Staff Report to the Zoning Administrator

Application Number: 02-0176

Applicant: Jason Osbourne
Owner: Park Place Enterprises
APN: 027-142-02

Agenda Date: January 21, 2008
Agenda Item #: 5
Time: After 10:00 a.m.

Project Description: Proposal to co-locate a wireless communication site on the rooftop of an existing commercial building. Construction to consist of three pairs of roof mounted antennas and an equipment cabinet in the interior of the building

Location: Property located on the northeast comer of 7th Avenue and Bonnie Street

Supervisoral District: 1st District (District Supervisor: J. Beautz)

Permits Required: Coastal Development Permit and Amendment to Commercial Development Permits 96-0605 and 79-199-PD

Staff Recommendation:

- Approval of Application 02-0176, 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		Maps
B.	Findings	G.	Supplemental Information (Including Radio Frequency Report and Photo Simulations)
C.	Conditions		
D.	Categorical Exemption (CEQA determination)	H.	Comments & Correspondence
E.	Assessor's parcel map		
F.	Zoning, General Plan & Location		

Parcel Information

Parcel Size:	28,619 square feet
Existing Land **Use** - Parcel:	Commercial
Existing Land Use - Surrounding:	Commercial and Residential
Project Access:	Park Place/7th Avenue

Planning Area:	Live *Oak*
Land Use Designation:	C-N (Neighborhood Commercial)
Zone District:	C-1 (Neighborhood Commercial)
Coastal Zone:	X Inside ___ Outside
Appealable to Calif. Coastal Comm.	___ Yes X No

Environmental Information

Geologic Hazards:	N/A – developed site
Soils:	N/A – developed site
Fire Hazard:	Not a mapped constraint
Slopes:	N/A – developed site
Env. Sen. Habitat:	N/A – developed site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate
Traffic:	N/A
Roads:	Existing roads adequate
Parks:	Existing park facilities adequate
Archeology:	N/A – developed site

Services Information

Urban/Rural Services I	X Inside ___ Outside
Water Supply:	City of Santa Cruz
Sewage Disposal:	County of Santa Cruz Sanitation District
Fire District:	Central Fire Protection District
Drainage District:	Zone 5

History

The site is currently developed with a two story commercial building which contains a variety of office uses, including a radio station approved under 79-199-PD. A micro-wave dish antenna 10 feet in height was installed on the roof of the building to serve the radio station. Minor Variation 96-0605 approved 6 panel antennas on the roof of the building for cellular communications. The current proposal to co-locate an additional three pairs of flat panel antennas was submitted to the Planning Department on October 30,2002 and was deemed complete on November 9,2004.

Zoning & **General Plan** Consistency

The subject property is an approximately 28,619 square foot lot, located in the Neighborhood Commercial (C-1) zone district. The C-1 zone district allows wireless communication facilities with a Level V review, and is consistent with the site's Neighborhood Commercial (C-N) General Plan designation. Neighborhood commercial zoning exists to the north and south of the subject parcel, while single-family residential (R-1-3.5) exists to the east and west. The footprint

of the existing office building is approximately 25,000 square feet.

Analysis and Discussion

A total of six antennas are proposed for the rooftop; two pairs enclosed within parapets, and one pair in a rectangular enclosure. The existing building parapets facing the north and west will be replaced with a fiberglass material that is transparent to radio frequency (RF) electromagnetic radiation. All colors, dimensions, and details of the parapets will match the existing building. The enclosure for the third pair of antennas will be constructed from the same material and painted and textured to match the building. Because of the width of the building, the new antenna enclosure will only be visible from the north. The project site is not visible from the Highway One scenic corridor.

Equipment associated with the antennas will occupy a 100 square foot section of an existing storage room on the second floor of the office building. Existing electrical and telecommunication utilities will be extended to the second floor equipment room and rooftop antennas.

Only authorized personnel will be able to access the roof area. Compliant with the Wireless Communication Facilities Ordinance, a 12 inch by 12 inch sign is required to be posted at the main entrance to the building notifying the general public that a wireless communication facility exists on site. To warn service technicians. warning signs will be placed at all roof access locations and on the backsides of the antenna enclosures, and, bright orange lines will be painted on the ground 5 feet around each pair of antennas. A service technician will perform routine maintenance on the antennas once or twice a month.

Local Coastal Program Consistency

The proposed co-located wireless communication antennas are in conformance with the County's certified Local Coastal Program, in that the structures are sited and designed to have the least visual impact possible. Because two of the three pairs of antennas are sited in existing parapets, the only visible addition to the rooftop will be one antenna enclosure. While no new overhead utility lines **are** proposed at this time. a condition of approval is included that any new utility lines are required to be installed underground.

The project site is not located between the shoreline and the first public road and is not identified as a priority acquisition site in the County's Local Coastal Program. Consequently, the proposed project will not interfere with public access to the beach, ocean, or other nearby body of water.

Alternative Site Analysis

An alternative site analysis is not required for the proposed project, since the use of the proposed site which is already developed with a commercial use and has existing telecommunication antennas, would significantly reduce environmental impacts. The creation of an additional site in the immediate area would require the erection of an additional tower and would create unnecessary, additional visual impacts to the surrounding area.

Radio Frequency Emissions

A Radio Frequency (RF) report has been prepared for this project. The combined wireless communications facilities on the project site, including the existing and proposed facilities, will not exceed 2.8% of the allowed Federal Communications Commission (FCC) maximum public exposure levels. This exposure level is considered a worst case scenario that would be experienced within 1,000 feet of the site at a height corresponding to a second floor. The calculated level at any ground level location is 1.1% of the public exposure limit, with the AT&T antennas contributing a maximum of 0.98%.

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 **02-0176,** 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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Application #: 02-0176
APN: 027-142-02
Owner: **Park** Place **Enterprises**

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts, other than the Special Use (SU) district, listed in section 13.10.170(d) as consistent with the General Plan and Local Coastal Program LUP designation.

This finding can be made, in that the property is zoned C-1 (Neighborhood Commercial), a designation which allows wireless communcations facilities. The proposed co-located wireless antennas and ancillary equipment are an allowed use within the zone district, consistent with the site's (C-N) Neighborhood Commercial General Plan designation.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made, in that the proposal does not conflict with any existing easement or development restriction such as public access, utility, or open space easements in that no such easements or restrictions are known to encumber the project site.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to section 13.20.130 et seq.

This finding can be made, in that the project will be compatible and integrated with the surrounding neighborhood in that the new rooftop antennas are designed in enclosures that will have minimal visual impact on the surrounding area. Colors and architectural style will match the existing building. The development site is not on a prominent ridge, beach, or bluff top.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the General Plan and Local Coastal Program land use plan, specifically Chapter 2: figure 2.5 and Chapter 7, and, as *to* any development between and nearest public road and the sea or the shoreline of any body of water located within the coastal zone, such development is in conformity with the public access and public recreation policies of Chapter 3 of the Coastal Act commencing with section 30200.

This finding can be made, in that the project site is not located between the shoreline and the first public road. Consequently; the co-located wireless antennas will not interfere with public access to the beach, ocean, or any nearby body of water. Further, the project site is already developed with a commercial building and is not identified as a priority acquisition site in the County Local Coastal Program.

5. That the proposed development is in conformity with the certified local coastal program.

This finding can be made, in that the rooftop antennas are sited and designed to be visually compatible and integrated with the character of the surrounding neighborhood. Additionally, commercial uses are allowed uses in the C-1 (Neighborhood Commercial) zone district of the area, as well as the C-N (Neighborhood Commercial) General Plan and Local Coastal Program land use designation.

EXHIBIT B

Application #: 02-0176
APN: **027-142-02**
Owner: Park **Place Enterprises**

Wireless Communication Facility Use Permit Findings

1. The development of the proposed wireless communications facility as conditioned will not significantly affect any designated visual resources, environmentally sensitive habitat resources (as defined in the Santa **Cruz** County General Plan/LCP Sections 5.1, 5.10, and 8.6.6.), and/or other significant County resources. including agricultural, open space, and community character resources; or there are no other environmentally equivalent and/or superior and technically feasible alternatives to the proposed wireless communications facility as conditioned (including alternative locations and/or designs) with less visual and/or other resource impacts and the proposed facility has been modified by condition and/or project design to minimize and mitigate its visual and other resource impacts.

This finding can be made, in that the proposed project is not visible from any designated scenic road. The proposed project complies with General Plan Policy 5.10.3 (Protection of Public Vistas), in that the project, by co-locating on an existing commercial building rooftop, will result in minimal disruption of landform and aesthetic character. The project has been designed and conditioned to mitigate visual impacts in that two pairs of antennas will be enclosed in existing parapets and the third pair will be in a new enclosure painted and textured to match the building. Conditions *of* approval require maintenance of the antenna enclosures. Any new utility lines are required to be installed underground.

No formal alternative site analysis has been required for this project. The proposed project site is the environmentally superior site, in that the creation of an additional wireless communications facility near the subject property would require the erection of an additional tower and may cause greater impacts to the surrounding residential and commercial neighborhood.

2. The site is adequate for the development of the proposed wireless communications facility and, for sites located in one of the prohibited and/or restricted areas set forth in Sections 13.10.661(b) and 13.10.661(c), that the applicant has demonstrated that there are not environmentally equivalent or superior and technically feasible: (1) alternative sites outside the prohibited and restricted areas; and/or (2) alternative designs for the proposed facility as conditioned.

As discussed in Wireless Communication Finding #1, the finding that the proposed project site is the environmentally superior site can be made, in that additional infrastructure or utility poles are not required for this co-located project. By co-locating on an existing commercial building, the project avoids the erection of a new monopole that would be visible to adjacent properties, therefore proposing the least visually intrusive alternative and minimizing adverse visual impacts.

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 any other applicable provisions of this Title and that all zoning violation abatement costs, if any, have been paid.

EXHIBIT B

This finding can be made, in that the proposed location of the co-located wireless communication facility and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the C-1 (Neighborhood Commercial) zone district in that the primary use of the property will continue to be an office building operating under Commercial Use Permit 79-199-PD.

No zoning violation abatement fees are applicable to the subject property

4. The proposed wireless communication facility as conditioned 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 two story office building approximately 35 feet tall, which is too low to interfere with an aircraft in flight.

5. The proposed wireless communication facility as conditioned is in compliance with all FCC and California PUC 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 1.1% of the most restrictive applicable limit.

The applicant is required to obtain all necessary approvals from the California Public Utilities Commission and the Federal Communications Commission prior to construction.

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

This finding can be made, in that the proposed wireless communication facility is designed and located in a manner that will minimize potential impacts to scenic and biotic resources, and that the construction of the proposed facility will not impede access to the beach or other recreational resources. Any new utility lines are required to be installed underground.

EXHIBIT B

Application #: 02-0176
APN: 027-142-02
Owner: **Park Place Enterprises**

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 ofpersons 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 1.1% 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 concealed within antenna enclosures and co-located on the rooftop of an existing commercial building, 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 co-location of wireless communications facilities are allowed uses within the C-1 (Neighborhood Commercial) zone district, without the requirement of further alternatives analysis. The proposed, developed site is the environmentally superior site. The primary use of the property will continue to be commercial and the site has a Neighborhood Commercial (C-N) 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 wireless communication facility will be co-located on the rooftop of an existing commercial building. Co-located wireless communication facility installations are an environmentally superior alternative to the creation of new wireless communication facility installations and their associated visual and environmental impacts.

The proposed project complies with General Plan Policy 5.10.3 (Protection of Public Vistas), in that no disruption to the landform or aesthetic character will occur. The project has been designed and conditioned to mitigate visual impacts in that two pairs of antennas will be enclosed in existing parapets and the third pair will be in a new enclosure painted and textured *to* match the building. Conditions of approval require maintenance of the antenna enclosures. No new overhead utility lines are proposed. The subject property for the proposed project is not located within the Highway One scenic comdor.

EXHIBIT B

The property is located in the Neighborhood Commercial (C-N) land use designation, which is implemented by and consistent with the site's C-1 (Neighborhood Commercial) 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.

This finding can be made, in that 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 increase 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 wireless communication facility will be co-located on an existing commercial building. 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 commercial building and the antennas will be concealed within the building parapets and enclosures to reduce potential visual impacts to the surrounding neighborhood.

EXHIBIT B

Application#: 02-0176
APN: 027-142-02
Owner: **Park** Place Enterprises

Conditions of Approval

Exhibit **A:** Project Plans drawn by CH2M Hill, 10 sheets, dated October 13,2004

I. This permit authorizes the construction of 6 wireless communication antennas on the rooftop of an existing commercial building, along with the installation of associated equipment on the second floor of the building. This permit amends and incorporates all of the findings and conditions of Commercial Development Permits 96-0605 and 79-199-PD. Any findings or conditions contained in this permit that are in conflict with prior permits will be superceded by the conditions contained within this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner 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. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder) within 30 days of the approval date on this permit.

II. Applicant shall obtain approval from the California Public Utilities Commission and the Federal Communications Commission.

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. Identify the colors and finish of the antenna enclosures for Planning Department approval. Exterior materials shall match the existing building in texture and color. Any color boards must be in 8.5" x 11" format.

2. Indicate on the building plans if any lighting is proposed. Any proposed lighting shall be manually operated and directed away from surrounding properties.

3. Indicate all new utility lines on the building plans. New utility lines shall be installed underground.

4. Provide warning sign details. Include sign locations, sizes, and text for review and approval by the County. Signs are required at the main entrance to the building and at all roof access points.

EXHIBIT C

B. Submit documentation addressing the possibility of reducing the visual impact of the Sector **A** antennas by shifting their location towards the center of the building (approximately 10-20 feet south). The documentation should address potential conflicts with the existing dish antenna.

C. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.

D. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school 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. 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 for the wireless antennas, antenna enclosures, and equipment room.

A. 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.

B. The applicant shall agree in writing that where future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the applicant agrees to make those modifications which would allow for reduced visual impact as part of the normal replacement schedule. If, in the future, the facility is no longer needed, the applicant agrees to

EXHIBIT *C*

abandon the facility and be responsible for the removal of all permanent structures and the restoration of the site as needed to reestablish the area consistent with the character of the surrounding landscaping.

C. Any modification in the type of equipment shall be reviewed by Planning Department staff. The County may deny or modify conditions at this time, or the Planning Director may refer it for public hearing before the Zoning Administrator.

D. Outdoor noise producing construction activities shall only take place on non-holiday weekdays between the hours of 8 a.m. and 6 p.m.

E. All noise created by the new development shall be contained on the property. **A** maximum exterior noise level at the property line is 60 dB L_{dn} (day/night average noise level).

F. No continuous outdoor lighting shall be installed on the rooftop. Any temporary lighting required during an emergency shall be directed onto the lease site and away from adjacent properties.

G The applicant shall meet all requirements of County Code 13.10.664 pertaining to initial post-construction non-ionizing electromagnetic radiation (NIER) monitoring requirements. A report documenting the measurements and findings with respect to compliance with the established FCC NIER exposure standard shall be submitted to the Planning Director within ninety (90) days of commencement of operation.

H. The antenna enclosures must be repainted and resurfaced as necessary to ensure the continued mitigation of the visual impact of the facility.

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.

EXHIBIT C

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.

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	Karen McConaghy
Deputy Zoning Administrator	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 Cmz County Code.

EXHIBIT C

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: 02-0176
Assessor Parcel Number: 027-142-02
Project Location: 200 7th Avenue

Project Description: Proposal to construct a co-located wireless communications facility.

Person **or** Agency Proposing Project: Jason Osbourne

Contact Phone Number: **(415) 430-0306**

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. __X__ Categorical Exemption

Specify type: Class **3** - New Construction or Conversion of Small Structures (Section 15303)

F. Reasons **why** the project is exempt:

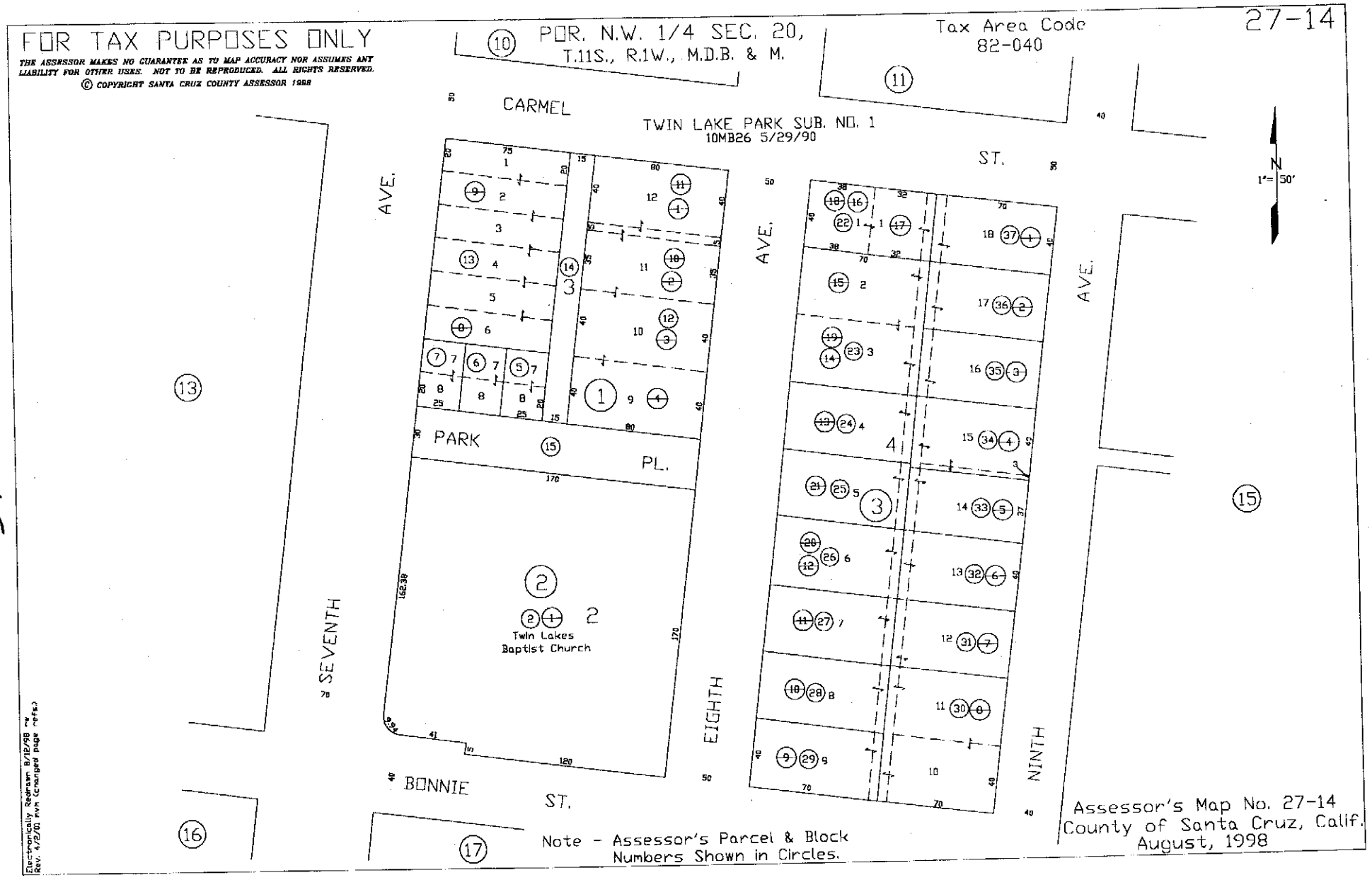
Construction of **an** additional small structure in an area of existing commercial uses.

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

_____ Date:_____

Karen McConaghy, Project Planner

EXHIBIT D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POR. N.W. 1/4 SEC. 20, T.11S., R.1W., M.D.B. & M.
Tax Area Code 82-040
27-14
TWIN LAKE PARK SUB. NO. 1
10MB26 5/29/90
CARMEL
ST.
AVE.
PARK
PL.
SEVENTH
EIGHTH
NINTH
BONNIE
ST.
Twin Lakes Baptist Church
N
1"= 50'
Assessor's Map No. 27-14
County of Santa Cruz, Calif.
August, 1998
Note - Assessor's Parcel & Block Numbers Shown in Circles.
Electronically Regrawn 8/12/98 mw
Rev. 4/2/01 mvn (Cranged page refs.)

General Plan Map

200 0 200 400 **600** Feet

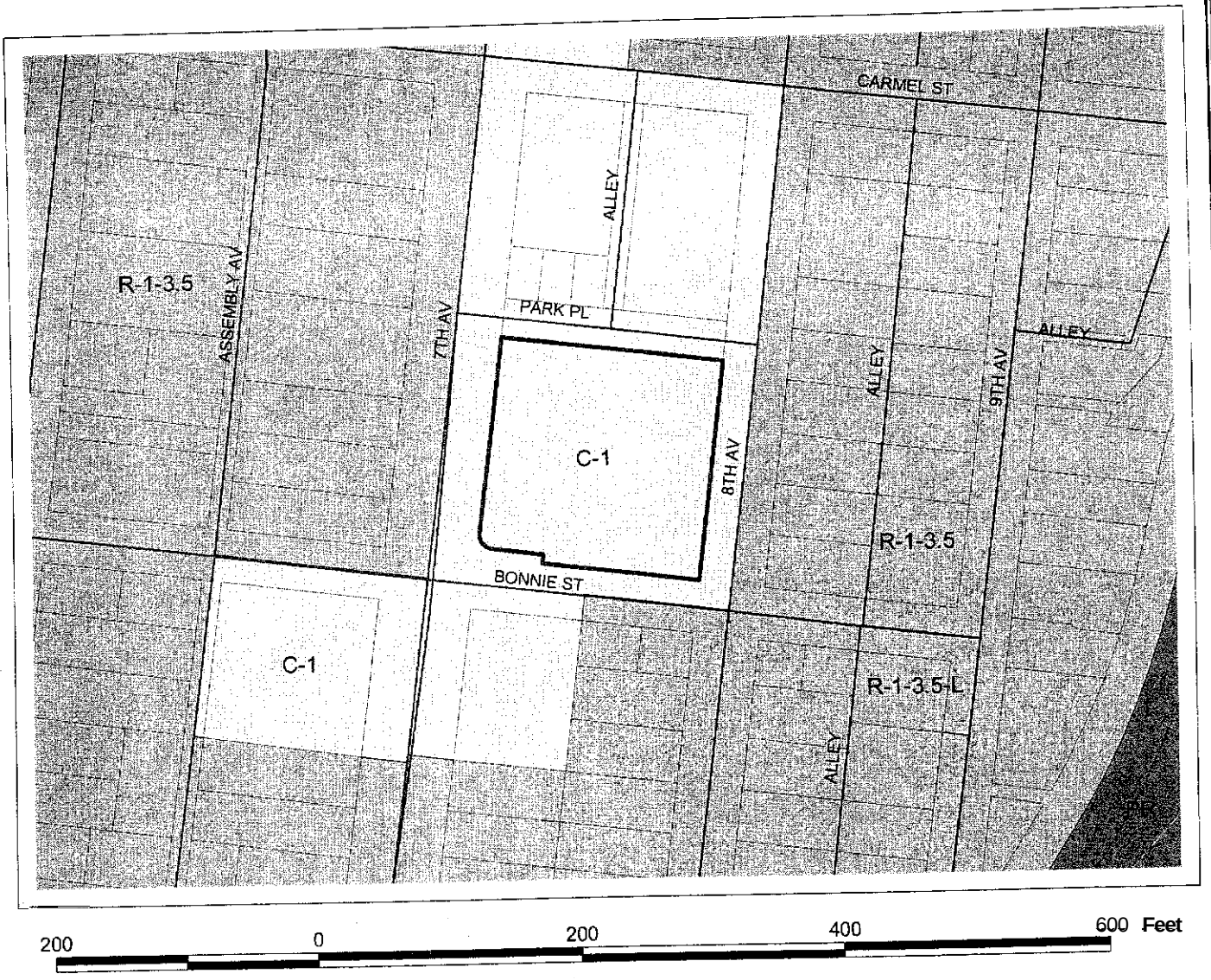
N

Legend

- APN 027-142-02
- Parcel boundaries
- Streets
- Residential - Urban High Density
- Neighborhood Commercial
- Parks and Recreation
- Urban Open Space

Map created by Santa Cruz County Planning Department: December 2004

Zoning Map



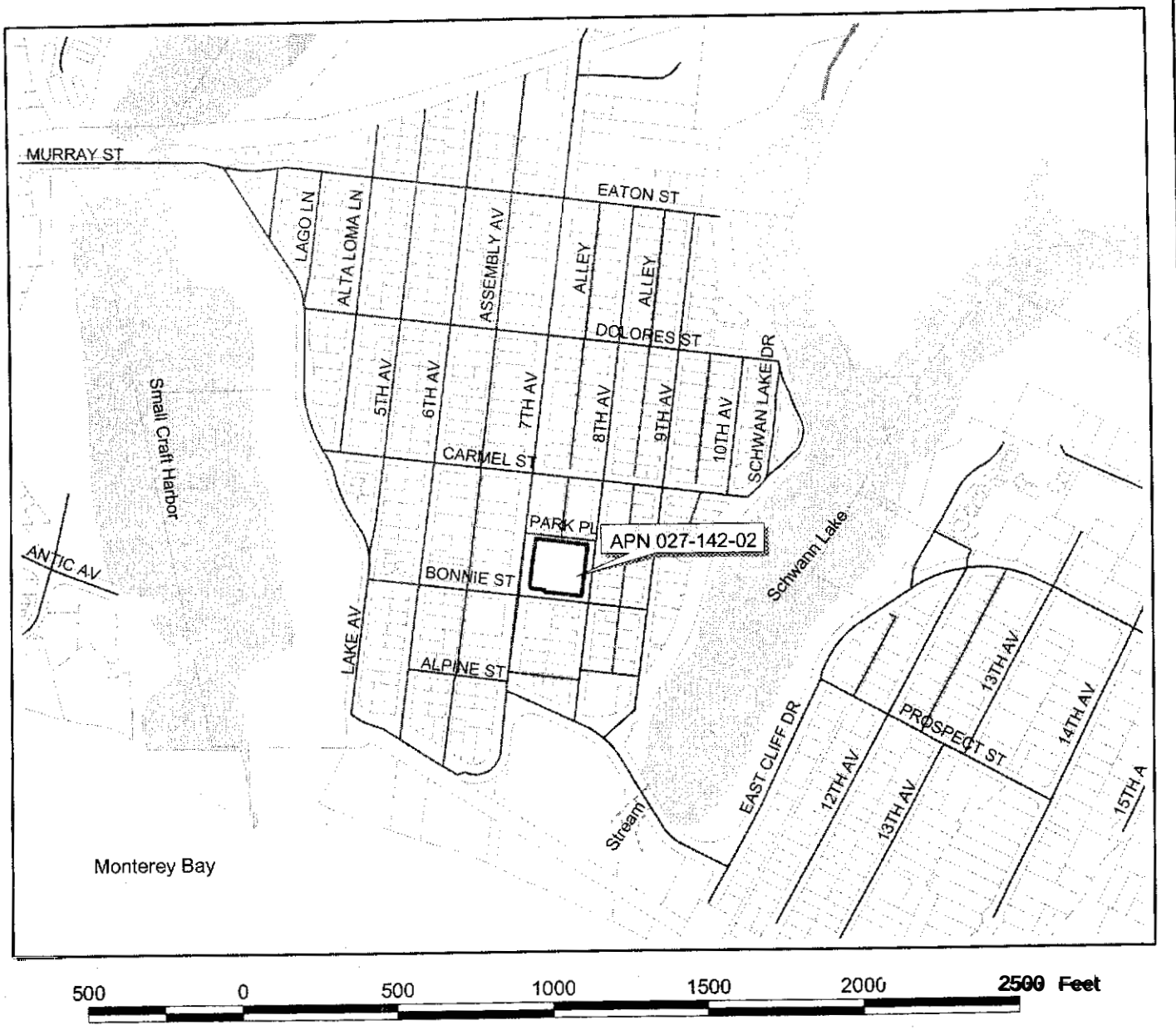
N

Legend

- APN 027-142-02
- Parcel boundaries
- Streets
- Single-family Residential **(R-1-3.5)**
- Neighborhood Commercial (C-1)
- Parks, Recreation, and Open Space (PR)

Map created by Santa Cruz County Planning Department: December 2004

Location Map



Map created by Santa Cruz County Planning Department: December 2004

AT&T Wireless • Proposed Base Station (Site No. 960008036A)
200 7th Avenue • Santa Cruz, 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. 960008036A) to be located at 200 7th Avenue in Santa Cruz, 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:

Personal Wireless Service	Approx. Frequency	Occupational Limit	Public Limit
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

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 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 15, 2003, it is proposed to mount six dualband (870/1,950 MHz) Allgon Model 7920 directional panel antennas on short poles or behind fiberglass screens above the roof of the two-story building, located at 200 7th Avenue in Santa Cruz. Two antennas would be mounted at an effective height of about 33 1/2 feet above ground, 5 1/2 feet above the upper roof, and would be oriented toward 0°T. Two antennas would be mounted at an effective height of about 32 feet above ground, 4 feet above the upper roof, and would be oriented toward 60°T. Two antennas would be mounted at an effective height of about 31 feet above ground, 3 feet above the upper roof, and would be oriented toward 290°T. The effective radiated power in any direction during peak operation periods would be 1,100 watts, representing the simultaneous operation of two cellular and two PCS channels at 275 watts each.

Located on other short poles above the roof of the same building are similar antennas for use by Cingular Wireless, another telecommunications carrier. For the purposes of this study, it is assumed that Cingular has installed one EMS Model RR9017-02DP and two Model RR6518-02DP directional panel antennas, oriented in directions similar to AT&T, and operates with a maximum effective radiated power of 1,500 watts. Located about 1.5 kilometers away are two AM stations, KSCO and KOMY; at that distance, these stations are not significant contributors to RF exposure conditions near the proposed site.

Study Results

The maximum ambient RF level at any ground level location within 1,000 feet due to the proposed AT&T operation by itself is calculated to be *0.0062* mW/cm^2, which is 0.98% of the applicable public limit. The maximum calculated cumulative level within 1,000 feet for the simultaneous operation of both carriers is 1.1% of the public exposure limit; the maximum calculated level at a height corresponding to a second floor is 2.8% 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. Areas on the roof of the subject building may exceed the applicable exposure limit. 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.

Recommended Mitigation Measures

It is recommended that the roof of the building be kept locked, so that the antennas are not accessible to the general public.

To prevent occupational exposures in excess of the FCC guidelines, no access within **5** feet in front of the AT&T antennas themselves, such as might occur during building maintenance activities, should be allowed while the site is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory warning signs* at roof access location(s) and on the screen in front of the antennas or at the antennas themselves, 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. Similar measures should already be in place for the other carrier at the site; applicable keep-back distances have not been determined as part of this study.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that the AT&T Wireless base station proposed at 200 7th Avenue in Santa Cruz, 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.

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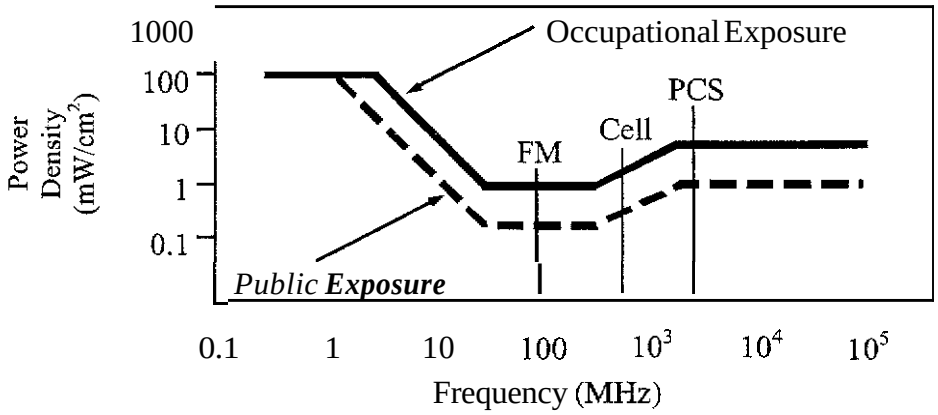
* Warning signs should comply with ANSI C95.2 color, symbol, and content conventions. In addition, contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may he 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	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Elecmc Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/f*	1.63	*2.19/f*	100	*180/f^2*
3.0 – 30	1842/f	*823.8/f*	4.89/f	*2.19/f*	900/f^2	*180/f^2*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	$3.54\sqrt{f}$	*$1.59\sqrt{f}$*	$\sqrt{f}/106$	*$\sqrt{f}/238$*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



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:

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

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:

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

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.

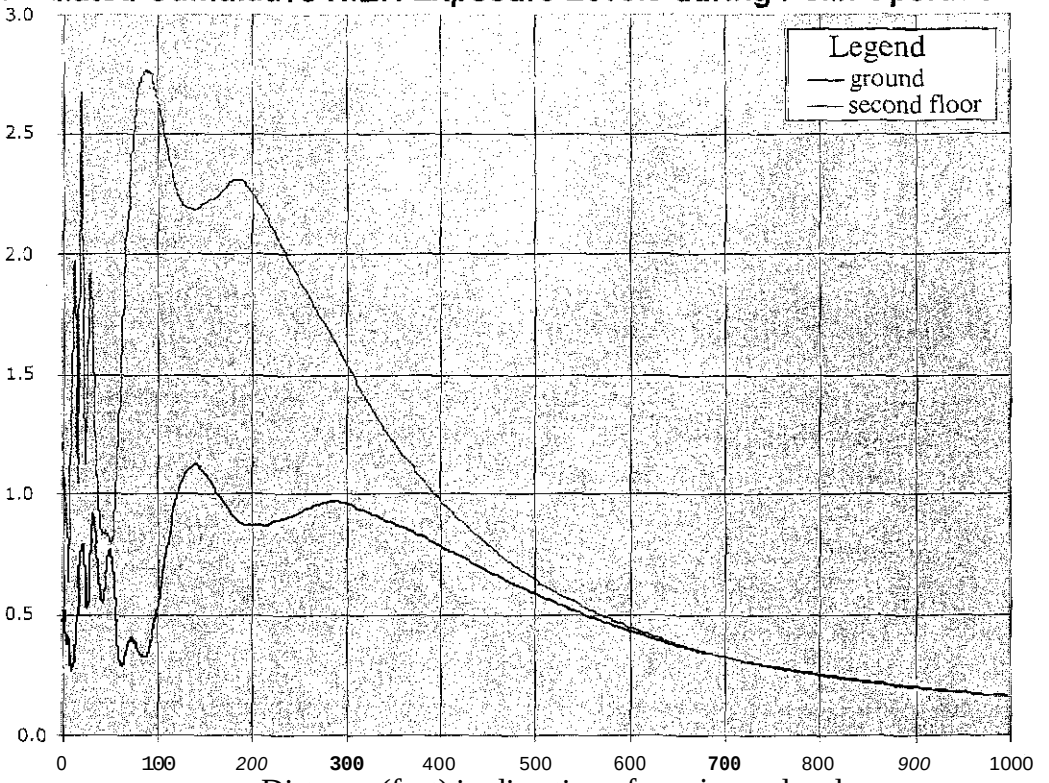
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 **x** 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units 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. 960008036A)
200 7th Avenue • Santa Cruz, California

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

"Compliance with the FCC s non-ionizing electromagnetic radiation (NIER) standards or otner applicable standards shall be demonstrated for any new wireless communication facility through submission, at the time of appiication for the necessary permit or entitiement, of NiER calculations specifying NIER levels in the area surrounding the proposed facility. Calcuiations shall be made of expected NIER exposure levels during peak *operation* periods at c range of distcnces from fifty (50) to one thousand *(1.000)* feet. *taking into account* cumulative NIER exposure ievels from the propcsed source in combination with all other existing NIER transmission sources within a one-mile radius. This should also include a plan to ensure that the public would be kept at a safe distance from any NIER transmission source associated with the proposed wireless communication facility. consistent with the NIER standards of the FCC, or any potential future superceding standards."

Calculated Cumulative NIER Exposure Levels during Peak Operation Periods



RF level (% limit)							
Distance (feet)	50	100	200	300	500	750	1,000
ground	0.77%	0.52%	0.87%	0.96%	0.58%	0.29%	0.16%
second floor	0.79%	2.7%	2.3%	1.5%	0.64%	0.28%	0.16%

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) - 1,100 watts

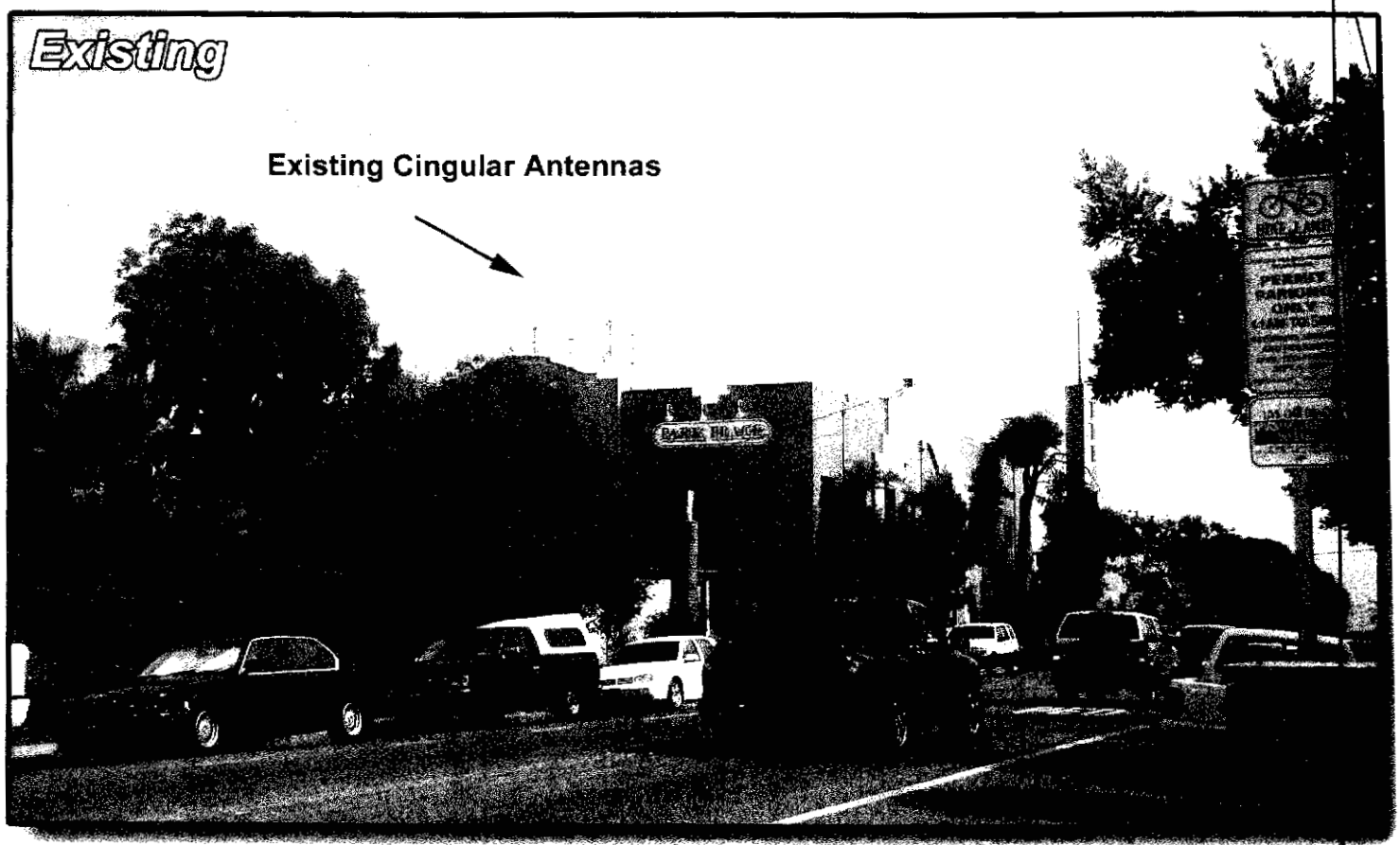
Effective AT&T antenna height above ground - 31 feet (minimum)

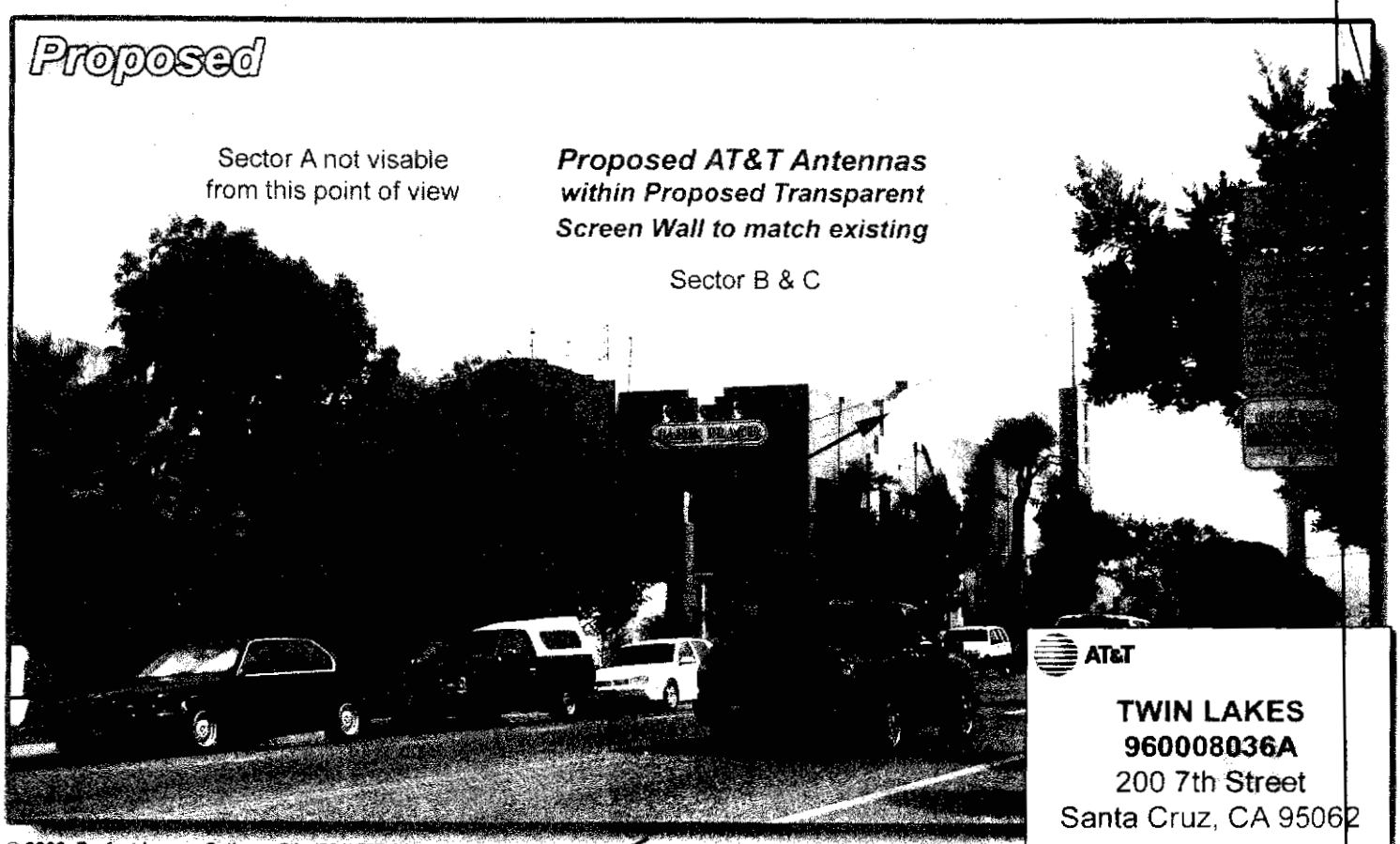
Other sources nearby - Cingular Wireless

Other sources within one mile - AM Stations KSCO and KOMY approximately 1.5km away
No two-way stations close enough to affect compliance

Plan for restricting public access - Antennas are mounted above the roof of a building

Existing / Proposed View as seen from Seventh Avenue & Carmel Street

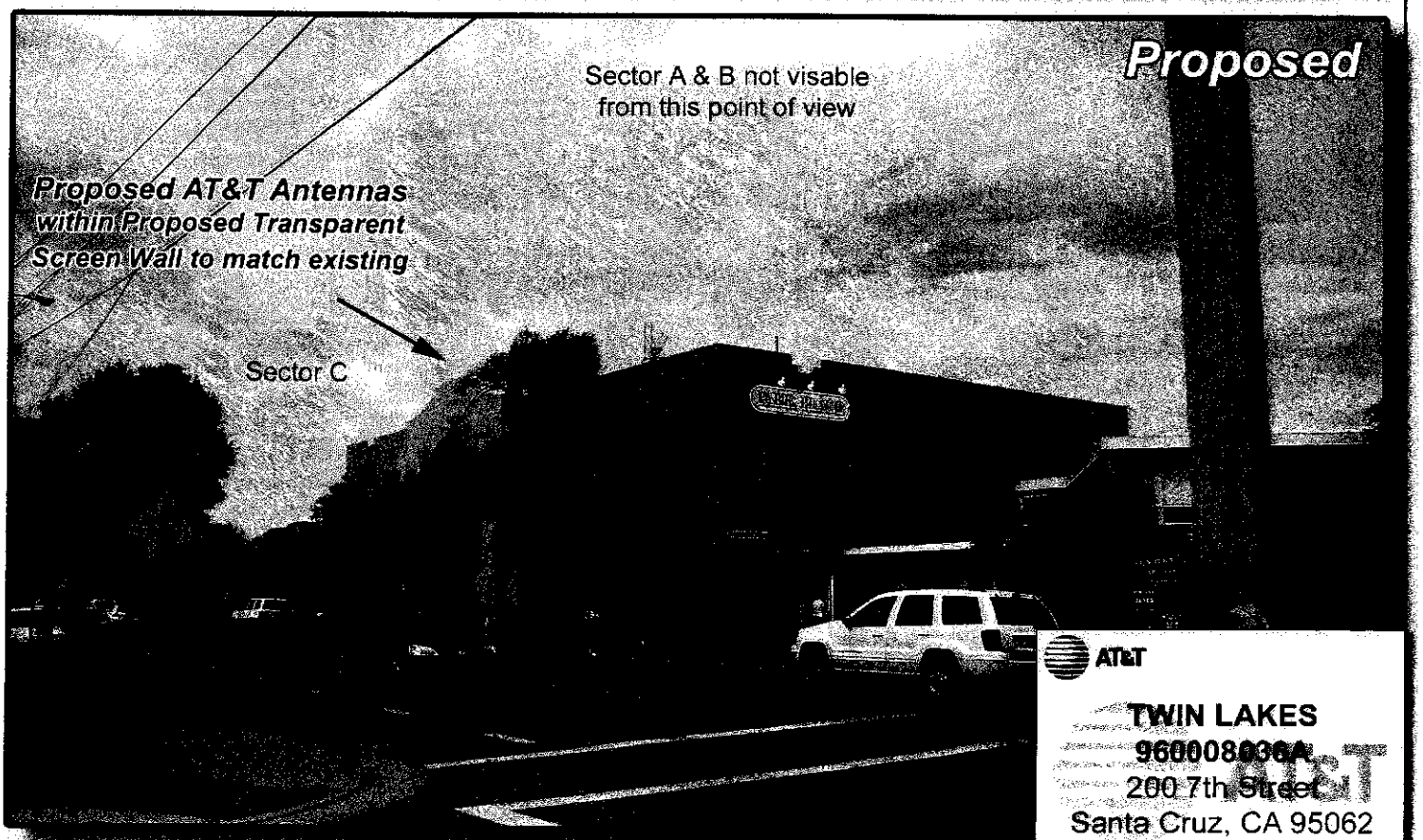




AT&T

TWIN LAKES
960008036A
200 7th Street
Santa Cruz, CA 95062

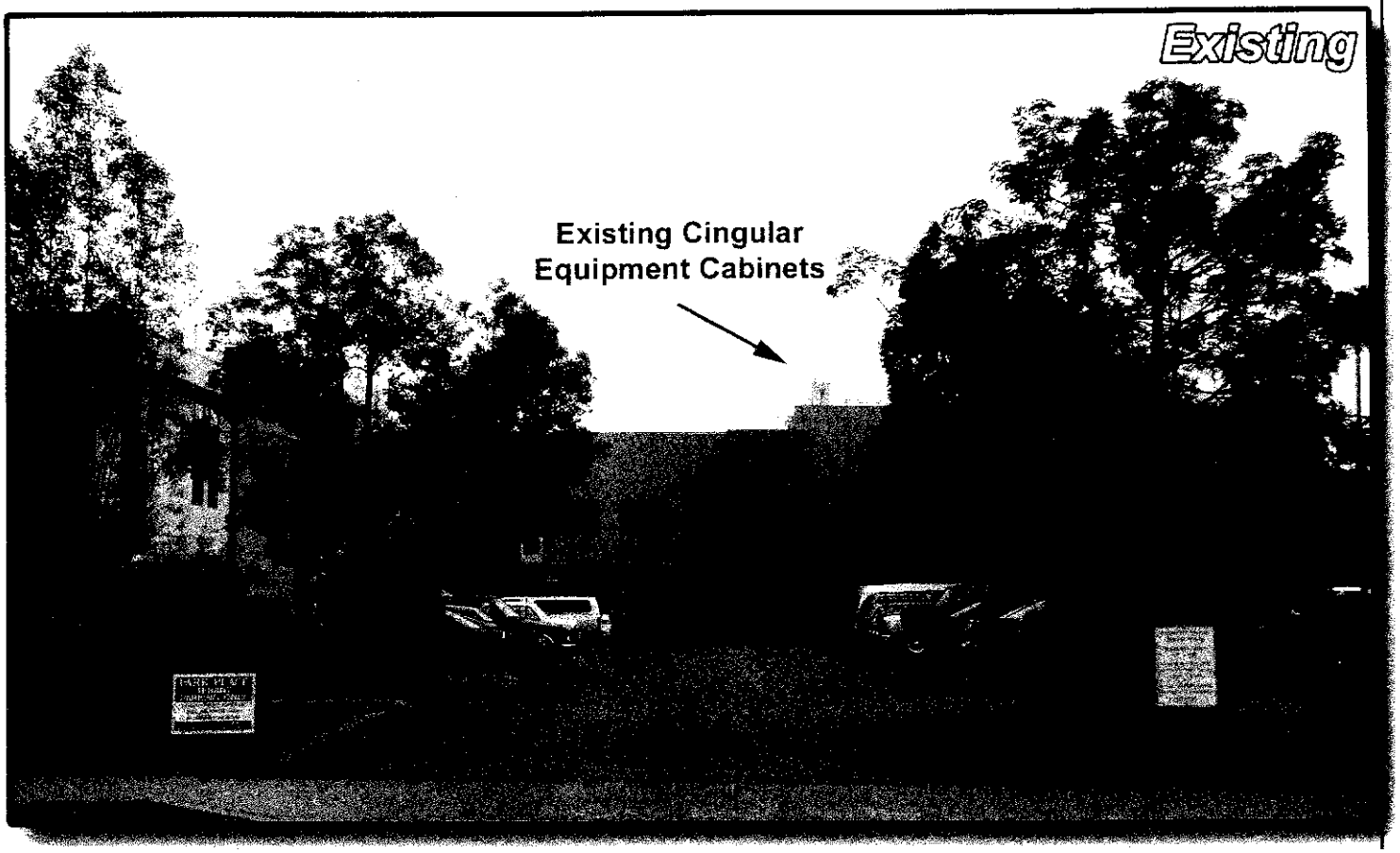
Existing / Proposed View as seen from Seventh Avenue & Bonnie Street

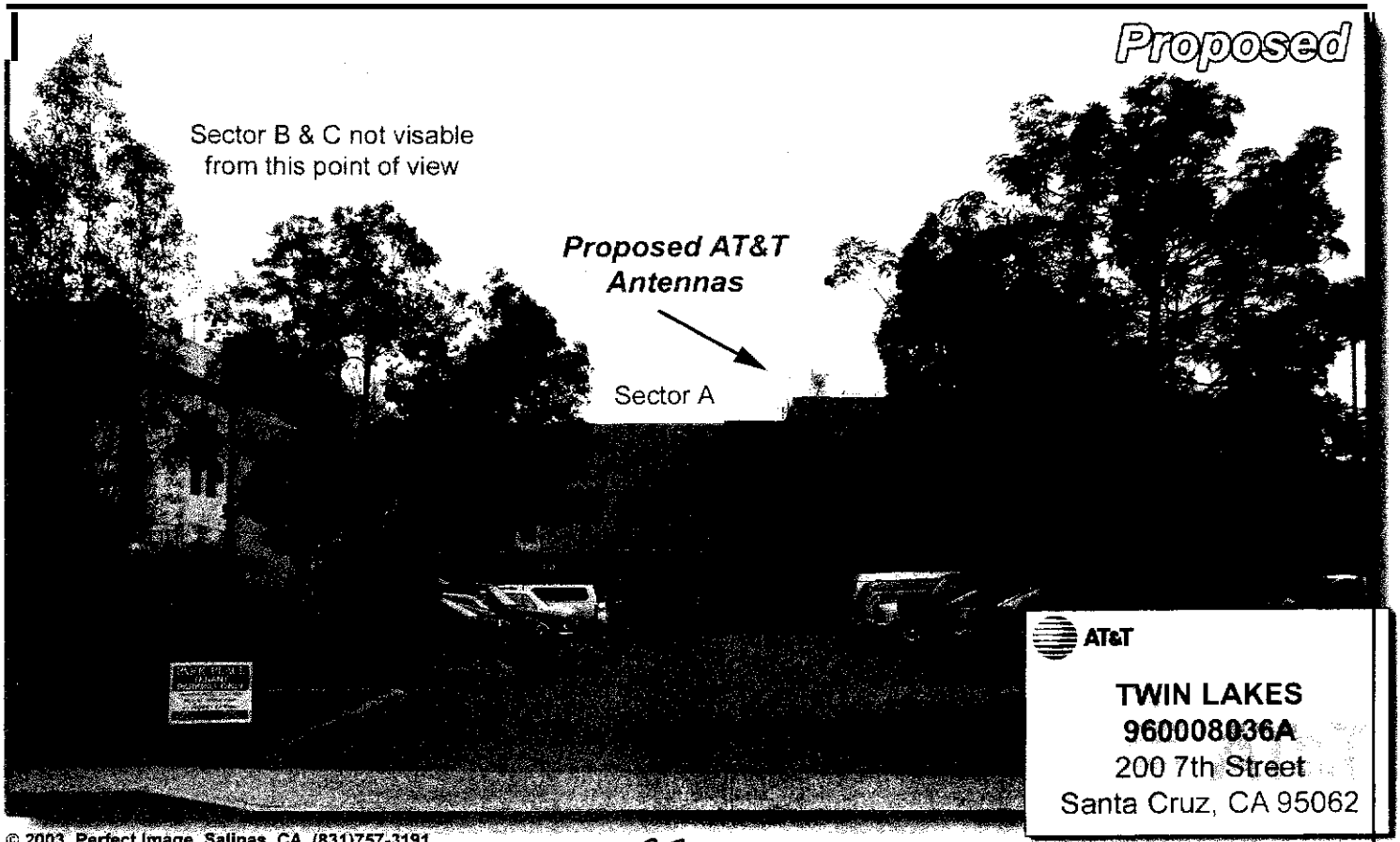


AT&T

TWIN LAKES
960008036A
200 7th Street
Santa Cruz, CA 95062

Existing /Proposed View as seen from Carmel Street - North Elevation

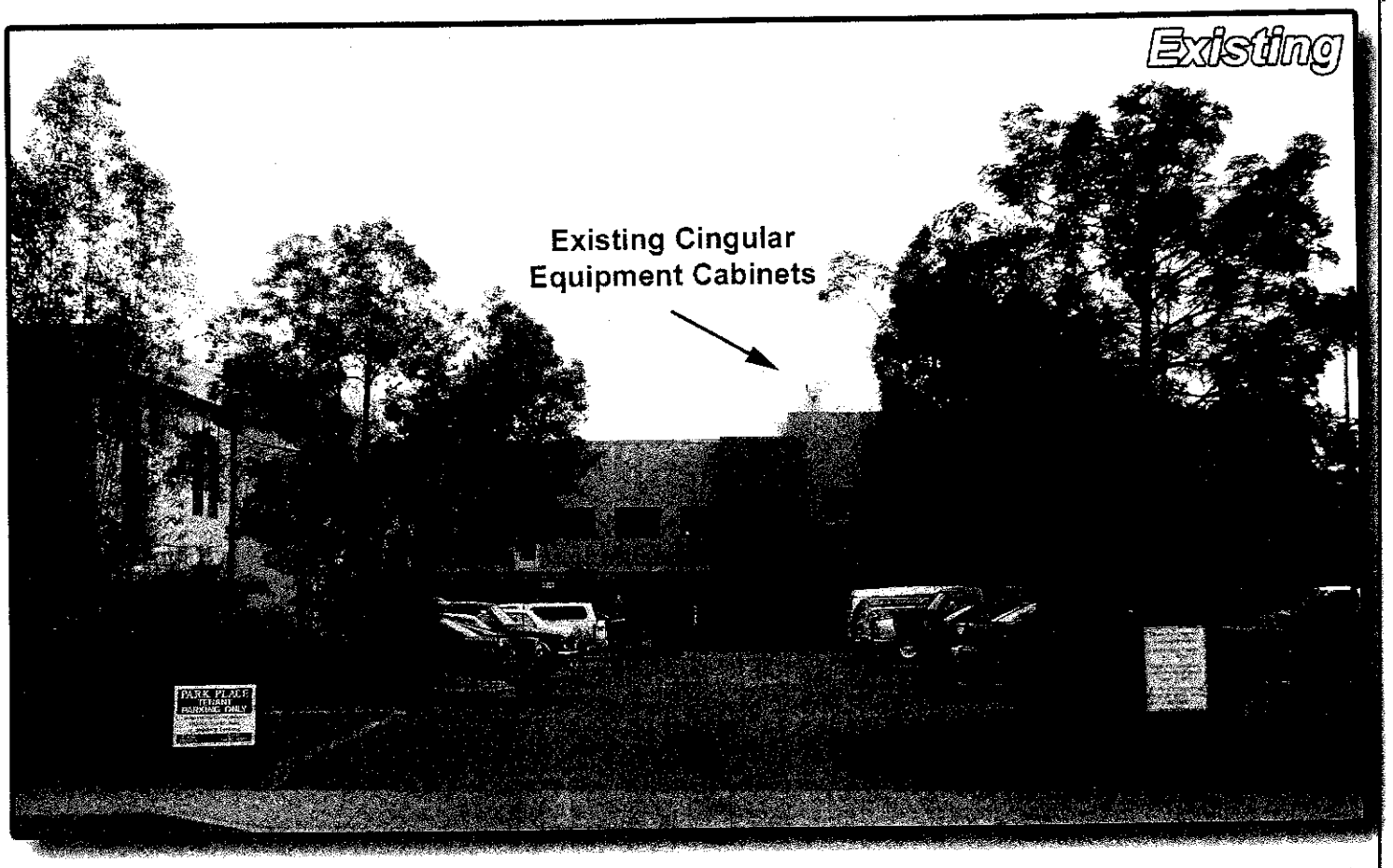


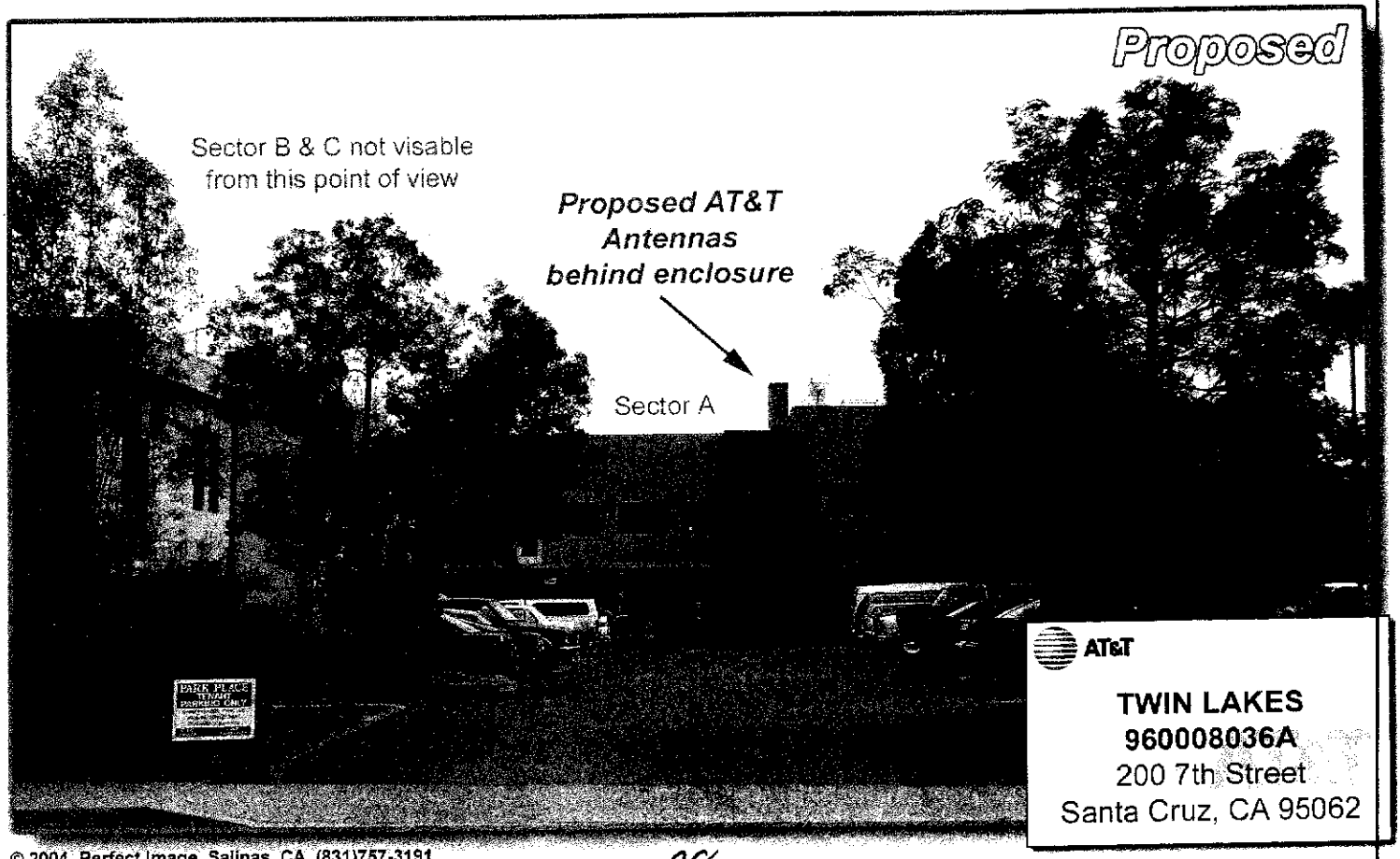


AT&T

TWIN LAKES
960008036A
200 7th Street
Santa Cruz, CA 95062

Existing / Proposed View as seen from Carmel Street - North Elevation



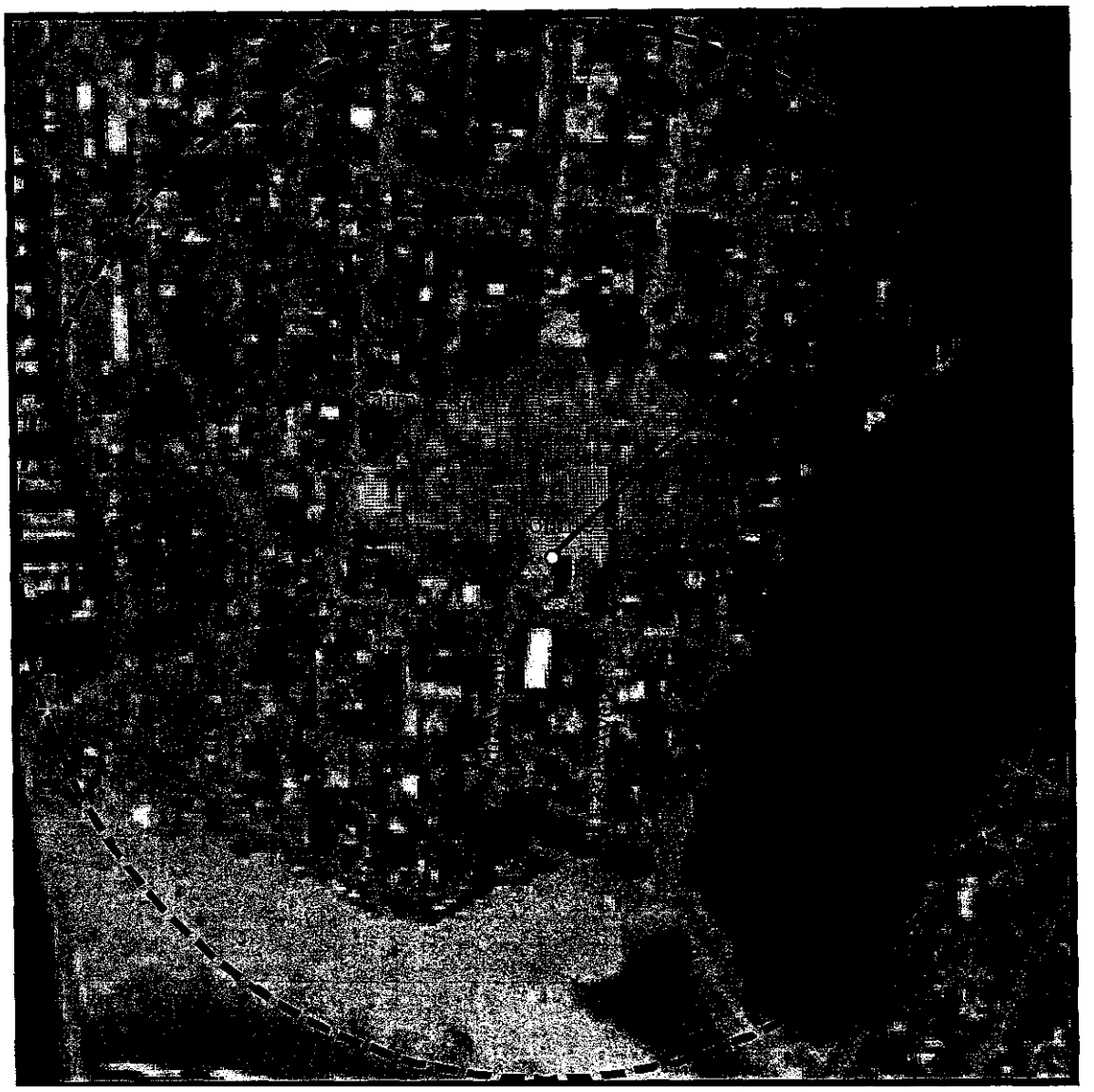


AT&T

TWIN LAKES
960008036A
200 7th Street
Santa Cruz, CA 95062

AT&T Wirele. .• Proposed Base Station (Site N. 960008036A)
200 7th Avenue • Santa Cruz, California

Calculated Cumulative NIER Exposure Levels Within 1,000 Feet of Proposed Site For Simultaneous Operation of AT&T Wireless and Cingular Wireless



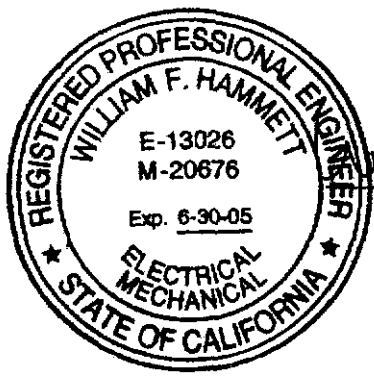
Aerial *photo* from Mapquest.

Legend
blank - less than 1.0% of FCC public limit (*i.e.*, more than 100 times below)
- 1.0% and above near ground level (highest level is 1.1%)
- 1.0% and above at 2nd floor level (highest level is 2.8%)

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

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



William F. Hammett, P.E.

August 11, 2003

COUNTY OF SANTA CRUZ | Planning Department

INTEROFFICE MEMO

APPLICATION NO: 02-0176

Date: January 8, 2004

To: David Heinlein, Project Planner

From: Larry Kasparowitz, Urban Designer

Re: Design Review for a cellular array at 200 Seventh Avenue, Santa Cruz (David Cury / owner, AT&T / applicant)

URBAN DESIGNER'S COMMENTS:

- *The plans should clearly* **indicate** *that* **the** *existing parapet* **is to** *be removed and replaced with a new transparent parapet screen wall, with all colors,* **dimensions** *and details to match.*

AT&T WIRELESS SERVICES

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 on an existing parcel developed with a 'commercial facility", located at 200 7th Avenue. Currently Cingular operates a "like" facility on the rooftop.

Property Description

The subject property is located at 200 7th Avenue, Santa Cruz, Ca. This is parcel, APN#: 027-142-02 and is within the jurisdiction of Santa Cruz County Mr. David Cury has given authority to the Lyle Company/AT&T wireless to submit for the site at his property.

The property is located within a Commercial Zoning District, which allows installation of wireless telecommunications facilities as a conditional use pursuant to Section 13.10.659.21.8F.2 of the Planning Code. The property itself is located within a highly residential area, adjacent to "Twin Lakes" beach, which is the reason for the proposed screening, etc.

Project Description

AT&T proposes to install a communication facility that will consist of six (6) flat panel antennas. Four (4) of the antennas will be mounted behind a (n) screen enclosure, at a centerline height of 31', in two (2) different sectors (see 2-04). Both (n) screen walls will be designed to match the (e) height, appearance, and general character of the current façade.

The other sector, consisting of two **(2)** antennas are to be mounted on the East side (facing 8th) pole mounted just above the (e) parapet, located in front of the (e) equipment (see 2-04 – North elevation). These antennas are naturally screened by the (e) building on the east side of the property, being the same reason the equipment is not visible from 8th street. I have included photosimulations to represent our proposal. The "visible" antennas will be painted to match the building.

In addition, a +/- 87'.6" square foot area will be developed with 3 equipment cabinets on the (e) mezzanine within the building, to mitigate any visual impacts to neighboring parcels.

Access to the project site will be via the (E) asphalt parking lot, and through normal "commercial" access, used by building tenants, mitigating any potential need for additional access. Our proposal, other than construction, will only add a maximum of two road trips per month.

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 asphalt/gravel 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 Commercial Zoning District. Pursuant to the County **of** Santa Cruz Wireless Telecommunications Services (WTS) Facilities Siting Guidelines the proposed use is allowed in this zoning district 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 in that this project proposes to be collocated with another carrier and will be architecturally/visually integrated into the existing building, via screening to mitigate any potential visual impacts by passing motorists.

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.

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 **F A 4** rules on site location and operation I have included, with this submittal. a copy of an **EMF** study to alleviate any potential health concerns