

Case File Number: PLN16-081

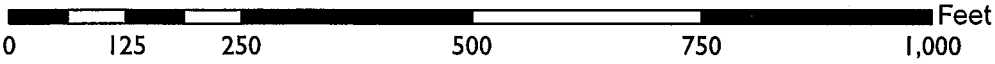
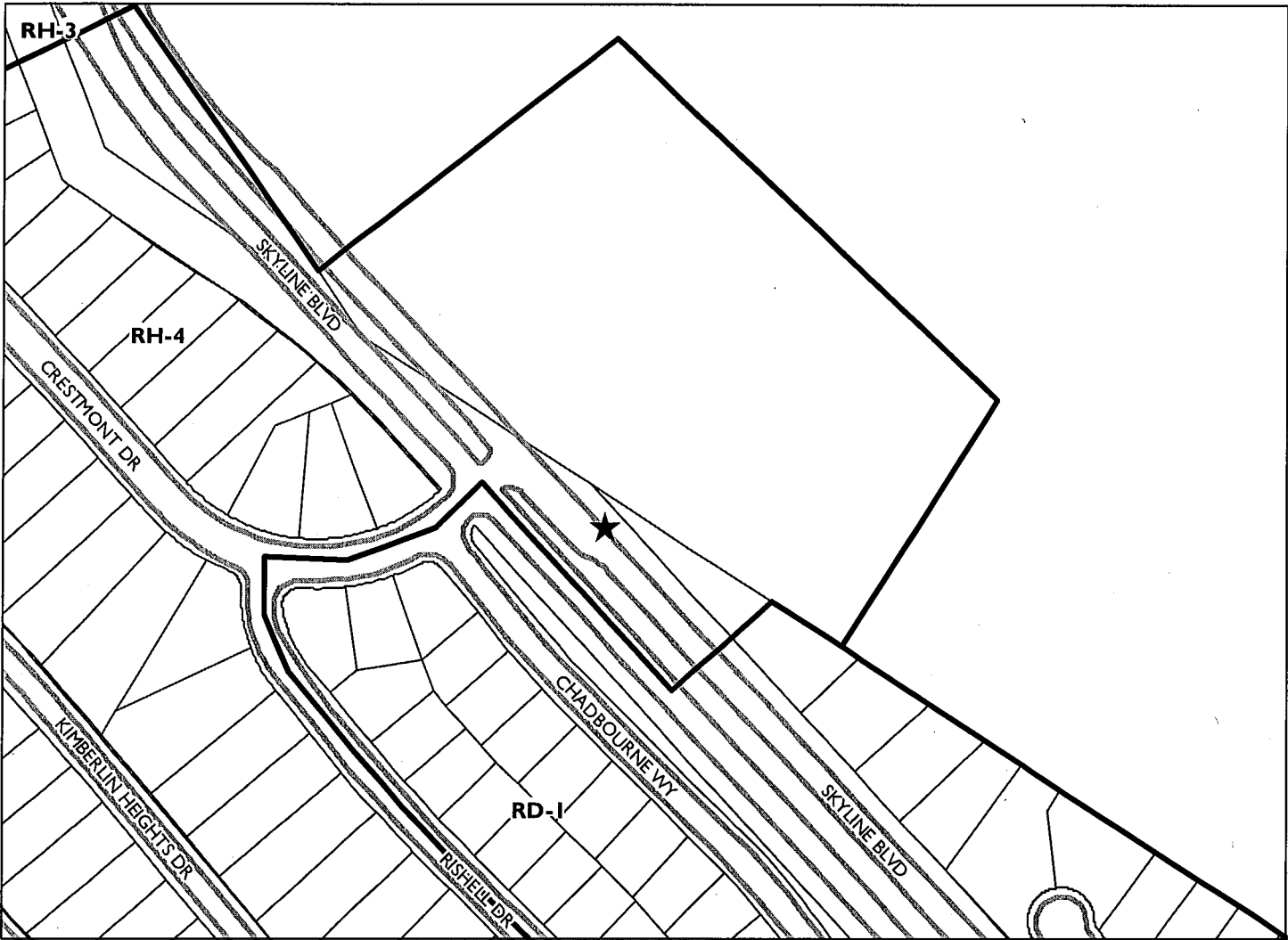
September 7, 2016

Location:	The Public Right of Way across from 11500 Skyline Boulevard. (See map reverse)
Assessors Parcel Numbers:	Nearest lot adjacent to the project site (085-0001-006-01)
Proposal:	The project involves the installation of a new wireless Telecommunications facility (Crown Castle) on a new 30'-8" tall wood pole located in the public right-of-way; installation of two panel antennas within a 72" tall radome mounted at 24'-7" above the ground; an associated equipment cabinet located below ground level in vault
Applicant:	Crown Castle
Contact Person/	Bob Gundermann and Jason Osborn
Phone Number:	(925) 899-1999
Owner:	City of Oakland
Case File Number:	PLN16-081
Planning Permits Required:	Major Conditional Use Permit and Design Review to install a new Monopole Telecommunication Facility in the residential zone.
General Plan:	Hillside Residential
Zoning:	RH-4/S-10 Zone
Environmental Determination:	Exempt, Section 15303 of the State CEQA Guidelines; New construction of small structures. Section 15183 of the State CEQA Guidelines; projects consistent with a community plan, General Plan or zoning.
Historic Status:	Not a Potential Designated Historic Property; Survey Rating: N/A
Service Delivery District:	3
City Council District:	4
Date Filed:	3/24/2016
Finality of Decision:	Appealable to City Council within 10 days
For Further Information:	Contact case planner Jason Madani at (510) 238-4790 or jmadani@oaklandnet.com

SUMMARY

The proposal is to install a new wireless Telecommunications Facility on a new 30'-8" tall wood pole designed to resemble a PG&E utility pole located in the public right-of-way across from East Bay Regional Park District training center parking lot and 20' away from an existing 30' tall emergency siren wood pole. Crown Castle is proposing to install two panel antennas within a 72" tall radome mounted at 24'-7" above the ground; an associated equipment cabinet will be located below ground level in vault. Because this installation is a stand-alone telecommunication pole and not a joint-use utility pole, it is considered a Monopole by City of Oakland regulations.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN16081

Applicant: Crown Castle

Address: Public Right-of-Way across from 11500 Skyline Boulevard

Zone: RH-4

A Major Conditional Use Permit and Design Review is required for the installation of a new Monopole Telecommunication Facility in a residential zone. Staff believes, given the existing emergency siren wood pole and lack of close residences, the project meets all the required findings listed below for an approval of the project.

TELECOMMUNICATIONS BACKGROUND

Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of "Personal Wireless Services Facilities." "Personal Wireless Services" include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law.

Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.

Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the "effect" of prohibiting the placement, construction, or modification of personal wireless services.

Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with FCC standards in this regard. See, 47 U.S.C. 332 (c) (7) (B) (iv) (1996). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.

Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time.

47 U.S.C.332(c) (7) (B) (ii). See FCC Shot Clock ruling setting forth "reasonable time" standards for applications deemed complete.

Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC's jurisdiction in this area, contact Steve Markendorff, Chief of the Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0640 or e-mail "smarkend@fcc.gov".

PROJECT DESCRIPTION

The applicant (Crown Castle) is proposing to install a new 30'-8" tall wood pole located in the City of Oakland public right-of-way. The project involves installation of two panel antennas within a 72" tall radome mounted at 24'-7" above the ground; an associated equipment cabinet located below ground level in vault.

(See Attachment A)

PROPERTY DESCRIPTION

The project site is located in the City of Oakland public right-of-way across from East Bay Regional Park District training center parking lot located at 11500 Skyline Boulevard.

The proposed telecommunication facility will be located approximately 20' away from an existing 30' tall emergency siren wood pole and provide 212' distance from nearest home within this vicinity.

GENERAL PLAN ANALYSIS

The subject property is located within the Hillside Residential General Plan designation and is located adjacent to the Urban Park and Open Space. The Hillside Residential Land Use Classification is intended "to identify, create, maintain and enhance neighborhood residential areas that are characterized by detached, single unit structures on hillside lot. The antennas will be mounted on a monopole telecommunication facility and an associated equipment cabinet will be located below ground level in vault located in public right-of-away; therefore, the proposed unmanned wireless telecommunication facility will not adversely affect or detract from the residential characteristics of the neighborhood.

ZONING ANALYSIS

The project site is located in RH-4 Hillside Residential, S-10 Scenic Route Combining. The intent of the RH-4 Zone is: "to create, preserve, and enhance areas for single-family estate living at very low densities in spacious environments and is typically appropriate to portions of the Oakland hill areas. The proposal for a new unmanned wireless telecommunication facility on a new monopole telecommunication facility requires a Major Conditional Use Permit and Design Review because the project is located within a residential zone. Given the location of existing emergency siren wood pole and vacant parcel, and lack of close residences, the proposed monopole will blend in with other utility or similar wooden pole. Staff finds that the proposal meets the applicable RH-4 and S-10 zoning and City of Oakland Telecommunication regulations.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines list the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15303, new construction of small structures, and 15183, projects consistent with a community plan, general plan or zoning.

KEY ISSUES AND IMPACTS

1. Conditional Use Permit and Design Review

Section 17.17.040 and 17.128.080 of the City of Oakland Planning Code requires a Conditional Use Permit and Design Review to install a Monopole Telecommunication facility in the RH-4 zone. Furthermore, Section 17.134.020 defines a major and minor conditional use permit. Subsections (A) (3) (i) lists a major conditional use permit: "Any telecommunication facility within any residential zone". The required findings for a major conditional use permit are listed and included in staff's evaluation as part of this report.

2. Project Site

Section 17.128.110 of the City of Oakland Telecommunication Regulations indicate that new wireless facilities shall generally be located on designated properties or facilities in the following order of preference:

- A. Co-located on an existing structure or facility with existing wireless antennas.
- B. City owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in non-residential zones (excluding all HBX Zones and the D-CE3 and D-C-4 Zones).
- D. Existing commercial or industrial structures in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- E. Other non-residential uses in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in non-residential zones. (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- G. Residential uses in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.

*Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials.

Since the proposed project involves installation of a new monopole facility with new antennas and associated equipment cabinets on a site, the proposed project meets (B), hence a site alternatives analysis is not required, although the applicant did provide one.

Alternative Site Analysis:

Crown Castle considered alternative sites on other utility poles in this area but none of these sites are as desirable from a coverage perspective or from an aesthetics perspective to minimize visual impact. The proposed location is approximately equidistant from other DAS nodes proposed in the surrounding area so that service coverage can be evenly distributed.

Staff has reviewed the applicant's written evidence of an alternative sites analysis (see attachment C) and determined that the site selected conforms to the telecommunication regulation requirements. In addition, staff agrees that no other sites are more suitable. The project has met design criteria (B and G) since, the proposed two (2) new antennas within a 72"

tall radome mounted on a new monopole facility 24'-7" above ground, an associated equipment cabinet located below ground level in vault.

3. Project Design

Section 17.128.120 of the City of Oakland Telecommunications Regulations indicates that new wireless facilities shall generally be designed in the following order of preference:

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right of-way.
- E. Monopoles.
- F. Towers.

* Facilities designed to meet an A or B ranked preference do not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of:

- a. Written evidence indicating why each higher preference design alternative can not be used. Such evidence shall be in sufficient detail that independent verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

City of Oakland Planning staff has reviewed and determined that the site selected conforms to all other telecommunication regulation requirements. The project has met design criteria (C) since the antennas will be mounted on a new wood pole resembling existing PG&E wood poles and is consistent with the existing siren wooden pole located in the public right-of-way, and an associated equipment cabinet will be located below ground level in vault to minimize potential visual impacts from public view. (See Attachment C)

4. Project Radio Frequency Emissions Standards

Section 17.128.130 of the City of Oakland Telecommunication Regulations require that the applicant submit the following verifications including requests for modifications to existing facilities:

- a. The telecommunications regulations require that the applicant submit written documentation demonstrating that the emission from the proposed project are within the limits set by the Federal Communications Commission. In the document (attachment B) prepared by Jerrold T. Bushberg Health and Medical Physics Consulting, Inc., the proposed project was evaluated for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. According to the report on the proposal, the project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, the proposed site will operate

within the current acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards.

b. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

The RF emissions report, states that the proposed project will not cause a significant impact on the environment. Additionally, staff recommends that prior to the final building permit sign off; the applicant submit a certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory federal agency.


CONCLUSION

The proposed project meets all of the required findings for approval. The proposal will provide an essential telecommunication services to the community and the City of Oakland at large. It will also be available to emergency services such as Police, Fire and Health response teams. Staff believes that the findings for approval can be made to support the Conditional Use Permit and Design Review.

RECOMMENDATIONS:

1. Affirm staff's environmental determination
2. Approve Major Conditional Use Permit, and Design Review application PLN16-081 subject to the attached findings and conditions of approval.

Prepared by:



Jason Madani
Planner II

Reviewed by:



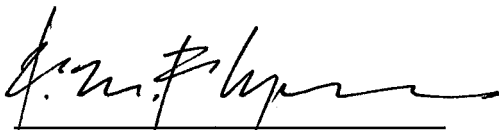
Scott Miller
Zoning Manager

Reviewed by:



Darin Ranelletti, Deputy Director
Bureau of Planning and Building

Approved for forwarding to the
City Planning Commission



Rachel Flynn, Director
Bureau of Planning and Building

ATTACHMENTS:

- A. Project Plans & Photo simulations
- B. Site Safe RE Compliance Experts RF Emissions Report
- C. Site Alternative Analysis and Coverage Maps

FINDINGS FOR APPROVAL

FINDINGS FOR APPROVAL:

This proposal meets all the required findings under Section 17.134.050, of the General Use Permit criteria; all the required findings under Section 17.136.050. (B), of the Non-Residential Design Review criteria; all the required findings under Section 17.128.080 (B), of the telecommunication facilities (Monopole) Design Review criteria; and all the required findings under Section 17.128.080. (C), of the telecommunication facilities (Monopole) Conditional Use Permit criteria; and as set forth below and which are required to approve your application. Required findings are shown in **bold** type; reasons your proposal satisfies them are shown in normal type.

SECTION 17.134.050 – GENERAL USE PERMIT FINDINGS:

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with, and will not adversely affect, the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development.

The purpose of the project is to enhance wireless telecommunications in the area along Skyline line Boulevard. The new facility is designed to resemble utility poles found in the area and is located across from East Bay Regional Park District training center parking lot. The proposed antennas will be screened within a radome and equipment cabinet will be located below ground level in vault. The facility will be unmanned and will not create additional vehicular traffic in the area and will not adversely affect the operating characteristics or livability of the hillside area.

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant.

The proposed unmanned wireless telecommunication facility will not adversely affect or detract from the civic, commercial or residential characteristics of the neighborhood, because the antennas will be mounted on a monopole telecommunication facility located in an unpopulated area

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region.

The proposed development will enhance the successful operation of the surrounding area in its basic community function and will provide an essential service to the community or region. This will be achieved by improving the functional use of the site by providing a regional

telecommunication facility for the community, which will be available to police, fire, public safety organizations and the general public.

D. That the proposal conforms to all applicable design review criteria set forth in the DESIGN REVIEW PROCEDURE of Chapter 17.136 of the Oakland Planning Code.

The proposal conforms with all significant aspects of the design review criteria set forth in Chapter 17.136 of the Oakland Planning Code, as outlined below.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable plan or development control map which has been adopted by the City Council.

The proposal conforms in all significant aspects with the Oakland General Plan and with any other applicable plan or zoning maps adopted by the City of Oakland. The proposed monopole telecommunication facility expansion in the Hillside Residential General Plan designation will enhance and improve communication service for a mix of civic, commercial, residential and institutional uses in the area.

17.136.050(B) – NONRESIDENTIAL DESIGN REVIEW CRITERIA:

1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;

The proposal is to install a new 30'-8" tall wood pole located in the public right-of-way. The project involves the installation of two panel antennas mounted at 24'-7" above the ground; an associated equipment will be located below ground level in vault located within the City of Oakland public right-of-way. The new facility is designed to resemble utility wood poles found in the area.

2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;

The design will be appropriate and compatible with current zoning and general plan land use designations. The antennas will be located on a monopole designed to look like a PG&E utility pole and will have minimal visual impacts as seen from the roadway.

3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

The proposal conforms with the City of Oakland General Plan and meets specific General Plan policies and the Supplemental Report and Recommendations on Revisions to the Citywide Telecommunications Regulations. The proposal will conform to performance standards for noise set forth in Section 17.120.050 for decibels levels in residential areas for both day and nighttime use. The Project conforms to all monopole-facility definitions set forth in Section 17.128.080 and meets all design review criteria to minimize all impacts throughout the neighborhood.

17.128.080(B) DESIGN REVIEW CRITERIA FOR MONOPOLE FACILITIES

1. Collocation is to be encouraged when it will decrease visual impact and collocation is to be discouraged when it will increase negative visual impact:

The proposed project entails a new monopole design to look like a PG&E utility pole and is consistent with existing utility siren wood pole located within this vicinity and will have minimal visual impacts as seen from the roadway.

2. Monopoles should not be sited to create visual clutter or negatively affect specific views:

The proposed antennas will be screened within a radome mounted to a monopole which will be located in an area with limited houses. The equipment cabinets will be located below ground level in vault located within the City of Oakland public right-of-way. Therefore, the project will have minimal visual impacts in the hillside area.

3. Monopoles shall be screened from the public view wherever possible:

See above #2 finding

4. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained:

The associated equipment cabinet will be located below ground level in vault located within the City of Oakland public right-of-way. The equipment will be placed where it will not be accessed by the public.

5. Site location and development shall preserve the preexisting character of the surrounding buildings and land uses and the zone district as much as possible. Wireless communication towers shall be integrated through location and design to blend in with the existing characteristics of the site to the extent practical. Existing on-site vegetation shall be preserved or improved, and disturbance of the existing topography shall be minimized, unless such disturbance would result in less visual impact of the site to the surrounding area:

The proposed antennas will be located on a monopole in an area with limited houses, Based on the location of site, the proposed monopole will not result in a visual impact and will blend in with the existing characteristics of the site.

6. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing, anti-climbing measures and anti-tampering devices:

The antennas will be mounted to a monopole and will not be accessible to the public due to its location. The equipment cabinet will be located in a service area which is only accessible to maintenance workers and not to the public.

Section 17.128.080(C) CONDITIONAL USE PERMIT (CUP) FINDINGS FOR MONOPOLE FACILITIES

1. The project must meet the special design review criteria listed in subsection B of this section (17.128.080C):

The proposed project meets the special design review criteria listed in section 17.128.080B. (see Staff's findings in the preceding Section).

2. Monopoles should not be located any closer than one thousand five hundred (1,500) feet from existing monopoles unless technologically required or visually preferable:

The site is appropriate because the proposed antennas will be located on a monopole in an area with limited homes, and will serve the near by residential neighborhood without actually being located on a residential property.

3. The proposed project must not disrupt the overall community character:

The site is appropriate because the proposed antennas will be located on a monopole within City of Oakland public right-of-way, thus it will not disrupt the overall community character of the site.

4. If a Major Conditional Use Permit is required, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.

a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.

b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.

c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.

d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.

e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.

f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the city.

N/A

CONDITIONS OF APPROVAL
PLN16-081

STANDARD CONDITIONS:

1. Approved Use

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **PLN15-081** and the approved plans **dated March 24, 2016**, as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

2. Effective Date, Expiration, Extensions and Extinguishment

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. Compliance with Other Requirements

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City’s Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

4. Minor and Major Changes

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. Compliance with Conditions of Approval

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the “project applicant” or “applicant”) shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant’s expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City’s Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. Signed Copy of the Approval/Conditions

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. Blight/Nuisances

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

8. Indemnification

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called “City”) from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys’ fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called “Action”) against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys’ fees.
- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a)

above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

PROJECT SPECIFIC CONDITONS:

10. Radio Frequency Emissions

Prior to the final building permit sign off.

The applicant shall submit a certified RF emissions report stating the facility is operating within the acceptable standards established by the regulatory Federal Communications Commission.

11. Operational

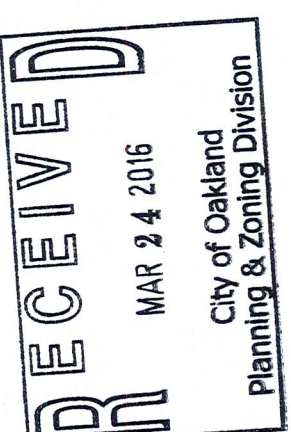
Ongoing.

Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

NOTE
A COPY OF ALL REQUIRED PERMITS MUST BE PRESENT DURING ANY WORK ON THIS LOCATION AND PERFORMING WORK AT THIS LOCATION INDICATES THAT THE CONTRACTOR HAS READ AND COMPLETED WITH THE REQUIREMENTS STATED IN THE PERMITS
SIGNATURE: _____

CROWN CASTLE

**OAKLAND HILLS
NODE N31M3
ACROSS 11500 SKYLINE BLVD
OAKLAND, CA. 94619**



CROWN CASTLE
635 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:
OAKLAND HILLS
NODE N31M3
ACROSS 11500 SKYLINE BLVD
OAKLAND, CA 94619

CURRENT ISSUE DATE:
1/16/16

PERMIT SUBMISSION:

REV.	DATE	DESCRIPTION	BY:
1	2/19/16	DRAWING UPDATE	VO
2	3/08/16	ADD SITE SURVEY & EQUIPMENT UPDATE	VO
3	3/16/16	DRAWING UPDATE	VO
4	3/23/16	DRAWING UPDATE	VO

PLANS PREPARED BY:

PLANS APPROVED BY:
13341 TEMESCAL
CANYON RD, 92683
CORONA, CA 92701
PHONE: 909-266-8080
FAX: 909-266-8080

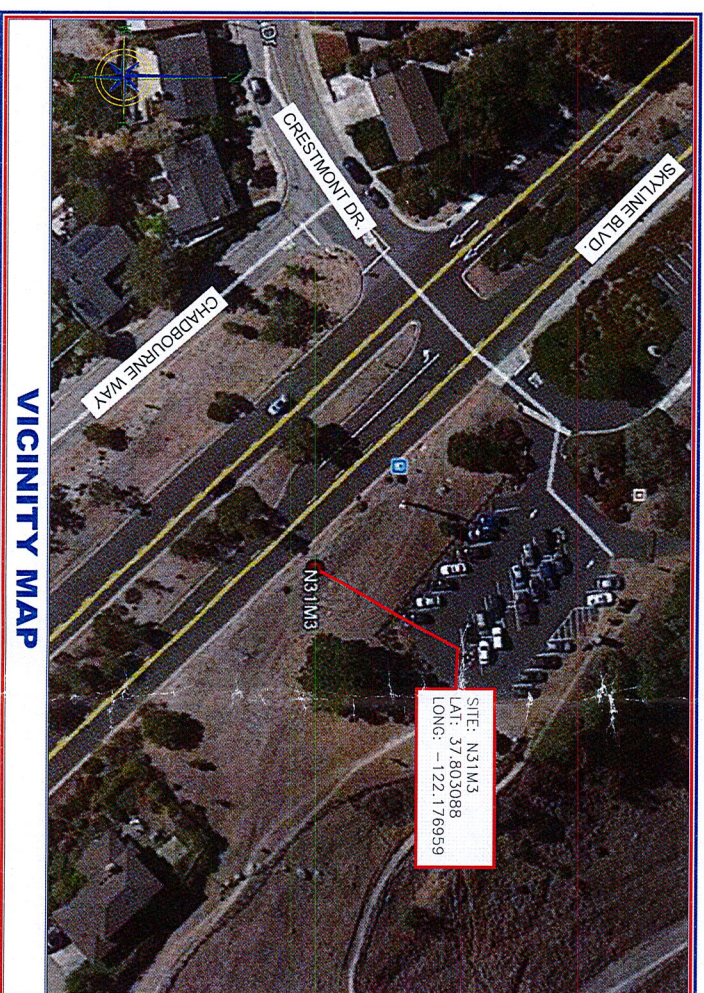
CROWN CASTLE

COMMENTS:

SHEET TITLE:
CROWN CASTLE
TITLE SHEET NODE N31M3

SHEET NUMBER: 1
REVISION: 4
(24"x36" SIZE)

1 OF 7



VICINITY MAP

- CODE COMPLIANCE**
1. STATE ADMINISTRATIVE CODE
 2. STATE BUILDING CODE
 3. ANSI/FIA-222-F LIFE SAFETY CODE NFPA-101-1990
 4. STATE MECHANICAL CODE
 5. STATE PLUMBING CODE
 6. STATE ELECTRIC CODE
 7. LOCAL BUILDING CODE
 8. CITY/COUNTY ORDINANCES
 9. MUTCO STANDARDS

PROPERTY INFORMATION

CUSTOMER: CROWN CASTLE
PROJECT: OAKLAND HILLS
NODE: N31M3
LATITUDE: 37.803088
LONGITUDE: -122.176959
STREET ADDRESS: ACROSS 11500 SKYLINE BLVD
CITY, STATE: OAKLAND, CA 94619
POLE # / TYPE: NEW POLE / WOOD POLE
RAD CENTER / ANTENNA HEIGHT: 28'-0" / 58'-3"
ANTENNA TYPE: AMPHENOL HTXQW31518X3000
AZIMUTH FOR ANTENNA: N/A
POWER TO POLE: METER ON PROPOSED POLE
POLE ACCESS: STREET ACCESS
POLE LOCATION & DESCRIPTION: ACROSS 11500 SKYLINE BLVD ON EAST SIDE OF STREET APPROX. 160' S/E OF THE BAY REGIONAL PARKS TRAINING CENTER PARKING LOT

PROJECT SUMMARY

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED POLE AND A GROUND LEVEL WALK HOUSING EQUIPMENT FOR CROWN CASTLE.
CROWN CASTLE PROPOSES TO INSTALL A NEW 35'-0" WOOD POLE WITH ONE (1) ANTENNA ATTACHMENT (S) ON THE EAST SIDE OF STREET APPROX. 160' S/E OF THE BAY REGIONAL PARKS TRAINING CENTER PARKING LOT. IN ADDITION CROWN CASTLE PROPOSES TO INSTALL A GROUND LEVEL WALK THAT WILL HOUSE THE RF EQUIPMENT AND BATTERY BACKUP.

PROJECT DESCRIPTION

PROJECT SCOPE

CROWN CASTLE PROPOSES TO PLACE NEW COAXIAL CABLE(S) TO THE NEW POLE, RUNNING ALL WIRING / CABLES INSIDE RISERS ATTACHED TO THE OUTSIDE OF THE WOOD POLE.
CROWN CASTLE PROPOSES TO INSTALL ONE (1) PANEL ANTENNA AND ALL ASSOCIATED MOUNTING BRACKETS IN ACCORDANCE TO THE CONSTRUCTION / ASSEMBLY GUIDELINES. THE ANTENNAS WILL BE INSTALLED ON THE EAST SIDE OF STREET APPROX. 160' S/E OF THE BAY REGIONAL PARKS TRAINING CENTER PARKING LOT. IN ADDITION CROWN CASTLE PROPOSES TO PLACE A NEW GROUND LEVEL WALK.

PROJECT SCOPE

SHEET	DESCRIPTION	REV.
1	TITLE SHEET	4
2	UTILITY POLE EQUIPMENT PROFILES	4
3	SYSTEM OVERVIEW	3
4	UTILITY POLE EQUIPMENT TYPICALS	3
5	UTILITY POLE EQUIPMENT TYPICALS	3
6	SHUT DOWN PROCEDURE	3
7	SITE SURVEY	3

SHEET INDEX

811
Know what's below.
Call before you dig.
Call 811 Before you Dig!

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

GENERAL CONTRACTOR NOTES



605 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:
OAKLAND HILLS
NODE N31M3
ACROSS 11500 SKYLINE BLVD
OAKLAND, CA 94619

CURRENT ISSUE DATE:
1/16/16

PERMIT SUBMISSION:

REV.	DATE	DESCRIPTION	BY
1	2/19/16	DRAWING UPDATE	VO
3	3/16/16	DRAWING UPDATE	VO
4	3/23/16	DRAWING UPDATE	VO

PLANS APPROVED BY:	PLANS PREPARED BY:

3341 TEMESCAL
CANTON RD. 02983
OFFICE: 951-471-1919
FAX: 909-256-8080



Call Before you Dig!



Know what's below.
Call before you dig.
Call 811 Before you Dig!

SHEET TITLE:
CROWN CASTLE
UTILITY POLE EQUIPMENT
PROFILES NODE N31M3

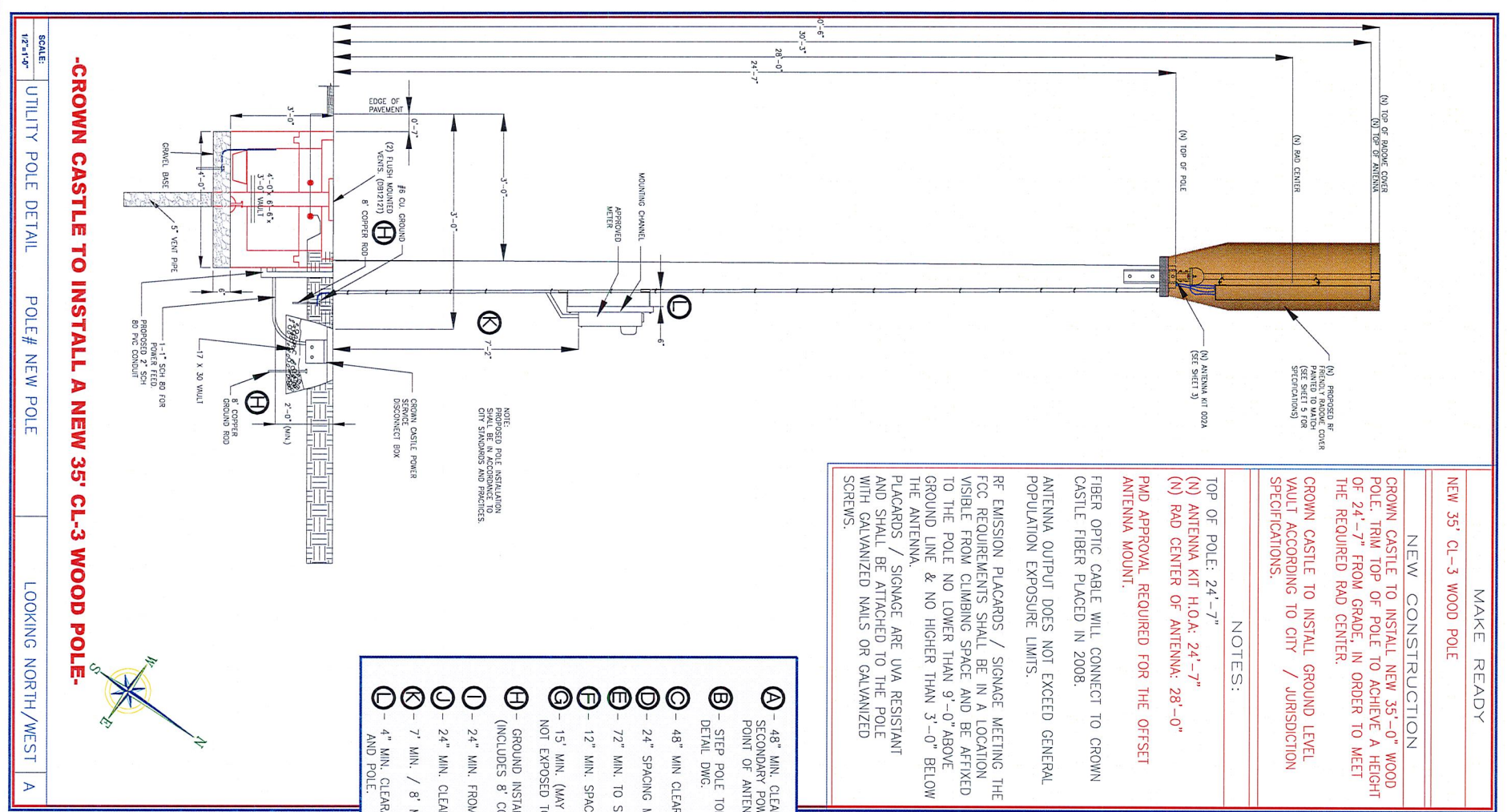
SHEET NUMBER:
2

REVISION:
4
2 OF 7

-CROWN CASTLE TO INSTALL A NEW 35' CL-3 WOOD POLE-

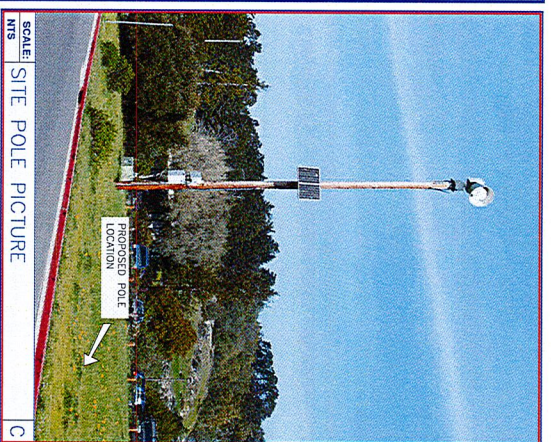
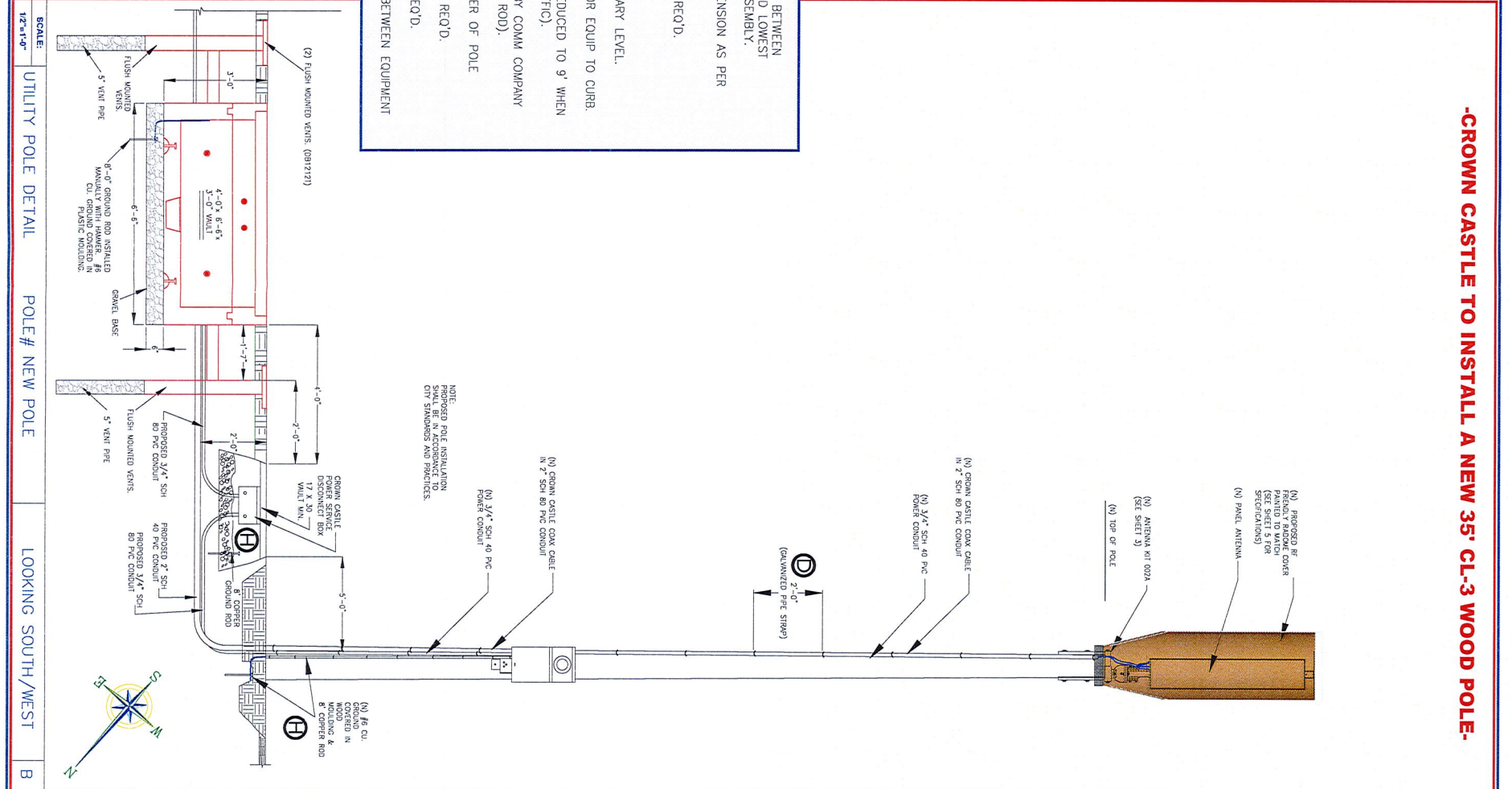
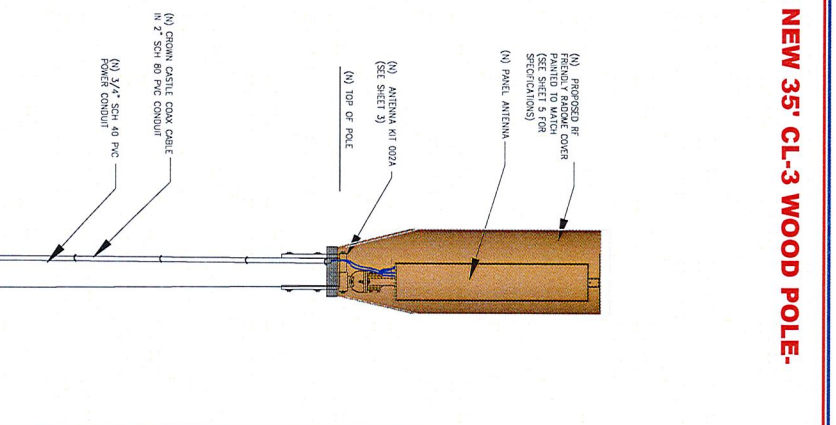
MAKE READY
NEW CONSTRUCTION
CROWN CASTLE TO INSTALL NEW 35'-0" WOOD POLE. TRIM TOP OF POLE TO ACHIEVE A HEIGHT OF 24'-7" FROM GRADE. IN ORDER TO MEET THE REQUIRED RAD CENTER.
CROWN CASTLE TO INSTALL GROUND LEVEL VAULT ACCORDING TO CITY / JURISDICTION SPECIFICATIONS.

NOTES:
TOP OF POLE: 24'-7"
(N) ANTENNA KIT H.O.A.: 24'-7"
(N) RAD CENTER OF ANTENNA: 28'-0"
PAD APPROVAL REQUIRED FOR THE OFFSET ANTENNA MOUNT.
FIBER OPTIC CABLE WILL CONNECT TO CROWN CASTLE FIBER PLACED IN 2008.
ANTENNA OUTPUT DOES NOT EXCEED GENERAL POPULATION EXPOSURE LIMITS.
RF EMISSION PLACARDS / SIGNAGE MEETING THE FCC REQUIREMENTS SHALL BE IN A LOCATION VISIBLE FROM CLIMBING SPACE AND BE AFFIXED TO THE POLE NO LOWER THAN 9'-0" ABOVE GROUND LINE & NO HIGHER THAN 3'-0" BELOW THE ANTENNA.
PLACARDS / SIGNAGE ARE UVA RESISTANT AND SHALL BE ATTACHED TO THE POLE WITH GALVANIZED NAILS OR GALVANIZED SCREWS.



- (A) - 48" MIN. CLEARANCE BETWEEN SECONDARY POWER AND LOWEST POINT OF ANTENNA ASSEMBLY.
- (B) - STEP POLE TOP EXTENSION AS PER DETAIL DWG.
- (C) - 48" MIN. CLEARANCE REQ'D.
- (D) - 24" SPACING MAX.
- (E) - 72" MIN. TO SECONDARY LEVEL.
- (F) - 12" MIN. SPACING FOR EQUIP TO CURB.
- (G) - 15' MIN. (MAY BE REDUCED TO 9' WHEN NOT EXPOSED TO TRAFFIC).
- (H) - GROUND INSTALLED BY COMM COMPANY (INCLUDES 8' COPPER ROD).
- (I) - 24" MIN. FROM CENTER OF POLE
- (J) - 24" MIN. CLEARANCE REQ'D.
- (K) - 7' MIN. / 8' MAX. REQ'D.
- (L) - 4" MIN. CLEARANCE BETWEEN EQUIPMENT AND POLE.

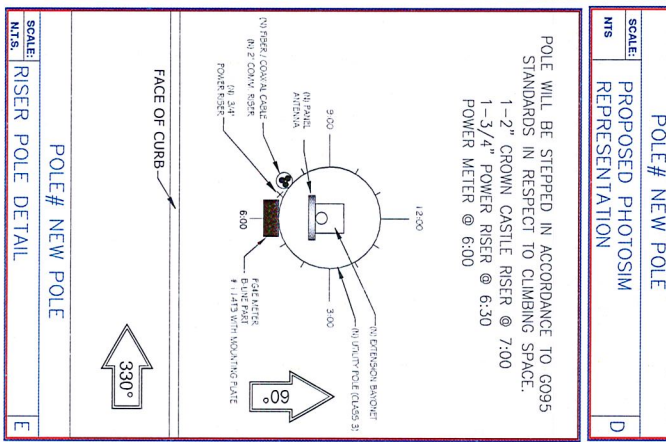
-CROWN CASTLE TO INSTALL A NEW 35' CL-3 WOOD POLE-



SITE POLE PICTURE



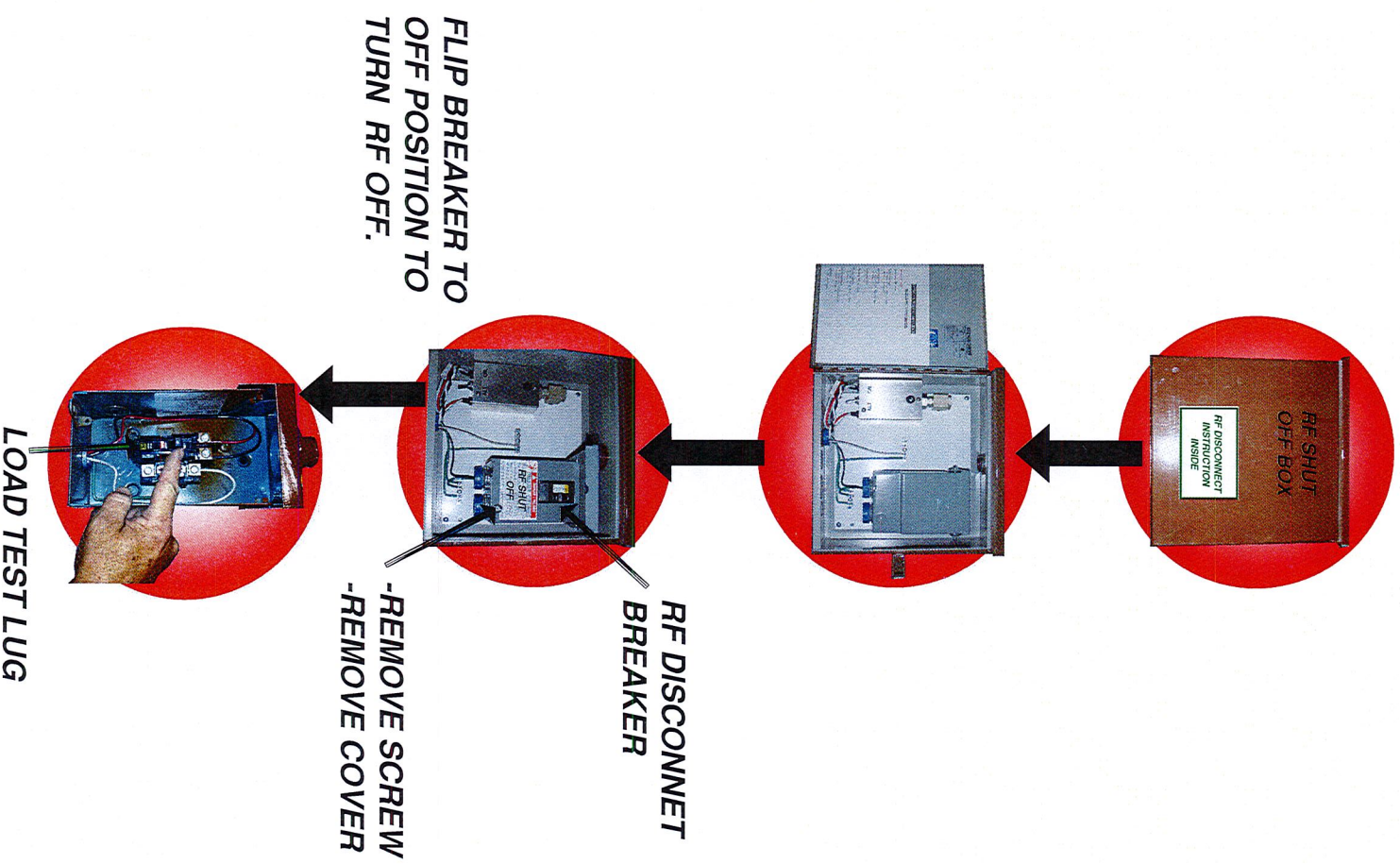
POLE# NEW POLE PROPOSED PHOTOSIM REPRESENTATION



POLE# NEW POLE RISER POLE DETAIL

PG&E SHUTDOWN PROCEDURE

RF DISCONNECT BOX



Instructions for De-Energizing the Site:

1. Call Crown Castle Network operations center 1888-632-0931
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



695 RIVER OAKS PARKWAY
SAN JOSE, CA 95134
PHONE: (408) 954-1580

PROJECT INFORMATION:
OAKLAND HILLS
NODE N31M3
ACROSS 11500 SKYLINE BLVD
OAKLAND, CA 94619

CURRENT ISSUE DATE:
1/16/16

PERMIT SUBMISSION:
BY:
DATE:

REV.	DATE	DESCRIPTION	BY:
3	3/16/16	DRAWING UPDATE	VO

PLANS PREPARED BY:



PLANS APPROVED BY:



REP. COMMENTS:

SHEET TITLE:

CROWN CASTLE
SHUTDOWN PROCEDURE
NODE N31M3

SHEET NUMBER: 6 (24"x36" SIZE)
REVISION: 3

ATTACHMENT A



Existing



proposed antenna

Proposed



Node N31M2
Across 11500 Skyline Blvd.
Oakland, CA

Looking Northwest from Skyline Blvd.

View #1

3/3/16

Applied Imagination 510 914-0500

ATTACHMENT B

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

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

February 29, 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 directional Amphenol antennae model HTXCWW631518x000 mounted to a wood 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 28.0 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 of this configuration proposed for Oakland Hills, CA (see Appendix A-0-1).

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.

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.

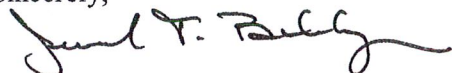
Summary & Conclusions

All Crown Castle antenna systems operating with the maximal exposure conditions characteristics as specified above and observing a 13 foot (public) and 5 foot (occupational) 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 caution 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 5 and 13 feet or closer to the face of the antenna may exceed the FCC occupational and public exposure standards respectively. Thus only qualified RF workers may work within the 13 foot exclusion zone. The maximum RF exposure at ground level from these nodes will not be in excess of 14.1% 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.

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 28.0 or more feet above grade, and the 13 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.

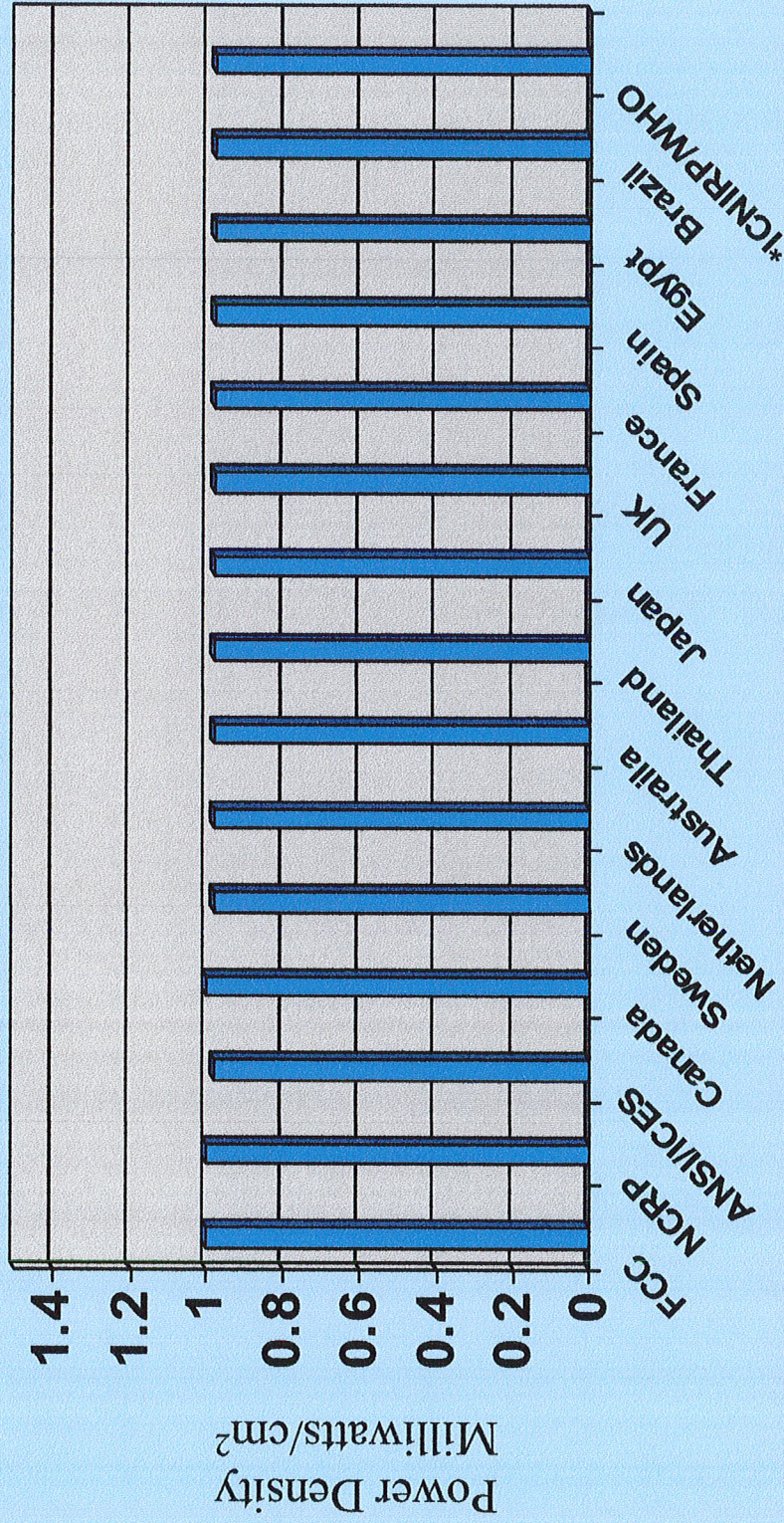
Sincerely,



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.

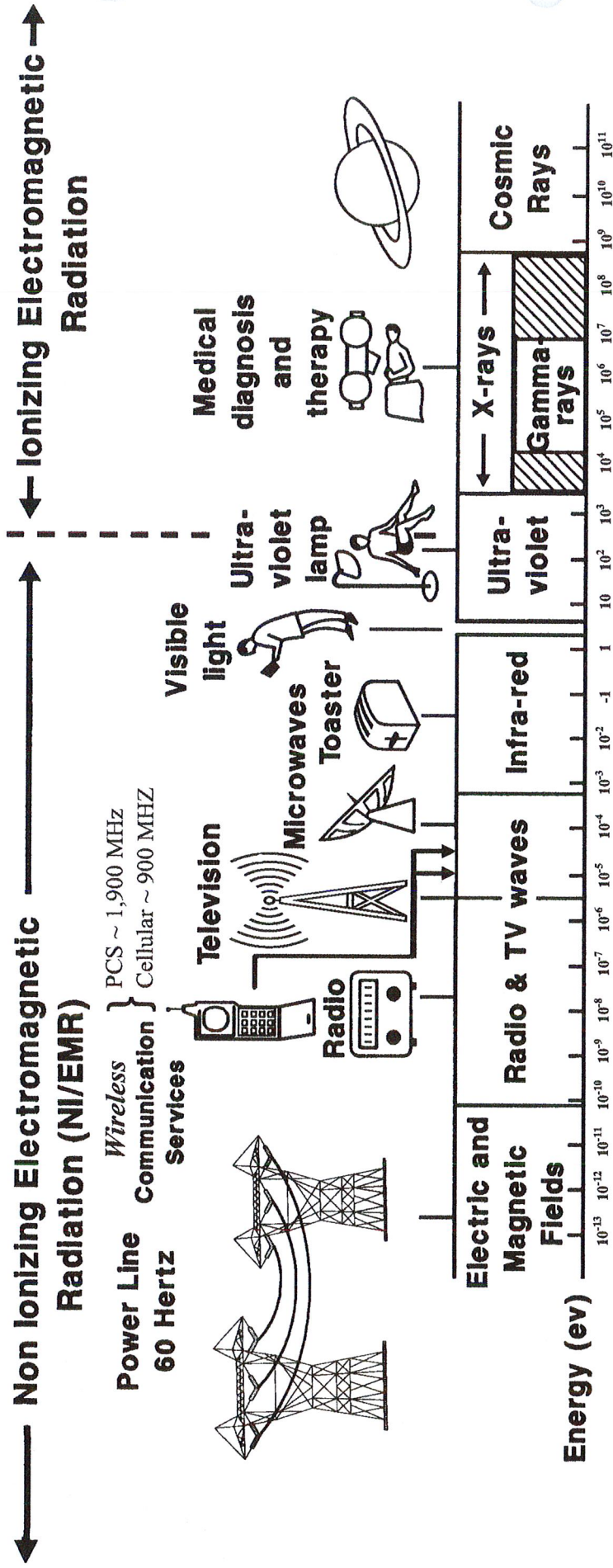
National and International Public RF Exposure Standards (DAS @ 1,950 MHz)



*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 • Sweden
- Italy • Japan • United Kingdom
- France • Germany • Hungary
- United States

Figure 1



The Electromagnetic Spectrum

Figure 2

Typical Exposure from Various Radio Frequency / Microwave Sources

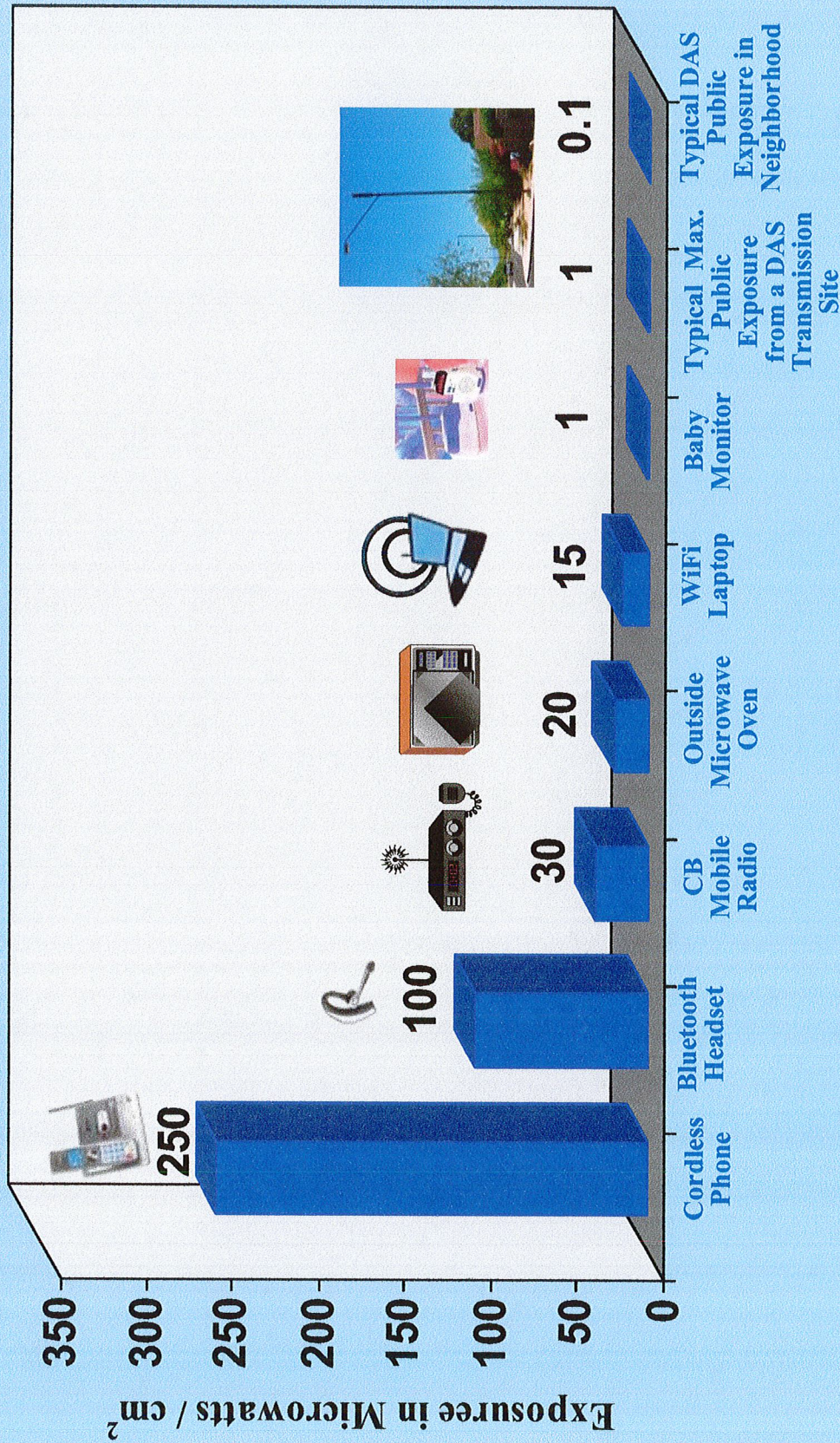


Figure 3

Appendix A-3

RF Exposure At Ground Level

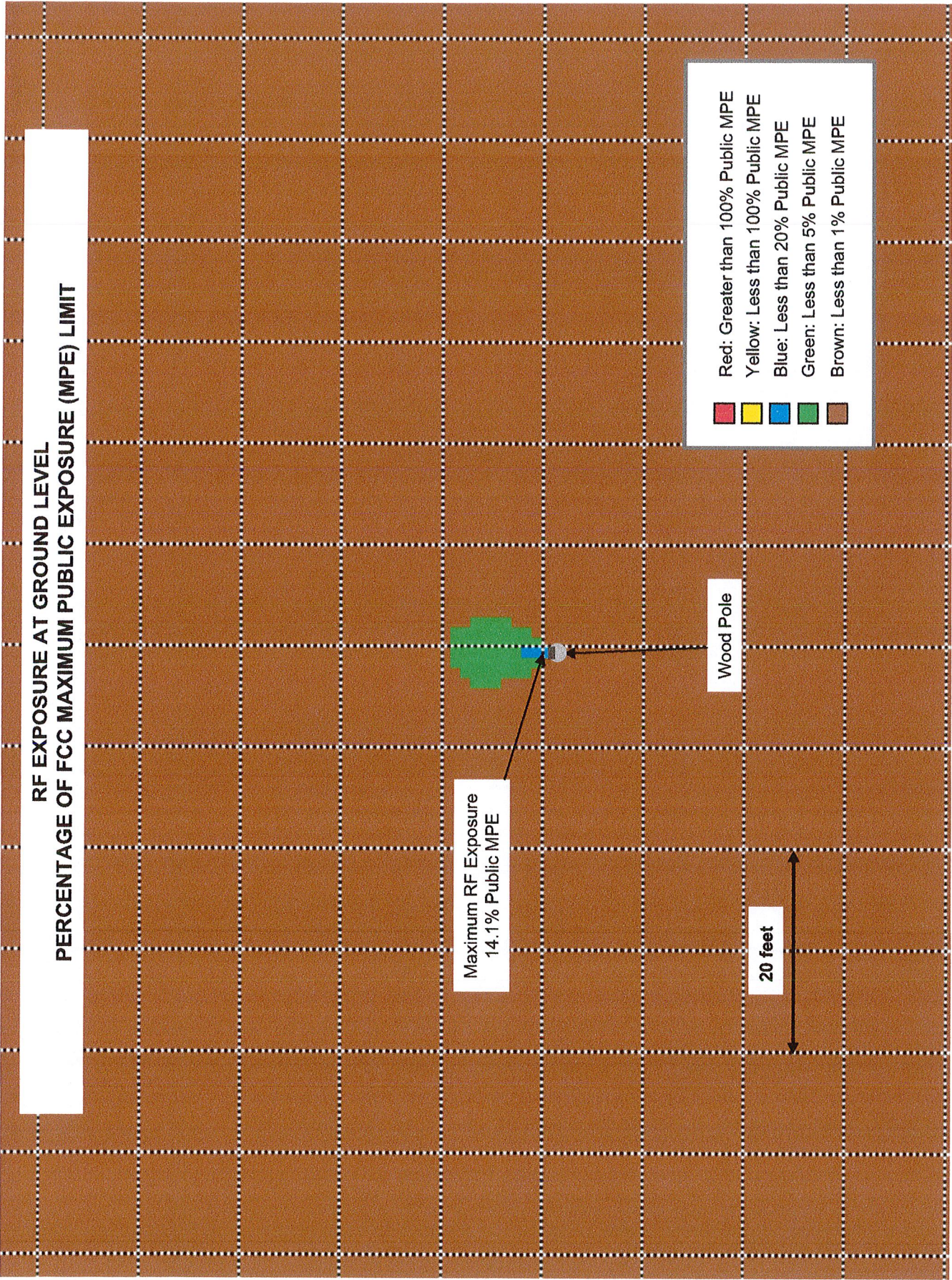
**RF EXPOSURE AT GROUND LEVEL
PERCENTAGE OF FCC MAXIMUM PUBLIC EXPOSURE (MPE) LIMIT**

Maximum RF Exposure
14.1% Public MPE

Wood Pole

20 feet

- 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.

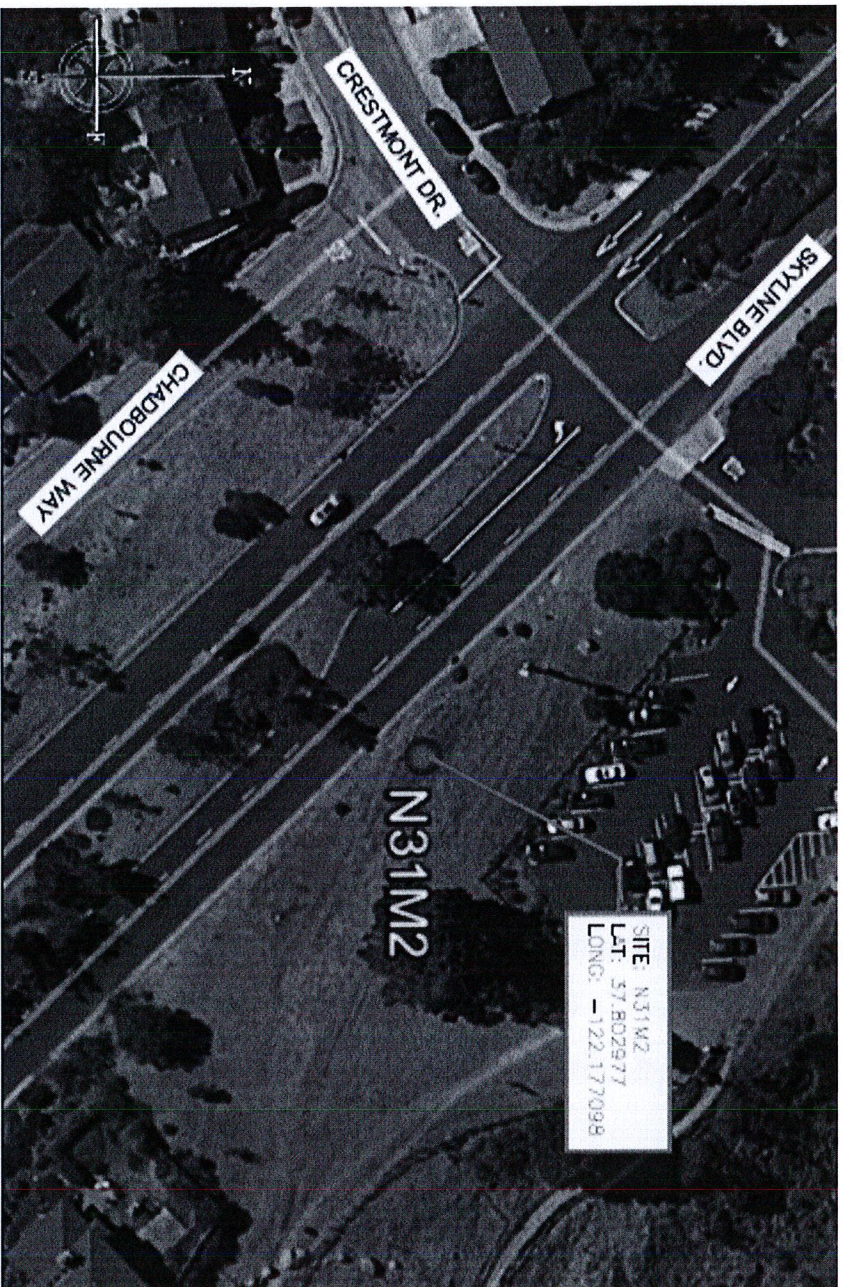
Dr. Bushberg's doctoral dissertation at Purdue University was on various aspects of the biological effects of microwave radiation. He has maintained a strong professional involvement in this subject and has served as consultant or appeared as an expert witness on this subject to a wide variety of organizations/institutions 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.

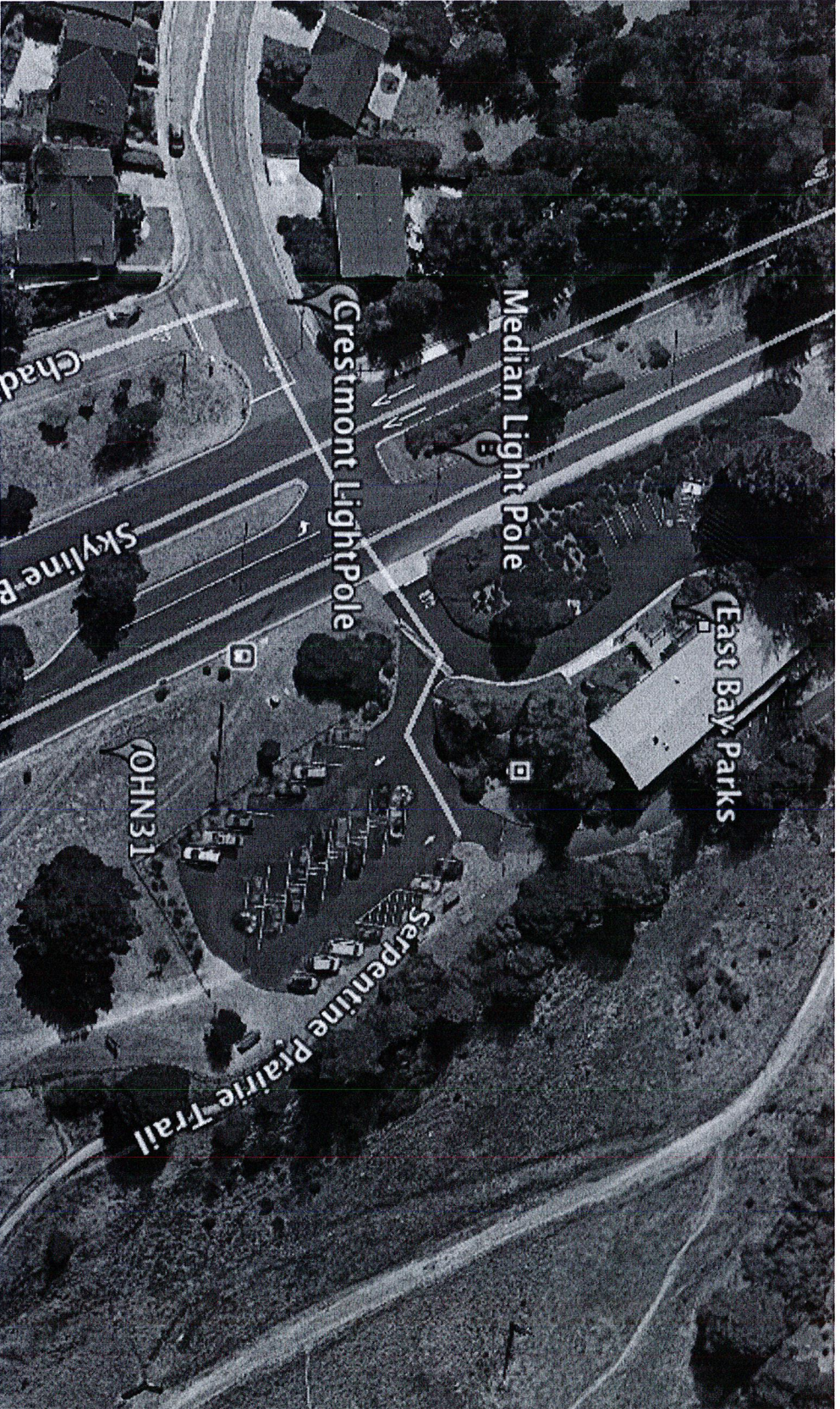
Dr. Bushberg is a full member of the Bioelectromagnetics Society, the Health Physics Society and the Radiation Research Society. Dr. Bushberg received both a Masters of Science and Ph.D. from the Department of Bionucleonics at Purdue University. Dr. Bushberg is a fellow of the American Association of 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.

CROWN CASTLE
OAKLAND HILLS OHN31
SITE ALTERNATIVES

Propose Site Location Overview



Alternative Locations Map



Overview

- This Small Cell project is part of a larger system that Crown has currently deployed in the Oakland hills.
- The area Crown is looking to cover is all residential and open space, no commercial property in the area.
- The only existing structures in the area metal light poles owned by the city. The city has refused to work with Crown on allowing them to attach equipment to the poles.
- Several other locations have been presented over the last few years but for various reasons were not permitted
- The search area for Small Cells is very specific, this site was designed to cover the Skyline/Crestmont intersection and Richard Trudeau Conference Center and Park Entrance.

10648 Skyline Location Option 1 – Previously Submitted Location



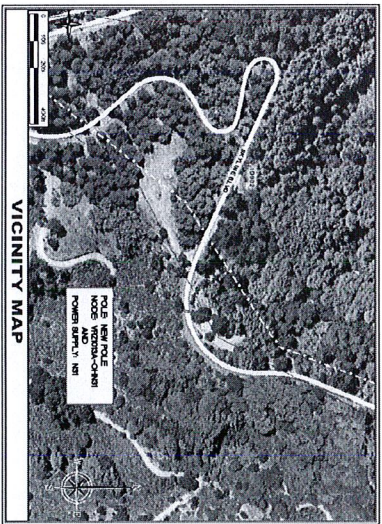
NextG Networks Inc.
OAKLAND HILLS
VRZ1013A-OHN31
10648 SKYLINE BLVD.
OAKLAND, CA. 94619

CODE COMPLIANCE

1. CITY ORDINANCE 12.01
 2. CITY ORDINANCE 12.02
 3. CITY ORDINANCE 12.03
 4. CITY ORDINANCE 12.04
 5. CITY ORDINANCE 12.05
 6. CITY ORDINANCE 12.06
 7. CITY ORDINANCE 12.07
 8. CITY ORDINANCE 12.08
 9. CITY ORDINANCE 12.09
 10. CITY ORDINANCE 12.10

PROPERTY INFORMATION

OWNER: NEXG
 PROJECT: OAKLAND HILLS
 ADDRESS: 10648 SKYLINE BLVD
 CITY: OAKLAND, CA 94619
 COUNTY: ALAMEDA
 ZONING: O-1
 APN: 017-013-0000
 AREA: 1.5 ACRES
 DATE: 10/20/10



PROJECT DESCRIPTION

The project consists of the installation and operation of a radio tower and associated equipment on the site. The tower will be used to provide cellular service to the surrounding area. The project is located on Skyline Blvd in Oakland Hills, CA.

PROJECT SCOPE

The project scope includes the design, construction, and operation of the radio tower and associated equipment. The project will be completed in three phases: design, construction, and operation.

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND AND THE COUNTY OF ALAMEDA.

SHEET	DESCRIPTION	REV.
1	POUL PROJECT	0
2	GENERAL CONTRACTOR NOTES	0
3	GENERAL CONTRACTOR NOTES	0
4	GENERAL CONTRACTOR NOTES	0

SHEET INDEX

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Call 811 before you dig!



GENERAL CONTRACTOR NOTES

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND AND THE COUNTY OF ALAMEDA.
 3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND AND THE COUNTY OF ALAMEDA.

PROJECT INFORMATION
 PROJECT NAME: OAKLAND HILLS
 PROJECT NUMBER: VRZ1013A-OHN31

CLIENT SITE DATE: 10/20/10
PERMIT SUBMISSION:

PLANS PREPARED BY: HP COMMUNICATIONS INC.
 1001 BROADWAY, SUITE 1000
 OAKLAND, CA 94612
 PHONE: (510) 431-1111

PLANS APPROVED BY: NEXG NETWORKS INC.

COMMENTS:

SHEET NUMBER: 1 OF 4

10648 Skyline Location Option 2 – Previously Submitted Location



NextG Networks Inc.
OAKLAND HILLS
VRZ1012CA-OHN31
10648 SKYLINE BLVD.
OAKLAND, CA. 94720

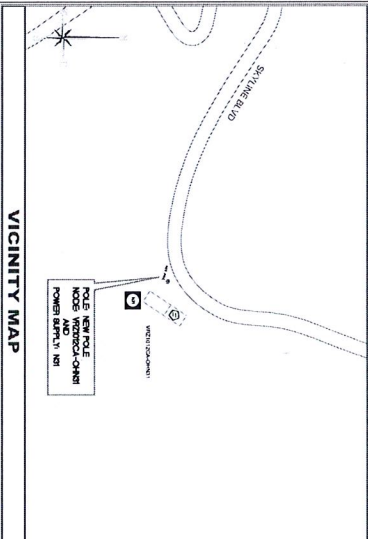
CODE COMPLIANCE

All structures and equipment shall be constructed in accordance with the following codes and standards unless otherwise specified:

1. CITY BUILDING CODE
2. CITY ELECTRICAL CODE
3. CITY MECHANICAL CODE
4. CITY PLUMBING CODE
5. CITY FIRE CODE
6. CITY LANDSCAPE CODE
7. CITY TREE PRESERVATION CODE
8. CITY SIGNAGE CODE
9. CITY UTILITIES CODE
10. CITY TRAFFIC CODE
11. CITY ZONING ORDINANCES

PROPERTY INFORMATION

CUSTOMER: NEXTO
 PROJECT: OAKLAND HILLS
 ADDRESS: 10648 SKYLINE BLVD
 CITY: OAKLAND, CA 94720
 COUNTY: ALAMEDA
 STATE: CA
 ZIP: 94720
 PROJECT ADDRESS: 10648 SKYLINE BLVD
 CITY: OAKLAND, CA 94720
 COUNTY: ALAMEDA
 STATE: CA
 ZIP: 94720
 PROJECT ADDRESS: 10648 SKYLINE BLVD
 CITY: OAKLAND, CA 94720
 COUNTY: ALAMEDA
 STATE: CA
 ZIP: 94720



PROJECT DESCRIPTION

The project consists of the installation and operation of a new radio tower and associated equipment on an existing pole structure located at the intersection of Skyline Blvd and 10648 Skyline Blvd, Oakland, CA. The tower will be used to provide cellular service to the surrounding area.

PROJECT SCOPE

SCOPE OF WORK AND LIMITS TO WORK: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, AND INSTALLATION OF THE TOWER AND EQUIPMENT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND AND THE ALAMEDA COUNTY PUBLIC UTILITIES DEPARTMENT.

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OAKLAND AND THE ALAMEDA COUNTY PUBLIC UTILITIES DEPARTMENT.

GENERAL CONTRACTOR NOTES

SHEET	DESCRIPTION	REV
1	POLE LOCATION	0
2	EXISTING POLE / EQUIPMENT LOCATION	0
3	UTILITY LOCATIONS	0
4	UTILITY FIELD EQUIPMENT LOCATIONS	0
		0
		0

SHEET INDEX

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PROJECT INFORMATION
 PROJECT NAME: OAKLAND HILLS
 PROJECT ADDRESS: 10648 SKYLINE BLVD, OAKLAND, CA 94720

COMMENT ISSUE DATE
 2/25/10

PERMIT SUBMISSION

PLANS PREPARED BY:
 HP COMMUNICATIONS INC.
 12411 Broadway Blvd.
 Fremont, CA 94538
 PHONE: (510) 791-9194

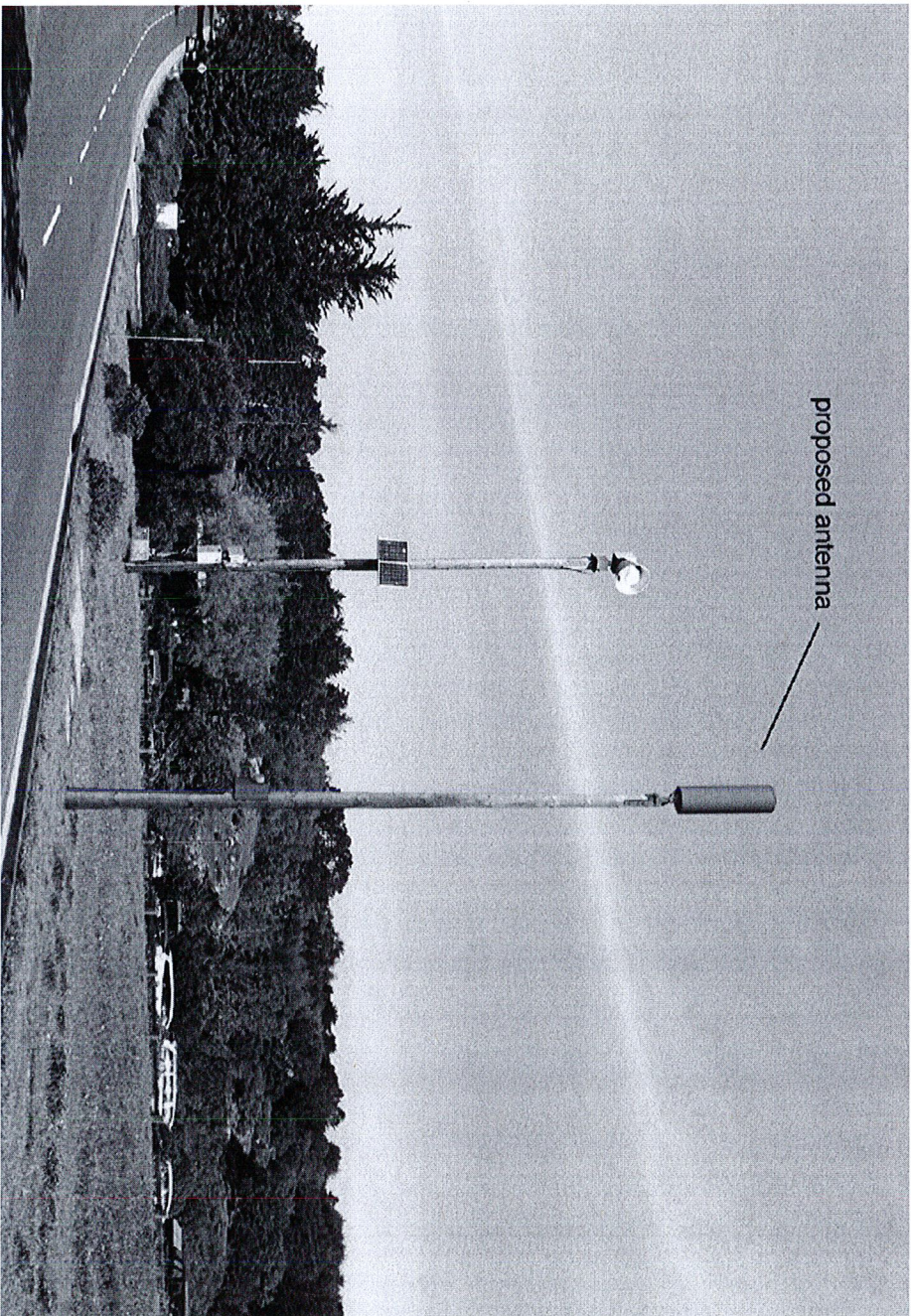
PLANS APPROVED BY:
 NEXTO NETWORKS INC.

COMMENTS:

SHEET TITLE:
 NEXTO NETWORKS
 OAKLAND HILLS
 POLE PROJECT VRZ1012CA-OHN31

SHEET NUMBER:
 1 OF 4

Photosimulation of Proposed Facility



Northern View of the Search Area with candidate locations



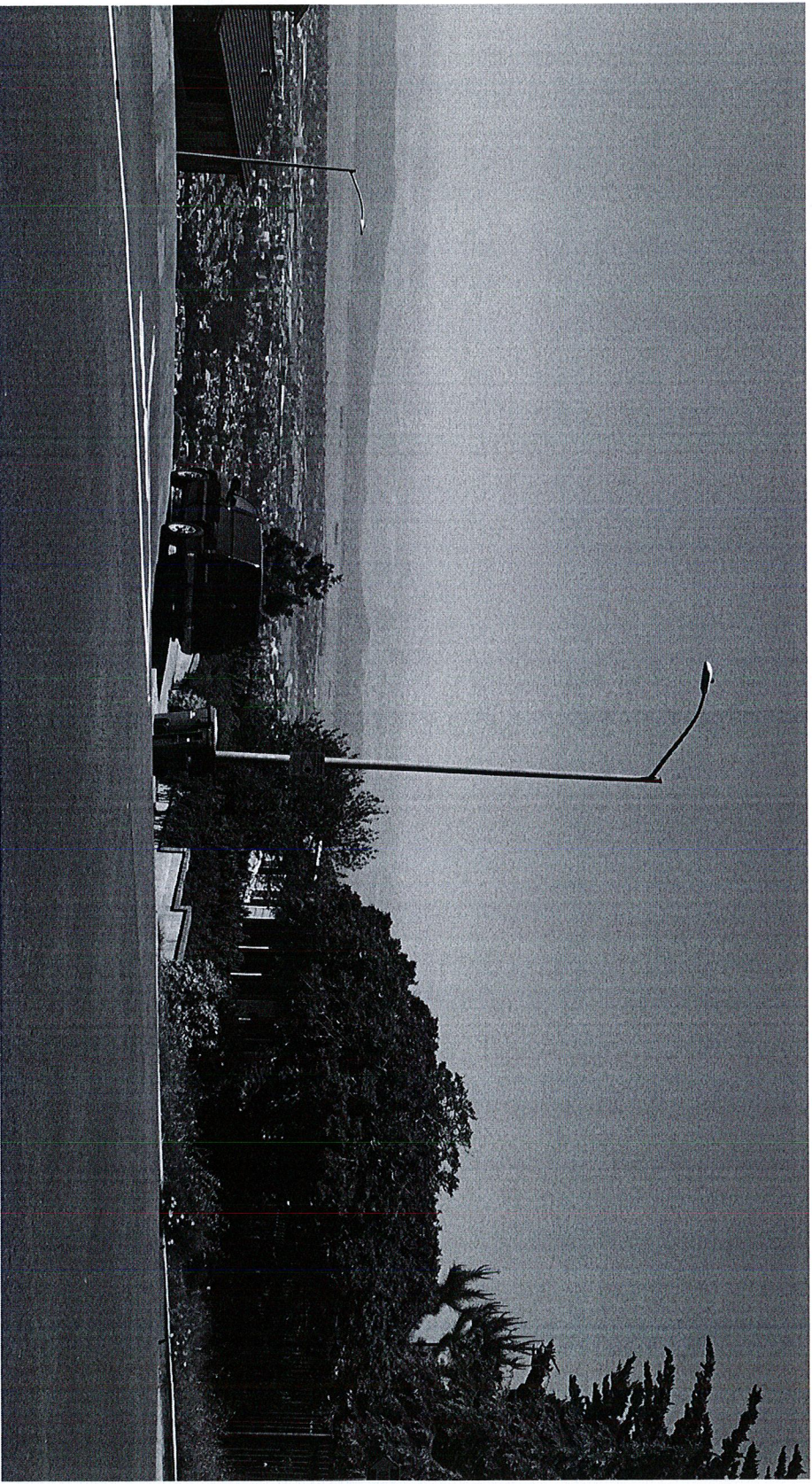
Center Median Light Pole on Skyline

Item B on the map, This pole isn't a desirable location as its in the center median, this brings in worker safety issues with installation and on going maintenance



Crestmont Dr. Light Pole

Item C on the map – this pole could potentially work but there space limitations on the sidewalk, plus there is no deal in place to rent space on city light pole with Crown.



East Bay Park Facility

Item D on the map – The parks department was initially interested in leasing space but a facility location and a deal couldn't be reached.

