



**CITY OF PACIFIC GROVE**  
300 Forest Avenue, Pacific Grove, California 93950

**AGENDA REPORT**

**TO:** Planning Commission

**FROM:** Wendy Lao, Assistant Planner

**MEETING DATE:** September 22, 2016

**LOCATION:** North side of Public right-of-way along 500 block of Central Ave., adjacent to 124 14<sup>th</sup> St. Pacific Grove, CA 93950

**SUBJECT:** Use Permit (UP) No. 16-085 to allow an existing PG&E pole of 43 feet height to install wireless communication equipment including an antenna, and an underground vault

**APPLICANT:** Crown Castle NG West, LLC

**ZONING/LAND USE:** None; public right-of-way

**CEQA:** Categorical Exemption, Section 15301, Class 1

**RECOMMENDATION:**

Hold a public hearing to consider Use Permit No. 16-0865 and approve, subject to recommended findings and conditions.

Should the Planning Commission take an action to deny the use permit application, it needs to do so in accordance with The National Telecommunications Reform Act of 1996, Section 704, (B) (I) (iii) *“Any decision by a State or local government to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and be supported by substantial evidence contained in a written record.”*

**BACKGROUND:**

The Use Permit application is one of three similar requests to allow an existing PG&E pole to collocate wireless communication equipment. The equipment includes an antenna of 4 feet to be located at approximately 22 feet and 7 inches above ground, and a disconnect box and power meter to be located at approximately 8 feet above ground. The equipment will be painted to match the pole. An underground vault is also proposed.

The Pacific Grove Municipal Code §23.64.060 allows wireless telecommunication facilities to be permitted in any district, except the O district, subject to obtaining a use permit.

The public right-of-way does not have a zoning designation. However, the site is surrounded by properties in the R-2 zoning district to the north, and Unclassified (U) zoning district to the south.

**DISCUSSION:**

The PG&E pole is located along the 500 block of Central Avenue’s public right-of-way, adjacent to the property located at 124 14<sup>th</sup> Street. The street intersects Monterey Avenue where more residences are located. The General Plan is silent with respect to telecommunications equipment and facilities.

The City may not prohibit the installation of wireless facilities on PG&E poles along the public right-of-way, under the Federal Telecommunications Act Section 253. However, the City, State, and other local governments may regulate the placement, construction, and modification of personal wireless service facilities, except as provided, under the Telecommunications Reform Act of 1996 Section 704(a)(7)(A).

The following is a summary of applicable key provisions of the Telecommunication Reform Act of 1996.

Local Zoning Authority Preserved – Section 704(a)(7)(A) preserves the authority of State and local governments over decisions regarding the placement, construction, and modification of personal wireless service facilities, except as provided.

State and Localities May Not Take Discriminatory or Prohibiting Actions – The City shall not unreasonably discriminate among providers of functionally equivalent services and shall not prohibit or have the effect of prohibiting the provision of personal wireless services.

Procedures for Ruling on Requests to Place, Construct, or Modify Personal Wireless Service Facilities – Requires local government to act upon a request for authorization to place, construct, or modify personal wireless service facilities within a reasonable time. Any decision to deny a request must be made in writing and be supported by substantial evidence contained in a written record.

Regulations for Evaluating the Environmental Effects of Radiofrequency Radiation – The City is prohibited from denying a permit to install wireless communication equipment based on health concerns over radio frequency emissions, provided that the emissions from the facility comply with Federal Communications Commission (FCC) standards. The Act also prohibits local jurisdictions from imposing more stringent safety standards than the FCC standards.

**Points to Consider:**

The following points have been identified for the Planning Commission to consider regarding this proposal:

Compatibility with surrounding uses: The proposed use is located along the public right-of-way, surrounded by many residences in the R-3-PGR to the north and businesses in the C-D commercial downtown zoning district to the south. A preschool at 136 8<sup>th</sup> Street is located approximately 1150 feet, or less than a quarter mile, away from the site. The proposed use is considered a utility and therefore will not generate noise or odors that will adversely impact neighboring uses.

Visual impact resulting from installation of proposed equipment: The applicant has provided photo simulations that illustrate the existing and proposed site elevations, which include the proposed equipment to be collocated to the existing PG&E pole. The equipment includes an antenna of 4 feet to be located at approximately 22 feet and 7 inches above ground, and a disconnect box and power meter to be located at approximately 8 feet above ground. The equipment will be painted to match the PG&E pole. The site is also located within the Coastal Zone where impacts to scenic areas are considered. An underground vault is also proposed to be below the sidewalk in order to be concealed from public view.

Radio frequency emissions. There has been increased awareness and considerable debate in recent years regarding radio frequency emissions with respect to potential human health impacts. The scientific community has not reached consensus on the nature of potential human health impacts, if any, and studies are ongoing. As already noted in this staff report, Section 704 of The National Telecommunications Reform Act of 1996 expressly preempts State and local government regulation of the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the FCC's regulations concerning such emissions. The Act also prohibits local jurisdictions from imposing more stringent safety standards than the FCC standards. The radio frequency report found that the proposal will be below the FCC's permitted maximums, and therefore will be in full compliance with FCC RF public and occupational safety exposure standards. (See attachment.) Staff recommends a condition of approval requiring full and ongoing compliance with all applicable FCC regulations.

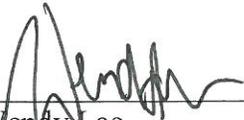
Service level quality. The installation of the proposed antennas and equipment will provide service coverage for some areas that currently have poor coverage and will boost service levels for areas that currently have good coverage. The proposed project will provide an enhanced level of telecommunication service for residents, businesses, and visitors.

Effect on economic development. Businesses and residences have come to rely on wireless technologies in their day-to-day operations. Enhanced service levels will support both current and future technologies within the City.

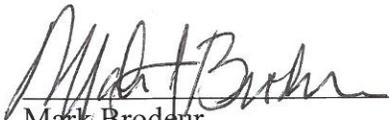
**ATTACHMENTS**

- A. Draft Resolution
- B. Affidavit
- C. Radio Frequency Report
- D. Hazardous Material Questionnaire
- E. Site Plans

RESPECTFULLY SUBMITTED:

  
\_\_\_\_\_  
Wendy Lao  
Assistant Planner

REVIEWED BY:

  
\_\_\_\_\_  
Mark Brodeur  
Community and Economic  
Development Director



## RESOLUTION NO. 16-XX

### USE PERMIT (UP) NO. 16-085 FOR A SITE LOCATED AT THE NORTH SIDE OF THE PUBLIC RIGHT-OF-WAY OF THE 500 BLOCK OF CENTRAL AVENUE ADJACENT TO 124 14<sup>TH</sup> STREET TO INSTALL WIRELESS COMMUNICATION EQUIPMENT INCLUDING AN ANTENNA TO AN EXISTING PG&E POLE, AND TO ALLOW AN UNDERGROUND VAULT NEAR 500 CENTRAL AVENUE.

#### FACTS

1. The subject site is located at the north side of the public right-of-way of the 500 block of Central Avenue, adjacent to 124 14<sup>th</sup> Street, Pacific Grove, 93950.
2. The site does not have a zoning designation as it is located in the public right-of-way.
3. The site is surrounded by properties in the R-3-PGR zoning district to the north, and Commercial Downtown (C-D) zoning district to the south.
4. The subject site is developed with a PG&E pole of 39 feet height on a concrete sidewalk.
5. The subject site is located in the Archaeological Zone.
6. The subject site is located in the Area of Special Biological Significance Watershed.
7. The subject site is located in the Coastal Zone.
8. This project has been determined to be CEQA Exempt under CEQA Guidelines Class 1 Section 15301.
9. Wireless telecommunication facilities may be permitted in any district, except the O district, providing a use permit shall first be obtained in each case, per P.G.M.C. 23.64.060.

#### FINDINGS

1. A Biological Resources Preconstruction Survey Checklist was completed on January 6, 2016, and found negligible potential that any biological resources would be impacted during installation, and;
2. An Archaeological Resources Preconstruction Survey Checklist was completed on January 6, 2016, and found that the proposed project site has no archaeological deposits recorded within 100 feet of the site, and;
3. The proposed use is allowed with a use permit in the public right-of-way and complies with all applicable provisions of these regulations, and;
4. The proposed use is consistent with the general plan and the Local Coastal Program, and;
5. The establishment, maintenance, and operation of the use will not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the neighborhood of the proposed use, and;
6. The use, as described and conditionally approved, will not be detrimental or injurious to property and improvements in the neighborhood or to the general welfare to the city, and;

7. The location, size, design, and operating characteristics of the proposed use are compatible with the existing and future land uses in the vicinity, and;
8. The architecture and general appearance of the completed project are compatible with the neighborhood, and;
9. The completed project will neither be detrimental to the orderly and harmonious development of the city nor impair the desirability of investment or occupation in the neighborhood.
10. The proposed project will collocate wireless communication equipment to a replacement PG&E pole, which minimizes visual impacts within the Coastal Zone's scenic area.

**CONDITIONS OF APPROVAL:**

1. **Permit Expiration:** This permit shall expire and be null and void if a building permit has not been applied for within one (1) year from and after the date of approval. Application for extension of this approval must be made prior to the expiration date.
2. **Construction and Use Compliance:** All activities must occur in strict compliance with the proposal as set forth in the application for this Use Permit, subject to any special conditions of approval herein. Any deviation from approvals must be reviewed and approved by staff, and may require Planning Commission approval.
3. **Public Works, Fire, and Building:** Review and approval by the Public Works, Fire and Building Departments are required prior to issuance of a Building Permit. Work taking place in the public right-of-way shall require an Encroachment Permit prior to issuance of the building permit.
4. **Conformance to Plans.** Development of the site shall conform to approved plans for "CA-DTMON01 500 Central Avenue", submitted to the Community and Economic Development Department on September 14, 2016, with the exception of any subsequently approved changes
5. **Tree Protection Standards During Construction:** Pursuant to Municipal Code Chapters 12.20 and 12.30, and the Urban Forestry Standards, all trees that are otherwise protected and will be impacted as a result of Development, both proposed for pruning or removal and where the development will impact the critical root zone of the tree are protected. Prior to issuance of the building permit, the Project Arborist shall review grading, drainage, utility, building and landscape plans to determine impacts to individual Trees, to determine required minimum Tree protection standards during construction.
6. **During-Construction Pollution Prevention (a):** During construction, the developer shall employ storm water best management practices (BMPs) for erosion and sediment control, prevention of non-stormwater discharges, and implement good housekeeping and construction waste management practices to protect the storm drainage system and water

quality as required by City Code Section 9.30.130(c), the City Phase II NPDES Permit, State Water Resources Control Board (SWRCB) Construction General Permit (CGP), and the Monterey Regional Storm Water Management Program (MRSWMP). Plans for during-construction storm water management and BMPs, such as a Storm Water Pollution Prevention Plan (SWPPP), shall be submitted to the City and subject to review and approval of the Public Works/Community Development Director and Building Official prior to issuance of a grading and/or building permit.

7. **During-Construction Pollution Prevention (b):** Construction activities subject to BMP requirements shall continuously employ measures to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality, contamination, or unauthorized discharge of pollutants.
8. **During-Construction Pollution Prevention (c):** Whenever construction activity is being done contrary to and in violation of Municipal Code Chapter 9.30, the Public Works/Community Development Director may order that construction activity to stop by posting a written notice on the premises. All persons shall immediately stop such work unless or until the public works director authorizes removing the stop work order and allows construction activity to proceed.
9. **Archaeology:** If human remains are encountered during excavations associated with this project, all work will halt, and the County Coroner will be notified. The County Coroner will determine the remains are of forensic interest. If the County Coroner, with the aid of the supervising archaeologist, determines the remains are prehistoric, he/she will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the most likely descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD will make his/her recommendations within 24 hours of their notification by the NAHC. This recommendation may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (Section 7050.5 of the Health and Safety Code). In the event that any other cultural material is encountered during construction of this telecommunications facility, work shall be halted within 50 meters of the find and a qualified archaeologist should be notified. The archaeologist will assess the find and provide mitigation recommendations.
10. **Coastal Development Permit.** An approved Coastal Development Permit from the California Coastal Commission is required prior to the issuance of building permits.
11. **Monterey County Health Department.** Approval from the Monterey County Health Department, Environmental Health Bureau is required prior to the issuance of building permits.

12. **Signature:** The resolution for the use permit is not valid and construction shall not commence until a copy of the resolution signed by the permittee or authorized agent, acknowledging receipt of the permits and acceptance of the terms and conditions, is returned to the Community Development Department.
13. **Terms and Conditions:** These terms and conditions shall run with the land, and it is the intention of the Planning Commission and the Permittee to bind all permittees of the subject property to the terms and conditions, unless amended. Amendments to this permit may be achieved only if an application is made, and the Planning Commission approves, any such amendments pursuant to the Zoning Code regulations.
14. **Conditions of Approval in Plans:** All conditions of approval for the Planning permit(s) shall be printed on a full size sheet and included with the construction plan set submitted to the Building Department.
15. **Dimensions:** The proposed cross arm and brace shall vary no more than two (2) inches in length and dimension from the plans submitted to the Community & Economic Development Department on September 14, 2016.
16. **Trenching:** Any portions of the street that will be open trench will require a Type 2 Slurry Seal from road edge to road edge with like markings to the satisfaction of the City Engineer.
17. **Utility and Right-of-Way Use Agreement:** A utility and right-of-way use agreement shall be finalized prior to construction.
18. **Compaction Report:** The permittee shall submit a compaction report prior to repaving, at the expense of the permittee/contractor.
19. **Traffic Control Plan:** The permittee shall submit a traffic control plan to be approved by the City Engineer.
20. **Federal Communications Commission (FCC):** The facility shall be operated in full compliance at all times with applicable Federal Communications Commission guidelines and regulations. Warning signs shall be posted in compliance with FCC guidelines and requirements.
21. **Reports:** The permittee shall submit an annual monitoring report prepared by a licensed electrical/mechanical engineer to the Community Development Department for the purpose of demonstrating that the facility is in full compliance with guidelines and regulations established by the Federal Communications Commission regarding electromagnetic energy emissions. The first report shall be due one year from final approval of the building permit required for installation of the equipment, and any other additional reports may be required.

22. **Signage:** No logos, signs or other forms of advertising are permitted to be installed on antennas or related equipment.
23. **Equipment:** No additional antennas or related equipment may be installed without prior approval from the Community & Economic Development Department. The permittee shall remove antennas and equipment that have not been in service for a continuous period of six months.

**NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF PACIFIC GROVE:**

- I. The Commission determines that each of the Findings set forth above is true and correct, and by this reference incorporates those Findings as an integral part of this Permit.
- II. The Commission authorizes approval of Use Permit No. 16-085 for a site located at the north side of the public right-of-way of the 500 block of Central Avenue adjacent to 124 14th Street to install wireless communication equipment including an antenna to an existing PG&E pole, and to allow an underground vault.
- III. This permit shall become effective upon the expiration of the 10-day appeal period.
- IV. This permit shall not take effect until the permittee acknowledges and agrees to all terms and conditions and agrees to conform to and comply with those terms and conditions.

**PASSED AND ADOPTED** BY THE PLANNING COMMISSION OF THE CITY OF PACIFIC GROVE this 22<sup>nd</sup> day of September, 2016, by the following vote:

AYES:

NOES:

ABSENT:

APPROVED:

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WILLIAM FREDRICKSON, Chair

The undersigned hereby acknowledge and agree to the approved terms and conditions, and agree to fully conform to, and comply with, said terms and conditions.

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Crown Castle NG West, LLC  
Permittee

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Date



Location: North side of Public right-of-way along 500 block of Central Avenue, adjacent to 124 14<sup>th</sup> Street, Pacific Grove, CA 93950

Planning Application: Use Permit No. 16-085

APN: N/A; public right-of-way

**DECLARATION**

I, Wendy Lao, declare as follows:

1. The Notice of Public Hearing was posted on the subject lot in a location that can be viewed from the nearest street. If the subject lot is a through lot, a notice was conspicuously posted adjacent to each street frontage in a location that can be viewed from the street.
2. The Notice of Public Hearing was mailed to owners and occupants of all properties 300 feet from the subject lot. The names and addresses used for such notice was those appearing on the equalized county assessment roll, as updated from time to time.
3. The Notice of Public Hearing was posted in the Monterey County Herald at least 10 days prior to the Public Hearing or issuance of the approval.

I declare under penalty of perjury under laws of the State of California that the foregoing is true and correct.

Print Name: wendy lao

Signature: *Wendy Lao*

Date: 9/13/16



## CITY OF PACIFIC GROVE

### Community Development Department – Planning Division

300 Forest Avenue, Pacific Grove, CA 93950

T :: 831.648.3190 • F :: 831.648.3184 • www.ci.pg.ca.us/cdd

### NOTICE OF EXEMPTION FROM CEQA

**Property Address/Location:** North side of Public right-of-way along 500 block of Central Ave., adjacent to 124 14<sup>th</sup> St. Pacific Grove, CA 93950

**Project Description:** Use Permit (UP) No. 16-085 to allow an existing PG&E pole of 43 feet height to install wireless communication equipment including an antenna, a disconnect box, a power meter, and an underground vault.

APN: n/a; public right-of-way

ZC: n/a; public right-of-way GP: n/a; public right-of-way

Applicant Name: Mark Hansen, Crown Castle Government Relations Specialist Phone #: (408) 468-5525

Mailing Address: 695 River Oaks Parkway, San Jose, CA 95134

Email Address: Mark.Hansen@crowncastle.com

**Public Agency Approving Project:** City of Pacific Grove, Monterey County, California

**Exempt Status** (Check One):

- Ministerial (Sec. 21080(b)(1):15268))
- Declared Emergency (Sec. 21080(b)(3): 15269(a))
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
- Categorical Exemption

Type and Section Number: Section 15301 Class 1 Categorical Exemption

**Exemption Findings:**

The project includes an existing PG&E pole of 43 feet height to install wireless communication equipment including an antenna, a disconnect box, a power meter, and an underground vault, and therefore qualifies for a Class 1 Exemption from CEQA requirements. Section 15301(b) Existing Facilities states that “existing facilities of both investor and publicly owned utilities used to provide... public utility services” are considered Categorical Exemptions. Furthermore, Section 15301(e) Existing Facilities states that “additions to existing structures provided that the addition will not result in an increase of more than (1) 50 percent of the floor area of the structures before the addition” are also considered Categorical Exemptions. The proposed alterations do not present any unusual circumstances that would result in a potentially significant environmental impact.

**Contact: Wendy Lao, Assistant Planner      Contact Phone: (831) 648-3185**

**Signature:**

**Date: September 15, 2016**

Monterey County Health Department
Environmental Health Bureau
1270 Natividad Road
Salinas, CA 93906
(831) 755-4507
Fax (831) 796-8698

Jurisdiction Name City of Pacific Grove
Use Permit # 16-095, 16-096, 16-097
Or
Building Permit #
Contact Name Wendy Lao, Assistant Planner
Phone # (831) 648-3185

HAZARDOUS MATERIAL QUESTIONNAIRE

Business Name Crown Castle NG West LLC Type of Business CLEC
Site Location Near 500, 388, 230 Central City Pacific Grove APN: N/A; ROW Only
Mailing Address 695 River Oaks Parkway, San Jose, CA 95134
Business Contact Mark Hansen (408) 468-5525
Property Owner City of Pacific Grove (ROW) (831) 648-5722 ext. 200

- 1. Will your business/proposed project be using any hazardous materials such as oil, fuels, solvents, compressed gases, acids, corrosives, pesticides, fertilizers, paints or other chemicals?
2. Will your business/proposed project be using hazardous materials in quantities of 55 gallons and above for liquids, 500 lbs. and above for solids and/or 200 cubic feet and above for compressed gases?
3. Will your business/proposed project be using any quantities of acutely hazardous materials such as ammonia, chlorine, sulfuric acid, formaldehyde, hydrogen peroxide, methyl bromide or other restricted pesticides?
4. Will your business/proposed project be using underground storage tanks to store hazardous materials?
5. Will your business/proposed project be generating any quantities of hazardous waste such as waste oil, waste solvents, etc?
6. Will your business/proposed project be emitting any hazardous air emissions?

CERTIFICATION:

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and belief.

ANY QUESTIONS REGARDING THIS FORM CAN BE DIRECTED TO:

Monterey County Health Department
Environmental Health Bureau
1270 Natividad Road
Salinas, CA 93906
(831) 755-4507
Fax (831) 796-8698

Executed AT:

Pacific Grove, CA
City, State

Print Name of Owner/Operator: Mark Hansen

Signature of Owner/Operator: Mark Hansen

For Local Jurisdiction Use Only:

- 1. Is there a known or proposed school, hospital, day care, or long term care facility within 1,000 feet of this site location?
2. Is there a known or proposed school, hospital, day care, or long term care facility 1/4 mile of this site location?

St Angela's children center, 136 9th St, but ~1150 ft away from 500 Central

Health Department Clearance Signature: Date:

Print Name and Title:

Air Pollution District Clearance Signature: Date:

Print Name and Title:

**JERROLD T. BUSHBERG Ph.D., DABMP, DABSNM, FAAPM, FHPS**  
**◆HEALTH AND MEDICAL PHYSICS CONSULTING◆**

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7784 Oak Bay Circle Sacramento, CA 95831  
(800) 760-8414–jbushberg@hampc.com

Ernesto Figueroa  
Sr. RF Engineer  
Crown Castle  
695 River Oaks Parkway  
San Jose, CA 95134

September 1, 2016

### **Introduction**

This report provides an analysis of the technical specifications the proposed Crown Castle wireless facilities in order to determine compliance with public and occupational radiofrequency (RF) safety standards. The project scope for Crown Castle includes the installation of new wireless equipment and all associated brackets on utility poles in the public right-of-way in accordance with the construction specifications and governing construction guidelines as depicted in the node configuration drawing (attachment 1). These nodes will be used for wireless telecommunications transmission and reception utilizing one pseudo omni-directional Amphenol antennae modelCUUT360X12Fxyz0 mounted to a utility pole. The antenna and power specification details are depicted in attachment two. The distance from the antenna center to the ground for all nodes will be at least 24.6 feet. This analysis represent the worst case of any of the proposed nodes that are utilizing these transmission and antennae specifications. There will be one node (CA-DTMon01m) of this configuration proposed for 500 Central Avenue, City of Pacific Grove in Monterey county, CA (see Appendix A-0).

### **Calculation Methodology**

Calculations at the level of the antenna were made in accordance with the cylindrical model recommendations for near-field analysis contained in the Federal Communications Commission, Office of Engineering and Technology Bulletin 65 (OET 65) entitled "Evaluating Compliance with FCC-Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." RF exposure calculations at ground level were made using equation 10 from the same OET document. Several assumptions were made in order to provide the most conservative or "worse case" projections of power densities. Calculations were made assuming that all channels were operating simultaneously at their maximum design ERP. Attenuation (weakening) of the signal that would result from surrounding foliage or buildings was ignored. Buildings or other structures can reduce the signal strength by a factor of 10 (i.e., 10 dB) or more depending upon the construction material. In addition, for ground level calculations, the ground or other surfaces were considered to be perfect reflectors (which they are not) and the RF energy was assumed to overlap and interact constructively at all locations (which they would not) thereby resulting in the calculation of the maximum potential exposure. In fact, the accumulations of all these very conservative assumptions, will significantly overestimate the actual exposures that would typically be expected from such a facility. However, this method is a prudent approach that errs on the side of safety. The assessment also included the RF exposure contribution from the closest base station to the proposed project (a macro cell) located at 542 Lighthouse Ave. Pacific Grove. A worst case assumption was made that all six potential carriers were co-located at this site (see Attachment 1 - Antenna Power Detail Macro Site).

## RF Safety Standards

The two most widely recognized standards for protection against RF field exposure are those published by the American National Standards Institute (ANSI) C95.1 and the National Council on Radiation Protection and measurement (NCRP) report #86.

The NCRP is a private, congressionally chartered institution with the charge to provide expert analysis of a variety of issues (especially health and safety recommendations) on radiations of all forms. The scientific analyses of the NCRP are held in high esteem in the scientific and regulatory community both nationally and internationally. In fact, the vast majority of the radiological health regulations currently in existence can trace their origin, in some way, to the recommendations of the NCRP.

All RF exposure standards are frequency-specific, in recognition of the differential absorption of RF energy as a function of frequency. The most restrictive exposure levels in the standards are associated with those frequencies that are most readily absorbed in humans. Maximum absorption occurs at approximately 80 MHz in adults. The NCRP maximum allowable continuous occupational exposure at this frequency is 1,000  $\mu\text{W}/\text{cm}^2$ . This compares to 5,000  $\mu\text{W}/\text{cm}^2$  at the most restrictive of the PCS frequencies (~1,800 MHz) that are absorbed much less efficiently than exposures in the VHF TV band.

The traditional NCRP philosophy of providing a higher standard of protection for members of the general population compared to occupationally exposed individuals, prompted a two-tiered safety standard by which levels of allowable exposure were substantially reduced for "uncontrolled" (e.g., public) and continuous exposures. This measure was taken to account for the fact that workers in an industrial environment are typically exposed no more than eight hours a day while members of the general population in proximity to a source of RF radiation may be exposed continuously. This additional protection factor also provides a greater margin of safety for children, the infirmed, aged, or others who might be more sensitive to RF exposure. After several years of evaluating the national and international scientific and biomedical literature, the members of the NCRP scientific committee selected 931 publications in the peer-reviewed scientific literature on which to base their recommendations. The current NCRP recommendations limit continuous public exposure at PCS frequencies to 1,000  $\mu\text{W}/\text{cm}^2$ .

The 1992 ANSI standard was developed by Scientific Coordinating Committee 28 (SCC 28) under the auspices of the Institute of Electrical and Electronic Engineers (IEEE). This standard, entitled "IEEE Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz" (IEEE C95.1-1991), was issued in April 1992 and subsequently adopted by ANSI. A complete revision of this standard (C95.1-2005) was completed in October 2005 by SCC 39 the IEEE International Committee on Electromagnetic Safety. The current version, including minor revisions, was published in March 2010. Their recommendations are similar to the NCRP recommendation for the maximum permissible exposure (MPE) to the public PCS frequencies (950  $\mu\text{W}/\text{cm}^2$  for continuous exposure at 1,900 MHz) and incorporates the convention of providing for a greater margin of safety for public as compared with occupational exposure. Higher whole body exposures are allowed for brief periods provided that no 30 minute time-weighted average exposure exceeds these aforementioned limits.

On August 9, 1996, the Federal Communications Commission (FCC) established a RF exposure standard that is a hybrid of the current ANSI and NCRP standards. The maximum permissible exposure values

used to assess environmental exposures are those of the NCRP (i.e., maximum public continuous exposure at PCS frequencies of  $1,000 \mu\text{W}/\text{cm}^2$ ). The FCC issued these standards in order to address its responsibilities under the National Environmental Policy Act (NEPA) to consider whether its actions will "significantly affect the quality of the human environment." In as far as there was no other standard issued by a federal agency such as the Environmental Protection Agency (EPA), the FCC utilized their rulemaking procedure to consider which standards should be adopted. The FCC received thousands of pages of comments over a three-year review period from a variety of sources including the public, academia, federal health and safety agencies (e.g., EPA & FDA) and the telecommunications industry. The FCC gave special consideration to the recommendations by the federal health agencies because of their special responsibility for protecting the public health and safety. In fact, the maximum permissible exposure (MPE) values in the FCC standard are those recommended by EPA and FDA. The FCC standard incorporates various elements of the 1992 ANSI and NCRP standards which were chosen because they are widely accepted and technically supportable. There are a variety of other exposure guidelines and standards set by other national and international organizations and governments, most of which are similar to the current ANSI/IEEE or NCRP standard, figure one.

The FCC standards "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation" (Report and Order FCC 96-326) adopted the ANSI/IEEE definitions for controlled and uncontrolled environments. In order to use the higher exposure levels associated with a controlled environment, RF exposures must be occupationally related (e.g., PCS company RF technicians) and they must be aware of and have sufficient knowledge to control their exposure. All other environmental areas are considered uncontrolled (e.g., public) for which the stricter (i.e., lower) environmental exposure limits apply. All carriers were required to be in compliance with the new FCC RF exposure standards for new telecommunications facilities by October 15, 1997. These standards applied retroactively for existing telecommunications facilities on September 1, 2000.

The task for the physical, biological, and medical scientists that evaluate health implications of the RF data base has been to identify those RF field conditions that can produce harmful biological effects. No panel of experts can guarantee safe levels of exposure because safety is a null concept, and negatives are not susceptible to proof. What a dispassionate scientific assessment can offer is the presumption of safety when RF-field conditions do not give rise to a demonstrable harmful effect.

### **Summary & Conclusions**

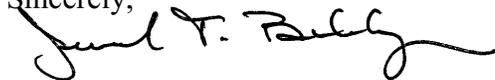
All Crown Castle antenna systems operating with the maximal exposure conditions characteristics as specified above and observing a 4 foot public exclusion zone directly in front of and at the same elevation as the antenna, will be in full compliance with FCC RF public and occupational safety exposure standards (see appendix A-1). These transmitters, by design and operation, are low-power devices (see attachment 2). An RF safety notice sign, as depicted in appendix A-2 should be placed near the antenna. This sign should contain appropriate contact information and indicate that RF exposures at 4 feet or closer to the face of the antenna may exceed the FCC public exposure standards respectively. Thus only qualified RF workers may work within the 4 foot exclusion zone. The maximum RF exposure at ground level from these nodes will not be in excess of 6.8% of the FCC public safety standard, (see appendix A-3). A chart of the electromagnetic spectrum and a comparison of RF power densities from various common sources is presented in figures two and three respectively in order to place exposures from wireless telecommunications systems in perspective.

The assessment of the RF exposure contribution from the closest base station to the proposed project (a macro cell) located at 542 Lighthouse Ave. Pacific Grove) revealed that the maximum contribution from macro cell site to the CA-DTMon01m DAS Node will be less than 0.01% Public MPE. Similarly the maximum contribution from the closest DAS Node to the macro cell site will be less than 0.1% Public MPE. A worst case assumption was made that all six potential carriers were co-located at the macro cell site and that the relative elevation of the antennae at each location to one another with optimized to yield the highest potential exposure (see Appendix A-1).

Given the low levels of radiofrequency fields that would be generated from all Crown Castle directional antenna installations of this configuration, (e.g., antenna specification and input power); where the center of the antenna is 24.6 or more feet above grade, and the 4 foot public exclusion zone directly in front and at the same elevation as the antenna is observed, there is no scientific basis to conclude that harmful effects will attend the utilization of these proposed wireless telecommunications facilities. This conclusion is supported by a large numbers of scientists that have participated in standard-setting activities in the United States who are overwhelmingly agreed that RF radiation exposure below the FCC exposure limits has no demonstrably harmful effects on humans.

These findings are based on my professional evaluation of the scientific issues related to the health and safety of non-ionizing electromagnetic radiation and my analysis of the technical specification as provided by Crown Castle Networks. The opinions expressed herein are based on my professional judgement and are not intended to necessarily represent the views of any other organization or institution. Please contact me if you require any additional information.

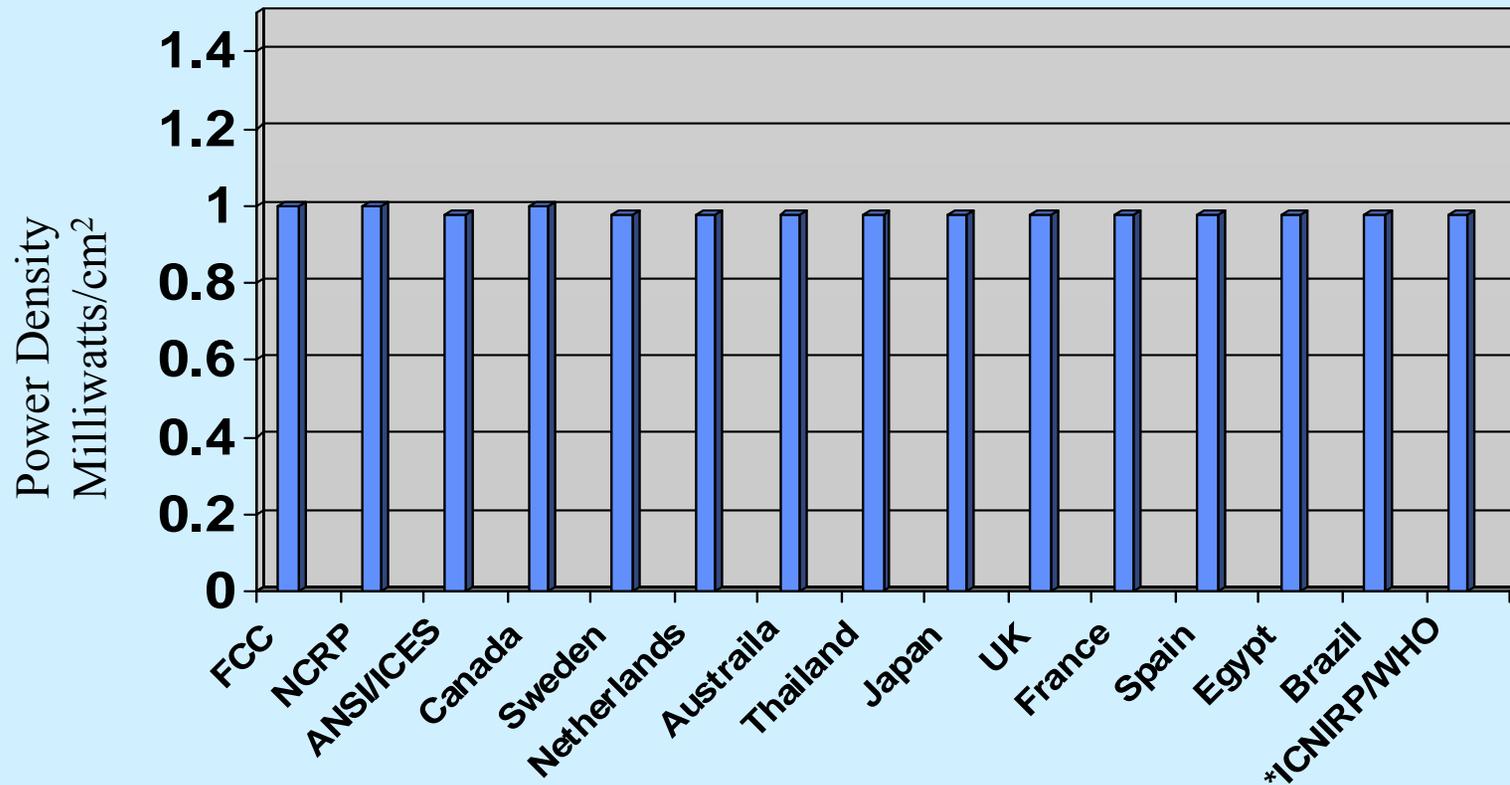
Sincerely,



Jerrold T. Bushberg Ph.D., DABMP, DABSNM, FAAPM  
Diplomate, American Board of Medical Physics (DABMP)  
Diplomate, American Board of Science in Nuclear Medicine (DABSNM)  
Fellow, American Association of Physicists in Medicine (FAAPM)  
Fellow, Health Physics Society (FHPS)

Enclosures: Figures 1-3; Attachment 1,2; Appendix A-0, A-1, A-2, A-3 and Statement of Experience.

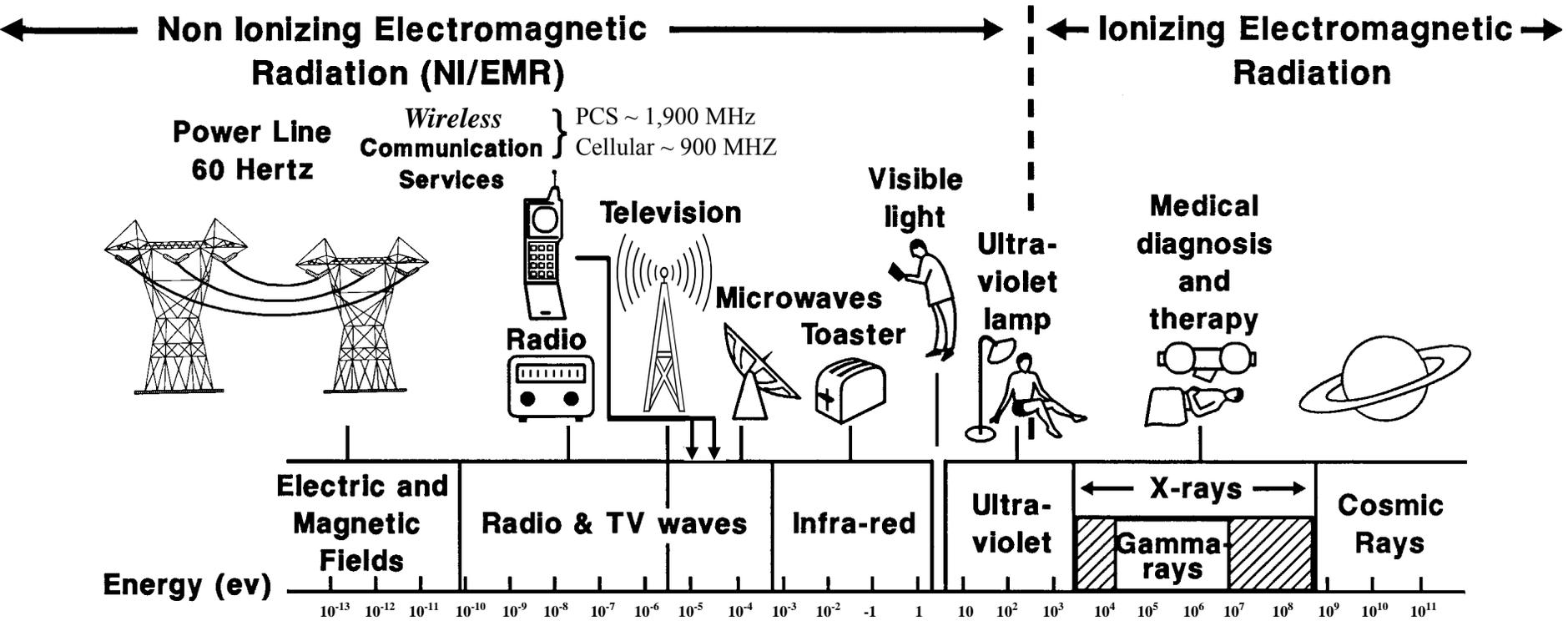
# National and International Public RF Exposure Standards (DAS @ 1,950 MHz)



**\*International Commission on Non-Ionizing Radiation Protection (ICNIRP) Public Safety Exposure Standard. ICNIRP standard recommended by the World Health Organization (WHO). Members of the ICNIRP Scientific Committee were from:**

- Australia
- Finland
- France
- Germany
- Hungary
- Italy
- Sweden
- Japan
- United Kingdom
- United States

Figure 1



# The Electromagnetic Spectrum

Figure 2

# Typical Exposure from Various Radio Frequency / Microwave Sources

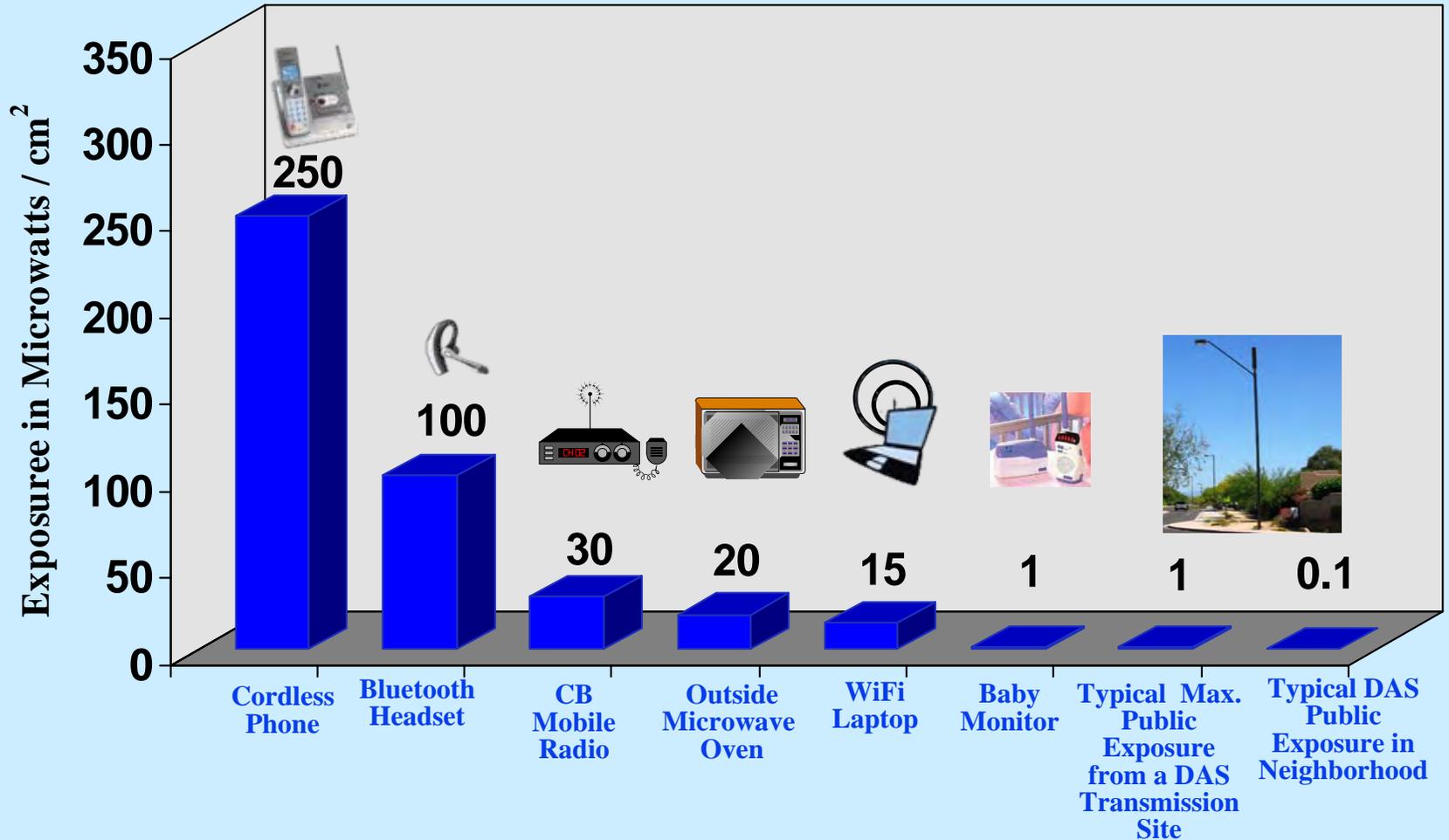


Figure 3

# **Attachment 1**

## **Site Configuration Examples**



**LEGEND**

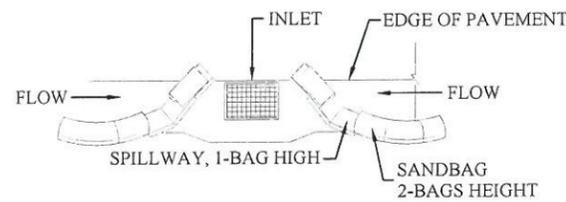
SYMBOL	DESCRIPTION
<b>PROPOSED</b>	
	2 X 3 VAULT
	TRENCH AND FIBER CONDUIT (PVT)
<b>EXISTING</b>	
	EXISTING UTILITY POLE
	STATION POINTS (10' INCREMENTS)
	EXISTING CURB RAMP
	EXISTING CURB & GUTTER
	EXISTING RIGHT OF WAY
	EXISTING CENTER LINE

**EROSION AND SEDIMENT CONTROL NOTES:**

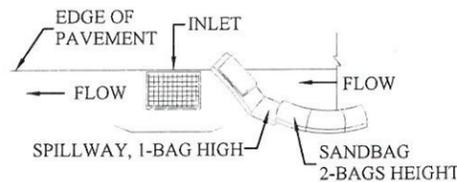
TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
- FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
- THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
- EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
- ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

**STORMDRAIN INLET PROTECTION**



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

- NOTES:**
- INTENDED FOR SHORT - TERM USE.
  - USE TO INHIBIT NON - STORM WATER FLOW.
  - ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
  - BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
  - NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

**NOTES:**

- CONTRACTOR TO POT HOLE ALL UTILITY CROSSINGS.
- CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
- SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEEPED AND CLEANED AS NEEDED.
- CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
- CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
- SIDEWALK SHALL BE RESTORED/REPLACED PER CITY STANDARD DRAWINGS.
- PEDESTRIAN RAMP WILL NOT BE DISTURBED.

**ROW GROUND CONSTRUCTION NOTES:**

- GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
- CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 227-2600 OR 811.
- ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- ALL EQUIPMENT TO BE BONDED.
- METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING.
- CAULK CABINET BASE AT PAD.

**NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:**

- LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPT. OF PUBLIC WORKS FOR APPROVAL.
- CHANGES MAY BE PERMITTED BY THE DEPT. OF PUBLIC WORKS IN CASES OF CONFLICTING FACILITIES.
- CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
- MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

**CALIFORNIA STATE CODE COMPLIANCE:**

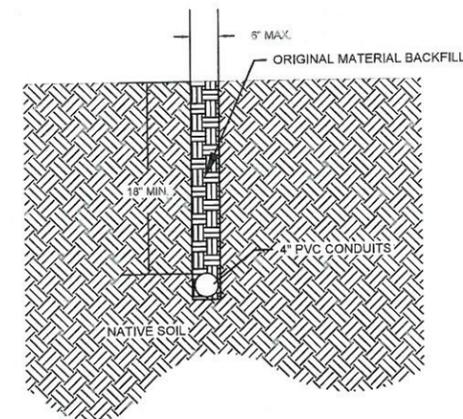
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2010
- 2010 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2010 UBC, 2010 UMC, 2010 UPC AND THE 2010 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2010 CALIFORNIA MECHANICAL CODE
- ANSI/ISA-222-F LIFE SAFETY CODE NFPA-101
- 2010 CALIFORNIA PLUMBING CODE
- 2010 CALIFORNIA ELECTRICAL CODE
- 2010 LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

FCC NOTE: THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

**IN DIRT - PRIVATE TYPICAL SECTION (N.T.S.)**



**INSTALLATION NOTES:**

- CUT 6" MAX. WIDTH X 18" + DEPTH TRENCH
- BACKFILL WITH THE ORIGINAL MATERIAL FROM THE TRENCH
- RESTORE THE SURFACE

**ABBREVIATIONS**

A/C	ASPHALT CURB
B.O.C.	BACK OF CURB
B/EOP	BACK OF EDGE OF PAVEMENT
C&G	CURB & GUTTER
CL	CENTERLINE
EX	EXISTING
EOP	EDGE OF PAVEMENT
F.O.C.	FACE OF CURB
F/EOP	FACE OF EDGE OF PAVEMENT
PL	PROPERTY LINE
R/W	RIGHT OF WAY
S/B	SUBDIVISION BOUNDARY

**CA-DTMON01m**

**DOWNTOWN MONTEREY**  
CROWN CASTLE PROJECT NO  
**V252654**

CLIENT:



655 RIVER OAKS PARKWAY  
SAN JOSE, CA 95134  
www.crowncastle.com

PREPARED BY:



8841 EDISON PLACE, SUITE 110  
CARLSBAD, CA 92008  
PHONE: (760) 929-0910  
FAX: (760) 929-0936  
www.coastalcomminc.com

**PROPRIETARY INFORMATION**

THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROPRIETARY AND CONFIDENTIAL TO VERIZON. ANY USE OR DISCLOSURE OTHER THAN AS IT RELATES TO VERIZON IS STRICTLY PROHIBITED.

**DIGALERT**



UNDERGROUND SERVICE ALERT  
TICKET # \_\_\_\_\_

**DESCRIPTION**

REVISED DRAWINGS.	4/2/15
VAULTED (2) RRUS-12	12/04/15
ANTENNA CHANGE	06/16/16

**REVISION / ISSUE**

REVISION / ISSUE	DATE

**SITE NAME & ADDRESS**

500 CENTRAL AVE  
PACIFIC GROVE, CA

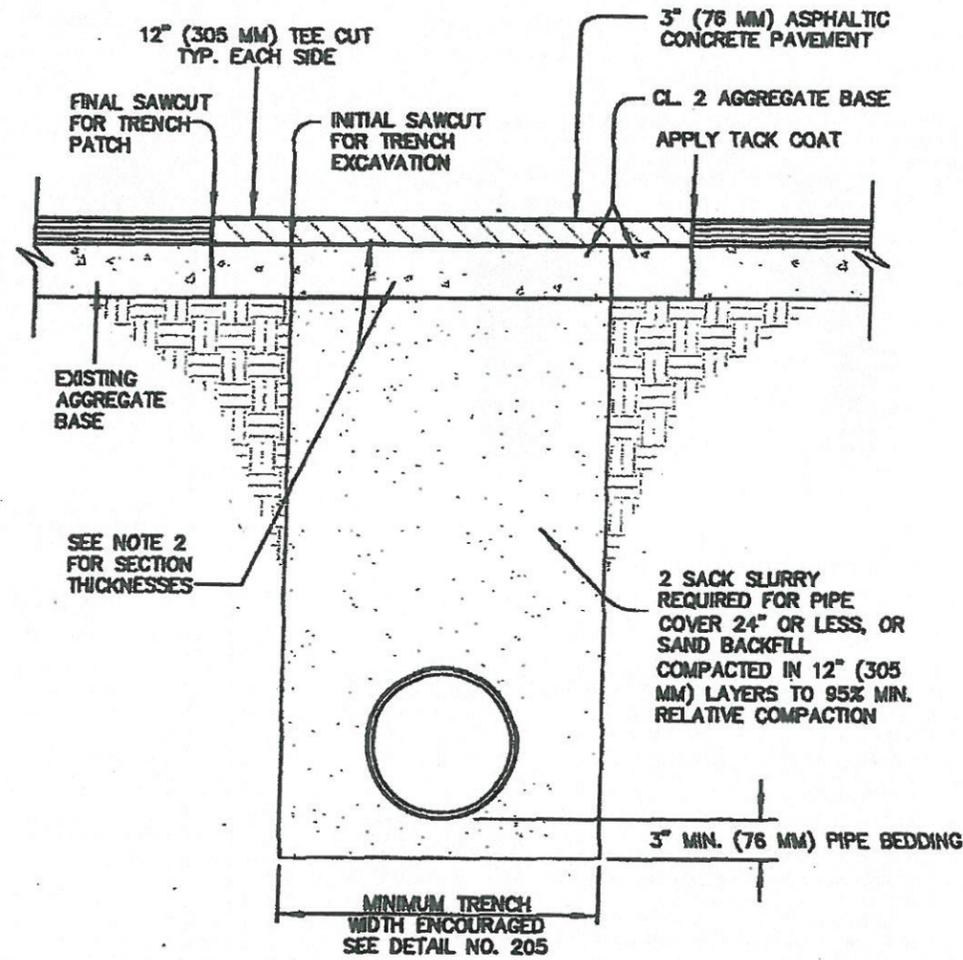
**DETAILS & NOTES**

DRAWN BY: AGR	DRAFT DATE: 02/20/15	APPROVED BY: TT
------------------	-------------------------	--------------------

SHEET NUMBER

**D-1**

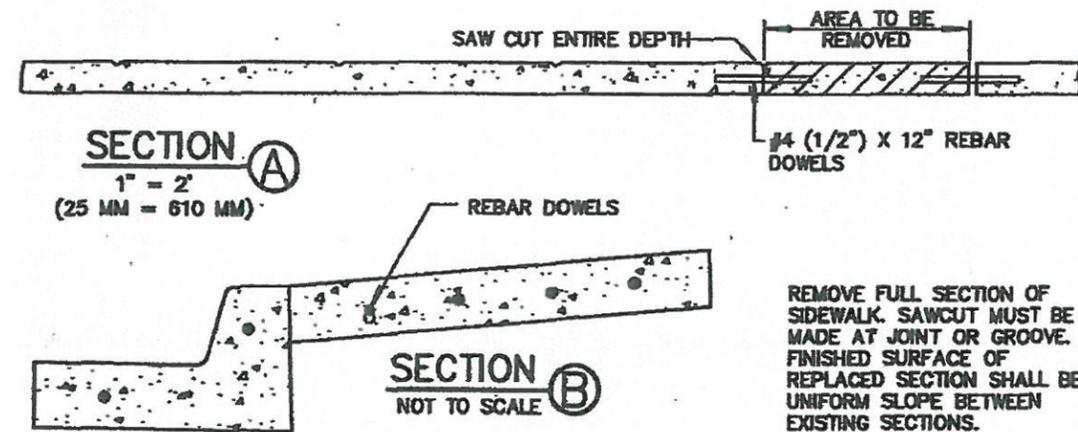
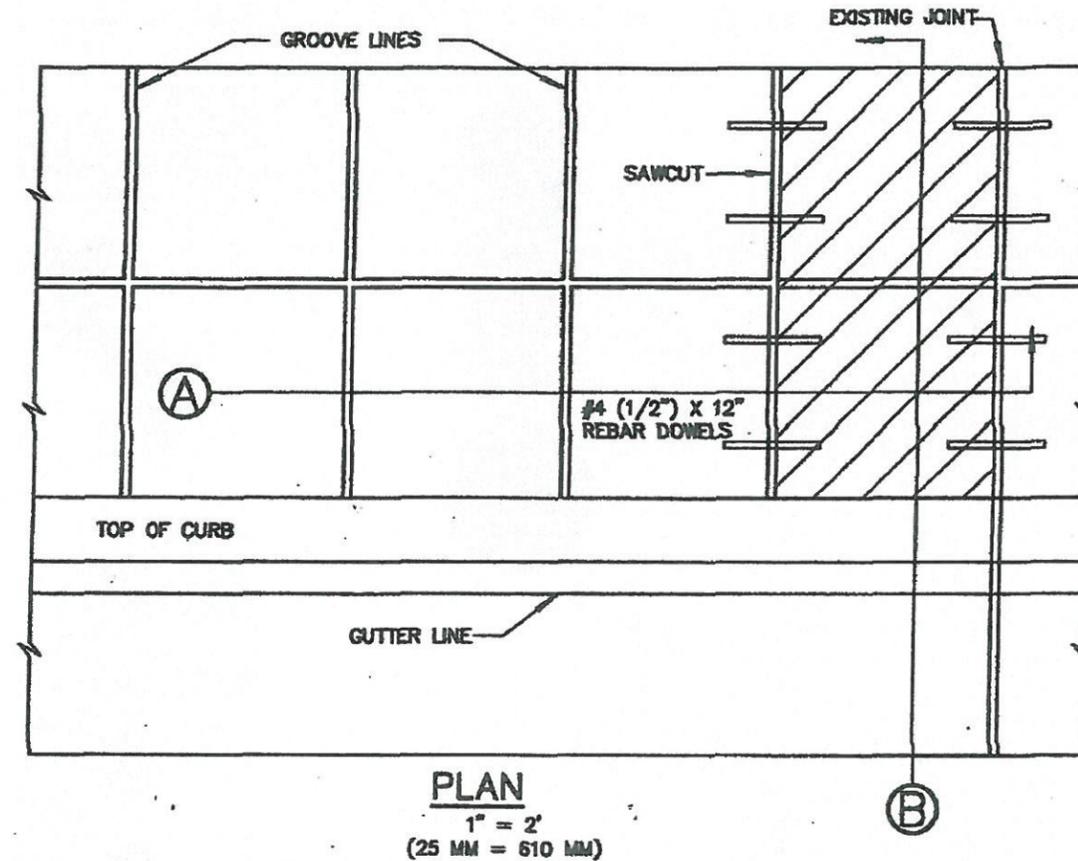
**CITY OF PACIFIC GROVE**  
 (STANDARD DETAIL NO. 207)  
**TRENCH SECTION & PAVEMENT REPLACEMENT**  
 N.T.S.



**NOTES:**

1. SAWCUTS REQUIRED FOR ALL PATCHES
2. DEPTH OF SUBGRADE FOR TRENCH PATCH SHALL MATCH THE EXISTING THICKNESS OF ASPHALT CONCRETE AND AGGREGATE BASE. IN NO CASE SHALL THE TRENCH PATCH BE LESS THAN 3" (76 MM) ASPHALT CONCRETE AND 6" (152 MM) CLASS 2 AGGREGATE BASE. ASPHALT CONCRETE AND CLASS 2 AGGREGATE BASE SHALL CONFORM TO CALTRANS STANDARD SPECIFICATIONS.
3. SAND-BACKFILL TO BE VIBRATORY COMPACTED AT OPTIMUM MOISTURE CONTENT TO 95% RELATIVE COMPACTION. CONTRACTOR SHALL PROVIDE FOR COMPACTION TESTING AND SUBMIT FINAL RESULTS TO CITY ENGINEER.
4. 2 SACK SLURRY CEMENT BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 19, "EARTHWORK" OF CALTRANS STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER.
5. CITY ENGINEER MAY REQUIRE OUTLET FOR TRENCH BOTTOM WHEN WATER BUILD UP OCCURS.

**CITY OF PACIFIC GROVE**  
 (STANDARD DETAIL NO. 111)  
**REPLACEMENT OF CONCRETE SIDEWALK**  
 N.T.S.



**CA-DTMON01m**

DOWNTOWN MONTEREY  
 CROWN CASTLE PROJECT NO.  
**V252654**

CLIENT:



695 RIVER OAKS PARKWAY  
 SAN JOSE, CA 95134  
 www.crowncastle.com

PREPARED BY:



5841 EDISON PLACE, SUITE 110  
 CARLSBAD, CA 92008  
 PHONE: (760) 929-0910  
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 www.coastalcomm.com

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 CALL AT  
 LEAST TWO  
 DAYS BEFORE  
 YOU DIG

UNDERGROUND SERVICE ALERT  
 TICKET # \_\_\_\_\_

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REVISED DRAWINGS.	4/2/15
VAULTED (2) RRUS-12	12/04/15
ANTENNA CHANGE	06/16/16

REVISION / ISSUE      DATE

SITE NAME & ADDRESS

500 CENTRAL AVE  
 PACIFIC GROVE, CA

DETAILS & NOTES

DRAWN BY:      DRAFT DATE:      APPROVED BY:  
 AGR      02/20/15      TT

SHEET NUMBER:

**D-2**



696-960 / 1695-2700 / 1695-2700 MHz

CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

Features

- Pseudo Omni configuration with 6 connectors
- Ideal for Small Cell / DAS applications
- Available with 4.1/9.5 or 4.3/10 or 7/16-DIN connectors
- Three unique mounting options
- Can be painted to blend in with a mounting structure



Connector Description

The antenna has 6 connectors located at the bottom, each marked with a colored ring.

Low Band	696-960 MHz	Red Rings	●	(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female
High Band #1	1695-2700 MHz	Yellow Rings	●	(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female
High Band #2	1695-2700 MHz	Orange Rings	●	(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female

Electrical Characteristics

Electrical Characteristics	Low Band		High Bands #1 and #2			
	696-960 MHz		(2x) 1695-2700 MHz			
Frequency Bands (MHz)	696-806	806-960	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	±45°		(2x) ±45°			
Horizontal Beamwidth	360°	360°	360°	360°	360°	360°
Vertical Beamwidth	20°	15°	7.5°	7.0°	6.5°	6.0°
Gain	5.5 dBi	6.0 dBi	9.0 dBi	9.5 dBi	10.0 dBi	10.3 dBi
Electrical Downtilt (°)	(x) 0, 2, 4, 6, 8, 10, 12		(y) 0, 4, 8, 12			
Impedance	50Ω		50Ω			
VSWR	≤ 1.5:1		≤ 1.5:1			
Upper Sidelobe Suppression	> 15 dB		> 15 dB			
Isolation Between Ports	20 dB		25 dB			
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc			
Input Power	(2x) 500 W		(4x) 300 W			
Diplexed	No					
Number of Sectors / Sector Spacing	3 Sectors / Pseudo Omni					
Lightning Protection	Direct Ground					

Mechanical Characteristics

Antenna Dimensions (Height x Diameter)	1219 x 371 mm	48.0 x 14.6 in
Weight without Mounting Bracket Kit	17.3 kg	38.1 lbs
Survival Wind Speed	200 km/hr	125 mph
Wind Area	0.47 m <sup>2</sup>	5.0 ft <sup>2</sup>
Wind Load (160 km/hr or 100 mph)	391 N	88 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

REV112315R

www.amphenol-antennas.com

1 of 5



696-960 / 1695-2700 / 1695-2700 MHz

CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

Mounting Kits

This antenna can be mounted using any of the following mounting kits. Mounting kits can be ordered as a separate line item or can be included with the antenna as a single line item. Refer to Ordering Options.

Side Mounting Kit	Top Mounting Kit	Utility Pole Mounting Kit
CWT-MKS-SIDE	CWT-MKS-TOP	WB3X-MKS-01

Ordering Options

When ordering, select the Electrical Downtilt (xy), Paint Color, Mounting Option and Connector Type (z).

Electrical Downtilt Degree (°)	Low Band	replace "x" with one of the following options:	0, 2, 4, 6, 8, 10 or 12
	High Band	replace "y" with one of the following options:	0, 4, 8 or 12

Paint Color	Mounting Option	Connector Type (z)		
		4.1/9.5	4.3/10	7/16-DIN
Unpainted	No Mounting - Antenna Only	CUUT360X12Fxy-0	CUUT360X12Fxys0	CUUT360X12FxyD0
	Side Mounting Kit	CUUT360X12Fxy-0S	CUUT360X12Fxys0S	CUUT360X12FxyD0S
	Top Mounting Kit	CUUT360X12Fxy-0T	CUUT360X12Fxys0T	CUUT360X12FxyD0T
	Utility Pole Mounting Kit	CUUT360X12Fxy-0U	CUUT360X12Fxys0U	CUUT360X12FxyD0U
Black	No Mounting - Antenna Only	CUUT360X12Fxy-0BK	CUUT360X12Fxys0BK	CUUT360X12FxyD0BK
	Side Mounting Kit	CUUT360X12Fxy-0BKS	CUUT360X12Fxys0BKS	CUUT360X12FxyD0BKS
	Top Mounting Kit	CUUT360X12Fxy-0BKT	CUUT360X12Fxys0BKT	CUUT360X12FxyD0BKT
	Utility Pole Mount	CUUT360X12Fxy-0BKU	CUUT360X12Fxys0BKU	CUUT360X12FxyD0BKU
Brown	No Mounting - Antenna Only	CUUT360X12Fxy-0BR	CUUT360X12Fxys0BR	CUUT360X12FxyD0BR
	Side Mounting Kit	CUUT360X12Fxy-0BRS	CUUT360X12Fxys0BRS	CUUT360X12FxyD0BRS
	Top Mounting Kit	CUUT360X12Fxy-0BRT	CUUT360X12Fxys0BRT	CUUT360X12FxyD0BRT
	Utility Pole Mounting Kit	CUUT360X12Fxy-0BRU	CUUT360X12Fxys0BRU	CUUT360X12FxyD0BRU
White	No Mounting - Antenna Only	CUUT360X12Fxy-0WH	CUUT360X12Fxys0WH	CUUT360X12FxyD0WH
	Side Mounting Kit	CUUT360X12Fxy-0WHS	CUUT360X12Fxys0WHS	CUUT360X12FxyD0WHS
	Top Mounting Kit	CUUT360X12Fxy-0WHT	CUUT360X12Fxys0WHT	CUUT360X12FxyD0WHT
	Utility Pole Mounting Kit	CUUT360X12Fxy-0WHU	CUUT360X12Fxys0WHU	CUUT360X12FxyD0WHU

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

REV112315R

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5 of 5

1 SCALE N.T.S.

CA-DTMON01m

DOWNTOWN MONTEREY  
CROWN CASTLE PROJECT NO  
V252654

CLIENT:



695 RIVER OAKS PARKWAY  
SAN JOSE, CA 95134  
www.crownncastle.com

PREPARED BY:



3841 EDISON PLACE, SUITE 110  
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PHONE: (760) 929-0910  
FAX: (760) 929-0936  
www.coastalcomm.com

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DESCRIPTION:

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VAULTED (2) RRUS-12	12/04/15
ANTENNA CHANGE	06/16/16

REVISION / ISSUE DATE

SITE NAME & ADDRESS:

500 CENTRAL AVE  
PACIFIC GROVE, CA

DETAILS & NOTES

DRAWN BY:	DATE:	APPROVED BY:
AGR	02/20/15	TT

SHEET NUMBER:  
D-3

**MAXIMUM PERMISSIBLE EXPOSURE (MPE)  
PLACARD**

# NOTICE

Radio Frequency fields beyond this point may exceed the FCC general public exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

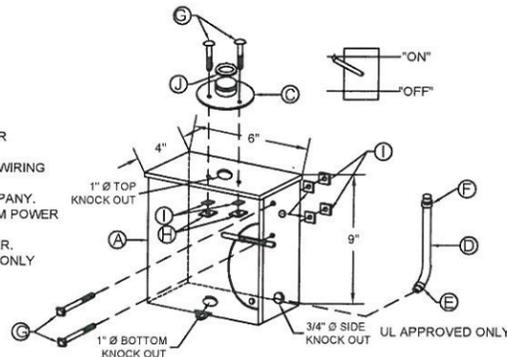
In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(h)

2 SCALE  
N.T.S.

**DISCONNECT BOX  
TYPICAL SECTION: N.T.S.**

NOTES:

1. MAIN DISCONNECT BREAKER.
2. MANUFACTURER SQUARE D - (OR EQUIVALENT).
3. BREAKER SIZE AND INCIDENTAL WIRING SPECIFIED BY CLIENT.
4. KAIC SPECIFIED BY POWER COMPANY.
5. 1" CLOSE NIPPLE FOR FEED FROM POWER SOURCE.
6. 3/4" LIQUID FLEX TO TRANSCIEVER.
7. CABINET LOCKABLE FOR CLIENT ONLY



PARTS LIST		
CALLOUT	QTY	DESCRIPTION
A	1	CABINET WATER PART #
B	1	BREAKER AMP KAIC 2 POLE 120/140 VAC SINGLE PHASE
C	1	1" CLOSE NIPPLE STRAIGHT
D	1	3/4" X 4' LIQUID TIGHT METALLIC FLEX CONDUIT WITH CONNECTOR
E	1	3/4" Ø LIQUID TIGHT FLEX CONNECTOR 45°
F	1	3/4" Ø LIQUID TIGHT FLEX CONNECTOR - STRAIGHT
G	4	5/16" X 1" BOLT - STAINLESS STEEL
H	4	5/16" LOCK WASHER - STAINLESS STEEL
I	4	5/16" NUT - STAINLESS STEEL
J	1	1" LOCK NUT

3 SCALE  
N.T.S.

**METER ENCLOSURE  
(TB Series model 114TB)**

Test Block Bypass TB Series  
100 Amp/600 Volt Socket Only/Self-Contained



- FEATURES**
  - Single meter position
  - Designed to receive wall/hour meters that meet ANSI C12.10
  - Overhead/underground feed
  - Surface mount
  - Top or bottom load exit
- CONSTRUCTION**
  - Type 3R construction
  - Safety socket with factory installed test/bypass facilities\*
  - Strip type sealing ring included
  - 5th jaw provision at time o'clock - 114TB only
  - Provisions for 2 AW base caps or hub kits on top
  - Padlock provision
  - Ring style
- STANDARDS**
  - UL 414 listed, complies with ANSI C12.7
- FINISH**
  - ANSI 61 gray acrylic electrocoat finish
- ACCESSORIES**
  - Fifth jaw kit - catalog #50371
  - Center and offset pole mounting brackets
  - Bussed gutters, see page 68
  - AW hubs
  - Screw type sealing ring - catalog #25016D
  - Steel or clear lexan covers for socket opening

CATALOG NUMBER	AIC Rating	Branch Circuits	Capacity (kVA)	Voltage	Service Type	Number of Joints	Hub Prot.	CONDUCTOR LUG RANGE		DIMENSIONS (INCHES)				
								Phase Conductor (Line/Load)	Neutral Conductor	Figure Number	Height (H)	Width (W)	Depth (D)	
114TB	†	NONE	115	100	600	10 3W	4	AW	1/4 AWG - 2/0 AWG	1/4 AWG - 1/0 AWG	T-1	24	12	4 1/2

\* = 60-in. lbs torque recommended for circuit-closing nut  
† - Meter sockets on this page have certain short circuit current ratings when used in conjunction with the tables on page 72  
Note: For 208/120V, 10-31W systems, order 4-jaw unit and a 5th jaw kit

4 SCALE  
N.T.S.

**PG&E SHUTDOWN PROCEDURES  
(INSTRUCTIONS FOR DE-ENERGIZING THE SITE)**

**RF DISCONNECT BOX**



1. CALL CROWN CASTLE NETWORK OPERATIONS CENTER AT 1-888-632-0931.
2. IDENTIFY RF DISCONNECT BOX.
3. OPEN RF DISCONNECT BOX.
4. OPEN COVER FOR RF DISCONNECT BREAKER.
5. TURN RF DISCONNECT BREAKER TO THE OFF POSITION TO DE-ENERGIZE NODE.
6. TO CONFIRM THAT THE SITE HAS BEEN DE-ENERGIZED, PG&E CREW / TECHNICIAN CAN REMOVE THE SINGLE SCREW ON THE BOTTOM RIGHT COVER OF THE RF DISCONNECT BREAKER AND REMOVE THE COVER TO EXPOSE THE SOURCE AND LOAD TERMINALS ON THE SWITCH AND THEN CHECK FOR NO POTENTIAL BETWEEN THE LOAD TERMINAL AND GROUND TO VERIFY THAT NO RF SIGNAL CAN BE GENERATED.
7. NOTIFY CROWN CASTLE NETWORK OPERATIONS CENTER THAT WORK IS COMPLETE.

FLIP BREAKER TO OFF POSITION TO TURN RF OFF.

RF DISCONNECT BREAKER

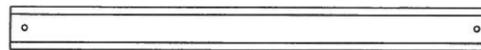
-REMOVE SCREW  
-REMOVE COVER

LOAD TEST LUG

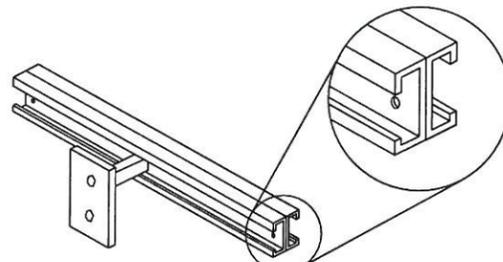
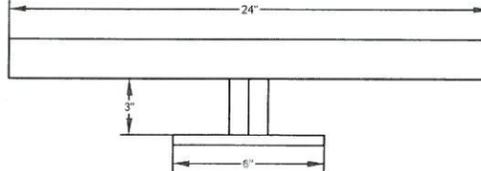
5 SCALE  
N.T.S.

**STAND-OFF BRACKET**

**FRONT VIEW OF STAND-OFF BRACKET**



**TOP VIEW OF STAND-OFF BRACKET**

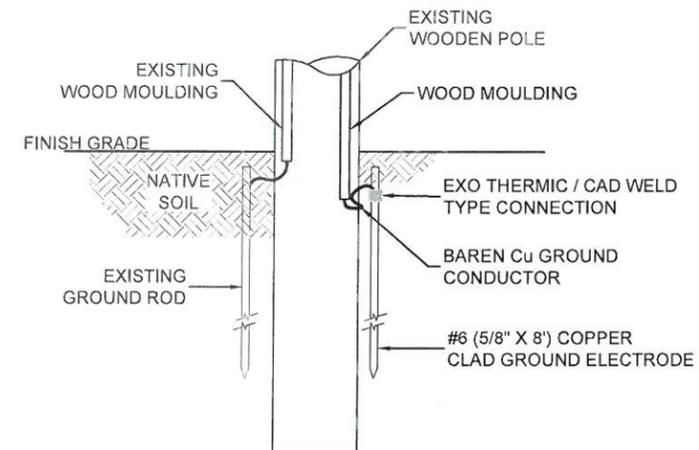


**3D VIEW OF STAND-OFF BRACKET**

6 SCALE  
N.T.S.

**GROUND ROD INSTALLATION FOR WOODEN POLES**

**TYPICAL SECTION: N.T.S.**



NOTE:  
UTILITY POLE GROUND SHALL COMPLY WITH PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA GENERAL ORDER No. 95 (SECTION 59.4, 92.4)

7 SCALE  
N.T.S.

**CA-DTMON01m**

DOWNTOWN MONTEREY  
CROWN CASTLE PROJECT NO  
V252654

CLIENT:



695 RIVER OAKS PARKWAY  
SAN JOSE, CA 95134  
www.crowncastle.com

PREPARED BY:



841 EDISON PLACE, SUITE 110  
CARLSBAD, CA 92008  
PHONE: (760) 929-0910  
FAX: (760) 929-0935  
www.coastalcomm.com

PROPRIETARY INFORMATION

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**DIGALERT**

1-800-227-2600  
CALL AT  
LEAST TWO  
DAYS BEFORE  
YOU DIG

UNDERGROUND SERVICE ALERT  
TICKET # \_\_\_\_\_

DESCRIPTION:

REVISED DRAWINGS.	4/2/15
VAULTED (2) RRUS-12	12/04/15
ANTENNA CHANGE	06/16/16

REVISION / ISSUE DATE

SITE NAME & ADDRESS

500 CENTRAL AVE  
PACIFIC GROVE, CA

DETAILS & NOTES

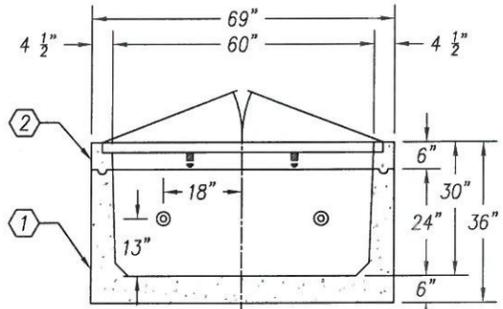
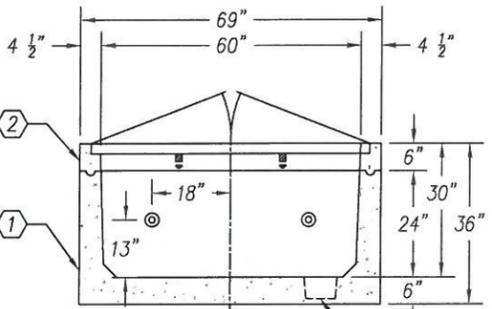
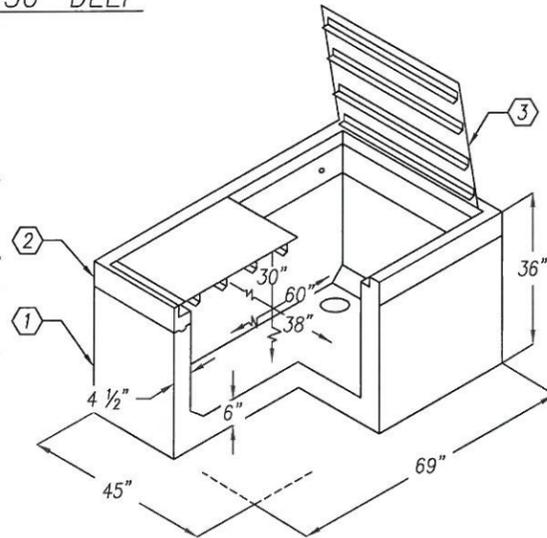
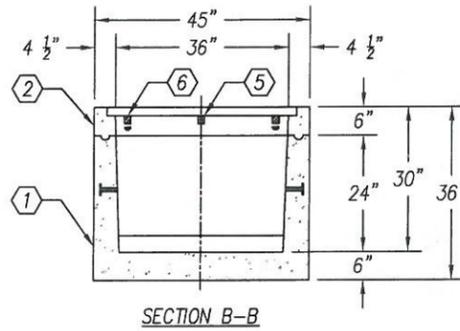
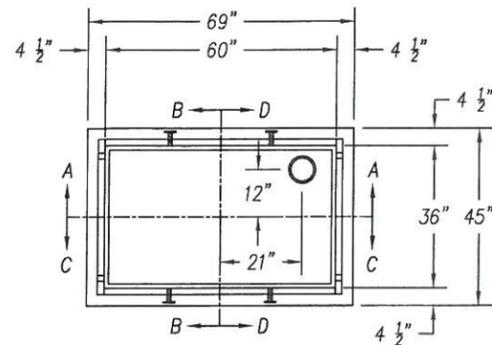
DRAWN BY: AGR DRAFT DATE: 02/20/15 APPROVED BY: TT

SHEET NUMBER:

D-4

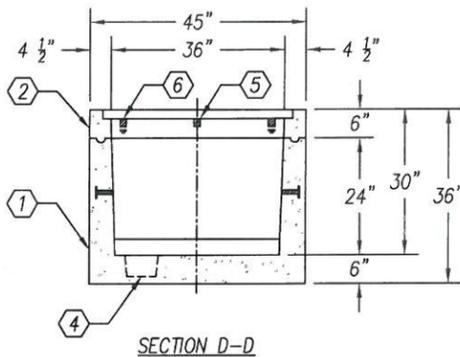
3'-0" X 5'-0" PARKWAY PULL BOX X 30" DEEP

MODEL #3660-FP30-S10-0B



SECTION A-A

SECTION C-C



SECTION D-D

NOTES:

PULL BOX DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE USING 5,500 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT PER CALC. NO. 32355.

DESIGNED IN ACCORDANCE WITH ASTM C857-95 AND ASTM C858-83 SPECIFICATIONS.

COVER DESIGNED FOR PARKWAY LOADING 300 psf.

MINIMUM EXCAVATION SIZE:  
4'-2" x 6'-9" x DEPTH REQ'D

- P83660F-824-S10, 24" BOTTOM SECTION (R3660F-B-24-S10). WT. 3,590 lbs.
- P83660-T6H, 6" TOP RING (CC-LOOP4H-3660) WITH FRAME (F3660-PB-HNG). CAST-IN WT. 575 lbs.
- SC3660-TGSASR-S10, TWO PIECE GALV. PARKWAY SLIP RESISTANT SPRINT ASSIST. HINGED COVER. WT. 400 lbs.
- 6" X 7" DIA. SUMP KNOCKOUT WITH GRATE. LOCATE AS FOLLOWS: BOTTOM SECTION (1) CORE MTD.
- 1/2" DIA. FERRULE LOOP INSERT (55-10-422) FOR HANDLING. LOCATE AS FOLLOWS: TOP RING SECTION (2) CORE MTD. (2) SHELL MTD.
- 1/2" P-35-T INSERT W/CLEANOUT HOLE. (B) FRAME MTD.
- 2 TON SL ANCHOR 3 3/8". BOTTOM SECTION (4) CORE MTD.

GENERAL NOTES:

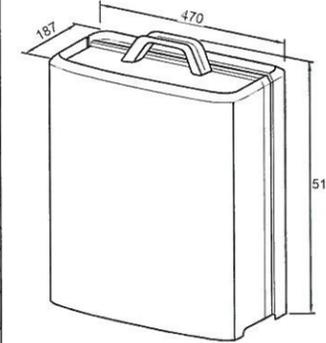
- MINIMUM SOIL BEARING CAPACITY IS HEREBY ASSUMED TO BE 2000 PFS UNLESS OTHERWISE DOCUMENTED BY A GEOGRAPHICAL REPORT THAT SHALL BE PROVIDED TO JENSEN PRECAST BY THE END USER. JENSEN PRECAST SHALL NOT BE HELD RESPONSIBLE FOR THE SOIL BEARING CAPACITY.
- INSTALLATION VAULTS WILL BE AS PER JENSEN INSTALLATION PROCEDURES.
- STRUCTURAL MODIFICATION TO THE JENSEN LINE OF PRODUCTS IS NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM JENSEN ENGINEERING DEPARTMENT.
- DO NOT SCALE THE DRAWINGS, VERIFY ALL DIMENSIONS INCLUDING ROUGH OPENINGS, IF ANY DISCREPANCIES ARE FOUND, NOTIFY THE JENSEN ENGINEER IMMEDIATELY.
- THE JENSEN ENGINEER WILL INTERPRET THE INTENT OF THE DRAWINGS IN CASE OF POSSIBLE CONFLICT OR DISCREPANCY.
- PERMISSIBLE VARIATIONS:  
DIMENSIONAL TOLERANCES - THE LENGTH, WIDTH, HEIGHT, OR DIA. MEASUREMENTS OF THE STRUCTURE WHEN MEASURED ON THE INSIDE SURFACES SHALL NOT DEVIATE FROM DESIGN DIMENSIONS BY MORE THAN THE FOLLOWING: TOLERANCE:  
0 TO 5 FEET 1/4"  
5 TO 10 FEET 3/8"  
10 TO 20 FEET AS AGREED UPON BETWEEN THE SUPPLIER AND PURCHASER.
- SQUARENESS TOLERANCE:  
THE INSIDE OF THE PRECAST CONCRETE COMPONENT SHALL BE SQUARE AS DETERMINED BY DIAGONAL MEASUREMENTS. THE DIFFERENCE BY DIAGONAL MEASUREMENTS SHALL NOT EXCEED THE FOLLOWING:  
MEASURED LENGTH: ALLOWABLE DIFFERENCE  
0 TO 10 FEET 1/2"  
10 TO 20 FEET 3/4"  
20 FEET AND OVER AS AGREED UPON BETWEEN THE SUPPLIER AND PURCHASER.

8 SCALE N.T.S.

ERICSSON - REMOTE RADIO UNIT

(MODEL NO. RRU-12)

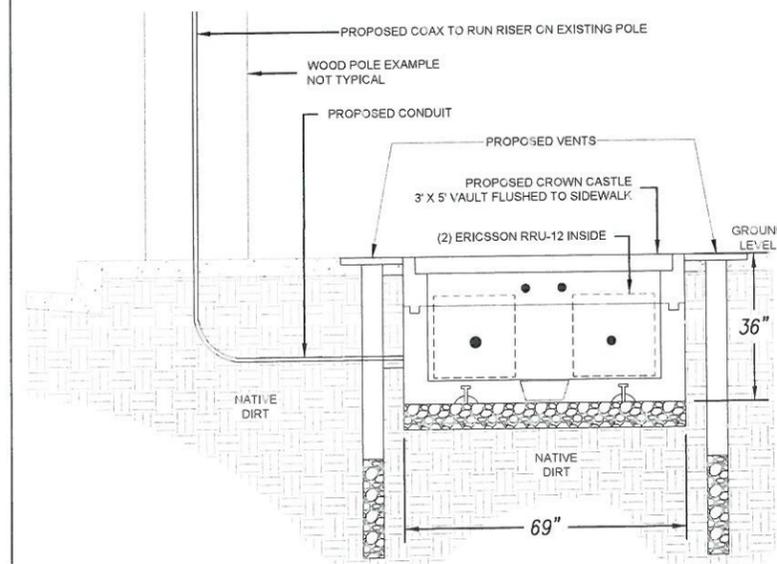
Description	Value
Maximum nominal output power	2x10 W, 2x20 W, 2X30 W, 2X50 W, and 2X60 W (subject to license handling)
Number of carriers	WCDMA and LTE: One to four carriers. GSM: One to eight carriers. CDMA: One to eight carriers. (subject to license handling)
Frequency	1,920 to 1,980 MHz uplink 2,110 to 2,170 MHz downlink B1 for WCDMA and LTE 1,850 to 1,910 MHz uplink 1,930 to 1,990 MHz downlink B2 for GSM, WCDMA and LTE 1,710 to 1,785 MHz uplink 1,805 to 1,880 MHz downlink B3 for GSM, WCDMA and LTE 880 to 910 MHz uplink 925 to 960 MHz downlink B8 for GSM and WCDMA
Dimensions with Solar and Handle and Feet	
Height	518mm
Width	470mm
Depth	190mm
Dimensions without Solar Shield and without Handle or feet	
Height	418mm
Width	458mm
Depth	159mm
Weight	
RRUS 12 B1 and RRU B2	22.4kg
RRUS 12 B3 and RRU 12 B8	26.3kg
Color	Gray



Unit of measurement: mm

9 SCALE N.T.S.

VAULT DETAIL



10 SCALE N.T.S.

CA-DTMON01m

DOWNTOWN MONTEREY  
CROWN CASTLE PROJECT NO  
V252654

CLIENT:



695 RIVER OAKS PARKWAY  
SAN JOSE, CA 95134  
www.crowncastle.com

PREPARED BY:



5841 EDISON PLACE, SUITE 110  
CARLSBAD, CA 92008  
PHONE: (760) 929-6910  
FAX: (760) 929-0936  
www.coastalcomm.com

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UNDERGROUND SERVICE ALERT  
TICKET #

DESCRIPTION

REVISION	DATE
REVISED DRAWINGS	4/2/15
VAULTED (2) RRU-12	12/04/15
ANTENNA CHANGE	06/16/16

REVISION / ISSUE DATE

SITE NAME & ADDRESS

500 CENTRAL AVE  
PACIFIC GROVE, CA

DETAILS & NOTES

DR. W. N.	DRAFT DATE	APPROVED BY:
AGR	02/20/15	TT

SHEET NUMBER:

D-5



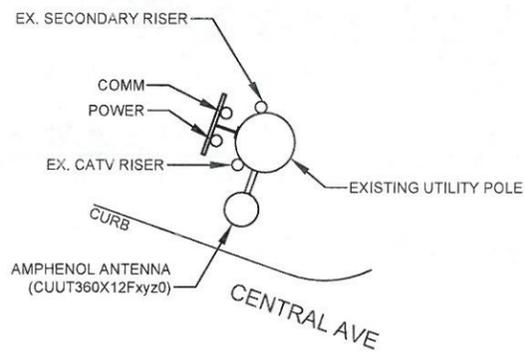
A 9 O'CLOCK VIEW (EXISTING CONDITION)



B 12 O'CLOCK VIEW (EXISTING CONDITION)



C 3 O'CLOCK VIEW (EXISTING CONDITION)



D TOP VIEW

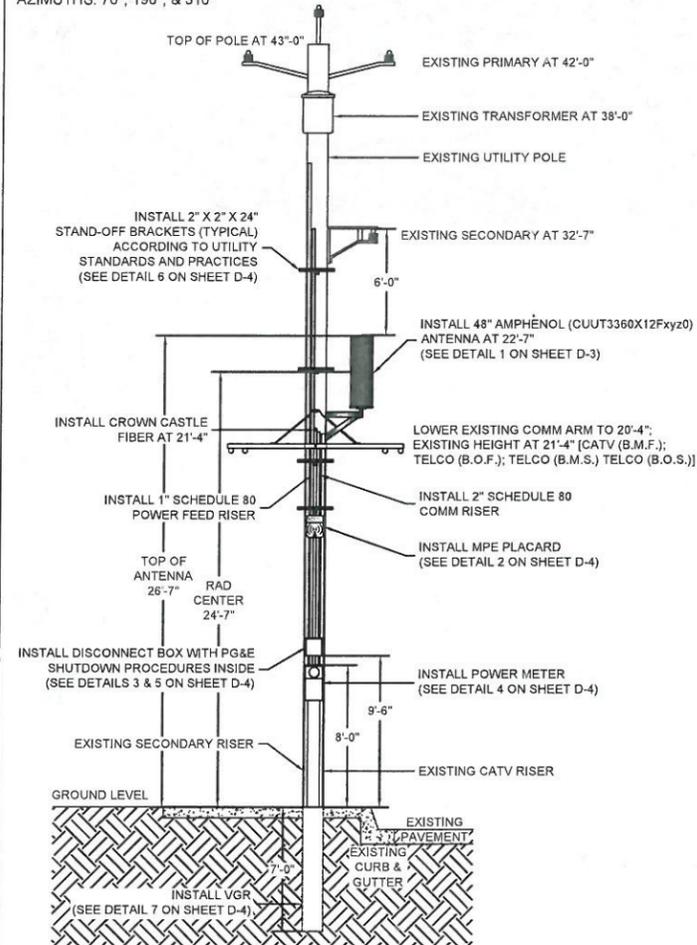
**CROWN CASTLE TO PERFORM THE FOLLOWING:**

- REMOVE & RESTORE 5' X 10' SIDEWALK PANEL.
- 6' DIRT TRENCH.
- INSTALL 2" X 2" X 24" STAND-OFF BRACKETS (TYPICAL) ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- LOWER EXISTING COMM ARM TO 20'-4"; EXISTING HEIGHT AT 21'-4"
- INSTALL SIDE MOUNTING WITH 48" AMPHENOL (CUUT360X12Fxy20) ANTENNA AT 22'-7".
- INSTALL CROWN CASTLE FIBER AT 21'-4".
- INSTALL MPE PLACARD.
- INSTALL DISCONNECT BOX WITH PG&E SHUTDOWN PROCEDURES INSIDE.
- INSTALL 1" SCHEDULE 80 POWER FEED RISER.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL POWER METER.
- INSTALL VGR.
- INSTALL CROWN CASTLE 3' X 5' EQUIPMENT VAULT WITH (2) ERICSSON RRU-12 INSIDE.
- ANTENNAS AND EQUIPMENT TO BE PAINTED TO MATCH POLE.

**E NEW CONSTRUCTION** **N.T.S.**

**UTILITY POLE #NT**

TOP OF POLE: 43'-0"  
 TOP OF ANTENNA: 26'-7"  
 RAD CENTER: 24'-7"  
 AZIMUTHS: 70°, 190°, & 310°



F 3 O'CLOCK VIEW (PROPOSED)

N.T.S.

**CA-DTMON01m**

DOWNTOWN MONTEREY

CROWN CASTLE PROJECT NO

V252654

CLIENT:



695 RIVER OAKS PARKWAY  
 SAN JOSE, CA 95134  
 www.crowncastle.com

PREPARED BY:



5841 EDISON PLACE, SUITE 110  
 CARLSBAD, CA 92008  
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DESCRIPTION

REVISED DRAWINGS.	4/2/15
VAULTED (2) RRU-12	12/04/15
ANTENNA CHANGE	06/16/16

REVISION ISSUE DATE

SITE NAME & ADDRESS

500 CENTRAL AVE  
 PACIFIC GROVE, CA

**SITE PHOTOS & PROPOSED PROFILE**

DRAWN BY: AGR  
 DRAFT DATE: 02/20/15  
 APPROVED BY: TT

SHEET NUMBER:

S-1





# **Attachment 2**

## **Antenna Specifications**

# CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

## Features

- Pseudo Omni configuration with 6 connectors
- Ideal for Small Cell / DAS applications
- Available with 4.1/9.5 or 4.3/10 or 7/16-DIN connectors
- Three unique mounting options
- Can be painted to blend in with a mounting structure



## Connector Description

The antenna has 6 connectors located at the bottom, each marked with a colored ring.

Low Band	696-960 MHz	Red Rings		(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female
High Band #1	1695-2700 MHz	Yellow Rings		(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female
High Band #2	1695-2700 MHz	Orange Rings		(2x) 4.1/9.5 or 4.3/10 or 7/16-DIN Female

Electrical Characteristics	Low Band		High Bands #1 and #2			
Frequency Bands (MHz)	696-960 MHz		(2x) 1695-2700 MHz			
	696-806	806-960	1695-1880	1850-1990	1920-2200	2300-2700
Polarization	±45°		(2x) ±45°			
Horizontal Beamwidth	360°	360°	360°	360°	360°	360°
Vertical Beamwidth	20°	15°	7.5°	7.0°	6.5°	6.0°
Gain	5.5 dBi	6.0 dBi	9.0 dBi	9.5 dBi	10.0 dBi	10.3 dBi
Electrical Downtilt (°)	(x) 0, 2, 4, 6, 8, 10, 12		(y) 0, 4, 8, 12			
Impedance	50Ω		50Ω			
VSWR	≤ 1.5:1		≤ 1.5:1			
Upper Sidelobe Suppression	> 15 dB		> 15 dB			
Isolation Between Ports	20 dB		25 dB			
IM3 (2x20W carrier)	< -153 dBc		< -153 dBc			
Input Power	(2x) 500 W		(4x) 300 W			
Diplexed	No					
Number of Sectors / Sector Spacing	3 Sectors / Pseudo Omni					
Lightning Protection	Direct Ground					

## Mechanical Characteristics

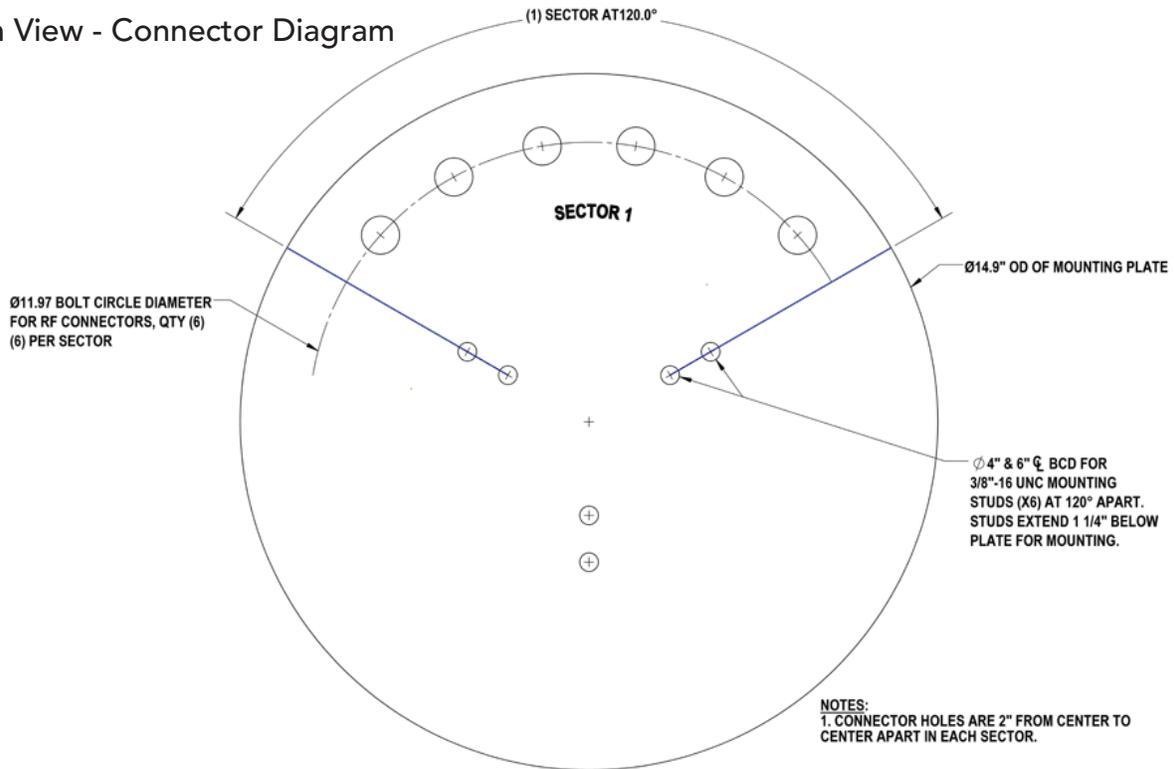
Antenna Dimensions (Height x Diameter)	1219 x 371 mm	48.0 x 14.6 in
Weight without Mounting Bracket Kit	17.3 kg	38.1 lbs
Survival Wind Speed	200 km/hr	125 mph
Wind Area	0.47 m <sup>2</sup>	5.0 ft <sup>2</sup>
Wind Load (160 km/hr or 100 mph)	391 N	88 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

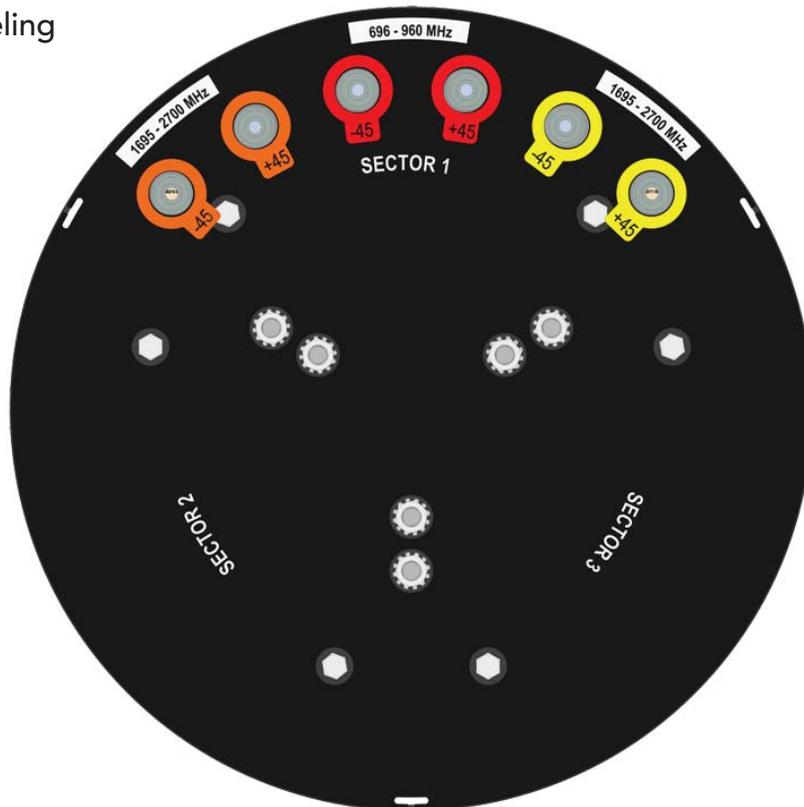
CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

Bottom View - Connector Diagram



Bottom View - Labeling

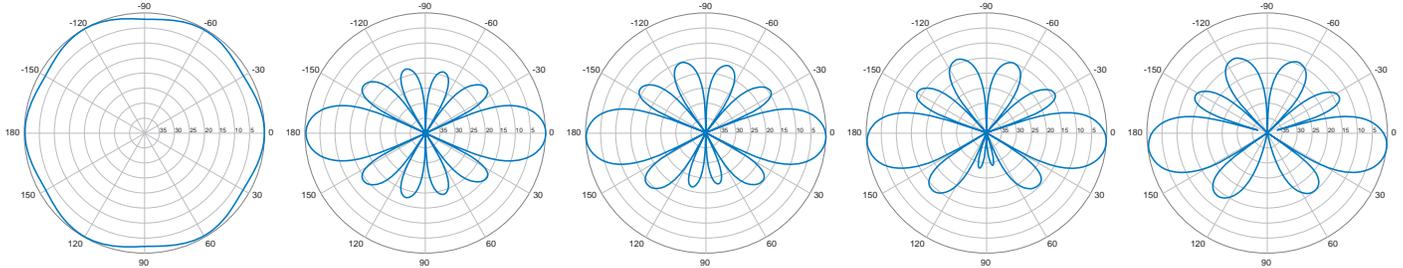


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# CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

## 696-960 MHz



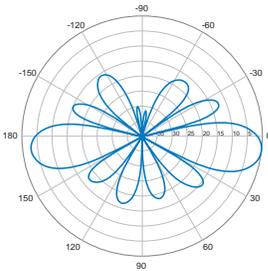
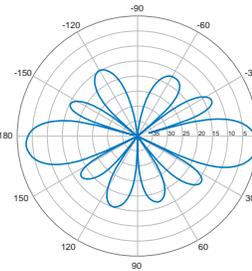
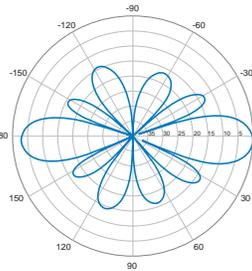
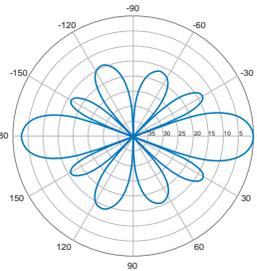
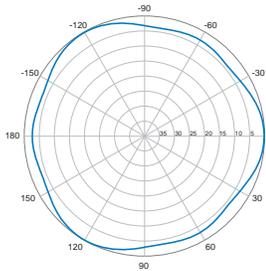
Horizontal | 750 MHz

Vertical | 0° | 750 MHz

Vertical | 2° | 750 MHz

Vertical | 4° | 750 MHz

Vertical | 6° | 750 MHz



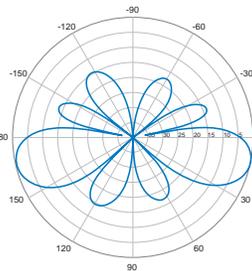
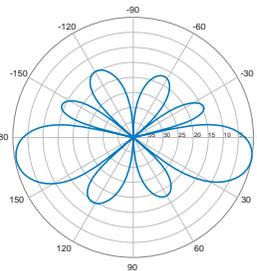
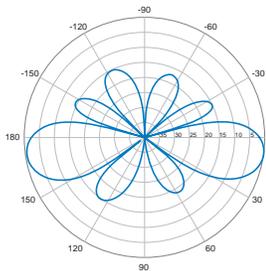
Horizontal | 850 MHz

Vertical | 0° | 850 MHz

Vertical | 2° | 850 MHz

Vertical | 4° | 850 MHz

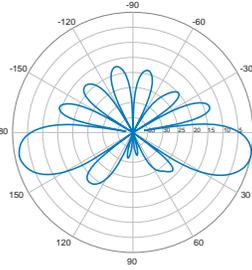
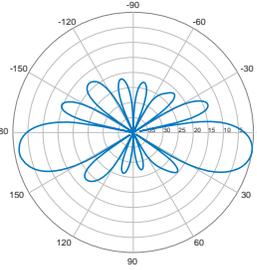
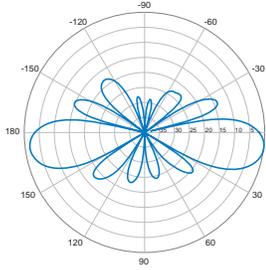
Vertical | 6° | 850 MHz



Vertical | 8° | 750 MHz

Vertical | 10° | 750 MHz

Vertical | 12° | 750 MHz



Vertical | 8° | 850 MHz

Vertical | 10° | 850 MHz

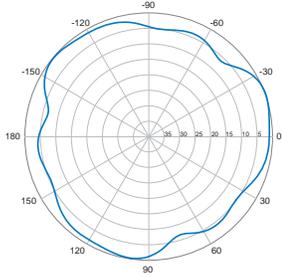
Vertical | 12° | 850 MHz

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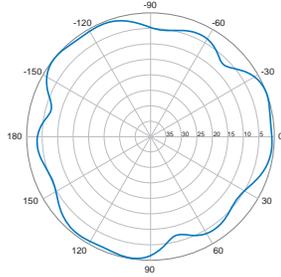
**CUUT360X12Fxyz0**

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

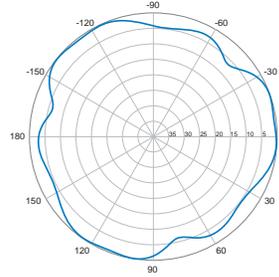
**1695-2700 MHz**



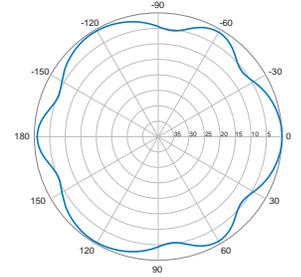
Horizontal | 1800 MHz



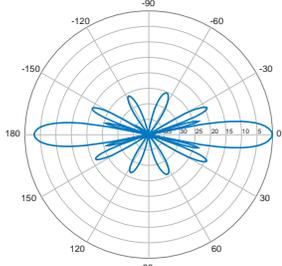
Horizontal | 1900 MHz



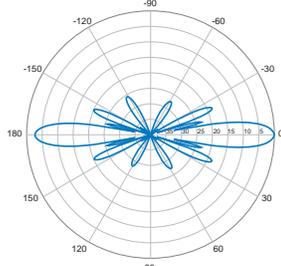
Horizontal | 2100 MHz



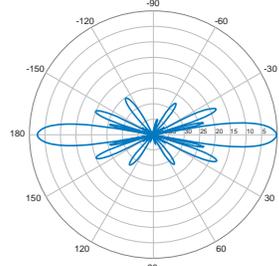
Horizontal | 2600 MHz



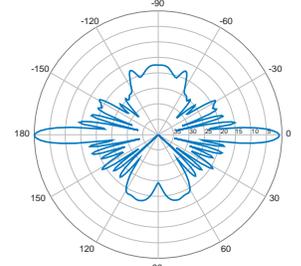
0° | Vertical | 1800 MHz



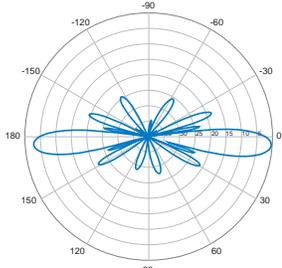
0° | Vertical | 1900 MHz



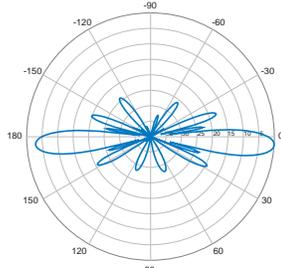
0° | Vertical | 2100 MHz



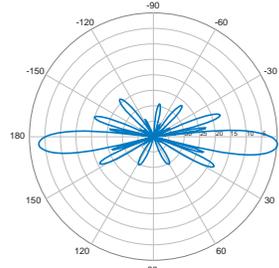
0° | Vertical | 2600 MHz



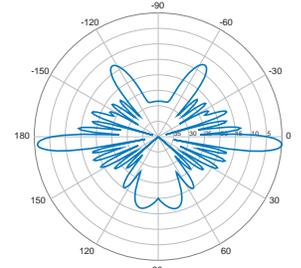
4° | Vertical | 1800 MHz



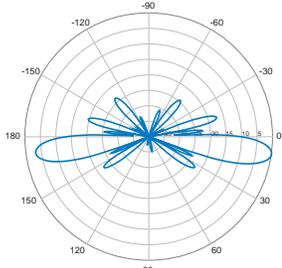
4° | Vertical | 1900 MHz



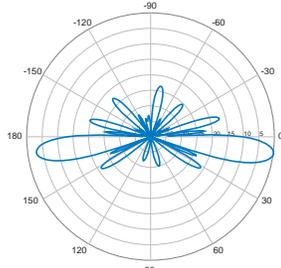
4° | Vertical | 2100 MHz



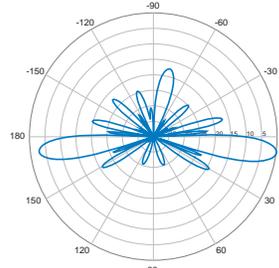
4° | Vertical | 2600 MHz



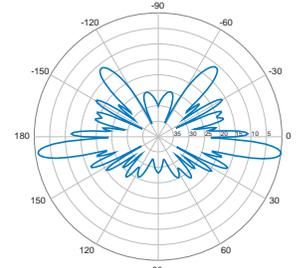
8° | Vertical | 1800 MHz



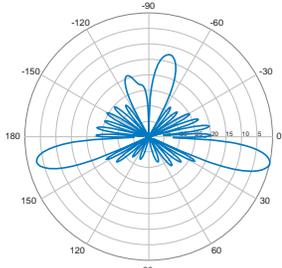
8° | Vertical | 1900 MHz



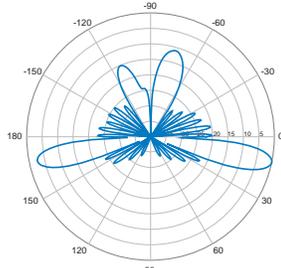
8° | Vertical | 2100 MHz



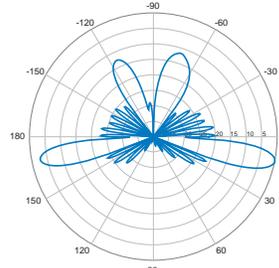
8° | Vertical | 2600 MHz



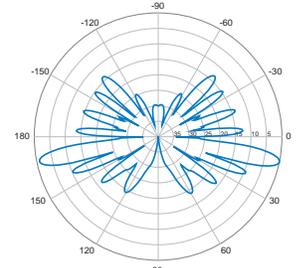
12° | Vertical | 1800 MHz



12° | Vertical | 1900 MHz



12° | Vertical | 2100 MHz



12° | Vertical | 2600 MHz

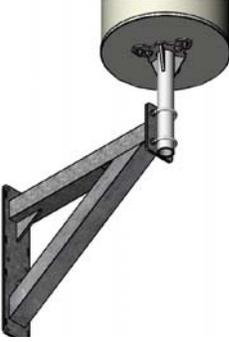
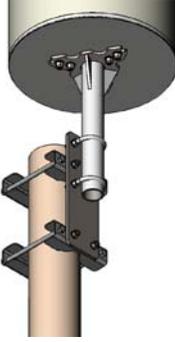
Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

# CUUT360X12Fxyz0

TRI BAND | PSEUDO OMNI | CANISTER ANTENNA | XXX-POL | 360° / 360° / 360° | 6.0 / 10.3 / 10.3 DBI | FIXED TILT

## Mounting Kits

This antenna can be mounted using any of the following mounting kits. Mounting kits can be ordered as a separate line item or can be included with the antenna as a single line item. Refer to [Ordering Options](#).

Side Mounting Kit	Top Mounting Kit	Utility Pole Mounting Kit
CWT-MKS-SIDE	CWT-MKS-TOP	WB3X-MKS-01
		

## Ordering Options

When ordering, select the Electrical Downtilt (**xy**), Paint Color, Mounting Option and Connector Type (**z**).

Electrical Downtilt Degree (°)	Low Band	replace "x" with one of the following options:	0, 2, 4, 6, 8, 10 or 12
	High Band	replace "y" with one of the following options:	0, 4, 8 or 12

Paint Color	Mounting Option	Connector Type (z)		
		4.1/9.5	4.3/10	7/16-DIN
Unpainted 	No Mounting - Antenna Only	CUUT360X12Fxy-0	CUUT360X12Fxys0	CUUT360X12FxyD0
	Side Mounting Kit	CUUT360X12Fxy-0S	CUUT360X12Fxys0S	CUUT360X12FxyD0S
	Top Mounting Kit	CUUT360X12Fxy-0T	CUUT360X12Fxys0T	CUUT360X12FxyD0T
	Utility Pole Mounting Kit	CUUT360X12Fxy-0U	CUUT360X12Fxys0U	CUUT360X12FxyD0U
Black 	No Mounting - Antenna Only	CUUT360X12Fxy-0BK	CUUT360X12Fxys0BK	CUUT360X12FxyD0BK
	Side Mounting Kit	CUUT360X12Fxy-0BKS	CUUT360X12Fxys0BKS	CUUT360X12FxyD0BKS
	Top Mounting Kit	CUUT360X12Fxy-0BKT	CUUT360X12Fxys0BKT	CUUT360X12FxyD0BKT
	Utility Pole Mount	CUUT360X12Fxy-0BKU	CUUT360X12Fxys0BKU	CUUT360X12FxyD0BKU
Brown 	No Mounting - Antenna Only	CUUT360X12Fxy-0BR	CUUT360X12Fxys0BR	CUUT360X12FxyD0BR
	Side Mounting Kit	CUUT360X12Fxy-0BRS	CUUT360X12Fxys0BRS	CUUT360X12FxyD0BRS
	Top Mounting Kit	CUUT360X12Fxy-0BRT	CUUT360X12Fxys0BRT	CUUT360X12FxyD0BRT
	Utility Pole Mounting Kit	CUUT360X12Fxy-0BRU	CUUT360X12Fxys0BRU	CUUT360X12FxyD0BRU
White 	No Mounting - Antenna Only	CUUT360X12Fxy-0WH	CUUT360X12Fxys0WH	CUUT360X12FxyD0WH
	Side Mounting Kit	CUUT360X12Fxy-0WHS	CUUT360X12Fxys0WHS	CUUT360X12FxyD0WHS
	Top Mounting Kit	CUUT360X12Fxy-0WHT	CUUT360X12Fxys0WHT	CUUT360X12FxyD0WHT
	Utility Pole Mounting Kit	CUUT360X12Fxy-0WHU	CUUT360X12Fxys0WHU	CUUT360X12FxyD0WHU

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

## Configuration #1 Antenna Power Detail – DAS Node

Node Configuration Spec	Node ID	Antenna Type	Antenna Manufacturer & Model #	700MHz			2100MHz			Proposed Antenna Rad Center (AGL) (feet)	Number of Antennas at Site	Azimuth (Tilt) for Antenna #1	Azimuth (Tilt) for Antenna #2	Azimuth (Tilt) for Antenna #3	Latitude (decimal) NAD 83	Longitude (decimal) NAD 83	Street Address/cross street	City, State
				Net Power to Antenna (Watts)	Antenna Gain (dBd)	Total ERP (Watts)	Net Power to Antenna (Watts)	Antenna Gain (dBd)	Total ERP (Watts)									
1	CA-DTMon01m	Pseudo Omni	Amphenol CUUT360X12Fxyz0	50.24	3.35	108.65	50.24	7.85	306.22	24' 7"	1	70	190	310	36.621694	-121.915103	500 Central Ave	Monterey, CA

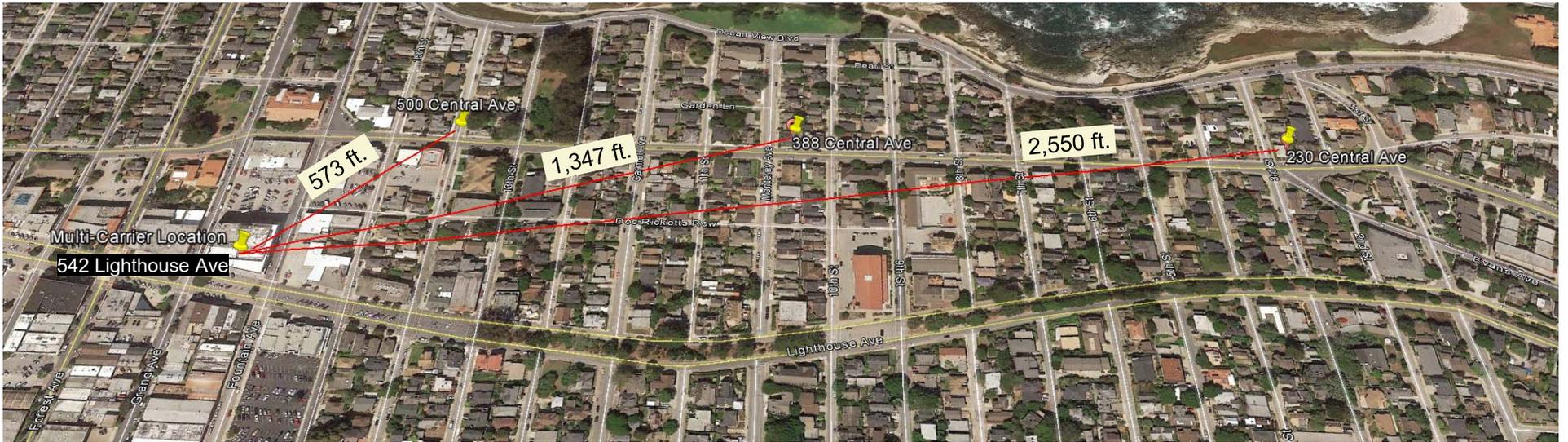
## Antenna Power Detail – Macro Site

Num	ID	Name	Freq	Power	Power	Model	X	Y	Z	Type	Aper	Pt Dir
1	1A	Verizon	700.00000	32.0	32.0	Generic	100.0	100.0	69.0	Panel	4.6	65;90
2	2A	Verizon	850.00000	52.5	52.5	Generic	100.0	100.0	69.0	Panel	4.6	65;90
3	3A	Verizon	1900.00000	45.0	45.0	Generic	100.0	100.0	69.0	Panel	4.6	65;90
4	1B	Verizon	700.00000	32.0	32.0	Generic	100.0	100.0	69.0	Panel	4.6	65;160
5	2B	Verizon	850.00000	52.5	52.5	Generic	100.0	100.0	69.0	Panel	4.6	65;160
6	3B	Verizon	1900.00000	45.0	45.0	Generic	100.0	100.0	69.0	Panel	4.6	65;160
7	1C	Verizon	700.00000	32.0	32.0	Generic	100.0	100.0	69.0	Panel	4.6	65;280
8	2C	Verizon	850.00000	52.5	52.5	Generic	100.0	100.0	69.0	Panel	4.5	65;280
9	3C	Verizon	1900.00000	45.0	45.0	Generic	100.0	100.0	69.0	Panel	4.5	65;280
10	1A	SPT/NEX	850.00000	84.5	84.5	Generic	100.0	100.0	69.0	Panel	4.5	65;90
11	2A	SPT/NEX	1900.00000	33.8	33.8	Generic	100.0	100.0	69.0	Panel	4.5	65;90
12	1B	SPT/NEX	850.00000	84.5	84.5	Generic	100.0	100.0	69.0	Panel	4.5	65;160
13	2B	SPT/NEX	1900.00000	33.8	33.8	Generic	100.0	100.0	69.0	Panel	4.5	65;160
14	1C	SPT/NEX	850.00000	84.5	84.5	Generic	100.0	100.0	69.0	Panel	4.5	65;280
15	2C	SPT/NEX	1900.00000	33.8	33.8	Generic	100.0	100.0	69.0	Panel	4.5	65;280
16	1A	TMO 1	1900.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;90
17	2A	TMO 2	2100.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;90
18	1B	TMO 3	1900.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;160
19	2B	TMO 4	2100.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;160
20	1C	TMO 5	1900.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;280
21	2C	TMO 6	2100.00000	50.6	50.6	Generic	100.0	100.0	69.0	Panel	4.5	65;280
22	1A	Cricket	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;90
23	1B	Cricket	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;160
24	1C	Cricket	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;280
25	1A	ATT	700.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	65;90
26	2A	ATT	850.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	64;90
27	3A	ATT	1900.00000	50.4	50.4	Generic	100.0	100.0	69.0	Panel	6.0	57;90
28	1B	ATT	700.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	65;160
29	2B	ATT	850.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	64;160
30	3B	ATT	1900.00000	50.4	50.4	Generic	100.0	100.0	69.0	Panel	6.0	57;160
31	1C	ATT	700.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	65;280
32	2C	ATT	850.00000	25.2	25.2	Generic	100.0	100.0	69.0	Panel	6.0	64;280
33	3C	ATT	1900.00000	50.4	50.4	Generic	100.0	100.0	69.0	Panel	6.0	57;280
34	1A	MPCS	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;90
35	1B	MPCS	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;160
36	1C	MPCS	2100.00000	53.0	53.0	Generic	100.0	100.0	69.0	Panel	4.5	65;280

# **Appendix A-0**

## **Node IDs, Configuration & Locations**

# Appendix A-0 Node IDs, Configuration & Locations



## Appendix A-0 Node IDs, Configuration & Locations

Configuration 1: Pseudo Omni											
Site ID	Antenna Config	Pole Number	Antenna Rad Center	Azimuths	Latitude	Longitude	Street Address	City, ST	Antenna Type	Node Equipment	Ground Elevation
CA-DTMon01m	Pseudo Omni	500	24' 7"	70 / 190 / 310	36.621694	-121.915103	500 Central Ave	Monterey, CA	Amphenol CUUT360X12Fxyz0	Two 2x40W RRUS12 (700, AWS)	69

Nearby Nodes/Macro											
Site ID	Antenna Config	Pole Number	Antenna Rad Center	Azimuths	Latitude	Longitude	Street Address	City, ST	Antenna Type	Node Equipment	Ground Elevation
Macro - All carriers	6 Panels	NA	60' 0"	90, 160, 160, 280, 280, 280	36.621339	-121.916320	542 Lighthouse Ave	Pacific Grove	NA	NA	98'

# **Appendix A-1**

## **RF EXPOSURE AT THE LEVEL OF THE ANTENNA**

**RF EXPOSURE AT THE LEVEL OF THE ANTENNA  
BASED ON PERCENTAGE OF FCC MAXIMUM PUBLIC EXPOSURE (MPE) LIMIT**

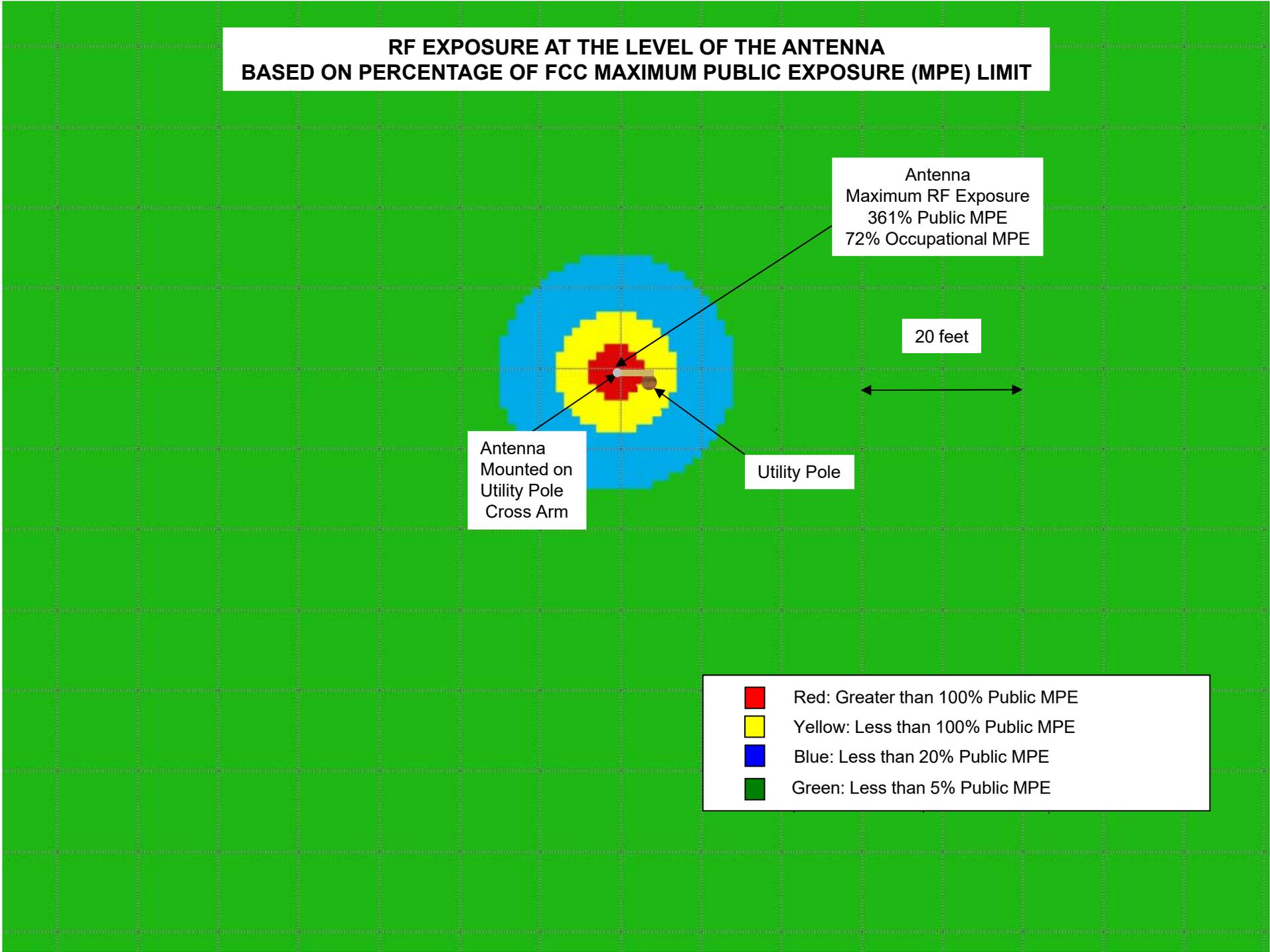
Antenna  
Maximum RF Exposure  
361% Public MPE  
72% Occupational MPE

20 feet

Antenna  
Mounted on  
Utility Pole  
Cross Arm

Utility Pole

- Red: Greater than 100% Public MPE
- Yellow: Less than 100% Public MPE
- Blue: Less than 20% Public MPE
- Green: Less than 5% Public MPE



# **Appendix A-2**

**RF CAUTION SIGN**

## RF Safety Signage- Configuration #1



### EXCLUSION ZONE NOTICE

# NOTICE

The radio frequency (RF) emissions at this site have been evaluated for potential RF exposure to personnel who may need to work near these antennae.

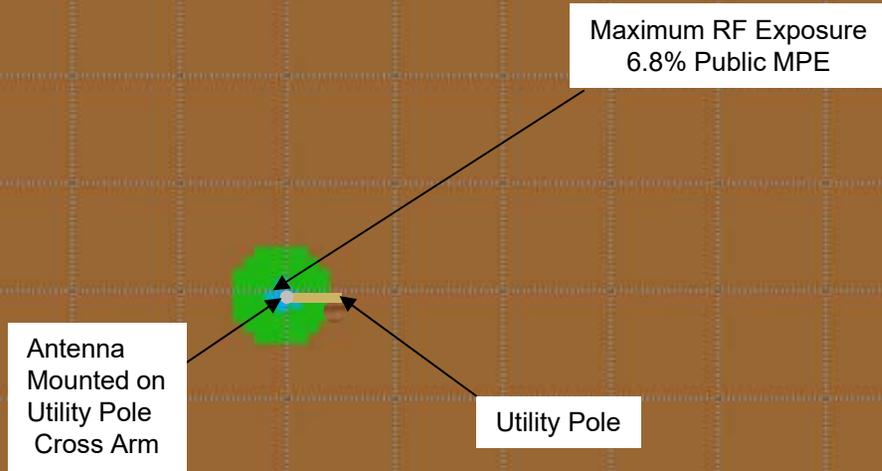
**RF EXPOSURE AT 4 FEET OR CLOSER TO THE FACE OF THE ANTENNA MAY EXCEED THE FCC PUBLIC EXPOSURE STANDARD AND THUS ONLY QUALIFIED RF WORKERS MAY WORK IN THIS 4 FOOT EXCLUSION ZONE. OTHERS WHO NEED TO WORK IN THE EXCLUSION ZONE SHOULD CALL \_\_\_\_\_ FOR INSTRUCTIONS. REFER TO SITE # \_\_\_\_\_**

Reference: Federal Communications Commission (FCC) Public Exposure Standard. OET Bulletin-65, Edition 97-01, August 1997.

# **Appendix A-3**

RF Exposure At Ground Level

**RF EXPOSURE AT GROUND LEVEL  
PERCENTAGE OF FCC MAXIMUM PUBLIC EXPOSURE (MPE) LIMIT**



- Red: Greater than 100% Public MPE
- Yellow: Less than 100% Public MPE
- Blue: Less than 20% Public MPE
- Green: Less than 5% Public MPE
- Brown: Less than 1% Public MPE

**STATEMENT OF EXPERIENCE****Jerrold Talmadge Bushberg, Ph.D., DABMP, DABSNM, FAAPM, FHPS**

Dr. Jerrold Bushberg has performed health and safety analysis for RF & ELF transmissions systems since 1978 and is an expert in both health physics and medical physics. The scientific discipline of Health Physics is devoted to radiation protection, which, among other things, involves providing analysis of radiation exposure conditions, biological effects research, regulations and standards as well as recommendations regarding the use and safety of ionizing and non-ionizing radiation. In addition, Dr. Bushberg has extensive experience and lectures on several related topics including medical physics, radiation protection, (ionizing and non-ionizing), radiation biology, the science of risk assessment and effective risk communication in the public sector.

Dr. Bushberg's doctoral dissertation at Purdue University was on various aspects of the biological effects of microwave radiation. He has maintained a strong professional involvement in this subject and has served as consultant or appeared as an expert witness on this subject to a wide variety of organizations/institutions including, local governments, school districts, city planning departments, telecommunications companies, the California Public Utilities Commission, the California Council on Science and Technology, national and international news organizations, and the U.S. Congress. In addition, his consultation services have included detailed computer based modeling of RF exposures as well as on-site safety inspections. Dr. Bushberg has performed RF & ELF environmental field measurements and recommend appropriate mitigation measures for numerous transmission facilities in order to assure compliance with FCC and other safety regulations and standards. The consultation services provided by Dr. Bushberg are based on his professional judgement as an independent scientist, however they are not intended to necessarily represent the views of any other organization.

Dr. Bushberg is a member of the main scientific body of International Committee on Electromagnetic Safety (ICES) which reviews and evaluates the scientific literature on the biological effects of nonionizing electromagnetic radiation and establishes exposure standards. He also serves on the ICES Risk Assessment Working Group that is responsible for evaluating and characterizing the risks of nonionizing electromagnetic radiation. Dr. Bushberg was appointed and is serving as a member of the main scientific council of the National Council on Radiation Protection and Measurements (NCRP). He is also the Senior Scientific Vice-President of the NCRP and chairman of the NCRP Board of Directors. Dr. Bushberg has served as chair of the NCRP scientific committee on Radiation Protection in Medicine and he continues to serve as a member of this committee as well as the NCRP scientific advisory committee on Non-ionizing Radiation Safety. The NCRP is the nation's preeminent scientific radiation protection organization, chartered by Congress to evaluate and provide expert consultation on a wide variety of radiological health issues. The current FCC RF exposure safety standards are based, in large part, on the recommendations of the NCRP. Dr. Bushberg holds several radiation detection technology patents and was awarded the NCRP *Sinclair Medal* for "Excellence in Radiation Science" in 2014. Dr. Bushberg was elected to the International Engineering in Medicine and Biology Society Committee on Man and Radiation (COMAR) which has as its primary area of responsibility the examination and interpreting the biological effects of non-ionizing electromagnetic energy and presenting its findings in an authoritative and professional manner. Dr. Bushberg also served for several years as a member of a six person U.S. expert delegation to the international scientific community on Scientific and Technical Issues for Mobile Communication Systems established by the FCC and the FDA Center for Devices and Radiological Health.

Dr. Bushberg is a full member of the Bioelectromagnetics Society, the Health Physics Society and the Radiation Research Society. Dr. Bushberg received both a Masters of Science and Ph.D. from the Department of Bionucleonics at Purdue University. Dr. Bushberg is a fellow of the American Association of Physicists in Medicine, a fellow of the National Health Physics Society and is certified by several national professional boards with specific sub-specialty certification in radiation protection and medical physics. Prior to coming to California, Dr. Bushberg was on the faculty of Yale University School of Medicine.

Monterey County Health Department  
Environmental Health Bureau  
1270 Natividad Road  
Salinas, CA 93906  
(831) 755-4507  
Fax (831) 796-8698

Jurisdiction Name City of Pacific Grove  
Use Permit # 16-095, 16-096, 16-097  
Or  
Building Permit # \_\_\_\_\_  
Contact Name Wendy Lao, Assistant Planner  
Phone # (831) 648-3185

**HAZARDOUS MATERIAL QUESTIONNAIRE**

Business Name Crown Castle NG West LLC Type of Business CLEC  
Site Location Near 500, 388, 230 Central City Pacific Grove APN: N/A; ROW Only  
Mailing Address 695 River Oaks Parkway, San Jose, CA 95134  
Business Contact Mark Hansen (408) 468-5525  
*Name Phone Number*  
Property Owner City of Pacific Grove (ROW) (831) 648-5722 ext. 200  
*Name Phone Number*

- Will your business/proposed project be using any hazardous materials such as oil, fuels, solvents, compressed gases, acids, corrosives, pesticides, fertilizers, paints or other chemicals?  
 Yes  No
- Will your business/proposed project be using hazardous materials in quantities of 55 gallons and above for liquids, 500 lbs. and above for solids and/or 200 cubic feet and above for compressed gases?  
 Yes  No
- Will your business/proposed project be using any quantities of acutely hazardous materials such as ammonia, chlorine, sulfuric acid, formaldehyde, hydrogen peroxide, methyl bromide or other restricted pesticides?  
 Yes  No
- Will your business/proposed project be using underground storage tanks to store hazardous materials?  
 Yes  No
- Will your business/proposed project be generating any quantities of hazardous waste such as waste oil, waste solvents, etc?  
 Yes  No
- Will your business/proposed project be emitting any hazardous air emissions?  
 Yes  No

CERTIFICATION:

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct to the best of my knowledge and belief.

ANY QUESTIONS REGARDING THIS FORM CAN BE DIRECTED TO:

Monterey County Health Department  
Environmental Health Bureau  
1270 Natividad Road  
Salinas, CA 93906  
(831) 755-4507  
Fax (831) 796-8698

Executed AT:

Pacific Grove, CA  
City, State

Print Name of Owner/Operator: Mark Hansen

Signature of Owner/Operator: Mark Hansen

**For Local Jurisdiction Use Only:**

- Is there a known or proposed school, hospital, day care, or long term care facility within 1,000 feet of this site location?  
 Yes  No
- Is there a known or proposed school, hospital, day care, or long term care facility 1/4 mile of this site location?  
 Yes  No

St. Angela's children center, 136 9th St, but ~1150 ft away from 500 Central

Health Department Clearance Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name and Title: \_\_\_\_\_

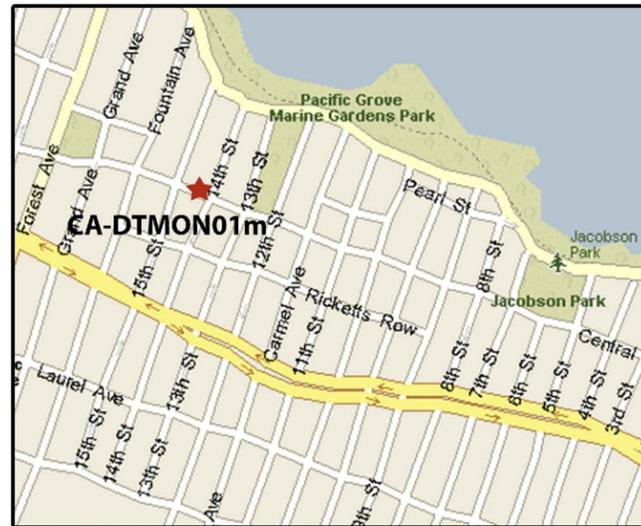
Air Pollution District Clearance Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Name and Title: \_\_\_\_\_





Existing Site



Vicinity Map



Proposed Site CA-DTMON01m

**CA-DTMON01m**

DOWNTOWN MONTEREY  
CROWN CASTLE PROJECT NO.  
V252654

CLIENT:



695 RIVER OAKS PARKWAY  
SAN JOSE, CA 95134  
www.crowncastle.com

PREPARED BY:



5841 EDISON PLACE, SUITE 110  
CARLSBAD, CA 92008  
PHONE: (760) 929-0910  
FAX: (760) 929-0936  
www.coastalcomminc.com

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TICKET #

DESCRIPTION	
REVISED DRAWINGS.	4/2/15
VAULTED (2) RRUS-12	12/04/15
ANTENNA CHANGE	06/16/16
REVISION / ISSUE	DATE

SITE NAME & ADDRESS:  
  
500 CENTRAL AVE  
PACIFIC GROVE, CA

**PHOTO SIM**

DRAWN BY: AGR	DRAFT DATE: 02/20/15	APPROVED BY: TT
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SHEET NUMBER:  
**P-1**



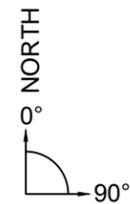
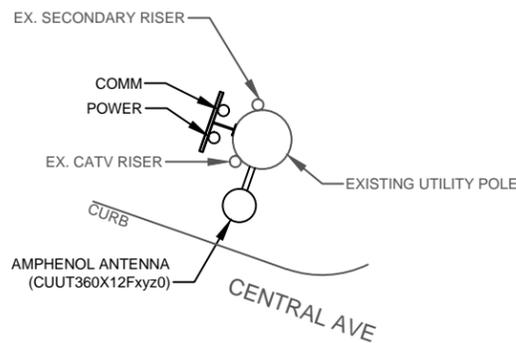
**A** 9 O'CLOCK VIEW (EXISTING CONDITION)



**B** 12 O'CLOCK VIEW (EXISTING CONDITION)



**C** 3 O'CLOCK VIEW (EXISTING CONDITION)



**D** TOP VIEW

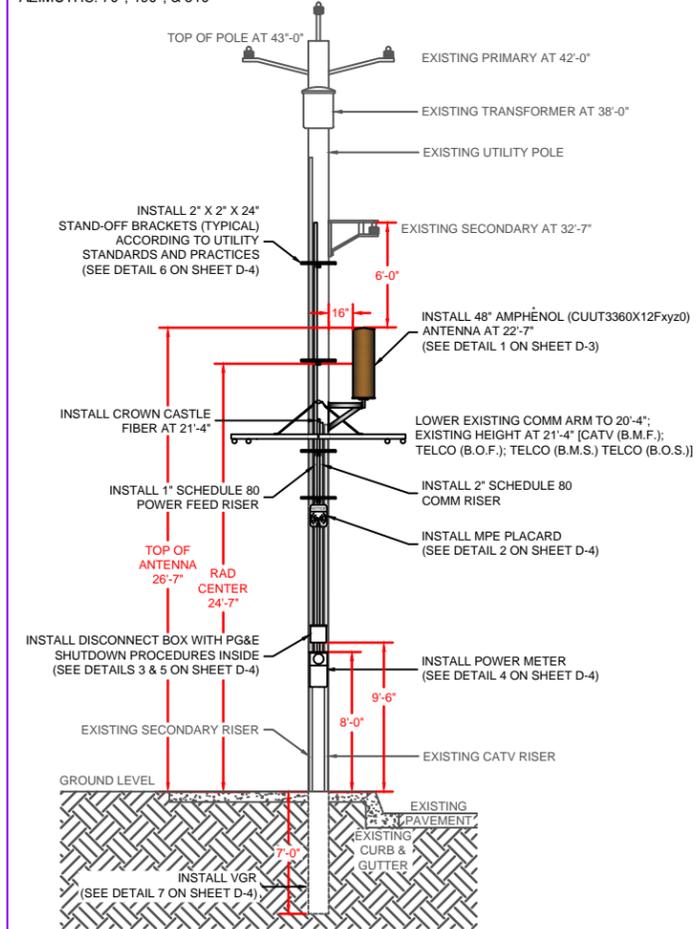
**CROWN CASTLE TO PERFORM THE FOLLOWING:**

- REMOVE & RESTORE 5' X 10' SIDEWALK PANEL.
- 6' DIRT TRENCH.
- INSTALL 2" X 2" X 24" STAND-OFF BRACKETS (TYPICAL) ACCORDING TO UTILITY STANDARDS AND PRACTICES.
- LOWER EXISTING COMM ARM TO 20'-4"; EXISTING HEIGHT AT 21'-4"
- INSTALL SIDE MOUNTING WITH 48" AMPHENOL (CUUT360X12Fxyz0) ANTENNA AT 22'-7".
- INSTALL CROWN CASTLE FIBER AT 21'-4".
- INSTALL MPE PLACARD.
- INSTALL DISCONNECT BOX WITH PG&E SHUTDOWN PROCEDURES INSIDE.
- INSTALL 1" SCHEDULE 80 POWER FEED RISER.
- INSTALL 2" SCHEDULE 80 COMM RISER.
- INSTALL POWER METER.
- INSTALL VGR.
- INSTALL CROWN CASTLE 3' X 5' EQUIPMENT VAULT WITH (2) ERICSSON RRUS-12 INSIDE.
- ANTENNAS AND EQUIPMENT TO BE PAINTED TO MATCH POLE.

**E** NEW CONSTRUCTION **N.T.S.**

**UTILITY POLE #NT**

TOP OF POLE: 43'-0"  
 TOP OF ANTENNA: 26'-7"  
 RAD CENTER: 24'-7"  
 AZIMUTHS: 70°, 190°, & 310°



**F** 3 O'CLOCK VIEW (PROPOSED) **N.T.S.**

**CA-DTMON01m**

DOWNTOWN MONTEREY  
 CROWN CASTLE PROJECT NO.  
**V252654**

CLIENT:



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**SITE PHOTOS & PROPOSED PROFILE**

DRAWN BY: AGR  
 DRAFT DATE: 02/20/15  
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**LEGEND**

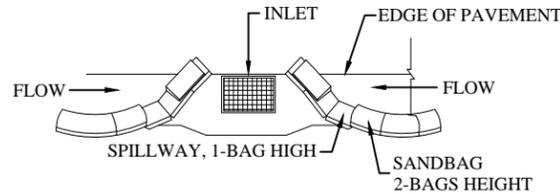
SYMBOL	DESCRIPTION
	2' X 3' VAULT
	TRENCH AND FIBER CONDUIT (PVT)
	EXISTING
	EXISTING UTILITY POLE
	STATION POINTS (100' INCREMENTS)
	EXISTING CURB RAMP
	C&G EXISTING CURB & GUTTER
	R/W EXISTING RIGHT OF WAY
	EXISTING CENTER LINE

**EROSION AND SEDIMENT CONTROL NOTES:**

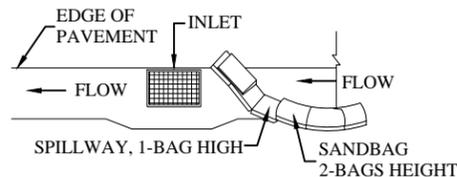
TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

- ALL REQUIREMENTS OF THE CITY "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
- FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
- THE CONTRACTOR OR QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
- EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON.
- THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
- ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
- ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
- THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

**STORMDRAIN INLET PROTECTION**



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

**NOTES:**

- INTENDED FOR SHORT - TERM USE.
- USE TO INHIBIT NON - STORM WATER FLOW.
- ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
- BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
- NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

**NOTES:**

- CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
- CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
- SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEEPED AND CLEANED AS NEEDED.
- CONTRACTOR TO REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
- CURB & GUTTER TO BE PROTECTED IN PLACE. SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
- THE CONTRACTOR SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
- SIDEWALK SHALL BE RESTORED/REPLACED PER CITY STANDARD DRAWINGS.
- PEDESTRIAN RAMP WILL NOT BE DISTURBED.

**ROW GROUND CONSTRUCTION NOTES:**

- GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
- CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 227-2600 OR 811.
- ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
- ALL EQUIPMENT TO BE BONDED.
- METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING.
- CAULK CABINET BASE AT PAD.

**NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:**

- LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SUBDIVIDER AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPT. OF PUBLIC WORKS FOR APPROVAL.
- CHANGES MAY BE PERMITTED BY THE DEPT. OF PUBLIC WORKS IN CASES OF CONFLICTING FACILITIES.
- CONFLICTS BETWEEN UTILITY COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITY COMPANIES.
- FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
- MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

**CALIFORNIA STATE CODE COMPLIANCE:**

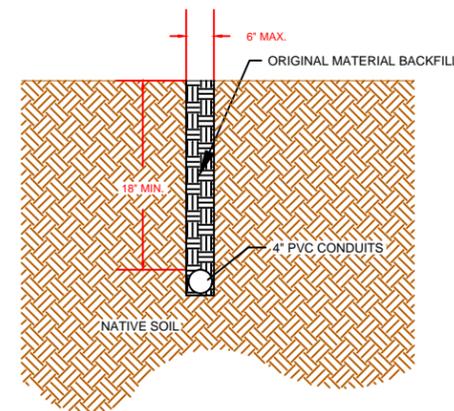
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2010
- 2013 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2010 UBC, 2010 UMC, 2010 UPC AND THE 2010 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2010 CALIFORNIA MECHANICAL CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2010 CALIFORNIA PLUMBING CODE
- 2010 CALIFORNIA ELECTRICAL CODE
- 2010 LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS:  
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2010 CALIFORNIA BUILDING CODE.

FCC NOTE:  
THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

**IN DIRT - PRIVATE  
TYPICAL SECTION  
(N.T.S.)**



**INSTALLATION NOTES:**

- CUT 6" MAX. WIDTH X 18" + DEPTH TRENCH
- BACKFILL WITH THE ORIGINAL MATERIAL FROM THE TRENCH
- RESTORE THE SURFACE

**ABBREVIATIONS**

A/C	ASPHALT CURB
B.O.C.	BACK OF CURB
B/EOP	BACK OF EDGE OF PAVEMENT
C&G	CURB & GUTTER
CL	CENTERLINE
EX.	EXISTING
EOP	EDGE OF PAVEMENT
F.O.C.	FACE OF CURB
F/EOP	FACE OF EDGE OF PAVEMENT
PL	PROPERTY LINE
R/W	RIGHT OF WAY
S/B	SUBDIVISION BOUNDARY

**CA-DTMON01m**

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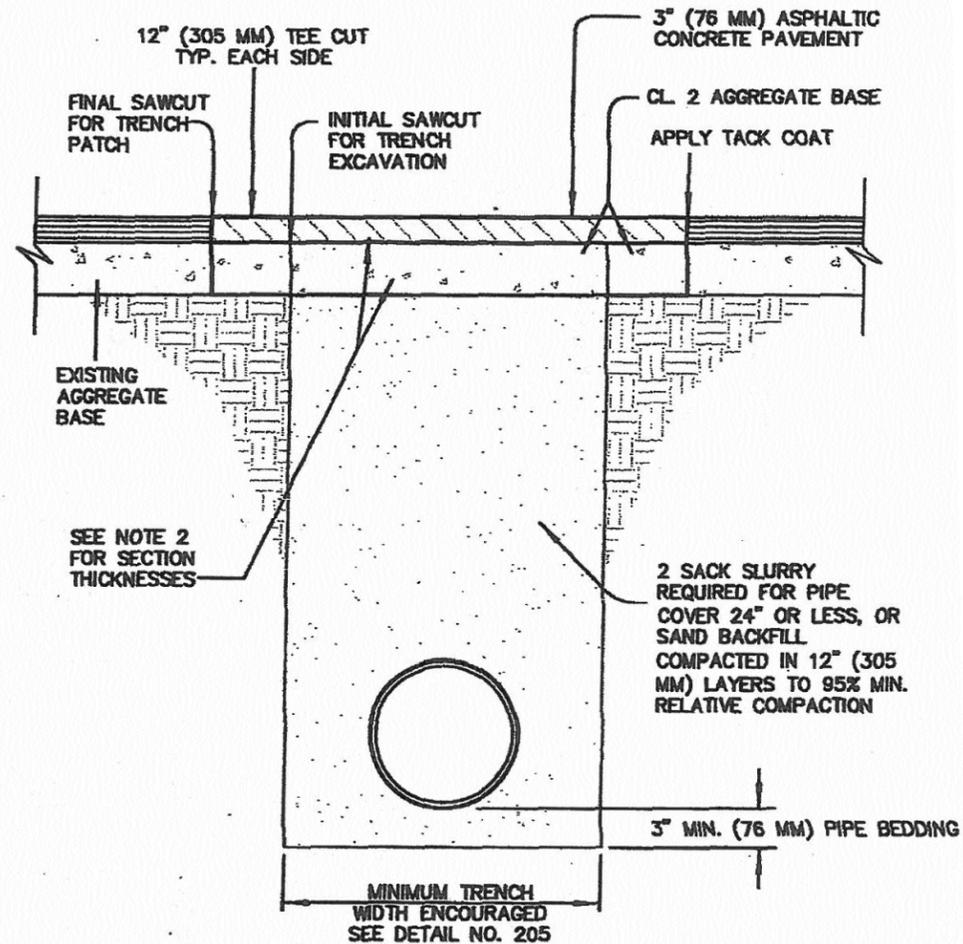
**DETAILS & NOTES**

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D-1

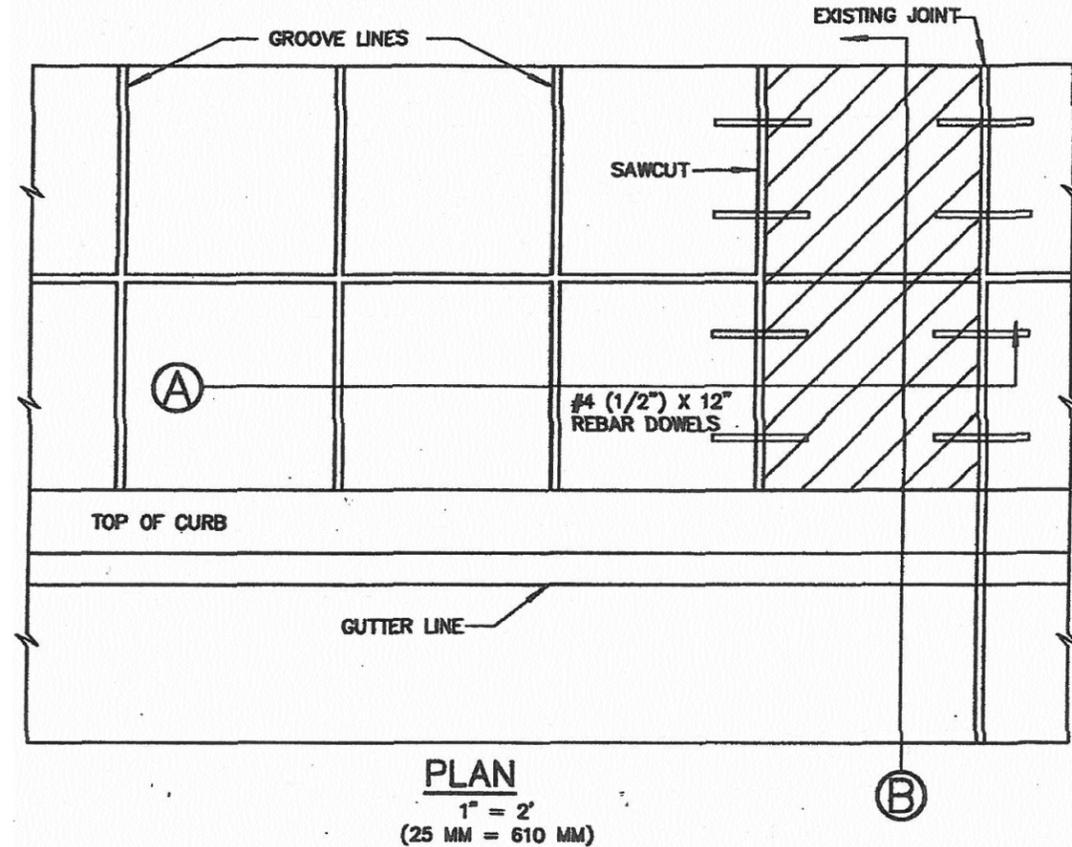
**CITY OF PACIFIC GROVE**  
 (STANDARD DETAIL NO. 207)  
**TRENCH SECTION & PAVEMENT REPLACEMENT**  
 N.T.S.



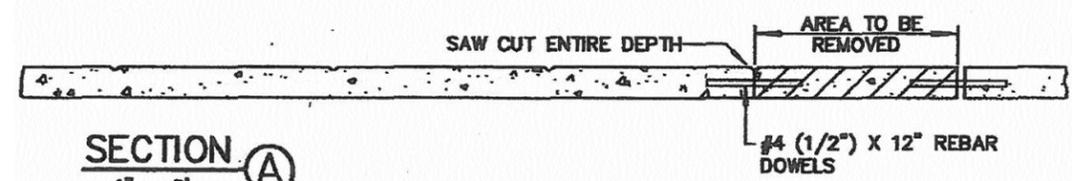
**NOTES:**

1. SAWCUTS REQUIRED FOR ALL PATCHES
2. DEPTH OF SUBGRADE FOR TRENCH PATCH SHALL MATCH THE EXISTING THICKNESS OF ASPHALT CONCRETE AND AGGREGATE BASE. IN NO CASE SHALL THE TRENCH PATCH BE LESS THAN 3" (76 MM) ASPHALT CONCRETE AND 6" (152 MM) CLASS 2 AGGREGATE BASE. ASPHALT CONCRETE AND CLASS 2 AGGREGATE BASE SHALL CONFORM TO CALTRANS STANDARD SPECIFICATIONS.
3. SAND BACKFILL TO BE VIBRATORY COMPACTED AT OPTIMUM MOISTURE CONTENT TO 95% RELATIVE COMPACTION. CONTRACTOR SHALL PROVIDE FOR COMPACTION TESTING AND SUBMIT FINAL RESULTS TO CITY ENGINEER .
4. 2 SACK SLURRY CEMENT BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 19, "EARTHWORK" OF CALTRANS STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER.
5. CITY ENGINEER MAY REQUIRE OUTLET FOR TRENCH BOTTOM WHEN WATER BUILD UP OCCURS.

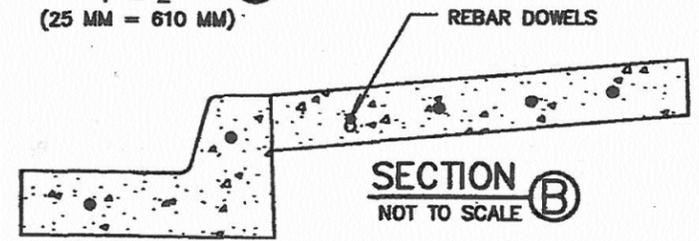
**CITY OF PACIFIC GROVE**  
 (STANDARD DETAIL NO. 111)  
**REPLACEMENT OF CONCRETE SIDEWALK**  
 N.T.S.



**PLAN**  
 1" = 2'  
 (25 MM = 610 MM)



**SECTION A**  
 1" = 2'  
 (25 MM = 610 MM)



**SECTION B**  
 NOT TO SCALE

REMOVE FULL SECTION OF SIDEWALK. SAWCUT MUST BE MADE AT JOINT OR GROOVE. FINISHED SURFACE OF REPLACED SECTION SHALL BE UNIFORM SLOPE BETWEEN EXISTING SECTIONS.

**CA-DTMON01m**

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