



Staff Report to the Zoning Administrator

Application Number: **03-0405**

Applicant: AT&T Wireless - Roger Haas

Date: 8/6/04

Owner: Department of Public Works

Agenda Item #: 3

APN: NO_APN_SPEC

Time: After 11:00 a.m.

Project Description: Proposal to install a wireless communication facility by mounting two flat panel antennas onto an existing wood utility pole in the public right-of-way.

Location: Property located within the right-of-way for Soquel Drive, ¼ mile southeast from Freedom Blvd.

Permits Required: Commercial Development Permit

Staff Recommendation:

- Approval of Application 03-0405, based on the attached findings and conditions.
- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

Exhibits

- | | | | |
|----|--|----|--|
| A. | Project plans | F. | Zoning & General Plan maps |
| B. | Findings | G. | Visual Simulations |
| C. | Conditions | H. | Supplemental Application information (Including RF report) |
| D. | Categorical Exemption (CEQA determination) | I. | Comments & Correspondence |
| E. | Assessor's parcel map | | |

Parcel Information

Parcel Size:	N/A
Existing Land Use - Parcel:	Public right-of-way
Existing Land Use - Surrounding:	Highway One right-of-way, Vacant rural residential
Project Access:	Soquel Drive
Planning Area:	Aptos Hills
Land Use Designation:	R-R (Rural Residential)
Zone District:	SU (Special Use)
Supervisory District:	2 (District Supervisor: Ellen Pirie)

Within Coastal Zone: Inside Outside
Appealable to Calif. Coastal Comm. Yes No

Environmental Information

Geologic Hazards: N/A
Soils: N/A
Fire Hazard: N/A
Slopes: N/A
Env. Sen. Habitat: N/A
Grading: No grading proposed
Tree Removal: No trees proposed to be removed
Scenic: Highway One Scenic Corridor - micro cellular installation on existing utility pole, no visual impact anticipated to scenic resources.
Drainage: N/A
Archeology: N/A

Services Information

Inside Urban/Rural Services Line: Yes No
Water Supply: N/A
Sewage Disposal: N/A
Fire District: Aptos/La Selva Fire Protection District
Drainage District: None

Project Setting

The proposed wireless communications facility will be located on an existing utility pole within the right-of-way of Soquel Drive above the north side of Highway One.

Zoning & General Plan Consistency

The project site is located within the public right-of-way of Soquel Drive within the SU (Special Use) zone district and within the (R-R) Rural Residential General Plan designation. Wireless communications facilities are a restricted category of use within the SU zone district (for parcels with a residential General Plan designation), but the installation of micro cellular wireless communications facilities on existing utility poles are allowed as an exception to the restricted areas prohibition.

Design Review & Scenic Resources

The proposed wireless communications facility complies with the requirements of the County Design Review Ordinance, and will not impact scenic resources such as the Highway One Scenic Comdor, in that the proposed project will be located on an existing utility pole and will blend with existing utilities *infrastructure* to adequately mitigate any visual impact of the proposed development on surrounding land uses and the natural landscape.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- APPROVAL of Application Number **03-0405**, based on the attached findings and conditions.
- Certification that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Department, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.co.santa-cruz.ca.us

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701 Ocean Street, 4th Floor
Santa Cruz CA 95060
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E-mail: randall.adams@co.santa-cruz.ca.us

Wireless Communication Facility Use Permit Findings

1. The development of the proposed wireless communications facility will not significantly affect any designated visual resources, or otherwise environmentally sensitive areas or resources, as defined in the Santa Cruz County General Plan/LCP (sections 5.1, 5.10, and 8.6.6), or there is no other environmentally superior and technically feasible alternative to the proposed location with less visual impacts and the proposed facility has been modified to minimize its visual and environmental impacts.

This finding can be made, in that the proposed micro cellular wireless communication facility will be co-located on an existing utility pole. Micro cellular wireless communication facility installations that are co-located on existing utility poles, such as this proposal, are an environmentally superior alternative to larger wireless communication facility installations and their associated visual and environmental impacts. The use of such co-located micro cellular wireless communication facilities in place of larger wireless communication facility installations, when technically feasible, minimizes the visual and environmental impacts associated with the construction of wireless communication facilities due to the smaller size of the proposed facilities and the presence of an existing pole and utilities infrastructure.

2. The site is adequate for the development of the proposed wireless communications facility and, for sites located in one of the restricted areas set forth in section 13.10.661(b) that the applicant has demonstrated that there are not environmentally equivalent or superior and technically feasible alternative sites outside the restricted area or designs for the proposed facility.

This finding can be made, in that the installation of micro cellular wireless communications facilities co-located on existing utility poles are allowed as an exception to the restricted areas prohibition without the requirement of further alternatives analysis, per County Code section 13.10.661(c)(3).

3. The subject property upon which the wireless communications facility is to be built is in compliance with all rules and regulations pertaining to zoning uses, subdivisions and other applicable provisions of this title (County Code 13.10.659) and that all zoning violation abatement costs, if any, have been paid.

This finding can be made, in that the project site is located within a public right-of-way and is used for the purpose of public access and utilities infrastructure.

No zoning violation abatement fees are applicable to the subject property.

4. The proposed wireless communication facility will not create a hazard for aircraft in flight.

This finding can be made, in that the proposed wireless communications facility will be located on an existing utility pole, which is approximately 22 feet in height, and this elevation is too low to interfere with an aircraft in flight.

5. The proposed wireless communication facility is in compliance with all FCC (federal communications commission) and California PUC (public utilities commission) standards and requirements.

This finding can be made, in that the maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated to be .062 percent of the most restrictive applicable limit.

6. For wireless communications facilities in the coastal zone, the proposed wireless communication facility as conditioned is consistent with all the applicable requirements of the Local Coastal Program.

This finding can be made, in that the proposed project site is not located within the coastal zone.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated to be .062 percent of the most restrictive applicable limit.

The proposed project will not result in inefficient or wasteful use of energy, in that the most recent and efficient technology available to provide wireless communication services will be required as a condition of this permit. Upgrades to more efficient and effective technologies will be required to occur as new technologies are developed.

The project will not be materially injurious to properties or improvements in the vicinity in that the project will be co-located on an existing utility pole, resulting in a minimal visual impact.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the installation of micro cellular wireless communications facilities co-located on existing utility poles are allowed as an exception to the restricted areas prohibition without the requirement of further alternatives analysis, per County Code section 13.10.661(c)(3). The project site is located within the SU (Special Use) zone district with a residential General Plan land use designation.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed micro cellular wireless communication facility will be co-located on **an** existing utility pole. Micro cellular wireless communication facility installations that are co-located on existing utility poles, such as this proposal, are an environmentally superior alternative to larger wireless communication facility installations and their associated visual and environmental impacts.

The subject property for the proposed project is located within the Highway One scenic corridor. The proposed project complies with General Plan Policy 5.10.3 (Protection of Public Vistas), in that the use of such co-located micro cellular wireless communication facilities minimizes the visual and environmental impacts associated with the construction of wireless communication facilities due to the small size of the proposed facilities and the presence of **an** existing pole and utilities infrastructure. The existing public views from the scenic highway will remain relatively unchanged as a result of this project.

The property is located in the Rural Residential (R-R) land use designation, which is implemented by and consistent with the site's SU (Special Use) zone district.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

The project will not require the use of public services such as water or sewer, but will require electric power and telephone connections. The facility will require inspection by maintenance personnel at least once per month and this will not result in increasing traffic to unacceptable levels in the vicinity.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed facility will be co-located on an existing utility pole. This proposed design will adequately mitigate any potential visual impacts to the surrounding neighborhood.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed facility will be co-located on an existing utility pole and will blend with the existing utilities infrastructure to reduce potential visual impacts to the surrounding neighborhood.

Conditions of Approval

Exhibit A: Project Plans, entitled, "Hwy1 / Soquel Drive", 8 sheets, prepared by AT&T Wireless Services, dated 7/1/03, with revisions **through 3/16/04**.

- I. This permit authorizes the construction of a wireless communications facility on an existing utility pole as indicated on the approved Exhibit "A" for this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant shall:
 - A. Sign, date, and return to the Planning Department one copy of the approval to indicate acceptance and agreement with the conditions thereof.
 - B. Obtain a Building Permit from the Santa Cruz County Building Official.
 - C. Obtain an Encroachment Permit from the Department of Public Works for all work performed in the County road right-of-way.
- II. The applicant shall obtain all required approvals from the California Public Utilities Commission (CPUC) and the Federal Communications Commission (FCC) for this wireless communication facility.
- III. Prior to issuance of a Building Permit the applicant/owner shall:
 - A. Submit Final Architectural Plans for review and approval by the Planning Department. The final plans shall be in substantial compliance with the plans marked Exhibit "A" on file with the Planning Department. The final plans shall include the following additional information:
 1. An indication of the proposed colors and materials of the proposed wireless communication facility. All colors and materials must be non-reflective and blend with the existing utilities infrastructure. All color boards must be no larger than 8.5"w x 11"h x 1/16"t.
 2. Details showing compliance with fire department requirements.
 - B. To ensure that the storage of hazardous materials on the site does not result in adverse environmental impacts, the applicant shall submit a Hazardous Materials Management Plan for review and approval by the County Department of Environmental Health Services, if required.
 - C. Meet all requirements and pay any applicable plan check fee of the Aptos/La Selva Fire Protection District.
- IV. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following

conditions:

- A. All site improvements shown on the final approved Building Permit plans shall be installed.
 - B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.
 - C. The Hazardous Materials Management Plan, if required, shall be approved by the County Department of Environmental Health Services.
 - D. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.
- V. Operational Conditions
- A. The exterior finish and materials of the wireless communication facility must be maintained on an annual basis to continue to blend with the existing utilities infrastructure. Additional paint and/or replacement materials shall be installed as necessary to blend the wireless communication facility with the existing utilities infrastructure.
 - B. The operator of the wireless communication facility must submit within 90 days of commencement of normal operations (or within 90 days of any major modification of power output of the facility) a written report to the Santa Cruz County Planning Department documenting the measurements and findings with respect to compliance with the established Federal Communications Commission (FCC) Non-Ionizing Electromagnetic Radiation (NEIR) exposure standard. The wireless communication facility must remain in continued compliance with the NEIR standard established by the FCC at all times. Failure to submit required reports or to remain in continued compliance with the NEIR standard established by the FCC will be a violation of the terms of this permit.
 - C. The use of temporary generators to power the wireless communication facility are not allowed.
 - D. If, in the future, the pole based utilities are relocated underground at this location, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the

surrounding natural landscape.

- E. If, as a result of future scientific studies and alterations of industry-wide standards resulting from those studies, substantial evidence is presented to Santa Cruz County that radio frequency transmissions may pose a hazard to human health and/or safety, the Santa Cruz County Planning Department shall set a public hearing and in its sole discretion, may revoke or modify the conditions of this permit.
 - F. If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the operator of the wireless communication facility must make those modifications which would allow for reduced visual impact of the proposed facility as part of the normal replacement schedule. If, in the future, the facility is no longer needed, the operator of the wireless communication facility must abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to re-establish the area consistent with the character of the surrounding natural landscape.
 - G. Any modification in the type of equipment shall be reviewed and acted on by the Planning Department staff. The County may deny or modify the conditions at this time, or the Planning Director may refer it for public hearing before the Zoning Administrator.
 - H. A Planning Department review that includes a public hearing shall be required for any future co-location at this wireless communications facility.
 - I. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.
- VI.** As a condition of this development approval, the holder of this development approval (“Development Approval Holder”), is required to defend, indemnify, and hold harmless the COUNTY, its officers, employees, and agents, from and against any claim (including attorneys’ fees), against the COUNTY, its officers, employees, and agents to attack, set aside, void, or annul this development approval of the COUNTY or any subsequent amendment of this development approval which is requested by the Development Approval Holder.
- A. COUNTY shall promptly notify the Development Approval Holder of any claim, action, or proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. COUNTY shall cooperate fully in such defense. If COUNTY fails to notify the Development Approval Holder within sixty (60) days of any such claim, action, or proceeding, or fails to cooperate fully in the defense

thereof, the Development Approval Holder shall not thereafter be responsible to defend, indemnify, or hold harmless the COUNTY if such failure to notify or cooperate was significantly prejudicial to the Development Approval Holder.

- B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:
 - 1. COUNTY bears its own attorney’s fees and costs; and
 - 2. COUNTY defends the action in good faith.
- C. Settlement. The Development Approval Holder shall not be required to pay or perform any settlement unless such Development Approval Holder has approved the settlement. When representing the County, the Development Approval Holder shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the County.
- D. Successors Bound. “Development Approval Holder” shall include the applicant and the successor’(s) in interest, transferee(s), and assign(s) of the applicant.
- E. Within 30 days of the issuance of this development approval, the Development Approval Holder shall record in the office of the Santa Cruz County Recorder an agreement which incorporates the provisions of this condition, or this development approval shall become null and void.

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires **two** years from the effective date unless you obtain the required permits and **commence** construction.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Don Bussey
Deputy Zoning Administrator

Randall Adams
Project Planner

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

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CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF EXEMPTION

The Santa Cruz County Planning Department has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 03-0405
Assessor Parcel Number: NO__APN__SPEC
Project Location: No situs (Soquel Drive Right-of-way)

Project Description: Proposal to construct a wireless communications facility.

Person or Agency Proposing Project: AT&T Wireless - Roger Haas

Contact Phone Number: (408) 672-5610

- A. The proposed activity is not a project under CEQA Guidelines Section 15378.
B. The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).
C. **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.
D. **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

Specify type:

- E. **Categorical Exemption**

Specify type: New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

Construction of a utility pole mounted micro-cellular facility that is not anticipated to generate any environmental impacts.

In addition, none of the conditions described in Section 15300.2 apply to this project.

Randall Adams, Project Planner

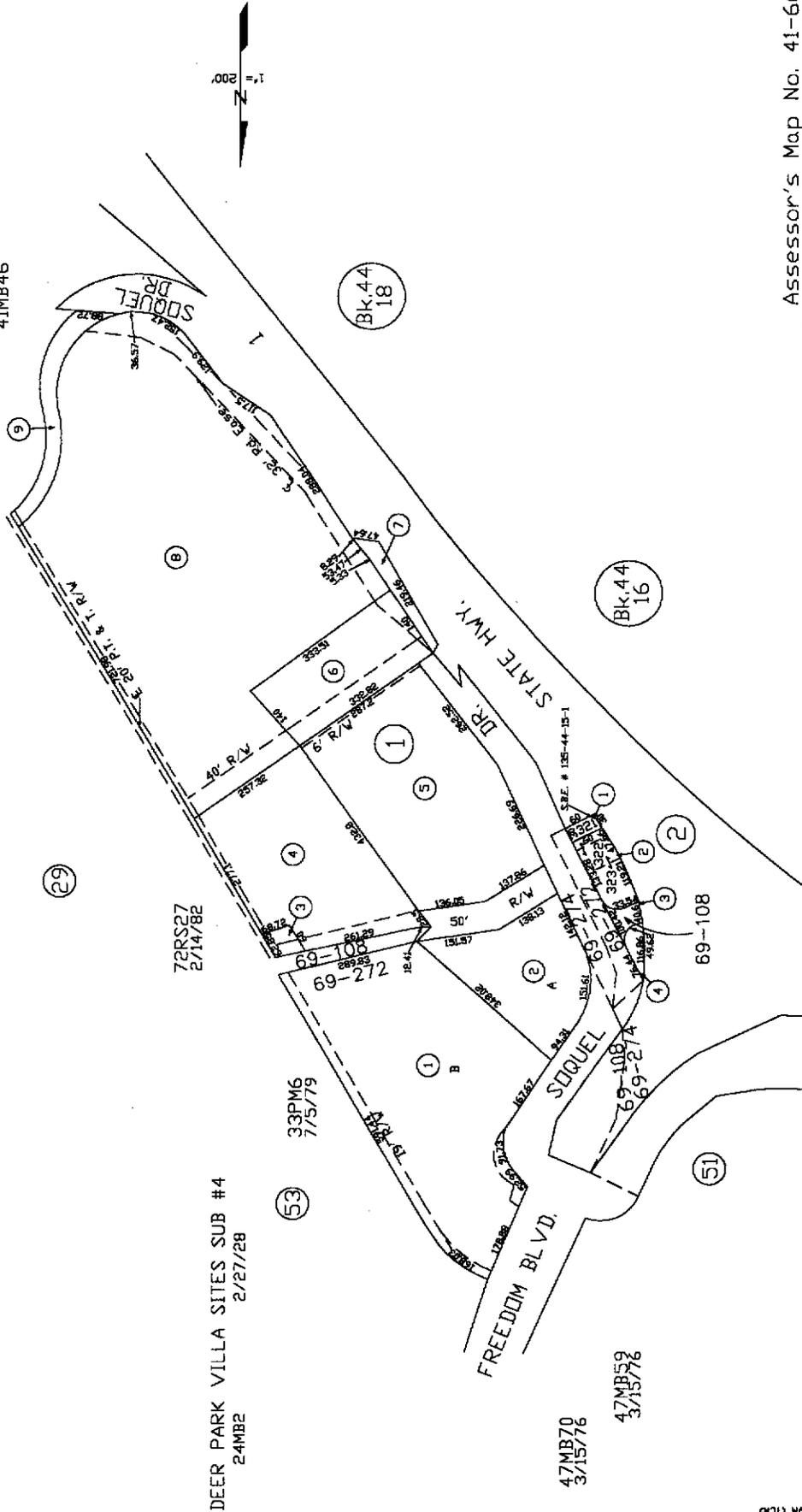
Date: _____

FOR TAX PURPOSES ONLY
 THE ASSessor MAKES NO GUARANTEE AS TO THE ACCURACY OF THE INFORMATION FOR ASSESSORS ANY LIABILITY FOR ANY LOSS OR DAMAGE TO BE REPRODUCED. ALL RIGHTS RESERVED.
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PDR, APTOS RANCHO
 SEC. 16, T.11S., R.1E., M.D.B. & M.

Tax Area Code
 69-108
 69-272 69-274

41-66



Note - Assessor's Parcel & Block Numbers Shown in Circles.

Assessor's Map No. 41-66
 County of Santa Cruz, Calif.
 Jan. 1999

DEER PARK VILLA SITES SUB #4
 24MB2

33PM6
 7/5/79

72RS27
 2/14/82

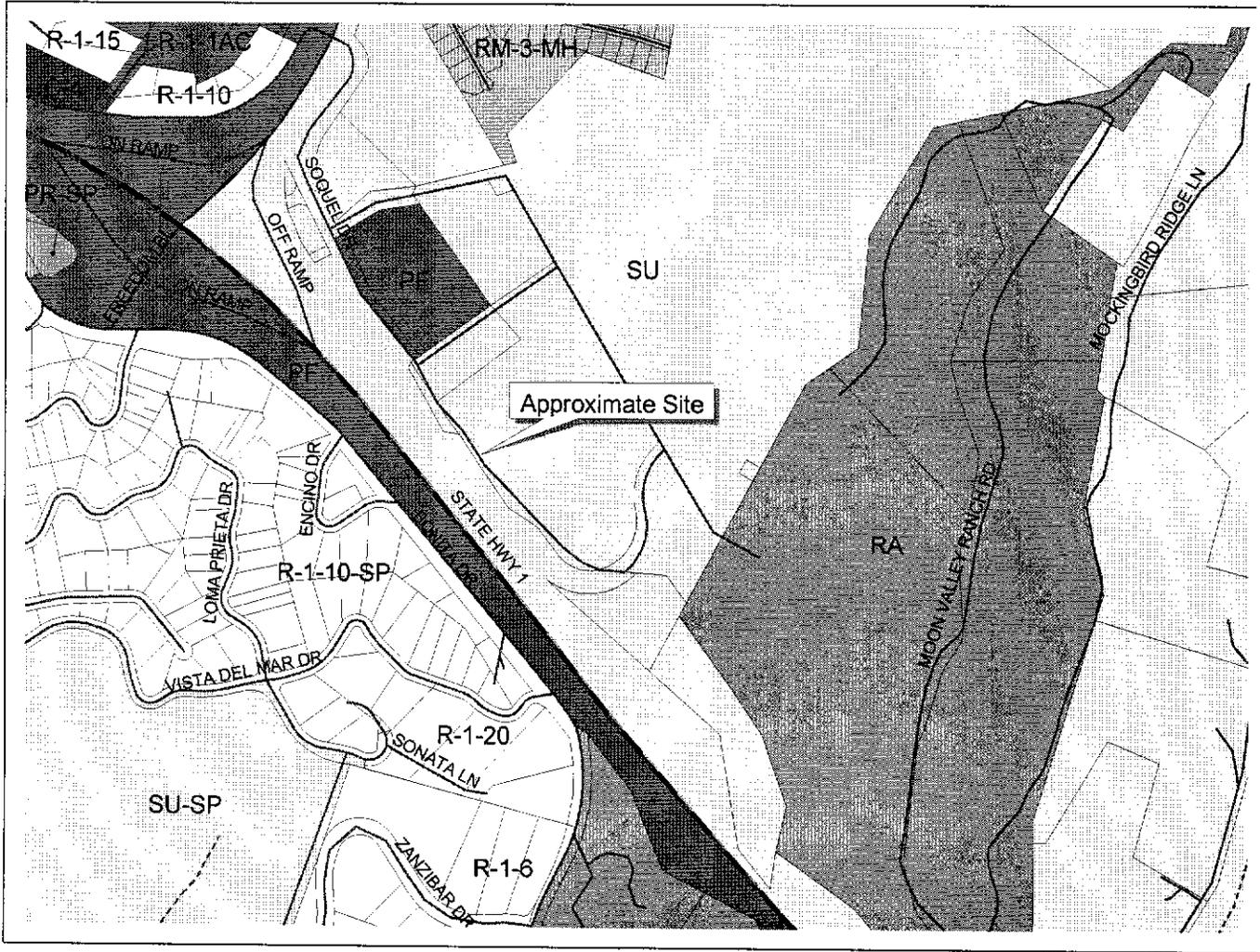
47MB70
 3/15/76

47MB52
 3/15/76

Electronically Redrawn 1/15/99
 Rev. 1/15/99 (from 8/29/99)
 Rev. 1/4/92 (from 7/25/92)

EXHIBIT

Zoning Map



Legend

	Parcel boundaries
	State highways
	Streets
	C-4
	PF
	RA
	PR
	RM
	SU
	R-1-X

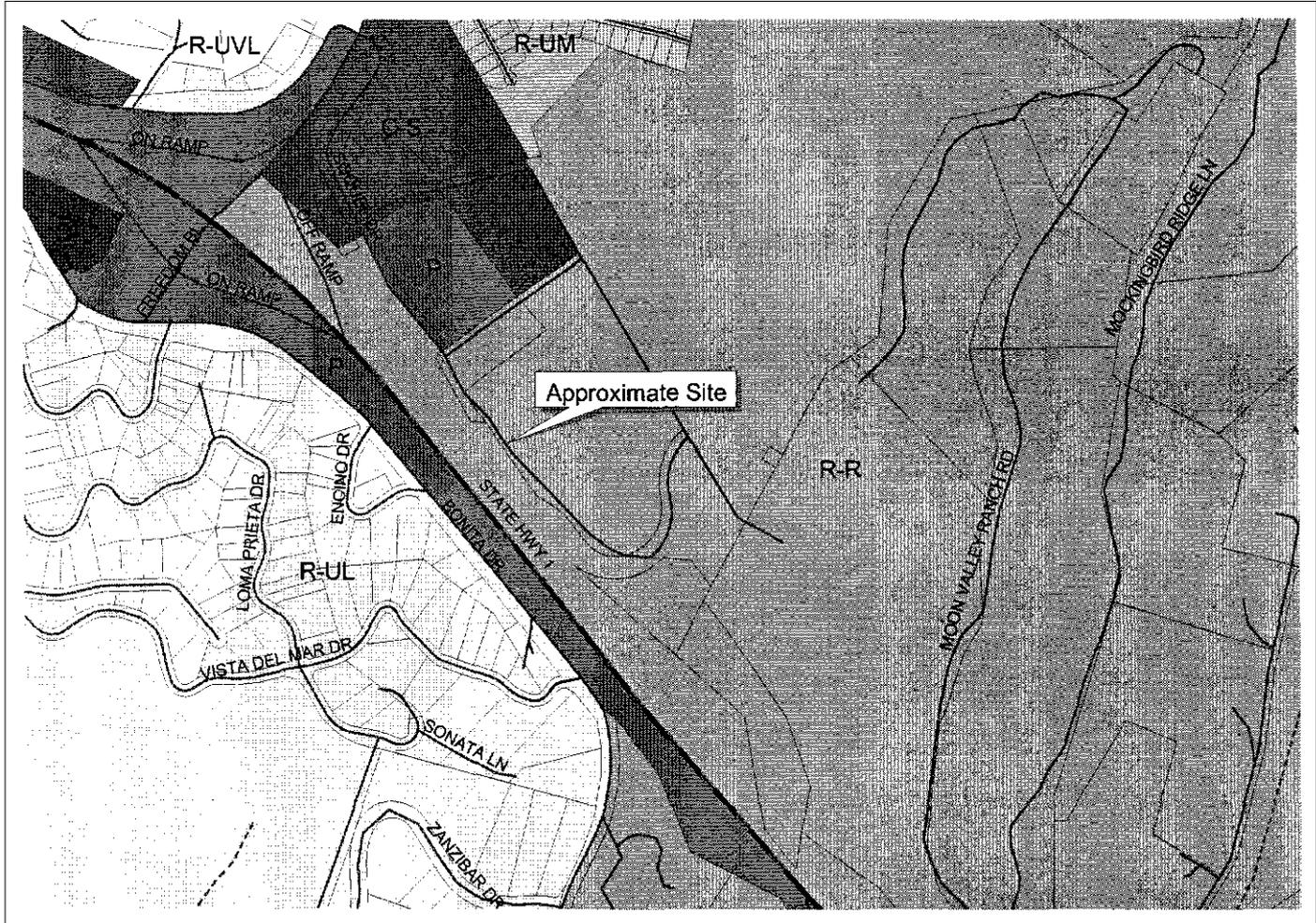


Map created by Santa Cruz County
Planning Department:
September 2003

EXHIBIT E

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General Plan Map



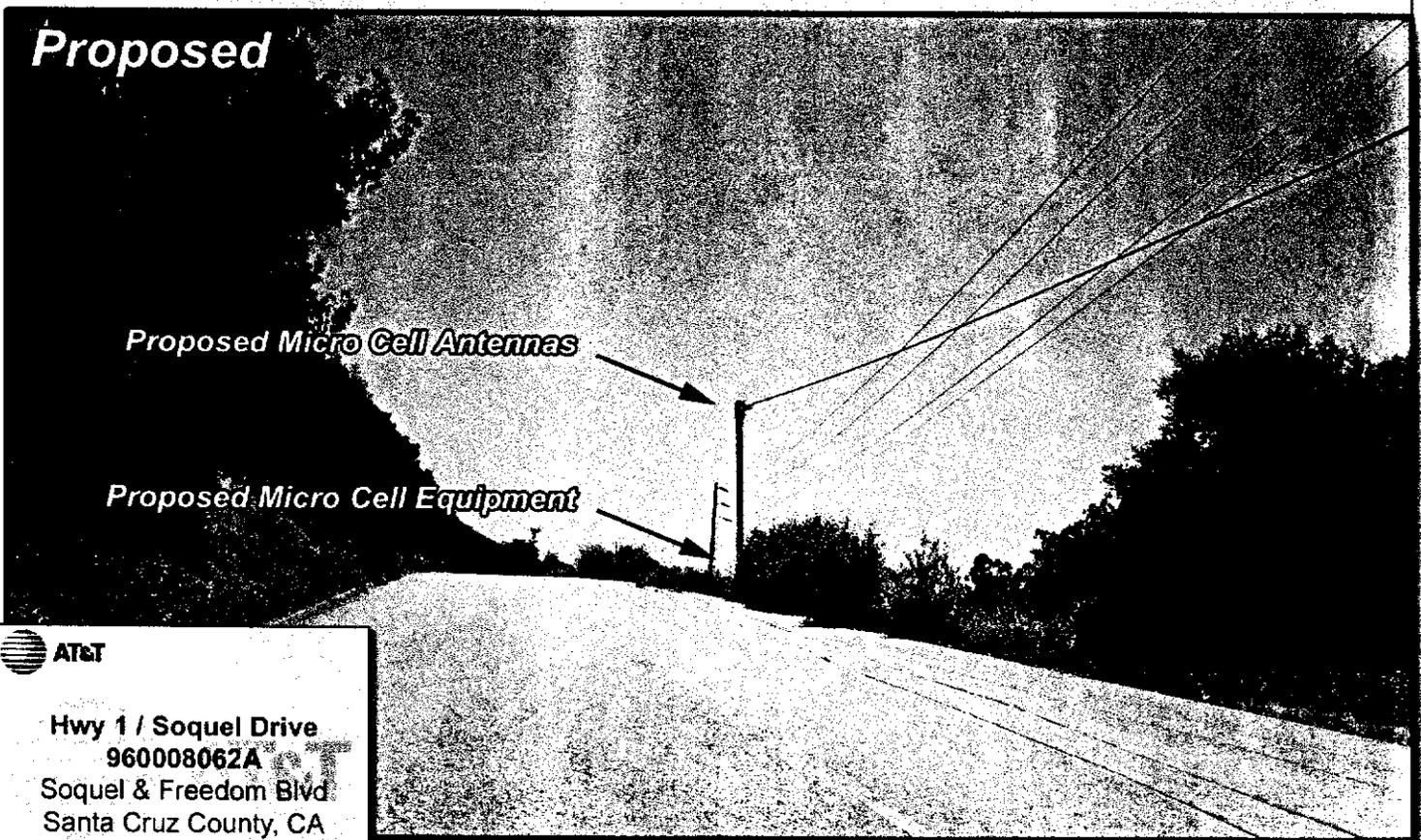
Legend

	Parcel boundaries
	State highways
	Streets
	Resource Conservation
	Service Commercial
	Public Facilities
	Rural Residential
	Residential - Urban Medium Density
	Residential - Urban Low Density
	Residential - Urban Very Low Density



Map created by Santa Cruz County
Planning Department
September 2003

Existing / Proposed View as seen from Soquel Drive looking Southeast



Hwy 1 / Soquel Drive
960008062A
Soquel & Freedom Blvd
Santa Cruz County, CA

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Existing / Proposed View as seen from Soquel Drive looking Northwest



 AT&T

Hwy 1 / Soquel Drive
960008062A
Soquel & Freedom Blvd
Santa Cruz County, CA



Project Description

Nature of Request

AT&T Wireless Services (AWS) seeks approval of a Conditional Use Permit, and related permits to allow the construction of a communication facility within a Caltrans ROW, located on an (e) wood utility pole. **Our** proposal is designed to blend in with the (e) utility pole, see photosimulations, which blends in with the surroundings. This site is being proposed in accordance with AWS' FCC license requirements.

Property Description

The subject property is located approximately **1/4** mile southeast of Freedom Boulevard and **Hwy 1** on Soquel Drive on the **north** side of **Hwy 1** within the Jurisdiction of Santa Cruz County. We have been asked to reflect the APN#: **no_APN_spec**, as requested by Santa Cruz Planning Staff. Santa Cruz County has given us authority to act on their behalf in regards of this proposal.

The property is located within an existing Santa Cruz County Right-of-way, which falls under County control but is not defined by a specific zoning designation. We have been informed during our pre-application meeting; the County does allow installation of wireless telecommunications facilities as a conditional use pursuant to Section 13.10.659.21.8F.2 of the Planning Code. The proposed use matches the present use, as the project does not deviate nor substantially increase the visual blight of the present use/site.

Project Description

AT&T proposes to install a communication facility that will consist of Two (2) flat panel antennas mounted on the existing wood utility pole, at a Centerline elevation of 31'8". Our equipment will be mounted at approximately 7'0", above grade. Both the antennas and equipment will be painted brown (or like) to mitigate potential visual impacts. All associated conduits, will also be painted brown (or like) to match the (e) wood pole.

The antennas will be flush mounted to the (e) pole, with a maximum distance from the pole at approximately 7", which would be difficult to capture at 55 MPH from a motorists perspective. The antenna dimensions are the following; 7.5" wide, 24.5" in length, and 1.8" thick. The proposed dimensions for the equipment, which will be mounted to the same pole (at 7'), are 16" wide, 21" in length, and 8" thick.

EXHIBIT 1

The Lyle Company
Representing AT&T Wireless

Access to the project site will be via Soquel Drive, with no safety risk to personnel, as Soquel Drive ends in a cul-de-sac approximately 1/10th mile to the southeast. There is no through traffic at this location.

Statement of Operations

The proposed AT&T communication facility only requires electrical and telephone services, which are readily available to the building/site. No nuisances will be generated by the proposed facility, nor will the facility injure the public health, safety, morals or general welfare of the community. AT&T technology does not interfere with any other forms of communication devices whether public or private. Construction of this facility will actually enhance wireless communications for residents or motorists traveling along Rural Santa Cruz County by providing seamless service to numerous customers.

As mentioned before, upon completion of construction, fine-tuning of the AT&T facility may be necessary, meaning the site will be adjusted once or twice a month by a service technician for routine maintenance. No additional parking spaces are needed at the project site for maintenance activities. The site is entirely self-monitored and connects directly to a central office where sophisticated computers alert personnel to any equipment malfunction or breach of security.

Because AT&T's facility will be un-staffed, there will be no regular hours of operation and no impact to existing traffic patterns. **An** existing dirt road will provide ingress and egress allowing access to the technician who arrives infrequently to service the site. No on-site water or sanitation services will be required as a part of this proposal.

Zoning Analysis

AT&T's proposed facility will be located within an (e) Santa Cruz County ROW, therefore according to the County we fall outside any applicable Zoning Districts. Pursuant to the County of Santa Cruz Wireless Telecommunications Services (WTS) Facilities Siting Guidelines the proposed use is allowed subject to approval of a Level 5 Conditional Use Permit. The proposal is consistent with the County design, siting and review guidelines for commercial antenna installation. It is also important to mention we are open to collocation however, the RF criteria would be determined by another carrier. Both the Joint Pole Authority and Bechtel Construction would have to examine placement of another carrier, where they look at the remaining space on the (e) wood pole, including a structural analysis.

Additionally, as mentioned above, the proposal includes the placement of electronic equipment which AT&T wireless has designed the base facility in the "least visual obtrusive manner". Please see the "Supplemental Information", Exhibit D, section for more in-depth analysis of Zoning as it follows your Interim Wireless Ordinance.

EXHIBIT I

The Lyle Company
Representing AT&T Wireless

Compliance with Federal Regulations

AT&T will comply with all FCC rules governing construction requirements, technical standards, interference protection, power and height limitations, and radio frequency standards. In addition, the company will comply with all FAA rules on site location and operation.

EXHIBIT

(v) Narrative & Map of future Sites (5 Year Plan)

The build-out plan of AT&T is determined by RF engineers who design the system to allow for the maximum blanketing coverage, while using the least amount of sites in the area. This limits the number of visual impacts in the area, and can potentially save AT&T money, thus keeping the prices of wireless services to a minimum, while still offering the same great service. AT&T **has** designed this current, 3G (3rd Generation), system to facilitate between thirty-three (33) to thirty-five (35) sites throughout Santa Cruz County. Preliminary research of sites have determined that approximately seventeen (17) of these sites fall within the Counties Jurisdictional control, while the remaining are spread through the City of Santa Cruz, Watsonville, and Capitola.

I have submitted, on 3.5" floppy disk, a detailed list and map location of AT&T sites spread throughout the County to Frank Baron.

(vi) Wireless Services to be provided

Benefits to the Community

Wireless technology can provide many benefits to the County of Santa Cruz residents, businesses and motorists that travel or live near the proposed project site. These benefits include:

- Quick access to 911 emergency allowing motorists to summon emergency aid and report dangerous situations.
- Support for emergency services by providing wireless communications access to paramedics, firefighters, and law enforcement agencies that use this technology.
- The ability to transmit data over the airwaves allowing for immediate access to vital information to emergency services.
- Communication capabilities in remote areas, enhancing the safety of travelers by allowing immediate access to emergency assistance.
- Provide quality wireless communications including voice, paging, digital data
- Enhance the communication services of those residents who conduct business and professional services for Santa Cruz County.

(vii) California Public Utilities Commission

AT&T Wireless is registered with the CPUC under General Order 159A.

- 1) AT&T Wireless Services of California, LLC (U-3010-C)
- 2) AT&T Wireless PCS, LLC (U-3074-C)

(viii) Federal Communications Commission

AT&T Wireless is registered with the Telecommunications Bureau as:

Market Number: BTA404

Call Sign: KNLG542

File Number: 0000030525

(ix) FCC Compliance with NIER Standards

I have included an EMF study, which describes NIER/EMF compliance issues regarding the proposal. This report is submitted respectively by Hammett & Edison, an outside consultant that examines the safety of Cellular installations.

(x) Security Considerations

The area surrounding our proposal is accessible to the general public, as it is located on near Soquel/Jaunell Avenues. Normally our sites have a locked gate for access issues however; in this case we can only state our equipment will be out of reach from the Public. We are also forbidden from including a gate to protect the site, as Public Utilities, (PG&E and PacBell), Caltrans, and Santa Cruz County need 100% access to the public ROW (Right-of-way). We feel that the site is hidden, which not only benefits the aesthetic value, but also keeps any potential visitors from actually seeing the equipment/antennas. The equipment/antennas will be painted brown (or like) to match the color of the (e) pole in an effort to mitigate potential security issues.

Federal Law also mandates that all areas, in compliance with FCC guidelines, shall include a ANSI compliant RF sign in a visible place for workers approaching the site, and once construction of the site is scheduled AT&T will provide this sign.

(xi) Facility Design Alternatives

This project includes the installation of two antennas, and ancillary equipment, which will be mounted to an (e) wood utility pole. In regards to design alternatives, our only option was to utilize a "MacroCell" site, as previously proposed over a year ago by a number of different carriers (Sprint, AT&T, and Verizon). The idea behind a 'MicroCell', is to minimize all visual impact from motorists. Due to the sensitive nature of this area, we feel this is the only design that eliminates visual impact.

Therefore, the only feasible design was to use (e) wood poles located in the ROW, and mount all ancillary equipment and antennas to the pole, while painting it brown to match.

(xii) Other Information Required

We will submit all other information as the Planning Director or governing body may require, per the requirement stipulated in the Interim Ordinance (soon to be finalized).

(xiii) Visual Simulation Study

I have included a Photosimulation; Exhibit F, for your review, the picture is taken from the 'best' vantage point, to depict the 'true' impact of the site. They are taken a 1/8-mile due west and east. This location is not visually obtrusive to traffic, as the site blends in with the surroundings, per the intention of its design.

(xiv) Alternative Site Analysis

AT&T evaluated a number of 'MacroCell' sites in the area, which ultimately lead us to a site located @ Moon Valley Ranch road. The location in itself was a great location, but we ran into a few problems with not only landlord discussions but construction costs, and could not reach a deal to solidify the location. Our first choice was to choose another "MacroCell" site, but felt the impact would be to great. Therefore, we felt the County could offer a potential solution. Our RF engineers decided we could use (e) utility poles, without adding blight to the area. The problem is we have to use four (4) locations to substitute for our one (1) location. In evaluating the business terms of each deal, we determined at this time we could "launch our system with the lower visually impacting sites (located in the approximate area – within 2.0-2.5 miles).

Summary of Alternative Sites Analysis

Our goal in determining the site location was based on minimizing the cumulative impact of Cellular sites in the area. Our proposal is located on the inland side of the Highway, which was recommended by Santa Cruz County staff during our pre-application meetings for sites in this area. The MicroCell sites emulate (e) utilities on (e) wood poles, which are innocuous as the utility installations we see throughout the County.

Amendment

The applicant agrees to notify within 30-days of any change of information required and submitted as part of this ordinance.

Technical Review

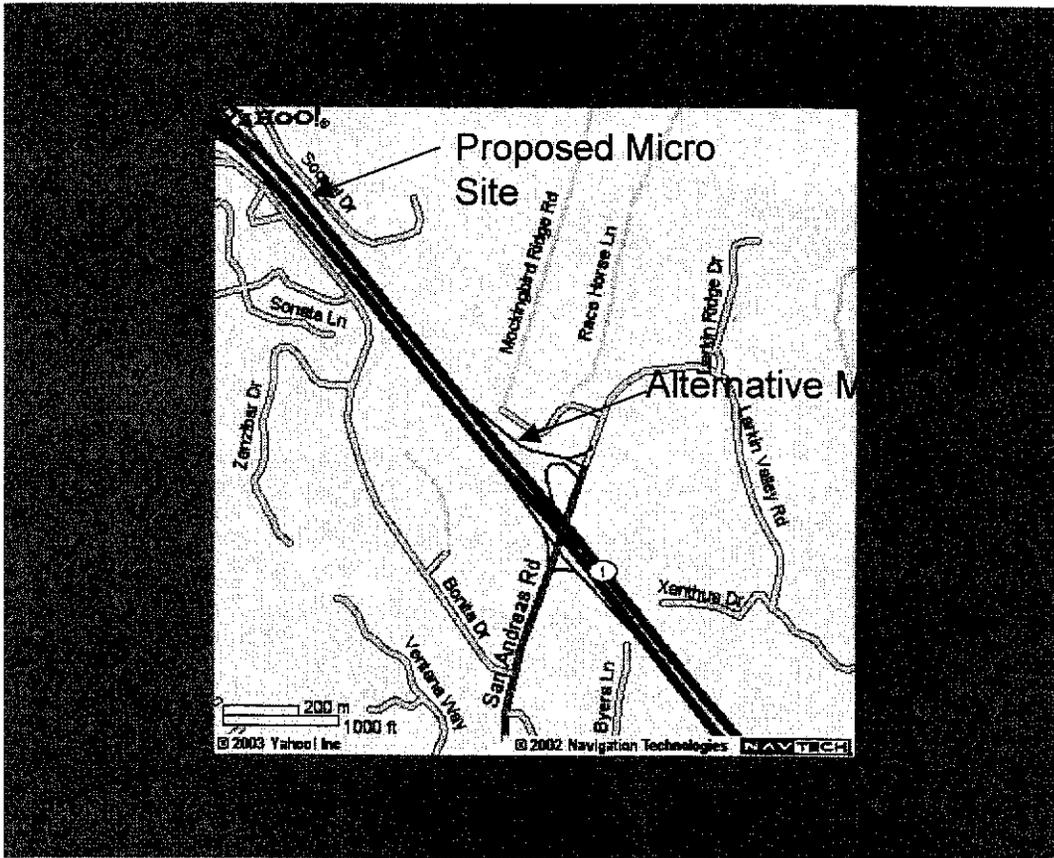
An independent technical expert, at the direction of the County of Santa Cruz and notification by, may review any technical materials submitted for review.

Fees

A check in the amount of **\$5000.00**, check #**10637**, is attached for an initial payment of processing the application submitted on behalf of AT&T wireless.

Alternative Site Analysis

Alternative for our MicroCell sites was located at 1025 Moon Valley Ranch Road, which is approximately 2.0 - 2.5 miles from four (4) different MicroCell locations. I am only reflecting only one (1) project proposal at a time.



MacroCell sites include 3 equipment cabinets located near the site, while our current proposal is a MicroCell, which has "pole" mounted Equipment.

**AT&T Wireless • Proposed Base Station (Site No. 9600080628)
Soquel Drive and Freedom Boulevard • Aptos, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by AT&T Wireless, a telecommunications carrier, to evaluate a proposed new base station (Site No. 960008062B) to be located near Soquel Drive and Freedom Boulevard in Aptos, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission (“FCC”) evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in 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 Institute of Electrical and Electronics Engineers (“IEEE”) Standard C95.1-1999, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” includes nearly identical exposure limits. 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 thresholds for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

<u>Personal Wireless Service</u>	<u>Approx. Frequency</u>	<u>Occupational Limit</u>	<u>Public Limit</u>
Personal Communication (“PCS”)	1,950 MHz	5.00 mW/cm ²	1.00 mW/cm ²
Cellular Telephone	870	2.90	0.58
Specialized Mobile Radio	855	2.85	0.57
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called “radios” or “cabinets”) 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. The transceivers are often located at ground level and are connected to the antennas by coaxial cables about 1 inch thick. 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



**AT&T Wireless • Proposed Base Station (Site No. 9600080628)
Soquel Drive and Freedom Boulevard • Aptos, California**

horizon, with very little energy wasted toward the sky or the ground. Along with the low power such facilities, this means that it is generally not possible for exposure conditions to approach 1 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 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 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 AT&T, including zoning drawings by CH2M Hill, dated July 2003, it is proposed to mount two Arc Wireless Model PCS-DS-14-06514-OD directional panel antennas on an existing 31¹/₂-foot utility pole located east of the intersection of Soquel Drive and Freedom Boulevard in Aptos. The antennas would be mounted at an effective height of about 29¹/₂ feet above ground and would be oriented toward 150°T and 310°T, to provide service to surrounding areas. The effective radiated power in any direction would be 40 watts, representing four PCS channels operating simultaneously at 10 watts each. There are reported no other wireless telecommunications base stations installed nearby.

Study Results

The maximum ambient RF level at any ground level location within 1,000 feet due to the proposed AT&T operation is calculated to be 0.00062 mW/cm², which is 0.062% of the applicable public limit. The maximum calculated level at the second floor elevation at any of the nearby homes* is 0.0045% 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. Figure 3 attached provides the specific data required under Santa Cruz County Code Section 13.10.659(g)(2)(ix), for reporting the analysis of RF exposure conditions.

* Based on Mapquest aerial photographs and as shown in Figure 3A



**AT&T Wireless • Proposed Base Station (Site No. 960008062B)
Soquel Drive and Freedom Boulevard • Aptos, California**

Recommended Mitigation Measures

Since they are to be mounted on a tall pole, the AT&T antennas are not 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 1 foot directly in front of the antennas themselves, such as might occur during maintenance work on the pole, should be allowed while the base station 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 pole 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 AT&T Wireless base station proposed near Soquel Drive and Freedom Boulevard in Aptos, California, can comply with the prevailing standards for limiting human exposure to radio frequency energy and, therefore, need 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.

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, 2005. 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.

August 19, 2003



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

[†] Warning signs should comply with ANSI C95.2 color, symbol, and content conventions. In addition, contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

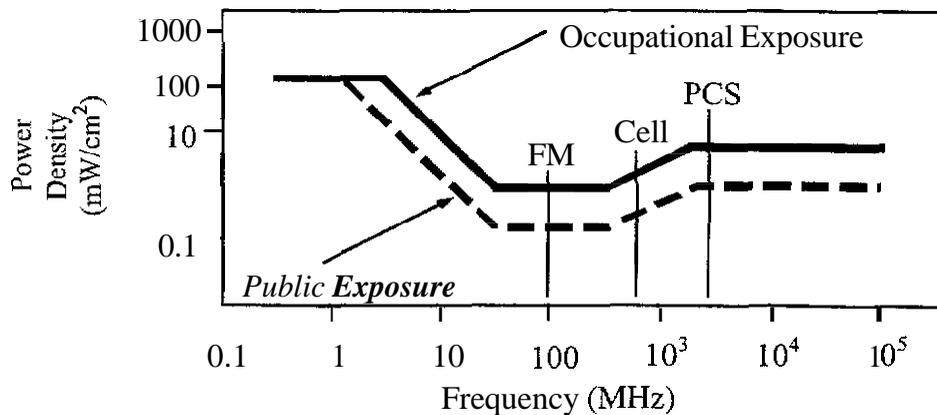


FCC Radio Frequency Protection Guide

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, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.” 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 ²)	
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/f²</i>
3.0– 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f ²	<i>180/f²</i>
30– 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300– 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<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.



**RFR.CALC™ Calculation Methodology
Assessment by Calculation
of Compliance with Human Exposure Limitations**

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, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.” 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. 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 cell sites. The near field zone is the distance from an antenna before which the manufacturer’s published, far field antenna patterns have formed; the near field is assumed to be in effect for increasing D until three conditions have been met:

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

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

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

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

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

The factor of 0.1 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates the distances to the FCC public and occupational limits,

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

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

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

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

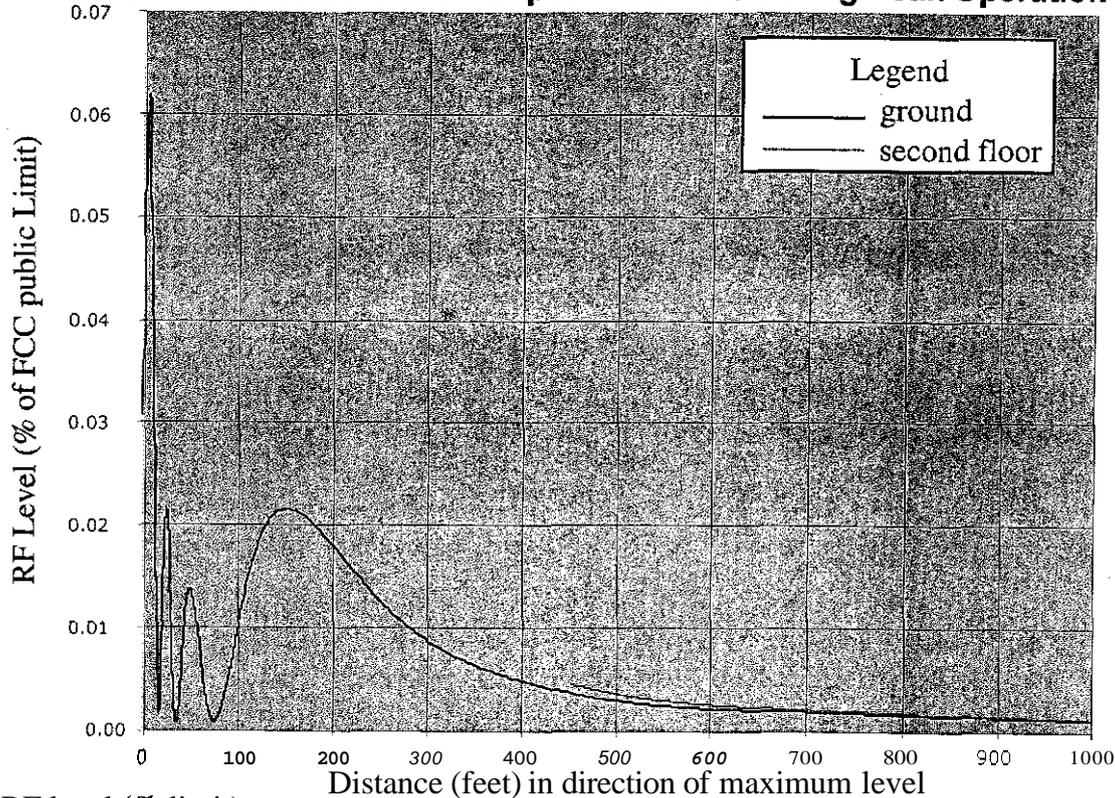


**AT&T Wireless • Proposed Base Station (Site No. 96008062B)
Soquel Drive and Freedom Boulevard • Aptos, California**

Compliance with Santa Cruz County Code §13.10.659(g)(2)(ix)

"Compliance with the FCC's non-ionizing electromagnetic radiation (NIEER) standards or other applicable standards shall be demonstrated for any new wireless communication facility through submission, at the time of application for the necessary permit or entitlement, of NIEER calculations specifying NIEER levels in the area surrounding the proposed facility. Calculations shall be made of expected NIEER exposure levels during peak operation periods at a range of distances from fifty (50) to one thousand (1,000) feet, taking into account cumulative NIEER exposure levels from the proposed source in combination with all other existing NIEER transmission sources within a one-mile radius. This should also include a plan to ensure that the public would be kept a safe distance from any NIEER transmission source associated with the proposed wireless communication facility, consistent with the NIEER standards of the FCC, or any potential future superceding standards."

Calculated Cumulative NIEER Exposure Levels during Peak Operation Periods



RF level (% limit)	Distance (feet) in direction of maximum level							
Distance (feet)	50	100	200	300	500	750	1,000	
ground	0.014%	0.010%	0.018%	0.0086%	0.0029%	0.0017%	0.0011%	
second floor	(no homes within 450 feet of site)					0.0036%	0.0019%	0.0012%

Calculated using formulas in FCC Office of Engineering Technology Bulletin No. 65 (1997), considering terrain variations within 1,000 feet of site

Maximum effective radiated power (peak operation) - 40 watts

Effective AT&T antenna height above ground - 29¹/₂ feet

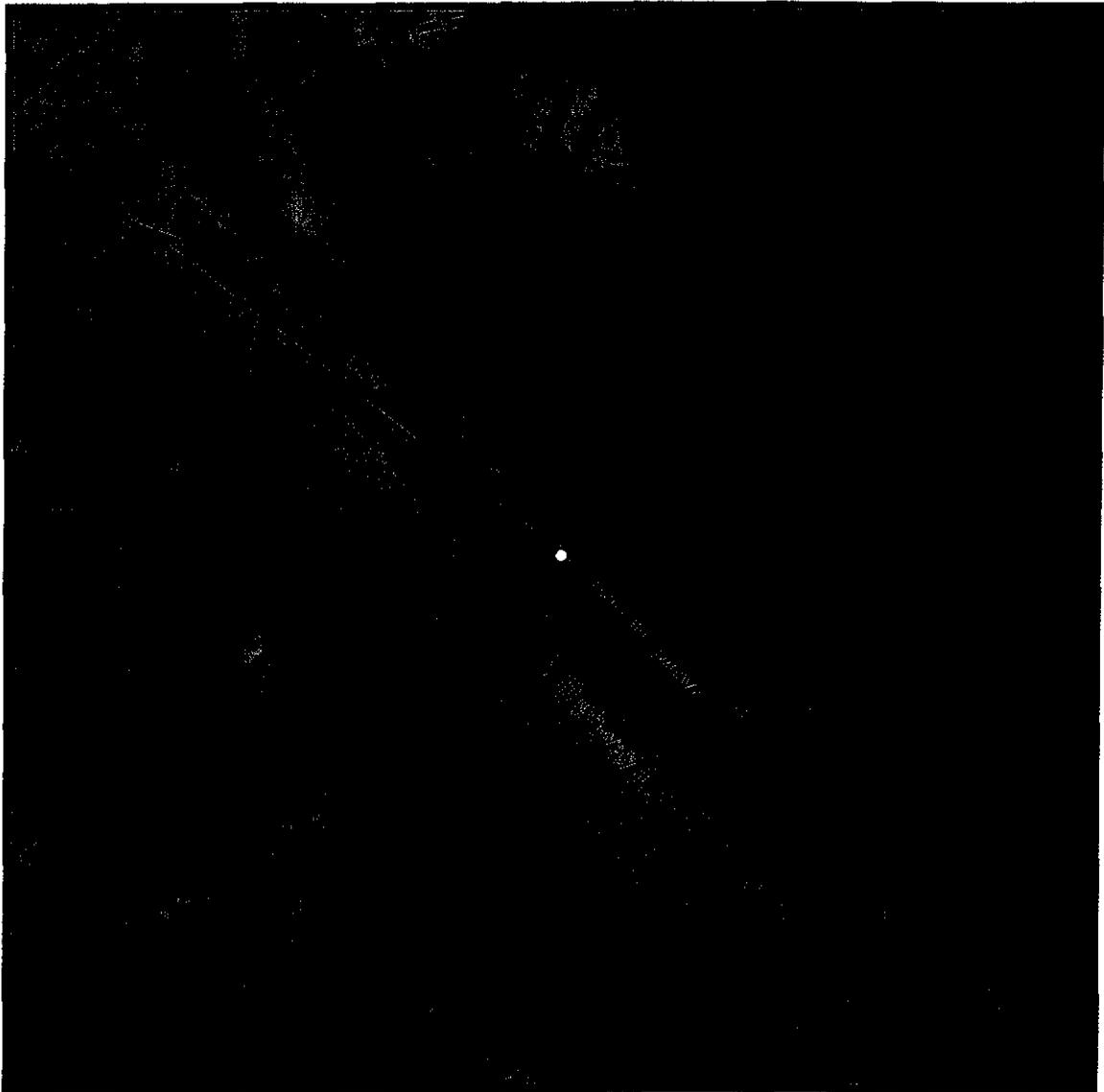
Other sources nearby - None

Other sources within one mile - No AM, FM, or TV broadcast stations
No two-way stations close enough to affect compliance

Plan for restricting public access - Antennas are mounted on a tall utility pole

AT&T Wireless • Proposed Base Station (Site # 960008062B)
Soquel Drive and Freedom Boulevard • Aptos, California

Calculated NIER Exposure Levels
Within 1,000 Feet of Proposed Site



Aerial photo from Mapquest.

Note: Maximum level at ground or on the second floor of any of the nearby homes was less than 0.1% of FCC public limit, *i.e.*, more than 1,000times below.

Calculate using formula in FCC Office of Engineering Technology Bulletin No. 65 (1997), considering terrain within 1,000 feet of site. See text for further information.

C O U N T Y O F S A N T A C R U Z
Discretionary Application Comments

Project Planner: Randal 1 Adams
Application No.: 03-0405
APN: NO_APN_SPEC

Date: June 28, 2004
Time: 16:36:15
Page: 1

Aptos-La Selva Beach Fire Prot Dist Completeness C

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

===== REVIEW ON OCTOBER 30, 2003 BY ERIN K STOW =====
DEPARTMENT NAME: Aptos/La Selva Fire Dept. Approved

Aptos-La Selva Beach Fire Prot Dbt Miscellaneous

LATEST COMMENTS HAVE **NOT YET** BEEN SENT TO PLANNER FOR THIS AGENCY

===== REVIEW ON OCTOBER 30, 2003 BY ERIN K STOW =====
NO COMMENT



County of Santa Cruz

DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 950604070
(831) 454-2160 FAX (831) 454-2385 TDD (831) 454-2123

THOMAS L. BOLICH
DIRECTOR OF PUBLIC WORKS

August 20, 2003

AT&T WIRELESS
C/O BUZZ LYNN
Lyle Company
2443 Fair Oaks Blvd., No. 71
Sacramento, CA 95825

SUBJECT: MICRO-CELL INSTALLATION - HIGHWAY ONE AND SOQUEL DRIVE SITE
NO. 8062

Dear Mr. Lynn:

This is in response to your letter requesting an encroachment permit for a micro-cell installation on an existing Pacific Gas and Electric pole located at Highway One and Soquel Drive.

The Public Works Department will not require you to obtain a permit from our encroachment section for this installation.

If you have any questions regarding this letter, please contact the undersigned at (831) 454-2802.

Yours truly,

THOMAS L. BOLICH
Director of Public Works

By:


John Swenson
Senior Civil Engineer

JES:mh

Copy to: Ruth Zadesky, Encroachment

HWY1MH.wpd