

# Staff Report to the Zoning Administrator

Applicant: Evan Shepherd Reiff Owner: Public Storage Inc APN: 032-091-02 Agenda Date: March 3,2006 Agenda Item #: **6** rime: After 1:00 p.m.

**Project Description:** Proposal to construct a new wireless communications facility on an existing commercial building. Includes six flush-mounted antennas, one GPS antenna, three associated ground equipment cabinets, a 96 square foot concrete slab, and two power and telecommunication boxes in a new equipment area surrounded by an existing fence.

**Location:** Property located on the south side of Portola Drive, approximately 450 feet west o the intersection with 41<sup>st</sup> Avenue in the Live Oak Planning Area (3840 Portola Drive.)

Supervisoral District: First District (District Supervisor: Janet Beautz)

**Permits Required:** Amendment to Planned Development Permit 83-18-PD, Coastal Development Permit 83-53-CZ, Commercial Development Permit 86-0134 & Coastal Development Permit 88-0251.

#### **Staff Recommendation:**

- Approval of Application 05-0444, 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
- B. Findings
- C. Conditions
- D. Categorical Exemption (CEQA determination)
- E. Assessor's parcel map
- F. Zoningmap
- G. Comments & Correspondence

#### **Parcel Information**

Parcel Size:	39,204 square feet
Existing Land Use - Parcel:	Commercial

County of Santa Cruz Planning Department 701 Ocean Street, 4<sup>th</sup> Floor, Santa Cruz CA *95060* 

I

Existing Land Use - Surrounding:	Commercial
Project Access:	Portola Drive
Planning Area:	Live Oak
Land Use Designation:	C-C (Community Commercial)
Zone District:	C-2 (Community Commercial)
Coastal Zone:	X Inside Outside
Appealable to Calif. Coastal Comm.	YesX_No

#### **Environmental Information**

Geologic Hazards:	Not mapped/no physical evidence on site
Soils:	No soils report required
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
Biotic:	Biotic pre-site completed; no Santa Cruz Tarplant exists on-site
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed, but arborist report completed
Scenic:	Not a mapped resource
Drainage:	Existing drainage adequate
Archeology:	Not mappedIno physical evidence on site

#### Services Information

Urban/Rural Services Line:	X Inside Outside
Water Supply:	City of Santa Cruz Water Department
SewageDisposal:	Santa Cruz County Sanitation District
Fire District:	<b>Central Fire Protection District</b>
Drainage District:	Zone 5 Flood Control District

#### History

Discretionary Permits 86-0134 and 88-0251 amended Discretionary Permits 83-18-PD and 83-53-CZ to allow the subject parcel to be used as a mini-storage facility. The current proposal is to amend the original approvals to allow for the installation of a wireless communication facility.

#### **Project Setting**

The subject parcel is an interior lot located on the south side of Portola Drive, about 140 feet east of **38''** Street. It is currently developed with a Public Storage mini-storage facility that consists of two buildings. The northern building, which is closest to Portola Drive, contains a manager's unit and an office to serve the public. The proposed equipment cabinets will be located to the west of this structure between it and the property line. The proposed antennas, consisting of six antennas and one GPS antenna, are to be flush mounted on the southern building. This southern building is behind a locked gate which requires a code for entry.

#### 2

Surrounding land uses include: a Big Creek Lumber Company yard to the west; a medical office to the north; a restaurant, Rock of the Sea, to **the** east; and a mobile home park to the south.

#### **Zoning & General Plan Consistency**

The subject property is located in the C-2 (Community Commercial) zone district, a designation which allows wireless communication facilities and the project is consistent with the site's (C-C) Community Commercial General Plan designation.

#### Visual Impacts/Design Review

The proposed Wireless Communication Facility and associated equipment cabinets comply with the requirements of the County Design Review Ordinance, in that the proposed antennas will be flush mounted and painted to match the existing building to reduce the project's visual impact on surrounding residences and the natural landscape. The County's Urban Designer has reviewed and accepted the proposed design with several conditions of approval including painting the antennas and cable tray to match the existing building and allowing only manual lighting. The equipment cabinets will not be visible from offsite as they are located about 42 feet south of Portola Drive and are behind fencing and five mature pine trees.

#### Trees

The 96 square foot concrete pad, which will support the proposed equipment cabinets, is adjacent to three mature pine **trees.** To ensure that those trees are not adversely affected by the construction of the concrete pad, construction will be required to comply with the recommendations of the submitted arborist report (Exhibit G).

#### Radio Frequency (RF) Exposure

The maximum ambient RF exposure **level** anywhere on the ground will be .54% of the applicable RF exposure levels established by the Federal Communications Commission (FCC). The on-site manager's residence's maximum ambient RF level will be .31% of the public exposure limit.

For the roof or the second floor of any building located at least 60 feet away, the maximum calculated exposure level is 14.5%. Beyond 60 feet away, exposure levels decrease rapidly. By approximately 140 feet, **the** RF exposure decreases to below 1% of **the** public exposure limit.

Section 47 USC 332(c)(7)(iv) of the Telecommunications Act of 1996 forbids jurisdictions from regulating **the** placement, construction, or modification of Wireless Communications Facilities based on the environmental effects of RF emissions if these emissions comply with FCC standards. The RF emissions of the proposed wireless communication facility comply with FCC standards.

#### Local Coastal Program Consistency

The proposed wireless communications facility is in conformance with the County's certified Local Coastal Program, in that the project is sited and designed to be visually compatible and

integrated with the character of the surrounding neighborhood. The project site is not located between the sea and the seaward side of the right-of-way of the first through public road parallel to the sea, and it is not identified as a priority acquisition site in the County's Local Coastal Program. The proposed project will not interfere with public access to the beach, ocean, or other nearby body of water.

#### 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 **05-0444**, 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: <u>www.co.santa-cruz.ca.us</u>

Report Prepared By:	Annette Olson
	Santa Cruz County Planning Department
	701 Ocean Street, 4th Floor
	Santa Cruz CA 95060
	Phone Number: (831) 454-3134
	E-mail: annette.olson@co.santa-cruz.ca.us





## EXHIBIT A



EXHIBIT A





EXHIBIT A



EXHIBIT A

#### 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 wireless communication antennas and cable tray will be flush mounted to an existing building and painted to match the building. The proposal will not significantly affect any designated visual resources, environmentally sensitive resources or any other significant County resource as its visual impact will be minimal and it will be located in an area for which there are no known significant County resources. Although the project is located within the Coastal Zone, it is not located between the sea and the seaward side of the right-of-way of the first through public road parallel to the sea.

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.

This finding can be made in that the proposed site is not located in a prohibited or restricted area as set forth in Sections 13.10.661(b) and 13.10.661(c). As such, no alternative site analysis or alternative designs are required. Wireless communication facilities are an allowed use with the C-2 (Community Commercial) zone district.

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 (County Code 13.10.660) and that all zoning violation abatement costs, if any, have been paid.

This finding can be made, in that the existing mini-storage is a permitted use under permits 83-18-PD, 83-53-CZ, 86-0134 and 88-0251. This application does not propose any alterations to the existing mini-storage facility beyond the installation of the wireless communication facility as shown in Exhibit A.

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 antennas will be flush mounted to an existing

structure which is about 32 feet high. As such, the proposal will not create a hazard for 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 RF exposure levels within 1,000 feet of the proposed antennas will be 14.5% of the maximum public exposure limit as set by the FCC and California PUC standards. On the ground, RF exposure will not exceed 1 percent of the FCC maximum public exposure limit.

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.

The proposed wireless communication facility will not extend onto or impede access to a publicly used beach. The power and telecommunication lines servicing the facility will be placed underground. In addition, the project is not located between the sea and the seaward side of the right-of-way of the first through public road parallel to the sea.

#### **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-2 (Community Commercial), a designation which allows commercial uses. The proposed wireless communications facility is an allowed use within the zone district, and is consistent with the site's (C-C) Community 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.

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

This finding can be made, in that the development is designed to have almost no visual impact on the neighborhood. The antennas and cable tray will be flush mounted to and painted to match the existing building. The equipment cabinets will not be visible from Portola Drive. 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 proposed wireless communications facility will not interfere with public access to the beach, ocean, or any nearby body of water. Further, the project site 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 structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. Additionally, commercial uses are allowed uses in the C-2 (Community Commercial) zone district of the area, as well as the General Plan and Local Coastal Program land use designation.

#### **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 proposed wireless communication facility will comply with all FCC regulations and will be flush mounted and painted to match the existing building so that the visual impact to neighboring properties will be minimal. The proposed wireless communication facility will require a building and electrical permit to ensure structural safety and energy conservation. Security measures will be required to prevent people from accessing the antennas or equipment cabinets.

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 proposed wireless communications facility will not deprive adjacent properties or the neighborhood of light, air, or open space, in that the structure meets all current setbacks that ensure access to light, air, and open space in the neighborhood.

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 proposed location of the wireless communications 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-2 (Community Commercial) zone district. The primary use of the property will continue to be one mini-storage facility that meets all current site standards for the zone district except for the rear yard setback for which a variance was granted to reduce the setback from the required 30 feet to 15 feet.

**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 commercial use is consistent with the use and density requirements specified for the Community Commercial (C-C) land use designation in the County General Plan.

The proposed wireless communication facility is compatible with adjacent uses in that the wireless communications facility was subject to Design Review and its design was accepted by the County's Urban Designer **as** specified in Policy **8.5.2** (Commercial Compatibility With Other Uses).

The proposed project complies with General Plan Policy 5.10.3 (Protection of Public Vistas), in that no views of the beach, ocean, or other significant vistas can be viewed past or across the subject property.

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 adequate electrical service will be available to the facility, and no additional traffic will be generated beyond occasional trips for maintenance and inspection of the facility.

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 ancillary to the primary use of the property as a mini-storage facility, and the antennas will be flush mounted and painted to match the existing building, Furthermore, the proposed equipment cabinets will not be visible to the public as the proposed lease area is located behind fencing, mature pine trees and between two buildings.

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 wireless communication facility and associated equipment cabinet will be of a height and color to minimize visual impacts to the surrounding properties and will not reduce or visually impact available open space in the surrounding area.

#### **Conditions of Approval**

- Exhibit A: Project plans, six sheets, drawn by Omni Design Group, Inc., dated January 25, 2006.
- I. This permit authorizes the construction of a Wireless Communications Facility. 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. The applicant shall obtain approval from the California Public Utilities Commission and the Federal Communications Commission to install and operate this facility.
  - D. 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.
- II. 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 finish paint and color of the antennas and cable trays for Planning Department approval. Paint must be non-reflective and match the existing paint color.
    - 2. Identify the height and material of fencing surrounding the lease area for Planning Department approval.
    - 3. Show compliance with the recommendations of the December 21,2005 arborist report by James P. Allen & Associates, including the arborist's recommendation to use a pier and above grade beam system to support the concrete equipment pad.
    - 4. **A** drainage plan.
    - 5. Details showing compliance with fire department requirements.
    - 6. All new electric and telecommunications lines shall be placed



- B. To guarantee that the camouflaged, ground-mounted tower remains in good visual condition and to ensure the continued provision of mitigation of the visual impact of the wireless communications facility, the applicant shall submit a maintenance program prior to building permit issuance which includes the following:
  - 1. A signed contract for maintenance with the company that provides for annual visual inspection and follow up repair, painting, and resurfacing as necessary.
- C. Meet all requirements of and pay Zone 5 drainage fees to the County Department of Public Works, Drainage. Drainage fees will be assessed on the net increase in impervious area.
- D. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services.
- E. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.
- III. 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 project must comply with all recommendations of the arborist report.
  - 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-Coronerif 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.
- IV. Operational Conditions
  - A. A Planning Department review that includes a public hearing shall be required for any future co-location at this wireless communications facility.
  - B. The NIER hazard zone will be posted with bilingual NIER hazard warning

signage that also indicates the facility operator and a 24-hour emergency contact who is authorized by the applicant to act on behalf of the applicant regarding an emergency situation.

- C. The equipment cabinet area must be locked at all times except when authorized personnel are present. The antennas must not be accessible to the public.
- D. 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.
- E. The antennas shall be permanently maintained and replacement materials and/or paint shall be applied as necessary.
- F. Within 90 days of the commencement of normal operations, or within 90 days after any modification to power output of the facility, a report must be submitted documenting the non-ionizing electromagnetic radiation (NIER) emissions of the project in order to verify compliance with the FCC's NIER standards.
- G. All site, building, security and landscape lighting shall be directed onto the lease site and away from adjacent properties. Light sources shall not be visible from adjacent properties. Building and security lighting shall be integrated into the building design and shall be operated with a manual on/off switch. The site shall be unlit except when authorized personnel are present at night.
- H. If future technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the applicant agrees through accepting the terms of this permit to 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 applicant agrees to 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 vegetation.
- I. 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.
- J. 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.

- V. 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, it 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, acticn. 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. <u>Settlement</u>. 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. <u>Successors Bound</u>. "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:	
	-prote do-
Don Bussey	Annette Olson
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 Cruz County Code.

#### **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: 05-0444 Assessor Parcel Number: 032-091-02 Project Location: 3840 Portola Dr.

#### Project Description: Proposal to construct a new wireless communications facility on an existing commercial building.

Person or Agency Proposing Project: Evan Shepherd Reiff

#### **Contact Phone Number: (831) 345-2245**

- The proposed activity is not a project under CEQA Guidelines Section 15378. A. \_\_\_\_\_ 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.
- Statutory Exemption other than a Ministerial Project (CEQA Guidelines Section D. \_\_\_\_\_ 15260 to 15285).

Specify type:

#### E. <u>x</u> **Categorical Exemption**

Specify type: 15303

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

New construction of small structures

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

Annette Olson, Project Planner Date: 1-3/-06

EXHIBIT D





#### COUNTY OF SANTA CRUZ DISCRETIONARY APPLICATION COMMENTS

Project Planner: Annette Olson Application No.: 05-0444 APN: 032-091-02 Date: February 1, 2506 Time: 09:16:51 Page: 1

#### Environmental Planning Completeness Comments

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

======= REVIEW ON JULY 20, 2005 BY JESSICA L DEGRASSI =========

NO COMMENT The parcel is mapped biotic because of the SC Tarplant layer, allthough no tarplant exists onsite.

#### Environmental Planning Miscellaneous Comments

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

----- REVIEW ON JULY 20, 2005 BY JESSICA L DEGRASSI ------

#### Dpw Drainage Completeness Comments

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

#### Dpw Drainage Miscellaneous Comments

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

Maintain existing drainage patterns as shown on the plans and do not adversely affect adjacent and/or downstream structures and properties (by flooding, erosion, etc.).

For increases in impervious area, a drainage fee will be assessed. The fees are cur rently \$0.85 per square foot and shall be increased by \$0.05 effective August 22, 2005 to \$0.90 per square foot.

#### Dpw Road Engineering Completeness Comments

NO COMMENT

Dpw Road Engineering Miscellaneous Comments

### **INTEROFFICE MEMO**

#### APPLICATION NO: 05-0444

Date:	August	16,2005
-------	--------	---------

- To: David Heinlein, Project Planner
- From: Larry Kasparowitz. Urban Designer
- Re: Design Reviewfor a wireless antennae co-location at Public Storage, 3840 Portola Drive, Santa Cruz (Public Storage Inc./ owner, Peacock and Associates / applicant)

#### Add Conditions of Approval that require:

Antennas and cable tray shall bepainted to match the existing building.

Manual lighting only.

Equipment shelter/cabinets shall be painted to match existing building.

#### MetroPCS • Proposed Base Station (Site No. SF16650B) 3840 Portola Drive • Santa Cruz. California

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

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of MetroPCS, a personal wireless telecommunications carrier, to evaluate the base station (Site No. SF16650B) proposed to be located at 3840 Portola Drive 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 limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Personal Wireless Service	Approx. Freuuencv	Occupational Limit	Public Limit
Personal Communication ("PCS")	1,950MHz	$5.00\mathrm{mW/cm^2}$	$1.00\mathrm{mW/cm^2}$
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

HAMMETT & EDISON, INC: CONSULTING ENGINEERS SAN FRANCISCO

MP1665595.1 Page 1 of 3



#### MetroPCS • Proposed Base Station (Site No. SF16650B) 3840 Portola Drive • Santa Cruz. California

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 Metro, including zoning drawings by Omni Design Group, Inc., dated June 23,2005, it is proposed to mount six EMS Model RR6518-00DPL directional panel PCS antennas on the penthouse side walls, above the roof of the building located at 3840 Portola Drive in Santa Cruz. The antennas would be mounted at an effective height of about 29<sup>1</sup>/2 feet above ground: 2<sup>1</sup>/2 feet above the roof of the building, and would be oriented in pairs toward 70°T, 240°T, and 350°T. The maximum effective radiated power in any direction would be 1,890 watts, representing six channels operating simultaneously at 315 watts each. There are reported no other wireless telecommunications base stations installed nearby.

#### **Study Results**

For a person anywhere at ground, the maximum ambient RF exposure level due to the proposed Metro operation is calculated to be  $0.0054 \text{ mW/cm}^2$ , which is 0.54% of the applicable public exposure limit; the maximum calculated level on the first floor of the manager's residence is calculated to be 0.31% of the public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building' is 14.5% of the public exposure 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.



Located at least 60 feet away, based on the drawings and aerial photographs from Terraserver.

#### MetroPCS • Proposed Base Station (Site No. SF16650B) 3840 Portola Drive • Santa Cruz, California

#### **Recommended Mitigation Measures**

It is recommended that the roof of the building be kept locked, so that the Metro ar ennas 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 Metro 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<sup>†</sup> at roof access locations and at each transmitting antenna, 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 base station proposed by MetroPCS at 3840 Portola Drive 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 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, 2007. This work has been carried out by him or 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.



January 16,2006

28

182

MP1665595.1 Page 3 of 3



Warning signs should comply with ANSI C95.2 color, symbol, and content conventions. In addition, contact t 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	Electro	maenetic Fi	ields (f is fr	equency of	emission in	<u>MHz)</u>	
Applicable	Elec	Electric		Magnetic		Equivalent Far-Field	
Range (MHz)	Field S (V)	trength m)	Field S (A/	trength m)	Power (mW)	Density /cm <sup>2</sup> )	
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 <sup>2</sup>	
3.0- 30	1842/ f	823.8/f	4.89/ f	2.19/f	900/ f <sup>2</sup>	180/ f <sup>2</sup>	
<i>30</i> - 300	61.4	27.5	0.163	0.0729	1.0	0.2	
300- 1,500	3.54 <b>√</b> f	1.59 <b>√</b> f	<b>√</b> f/106	√f/238	f/300	<i>f/1500</i>	
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.



FCC Guidelines Figure 1



#### **RFR.CALC<sup>™</sup>** Calculation Methodology

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

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

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications cell sites. The near field zone is defined by the distance, D, from an antenna beyond which the manufacturer's published, far field antenna patterns will be fully formed; the near field may exist for increasing D until some or all of three conditions have been met:

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

where h = aperture height of the antenna, in meters, and <math>h = uverelement height of the transmitted signal in meters

 $\lambda$  = 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:

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

where  $\theta_{BW}$  = 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 distances to 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:

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

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

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

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

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



HAMMETT & EDISON, INC. CONSULTINGENGINEERS SAN FRANCISCO

Methodology Figure 2



#### MetroPCS • Proposed Base Station (Site No. SF16650B) 3840 Portola Drive • 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 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 NIER calculations specifying NIER ieveis in the area surrounding the proposed facility Calculations shall be made of expected NIER exposure levels during peak operation periods at a range of distances from fifty (50) to one thousand (1,000) feet, taking into account cumulative NIER exposure levels from the proposed source in combination with ail 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**

Distance (feet)	50	100	200	300	500	750	1,000
ground	0.12%	0.035%	0.025%	0.14%	0.14%	0.081%	0.050%
roof or second flo	or -	6.4%	0.55%	0.45%	0.22%	0.11%	0.061%

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) - 1,890 watts

Effective Metro antenna height above ground - 29<sup>1</sup>/<sub>2</sub> feet

Other sources nearby - None

Other sources within one mile - Radio Stations KSCO and KOMY; not close enough to affect compliance

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

HAMMETT & EDISON, INC. CONSULTING ENGINEERS 7 (M) SAN FRANCISCO

MP1665595 Figure 3A



MetroPCS • Proposed Base Station (Site No. SF16650B) 3840 Portola Drive • Santa Cruz, California

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



Aerial photo from Terraserver

Legend

blank - less than 0.30% of FCC public limit (*i.e.*, more than 330 times below) - 0.30% and above near ground level (highest level is 0.54%)

- 0.30% and above at roof or at 2nd floor level (highest level is 14.5%)

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.

1 

HAMMETT & EDISON, INC. CONSULTING ENGINEERS SAN FRANCISCO

MP 1665595 Figure 3B





# Photosimulation of v ■est along Portola DFive



Previsualists







© Copyright 2005, Previsualists Inc., all rights reserved. Accuracy of this photosimulation based upon information provided by project applicant. Questions? Call 3.877.799.32.10 or visit WWWPHOTOSIM.COM



35

July 4, 2005

Photosimulation of view looking south from directly across Portola Drive.



# **Construction Impact Assessment**



# MetroPCS Equipment Pad 3840 Portola Drive, Santa Cruz Co. APN 032-091-02



#### Consulting Arborists

611 Mission Street Santa Cruz, CA 95060

831.426.6603 office 831.234.7739 mobile 831.460.1464 fax jpallen@cruzio.com Prepared for Peacock Associates, Inc. & MetroPCS, Inc.

#### **ASSIGNMENT/SCOPE OF SERVICES**

MetroPCS Inc is planning to construct a cellular site at the Pleasure Point Storage facility, **3840** Portola Drive, Santa Cruz (APN 032-091-02). Three pine trees growing on the property could be **affected** by the project. To protect the tree resources on this site, Santa Cruz County Planning Department requirements prompted Evan Shepherd Reiff of Peacock Associates, Inc. to **request** a proposal for a Construction Impact Assessment. **The** services performed are defined **as** follows:

- Inventory trees  $\geq 6$  inches in diameter at 4.5 feet above grade growing in proximity to the proposed construction.
- Locate, numerically tag and map tree locations using base maps provided by Peacock and Associates. Inc.
- Identify trees as to species and *trunk* diameter.
- Review construction plans (hardscape and utility) to determine potential impacts to *trees.*
- Create tree preservation specifications including a tree protection fencing plan with a preservation map.
- Provide all finding in the form of a **report** accompanied by a Tree Preservation Plan, adhering to the **requirements** set by the County of Santa *Cruz* Planning Department.

#### SUMMARY \*

Plans for the proposed construction project have been reviewed and the impacts to the existing tree population assessed. To protect the tree resources on this site the following plan modifications and alternative construction methods must be implemented.

The proposed construction will have minimal impacts to the Canary Island pines on this site as long as the pad supporting the equipment is **constructed** above natural **grade** using a pier and above grade beam system. This will elevate the equipment **support** structure and avoid disturbance to the exposed **supporting** *roots* of Tree #1. Piers should be positioned at the **comers of** the 8' x 12' pad supporting the required equipment with placement avoiding *roots* greater than two inches in diameter.

The required underground utility/coaxial cables from point of contact to equipment pad and from equipment pad to antennae are to be placed either above ground or far removed from tree root zones. This form of installation will **not** harm **the** trees on this project.

Tree Preservation Zone fencing and straw bales shall be in place prior to the onset of construction

Implementation of the *Tree Preservation Specifications* included within this document is required to safeguard the trees proposed for retention

# EXHIBIT G

A

#### BACKGROUND

To complete this assessment a site inspection was performed on December 16,2005. For purposes of identification, metal numbered tags have been affixed to tree trunks at 6 feet above natural grade. Tree locations with corresponding numbers are documented on a survey map.

The trees were evaluated visually **from** the root **crown** (where the truck meets **natural** grade), to the foliar canopy to determine health and structural stability. A visual tree assessment involves an evaluation of the biology, mechanics and function, as well as the suitability for **preservation**.

The biological assessment includes a visual analysis of the following:

- Vitality of the leaves, bark and twig
- Presence of fungi
- Presence of dead wood or broken branches
- Status of old wounds or cavities

The mechanical assessment involves a visual analysis of the following characteristics:

- Integrity of the framework of the tree (*trunk* and major branches)
- Indicators of potential internal defect such **as** bulges crack **or** ribs on the supporting *trunk* or large branches.
- Wounds
- Lean
- Root buttress development and configuration

The site assessment involves **an** analysis **of** the following:

- Evaluation of the growing area including availability for potential root development.
- Typical wind/rain events and previous consequences to tree stability.

Construction related impacts were assessed using plans (dated 7/12/05) provided by Evan Shepherd Reiff – Peawck Associates, Inc. and drawn by Omni Design Group, Inc.

#### SITE DESCRIPTION

The proposed construction will occur in a landscaped **area between** the storage facility and the western property line behind **a** trash enclosure. Width of this site varies **from** 20 to 15 feet. Access to this area is limited due to a locked gate located to the west of the garbage enclosure.

This site slopes to the west with the highest **point** being where there is surface root development and the lowest point **at** the pathway.

#### **TREE DESCRIPTION**

These three **trees** were planted from **nursery** grown, containerized stock at the time the storage facility was constructed. The **original** support stakes are still in place. The trees are planted close to one another without adequate area for canopy/root development

#### Tree #1

Canary Island Pine Pinus Canariensis

**8.5** diameter inches at 54 inches above grade Height of approximately **25** feet

Extensive surface root development to the south with roots ranging from  $\frac{1}{2}$  inch to 3 inches in diameter. Approximately 10 linear feet of the supporting surface roots are visible, growing in the southerly direction – spanning from the trunk to the existing trash enclosure.



Canopy is dense with good foliar coloration.

Tree #2 Canary Island Pine *Pinus Canariensis* 6.5 diameter inches at 54 inches above grade Height of approximately 28 feet

This tree is located approximately 6 feet to the west of the stairwell, with tree #1 to the south and tree #3 to the **north**. The root crown flare is not visible at grade, an indication of excessive planting depth during installation.

The foliar development and coloration are indications this tree is in a good state of Vigor.

Tree #3Canary Island PinePinus Canariensis12 diameter inches at 54 inches above gradeHeight of approximately 35 feet

This tree is located approximately 10 feet to the west of the existing storage building.



The upper 8 feet of the canopy **has** died.

The lower canopy displays good coloration and density. Construe > Ir y A s 3840 Portola Drive, 3a Cruz - APN 032-091 December 21, 2005 Page 5

#### DESCRIPTION OF CONSTRUCTION RELA ED IMPACTS

The p project consists of an 8' by 12' equipment support pad at the western p t J t. It will r with the preparation and construction of the leased equipment pad area. Installation of eg 1 ili li linking power and sig supply lines to the roof attached antennae will complete the proposed construction plans.

The impacts to the trees are based on provided development plans.

#### • U I ( shill construction to support equipment

The l construction of a concrete slab requires the upper 8 inches ft to be scrapped off exposing lower level soils that can be stabilized. If the process roots adjacent to and within this area are often damaged, resulting in barkstripped roots or shattered root stubs. Additionally, i bili i involves the mechanical removal of r spaces within the soil by compaction This decreases both anchoring and feeding root development, if t a t t

#### • Utility line placement

**Fraditionally**, i involvestren for s, affecting tree roots. t, avoid root zone impacts by detailing an above ground routing of utilities from 1 g corner, approximately 20 feet from the point of the t d th existing building foundation to the equipment pad. U ti 1 wiΠ above tc the roof anchored antennae. Disturbance to tree ground from the d T roots from the below ground portion is not anticipated.

#### Equipment access

Equipment repeatedly driving over Critical Root Zones *can* mechanically damage supporting roots and compact soils. Compaction breaks down soil structure by removing **air** and adding moisture. Anaerobic conditions may develop, promoting decay. Absorbing roots can suffocate **from** lack of oxygen. *Structural* roots may be compromised **as** a result of the decay.

#### canopy pruning

The removal of branches encroaching into the building area is required to create adequate space for access.

41 James P. Allen & Associates

EXHIBIT G

#### **Recommended Procedures**

The construction of the support pad using traditional methods will dramatically reduce the lifespan of existing tree. It can be abated with the implementation of pre-construction treatments and modifications to construction methods as described below.

#### Pier and Above Grade Beam System

This procedure is recommended for the equipment pad in close proximity to both trees (#1 & 2). This system eliminates the need for excavation and the resulting root loss. The graphic below depicts the basic principles of the system that will be used for the construction of the equipment support pad.



Piers will be placed at the comers of the 8 ft x 12 ft support structure. Grade beams will be placed above natural grade or constructed without disturbing native soil. This alternative method of construction will decrease the impacts of the pad foundation.

#### Equipment access

Equipment **used** to construct the support will be smaller mechanized equipment to be operated by hand. There is no vehicular access to the site, avoiding the possibility of extensive damage to the surface **roots** of Trees #1 & **2**.



**Pruning** *to* **provide clearance** has been recommended for Tree #1 to remove the minimum amount of lower branches on the southern side of the tree that will interfere with the proposed **construction**.

A qualified certified arborist, **using** the following industry **guidelines** should be contracted to perform **all** the above-described work.

- American National Standards Institute A300 for Tree Care Operations- <u>Tree. Shrub and Other Woody Plant Maintenance-Standard Practices.</u> (Part 1)-2001 Pruning
- International Society of Arboriculture: Best Management Practices
- American National Standards Institute Z133.1-1994 for Tree Care
  Operations- Pruning, Trimming, Repairing, Maintaining, and Removing
  Trees and Cutting Brush-Safety Requirements

**Tree preservation specifications** included in this report, outline specifics for tree protection fencing and other procedures that will provide the **best opportunity** for their long-term survivability. The exact locations for these procedures are documented on the attached map.

The implementation of these recommended procedures will ensure the future growth and stability of the tree resources on this site.

Any questions regarding this report may be directed to my office.

Respectfully submitted, AMA

James P. Allen Registered Consulting Arborist #390



#### Tree Preservation Specifications MetroPCS Cell Site, APN 032-091-02

These guidelines should be printed on <u>all</u> pages of the development plans. Contractors and sub contractors should be aware of tree protection guidelines and restrictions. Contracts should incorporate tree protection language that includes "damage to trees will be appraised using the <u>Guide to Plant Appraisal 9th Edition</u> and monetary fines assessed".

#### A pre construction meeting with the Project Arborist

A meeting with the Project Arborist, Project Manager and all **contractors** involved with the project **shall** take place prior to the onset **of** construction. Tree preservation specifications will be reviewed and discussed.

#### Establishment of a Tree Preservation Zone (TPZ)

Fencing, **no** less than **48** inches in height with metal stakes embedded in the ground **shall** be installed in areas designated on the attached map. Fencing will be installed prior to the onset **of** grading, under the supervision **of** the Project Arborist and shall not be moved.

#### Restrictions within the Tree Preservation Zone (TPZ)

No storage of construction materials, debris, **a** excess soil will be allowed within the TPZ. Parking of vehicles or construction equipment in this **area** is prohibited. Solvents or liquids of any type should be disposed of properly, never within **this** protected **area**.

#### **Field decisions**

The Project Arborist and Construction Project Manager will determine the most effective construction methods to **maintain** tree health.

#### Alteration of grade

**Maintain** the **natural** grade around trees. **If trees** roots **are** unearthed during the construction process, the Project Arborist will be notified immediately. Exposed **roots** will be covered with moistened burlap until the Project Arborist makes a determination.

#### Trenching requirements

Any areas of proposed trenching will be evaluated with the Project Arborist and the contractor prior to construction.

#### Tree canopy alterations

Unauthorized pruning of any tree on this site will not be allowed. Tree canopy alterations are to be performed the specifications established by the Project Arborist.



EXHIBIT G