ESCONDIDO
City of Choice

PLANNING COMMISSION

Agenda Item No.: G.1
Date: April 27, 2010

CASE NUMBER: PHG 09-0032

APPLICANT: Mark Phillips, M&M Telecom, Inc. (for Sprint-Nextel/Clearwire)

LOCATION: Lot G-G-1 of Tract No. 683, Woodland Heights Glen (APN 187-720-23)

TYPE OF PROJECT: Specific Plan Amendment

PROJECT DESCRIPTION: An Amendment to the Palos Vista Specific Plan

STAFF RECOMMENDATION: Approval

GENERAL PLAN DESIGNATION/TIER: SPA #1

ZONING: SP-Palos Vista Specific Plan

BACKGROUND/SUMMARY OF ISSUES:

Clearwire is a subscription based internet service provider, which is 51% owned by Sprint/Nextel. They currently have sites in many states and are proposing a new network in Escondido with approximately 23 sites. Many, but not all of the proposed facilities in Escondido would be co-located or associated with existing Sprint/Nextel sites. Clearwire is proposing to locate on an approximately 67+-acre open-space lot within the 979-acre Palos Vista Specific Plan (SP 87-01, known as Escondido Highlands) and co-locate their new antennas on an exiting Nextel facility. The site currently contains several wireless communication facilities including Sprint, Nextel, Cricket, AT&T and T-Mobile. An Amendment to the Specific Plan is required since wireless facilities are not a listed use within the open space areas of the Palos Vista Specific Plan. The proposed amendment would be specific to this request only, and would not add general language to the existing Specific Plan to allow other wireless communication facilities as a permitted or conditionally permitted use.

The existing Nextel wireless facility consists of eight, 12-foot-high support poles which were approved to accommodate one panel antenna on each of the poles (total of 8 antennas). There currently are six Nextel antennas mounted onto the eight poles. Clearwire Communication proposes to move two of the existing Nextel antennas onto the two vacant poles, and install two of their new rectangular antennas onto two of the support poles. Clearwire also would install two round directional antenna onto two of the existing poles below their new rectangular antennas and also mount an additional round antenna onto the block equipment enclosure for a total of five new Clearwire antennas and six Nextel antennas. The necessary Clearwire support equipment would be placed within the existing Nextel masonry equipment shelter.

LEGAL REQUIREMENTS: In 1996, the U.S. Congress added a section to the Communications Act of 1934 to promote the expansion of personal wireless communications service, adding section 332(c)(7). This section preserves local zoning authority over the "placement, construction, and modification" of wireless facilities, while imposing certain federal requirements. Specifically, Section 332(c)(7) requires that state or local government decisions regarding wireless service facilities must not: 1) unreasonably discriminate between one cellular provider and another; or 2) prohibit or have the effect of prohibiting the provision of personal wireless services; or 3) be founded on "the environmental effects of radio frequency (RF) emissions ***to the extent that such facilities comply*** with the FCC's regulations" (emphasis added).

In summary, once the Commission is satisfied the project's RF emissions are within the federal thresholds, then the review must be based on otherwise applicable local zoning criteria. A denial of a proposed facility must not run afoul of the federal restrictions set forth as 1), 2) and 3) above.

Staff feels the issues are as follows:

1. Whether the design and location of the proposed facility is appropriate for the site and consistent with the Wireless Facility Guidelines.

REASONS FOR STAFF RECOMMENDATION:

1. The proposed facility would be consistent with the Communication Antennas Ordinance since the facility would co-locate on an existing communications antenna. Existing panel antennas would be removed and the number of new panels are limited and would be installed on an existing antenna array to be in scale with the existing facilities. The proposed equipment cabinets would be placed within an existing enclosure area. The facility (as conditioned) would be consistent with the Wireless Facility Guidelines since it would not result in any adverse visual impacts; is located on a non-residential site in a residential zone; would use an existing facility to mount the panels rather than construction of an additional structure; and would be in conformance with FCC emission standards.

2. Staff feels the proposed facility would not result in a potential health hazards to nearby residents since the Radio Frequency (RF) study prepared for the proposed project indicates the facility would be within maximum permissible exposure (MPE) limits and Federal Communication Commission (FCC) standards. The proposed project also would not result in an increase in RF emissions previously approved for the site.

Respectfully submitted,

Jay Paul
Associate Planner

ANALYSIS

A. LAND USE COMPATIBILITY/SURROUNDING ZONING

NORTH - SPA 1 (Palos Vista Specific Plan) / A 35-foot-high Vallecitos Water District water tank is located immediately north of the subject site. Native vegetation within the open space area of the development is located further north. Views of the facility from the nearest homes to the north and northeast within the Palos Vista development generally would be restricted due to the existing topography, height of the water tank, existing vegetation, and distance from the residences.

SOUTH - County Residential Zoning / Single-family residential homes on estate sized lots are located south of the subject site at a significantly lower elevation. Native vegetation is located on the lower slopes, and more ornamental type landscaping and tall mature trees (typically eucalyptus and oaks) are located on the residential properties. The existing Nextel wireless facility is visible from the homes to the south, and further views to the south and southeast.

EAST - R-1-7 zoning (Single-Family Residential, 7,000 SF min. lot size) / Single-family residential homes are located southeast of the site within the County jurisdiction at a lower elevation than the project site. Single-family homes also are located on the eastern side of Woodland Parkway within the City. The site is visible from some views to the east.

WEST - SPA 1 / (Palos Vista Specific Plan) / Open space property is located immediately west of the facility on the hillside terrain. Native vegetation covers most of the open space area. Singe-family homes located within the county are located further west and southwest at a lower elevation. Views of the site from the west generally are obscured by topography and/or large mature trees. The site is visible from some views to the southwest.

B. AVAILABILITY OF PUBLIC SERVICES

1. Effect on Police Service - The Police Department expressed no concern regarding the proposed project and their ability to provide service to the site.

2. Effect on Fire Service - The Fire Department indicated that adequate services can be provided to the site and the proposed project would not impact levels of service.

3. Traffic – The Engineering Department indicated the project would not have any impacts to existing traffic or circulation within the area.

4. Utilities – The Engineering Department indicated the project would not result in a significant impact to public services or utilities. The Rincon del Diablo Municipal Water District is a partial owner of the subject site, and the proposed project would not impact any plans for future utilities on the site.

5. Drainage – The Engineering Department determined the project would not materially degrade the levels of service of the existing drainage facilities.

C. ENVIRONMENTAL STATUS

1. The proposal is exempt from the requirements of the California Environmental Quality Act (CEQA) in conformance with Section 15301, "Existing Facilities" and a Notice of Exemption was prepared for the proposed project. In staff's opinion, the request does not have the potential for causing a significant effect on the environment due to the relatively small size of the facility and the proposed development would be located within a disturbed area. The subject parcel and adjacent parcel to the east currently contains several private and public communication facilities. The subject lease area does not contain any sensitive vegetation, nor would the project encroach into native vegetation areas.

2. In staff's opinion, no significant issues remain unresolved through compliance with code requirements and the recommended conditions of approval. Staff feels the proposed facility would not result in a potential health hazards to nearby residents since the Radio Frequency (RF) study prepared for the proposed project indicates the facility would be within maximum permissible exposure (MPE) limits and Federal Communication Commission (FCC) standards. The property is gated and public access is restricted.

3. The project will have no impact on fish and wildlife resources as no sensitive or protected habitat occurs within the proposed development area or will be directly impacted/removed by the proposed development.

D. GENERAL PLAN ANALYSIS:

General Plan - The General Plan land-use designation on the site is SPA 1, which calls for the area to be developed with residential uses and open space areas. The proposed amendment to the Palos Vista SPA would allow a wireless facility on this specific site within the open space area. This would be consistent with General Plan Policy III (Page VIII-4) regarding Plan Description for Specific Plan Area 1, which states: "The development plan is based on an analysis identifying the most appropriate areas for development." The project site is within an area that previously has been disturbed with major utilities to service the surrounding area (Vallecitos water tanks); wireless facilities previously have been approved and development on the subject site; adequate access is provided to the site with a paved road; and project would not result in a loss of sensitive habitat. The proposed project would be designed to integrate into the existing built environment, to the extent feasible for this type of facility, and the project site is not located on or near any intermediate or skyline ridges. Although the existing Nextel wireless facility is located within a designed for conservation on the Draft MHCP Vegetation Maps, the project area previously has been cleared of any native or sensitive habitat, and has been developed with utility type facilities. The proposed amendment also is consistent with the economic policies which call for providing support products and services for local businesses.

E. PROJECT ANALYSIS

Appropriateness of the Proposed Design and Whether the Proposed Wireless Facility Would Be in Conformance with the Communication Antennas Ordinance

The Escondido Highlands open space lot has a relatively level area at the top, and contains two Vallecitos above-ground water tanks and a variety of private communications facilities, including equipment buildings, poles and three, 35-foot-high faux trees. Clearwire proposes to remove and/or relocate several of the existing panel antennas on the Nextel facility to accommodate four of their new antennas (two, 26" round directional, and two, 48" H x 13" W panel antennas). An additional round (26" diameter) Clearwire antenna also would be mounted onto the existing masonry equipment shelter. The existing Nextel facility previously was approved for up to eight antennas on eight separate poles, but currently only maintains six antennas on the poles. Two of the existing poles do not have any antennas mounted onto them. With the removal of some of the Nextel antennas and installation of the new Clearwire antennas, the facility would accommodate a total of eleven antennas (ten antennas on the poles and one on the equipment enclosure). The antennas would be painted to match the existing facilities (typ. olive drab). The supporting Clearwire equipment cabinet would be located within the existing Nextel equipment enclosure along with a small GPS unit attached to the outside of the structure. No expansion to the building or enclosure area is proposed. Existing landscaping along the southern side of the equipment structure helps to screen the lower portions of the facility from views to the south, southwest and southeast.

Senate Bill 18 requires early consultation with affected "California Native American Tribes" regarding the project and potential impacts to cultural and archaeological resources, and the project was mailed to several of the area's Tribes for comment. One letter was received from the California Indian legal Services (attached) representing the San Luis Rey Band of Indians expressing concern regarding potential impacts to sensitive cultural/archaeological resources. The San Luis Rey Band requested that mitigation measures be incorporated into the project to protect any affected resources from any grading activities. An Environmental Impact Report (EIR) was adopted for the original Palos Vista Specific Plan and the archaeological study did not identify any significant resources within the area of the project. However, one archaeological site of significance (SDM-W-1458) is located more than a mile from the Nextel facility within a remote northwestern portion of the larger 67+-acre open-space lot, and it is preserved within an open-space easement. Staff does not feel the project has the potential to impact any sensitive resources since no grading or other ground disturbance is proposed, and the project area also has been disturbed by past development and landscaping, and no sensitive resources were discovered in the project area. However, should any cultural or archaeological resources be impacted by this or any other development, the appropriate measures would need to be followed in accordance with state and federal law. The California Indian Legal Services was mailed a copy of the Public Hearing Notice and staff has not received any additional comments to date.

Conformance with FCC Emission Requirements

Operation of the facility would generate electromagnetic emissions (RF radiation). A RF study was prepared for the project by AIM Wireless Solutions to determine whether the proposed communication facility complies with the FCC Radio Frequency Safety guidelines. The study assumes a worst case scenario at maximum capacity, and compares the figures to existing standards. Due to the existing communication facilities on the site, actual measurements were conducted to establish a baseline for a cumulative analysis. The analysis indicated the anticipated MPE limits on the ground from the proposed Clearwire facility by itself is approximately 21% of FCC limits. The cumulative level from all of the carriers is less than 47%, which would be in compliance with applicable FCC's General Population MPE Limits. The conclusions of this analysis also would be consistent with previous studies submitted for the other carriers on the site. A copy of the study has been attached with this report.

SUPPLEMENT TO STAFF REPORT/DETAILS OF REQUEST

A. PHYSICAL CHARACTERISTICS

The subject site is relatively flat and has been previously cleared and graded to accommodate two existing above-ground water tanks, and access road, and other wireless communication facilities. No sensitive animal species or significant habitat areas are known to be present within the proposed lease/improvements area(s). The development area contains a variety of mature trees, including eucalyptus and California Pepper. Native and non-native vegetation surrounds the site on the steeper slope areas.

B. SUPPLEMENTAL DETAILS OF REQUEST

1.	Property Size:	67+-acre open space parcel
2.	Panels/Poles:	
	Existing:	Approved for up to 8 (Nextel) on 8, 12-foot-high poles (currently six antennas mounted)
	Proposed:	Total of 11, which includes 3 round directional (Clearwire), 2 rectangular panels (Clearwire) and 6 Nextel panels. 10 to be mounted onto the exiting 8 poles and 1 onto the existing equipment enclosure. Antenna panels and any visible facilities to be painted olive drab to blend in with existing facilities. Clearwire rectangular antennas (48" H x 13" W x 3" – 6" D) Clearwire round directional antennas (26" diameter) Nextel Antennas (48" H x 12" W)
3.	Equipment Enclosure:	
	Existing:	24'L x 15"W x 12'H block and vinyl clad chain-link fence (painted camouflage)
4.	Power Density:	Clearwire - 21% of the FCC General Public Limit for Maximum Public Exposure (MPE). Cumulative from all carriers – less than 47%
5.	Equipment:	One additional equipment cabinet, plus GPS antenna and associated electrical rack(s) to be installed in the existing equipment enclosure.
6.	Hours of Operation Wireless Facility:	24 hours, unmanned
7.	Landscaping:	There are mature trees (generally California Peppers) located along the northern, eastern and southern boundary of the equipment area.

Other Wireless Facilities:

96-18-CUP	Sprint: (formally Cox PCS): Six panel antennas mounted onto six, 19.5-foot-high poles
2000-17-SPA/CUP	Nextel: Eight panel antennas mounted onto eight, 12-foot-high poles.
2006-20-SPA	AT&T (formally Cingular): 35-foot-high faux broad-leaf tree with up to six panel antennas.
2006-24-CUP	Cricket: 35-foot-high faux broad-leaf tree with up to three panel antennas.
2007-07-SPA	T-Mobile: 35-foot-high faux broad-leaf tree supporting up to nine panel antennas.

EXHIBIT "A"
FINDINGS OF FACT/FACTORS TO BE CONSIDERED
PHG 09-0032

Specific Plan Amendment

1. General Plan Residential Policy B2.1 (page II-17) states that residential neighborhoods shall be protected from the encroachment of incompatible activities which may have a negative impact on the residential living environment. Granting this Amendment to the Palos Vista Specific Plan to allow a personal wireless communication facility on the subject property would not conflict with this policy and would be based on sound principles of land use since the use is in response to services required by the community and the facility would enhance communication services in the city without posing a health threat to the surrounding area. The proposed panels would be co-located onto an existing wireless facility, which would minimize potential adverse visual impacts in conformance with the Communication Antennas Ordinance. The ground equipment would be located within an existing equipment enclosure and screened from public views. Landscaping and irrigation currently exist along the southern elevation of the facility to provide screening from adjacent views, and help to better integrate the facility into the surrounding environment. The proposed antennas and equipment enclosure area would not adversely affect the current operation of the site, or any future uses of the site in conformance with the underlying Specific Plan Open Space land-use category or zoning. The facility also would not result in a potential health hazard to nearby residents since the facility would be within MPE (maximum permissible exposure) limits as indicated in the radio frequency analysis prepared for the project. The proposed facility would be in compliance with the City's Wireless Facility Guidelines, as discussed in the Planning Commission staff report dated April 27, 2010.

2. The proposed personal wireless communication facility would be located within the Specific Plan zone. The proposed facility would not result in a substantial alteration of the present or planned land use since the new antennas are small in scale, and the antennas and support equipment would be integrated into an existing wireless communication facility. The project site currently is developed with large above ground water tanks, support buildings, paved access road and several other wireless communication facilities. The proposal would not cause deterioration of bordering land uses since the antennas/facility are designed to integrate into the existing wireless facility, and the number and size of the panels limited to reduce the overall bulk of the facility. Therefore, the antennas would be in context with the surrounding built environment and in conformance with the Wireless Guidelines regarding integration into the built environment.

3. The visual impacts related to the proposed personal wireless communication facility are not considered significant since the antennas would be mounted onto an existing communication facility, and the not exceed the height or the existing antennas. The overall size of the equipment and any other disturbed areas would remain the same. Landscaping and irrigation currently exist along the southern elevation of the facility to provide screening from adjacent views, and help to better integrate the facility into the surrounding environment. Therefore, the antennas would be in context with the surrounding built environment. The proposed equipment cabinet(s) would be located within a screened enclosure area. The design and location of the proposed facility would be in compliance with the City's Wireless Facility Guidelines, as discussed in the Planning Commission staff report dated April 27, 2010.

4. The proposed personal wireless communication facility would not be hazardous to the health of nearby residents since the radio frequency (RF) analysis prepared for the project concluded the maximum operation levels of radiation for the facility would be within the MPE (Maximum Permissible Exposure) limit established by FCC requirements. The proposed equipment would be secured within a locked enclosure area.

5. The proposal is exempt from the requirements of the California Environmental Quality Act (CEQA) in conformance with Section 15301, "Existing Facilities" and a Notice of Exemption was prepared for the proposed project. The request does not have the potential for causing a significant effect on the environment due to the relatively small size of the facility and the proposed development would be located within a previously disturbed area that supports and existing wireless communication facility. The subject lease area does not contain any sensitive vegetation, nor would the project encroach into native vegetation areas, nor would the project impact any cultural or archaeological sites.

6. The proposed Amendment to the Palos Vista Specific Plan has been considered in relationship to its effect on the community, and the request would be in compliance with the General Plan Policies and the Wireless Facility Guidelines, and would not result in a negative impact to the adjacent neighborhood for the reasons stated above and detailed in the Planning Commission staff report and radio frequency analysis.

EXHIBIT "B"

CONDITIONS OF APPROVAL
PHG 09-0032

General

1. All construction shall comply with all applicable requirements of the Escondido Zoning Code and requirements of the Planning Department, Director of Building, and the Fire Chief.

2. Access for use of heavy fire fighting equipment as required by the Fire Chief shall be provided to the job site at the start of any construction and maintained until all construction is complete. Also, there shall be no stockpiling of combustible materials, and there shall be no foundation inspections given until on-site fire hydrants with adequate fire flow are in service to the satisfaction of the Fire Marshal.

3. Appropriate access shall be provide to the project site, to the satisfaction of the Fire Department.

4. The legal description attached to the application has been provided by the applicant and neither the City of Escondido nor any of its employees assume responsibility for the accuracy of said legal description.

5. All requirements of the Public Partnership Program, Ordinance No. 86-70 shall be satisfied prior to building permit issuance. The ordinance requires that a public art fee be added at the time of the building permit issuance for the purpose of participating in the City Public Art Program

6. Prior to or concurrent with the issuance of building permits, the appropriate development fees and Citywide Facility fees shall be paid in accordance with the prevailing fee schedule in effect at the time of building permit issuance, to the satisfaction of the Director of Planning and Building.

7. Prior to obtaining building permits, the applicant shall demonstrate compliance with the requirements of the Citywide Facilities Plan, to the satisfaction of the Planning Division and Engineering Department.

8. All exterior lighting shall conform to the requirements of Article 1072, Outdoor Lighting (Ordinance No. 86-75).

9. As proposed, the design, color and materials of the proposed facilities shall be in accordance with the staff report, exhibits and the project's Details of Request, including the following to the satisfaction of the Planning Division:

    a. Any visible support poles, brackets, cable runs and other support equipment and screening materials shall be painted to match/blend with the existing colors of the facility (typically flat olive drab). This shall be clearly noted on the building plans.

    b. All new utility runs shall be placed underground, to the satisfaction of the Planning Division and the Engineering Department, unless as specifically approved by this permit.

    c. The existing equipment enclosure (block walls) shall be repainted in flat, dark olive green tones or all one solid dark olive green color to blend in with the surrounding vegetation. The final color shall be approved by the Planning Division and included on the final building plans.

10. All proposed signage associated with the project must comply with the City of Escondido Sign Ordinance (Ord. 92-47) and the exhibits included in the staff report(s), to the satisfaction of the Planning Division. Appropriate signs providing notice, caution or warning, and other necessary markings, shall be placed at the main site access point(s) and other locations, as may be required, in order to alert maintenance or other workers approaching the antennas to the presence of RF transmissions and to take precautions to avoid exposures in excess of FCC limits. The requirement for the appropriate signage/notice shall be indicated on the building plans.

11. Sprint-Nextel/Clearwire or any subsequent operator/lease holder of the wireless facility agrees to investigate any complaints related to possible interference with electronic equipment in the surrounding area to determine the cause of the interference. Any interference shall be resolved in a timely manner to the satisfaction of the Director of Community Development. If the facility is determined to be the cause of the electronic interference, Clearwire shall

solve the problem in a timely manner to the satisfaction of the complainant and the Director of Community Development. In addition, any interference with public safety communications shall be corrected immediately, to the satisfaction of the City of Escondido.

12. All project generated noise shall conform to the City's Noise Ordinance (Ordinance 90-08).

13. If requested by the City of Escondido, Sprint-Nextel/Clearwire, or any subsequent operator/lease holder of the facilities shall permit co-location of other wireless providers on its facility (subject to City of Escondido Approval) if it can be demonstrated that there would be no adverse effect on the existing facilities/operations.

14. Sprint-Nextel/Clearwire shall select an independent third party consultant to conduct actual power density measurements of the facility within 90 days after installation and under full operation of the facility. The results of the study shall be submitted to the Director of Community Development so that the theoretical power density study can be compared to the actual output to ensure compliance with FCC requirements.

16. Sprint-Nextel/Clearwire Wireless or any subsequent operator/lease holder of the wireless facility shall be responsible for all on-going maintenance of the facility, including the antennas and supporting equipment to ensure the condition of the facility does not appear weathered. Any required landscaping shall be permanently maintained in a flourishing manner. Any required irrigation shall be maintained in fully operational condition.

17. All communication facilities on the site shall be promptly removed upon non use of the facilities, to the satisfaction of the Planning Division and Building Department.

18. Any permanent, temporary or stand-by emergency generators must be in conformance with the City's Ordinance and regulations regarding electric generating facilities.

19. All new utilities and utility runs shall be underground.

20. No additional antennas or expansion of this facility shall be permitted without a modification of the Palos Vista Specific Plan and a public hearing before the Planning Commission. Minor changes within the approved size and design parameters may be permitted by the Director of Community Development.

21. Any proposed private security gates shall provide rapid reliable access by means of a key box to provide immediate access for firefighting purposes, as may be required by the Fire Department.

22. The Specific Plan Amendment shall be null and void if not utilized within twelve months of the effective date of approval, as determined by the Planning Division.

23. This Amendment to the Specific Plan only is for the co-location of Sprint-Nextel/Clearwire equipment on the existing facility located on the site. The number of antennas approved by this Specific Plan Amendment shall be used solely for Sprint-Nextel/Clearwire and not transferred or subleased to any other carriers unless approved by the City. No other additional carriers shall be allowed to be placed on the existing wireless communication facility, unless a separate Specific Plan Amendment is approved by the City.

24. This item may be referred back to the Planning Commission upon recommendation of the Director of Community Development for review and possible revocation or modification of the Amendment to the Specific Plan upon receipt of nuisance complaints regarding the facility or non-compliance with the Conditions of Approval.

25. A copy of these Conditions of Approval shall be submitted with the submittal of the building plans indicating compliance with all of the Conditions and Details of Request and exhibits contained in the Planning Commission staff report.

26. Prior to final of the building permit and operation of the facility, any graffiti on the existing Sprint/Nextel facility, fencing and any support equipment shall be removed or painted over to match the existing structures. Any previously required landscaping of either the Sprint/Nextel facility or other carriers associated with this Spring/Nextel facility shall be repaired and any missing vegetation replaced. This shall be noted on the building plans.

27. An inspection by the Planning Division will be required prior to operation of the project. Everything should be installed prior to calling for an inspection, although preliminary inspections may be requested. Contact the project planner at (760) 839-4671 to arrange a final inspection.

28. The City of Escondido hereby notifies the applicant that the County Clerk's Office requires a documentary handling fee of $50.00 in order to file a Notice of Exemption for the project (environmental determination for the project). The applicant shall remit to the City of Escondido Planning Division, within two working days of the final approval of the project (the final approval being the hearing date of the Planning Commission or City Council, if applicable) a check payable to the "San Diego County Clerk" in the amount of $50.00. In accordance with California Environmental Quality Act (CEQA) section 15062, the filing of a Notice of Exemption and the posting with the County Clerk starts a 35 day statute of limitations period on legal challenges to the agency's decision that the project is exempt from CEQA. Failure to submit the required fee within the specified time noted above will result in the Notice of Exemption not being filed with the County Clerk, and a 180 day statue of limitations will apply.

CITY OF ESCONDIDO
PLANNING DIVISION
201 NORTH BROADWAY
ESCONDIDO, CA 92025-2798
(760) 839-4671

Notice of Exemption

To: San Diego County Recorder's Office
Attn: Linda Kesian
P.O. Box 121750
San Diego, CA 92112-1750

From: City of Escondido
201 North Broadway
Escondido, CA 92025

Project Title/Case No.: PHG 09-0032

Project Location - Specific: Lot G-G-1 of Tract No. 683, Woodland Heights Glen (APN 187-720-23)

Project Location - City: Escondido, **Project Location - County:** San Diego

Description of Project: An amendment to the Palos Vista Specific Plan (SP 87-01) to install additional antennas (5 Clearwire antennas) onto an existing Nextel wireless communication facility. Clearwire Communication proposes to install two round directional antennas onto two of the existing 12-foot-high Nextel poles (below the panel antennas) and one onto the existing adjacent block equipment shelter, and replace two of the existing rectangular Nextel panel antennas with two new Clearwire panel antennas for a total of up to eleven antennas (Clearwire and Nextel). The necessary Clearwire support equipment would be placed within the existing Nextel masonry equipment shelter.

Name of Public Agency Approving Project: City of Escondido

Name of Person or Agency Carrying Out Project:

Name M&M Telecom (Mark Phillips) representing Spring/Clearwire Telephone (619) 379-3473

Address 2014 Granada Ave, San Diego, CA 92104

☒ Private entity ☐ School district ☐ Local public agency ☐ State agency ☐ Other special district

Exempt Status: Categorical Exemption. Section 15301 "Existing Facilities."

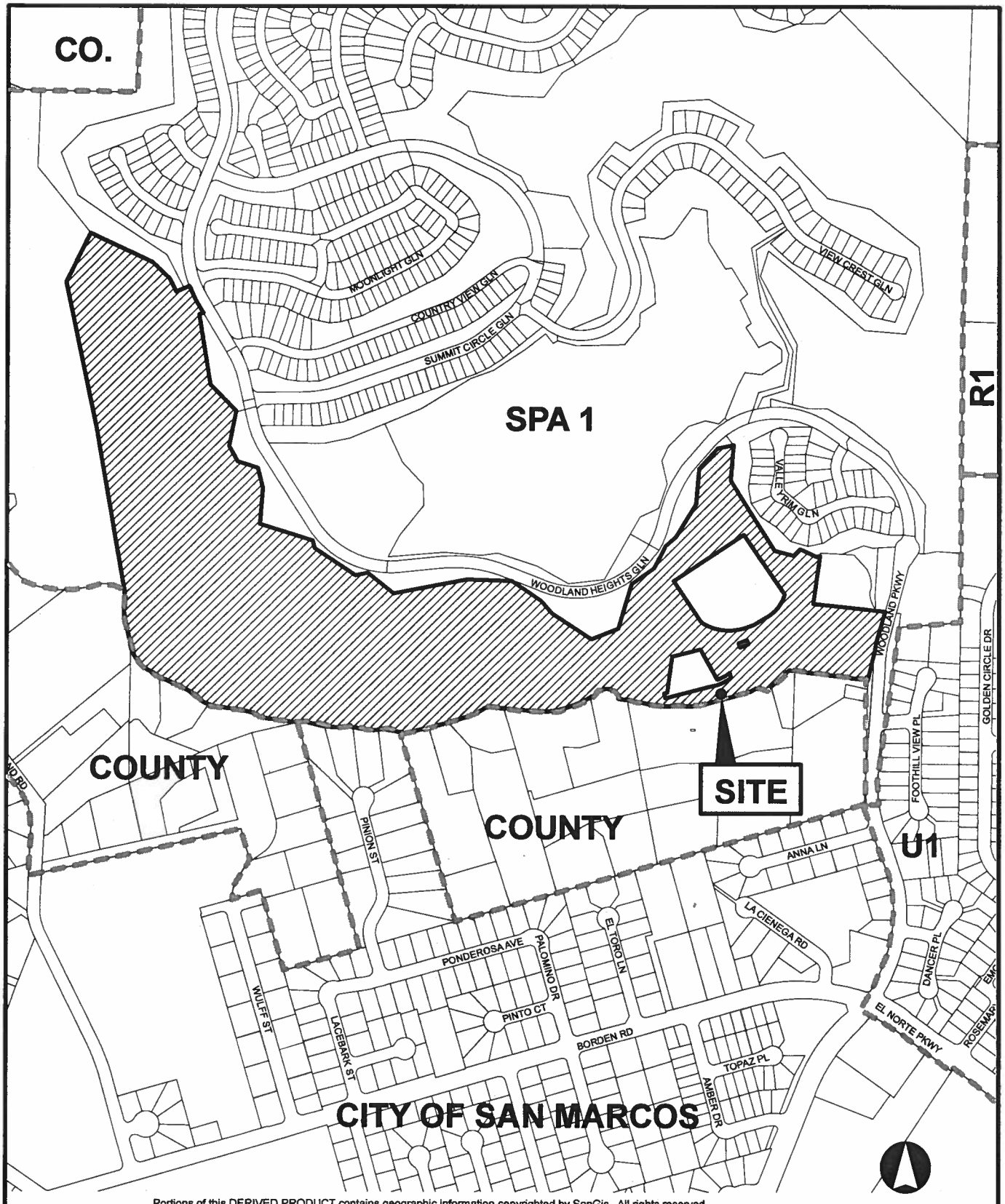
Reasons why project is exempt:

1. The project only involves a Modification to the Palos Vista Specific Plan to co-locate additional antenna panels on an existing Nextel wireless communication facility. No physical expansion of the site is proposed.
2. The site is in an area where all public services and facilities are available to allow for the proposed use.
3. The site is within an area that currently is developed with other municipal type facilities and structures, including several private wireless communication facilities. The proposed development/lease area is not in an area that is environmentally sensitive and the project would not have any direct impacts to any sensitive or protected resources. Since no ground disturbance is proposed, the project also would not impact any cultural or archaeological resources.
4. The proposed facility would not be hazardous to the health of nearby residents or the general public since the facility would be within maximum permissible exposure (MPE) limits and Federal Communication Commission (FCC) standards.

Lead Agency Contact Person: Jay Paul, Planning Division Area Code/Telephone/Extension (760) 839-4537

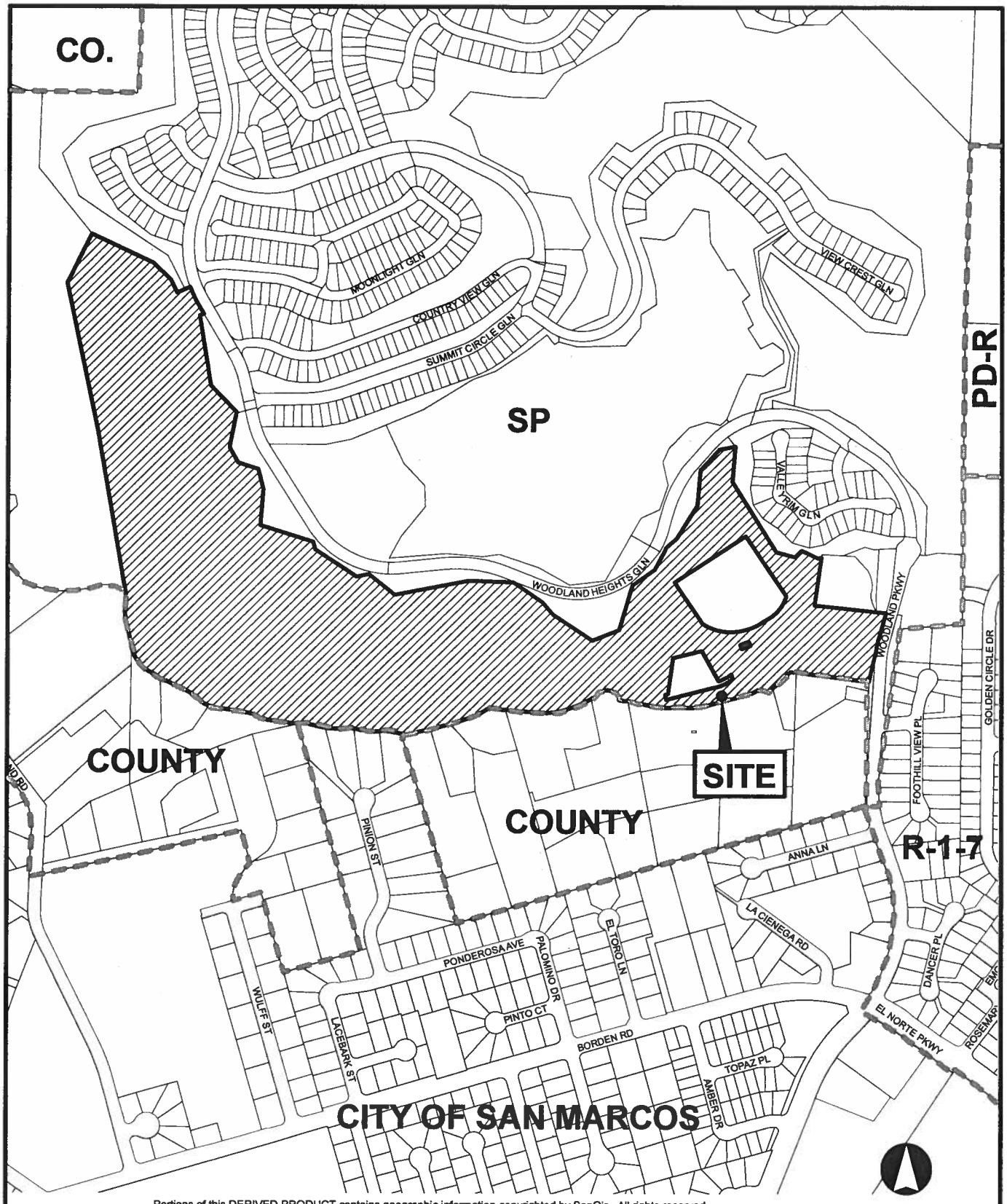
Signature: _____ April 12, 2010
Jay Paul, Associate Planner Date

☒ Signed by Lead Agency Date received for filing at OPR: N/A



PROPOSED PROJECT
PHG 09-0032

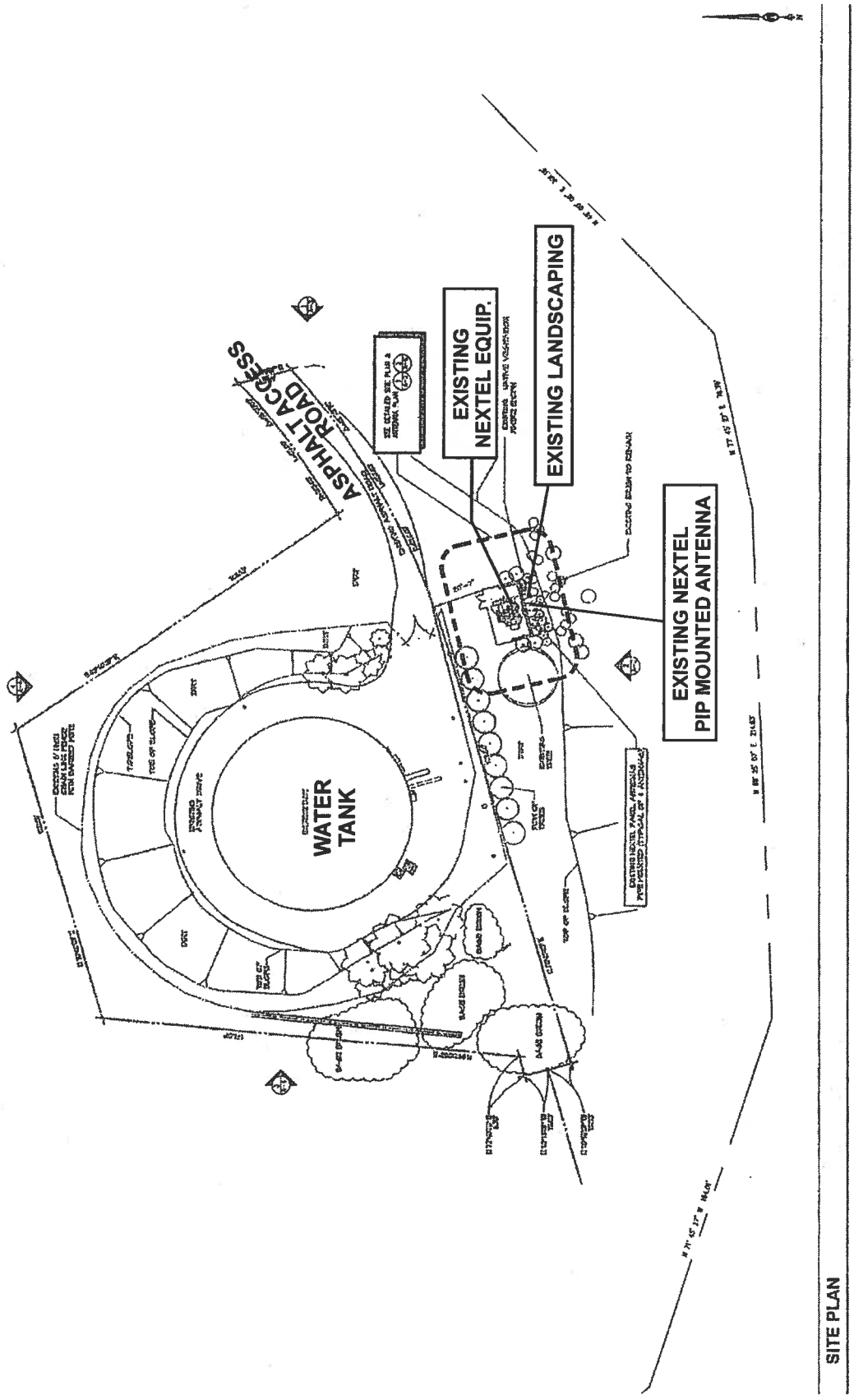
GP
GENERAL PLAN



PROPOSED PROJECT
PHG 09-0032

L

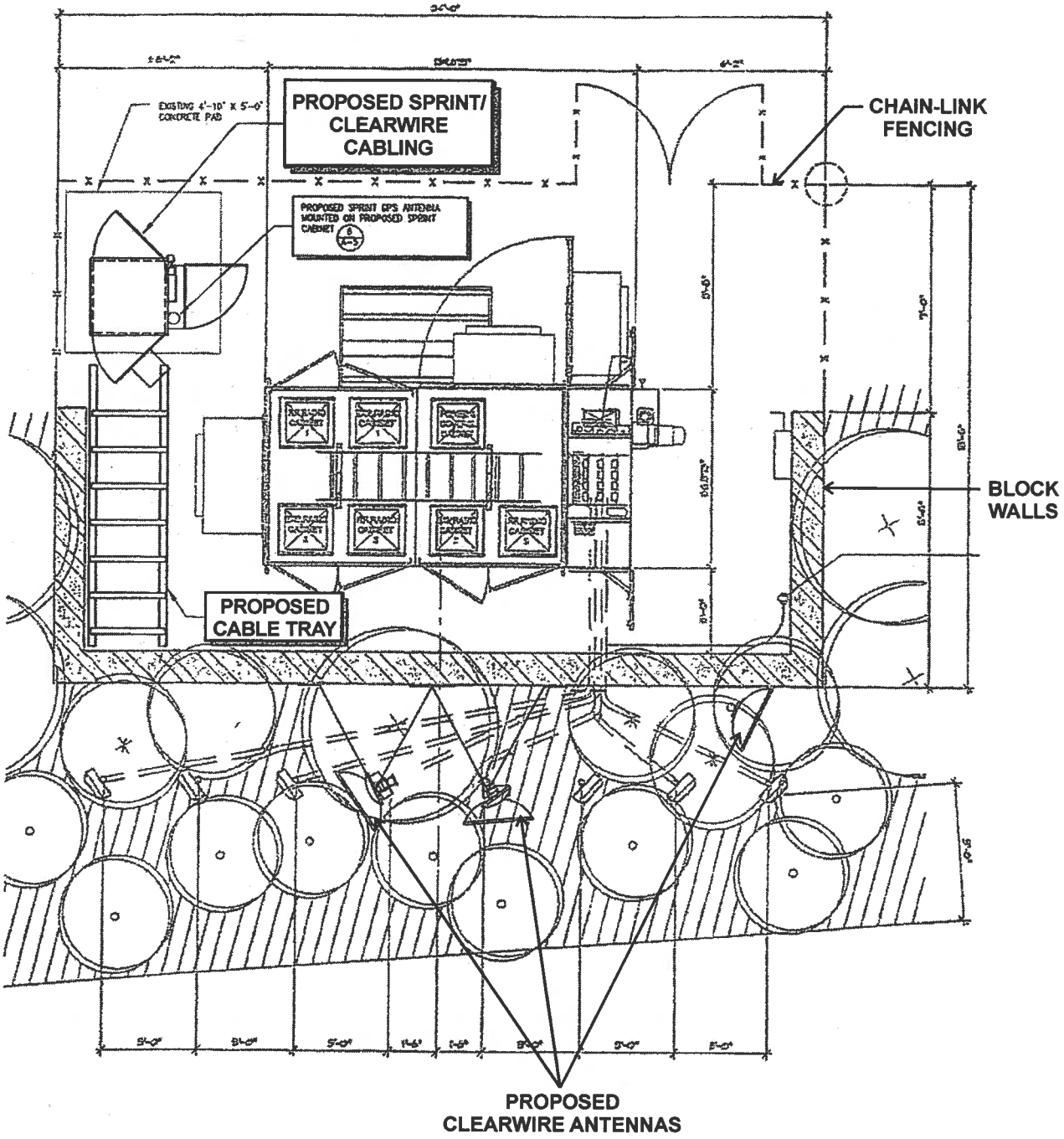
LOCATION/ZONING



PROPOSED PROJECT
PHG 09-0032

S

SITE PLAN

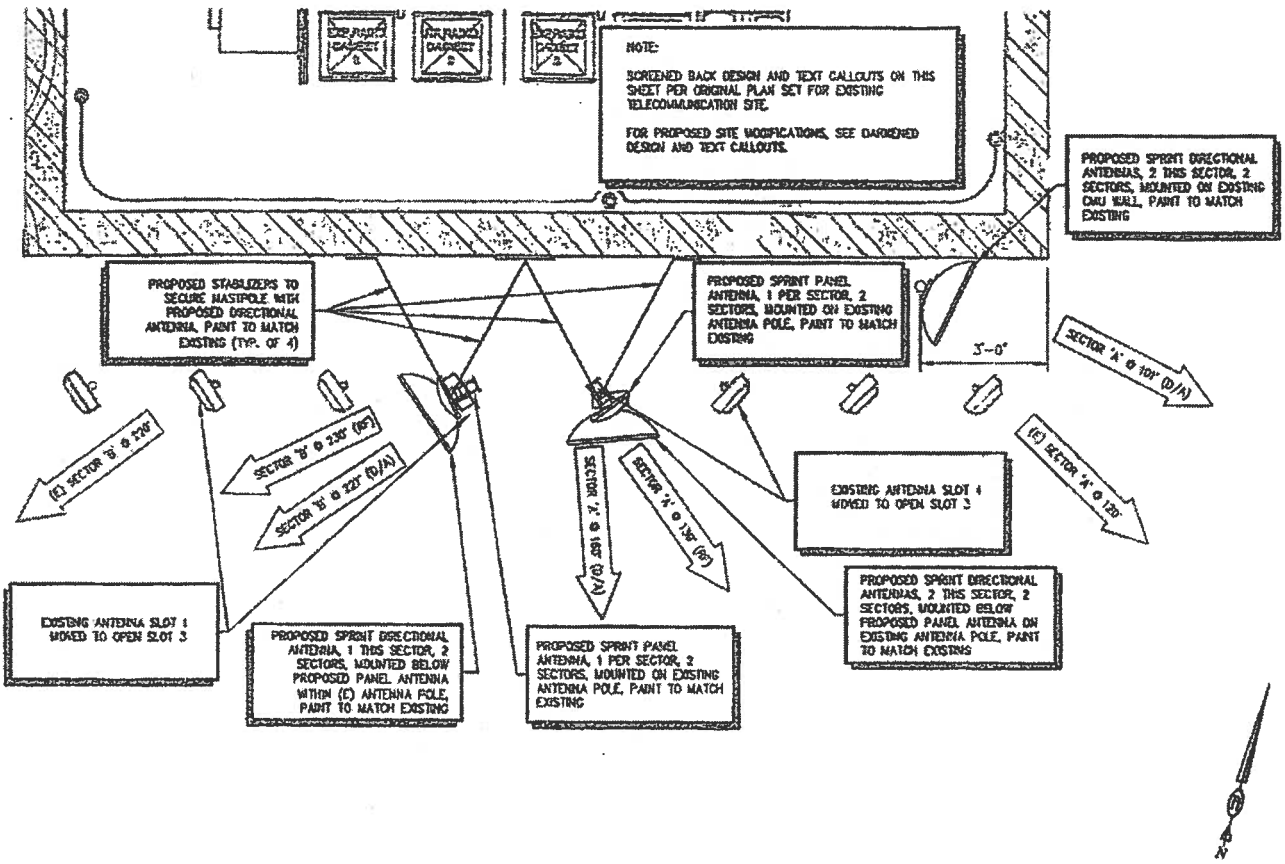


DETAILED SITE PLAN

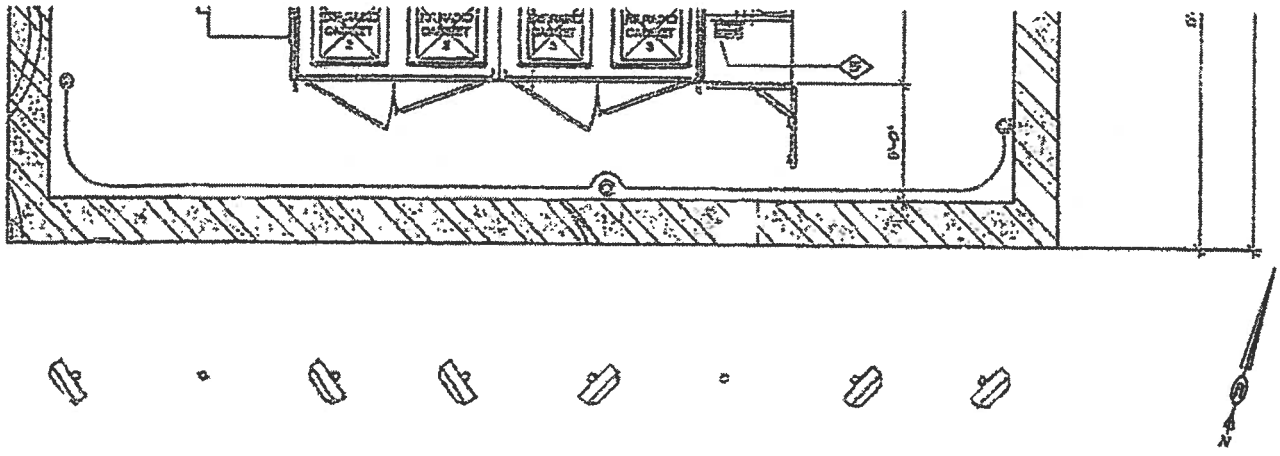
PROPOSED PROJECT
PHG 09-0032

S

SITE PLAN



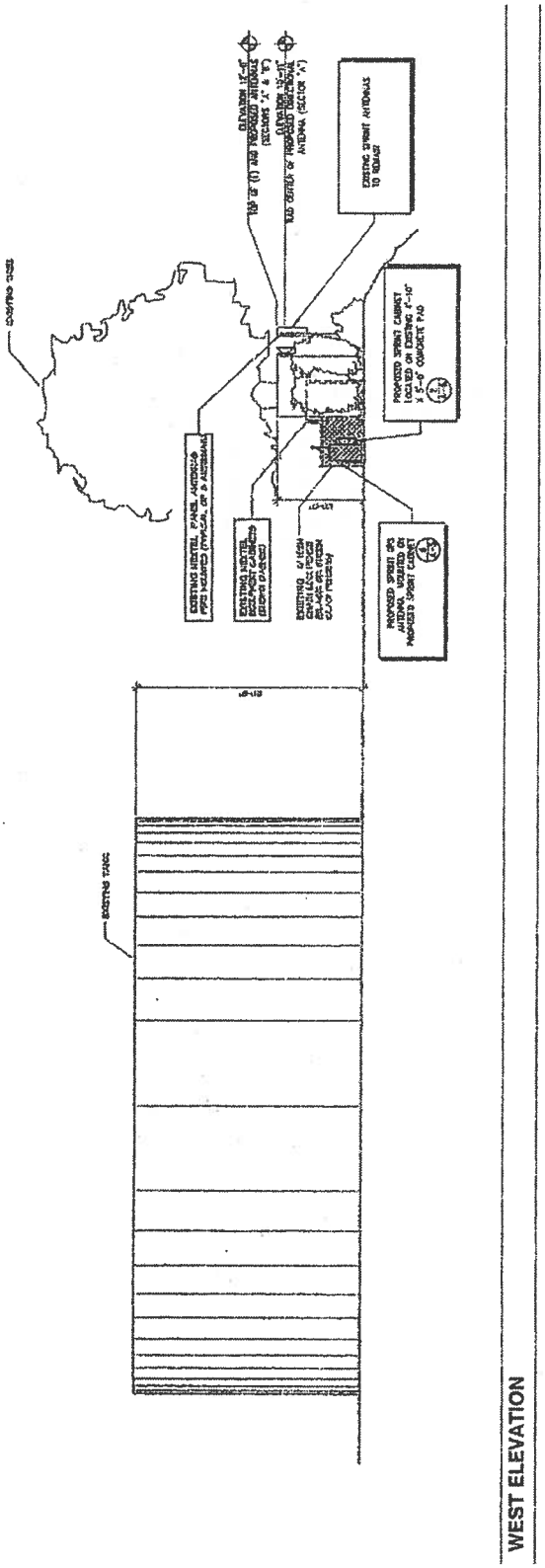
ANTENNA LAYOUT DETAIL

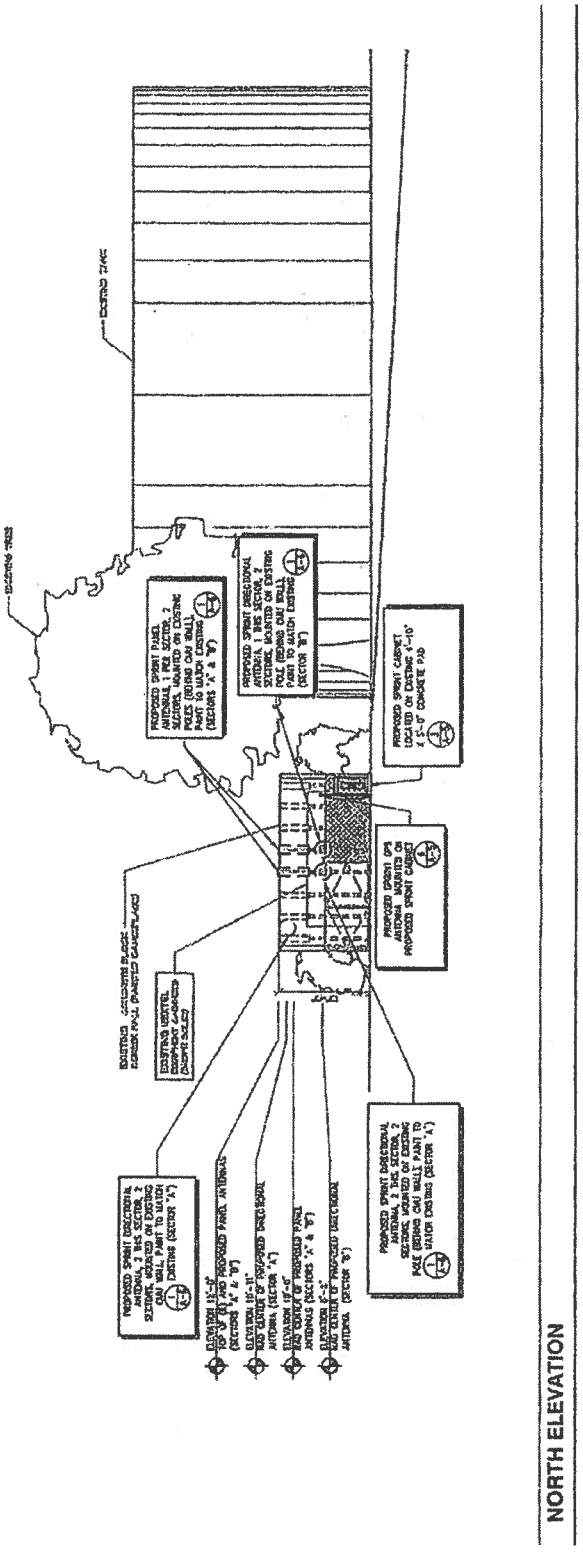


EXISTING ANTENNA LAYOUT (8 POLES, 6 ANTENNAS)

PROPOSED PROJECT
PHG 09-0032

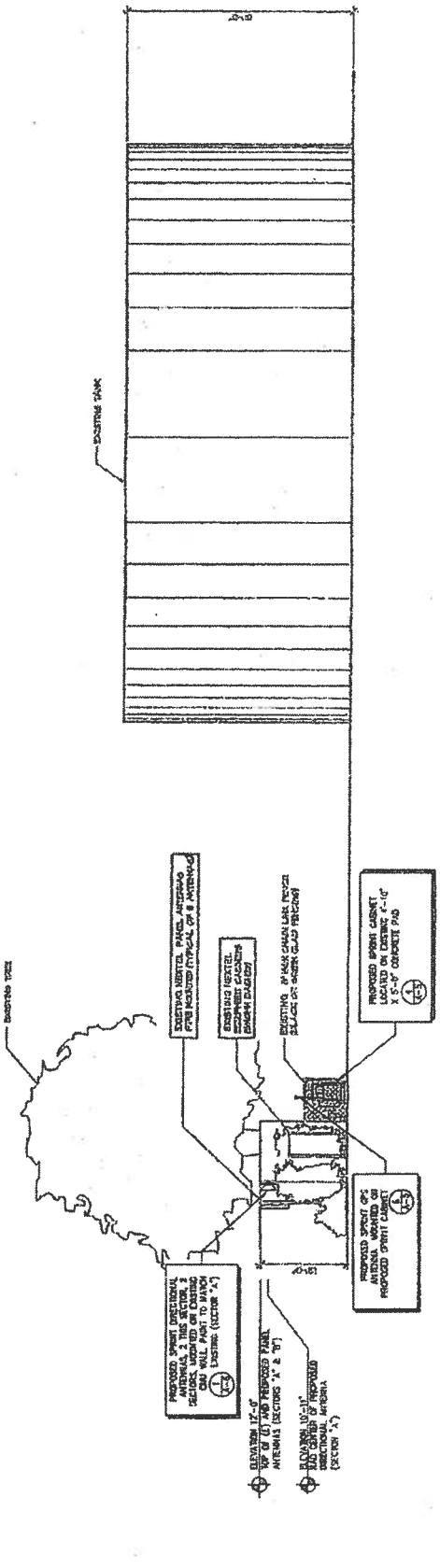
DETAILS



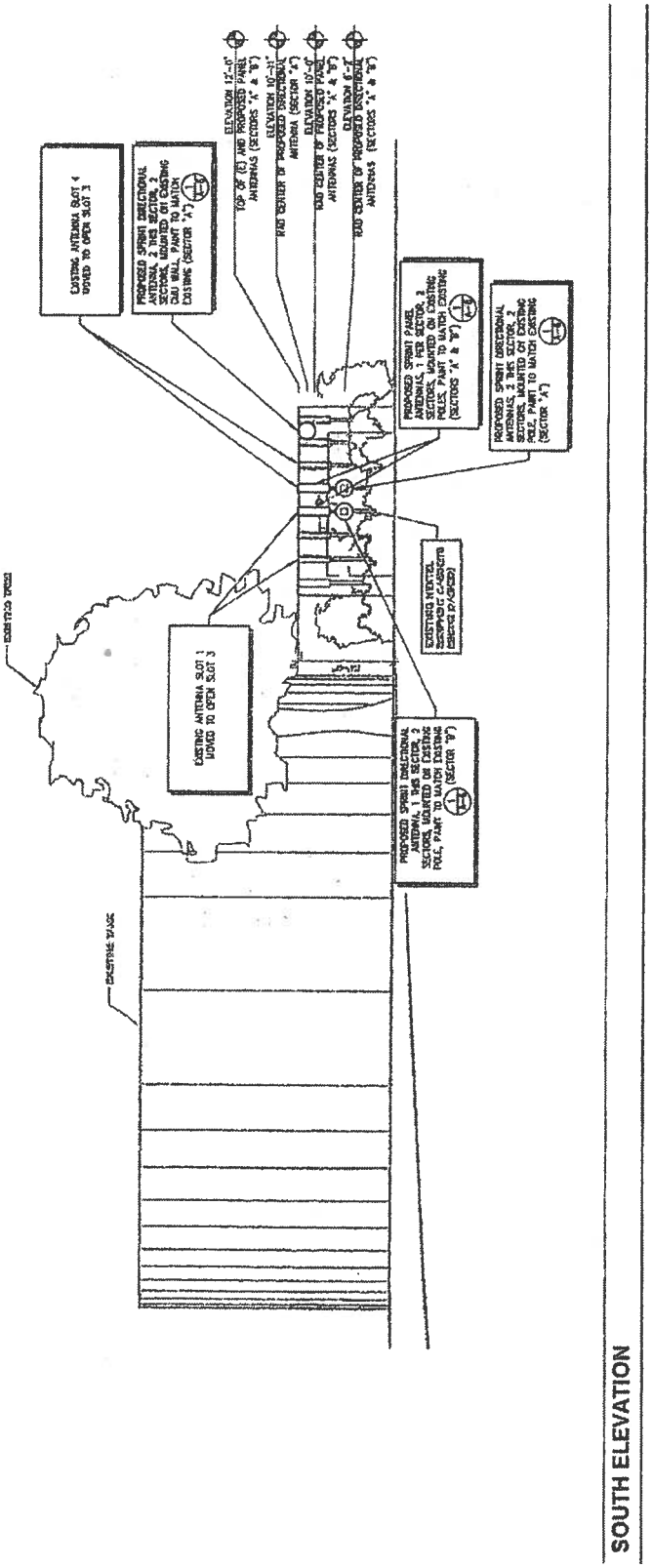


PROPOSED PROJECT
PHG 09-0032

ELEVATIONS



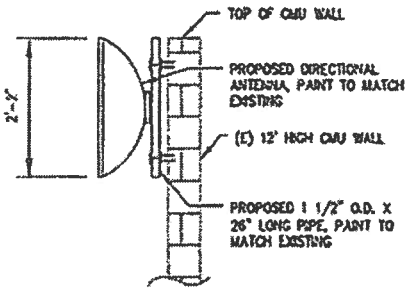
EAST ELEVATION



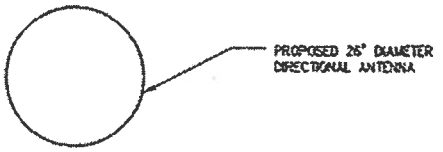
SOUTH ELEVATION

PROPOSED PROJECT
PHG 09-0032

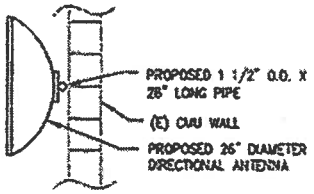
ELEVATIONS



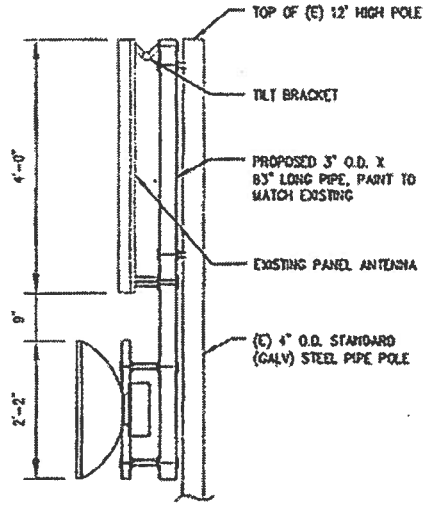
PROFILE VIEW
(SECTOR "A")



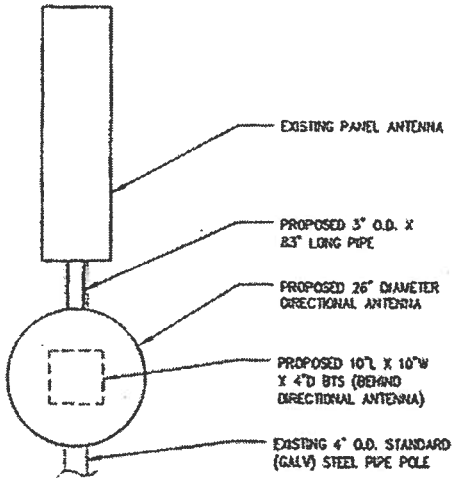
SECTION VIEW
(SECTOR "A")



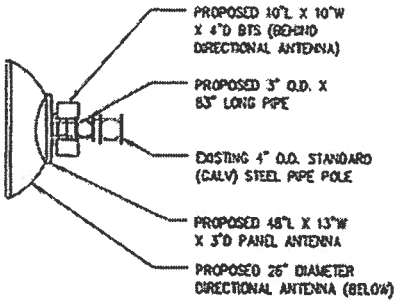
PLAN VIEW
(SECTOR "A")



PROFILE VIEW
(SECTORS "A" & "B")



SECTION VIEW
(SECTORS "A" & "B")

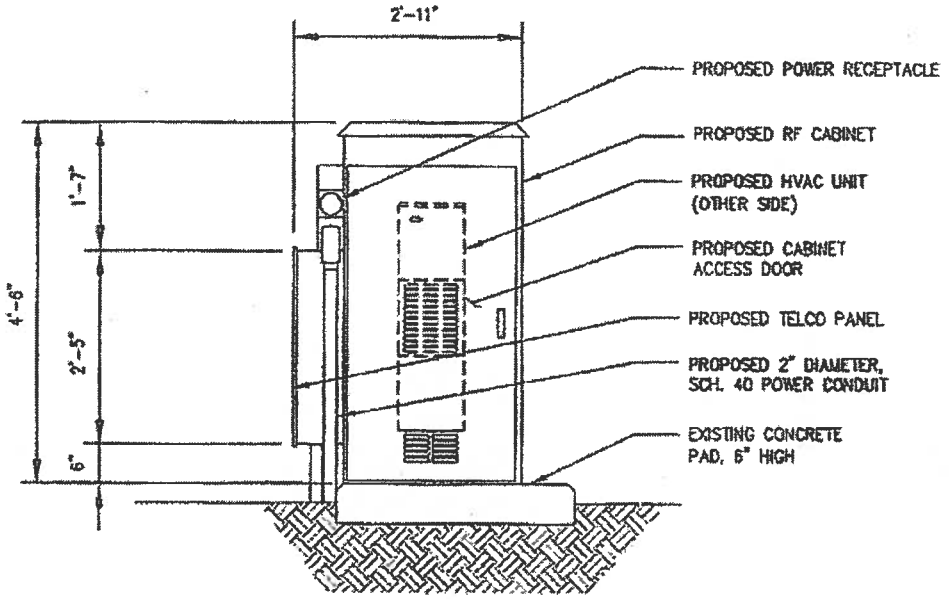


PLAN VIEW
(SECTORS "A" & "B")

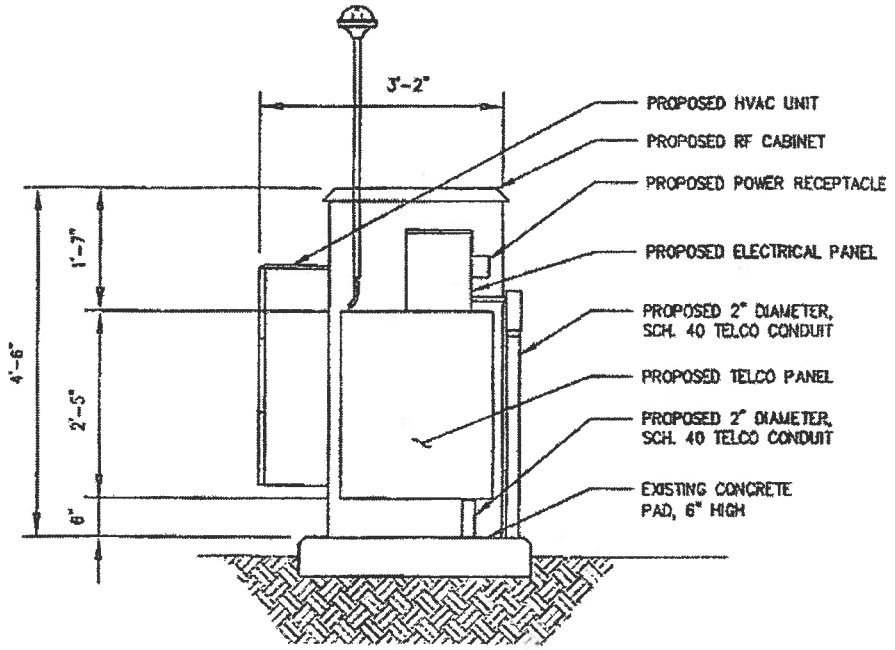
ANTENNA DETAILS

PROPOSED PROJECT
PHG 09-0032

DETAILS



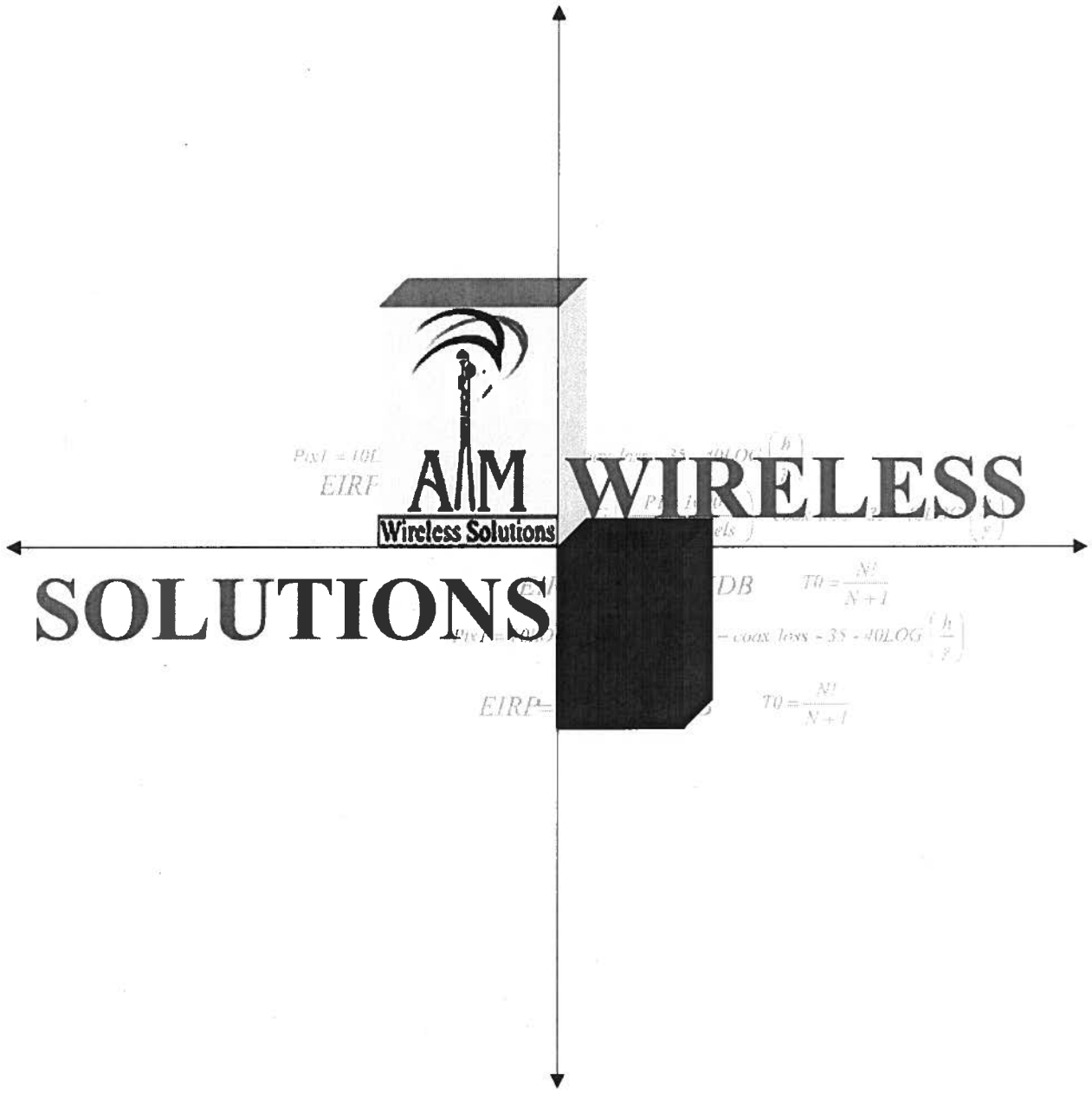
EQUIPMENT ELEVATIONS



EQUIPMENT ELEVATIONS

PROPOSED PROJECT
PHG 09-0032

ELEVATIONS



MPE Report
Client: Sprint-WIMAX
Site: Rockhoff, (CA-SDG5132)
Date: Tuesday, March 23, 2010

Contents

1. Objective

This report has been prepared on behalf of Sprint-WIMAX. Sprint-WIMAX is proposing communication equipment at Rockhoff located at 1901 3/4 Woodland Parkway, Escondido, CA 92069. The study will evaluate the effect of the base station for compliance with the appropriate limiting human exposure to radio frequency (RF) electromagnetic fields. The study took the following criteria into consideration:

Table 1 Measurements Information

Analysis	Description
Antenna Patterns	Yes
Measured Antenna Isolation Data	No, Empirical data used

2. Introduction

The Federal Communication Commission (FCC) requires the evaluation of its actions for possible significant impact on the environment. In 1997, the FCC adapted the human exposure limits for field strength and power density recommended in Repot No. 86, "Biological effects and Exposure Criteria for Radio frequency Electromagnetic Fields", published in 1986. Separate limits apply for occupational and public exposure conditions. Generally, the public limits are five times more restrictive than occupational limits. The table below shows the summary for the exposure limits.

Table 2 FCC exposure limits

Band	Frequency (MHz)	Occupation/Controlled (mW/cm^2)	Population/Uncontrolled (mW/cm^2)
Cellular	870	2.9	0.58
SMR	851	2.84	0.567
PCS	1930	5	1
WIMAX	>2400	5	1

3. Evaluation & Computer Modeling

The MPE analysis consists of evaluating the RF transmitter power being emitted from each active antenna at the communications site. Power density calculations are performed based on where a human (observer) would be located at the site. The power density values are then converted to MPE percentages and each antenna's MPE percentages are summed together to provide a composite MPE percentage for each observer location. Refer to Appendix I for detailed calculations.

AIM MPE software was used to predict the limits of exposure. Figure 1 below shows the mythology AIM MPE followed to generate the final output depicts the Occupational or Controlled Environment MPE analysis. The color zones in figures 2 and 3 indicate the maximum permissible exposure percentage a person would experience while in these zones.

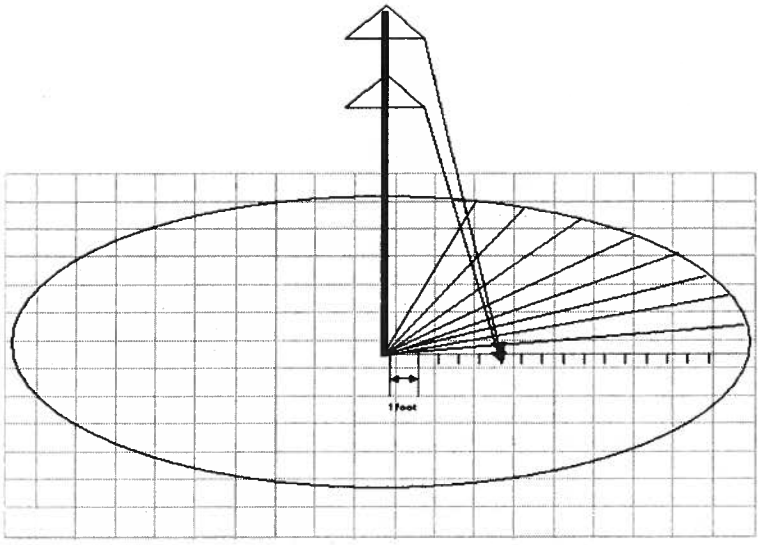


Figure 1. AIM Wireless methodology in calculating MPE

3.1. Site Description

Site name:	Rockhoff (CA-SDG5132) Worst Case
Site description:	Maximum Permissible Emission for a Water tank structure
Address:	1901 3/4 Woodland Parkway, Escondido, CA 92069
Latitude:	33-09-43 N
Longitude:	117-07-50 W

3.2. Antenna System

Table 2 Carriers' details

Carrier	Antenna Manufacturer	Antenna Model	Height-AGL (ft)	Azimuth-TN	Antenna Length (ft)	Power at Antenna (W)
Sprint-WIMAX	Argus	LLPX310R	12 ft	0,120,240	3.5 ft	16 W
Sprint-iDEN	Kathrein	741 984	12 ft	0,120,240	6 ft	50 W
Sprint-CDMA	Andrew	844G90VTA-SX_0	12 ft	30,125,315	4 ft and 6 in	50 W
AT&T	Andrew	844G90VTA-SX_0	12 ft	30,125,315	4 ft and 6 in	50 W
Existing Carrier	Power Wave	RA 21.7770.00	12 ft	0, 120, 240	6 ft	50 W
Sprint- Microwave 1	Andrew	VHKP_2	12 ft	0, 120, 240	2 ft	1 W
Sprint - Microwave 2	Andrew	VHKP_2	12 ft	0, 120, 240	2 ft	1 W
Sprint - Microwave 3	Andrew	VHKP_2	14 ft	0, 120, 240	2 ft	1 W

3.3. Carrier Frequency Information

Table 3 Frequency Information

Carrier	Frequency Ranges (MHz)
Sprint-WIMAX	2496-2502, 2602-2614, 2618-2673.5
Sprint-iDEN	806-824, 851-869
Sprint-CDMA	1930-1945, 1850-1965
AT&T	1965-1970, 1885-1890

Existing Carrier	870 - 894, 1945 - 1965
Sprint- Microwave 1	23 GHz
Sprint - Microwave 2	23 GHz
Sprint - Microwave 3	23 GHz

3.4. Site Photos and Layout

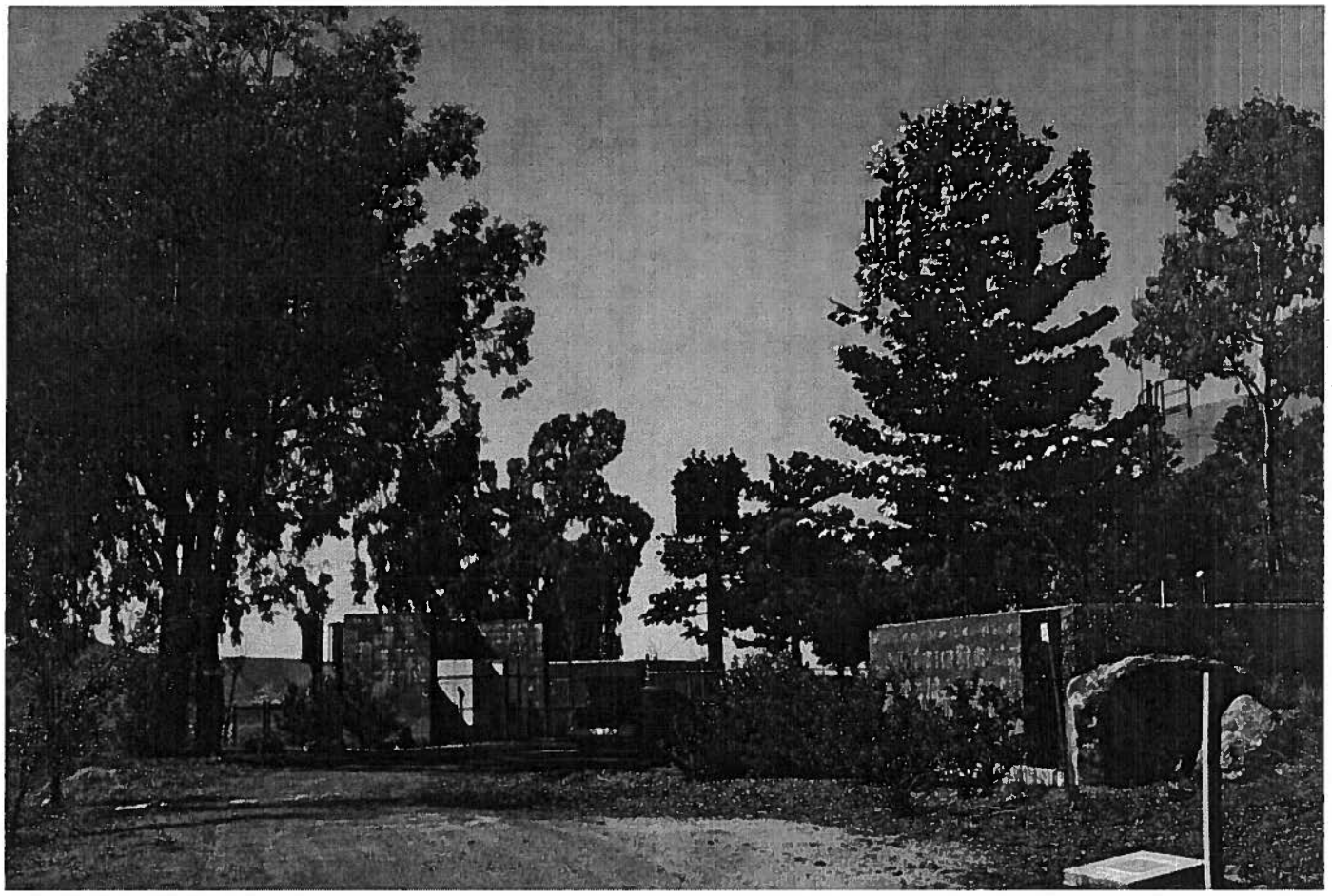


Photo 1 General site layout

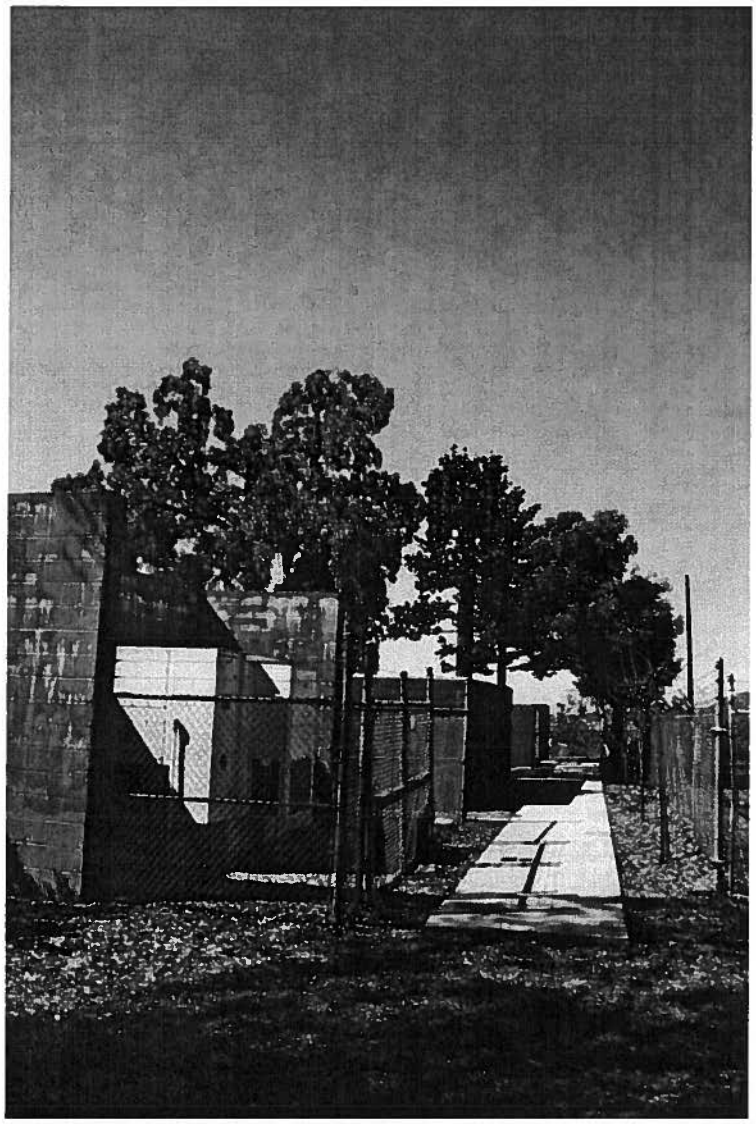


Photo 2 Existing Equipment Shelters

4. Test Methodology & Measurements

Narda (8718B) with matching probe 8721D with frequency range of 300 MHz to 50 GHz was used to collect the data on the rooftop. The NARDA probes used by AIM Wireless have a dynamic range of 30 dB. This dynamic range represents the ratio of the highest to the lowest measurement values. This equipment is typically used industry wide and has an accuracy of 0.3% or 0.6% depending on whether the probe used can read 300% or 600% of the occupational MPE limit respectively.

The table below shows the test results for each test point that was considered. A total of 17 test points were located on the rooftop.

Diagram 1 and table 2 below shows the measurement point locations and their associated values for both General public and Occupational results. Test points were located at 17 different locations. Test points were selected to be in front and behind each transmitting antenna. For those antenna that are flush mounted or unreachable, points were taken behind the antennas only. Test point 3 measurement shows the maximum

level (5.2% and 26% for occupational and general public respectively). The measurement at this point was taken in front of the antenna of existing Sprint antennas.

At each test point, the spectrum (300 MHz to 50 GHz) is scanned and stored to a media. Once the data is stored, MPE software is used to calculate the sum of the percentages for each scanned frequency and power. Refer to the Power summation in Appendix I for detailed calculations

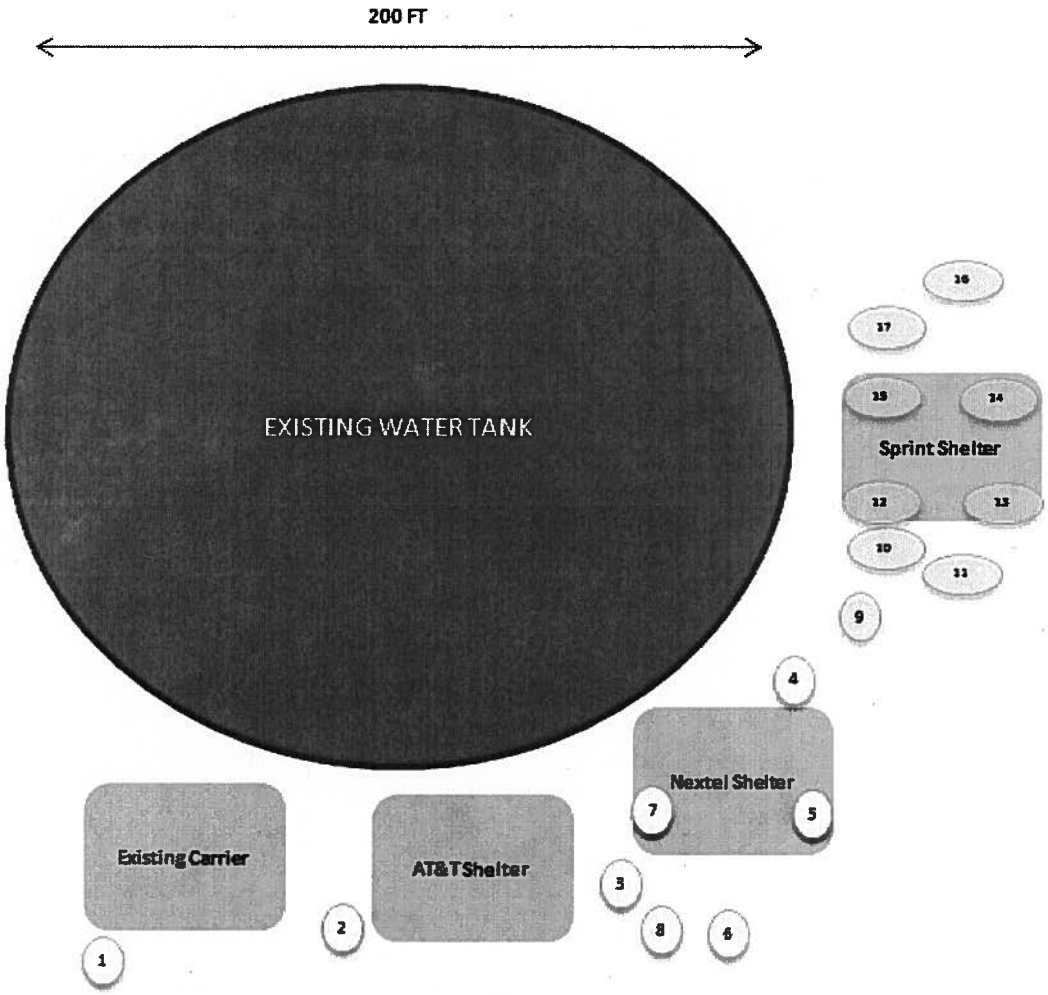


Diagram 1 CA-SDG5132 Rooftop layout and measurements' locations

Table 4Measuremnt points values

Measurement Point	Maximum Occupational %	Maximum General Public %
1	5.2	26
2	3.8	19
3	2.4	12
4	2.5	12.5
5	1.4	7
6	2.2	11
7	1.1	5.5

8	1.4	7
9	2.1	10.5
10	1.3	6.5
11	2.3	11.5
12	3.5	17.5
13	1.7	8.5
14	1.9	9.5
15	1.8	9
16	3.3	16.5
17	2.2	11

5. General Population/Uncontrolled Exposure Results:

By adding Sprint-WIMAX antennas to the existing structure, exposure limits are expected to increase. Using the measurements above and AIM's Software, the final results can be predicted. The analysis represents exposure limits to an individual who does not know that there is a potential for RF energy exposure and does not know how to control or limit this exposure. For FCC purposes, this applies to human exposure to RF fields where general public is exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public always fall under this category when exposure is not employment-related. Figure 2 below shows the total power percentage limits for maximum permissible exposure. Refer to the Appendix-I for the detailed limits.

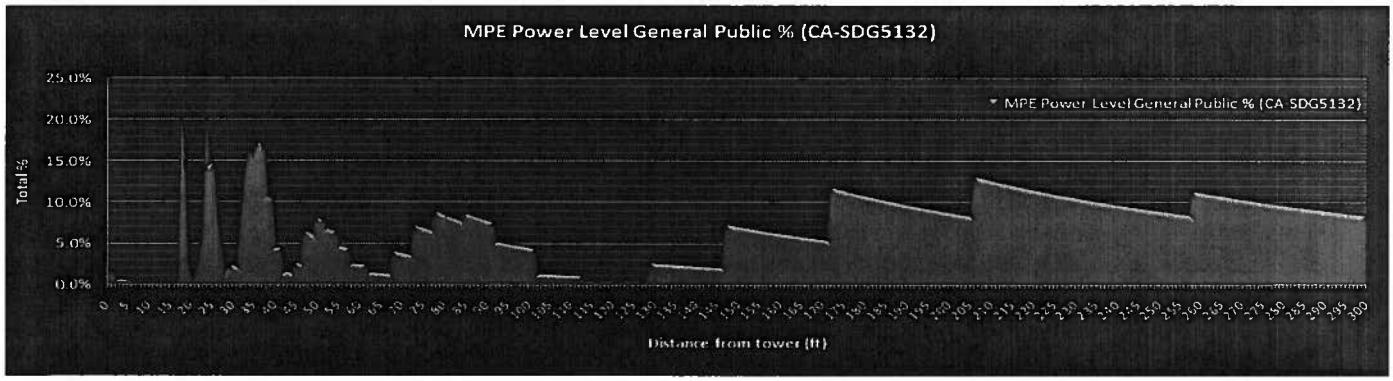


Figure 2 General public graphical representation distance vs. total % of Public Maximum Permissible Exposure

6. Occupational/Controlled Exposure Results:

By adding Sprint-WIMAX antennas to the existing structure, exposure limits are expected to increase. Using the measurements above and AIM's Software, the final results can be predicted. The analysis represents exposure limits to an individual who should know that there is a potential for RF energy exposure and knows how to control or limit this exposure For FCC purposes, this applies to human exposure to RF fields where person are exposed as a consequence of their employment and in which these person who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Figure 3 below shows the total power percentage limits for maximum permissible exposure. Refer to Appendix-I for the detailed limits.

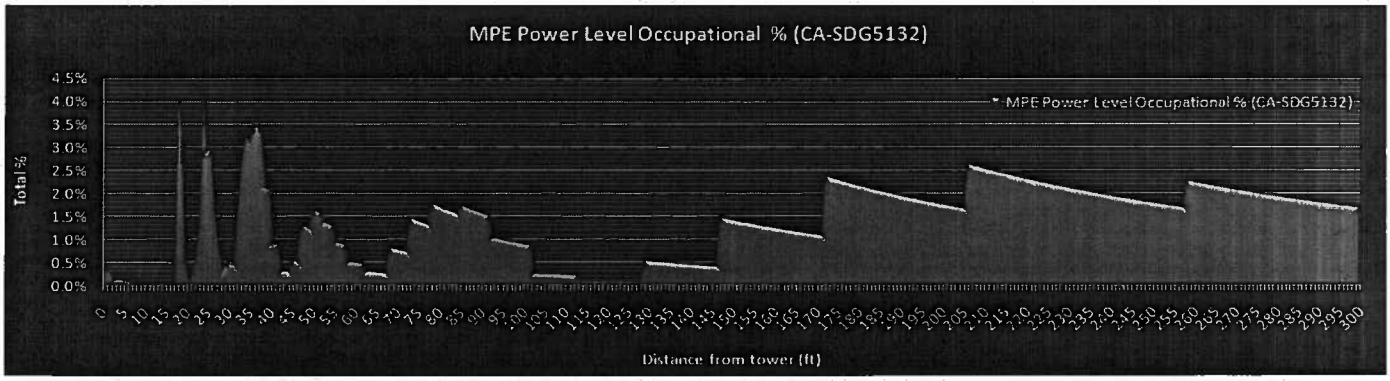


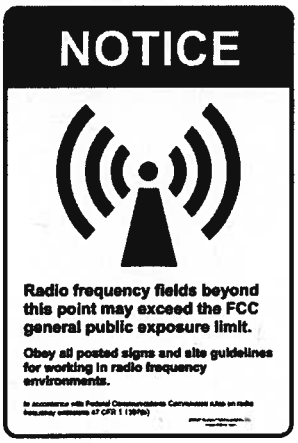
Figure 3 Occupational/controlled graphical representation distance vs. total % of Occupational Maximum Permissible Exposure

7. Study Findings

The maximum ambient RF level anywhere at the ground level due to the proposed Sprint-WIMAX operation by itself is calculated to be 0.21 mW/cm^2, which is 21% of the applicable public limit. Note that the maximum Measured value for public limit from all existing carriers is 26%. And hence, the total predicted value is = Measured value + Predicted value for proposed Sprint-WIMAX. The final values are 9.4% and 47% for occupational and public limits respectively. The total predicted received power on the Water tank from all carriers is less than 47%. For worst-case scenario analysis, a reflection factor of (2.56) is used for the analysis.

7.1. Sign Display

The following signs may be placed at the base of the Monopalm and/or at the site's entrance.



Sign 1 Placement at Site entrance and/or base of Monopalm

8. Conclusion

Based on the information and analysis above, it is our professional opinion that the base station proposed by Sprint-WIMAX at 1901 3/4 Woodland Parkway, Escondido, CA 92069 will comply with the prevailing standards of limiting public exposure to radio frequency energy, and therefore, will not cause an impact on the environment. The highest calculated level in publicly accessible areas does not exceed the prevailing standards allow for exposure of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Appendix I: Methods of calculations based on OET 65 document

Exposure Limits:

Table 2 Limits of Occupational Exposure

Limits of Occupation/Controlled Exposure (mw/cm^2)		
Frequency (f)	Power density (S_{m1})	Time (minutes)
.3-3	100	6
3-30	$900/f^2$	6
30-300	1.0	6
300-1500	F /300	6
1500-100000	5	6

Table 3 Limits of General Public Exposure

Limits of General Population/Uncontrolled Exposure (mw/cm^2)		
Frequency (f)	Power density (S_{m2})	Time (minutes)
.3-1.34	100	30
1.34-30	$180/f^2$	30
30-300	0.2	30
300-1500	F /1500	30
1500-100000	1	30

Power Density Calculations:

1. Towers

Determine if near field, transitional field or far field:

$R < R_{nf} = \frac{D^2}{4\lambda}$

Where: R_{nf} = extent of near-field (ft)
D = maximum dimension of antenna (diameter if circular) in ft
λ = wavelength (ft) = 186,000 x 5280/frequency (MHz)
R = distance from antenna (ft)

$R > Rff = \frac{0.6D^2}{\lambda}$

Where: R_{ff} = extent of far-field (ft)
D = maximum dimension of antenna (diameter if circular) in ft
λ = wavelength (ft)
R = distance from antenna

$R_{nf} < R_{tt} < R_{ff}$

Where: R_{tt} = transitional field
R_{ff} = extent of far-field

R_{nf} = extent of near-field

Near Field:

Equation 1

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi R h} \times 1000mw$$ (no reflection factor)

Equation 2

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi R h} \times 1000mw \times F1$$ (with reflection factor)

Where: S_{nf} = near field power density (mW/cm²)

P_{net} = net power input to the antenna after losses (mW)

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

ϕ_{bw} = beam width of the antenna in degrees

R = distance from antenna (ft)

h = aperture height of the antenna (ft)

Rfact = Reflection factor, if indicated it is 2.56. If not indicated, it is 1

Far Field

Equation 3

$$S_{ff} = \frac{P \times 10^{\frac{G}{10}}}{4\pi R^2} \times 1000mw$$ (no reflection)

Equation 4

$$S_{ff} = \frac{P \times 10^{\frac{G}{10}}}{4\pi R^2} \times F1 \times 1000mw$$ (with reflection)

Where: S_{ff} = far field power density

P_{net} = net power input to the antenna after losses

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

R = distance from antenna (ft)

G = Antenna gain

F1 = reflection factor (2.56)

Transitional Field

Equation 5

$$S_t = \frac{S_{nf} R_{nf}}{R}$$

Where: S_{nf} = Near field power (mW)
S_t = power density (mW/cm²)
R_{nf} = extent of near-field, calculated above (ft)
R = distance to point of interest (ft)

Power Summation

For S1, S2.....Sn

Perform power density excluding the new carrier. If results exceed the maximum by 5% or more, site is not previously in compliance with FCC. If not, then perform the study with the new located carrier and compare the results with the specified limits in the above table.

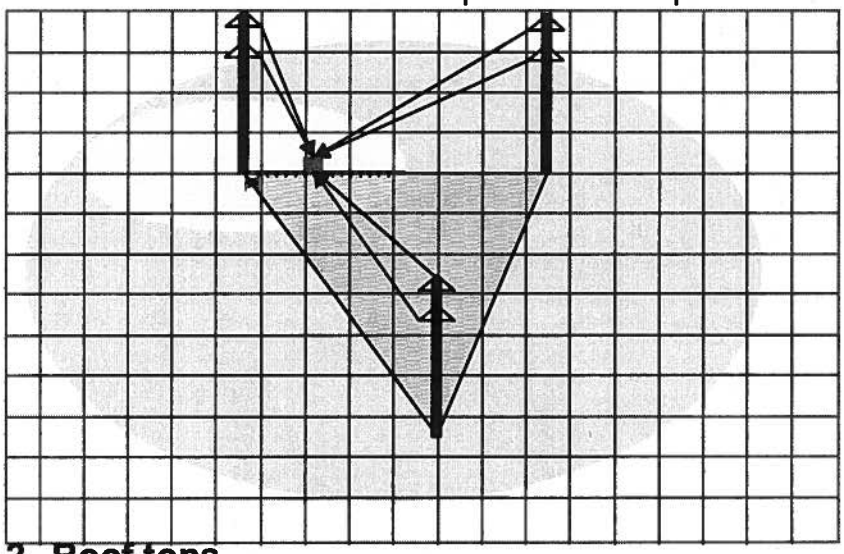
Equation 6

Total Power density Occupational/Controlled = $P_{STC} = \sum(\frac{S_1}{S_{m1}} + \frac{S_2}{S_{m1}} + ... \frac{S_n}{S_{m1}}) \times 100$

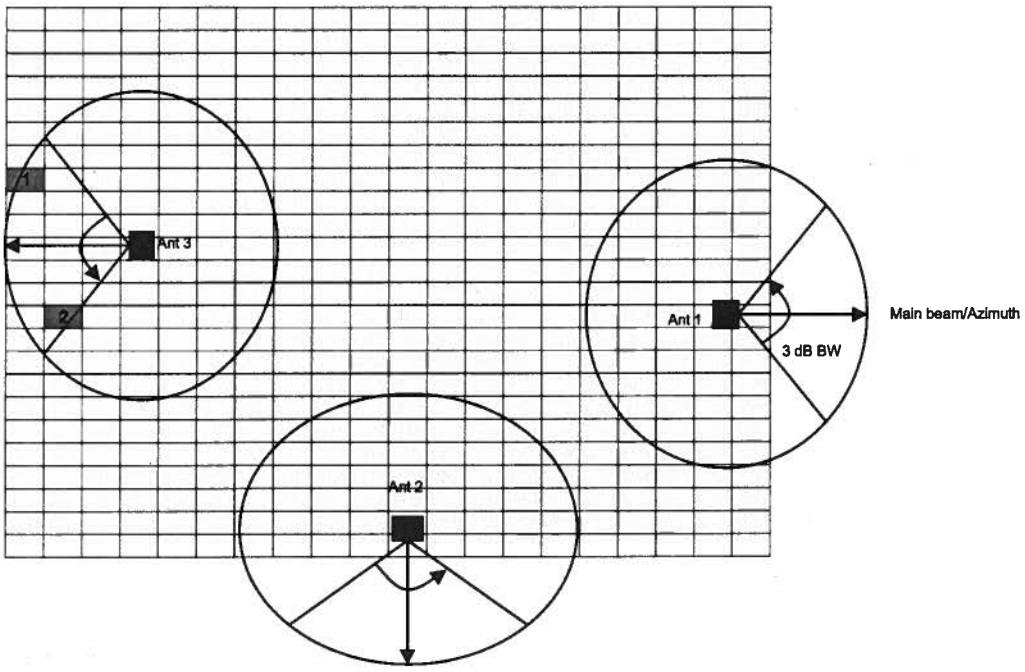
Equation 7

Total Power density General/uncontrolled = $P_{STU} = \sum(\frac{S_1}{S_{m2}} + \frac{S_2}{S_{m2}} + ... \frac{S_n}{S_{m2}}) \times 100$

Where: S1,S2...Sn = calculated power density
Sm1 = Occupational/controlled limits specified in table 2
Sm2 = General/unoccupational limits specified in table 3



2. Roof tops



Determine if near field, transitional field or far field:

$R < R_{nf} = \frac{D^2}{4\lambda}$

Where: R_{nf} = extent of near-field
D = maximum dimension of antenna (diameter if circular)
λ = wavelength
R = distance from antenna

$R > Rff = \frac{0.6D^2}{\lambda}$

Where: R_{ff} = extent of far-field
D = maximum dimension of antenna (diameter if circular)
λ = wavelength
R = distance from antenna

$R_{nf} < R_{tt} < R_{ff}$

Where: R_{tt} = transitional field
R_{ff} = extent of far-field

Figure 1 Rooftop grid for calculations

R_{nf} = extent of near-field

Near Field:

1) Within the 3dB Beamwidth (BW)

If the bin (square for calculations) is partially within the 3dB BW, then the square is within the 3dB BW.

Equation 8

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi Rh} \times 1000mw \quad \text{(no reflection factor)}$$

Equation 9

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi Rh} \times 1000mw \times F1 \quad \text{(with reflection factor)}$$

Where: S_{nf} = near field power density (mW/cm^2)

P_{net} = net power input to the antenna after losses (dBm)

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

ϕ_{bw} = beam width of the antenna in degrees

R = distance from antenna (ft)

h = aperture height of the antenna (ft)

F1 = reflection factor (2.56)

2) Outside the 3dB BW

Equation 10

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi Rh} \times 1000mw \times CF_{MPE} \times 10^{\frac{G-FTB}{10}} \quad \text{(no reflection factor)}$$

Equation 11

$$S_{nf} = \left(\frac{180}{\phi_{bw}}\right)\frac{P_{net}}{\pi Rh} \times 1000mw \times CF_{MPE} \times F1 \times 10^{\frac{G-FTB}{10}} \quad \text{(with reflection factor)}$$

Where: S_{nf} = near field power density (mW/cm^2)

P_{net} = net power input to the antenna after losses. (mW)

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

ϕ_{bw} = beam width of the antenna in degrees

FTB = Front to back ratio (dB)

R = distance from antenna (ft)

h = aperture height of the antenna (ft)

F1 = reflection factor (2.56)

Far Field

1) Within the 3dB BW:

If the bin (square for calculations) is partially within the 3dB BW, then the square is within the 3dB BW.

Equation 12

$$S_{ff} = \frac{P \times 10^{\frac{G}{10}}}{4\pi R^2} \times 1000mw \times CF_{MPE} \qquad \text{(no reflection)}$$

Equation 13

$$S_{ff} = \frac{P \times 10^{\frac{G}{10}}}{4\pi R^2} \times F1 \times 1000mw \times CF_{MPE} \qquad \text{(with reflection)}$$

Where: S_{ff} = far field power density (mW/cm^2)

P_{net} = net power input to the antenna after losses (mW)

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

R = distance from antenna (ft)

G = Maximum antenna gain (dB)

F1 = reflection factor (2.56)

CF_{MPE} = MPE correction factor and set to 0.7

Outside the 3dB BW:

Equation 14

$$S_{ff} = \frac{P \times 10^{\frac{G-FTB}{10}}}{4\pi R^2} \times 1000mw \times CF_{MPE} \qquad \text{(no reflection)}$$

Equation 15

$$S_{ff} = \frac{P \times 10^{\frac{G-FTB}{10}}}{4\pi R^2} \times F1 \times 1000mw \times CF_{MPE} \qquad \text{(with reflection)}$$

Where: S_{ff} = far field power density (mW/cm^2)

P_{net} = net power input to the antenna after losses

$$P_{net} = P \times 10^{\frac{coaxloss}{10}} \times 10^{\frac{insertionloss}{10}}$$

R = distance from antenna (ft)

FTB = Front to back ratio (dB)

G = Maximum antenna gain (dB)

F1 = reflection factor (2.56)

CF_{MPE} = MPE correction factor and set to 0.7

Transitional Field

Equation 16

$$S_t = \frac{S_{nf} R_{nf}}{R}$$

Where: S_{nf} = Near filed power (mW)

S_t = power density (mW/cm^2)

R_{nf} = extent of near-field, calculated above (ft)

R = distance from antenna (ft)

Power Summation

For S1, S2.....Sn

Perform power density excluding the new carrier. If results exceed the maximum by 5% or more, site is not in compliance with FCC, if not, then perform the study with the new located carrier and compare the results with the specified limits in the above table.

Equation 17

Total Power density Occupational/Controlled = $P_{STC} = \sum(\frac{S_1}{S_{m1}} + \frac{S_2}{S_{m1}} + ... \frac{S_n}{S_{m1}}) \times 100$

Equation 18

Total Power density General/uncontrolled = $P_{STU} = \sum(\frac{S_1}{S_{m2}} + \frac{S_2}{S_{m2}} + ... \frac{S_n}{S_{m2}}) \times 100$

Where: S1,S2...Sn = calculated power density (mW/cm^2)
Sm1 = Occupational/controlled limits specified in the above table (mW/cm^2)
Sm2 = General/unoccupational limits specified in the table above (mW/cm^2)

9. Contact Information

Engineer	Ahmad Malkawi
	Ahmad Malkawi
Contact Phone number	847-874-3003
Email Address	amalkawi@aimws.com
Fax	847-307-8312