

Case File Number: DR13-052

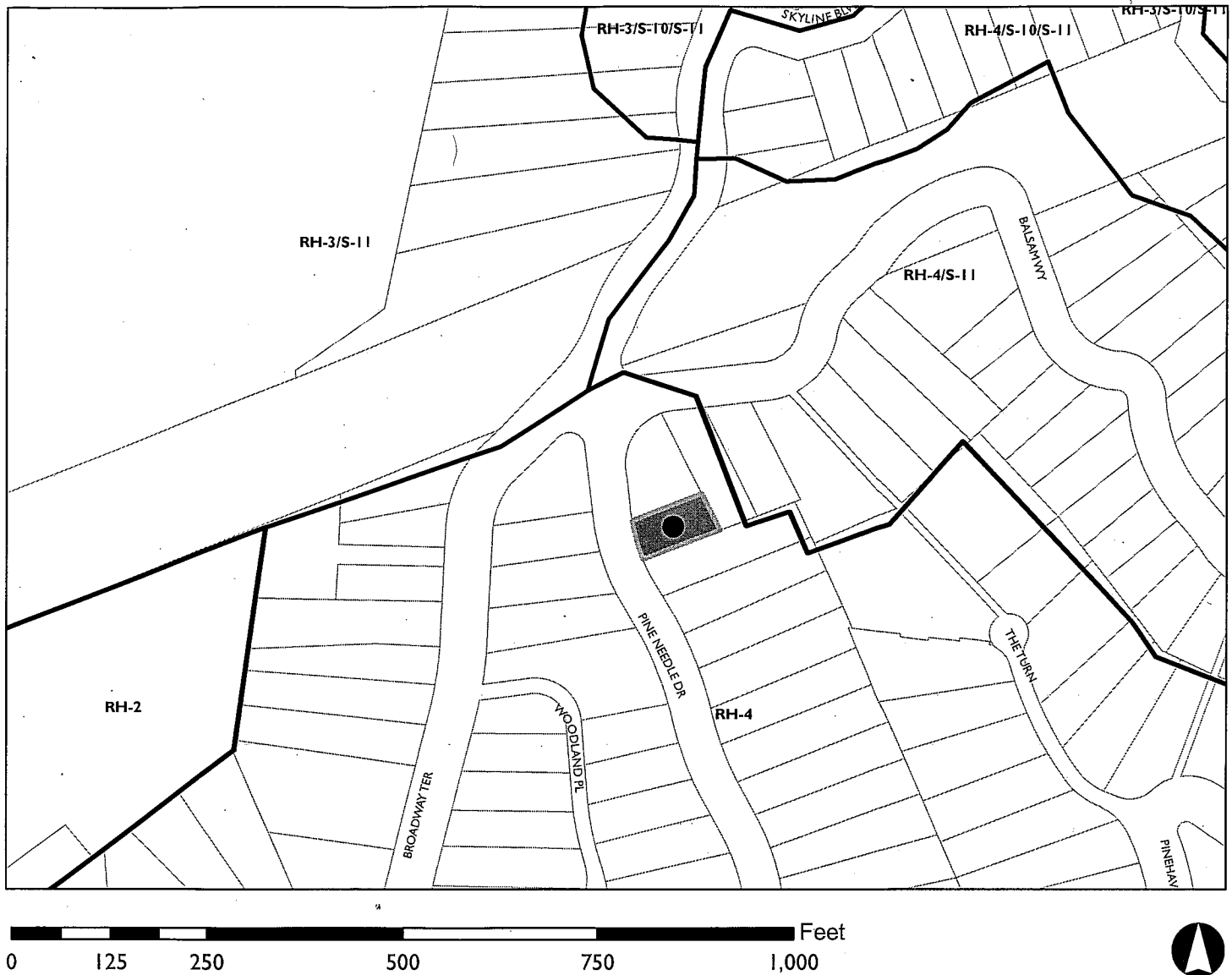
September 11, 2013

<b>Location:</b>	<b>The Public Right of Way near 6690 Pineneedle Drive on joint utility pole # 110133987 (See map on reverse)</b>
<b>Assessors Parcel Numbers:</b>	<b>(048G-7431-002-06) the parcel adjacent to the right of way</b> To install two panel antennas (two-feet long and 10- inches wide, each) for a wireless telecommunications facility (AT&T wireless) on a pre-approved 7-foot extension to an existing 37'-11" high joint utility pole; at 17' above grade, locate a battery-backup equipment box (2'x2'x1.5'); at 12' above grade, locate an equipment cabinet (4'x1'x1'); at 10' above grade, locate a 1'x1'x4" optical demarcation unit; At 8' above grade, locate a 1'x3"x8" safety shut-off switch and electricity meter; all equipment would be painted to match pole; relocation of existing climbing pegs to accommodate new equipment.
<b>Proposal:</b>	
<b>Applicant:</b>	New Cingular Wireless PCS, LLC./AT&T Mobility
<b>Contact Person/ Phone Number:</b>	Matthew Yergovich (415) 596-3474
<b>Owner:</b>	Pacific Gas & Electric.
<b>Case File Number:</b>	<b>DR13-052</b>
<b>Planning Permits Required:</b>	Major Design Review to install a wireless Telecommunications Macro Facility to on existing PG&E pole located in the public right of way in a residential zone.
<b>General Plan:</b>	Hillside Residential
<b>Zoning:</b>	RH-4 Hillside Residential-4 Zone.
<b>Environmental Determination:</b>	Exempt, Section 15301 of the State CEQA Guidelines; minor additions and alterations to an existing facility Exempt, Section 15183 of the State CEQA Guidelines; projects consistent with a community plan, General Plan or zoning.
<b>Historic Status:</b>	Not a Potential Designated Historic Property; Survey rating: n/a
<b>Service Delivery District:</b>	2
<b>City Council District:</b>	1
<b>Date Filed:</b>	2/6/2013
<b>Finality of Decision:</b>	Appealable to City Council within 10 Days
<b>For Further Information:</b>	Contact case planner Catherine Payne at (510) 238-6168 or cpayne@oaklandnet.com

## SUMMARY

The proposal is to install a wireless Telecommunications Macro Facility on an existing 37' high PG&E utility pole located in the public right-of-way (ROW) near 6690 Pineneedle Drive. New Cingular Wireless PCS for AT&T Mobility (the Applicant) proposes to install two panel antennas (two-feet long and 10- inches wide, each) for a wireless telecommunications facility (AT&T wireless) on a pre-approved 7-foot extension to an existing 37'-11" high joint utility pole (total height will be 43'-11"); at 17' above grade, locate a battery-backup equipment box (2'x2'x1.5'); at 12' above grade, locate an equipment cabinet (4'x1'x1'); at 10' above grade, locate a 1'x1'x4" optical demarcation unit; At 8' above grade, locate a 1'x3"x8" safety shut-off switch and electricity meter; all equipment would be painted to match pole; relocation of existing climbing pegs to accommodate new equipment. Staff believes that the proposed project, subject to conditions of

# CITY OF OAKLAND PLANNING COMMISSION



Case File: DR13-052  
Applicant: Cingular Wireless  
Address: 6690 Pine Needle Dr  
Zone: RH-4

approval, is designed to meet the established zoning and telecommunication regulations and recommends approval of the Major Design Review application.

## 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 proposes installation of a wireless Telecommunications Macro Facility on an existing 37' high PG&E utility pole located in the public right-of-way (ROW) near 6690 Pineneedle Drive. New Cingular Wireless PCS for AT&T Mobility (the Applicant) proposes to install two panel antennas (two-feet long and 10- inches wide, each) for a wireless telecommunications facility (AT&T wireless) on a pre-approved 7-foot extension to an existing 37'-11" high joint utility pole; at 17' above grade, locate a battery-backup equipment box (2'x2'x1.5'); at 12' above grade, locate an equipment cabinet (4'x1'x1'); at 10' above grade, locate a 1'x1'x4" optical demarcation unit; At 8' above grade, locate a 1'x3"x8" safety shut-off switch and electricity meter; all equipment would be painted to match pole; relocation of existing climbing pegs to accommodate new equipment. No portion of the telecommunication facilities will be located on the ground within City of Oakland public ROW. The proposed antennas and associated equipment will not be accessible to the public (See Attachment A).

## **PROPERTY DESCRIPTION**

The existing 37' high joint utility pole is located near 6690 Pineneedle Drive in the City of Oakland public ROW. The area is wooded with trees partially obscuring views of the pole. The terrain slopes upward to the west. The nearest occupied residential property is adjacent to the subject pole (the detached garage and driveway are adjacent to the pole, and the house is located downslope and away from the pole). The site is located in a residential zone.

## **GENERAL PLAN ANALYSIS**

The subject property is located within the Hillside Residential General Plan designation. 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 lots." The proposed telecommunication facilities will be mounted on the existing PG&E utility pole within the City of Oakland public ROW. Visual impacts will be mitigated since the antennas' "climb through" installation is typically not the most aesthetically pleasing; given the topography, mature vegetation, and lack of close homes, the facilities would be camouflaged and blend in with the existing heavily wooded area. In addition, the equipment cabinet box would be painted to match the existing utility pole. Therefore, the proposed unmanned wireless telecommunication facility would not adversely affect or detract from the residential characteristics of the neighborhood.

## ZONING ANALYSIS

The project site is located in the RH-4 Residential Zone. 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 area." The proposed antenna is located within 30 feet of the nearest residential building (a garage). The project requires Regular Design, with special findings, to allow the installation of telecommunication facilities on an existing PG&E pole located in the public ROW in the RH-4 Zone. As shown in the attached findings, the project meets the special findings required to approve the Design Review in order to ensure that the facility is concealed to the extent feasible. While the antennas' "climb through" installation is typically not the most aesthetically pleasing, the visual effect would be minimal given the color treatment and wooded context.

Staff finds that the proposed application meets the applicable RH-4 Hillside Residential zoning regulations for telecommunication facilities.

## ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines lists projects that qualify for categorical exemptions from environmental review under CEQA. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301, additions and alterations to existing facilities, and Section 15183, projects consistent with a General Plan or Zoning.

## KEY ISSUES AND IMPACTS

### *Regular Design Review*

Sections 17.136.040 and 17.128.070 of the City of Oakland Planning Code require Major Design Review for Macro Telecommunication facilities that are attached to utility poles in the RH-4 zone or that are located within one hundred (100) feet of the boundary of any residential zone. The required findings for Major Design Review are listed and included in staff's evaluation as part of this report.

### *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.
- D. Existing commercial or industrial structures in residential zones.
- E. Other non-residential uses in residential zones.
- F. Residential uses in non-residential zones.

G. Residential uses in residential zones.

\*Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Since the proposed project involves locating the installation of new antennas and associated equipment cabinets on an existing utility pole, the proposed project meets: (B) quasi-public facilities on an existing PG&E utility pole within the public ROW.

#### *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 & 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. Site design alternatives analysis shall, at a minimum, consist of:

- a. Written evidence indicating why each higher preference design alternative cannot 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).

The project meets design criteria (C) since the antennas will be mounted on existing PG&E pole expansion and will be camouflaged partially by the existing mature trees, and the equipment cabinet box and battery backup box will match the color of the existing joint utility pole to minimize potential visual impacts from public view. City of Oakland Planning staff have reviewed (see Attachment A, alternative site analysis letter) and determined that the site selected conforms to all other telecommunication regulation requirements.

#### *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 emissions from the proposed project are within the

limits set by the Federal Communications Commission. In the document (Attachment B) prepared by Hammett & Edison RF Compliance Experts, Inc. Inc. Registered Professional Engineer, 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.

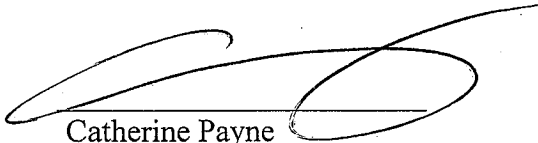
**CONCLUSION**

Staff believes that the proposed project is designed to meet the established zoning and telecommunication regulations and recommends approval of the Major Design Review application.

**RECOMMENDATIONS:**

1. Affirm staff's environmental determination; and
2. Approve Design Review application  
DR13-052 subject to the attached findings  
and conditions of approval

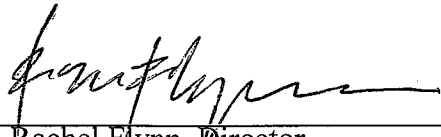
Prepared by:

  
Catherine Payne  
Planner III

Approved by:

  
Scott Miller  
Zoning Manager

Approved for forwarding to the  
City Planning Commission

  
Rachel Flynn, Director  
Department of Planning and Building

**ATTACHMENTS:**

- A. Project Plans & Photo simulations & Alternative Site Analysis
- B. Hammett & Edison, Inc., Consulting Engineering RF Emissions Report



**FINDINGS FOR APPROVAL****FINDINGS FOR APPROVAL:**

This proposal meets all the required findings under Section 17.136.050.(B), of the Non-Residential Design Review criteria and all the required findings under Section 17.128.070(B), of the telecommunication facilities (Macro) Design Review criteria and as set forth below: Required findings are shown in **bold** type; reasons your proposal satisfies them are shown in normal type.

**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 project consists of a wireless Telecommunications Macro Facility on an existing 37' high PG&E utility pole located in the public right-of-way (ROW) near 6690 Pineneedle Drive. New Cingular Wireless PCS for AT&T Mobility (the Applicant) proposes to install two panel antennas (two-feet long and 10- inches wide, each) for a wireless telecommunications facility (AT&T wireless) on a pre-approved 7-foot extension to an existing 37'-11" high joint utility pole; at 17' above grade, locate a battery-backup equipment box (2'x2'x1.5'); at 12' above grade, locate an equipment cabinet (4'x1'x1'); at 10' above grade, locate a 1'x1'x4" optical demarcation unit; At 8' above grade, locate a 1'x3"x8" safety shut-off switch and electricity meter; all equipment would be painted to match pole; relocation of existing climbing pegs to accommodate new equipment. No portion of the telecommunication facilities will be located on the ground within City of Oakland public right-of-way. The proposed antennas and equipment cabinet attached to the utility pole are partially camouflaged to blend-in with the existing surrounding heavily wooded area. Therefore, the proposal will have minimal visual impacts from public view.

**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 proposal improves wireless telecommunication service in a wooded hillside residential area. The installation will be camouflaged to blend-in with the existing surrounding wooded area to have minimal visual impacts on public views. It will protect the value of private and public investments in the area.

**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 subject site is located within the Hillside Residential General Plan designation classification which is intended to create, maintain, and enhance neighborhood residential areas that are characterized by detached, single unit structures on hillside lots. The proposed unmanned wireless telecommunication facility will be located on an existing joint utility pole and will not adversely affect or detract from the residential characteristics of the neighborhood. Visual impacts will be minimized since the area is heavily wooded with trees partially obscuring view of the pole. Therefore, the Project conforms to the General Plan and applicable design review criteria.

**17.128.070(B) DESIGN REVIEW CRITERIA FOR MACRO FACILITIES**

**1. Antennas should be painted and/or textured to match the existing structure:**

The proposed antennas will be painted to match the existing joint utility pole blend with surroundings.

**2. Antennas mounted on architecturally significant structures or significant architectural details of the building should be covered by appropriate casings which are manufactured to match existing architectural features found on the building:**

The proposed antennas will be mounted on a joint utility pole and painted to match the existing pole to blend with surroundings.

**3. Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building to help in camouflaging:**

The proposed antennas will be mounted on an existing joint utility pole and painted to match the utility pole and will therefore be camouflaged to blend-in with existing surrounding wooded area.

**4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop:**

The associated equipment will be attached to the existing utility pole and painted to match the pole and blend with surroundings.

**5. Equipment shelters or cabinets shall be consistent with the general character of the area.**

The proposed equipment cabinets will be compatible with the existing utility-related equipment.

**6. For antennas attached to the roof, maintain a 1:1 ratio for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with significant view corridors.**

N/A

**7. 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 at the top of the joint utility pole and will not be accessible to the public due to their location. The equipment accommodation and battery backup boxes will also be inside singular equipment box and attached to the pole at a height of at least 8' above grade.

**STANDARD CONDITIONS:****1. Approved Use*****Ongoing***

a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials for case number **DR13-052**, and the plans dated **December 24, 2012** and submitted on **February 6, 2013** and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval.

Any deviation from the approved drawings, Conditions of Approval or use shall require prior written approval from the Director of City Planning or designee.

b) This action by the City Planning Commission ("this Approval") includes the approvals set forth below. This Approval includes: **installation of a wireless Telecommunications Macro Facility on an existing 37' high PG&E utility pole located in the public right-of-way (ROW) near 6690 Pineneedle Drive. New Cingular Wireless PCS for AT&T Mobility (the Applicant) proposes to install two panel antennas (two-feet long and 10- inches wide, each) for a wireless telecommunications facility (AT&T wireless) on a pre-approved 7-foot extension to an existing 37'-11" high joint utility pole; at 17' above grade, locate a battery-backup equipment box (2'x2'x1.5'); at 12' above grade, locate an equipment cabinet (4'x1'x1'); at 10' above grade, locate a 1'x1'x4" optical demarcation unit; At 8' above grade, locate a 1'x3"x8" safety shut-off switch and electricity meter; all equipment would be painted to match pole; relocation of existing climbing pegs to accommodate new equipment. No portion of the telecommunication facilities will be located on the ground within City of Oakland public right-of-way. The proposed antennas and associated equipment will not be accessible to the public.**

**2. Effective Date, Expiration, Extensions and Extinguishment*****Ongoing***

Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the approval date, 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 permit, 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 for this project may invalidate this Approval if the said extension period has also expired.

**3. Scope of This Approval; Major and Minor Changes*****Ongoing***

The project is approved pursuant to the **Oakland Planning Code** only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or

designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

#### **4. Conformance with other Requirements**

##### ***Prior to issuance of a demolition, grading, P-job, or other construction related permit***

- a) The project applicant shall comply with all other applicable federal, state, regional and/or local codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency.
- b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

#### **5. Conformance to Approved Plans; Modification of Conditions or Revocation**

##### ***Ongoing***

- a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.
- b) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.
- c) Violation of any term, conditions or project description relating to the Approvals 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 Approvals 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.

#### **6. Signed Copy of the Conditions**

##### ***With submittal of a demolition, grading, and building permit***

A copy of the approval letter and conditions shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

#### **7. Indemnification**

##### ***Ongoing***

- a) To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (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, (1) an approval by the City relating to a development-related application or subdivision or (2) implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the defense of said Action and the 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 applicant shall execute a Letter Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Letter of Agreement shall survive termination, extinguishment or invalidation of the approval. Failure to timely execute the Letter Agreement does not relieve the applicant of any of the obligations contained in this condition or other requirements or conditions of approval that may be imposed by the City.

#### **8. Compliance with Conditions of Approval**

##### ***Ongoing***

The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

#### **9. Severability**

##### ***Ongoing***

Approval of the project would not have been granted but for the applicability and validity of each and every one of the specified conditions, and if any 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.

#### **10. Job Site Plans**

##### ***Ongoing throughout demolition, grading, and/or construction***

At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

#### **11. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Management**

##### ***Prior to issuance of a demolition, grading, and/or construction permit***

The project applicant may be required to pay for on-call special inspector(s)/inspections as needed during the times of extensive or specialized plan check review, or construction. The project applicant may also be required to cover the full costs of independent technical and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

#### **12. Days/Hours of Construction Operation**

***Ongoing throughout demolition, grading, and/or construction***

The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.
- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
  - i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
  - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or Federal holidays.
- f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

**PROJECT SPECIFIC CONDITIONS:****12. 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.

**13. 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.

**14. Equipment cabinets*****Prior to the final building permit***

The applicant shall submit revised elevations showing associated equipment cabinet are concealed within singular equipment box painted to match utility pole, to the Oakland Planning Department for review and approval.






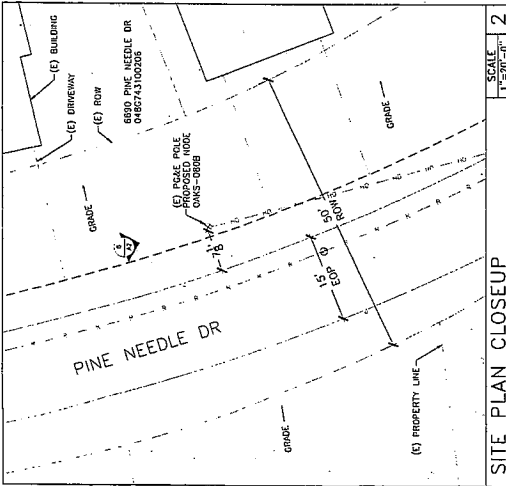
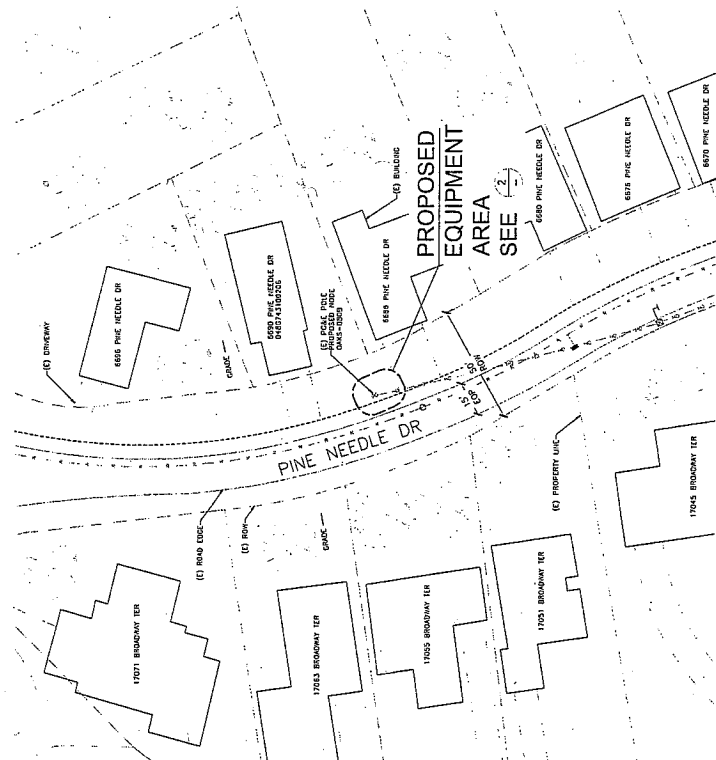
Planning Commission  
September 11, 2013  
DR13052

A. Project Plans & Photo simulations & Alternative Site Analysis

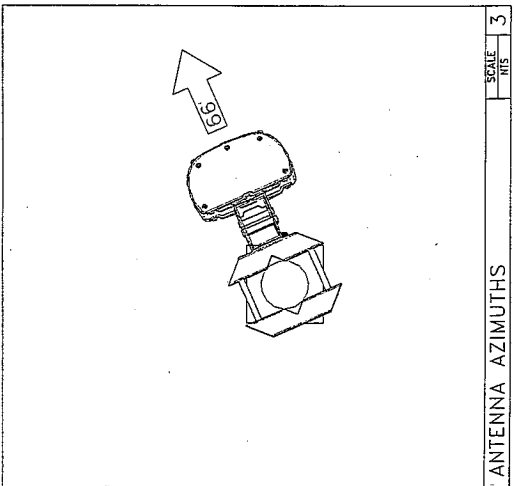




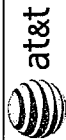
 <p>NEW CINGULAR WIRELESS PCS, LLC 1000 PINE NEEDLE DR PLEASANTON, CA 94588-3030</p>		<p>PROJECT INFORMATION:</p> <p>OAKHILLS AT&amp;T SOUTH NETWORK NODE 080B 0800 PINE NEEDLE DR DANFORTH, CA 94511</p>		<p>CURRENT ISSUE DATE:</p> <p>12/24/12</p>		<p>ISSUED FOR:</p> <p>ZONING</p>		<p>BY: DATE: DESCRIPTION: REV:</p> <table border="1"> <tr> <td>ACI</td> <td>12/24/12</td> <td>ZDs</td> <td>0</td> </tr> </table>		ACI	12/24/12	ZDs	0	<p>PLANS PREPARED BY:</p> <p> ACI 1-800-825-4ACI 5711 Research Drive Canyon, TX 48105</p>		<p>L&amp;S NUMBER: OAKS-080B</p> <p>CONSTRUCTED BY:</p> <p> net YOUR NETWORK ANYWHERE</p> <p>3030 Warrenville Rd, Suite 340 Lisle, IL 60532 www.net-systems.com</p>		<p>SHEET TITLE:</p> <p>SITE PLAN</p>		<p>SHEET NUMBER: A1</p> <p>REVISION: 0</p>		<p>12/24/12</p>	
ACI	12/24/12	ZDs	0																				



SITE PLAN CLOSEUP



ANTENNA AZIMUTHS



NEW CINCINNATI WIRELESS PCS, LLC  
4430 ROSEWOOD DR., BLDG. 3  
PLEASANTON, CA 94588-3650

PROJECT INFORMATION:

OAKHILLS AT&T  
SOUTH NETWORK  
NODE 080B  
6000 PINE NEEDLE DR  
OAKLAND, CA 94611

CURRENT ISSUE DATE:

12/24/12

ISSUED FOR:

ZONING

BY: DATE: DESCRIPTION: REV:

BY	DATE	DESCRIPTION	REV
ACI	12/24/12	ZDS	0

PLANS PREPARED BY:



CONSTRUCTED BY:

net  
YOUR NETWORK  
SYSTEMS  
3030 Worrenville Rd, Suite 340  
Lisle, IL 60532  
www.netel.com

SEAL OF APPROVAL:

SHEET TITLE:

ELEVATIONS  
&  
RISER DETAILS

SHEET NUMBER:

REVISION:

A2

12/24/12

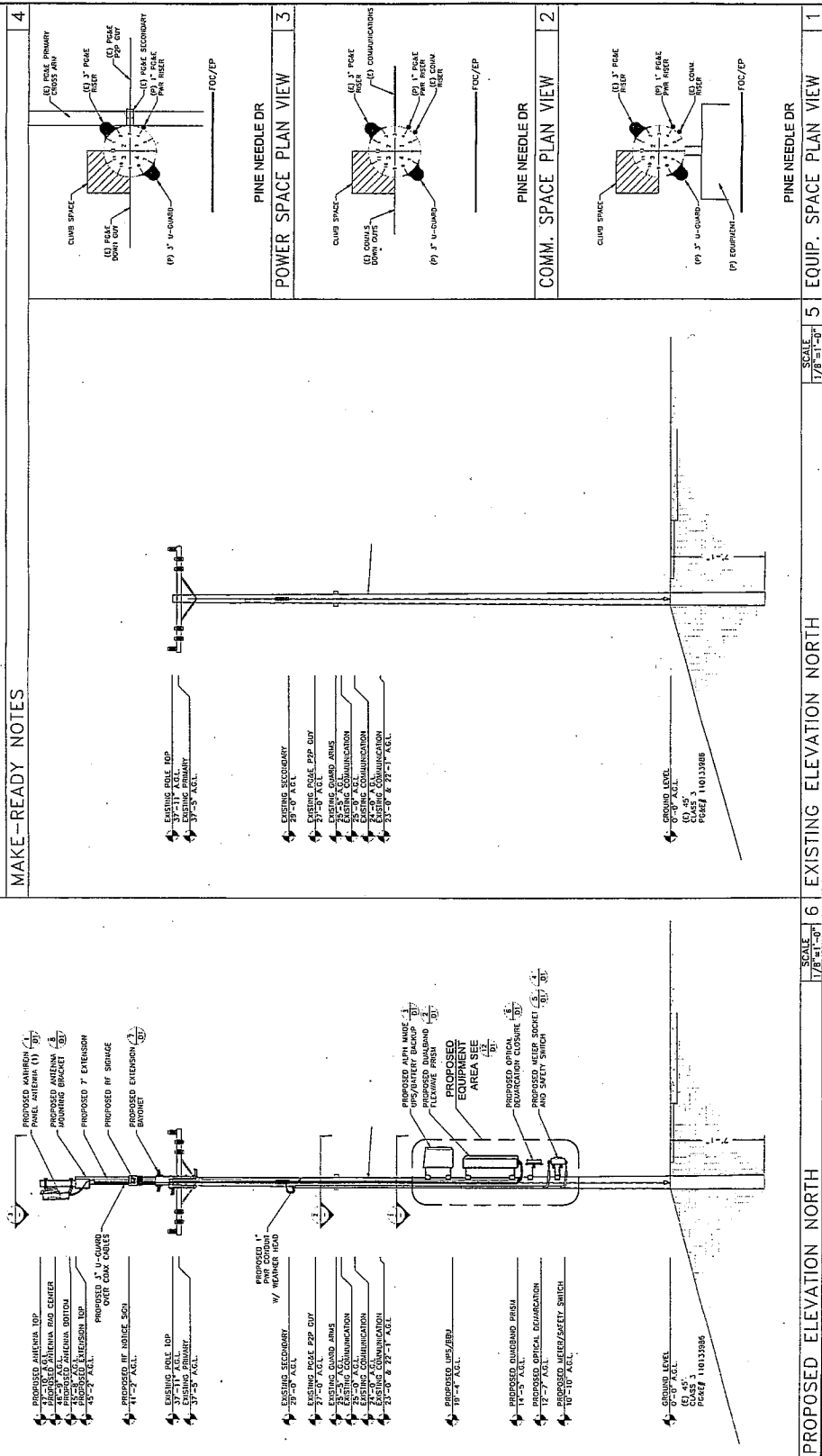
#### POWER MAKE-READY

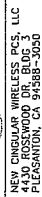
1. INSTALL PG&E 1" SCH 80 CONDUIT AT 4:00 POSITION
2. INSTALL (1) PANEL ANTENNA W/ MOUNTING BRACKET ON POLE TOP EXTENSION AT 45'-2" AGL
3. INSTALL COMBINERS AND (4/8) 1/2" COAX
4. INSTALL PG&E WEATHER HEAD AND 1" SCH 80 CONDUIT AT 4:00 POSITION FOR POWER SERVICE
5. INSTALL 3" SCH 80 U-GUARD AT 7:30 POSITION OVER COAX
6. PROVIDE 120/240 3-WIRE SINGLE PHASE, 100 AMP SERVICE TO 1" PG&E CONDUIT AT 4:00 POSITION TO METER SOCKET FROM SERVICE DROP 29'-0" AGL

#### COMMUNICATIONS MAKE-READY

1. INSTALL PG&E 1" SCH 80 CONDUIT AT 4:00 POSITION
2. INSTALL (1) PANEL ANTENNA W/ MOUNTING BRACKET ON POLE TOP EXTENSION AT 45'-2" AGL
3. INSTALL COMBINERS AND (4/8) 1/2" COAX
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#### MAKE-READY NOTES





PROJECT INFORMATION:  
OAKHILLS AT&T  
SOUTH NETWORK  
NODE 080B  
6090 PINE NEEDLE DR  
OAKLAND, CA 94611

12/24/12


ISSUED FOR: ZONING

BY: _____	DATE: _____	DESCRIPTION: _____	REV: _____
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[illegible]


PLANS PREPARED BY: **ACI**  
 ALSO COMMUNICATIONS INC.  
 1-800-825-4ACI  
 5711 Research Drive  
 Canton, MI 48188

ACI NUMBER: **QMS-0809**

CONSTRUCTED BY:  YOUR NETWORK. EVERYWHERE.

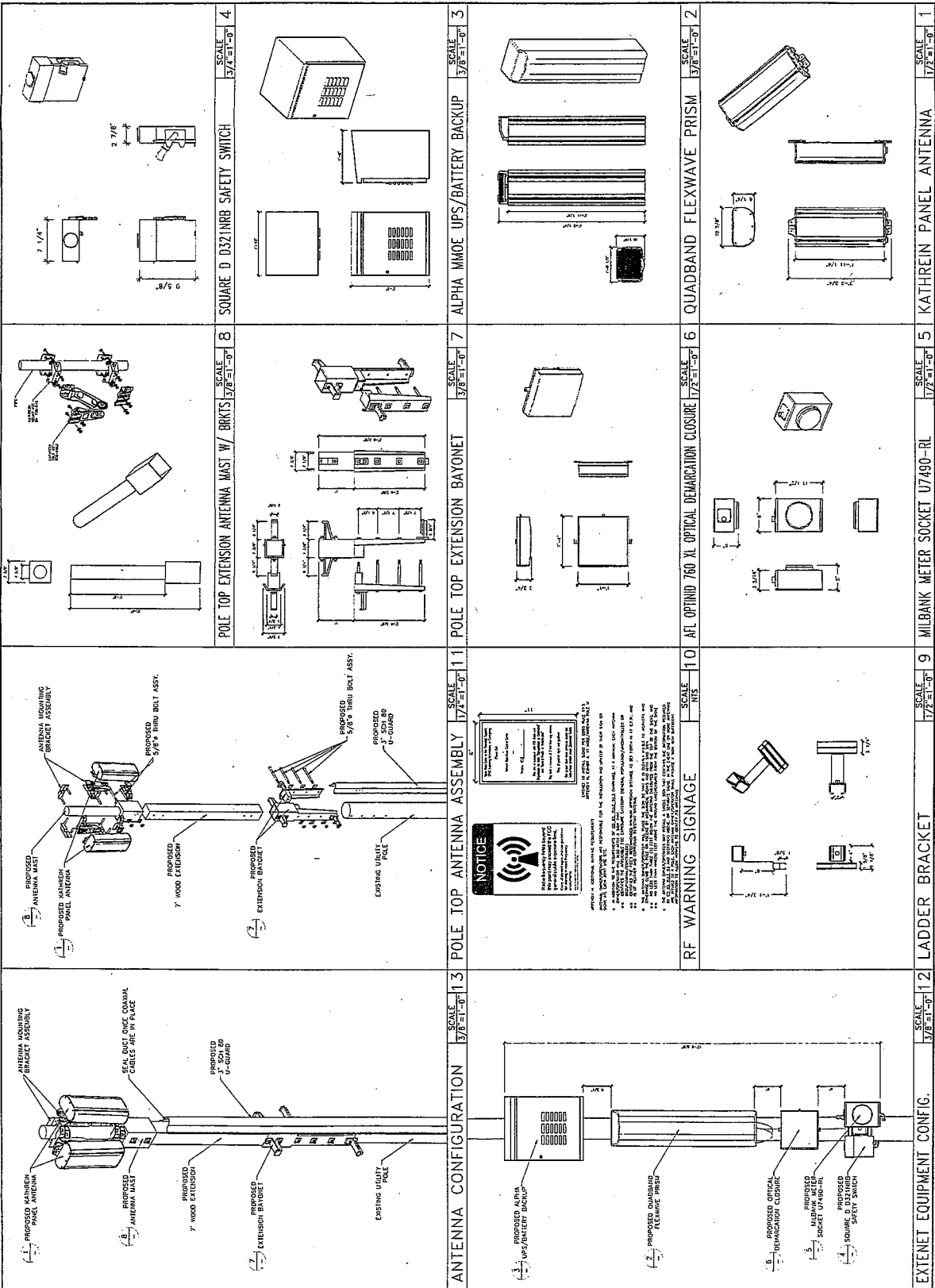
3030 Warrenville Rd, Suite 340  
Lisle, IL 60532  
[www.exitenet.com](http://www.exitenet.com)

SEAL OF APPROVAL: \_\_\_\_\_



SHEET TITLE: **EQUIPMENT DETAILS**

D1	0
	12/24/12



Existing



Proposed

view from Pine Needle Drive looking north at site



AT&T Wireless

6690 Pine Needle Drive, Oakland, CA  
Oakhills AT&T South Network Node 080B

Advancesim  
Photo Simulation Solutions  
Contact (925) 202-8507

Planning Commission  
September 11, 2013  
DR13052

Hammett & Edison, Inc., Consulting Engineering RF Emissions Report



**New Cingular Wireless, LLC • Two Proposed Distributed Antenna System Nodes  
Oakland Hills • Oakland, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of New Cingular Wireless, LLC, a wireless telecommunications service provider, to evaluate two distributed antenna system (DAS) nodes proposed to be located in the Oakland Hills area of Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

New Cingular Wireless proposes to install a directional panel antenna on two existing utility poles sited in the Oakland Hills area of Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standards**

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

Power line frequencies (60 Hz) are well below the applicable range of these standards, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

**General Facility Requirements**

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units.



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Z5SS  
Configuration 1B  
Page 1 of 4

**ATTACHMENT B**

## **New Cingular Wireless, LLC • Two Proposed Distributed Antenna System Nodes Oakland Hills • Oakland, California**

The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. Along with the low power of such facilities, this means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

### **Computer Modeling Method**

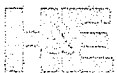
The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

### **Site and Facility Description**

Based upon information provided by New Cingular Wireless, that carrier proposes to install two new nodes, listed in Table 1 below, in the Oakland Hills area of Oakland. Each node would consist of one Kathrein Model 840-10525 directional panel antenna installed on an existing utility pole sited in a public right-of-way. The antenna would be mounted with no downtilt at an effective height of about 35 feet above ground and would be oriented in different directions, as shown in Table 1. The maximum effective radiated power in any direction would be 219 watts, representing simultaneous operation by New Cingular Wireless at 104 watts for PCS, 61 watts for cellular, and 54 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

<u>Node#</u>	<u>Approximate Address</u>	<u>Antenna Orientations</u>
Node 65	6251 Castle Drive	10°T
Node 80	6690 Pine Needle Drive	66°T

*Table 1. New Cingular Wireless Nodes Evaluated*



**New Cingular Wireless, LLC • Two Proposed Distributed Antenna System Nodes  
Oakland Hills • Oakland, California**

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed operation is calculated to be 0.0026 mW/cm<sup>2</sup>, which is 0.50% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building\* is 1.2% of the public limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

**Recommended Mitigation Measures**

Due to their mounting locations on utility poles, the New Cingular Wireless antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, no access within 3 feet directly in front of the antennas themselves, such as might occur during maintenance work on the poles, should be allowed while the pertinent node is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs† at the antennas and/or on the poles below the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that the proposed operation of these New Cingular Wireless nodes in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Posting explanatory signs is recommended to establish compliance with occupational exposure limitations.

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\* Including nearby residences located at least 6 feet from either pole, based on photographs from Google Maps. The antennas are oriented away from those residences.

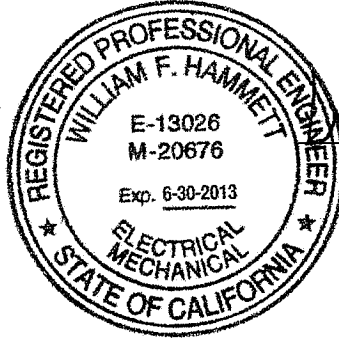
† Warning signs should comply with OET-65 color, symbol, and content recommendations. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.



**New Cingular Wireless, LLC • Two Proposed Distributed Antenna System Nodes  
Oakland Hills • Oakland, California**

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2013. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



*William F. Hammett*  
William F. Hammett, P.E.

707/996-5200

December 13, 2012



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

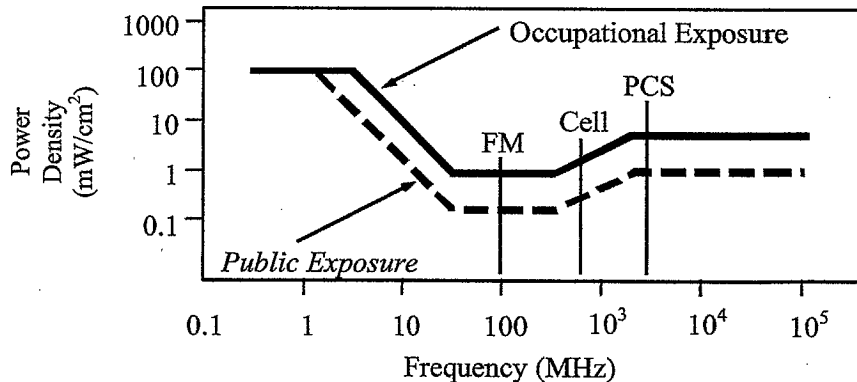
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Configuration 1B  
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## FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f<sup>2</sup></i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f <sup>2</sup>	<i>180/f<sup>2</sup></i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	<i>3.54√f</i>	<i>1.59√f</i>	<i>√f/106</i>	<i>√f/238</i>	<i>f/300</i>	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

FCC Guidelines  
Figure 1

## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density  $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$ , in mW/cm<sup>2</sup>,

and for an aperture antenna, maximum power density  $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$ , in mW/cm<sup>2</sup>,

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

$P_{net}$  = net power input to the antenna, in watts,

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

#### Far Field.

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

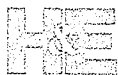
power density  $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$ , in mW/cm<sup>2</sup>,

where ERP = total ERP (all polarizations), in kilowatts,

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.



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Methodology  
Figure 2

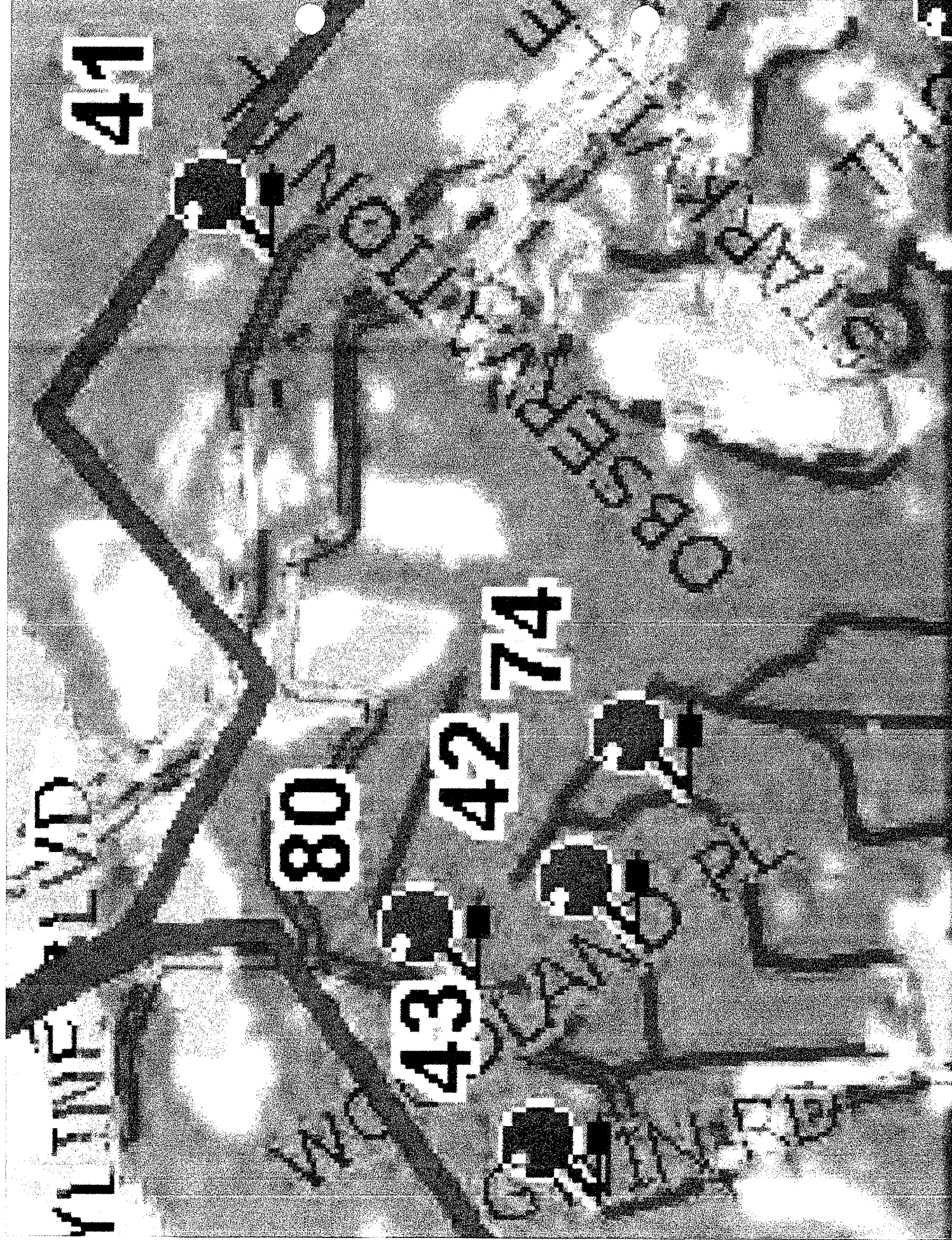
AT&T Oakland Hills DAS - Node 80 Propagation

Propagation Map Key:

- Red = Excellent Coverage (in-building)
- Yellow = Medium Coverage (partial in-building)
- Green = Some Coverage (outdoor)







41

80

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WOLF LVD

WOLF LVD

WOLF LVD

WOLF LVD