by the renewal application and fee applicable at that time. Renewal of this permit shall be considered at a public hearing.

Conditions 5, 6, 7 are mitigation measures from the Mitigated Negative Declaration made available on July 24 2010:

5. The applicant shall receive and maintain approval from the FCC and CPUC for the operation of the project at this site. Upon receipt of this approval, the applicant shall supply the Current Planning Section with proof of approval. If this approval is ever revoked, the applicant shall inform the Current Planning Section of the revocation.

6. The applicant shall paint the proposed antennas and GPS device a non-reflective gray or blue color to blend with the sky and equipment cabinets shall be painted a non-reflective brown earth-tone color to match the utility pole. Two copies of color samples shall be submitted to the Current Planning Section at the time of application for a building permit. Color verification will be confirmed by the Current Planning Section prior to a final inspection for the building permit.

7. Construction activities shall be limited from the hours of 7:00 a.m. until 6:00 p.m., Monday through Friday, and Saturdays from 9:00 a.m. until 5:00 p.m. Construction is not permitted on Sundays, Thanksgiving, or Christmas.

8. During project construction, the applicant shall, pursuant to Section 5022 of the San Mateo County Ordinance Code, minimize the transport and discharge of stormwater runoff from the construction site into storm drain systems by:

   a. Stabilizing all denuded areas and maintaining erosion control measures continuously between October 15 and April 15. Stabilizing shall include both proactive measures, such as the placement of hay bales or coir netting, and passive measures, such as revegetating disturbed areas with plants propagated from seed collected in the immediate area.

   b. Storing, handling, and disposing of construction materials and wastes properly, so as to prevent their contact with stormwater.

   c. Controlling and preventing the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.

   d. Using sediment controls or filtration to remove sediment when dewatering site and obtaining all necessary permits.

e. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

f. Delineating with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.

g. Protecting adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

h. Performing clearing and earth-moving activities only during dry weather.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilizing designated access points.

k. Avoiding tracking dirt or other materials off-site; cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. The contractor shall train and provide instruction to all employees and subcontractors regarding the construction best management practices.

9. The applicant is responsible for ensuring that all contractors are aware of all stormwater quality measures and implement such measures. Failure to comply with the construction BMPs will result in the issuance of the correction notices, citations or a project stop order.

10. The applicant shall obtain a building permit and install the antennas and miscellaneous power/communications lines in accordance with the approved plans and conditions of approval.

11. This permit does not allow for the removal of any trees. Any tree removal will require a separate permitting process.

12. Any damage to the adjacent paved trail on Alpine Road caused by construction activity must be repaired by the applicant.

Building Inspection Section

13. A building permit is required.

Department of Public Works

14. An encroachment permit is required when installing equipment within the County right-of-way.

15. The applicant shall submit a traffic control plan at the time of application for a building permit.

OSB:fc – OSBU0527_WFU.DOC

COUNTY OF SAN MATEO - PLANNING AND BUILDING DEPARTMENT

ATTACHMENT F

T-Mobile RF Compliance Report

Site # SF53938A
PG&E L-Cap Alpine Road
2965 Alpine Road
Portola Valley, California 94028

EBI Project No. 62138910
August 12, 2013

Prepared for:

T-Mobile West, LLC
1855 Gateway Boulevard, Suite 900
Concord, CA 94520

Prepared by:

EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

TABLES

APPENDICES

EXECUTIVE SUMMARY

EnviroBusiness Inc. (dba EBI Consulting or EBI) has been contracted by T-Mobile to conduct radio frequency electromagnetic (RF-EME) modeling for T-Mobile Site # SF53938A at 2965 Alpine Road in Portola Valley, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields. This document addresses the compliance of T-Mobile's transmitting facilities independently and in relation to all collocated facilities at the site. EBI field personnel conducted a site survey on July 30, 2013.

As presented in the sections below, based on worst-case theoretical modeling, there are no areas in front of the T-Mobile antennas on any walking surface that exceed the FCC standards for general population and occupational exposure. However, there are areas where workers elevated above the ground may be exposed to power densities greater than the general population and occupational limits.

During the survey, no spatially averaged power density readings above 0.0568% of the FCC's occupational MPE (0.2840% of the general public MPE) were encountered on any ground-level surface.

1. INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by T-Mobile in this area operate within a frequency range of 1900-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. 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.

2. SITE/PROJECT DESCRIPTION

This project site includes three (3) T-Mobile wireless telecommunication antennas (at three sector locations) on a utility pole located at 2965 Alpine Road in Portola Valley, California. Table 1 contains an antenna inventory and a summary of exposure information.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits for workers and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. Access to this site is considered uncontrolled. Additional information regarding controlled and uncontrolled exposure limits is provided in Appendix A. Appendix B presents a site safety plan that provides a plan view of the utility pole with antenna locations. Site plans are also provided in Appendix D.

EBI field personnel conducted a site survey on July 30, 2013. There were no other carriers observed at this site. Appendix E contains photos depicting the locations of existing signage that were taken during the site visit.

3. RESULTS OF RF EME MODELING

EBI has performed theoretical modeling using Roofview® and/or TowerCalc® to estimate the maximum potential power density from each antenna based on worst-case assumptions for the number of antennas and power. The modeling assumes a maximum of 5 radios for each T-Mobile sector, with a maximum 4 radio count for each UMTS sector at a power level of 15 Watts to 20 Watts per transmitter and a maximum 1 radio count for each LTE sector at a power level of 20 Watts per transmitter in order to provide a worst-case evaluation of predicted MPE levels.

The assumptions used in the modeling for T-Mobile's antennas are based upon virtual antenna specifications, information collected during the field survey, information provided by T-Mobile and information gathered from other sources. The parameters used for modeling T-Mobile antennas are summarized in the modeling export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

As presented in the "Electromagnetic Energy Safety Plan," included in Appendix B, the worst-case power density will not exceed the FCC's occupational or general population limits on any accessible ground-level walking or working surface. However, for elevated workers in front of the antenna faces, power densities may exceed the occupational limit 78 feet above the ground level or 4 feet below the bottoms of the T-Mobile antennas. Table 1 outlines the predicted extents of the area below the antenna that exceed the occupational limit.

For a person at ground level, the maximum ambient RF exposure level from the T-Mobile equipment is calculated to be 0.020 mW/cm2, which is equivalent to 2.00% of the general population exposure limit.

4. MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas on any walking or working surface at ground-level in front of the T-Mobile antennas that may exceed the FCC standards for general population exposure. All exposures above the FCC's safe limits require that individuals be elevated above the ground. Workers should not be elevated in front of the antennas unless the wireless equipment is shut down and lockout/tagout procedures implemented in accordance with T-Mobile standard operating protocols. In order to alert workers, an NOC sign, a red climber Warning sign and a yellow Notice to Workers sign are recommended for installation at the base of the utility pole, as indicated in the signage plan in Appendix B.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the utility pole should be provided a copy of the attached Site Safety Plan, made aware of the posted sign, and signify their understanding of the Site Safety Plan.

5. SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency Emissions Compliance Report for telecommunications equipment installed at Site #SF53938A, located at 2965 Alpine Road, in Portola Valley, California. EBI has conducted theoretical modeling to estimate the worst-case power density from T-Mobile antennas to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the preceding sections, based on worst-case theoretical modeling, there are no areas in front of the T-Mobile antennas on any walking surface that exceed the FCC standards for general population and occupational exposure. However, there are areas where workers elevated above the ground may be exposed to power densities greater than the general population and occupational limits.

Additionally, based on the FCC criteria, there are no measured areas on any accessible ground-level walking/working surface related to the existing site conditions that exceed the FCC's occupational and general public exposure limits at this site.

Recommended control measures are outlined within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with T-Mobile's standard operating protocol.

6. LIMITATIONS

This *Report* was prepared for the use of T-Mobile, Inc. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this *Report* are valid on the date of the investigation. Any additional information that becomes available concerning the Subject Property should be provided to EBI so that our conclusions may be revised and modified, if necessary. This *Report* has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this *Report.* No other warranty, expressed or implied, is made.

7. REFERENCES

Federal Communications Commission (FCC) Office of Engineering & Technology (OET). Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. OET Bulletin 65, Edition 97-01. August 1997.

FCC. Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields Fourth Edition, August 1999; (OET Bulletin 56).

Richard Tell Associates, Inc., RoofView® User Guide. Version 4.15. February 10, 2003.

Richard Tell Associates, Inc., TowerCalc User Guide. Version 3.5. October 10, 2002.

Table 1: Antenna Mount and Exposure Detail

T-MOBILE					
T-Mobile Sector / Antenna	Azimuth (°)	Antenna Base Height Above Ground (ft)	Antenna Mount	MPE Occupational Exceedance (ft)	MPE General Population Exceedance (ft)
				Below Antenna	
A1 (UMTS)	330	82	Radome	4	NA
A1 (UMTS)	330	82	Radome	4	NA
A1 (LTE)	330	82	Radome	4	NA
B1 (UMTS)	90	82	Radome	4	NA
B1 (UMTS)	90	82	Radome	4	NA
B1 (LTE)	90	82	Radome	4	NA
C1 (UMTS)	210	82	Radome	4	NA
C1 (UMTS)	210	82	Radome	4	NA
C1 (LTE)	210	82	Radome	4	NA
OTHER CARRIERS					
Other Carrier Sector / Antenna	Azimuth (°)	Antenna Base Height Above Ground (ft)	Antenna Mount	MPE Occupational Exceedance (ft)	MPE General Population Exceedance (ft)
				Below Antenna	
No Other Carriers					

APPENDIX A: REGULATORY AND MODELING INFORMATION

Reviewed and Approved by:

Herbert J. Stockinger, PE
Senior Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the building and related structures, as well as the impact of the antennas and broadcast equipment on the structural integrity of the building, are specifically excluded from EBI's scope of work.

Calculation of Near Field and Far Field Power Density

Near Field

Prediction methods have been developed from the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications cell sites. The near field zone is defined by distance, D, from an antenna beyond which the manufacturer's published, far field antenna patterns will be fully formed; the near field may exist for increasing D until some or all of three conditions have been met:

$$1)\ D > \frac{2h^2}{\lambda} \qquad 2)\ D > 5h \qquad 3)\ D > 1.6\lambda$$

where h = aperture height of the antenna, in meters, and
λ = wavelength of the transmitted signal, in meters.

The FCC Office of Engineering and Technology Bulletin No. 65 (OET 65 – August 1997) gives this formula for calculating power density in the near field zone about an individual RF source:

$$\text{power density}\quad S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}, \quad \text{in } mW/cm^2,$$

where θ_{BW} = half-power beamwidth of antenna, in degrees, and
P_{net} = net power input to the antenna, in watts.

The factor of 0.1 in the numerator converts to the desired units of power density. This formula has been built into the RoofView® program (described in the RF-EME Modeling Methodology section, below) that calculates FCC public and occupational limits.

Far Field

OET 65 gives the following formula for calculating power density in the far field of an individual RF source:

$$\text{power density}\quad S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}, \quad \text{in } mW/cm^2,$$

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

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into TowerCalc®.

Regulatory Background

The National Environmental Policy Act of 1969 (NEPA) requires all Federal agencies to evaluate the effects of their actions on the quality of the human environment. One of several environmental factors addressed by these requirements is human exposure to RF energy emitted by FCC-regulated transmitters and facilities.

The FCC revised and updated their RF exposure guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 0.3 MHz and 100,000 MHz. Implementation of the new guidelines for mobile and portable devices became effective August 7, 1996.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Table 1 and Figure 1(below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility, and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

Table 1. LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

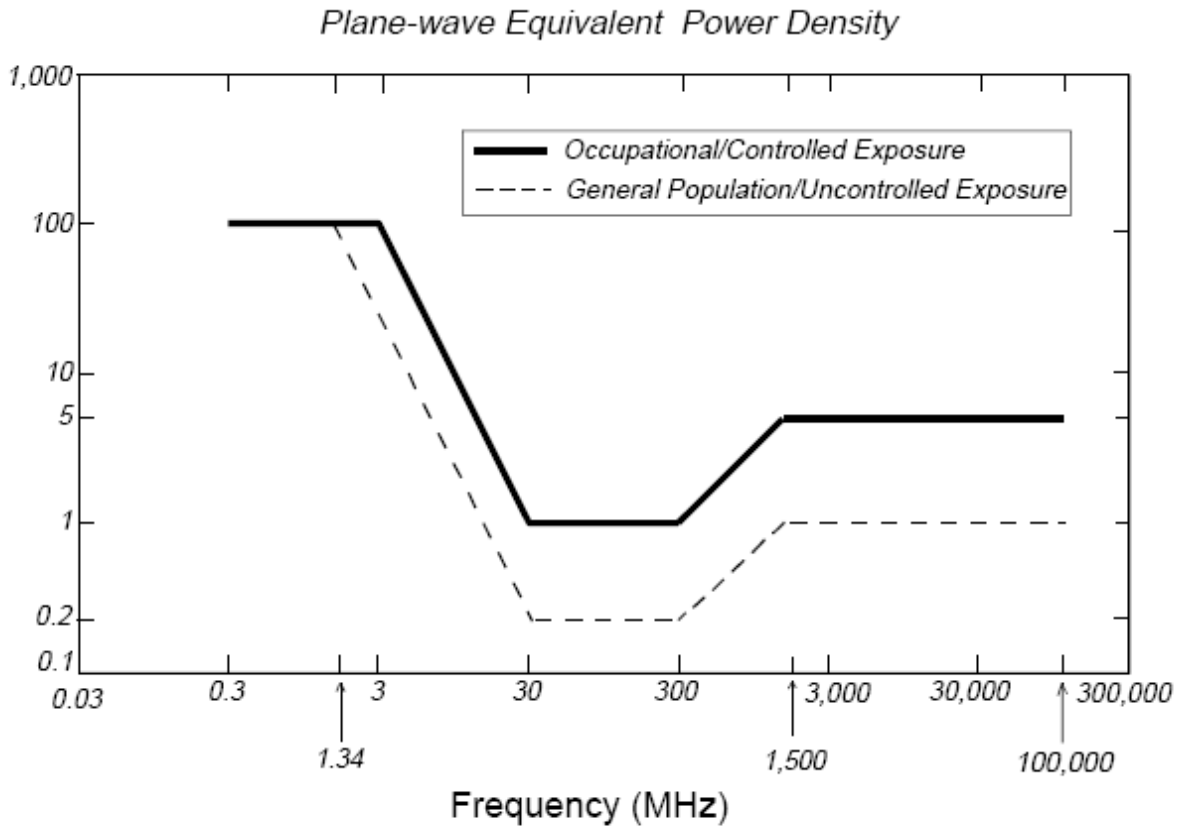
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

NOTE 1: ***Occupational/controlled*** limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: ***General population/uncontrolled*** exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870 MHz	2.90 mW/cm^2	0.58 mW/cm^2
Specialized Mobile Radio	855 MHz	2.85 mW/cm^2	0.57 mW/cm^2
Most Restrictive Freq, Range	30-300 MHz	1.00 mW/cm^2	0.20 mW/cm^2

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. 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.

For this project, the anticipated frequency range in which the antennas will operate is 1900-2100 MHz.

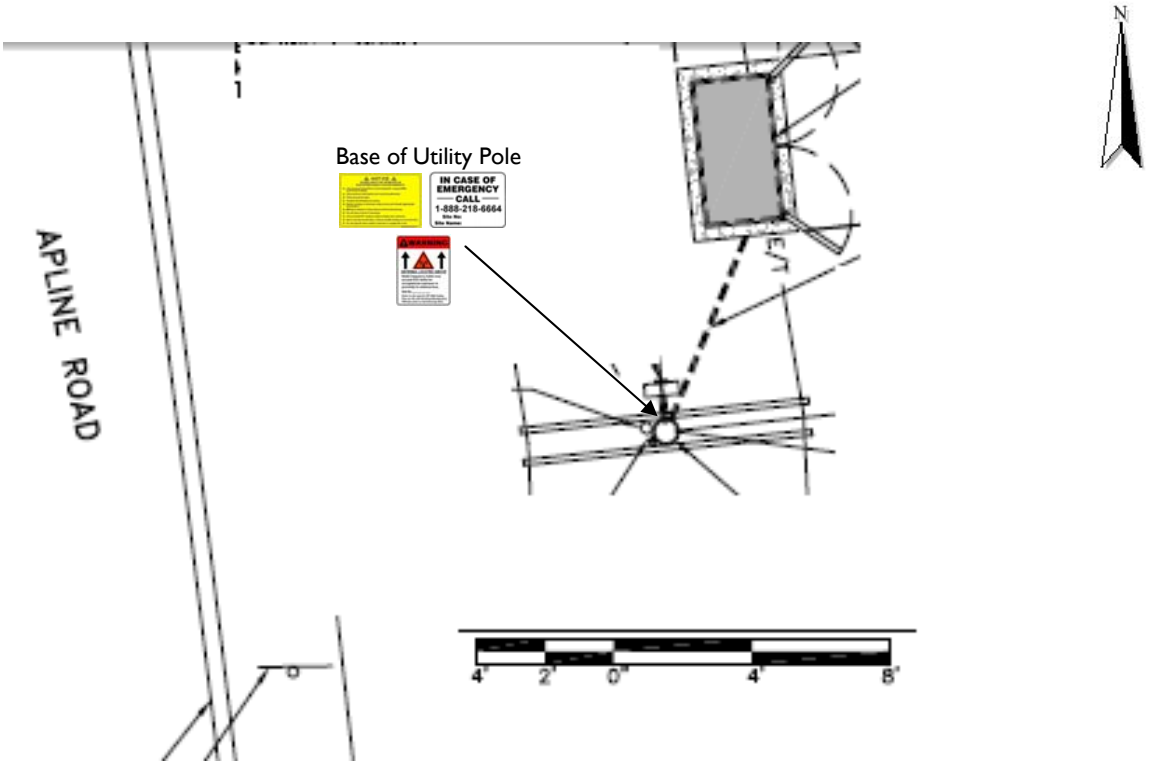
RF-EME Modeling Methodology

EBI assesses the RF impacts of the proposed equipment and other wireless carriers through the use of TowerCalc® and RoofView® software models to predict worst-case RF exposure fields due to antennas at this site. TowerCalc® and RoofView® are widely-used predictive modeling programs that have been developed by Richard Tell Associates to predict both near field and far field RF power density values for telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit. The calculations utilized by these programs are summarized in Appendix A. For this report, EBI utilized worst-case antenna and power data, and compared the resultant worst-case MPE levels to the FCC's occupational/controlled exposure limits outlined in OET Bulletin 65. (NOTE: *EBI retained Richard Tell Associates to provide technical support services to ensure that modeling and the resultant compliance evaluation for this site is fully consistent with FCC requirements).*

TowerCalc® and RoofView® calculate RF near-field levels from selected antennas by applying a model that takes into account parameters such as the antenna's aperture height, azimuthal beam width for directional antennas and the location of the antennas relative to workers at this site. Resulting spatially averaged power densities are expressed as a percentage of a user selectable exposure limit depending on frequency.

APPENDIX B: RF-EME SAFETY PLAN

ELECTROMAGNETIC ENERGY SIGN PLAN



EQUIPMENT COMPOUND VIEW

SIGNAGE INSTRUCTIONS

Sign Image	Description	Posting Instructions
	**NOC** Informational sign, used to provide T-Mobile emergency contact information for the site.	Securely mount approximately 48 inches above ground level at the base of the pole as indicated in the signage plan. Denote Site ID Number on Sign in Permanent Marker.
	**Notice To Workers** Informational sign, used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Securely mount approximately 48 inches above grade at the base of the pole as indicated in the signage plan.
	**Red Warning Sign** 8-1/2" x 11", used to alert individuals that the power density on elevated working surfaces in front of antennas may exceed the FCC's maximum permissible limit for occupational exposure.	Securely mount approximately 48 inches above ground level at the base of the pole. Denote Site ID Number on Sign in Permanent Marker.

Note: In order for this plan to accurately portray restricted areas it must be reprinted in color only.

PLAN DEVELOPED BY EBI CONSULTING BASED UPON BASE PLAN PREPARED BY PACIFIC TELECOM SERVICES, LLC DATED 04-22-13.

Electromagnetic Energy Safety Plan

Facility Operator: T-Mobile
T-Mobile Site Name: PG&E L-Cap Alpine Road
T-Mobile Site Number: SF53938A
Location: 2965 Alpine Road
Portola Valley, California 94028
Date: 08/12/13 **Rev.** 0

APPENDIX C: MODELING EXPORT FILES

Map, Settings, Antenna, and Symbol Data Table .. Exported from workbook -> RoofView 4.15.xls
Done on 8/12/2013 at 12:12:20 PM.
Use this format to prepare other data sets for the RoofView workbook file.
You may use as many rows in this TOP header as you wish.
The critical point are the cells in COLUMN ONE that read 'Start...' (eg. StartMapDefinition)
If used, these (4) headers are required to be spelled exactly, as one word (eg. StartMapDefinition)
The very next row will be considered the start of that data block.
The first row of the data block can be a header (as shown below), but this is optional.
When building a text file for import, Add the Map info first, then the Antenna data, followed by the symbol data.
All rows above the first marker line 'Start...' will be ignored, no matter how many there are.
This area is for you use for documentation.
End of help comments.

You can place as much text here as you wish as long as you don't place it below
the Start Map Definition row below the blue line.
You may insert more rows using the Insert menu.
Should you need additional lines to document your project, simply insert additional rows
by highlighting the row number adjacent to the blue line below and then clicking on the Insert menu
and selecting rows.

StartMapDefinition

Roof Max X	Roof Max Y	Map Max X	Map Max Y	Y Offset	X Offset	Number of envelope		List Of Area
60	60	80	90	20	20	1	$AE$141:$	$AE$141:$CL$200	$AE$141:$

StartSettingsData

Standard	Method	Uptime	Scale Factc	Low Thr	Low Color	Mid Thr	Mid Color	Hi Thr	Hi Color	Over Color	Ap Ht Mult	Ap Ht Method
3	2	3	1	20	1	50	2	100	2	3	1.5	1

StartAntennaData It is advisable to provide an ID (ant 1) for all antennas

ID	Name	(MHz) Freq	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Y	(ft) Z	Type	(ft) Aper	dBd Gain	BWdth Pt Dir	Uptime Profile	ON flag
TMO A1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	35	35	82	VC	3.75	13	65;330		ON•
TMO A1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	35	35	82	VC	3.75	13.5	64;330		ON•
TMO A1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	35	35	82	VC	3.75	13.5	64;330		ON•
TMO B1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	33	33	82	VC	3.75	13	65;90		ON•
TMO B1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	33	33	82	VC	3.75	13.5	64;90		ON•
TMO B1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	33	33	82	VC	3.75	13.5	64;90		ON•
TMO C1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	33	36	82	VC	3.75	13	65;210		ON•
TMO C1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	33	36	82	VC	3.75	13.5	64;210		ON•
TMO C1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	33	36	82	VC	3.75	13.5	64;210		ON•

StartSymbolData

Sym	Map Marke	Roof X	Roof Y	Map Label	Description (notes for this table only)
Sym		5	35	AC Unit	Sample symbols
Sym		14	5	Roof Access	
Sym		45	5	AC Unit	
Sym		45	20	Ladder	

Tower and Antenna Data Table .. Exported from workbook -> TowerCalc 3.5.xls
Done on 8/12/2013 at 12:15:00 PM.
Use this format to prepare other data sets for the TowerView workbook file.
You may use as many rows in this TOP header as you wish.
The critical point is the cells in COLUMN ONE that read 'Start...' (eg. StartTowerDefinition)
These (2) headers are required to be spelled exactly, as one word (eg. StartTowerDefinition)
The very next row will be considered the start of the data.
The first row of the data section can be a header (as shown below), but this is optional.
When building a workbook file for import, Add the Tower info first, then the Antenna data.
All rows above the first marker line 'Start...' will be ignored, no matter how many there are.
This area is for you use for documentation.
-- End of help comments.

You can place as much text here as you wish
as long as you don't place it below the Start Tower Definition row below the blue line.
You may insert more rows using the Insert menu.
Should you need additional lines to document your project, simply insert additional rows by highlighting
the row number adjacent to the blue line below and then clicking on the Insert menu and selecting rows.

StartTowerDefinition

Starting Ht	Ending Ht	Tower Ht
0	100	110

StartAntennaData It is advisable to provide an ID (col 1) for all antennas

ID	Name	Freq (MHz)	Trans Power	Trans Count	Coax Len	Coax Type	Other Loss	Input Power	Calc Power	Mfg	Model	(ft) X	(ft) Z	Not used Y	Type	(ft) Aper	Not used dBd Gain	Not used BWdth Theta	ON flag
TMO A1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	0	82			3.75	13	65;0	ON•
TMO A1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;0	ON•
TMO A1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;0	ON•
TMO B1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	0	82			3.75	13	65;max	ON•
TMO B1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;max	ON•
TMO B1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;max	ON•
TMO C1	UMTS	1900	15	2	80	1/2 LDF	0.5		17.18388	dbSpectra	DS1W13J3(	0	82			3.75	13	65;max	ON•
TMO C1	UMTS	2100	20	2	80	1/2 LDF	0.5		22.91184	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;max	ON•
TMO C1	LTE	2100	20	1	80	1/2 LDF	0.5		11.45592	dbSpectra	DS1W13J3(	0	82			3.75	13.5	64;max	ON•

APPENDIX D: SITE PLANS

T··Mobile·®

PG&E L-CAP ALPINE ROAD

SF53938A

IN FRONT OF 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

PLOT PLAN NUMBER:

_____

At all new services & grounding trenches, provide "WARNING" tape at 12" below grade.

DIG ALERT
"CALL BEFORE YOU DIG"
1-800-227-2600
UTILITY NOTIFICATION CENTER OF NORTHERN CALIFORNIA

PROJECT INFORMATION

PROJECT DESCRIPTION:

T-MOBILE PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY BY REMOVING (3) EXISTING ANTENNAS AND REPLACING IT WITH A PROPOSED 8" MICRO-TRIPLE TREE ANTENNA. ALONG WITH REMOVING ALL EXISTING EQUIPMENT MOUNTED TO THE POLE. T-MOBILE ALSO PROPOSES TO ADD (1) ERICSSON RBS6102 EQUIPMENT CABINET ON A 3'-0" x5'-0" CONCRETE PAD WITHIN THE RIGHT OF WAY LOCATED 5'-0" AWAY FROM THE BASE OF THE EXISTING POLE. THE EXISTING PG&E POWER METER AND DISCONNECT TO REMAIN. ADDITIONALLY, ALL EXISTING T-MOBILE COAX RUNS ARE TO BE REMOVED AND REPLACED AND (6) TMA'S TO BE INSTALLED.

APPLICANT:
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA 94520
CONTACT: BRAD CHAPMAN
PROGRAM MANAGER- BAY AREA ENTITLEMENTS
PH: (415) 309-8979
EMAIL: BRAD.CHAPMAN@T-MOBILE.COM

PROPERTY OWNER:
CONTRA COSTA COUNTY R.O.W.

TOWER/POLE OWNER:
PG&E

PROJECT MANAGER:
KEVIN BOWYER
149 NATOMA STREET, 3RD FLOOR
SAN FANCISCO, CA 94105
PH: (408) 219-5442

SITE ACQUISITION:
VANESA DENIKE
149 NATOMA STREET, 3RD FLOOR
SAN FANCISCO, CA 94105
PH: (415) 574-6805

LAND USE:
KATIE GINSBURG
149 NATOMA STREET, 3RD FLOOR
SAN FANCISCO, CA 94105
PH: (925) 574-6805

CODE INFORMATION:
ZONING CLASSIFICATION: PUBLIC RIGHT OF WAY
BUILDING CODE: 2010 CBC AND COUNTY OF SAN MATEO CODES AND ORDINANCES
CONSTRUCTION TYPE: IIB
OCCUPANCY: S-2
JURISDICTION: COUNTY OF SAN MATEO
CURRENT USE: TELECOMMUNICATIONS FACILITY
PROPOSED USE: TELECOMMUNICATIONS FACILITY

TELCO COMPANY:
AT&T

POWER COMPANY:
PG&E

SITE LOCATION: (BASED ON NAD 83):
LATITUDE: 37°24'13.30"N (37.403694)
LONGITUDE: 122°11'33.43"W (-122.192619)
TOP OF STRUCTURE AGL: 312.6' AMSL 74'-8"± AGL
BASE OF STRUCTURE AMSL: 237.9' AMSL

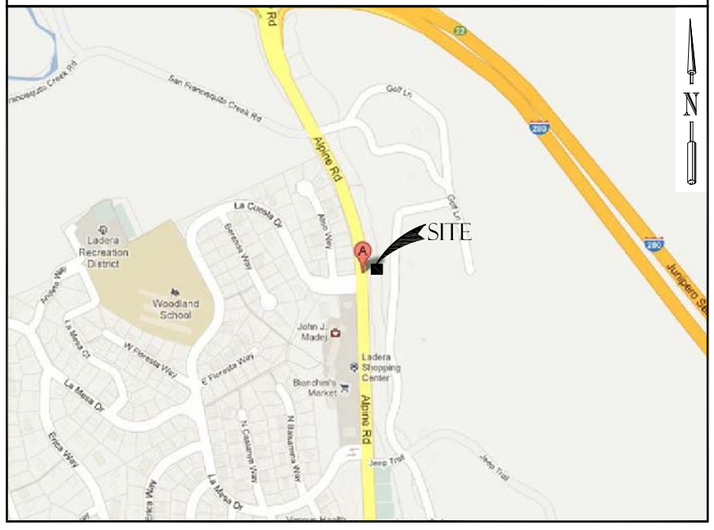
PARCEL NUMBER(S):
PUBLIC RIGHT-OF-WAY

PROJECT TEAM

PROJECT ARCHITECT
THOMAS R. HOLLAND, AIA
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105
CONTACT: TONY PELAYO
PH: (415) 850-1790
LPELAYO@PTSWA.COM

PROJECT CONSULTANT
MODUS, INC.
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105
CONTACT: CHAD ABBOTT
PH: (415) 794-2966

VICINITY MAP



DRIVING DIRECTIONS

FROM T-MOBILE OFFICE, CONCORD, CA:
HEAD SOUTHEAST ON GATEWAY BLVD 108 FT
TAKE THE 1ST RIGHT ONTO CLAYTON RD 0.3 MI
MERGE ONTO CA-242 S VIA THE RAMP TO OAKLAND 1.2 MI
MERGE ONTO I-680 S 3.3 MI
TAKE EXIT 46 FOR CALIFORNIA 24 TOWARD LAFAYETTE/OAKLAND 1.3 MI
MERGE ONTO CA-24W 12.3 MI
TAKE EXIT 2B FOR INTERSTATE 580W 1.0 MI
MERGE ONTO I-580W 5.0 MI
TAKE EXIT 19A ON THE LEFT TO MERGE ONTO I-80W TOWARD SAN FRANCISCO PARTIAL TOLL ROAD 8.3 MI
TAKE EXIT 1A ON THE LEFT TOWARD SAN JOSE/US 101S/AIRPORT 0.3 MI
MERGE ONTO US 101S 9.3 MI
TAKE EXIT 423B TO MERGE ONTO I-380W TOWARD I-280/SAN BRUNO 1.7 MI
TAKE EXIT 5B ON THE LEFT FOR INTERSTATE 280S TOWARD SAN JOSE .6 MI
MERGE ONTO I-280S 21.0 MI
TAKE EXIT 22 TOWARD PORTOLA VALLEY 0.3 MI
MERGE ONTO ALPINE RD DESTINATION WILL BE ON THE LEFT 0.3 MI

ARRIVE AT: 2965 ALPINE RD., PORTOLA VALLEY, CA 94028

APPROVAL	DATE	SIGNATURE
LANDLORD:		
CONST:		
S/A:		
R.F.:		
ZONING:		
A&E:		

REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED

DRAWING INDEX

LEGAL DESCRIPTION

TBD

RF INFORMATION

EXISTING RF & COAX CHART

SECTOR	AZIMUTH	RAD CENTER	# OF ANTENNAS	ANTENNA MODEL	TMA	COAX	COAX LENGTH
ALPHA	330°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±
BETA	90°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±
GAMMA	210°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±

NOTE: VERIFY WITH FINAL RF DESIGN.

PROPOSED RF & COAX CHART

SECTOR	AZIMUTH	RAD CENTER	# OF ANTENNAS	ANTENNA MODEL	TMA	COAX	PROPOSED COAX LENGTH
ALPHA	330°	83'-11"	1	SPECTRA 8-INCH MICRO TRIPLE TREE	(2) TWIN TMAS'S	(6) 1/2"	80' ±
BETA	90°				(2) TWIN TMAS'S		
GAMMA	210°				(2) TWIN TMAS'S		

NOTE: VERIFY WITH FINAL RF DESIGN.

T··Mobile·
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

modus
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PTS
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD
SF53938A
IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE "CALIFORNIA BUILDING CODE 2010" AND CITY CODE, SHALL MEET OR EXCEED THE STRICTER OF APPLICABLE COUNTY CODES AND REGULATIONS, LATEST EDITIONS.
2. ANTENNAS, CABINETS AND JUMPERS SHALL BE PROVIDED BY CLIENT. CONTRACTOR SHALL COORDINATE SCHEDULE OF DELIVERY TO AVOID DELAYS.
3. DAMAGE TO ALL UTILITIES, LAND, DRIVEWAY AREAS, AND PROPERTY OF OTHERS, DISTURBED DURING CONSTRUCTION, SHALL BE RETURNED TO THE ORIGINAL CONDITION AT THE COMPLETION OF WORK.
4. CONTRACTOR SHALL COORDINATE WITH THE LOCAL POWER, TELEPHONE UTILITIES, AND THE CONSTRUCTION MANAGER TO CONFIRM THE SOURCE OF SERVICE PRIOR TO INSTALLATION OF CONDUITS.
5. EXISTING VEGETATION AND ORGANIC MATERIALS SHALL BE REMOVED FROM THE CONCRETE PAD AREA, FILL SITE TO DESIGN ELEVATION WITH CLEAN, SANDY SOIL COMPACT UNDER CONCRETE PAD TO OBTAIN NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D557.
6. REGRADE AROUND PAD AS REQUIRED TO ALLOW MAXIMUM 3" OF PAD THICKNESS, EXTENDING ABOVE GRADE.
7. ALL WORK SHALL BE DONE SATISFACTORY IN A PROFESSIONAL WORKMANLIKE MANNER, SUBJECT TO INSPECTION DURING THE CONSTRUCTION AND FINAL APPROVAL BY THE CONSTRUCTION MANAGER.
8. ANY SUBSTITUTIONS OF MATERIALS, EQUIPMENT OR ALTERATIONS FROM THE PLANS AND/OR SPECIFICATIONS SHALL BE APPROVED BY THE ARCHITECT AND CONSTRUCTION MANAGER.
9. COLOR SELECTION SHALL BE COORDINATED WITH CONSTRUCTION MANAGER.
10. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS, DIMENSIONS, AND BRING DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT AND CONSTRUCTION MANAGER.
11. CONTRACTOR SHALL CONTACT SUBSURFACE UTILITY LOCATOR FOR EXACT LOCATION OF EXISTING UTILITIES, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PIT, AS NECESSARY. LOCATION OF UTILITIES SHOWN ON PLAN ARE APPROXIMATE AND FOR PLANNING PURPOSES ONLY.
12. CONTRACTOR SHALL SECURE THE NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENT AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.
13. TOWER AND TOWER FOUNDATIONS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
14. CONTRACTOR SHALL VISIT THE PROJECT SITE TO VIEW ALL CONDITIONS PRIOR TO SUBMITTING BID. ANY CHANGES DURING CONSTRUCTION VISUALLY ASCERTAINABLE PRIOR TO SUBMITTING BID, CANNOT BE THE BASIS FOR A CHANGE ORDER.
15. COAT ALL SURFACES WITH NO-OX WHERE DISSIMILAR METALS CONTACT.
16. CONTRACTOR SHALL REMOVE ALL DEBRIS AND EMPTY COAX REELS FROM THE SITE UPON COMPLETION OF THE PROJECT.

PROJECT NOTES:

REINFORCED CONCRETE:

R-1. CONCRETE: ALL CONCRETE SHALL BE F'c = 2,500 PSI AT END OF 28 DAYS AS DETERMINED BY ASTM C31 AND C39 AND SHALL BE NORMAL WEIGHT.

R-2. PREPARATION, TESTING, AND PLACING OF CONCRETE AND REINFORCEMENT SHALL BE PER ACI-318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, LATEST EDITION.

R-3. REINFORCING BARS SHALL HAVE A MINIMUM YIELD STRENGTH OF Fy = 60,000 PSI AND SHALL COMPLY WITH ASTM A615.

R-4. PROVIDE MINIMUM CONCRETE COVERAGE FOR REINFORCING STEEL OF 3".

DESIGN:

D-1. DESIGN IS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE 2010.

D-2. EQUIPMENT CABINET LOADING PER T-MOBILE STANDARD EQUIPMENT.

D-3. DESIGN LOADS: CALIFORNIA
A. 100 MPH WIND SPEED
3 SECOND GUST
CATEGORY 2 IMPORTANCE FACTOR 1.0
EXPOSURE CATEGORY C
B. ALL OTHER LOADS ARE PER ASCE 7-02

STRUCTURAL:

S-1. DETAIL, FABRICATE, AND ERECT ALL STRUCTURAL STEEL IN ACCORDANCE WITH AISC, SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURE STEEL FOR BUILDINGS.

S-2. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN, 9th EDITION.

S-3. STRUCTURAL PIPE COLUMNS SHALL COMPLY WITH ASTM A53. TYPE E OR S, GRADE B, Fy = 36KSI. ALL WIDE FLANGE SHAPES SHALL BE ASTM A992. GRADE 50. ALL STRUCTURAL SHAPES AND PLATE SHALL COMPLY WITH ASTM A36.

S-4. WELDING: ALL WELDING IS TO BE DONE BY PRE-QUALIFIED WELDERS HOLDING CURRENT CERTIFICATE FROM A RECOGNIZED TESTING LABORATORY. ALL WELDS SHALL BE 3/16" MINIMUM FILLET WELDS U.O.N. ELECTRODES SHALL BE E70XX.

S-5. THERE SHALL BE NO FIELD WELDING.

S-6. STRUCTURAL GROUT SHALL BE SHRINKAGE RESISTANCE NON-EXPANSIVE, NONMETALLIC GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM CODE C109. FORMS SHALL BE PLACED AROUND BASE PLATE AND THE STRUCTURAL GROUT SHALL BE POURED. NO DRY-DAMP PACKING.

S-7. ANCHOR BOLTS AND ALL-THREAD RODS SHALL COMPLY WITH ASTM A36, UNLESS OTHERWISE NOTED. ALL OTHER BOLTS AND NUTS SHALL COMPLY WITH ASTM A325. ALL BOLTS SHALL BE HOT-DIPPED GALVANIZED.

S-8. ALL EXPOSED STEEL SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A153 OR A123.

S-9. APPLY TWO COATS OF ZINC-RICH RUST-OLEUM #2185 PAINT TO ALL FIELD DRILLED HOLES AND CUTS. GRID-GUARD EPOXY #5465 COATING SHALL BE APPLIED TO ALL AREAS WHERE GALVANIZED SURFACES NEED TO BE RECONDITIONED, INCLUDING ALL WELD AREAS.

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE UL APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS, INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE, OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS, AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING BETWEEN CABINETS SHALL RUN IN EMT OR SCHEDULE 40 PVC (AS PERMITTED BY CODE).
6. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR PVC WHERE LOCAL CODES AND SITE CONDITIONS PERMIT.
7. ELECTRICAL WORK SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND EXISTING METER SOCKET AS LOCATED ON THIS DRAWING IN PVC, PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUITS BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND EXISTING TELCO CABINET AND T-MOBILE CABINET(S) AS INDICATED ON THIS DRAWING IN PVC. PROVIDE FULL LENGTH PULL ROPE IN TELCO CONDUIT.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
11. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO APPLY FOR COMMERCIAL POWER IMMEDIATELY UPON RECEIVING AWARD OF BID. THE GENERAL CONTRACTOR IS REQUIRED TO KEEP ALL RECEIPTS FROM THE POWER COMPANY ACKNOWLEDGING APPLICATION FOR POWER AND THOROUGH DOCUMENTATION OF ANY DISCUSSIONS WITH THE POWER COMPANY THEREAFTER. ALSO, THE GENERAL CONTRACTOR SHALL RECEIVE IN WRITING FROM THE POWER COMPANY AS TO WHEN THE ANTICIPATED POWER CONNECTION WILL BE COMPLETE. IF COMMERCIAL POWER IS NOT AVAILABLE BY THE "POWER COMPLETE" DATE AS CALLED OUT IN THE SPECIFICATIONS, A GENERATOR SHALL BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR UNTIL COMMERCIAL IS OBTAINED, ALL COSTS ASSOCIATED WITH THE GENERATOR WILL BE MUTUALLY AGREED UPON BETWEEN THE OWNER AND GENERAL CONTRACTOR, IN THE EVENT THAT THE GENERAL CONTRACTOR FAILS TO TAKE THE NECESSARY MEASURES AS DESCRIBED HEREIN TO SECURE POWER BY THE POWER COMPLETION DATE, THEN ALL COSTS ASSOCIATED WITH THE GENERATOR SHALL BE BORNE BY THE CONTRACTOR.

GROUNDING NOTES:

1. AN ANTIOXIDANT COMPOUND SHALL BE APPLIED TO ALL EXTERIOR, ABOVE GRADE, MECHANIC, GROUND CONNECTIONS.
2. CONTRACTOR SHALL SUPPLY ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR A COMPLETE SYSTEM AS INTENDED HEREIN UNLESS OTHERWISE NOTED.
3. ALL EXTERNAL GROUND CONDUCTORS SHALL BE #2 AWG, BARE, SOLID, TINNED COPPER UNLESS OTHERWISE NOTED.
4. ALL GROUND CONNECTIONS SHALL BE MADE WITH EXOTHERMIC WELD PROCESS UNLESS OTHERWISE NOTED OR APPROVED. ALL CONNECTIONS SHALL BE MADE AT DESIGNATED LOCATIONS ON THE EQUIPMENT.
5. EXACT LOCATION OF GROUND RODS AND GROUND CONNECTION POINTS SHALL BE DETERMINED IN THE FIELD, ADJUST LOCATIONS AS REQUIRED TO KEEP GROUND CONNECTIONS AS SHORT AS POSSIBLE (9" MIN. BEND RADIUS AND 90 DEGREE MAX BEND ANGLE). ALL BELOW GRADE GROUNDING SHALL BE INSPECTED AND APPROVED BY CONSTRUCTION MANAGER PRIOR TO BACKFILLING.
6. ALL GROUND COMPONENTS SHALL BE INSTALLED WITHIN THE CONFINES OF THE FENCED AREA. ANY METALLIC ITEMS WITHIN 6' OF THE GROUND RING SHALL BE BONDED TO THE GROUND RING. GROUNDING REQUIREMENT NOT SHOWN ON PLANS ARE WAVEGUIDE HATCH COVER / PLATE, CABLE TRAYS, SUPPORTS, SERVICE PANELS, DISCONNECT SWITCHES, HVAC UNITS ETC. THESE ITEMS MUST BE GROUNDED.
7. ALL EXTERIOR EXPOSED GROUND CONDUCTORS LONGER THAN 18" SHALL BE PROTECTED AND SUPPORTED BY A 3/4" PVC SCHEDULE 80 CONDUIT SLEEVE MOUNTED WITH CLIC-STRAP SUPPORTS FROM 6" BELOW FINISHED GRADE TO 6" FROM FINAL CONNECTION.
8. ALL GROUND RODS SHALL BE DRIVEN STRAIGHT DOWN, PERPENDICULAR TO FINISHED GRADE, SUITABLE PROTECTION SHALL BE PROVIDED ON END OF RODS TO PREVENT MUSHROOMING WITH GROUND DURING INSTALLATION.
9. GROUND CONDUCTORS SHALL NOT COME IN CONTACT WITH THE SLAB OR TOWER EXCEPT AS DESIGNATED.
10. THE UTILITY NEUTRAL / GROUND BOND IS TO BE MADE IN THE METER OR MAIN DISCONNECT SWITCH, NOT IN ATS.
11. ALL EQUIPMENT SURFACES TO BE BONDED TO GROUNDING SYSTEM SHALL BE STRIPPED OF ALL PAINT AND DIRT, CONNECTIONS TO VARIOUS METALS SHALL BE A TYPE AS TO NOT CAUSE A GALVANIC OR CORROSIVE REACTION AREA SHALL BE REPAINTED FOLLOWING BONDING.

RF SIGNAGE

ABBREVIATIONS

A/C	AIR CONDITIONING
AGL	ABOVE GROUND LEVEL
APPROX	APPROXIMATELY
BLDG	BUILDING
BLK	BLOCKING
CLG	CEILING
CLR	CLEAR
COAX	COAXIAL CABLE
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
DBL	DOUBLE
DIA	DIAMETER
DIAG	DIAGONAL
DN	DOWN
DET	DETAIL
DWG	DRAWING
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
EXT	EXTERIOR
FIN	FINISH
FLUOR	FLUORESCENT
FLR	FLOOR
FT	FOOT
FRP	FIBER-REINFORCED POLYMER
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPS	POSITIONING SYSTEM
GRND	GROUND
HORZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING VENTILATION AIR CONDITIONING
ID	INSIDE DIAMETER
IN	INCH
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
IBC	INTERNATIONAL BUILDING CODE
LBS	POUNDS
LMU	LOCATION MEASUREMENT UNIT
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MFR	MANUFACTURE
MGR	MANAGER
MIN	MINIMUM
MISC	MISCELLANEOUS
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PLYWD	PLYWOOD
PROJ	PROJECT
PROP	PROPERTY
PT	PRESSURE TREATED
REQ	REQUIRED
RF	RADIO FREQUENCY
RM	ROOM
RO	ROUGH OPENING
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SF	SQUARE FOOT
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
STD	STUD
SUSP	SUSPENDED
THRU	THROUGH
TMA	TOWER MOUNTED AMPLIFIER
TNNG	TINNED
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WP	WATER PROOF

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PG&E L-CAP ALPINE ROAD

SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

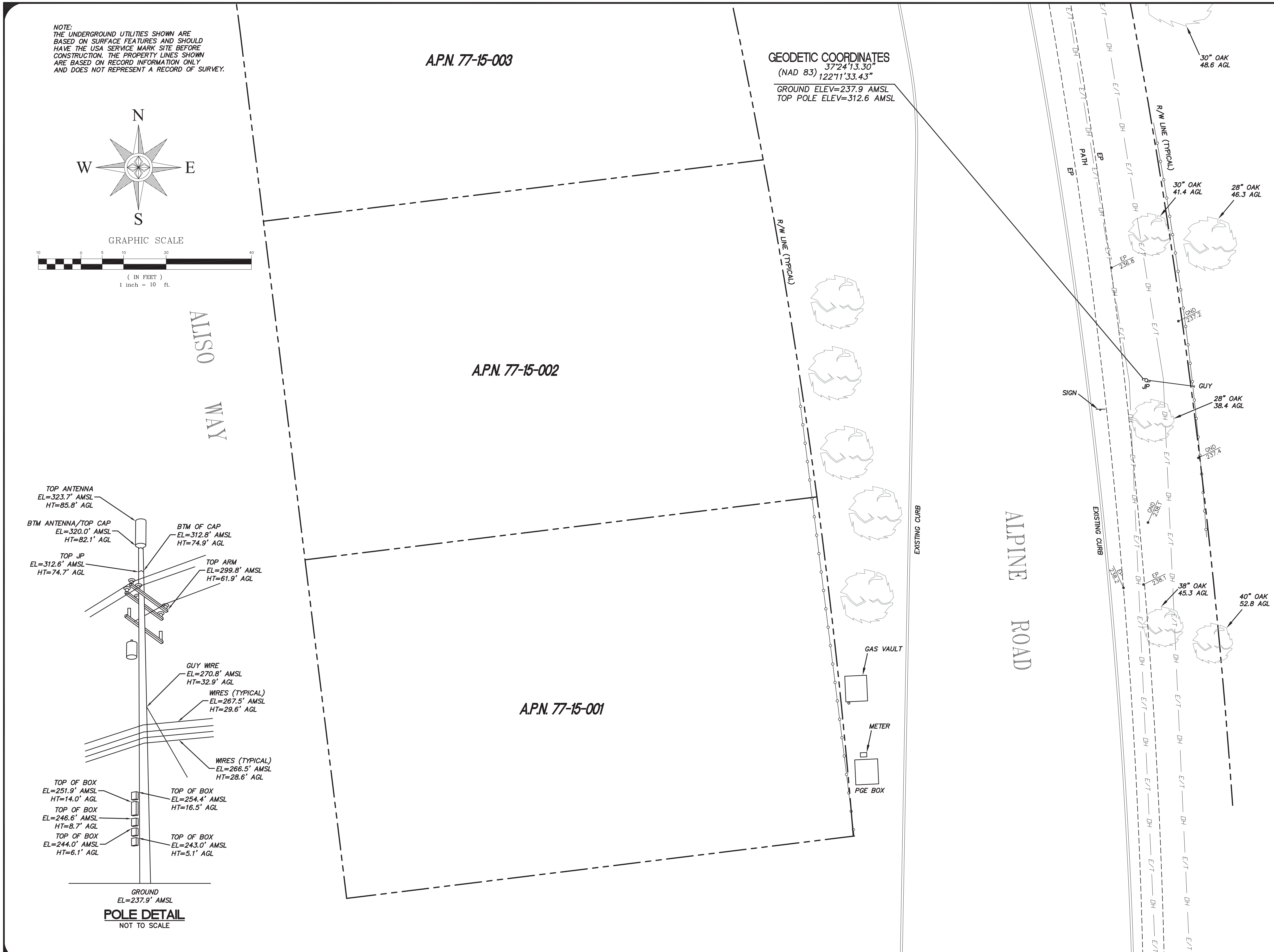
NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
GENERAL NOTES & RF SIGNAGE

SHEET NUMBER
G-1

NOTE:
THE UNDERGROUND UTILITIES SHOWN ARE BASED ON SURFACE FEATURES AND SHOULD HAVE THE USA SERVICE MARK SITE BEFORE CONSTRUCTION. THE PROPERTY LINES SHOWN ARE BASED ON RECORD INFORMATION ONLY AND DOES NOT REPRESENT A RECORD OF SURVEY.



ISSUE STATUS

△	DATE	DESCRIPTION	REV.
	3/15/2013	SITE PLAN	.

HAYES
Land Surveying And Mapping
2930 MADIGAN COURT
CONCORD, CA 94518

T-MO CA/NV, LLC
DBA T-Mobile
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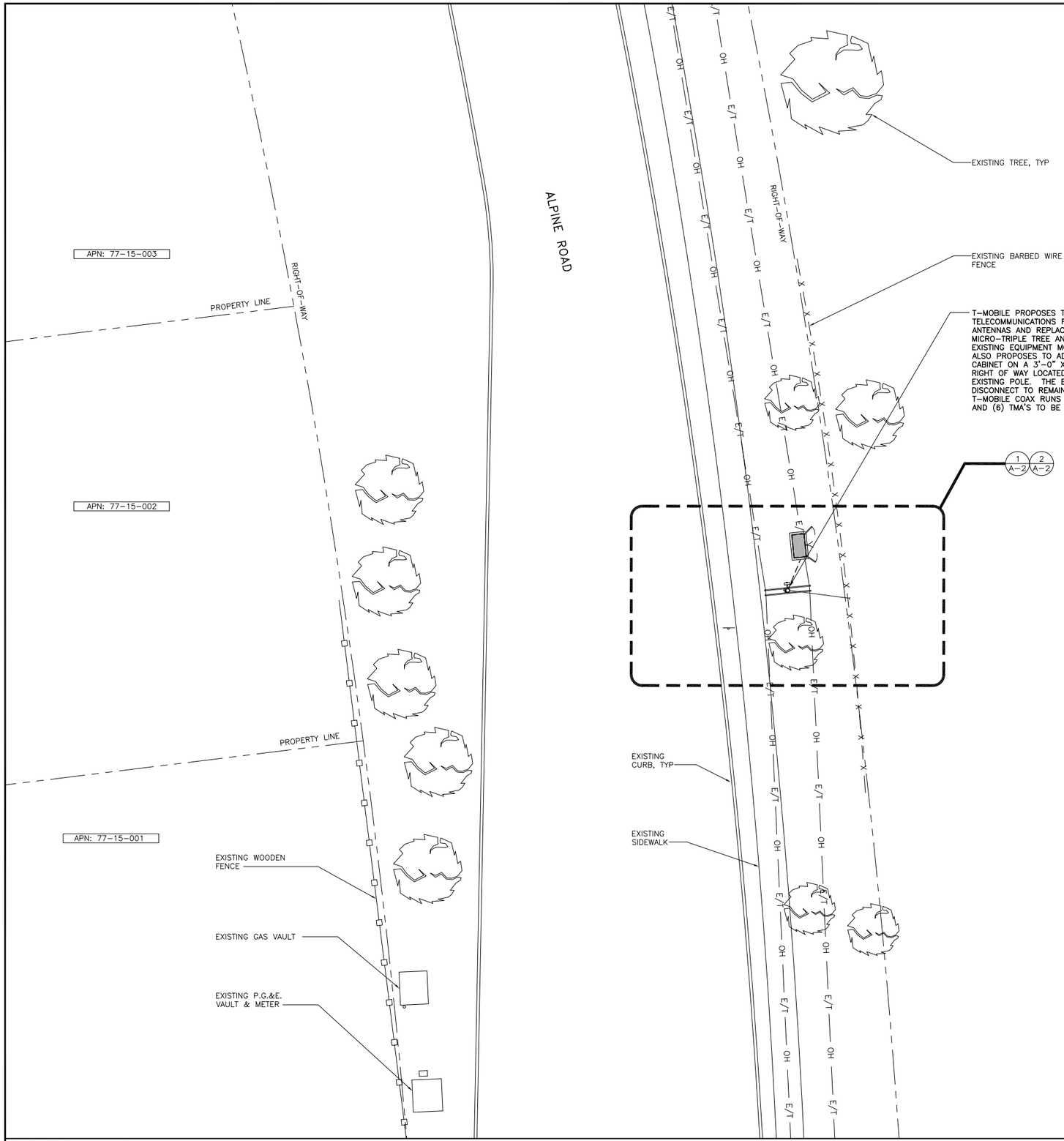
TOPOGRAPHIC SURVEY
P.G. + E. POLE CAPS

SF53938
2965 ALPINE ROAD
ATHERTON,CA

LS-1
SHEET 1 of 1



LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT-OF-WAY CENTERLINE
- RIGHT-OF-WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- COAX COAX COAX — COAXIAL CABLE LINE
- FIBER FIBER — FIBER OPTIC CABLE LINE
- OHP OHP — OVERHEAD POWER LINE
- UGP UGP UGP — BURIED POWER LINE
- GAS GAS GAS — BURIED GAS LINE
- OHT OHT — OVERHEAD TELEPHONE LINE
- UGT UGT UGT — BURIED TELEPHONE LINE
- W W W W — BURIED WATER LINE
- SS SS SS — BURIED SANITARY SEWER
- SD SD SD — BURIED STORM DRAIN
- DITCH LINE/FLOW LINE
- ROCK RETAINING WALL
- VEGETATION LINE
- X X X X — CHAIN LINK FENCE
- WOOD FENCE
- X X X X X X X X — BARBED WIRE/WIRE FENCE

TRANSFORMER	FIRE HYDRANT
LIGHT STANDARD	GATE VALVE
P POWER VAULT	WATER METER
UTILITY BOX	FIRE STAND PIPE
UTILITY POLE	CATCH BASIN, TYPE I
POLE GUY WIRE	CATCH BASIN, TYPE II
GAS VALVE	SIGN
GAS METER	BOLLARD
T TELEPHONE VAULT	MAIL BOX
TELEPHONE-RISER	234.21 SPOT ELEVATION

VICINITY MAP

TRUE NORTH
North to be determined by site survey (if possible).

SITE PLAN | 1

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

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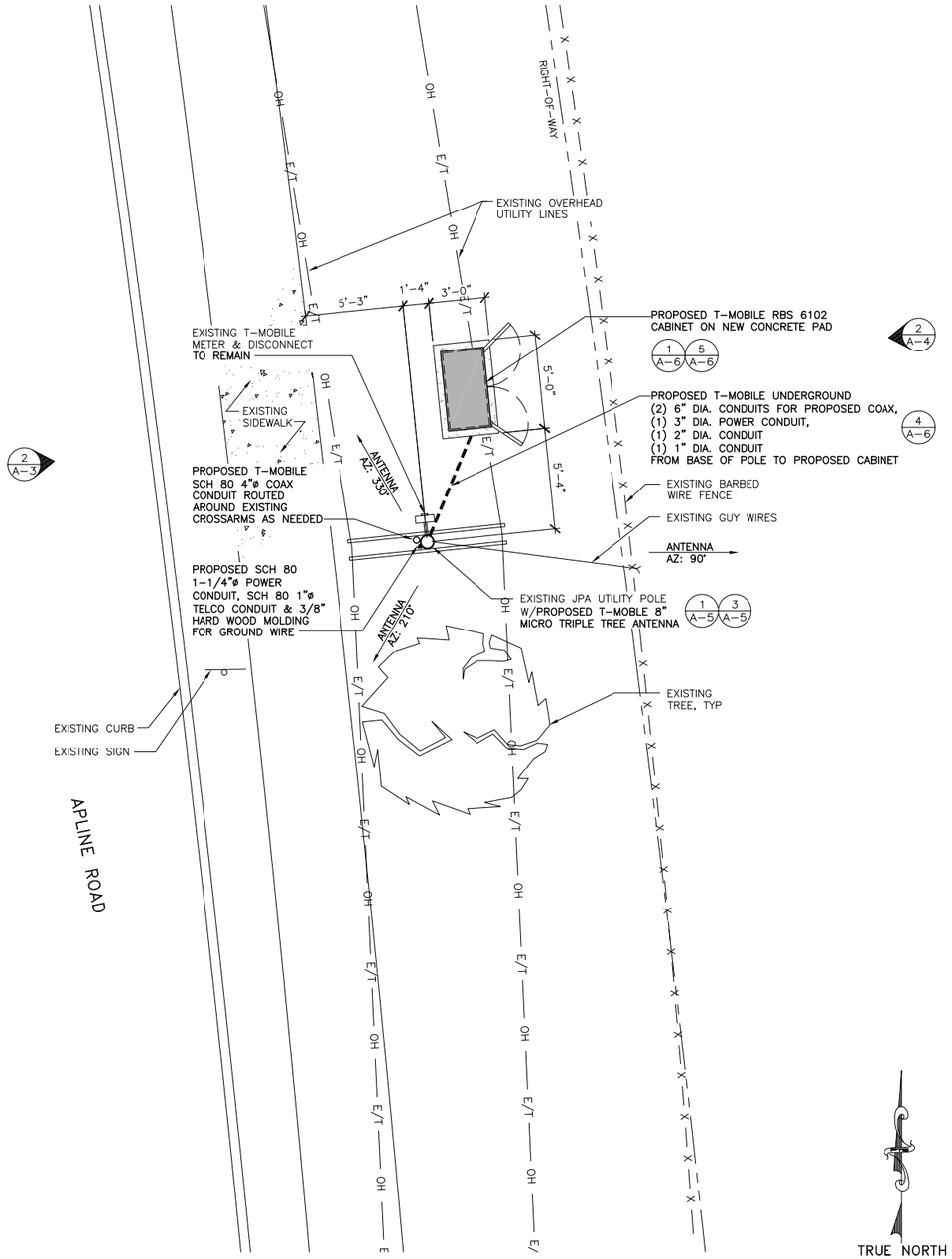
SHEET TITLE
SITE PLAN

SHEET NUMBER
A-1

PROPOSED RF & COAX CHART							
SECTOR	AZIMUTH	RAD CENTER	# OF ANTENNAS	ANTENNA MODEL	TMA	COAX	PROPOSED COAX LENGTH
ALPHA	330°	83'-11"	1	SPECTRA 8-INCH MICRO TRIPLE TREE	(2) TWIN TMAS'S	(6) 1/2"	80' ±
BETA	90°				(2) TWIN TMAS'S		
GAMMA	210°				(2) TWIN TMAS'S		
NOTE: VERIFY WITH FINAL RF DESIGN.							

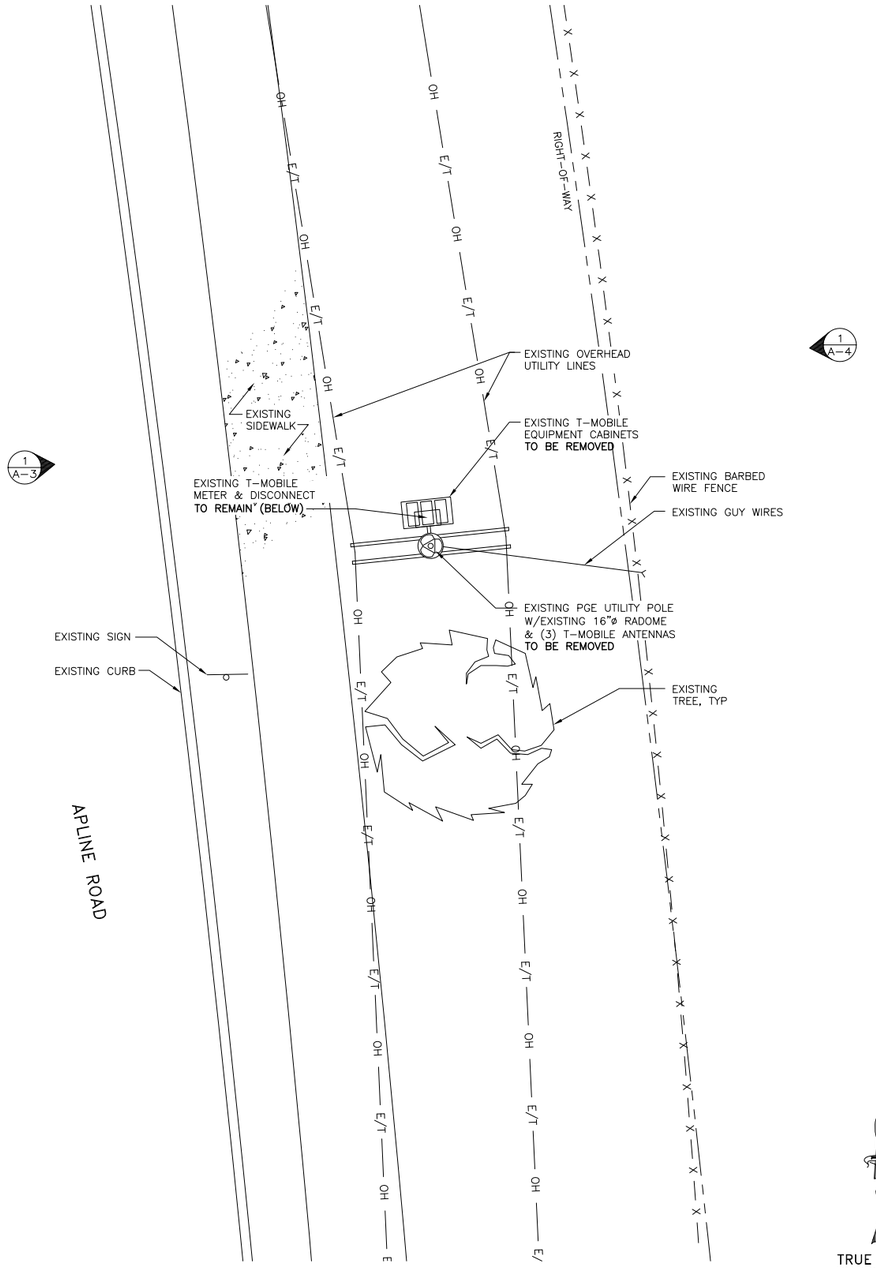


TRUE NORTH
North to be determined by site survey (if possible).

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 2' 0" 4' 8'

PROPOSED ENLARGED SITE PLAN | 2

EXISTING RF & COAX CHART							
SECTOR	AZIMUTH	RAD CENTER	# OF ANTENNAS	ANTENNA MODEL	TMA	COAX	COAX LENGTH
ALPHA	330°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±
BETA	90°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±
GAMMA	210°	83'-11"	1	APXV18-206513-C	NONE	(2) 1/2"	80' ±
NOTE: VERIFY WITH FINAL RF DESIGN.							



TRUE NORTH
North to be determined by site survey (if possible).

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 2' 0" 4' 8'

EXISTING ENLARGED SITE PLAN | 1

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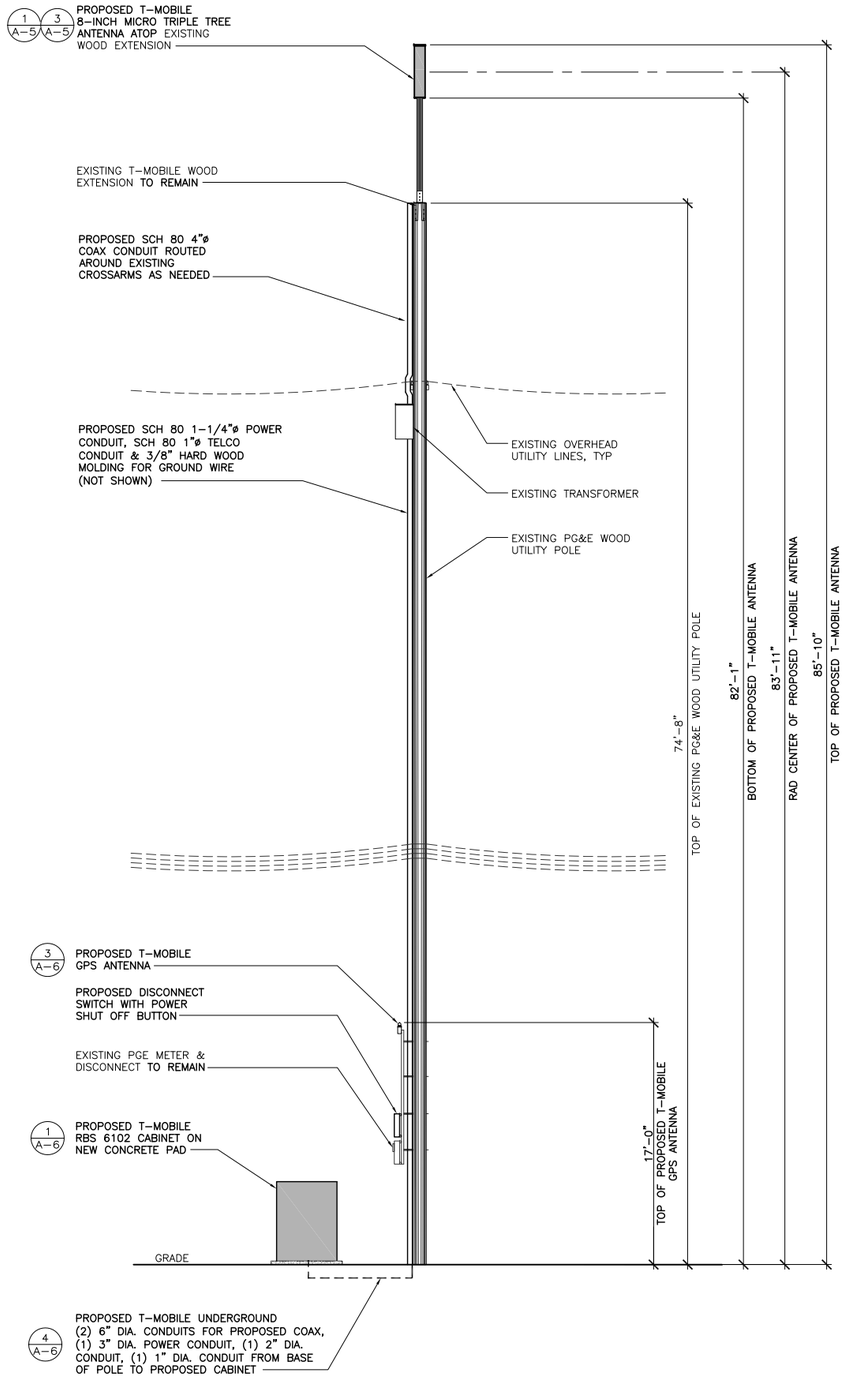
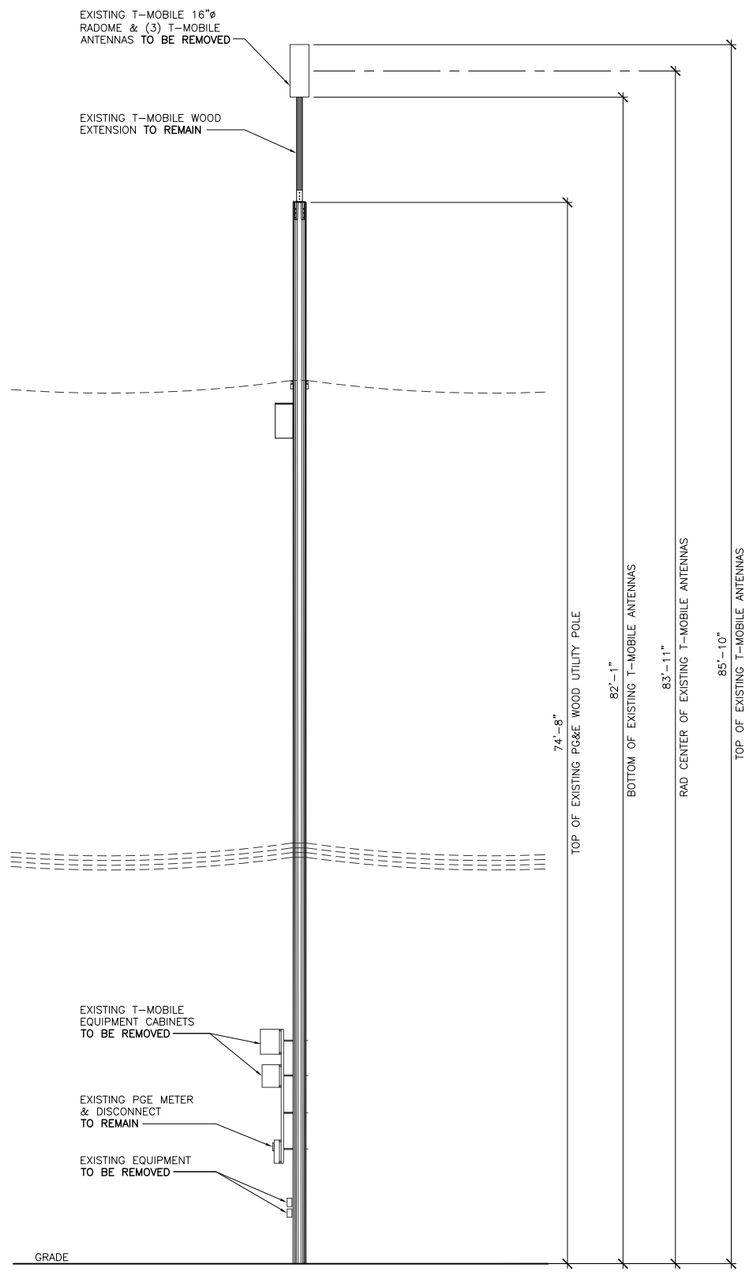
SHEET TITLE
EXISTING & PROPOSED ENLARGED SITE PLAN

SHEET NUMBER
A-2



24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
16' 12' 8' 4' 0" 16'

PROPOSED WEST ELEVATION | 2



24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

EXISTING WEST ELEVATION | 1

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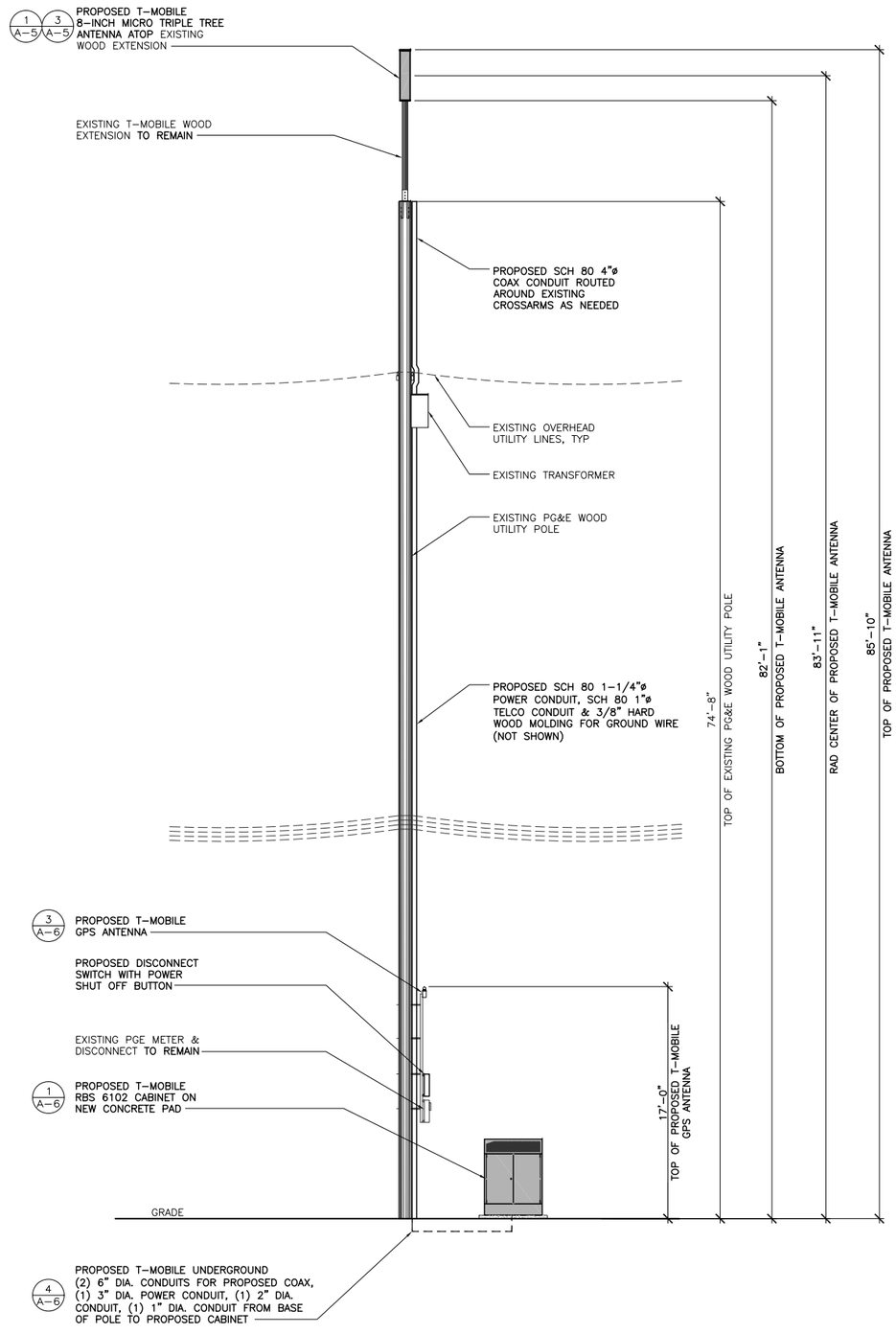
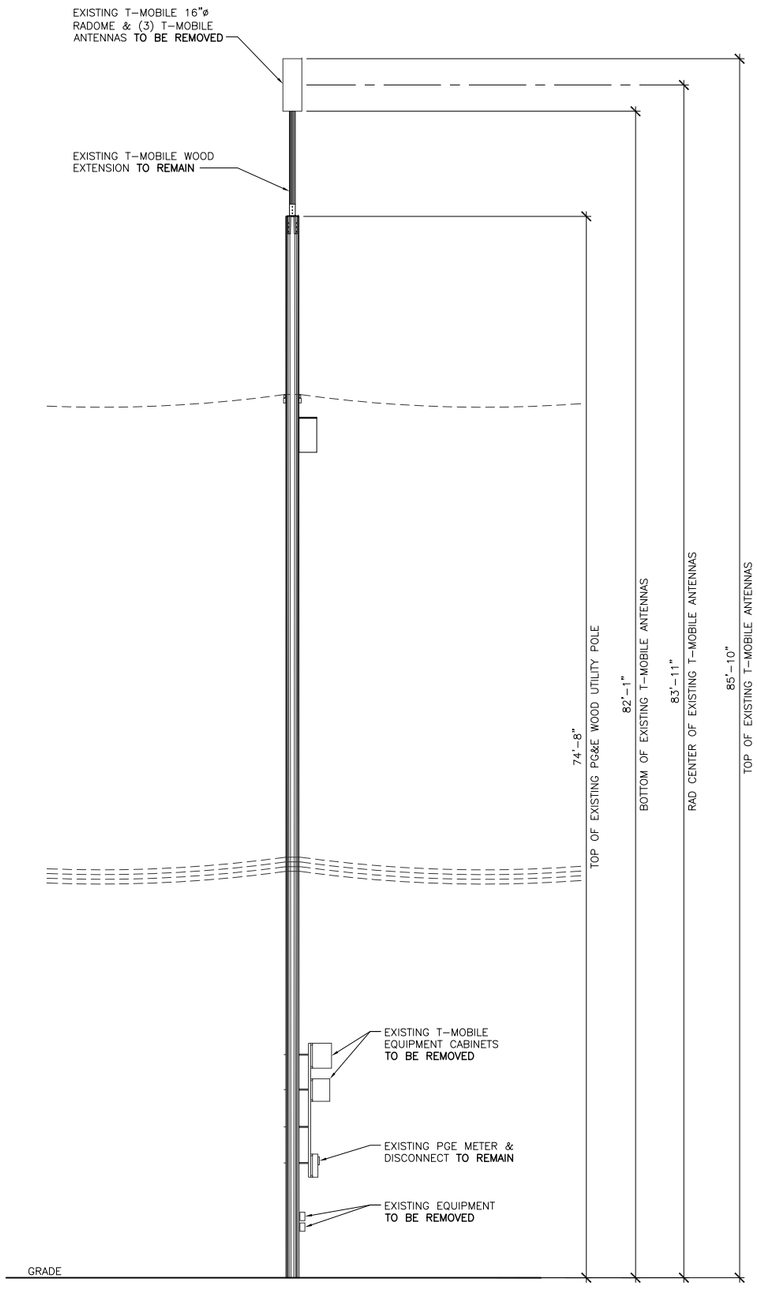
SHEET TITLE
EXISTING & PROPOSED WEST ELEVATION

SHEET NUMBER
A-3



24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
16' 12' 8' 4' 0" 16'

PROPOSED EAST ELEVATION | 2



24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

EXISTING EAST ELEVATION | 1

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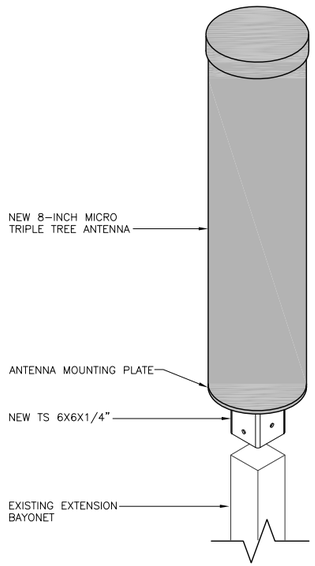
SHEET TITLE
EXISTING & PROPOSED EAST ELEVATION

SHEET NUMBER
A-4

NOT USED

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

4



NOTES:
1. GRAPHIC REPRESENTATION ONLY.
2. ANTENNA MAST ASSEMBLY IS PROVIDED BY T-MOBILE.

ANTENNA MOUNTING

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

3

NOT USED

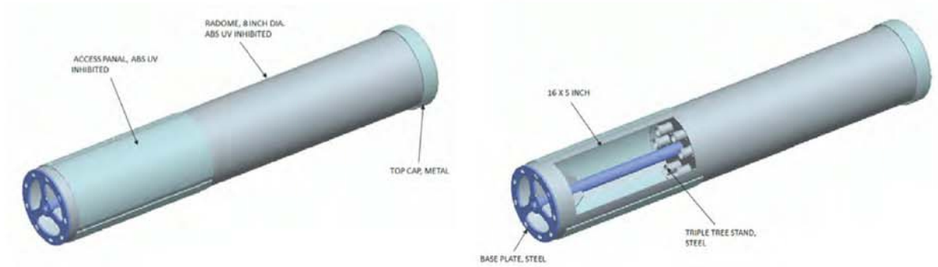
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

2

DS1W13J36TVD (1710-2170 MHz)
8-inch Micro Triple Tree Antenna

13.5 Gain, X-Pol Polarization

dbSpectra



ELECTRICAL SPECIFICATIONS			
Frequency Range (MHz)	1710-2170		
Frequency Band (MHz)	1710-1880	1850-1990	1920-2170
Gain (dBi/dBd)	15/12.9	15.1/13	15.6/13.5
Polarization	Dual Linear ±45°		
Nominal Impedance (Ω)	50		
VSWR	<1.4:1		
Horizontal Beamwidth, -3 dB (°)	67	65	64
Vertical Beamwidth, -3 dB (°)	14.1	13.5	12.5
Electrical Downtilt (°)	0-16		
Side Lobe Suppression - vertical 1st upper (dB)	>17, 16, 16, 15, 15 @ 0, 4, 8, 12, 16		
Isolation Between Inputs (dB)	>30	>30	>30
Tracking - horizontal plane ±60° (dB)	<1.5	<1.5	<1.5
First Null Fill (dB)	>-29, typical >-25	>-29, typical >-25	>-29, typical >-25
Vertical Beam Squint (°)	0 5	0.5	0.5
Front to Back Ratio (dB)180°±30° copolar	>30	>30	>30
Front to Back Ratio (dB)180°±30° total power	>25	>25	>25
Cross Polar Discrimination (XPD) 0° (dB)	>15	>15	>15
Cross Polar Discrimination (XPD) ±60° (dB)	>15	>15	>13
IM3, 2xTx@43dBm (dBc)	<-153	<-153	
Power Handling - average per input (W)	250		
Power handling - average total (W)	500		

MECHANICAL SPECIFICATIONS	
Material/Color	ASA/Light Grey
Connector	6 x 7/16 DIN Female
Connector position	Bottom
Survival wind speed (mph/kph)	100 / 160.9
Temperature Range (degrees)	-40 to +60 C
RET	AISG2.0 (AISG1.1/Ericsson)
Lightning Protection	DC Ground

DIMENSIONS	
Height (in/mm)	45 / 1143
Diameter (in/mm)	8.97 / 228
Weight (lbs/kg)	48 / 21.8

ANTENNA SPECIFICATIONS

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

1

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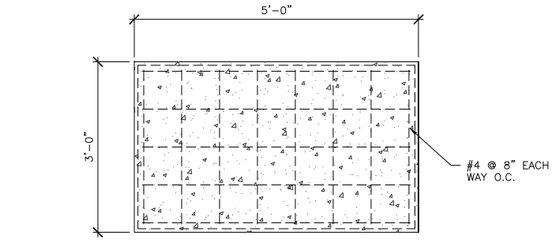
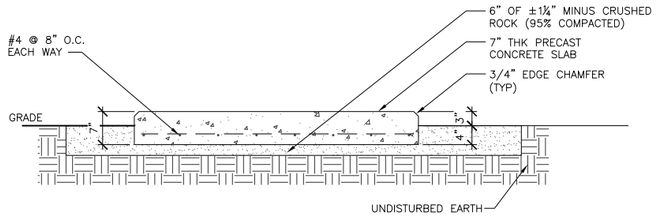
SHEET TITLE
ANTENNA DETAILS

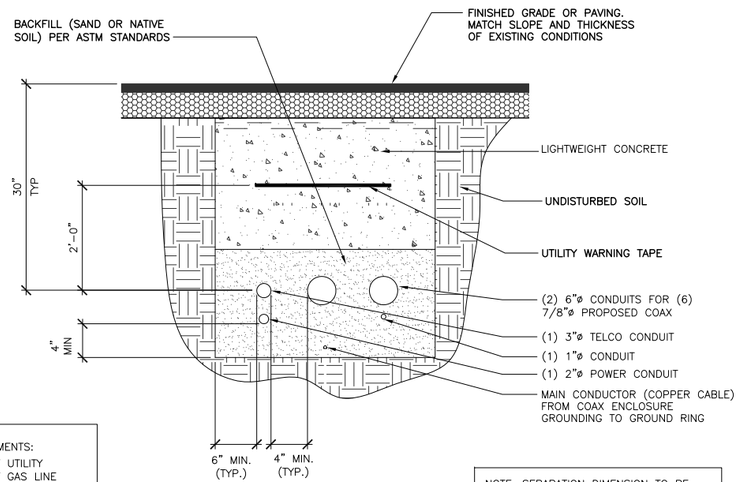
SHEET NUMBER
A-5

STRUCTURAL NOTES:
1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH fc=2500 psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: AC1-318-02 BUILDING CODE





CONCRETE PAD 5
24"x36" SCALE: 3/4" = 1'-0"
11"x17" SCALE: 3/8" = 1'-0"



NOTE:
MINIMUM DISTANCE REQUIREMENTS:
- 2'-0" MINIMUM FROM ANY UTILITY
- 2'-6" MINIMUM FROM ANY GAS LINE
- 3'-0" MINIMUM FROM ANY WATER LINE
- 3'-0" MINIMUM TO FACE OF CURB

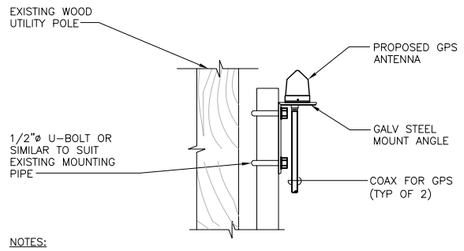
MINIMUM DISTANCES ARE FROM OUTER FACE OF THE TWO EXTERIOR CONDUITS. CONTRACTOR TO VERIFY IN FIELD EXISTING CONDITIONS BEFORE CONSTRUCTION

NOTE: SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.

CONDUIT TRENCH 4
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOTE:
VERIFY EXISTING CONDITIONS – ALL MOUNTING CLAMPS AND HARDWARE SHALL BE VERIFIED BY TOWER ACCESSORY MANUFACTURER

NOTE:
VERIFY ANTENNA MODEL PER FINAL RF DATA SHEET

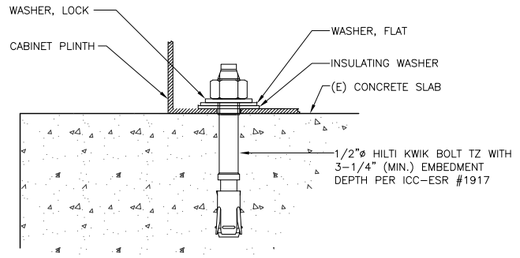


NOTES:

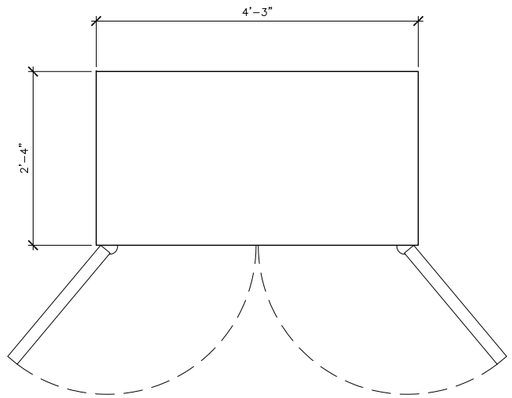
LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.

ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

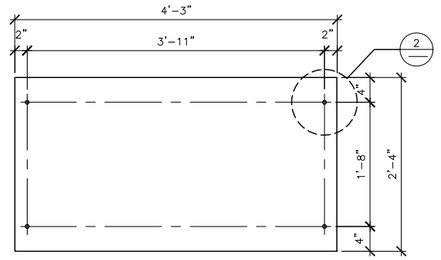
GPS ANTENNA 3
24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE



CABINET PLINTH ANCHOR 2
24"x36" SCALE: 1" = 1'-0"
11"x17" SCALE: 1/2" = 1'-0"

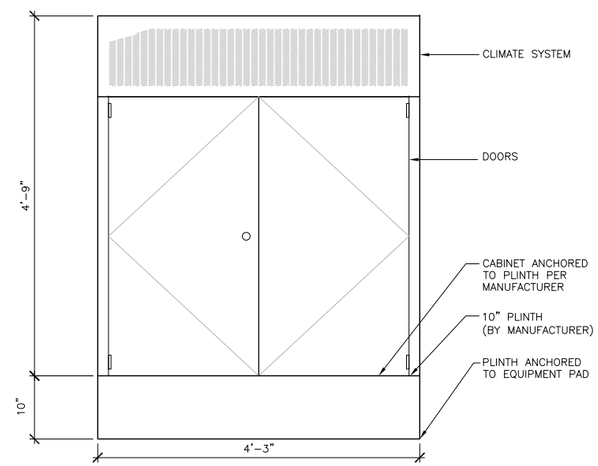


PLAN

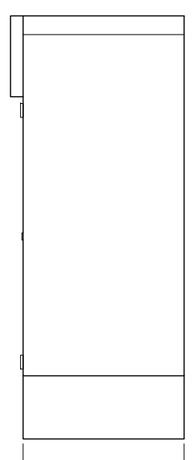


DRILL PATTERN

MANUFACTURER: ERICSSON
MODEL: RBS 6102
WEIGHT W/BATTERIES: 1422 lbs (645 kg)
DIMENSIONS: 57.0" X 51.2" X 27.6"



FRONT ELEVATION



SIDE ELEVATION

EQUIPMENT CABINET SPECIFICATIONS 1
24"x36" SCALE: 1" = 1'-0"
11"x17" SCALE: 1/2" = 1'-0"

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SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
A-6

KEY NOTES

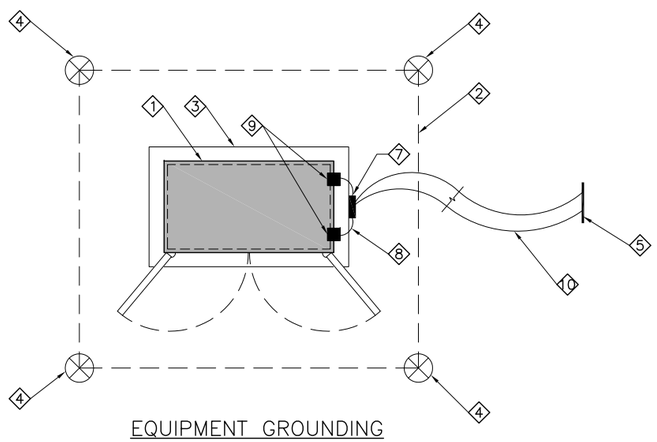
1. PROPOSED T–MOBILE EQUIPMENT CABINET
2. NEW GROUND RING AWG #2 INSULATED COPPER GROUND WIRE BURIED 30" BELOW GRADE
3. EQUIPMENT PAD
4. GROUND ROD (DETAIL 7/E–2)
5. ANTENNA GROUND BUS BAR AT BOTTOM OF EXISTING POLE (CONTRACTOR TO FIELD VERIFY)
6. ANTENNA GROUND BUS BAR @ ANTENNA LEVEL (DETAIL 6/E–2)
7. MASTER GROUND BUS BAR EQUIPMENT (DETAIL 6/E–2)
8. (2) #2 AWG INSULATED COPPER GROUND WIRES FROM PROPOSED CABINET TO PROPOSED MASTER GROUND BAR MOUNTED ON EQUIPMENT PAD
9. CAD WELD (DETAIL 3/E–2)
10. AWG 2 INSULATED COPPER GROUND WIRE TO MASTER GROUND BAR. TYP OF (2). (FOLLOW COAX ROUTING)
11. AWG 6 INSULATED COPPER GROUND WIRE FROM ANTENNA MOUNT TO ANTENNA BUS BAR

LEGEND

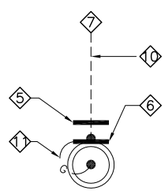
●	MECHANICAL CONNECTION
■	EXOTHERMIC WELD (CADWELD/THERMOWELD) CONNECTION.
⊗	5/8"ø x 10'–0" COPPER, OR COPPER CLAD STEEL GROUND ROD AT 10'–0" O.C. (MAX)
—G—	#2 AWG INSULATED, COPPER WIRE (UNLESS OTHERWISE SPECIFIED).
S.O.H.	S.O.H. SECONDARY OVERHEAD

GENERAL NOTES:

1. PLAN DRAWINGS SHOWN HEREIN ARE DIAGRAMMATIC AND DO NOT NECESSARILY DEPICT THE EXACT EQUIPMENT QUANTITIES, LOCATION, LAYOUT AND CONFIGURATION. REFER TO ARCHITECTURAL PLANS FOR EXACT EQUIPMENT LOCATION, LAYOUT AND CONFIGURATION.
2. PLAN DRAWINGS SHOWN HEREIN DO NOT NECESSARILY DEPICT ELECTRICAL REQUIREMENTS OF INDIVIDUAL EQUIPMENT AND DEVICES SUCH AS THE EQUIPMENT GROUNDING REQUIREMENTS, POWER REQUIREMENTS AND TELCO RACEWAY REQUIREMENTS.
3. REFER TO A–1 FOR THE LOCATION OF POWER AND TELCO POINT OF CONNECTIONS, THE DISTANCE OF THE RUN AND THE SUGGESTED CONDUIT ROUTING. FIELD VERIFY EXISTING CONDITIONS SPECIFICALLY FOR CONDUIT ROUTING PRIOR TO BID.



EQUIPMENT GROUNDING



ANTENNA GROUNDING

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T–MOBILE REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST–LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND–RING).

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
    a. BURNDY, HY–GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T–MOBILE PROJECT MANAGER.
    b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
    c. TWO –(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).

12. PRIOR TO ANY LUG–BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH–BRITE" OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO–OX–ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.

13. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).

14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250–82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT–OFF VALVE.

GROUNDING NOTES | 3

GROUNDING LAYOUT | 2

NOT USED | 1

T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

mobi
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD

SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

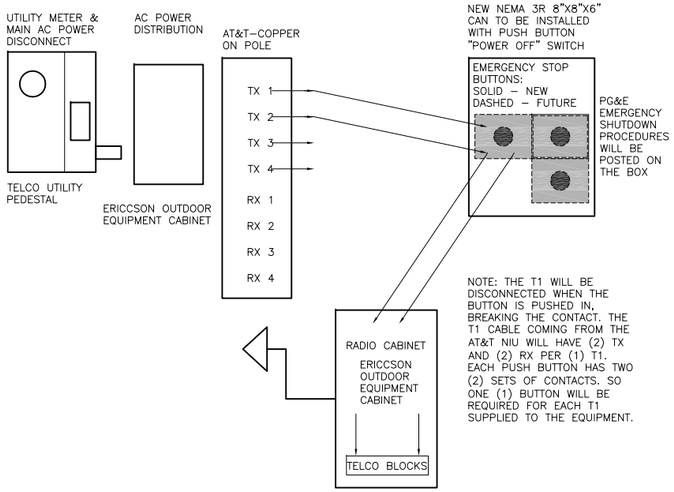
NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
GROUNDING LAYOUT, SCHEMATIC, & NOTES

SHEET NUMBER
E-1

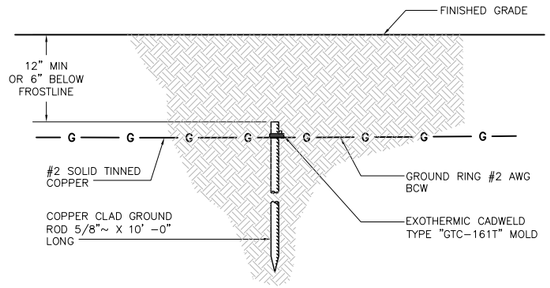
PG&E/T-MOBILE/TELCO-COPPER "T1" DISCONNECT
DRAWING SHOWS DIAGRAM FOR USE WITH COPPER T1 / INTERUPTING TX OR RX



NOTE: THE T1 WILL BE DISCONNECTED WHEN THE BUTTON IS PUSHED IN, BREAKING THE CONTACT. THE T1 CABLE COMING FROM THE AT&T NIU WILL HAVE (2) TX AND (2) RX PER (1) T1. EACH PUSH BUTTON HAS TWO (2) SETS OF CONTACTS. SO ONE (1) BUTTON WILL BE REQUIRED FOR EACH T1 SUPPLIED TO THE EQUIPMENT.

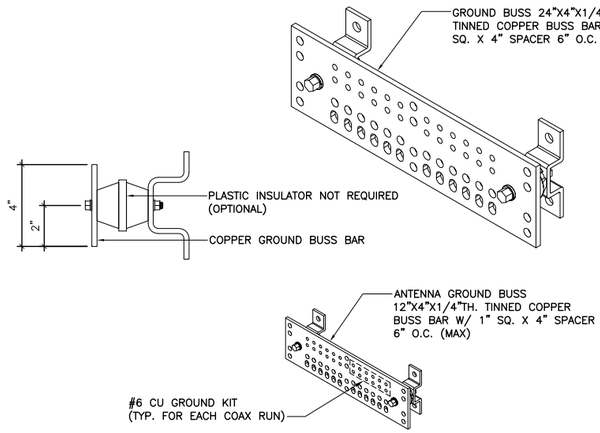
DISCONNECT DIAGRAM 8

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE



GROUND ROD/RING 7

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

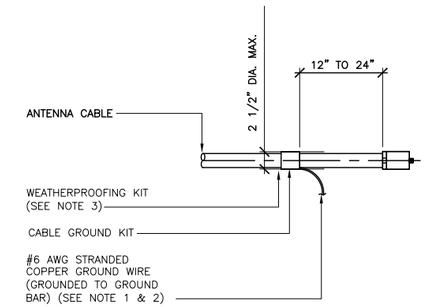


GROUND BAR 6

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOT USED 5

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

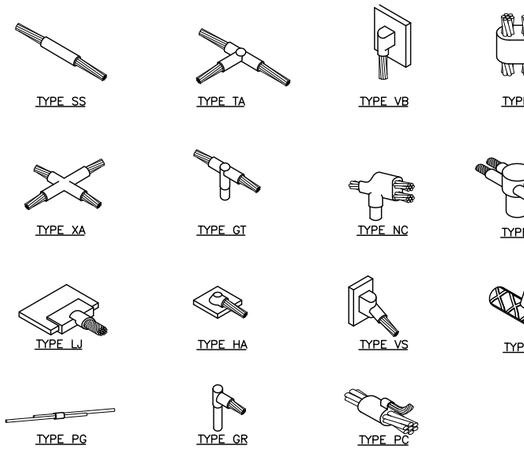


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

COAX GROUND KIT 4

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

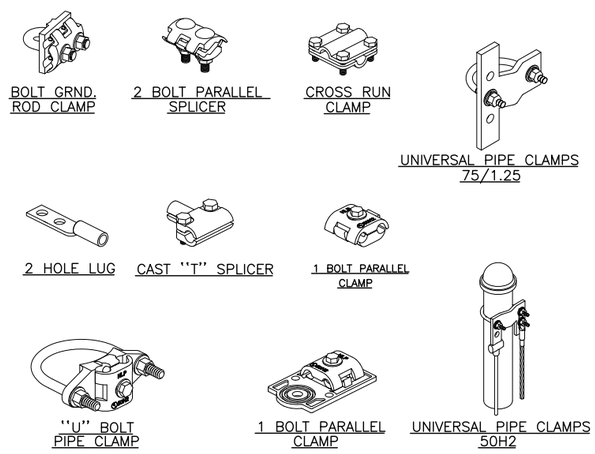


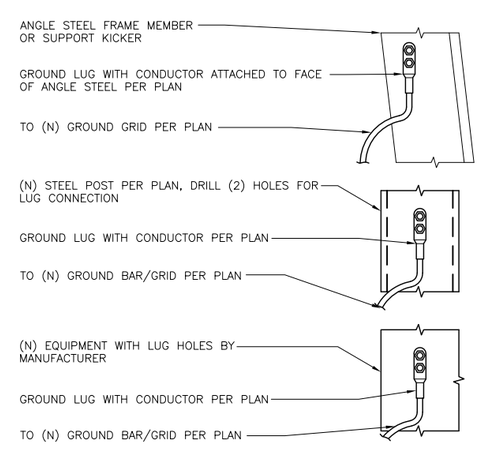
CADWELD CONNECTIONS 3

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

NOT USED 2

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE





COMPRESSION (MECHANICAL) CONNECTIONS 1

24"x36" SCALE: NOT TO SCALE
11"x17" SCALE: NOT TO SCALE

T-Mobile
T-MOBILE WEST
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CONCORD, CA. 94520

modu
149 NATOMA STREET, 3RD FLOOR
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PTS
PACIFIC TELECOM SERVICES, LLC
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SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD
SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
E-2

T··Mobile·

West Region

Network Modernization RFDS v0.1

Market: **San Francisco**

Site ID: **SF53938A**

Version: **1**

Date: **2012-08-31 21:16:19:000**

RF Design Engineer: **Asad Shahbaz**

Market RF Reviewer: **Anoop Narayanan**

Development Reviewer:

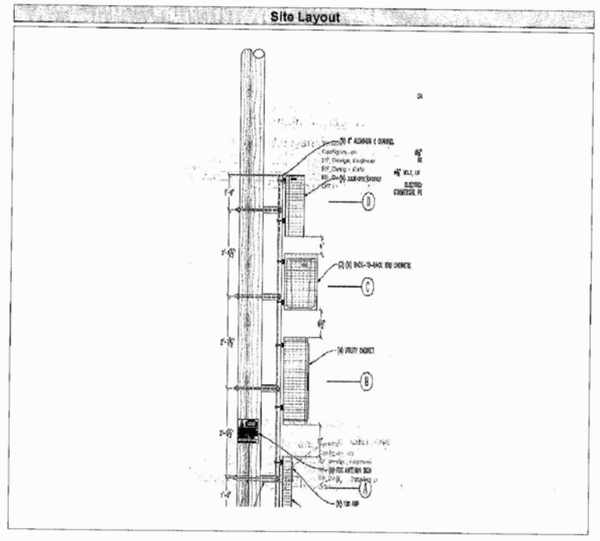
Anoop Narayanan

Design Information

Site_ID	SF53938A
Site Name	POE:R: Cap Alpine Road
Address	2965 Alpine Rd, Portola Valley
Market	San Francisco
Latitude	37.403644
Longitude	-122.190037
Site Type	Structure (New Build)
Site Class	Wood Pole
Polygon	Newbuild_2010

Version	1
Configuration	E_48_60_WoodBsc
RF_Design_Engineer	Asad Shahbaz
RF_Design_Date	8/22/2012 5:43:04 PM
RF_Design_Result	COMPLETE
QC_Reviewer	Anoop Narayanan
QC_Review_Date	8/22/2012 5:06:17 PM
QC_Result	APPROVED
RF_Reviewer	Anoop Narayanan
RF_Review_Date	8/29/2012 5:05:24 PM
RF_Review_Result	APPROVED
Dev_Reviewer	
Dev_Review_Date	
Dev_Review_Result	
Design_Status	APPROVED

Site Layout



Site_ID - SF53938A, Version - 1, Design Status - APPROVED

REFERENCE ONLY

T··Mobile·
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

mobi
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SAN FRANCISCO, CA 94105

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SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD

SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

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NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
RFDS INFORMATION
(REFERENCE ONLY)

SHEET NUMBER
RF-1

Site Information

Existing

Cabinet_Type	RBS 3308	RBS 3308		
Cabinet_Qty	1	1		
Support_Cabinet				
Support_Cabinet_Qty				
GSM_PCS				
UMTS_AWS				
UMTS_PCS				
LTE				
Baseband_Type				
Baseband_Qty				
Radio_Unit_Type				
Radio_Unit_Qty				
COVP_Type				
COVP_Qty				
HCS_Cable_Type				
HCS_Cable_Qty				
HCS_Cable_Len				

Proposed

Cabinet_Type	RBS 6102			
Cabinet_Qty	1			
Support_Cabinet				
Support_Cabinet_Qty				
GSM_PCS				
UMTS_AWS	UMTS_AWS			
UMTS_PCS	UMTS_PCS			
LTE	LTE			
Baseband_Type	DUW30	DUW30		DUL20
Baseband_Qty	1	1		1
Radio_Unit_Type	RUS01 B4		RUS01 B2	
Radio_Unit_Qty	6		6	
COVP_Type				
COVP_Qty				
HCS_Cable_Type				
HCS_Cable_Qty				
HCS_Cable_Len				

Cabinet Scope of Work : 6102 with 1 dual per sector.

Site_ID - SF53938A, Version - 1, Design Status - APPROVED

ALPHA

	Existing Antenna 1	Existing Antenna 2	Existing Antenna 3	Existing Antenna 4
Ant_Ports	2			
Ant_Type	Dual			
Ant_Model	APXV18-206513-C			
Ant_Vendor	RFS			
Ant_Height	70			
Azimuth	330			

	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS												
LTE												
Band	B4											
Active_Passive	P											
RET_deployed												
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	60											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count												
Diplexer_Type												
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

	Proposed Antenna 1	Proposed Antenna 2	Proposed Antenna 3	
Ant_Ports	2			
Ant_Type	Dual			
Ant_Model	8-inch Micro Triple Tree			
Ant_Vendor	dbSpectra			
Ant_Height	70			
Azimuth	330			

	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6	Ports 1-2	Ports 3-4	Ports 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS	UMTS_PCS											
LTE	LTE											
Band	B2_B4											
Active_Passive	P											
RET_deployed	YES											
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	60											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count	2											
Diplexer_Type	PCS DX- Cross											
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

Sector A Scope Of Work: Swap out existing antennas for DBSpectra antennas - G19 and U19 will be mixed mode and passive. U21 and LTE21 will also be mixed mode and passive. No existing TMAs. Set tilts based on Supplemental Tracker provided by RF before construction.

Site_ID - SF53938A, Version - 1, Design Status - APPROVED

REFERENCE ONLY

T-Mobile
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

MODUS
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PTS
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD
SF53938A
IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
RFDS INFORMATION (REFERENCE ONLY)

SHEET NUMBER
RF-2

BETA

	Existing Antenna 1			Existing Antenna 2			Existing Antenna 3			Existing Antenna 4		
Ant_Porte	2											
Ant_Type	Dual											
Ant_Model	APXV18-206515-C											
Ant_Vendor	RFS											
Ant_Height	70											
Azimuth	60											
	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS												
LTE												
Band	B4											
Active_Passive	P											
RET_deployed												
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	60											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count												
Diplexer_Type												
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

	Proposed Antenna 1			Proposed Antenna 2			Proposed Antenna 3			Proposed Antenna 4		
Ant_Porte	2											
Ant_Type	Dual											
Ant_Model	8-inch Mono Triple Tree											
Ant_Vendor	cbSpectra											
Ant_Height	70											
Azimuth	180											
	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS	UMTS_PCS											
LTE	LTE											
Band	B2_B4											
Active_Passive	P											
RET_deployed	YES											
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	90											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count	2											
Diplexer_Type	XPCS DX- Crossl											
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

Sector A Scope Of Work: Swap out existing antennas for CBSpectra antennas. LCS and LTE will be mixed mode and passive. L21 and L7E21 will also be mixed mode and passive. No existing TMAs. Set tilts based on Supplemental Tracker provided by RF before construction.

Site_ID - SF53938A, Version - 1, Design Status - APPROVED

GAMMA

	Existing Antenna 1			Existing Antenna 2			Existing Antenna 3			Existing Antenna 4		
Ant_Porte	2											
Ant_Type	Dual											
Ant_Model	APXV18-206515-C											
Ant_Vendor	RFS											
Ant_Height	70											
Azimuth	215											
	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS												
LTE												
Band	B4											
Active_Passive	P											
RET_deployed												
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	60											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count												
Diplexer_Type												
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

	Proposed Antenna 1			Proposed Antenna 2			Proposed Antenna 3			Proposed Antenna 4		
Ant_Porte	2											
Ant_Type	Dual											
Ant_Model	8-inch Mono Triple Tree											
Ant_Vendor	cbSpectra											
Ant_Height	70											
Azimuth	320											
	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6	Porte 1-2	Porte 3-4	Porte 5-6
GSM_PCS												
UMTS_AWS	UMTS_AWS											
UMTS_PCS	UMTS_PCS											
LTE	LTE											
Band	B2_B4											
Active_Passive	P											
RET_deployed	YES											
E_Tilt												
M_Tilt												
TMA_Count												
TMA_Type												
RRU_Count												
RRU_Type												
Coax_Used_Count	2											
Coax_Type	1/2"											
Coax_Length_ft	90											
Fiber_Count												
Fiber_Length_ft												
Splitter_Count												
Splitter_Type												
Diplexer_Count	2											
Diplexer_Type	XPCS DX- Crossl											
Combiner_Count												
Combiner_Type												
MCPA_Count												
MCPA_Type												
GSM_Trx_Count												
LMU_Used_Count												
LMU_Type												
LMU_Length_ft												

Sector A Scope Of Work: Swap out existing antennas for CBSpectra antennas. LCS and LTE will be mixed mode and passive. L21 and L7E21 will also be mixed mode and passive. No existing TMAs. Set tilts based on Supplemental Tracker provided by RF before construction.

Site_ID - SF53938A, Version - 1, Design Status - APPROVED

REFERENCE ONLY

T-Mobile
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

modus
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PTS
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD

SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
RFDS INFORMATION
(REFERENCE ONLY)

SHEET NUMBER
RF-3

Design Comments

Asad Shahbaz Version - 1 Date - 8/1/2012 3:42:52 PM

B1G2 with 1 dual per sector,NO GSM on site

Market RF Comments

Development Comments

Site_ID - SF53938A, Version - 1, Design Status - APPROVED

REFERENCE ONLY

T··Mobile··
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

mobi
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PTS
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE ROAD
SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

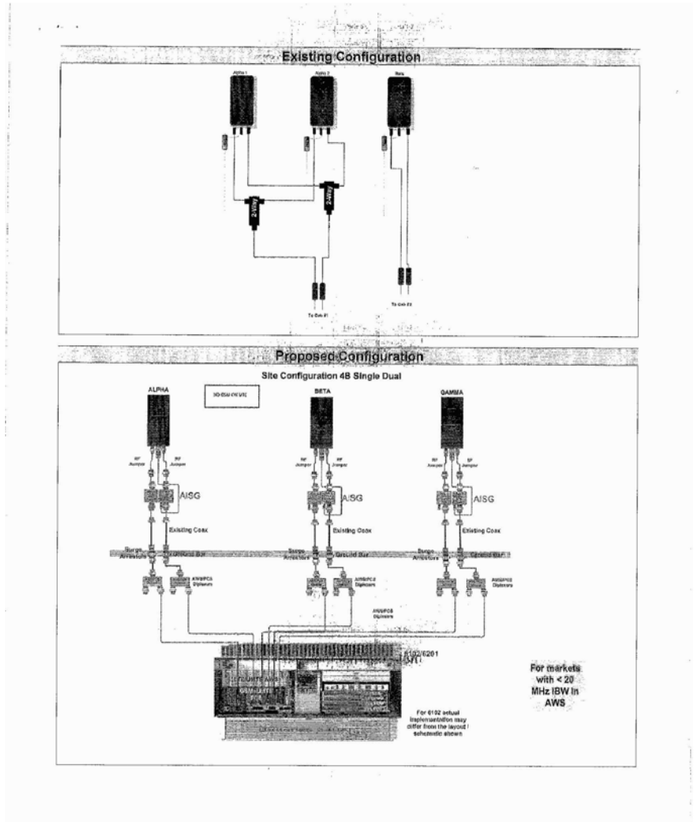
NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
RFDS INFORMATION
(REFERENCE ONLY)

SHEET NUMBER
RF-5

Site_ID - SF53938A, Version - 1, Design Status - APPROVED



Site_ID - SF53938A, Version - 1, Design Status - APPROVED

REFERENCE ONLY

T-Mobile
T-MOBILE WEST
1855 GATEWAY BLVD, SUITE 900
CONCORD, CA. 94520

modu
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PTS
PACIFIC TELECOM SERVICES, LLC
149 NATOMA STREET, 3RD FLOOR
SAN FRANCISCO, CA 94105

PG&E L-CAP ALPINE

SF53938A

IN FRONT OF: 2965 ALPINE RD.
PORTOLA VALLEY, CA 94028

REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
A	03/22/13	ISSUED FOR 90% CD REVIEW	BD
0	04/22/13	ISSUED FOR 100% CD REVIEW	RLD

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

SHEET TITLE
RFDS INFORMATION
(REFERENCE ONLY)

SHEET NUMBER
RF-4

APPENDIX E: SITE PHOTOGRAPHS

1.	Sector A

2.	View from Sector A

3.	Sector B

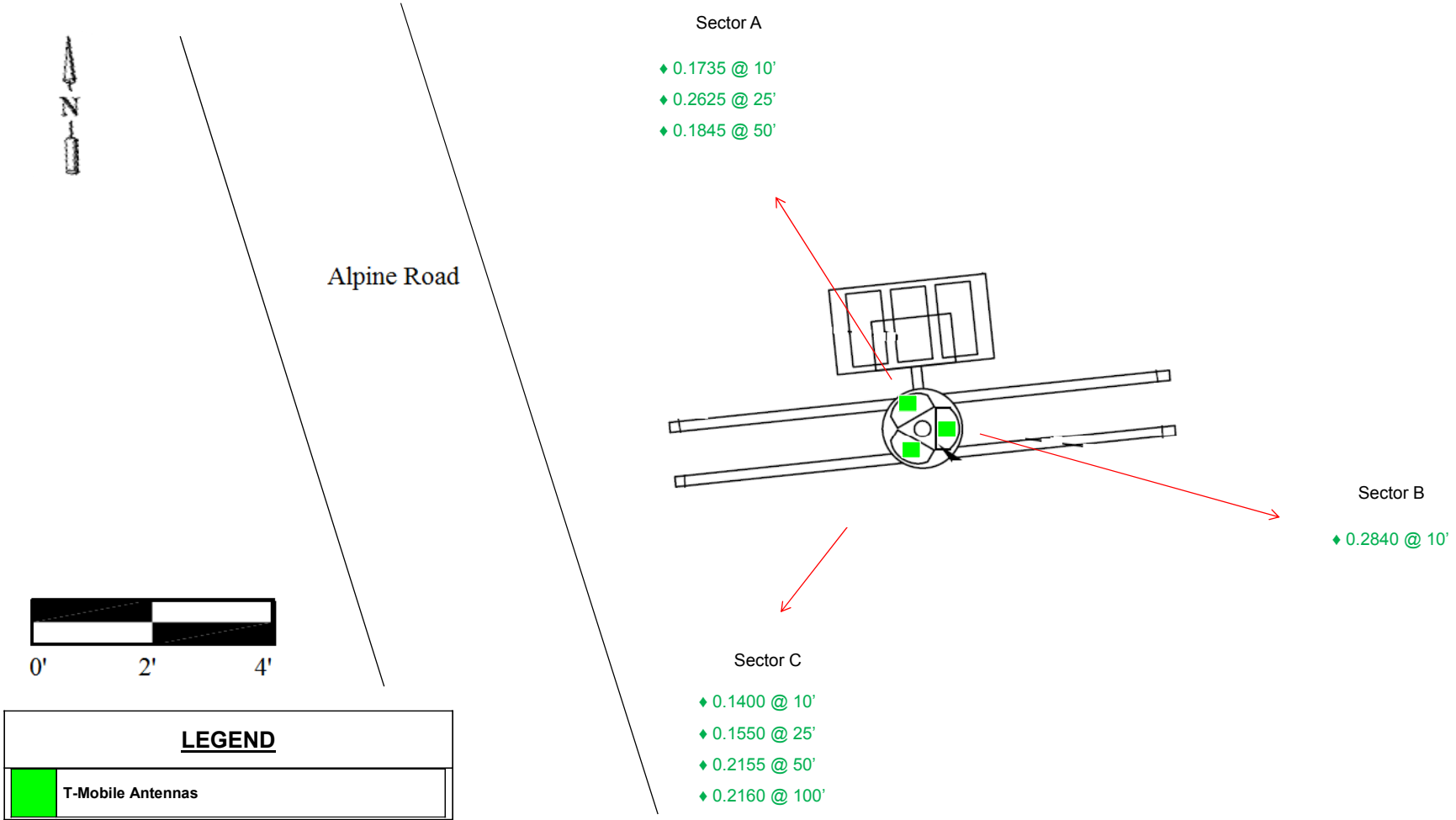
4.	View from Sector B (barbed wire fence 5' away)

5.	Sector C

6.	White and yellow RF sign

	
7.	Blue RF Sign

APPENDIX F: MONITORING PLAN



LEGEND

	T-Mobile Antennas
♦	Green numbers are Spatially-Averaged Measurements
%	FCC General Public Limit

Site Plan with Monitoring Results

Facility Operator: T-Mobile

Site Number: SF53938A

Site Name: PG&E L-Cap Alpine Road

Site Visit Date: 07-30-2013

EBI Consulting
environmental | engineering | due diligence