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## Staff Report to the Zoning Administrator

Application Number: **03-0544**

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Applicant: Nextel of California  
Owner: John Brady, trustee  
APN: 049-131-23

Agenda Date: 12/17/04  
Agenda **Item** #: 3  
Time: After 11:00 a.m.

Project Description: Proposal to construct a co-located wireless communications facility at an existing telecommunications site.

Requires an amendment to Commercial Development Permits 96-0292, 99-0140, and 02-0343.

Location: Property located on the west side of a private right-of-way, about 1/2 mile northwest from the end of Trabing Road (1253 Trabing Road).

Supervisorial District: Second District (District Supervisor: Ellen Pirie)

Permits Required: Commercial Development Permit

Staff Recommendation:

- Approval of Application 03-0544, 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                                 | E. | Assessor's parcel map   |
| B. | Findings                                      | F. | Zoning map  |
| C. | Conditions                                    | G. | Supplemental Information (Including<br>RF Report & Visual Analysis) |
| D. | Categorical Exemption (CEQA<br>determination) | H. | Comments & Correspondence   |

Parcel Information

Parcel Size:	12.4 acres
Existing Land Use - Parcel:	Single family residence and telecommunications site
Existing Land Use - Surrounding:	Rural residential home sites
Project Access:	Private right of way accessed off of Trabing Road
Planning Area:	Aptos Hills

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

Land Use Designation: R-R (Rural Residential)  
Zone District: SU (Special Use)  
Coastal Zone: — Inside X Outside

### Environmental Information

Geologic Hazards: Not mapped/no physical evidence on site  
Soils: N/A  
Fire Hazard: Not a mapped constraint  
Slopes: 5-15 percent at project site, steeper slopes adjacent  
Env. Sen. Habitat: Mapped biotic resources  
Grading: Installation of retaining wall and access road improvements  
Tree Removal: No trees proposed to be removed  
Scenic: Highway One Scenic Corridor  
Drainage: Existing drainage adequate  
Traffic: N/A  
Roads: Existing roads adequate  
Parks: Existing park facilities adequate  
Archeology: Not mapped/no physical evidence on site

### Services Information

Urban/Rural Services Line: — Inside X Outside  
Water Supply: N/A  
Sewage Disposal: N/A  
Fire District: California Department of Forestry/County Fire  
Drainage District: None

### History

Three approvals for wireless communications facilities have been granted on the subject property. Commercial Development Permit 96-0292 approved a non-camouflaged tower and Commercial Development Permit 99-0140 approved a tower camouflaged as a pine tree. Commercial Development Permit 02-0343 was approved to allow an additional wireless communications facility to be located on a higher point through an extension of the existing camouflaged tower.

### Project Setting

The project site is located off a private right of way off the end of Trabling Road on a hilltop surrounded by existing natural vegetation. The Highway One Scenic Corridor is located below **the** project site to the south and rural residential home sites are located to the north, east, and west of the subject property, with much of this land currently undeveloped and left in its natural state.

## **Zoning & General Plan Consistency**

The subject property is an approximately **12** acre parcel, located in the SU (Special Use) zone district and has a (R-R) Rural Residential General Plan designation. The proposed co-located wireless communication facility is an allowed use within the zone district. The SU (Special Use) zone district is consistent with the site's (R-R) Rural Residential General Plan designation.

### **Co-located Wireless Communication Facility**

The project site is located within a restricted zone district for wireless communication facilities (per County Code section 13.10.661(c)). The proposed project will co-locate on an existing wireless communication facility and is allowed within the zone district as a co-located facility.

The proposed wireless communication facility will consist of the placement of additional antennas on an existing tower camouflaged as a tree and the installation of an equipment platform and associated equipment cabinets. An approximately 180square foot equipment platform with equipment cabinets will be installed on the project site to support the wireless communication facility. All of the existing and proposed equipment is adequately screened by existing and proposed lattice fencing and landscaping. The project access and utilities infrastructure is already in place to serve the proposed facility without additional environmental impacts that would be required through the creation of a new telecommunications site.

### **Highway One Scenic Corridor**

The project site is located within the Highway One Scenic Corridor. The site of the existing and proposed wireless communications facilities is adequately screened from the Highway One Scenic Corridor by existing topography and the use of camouflage techniques. The proposed wireless communication facility will be located on an existing monopole which is camouflaged as a pine tree. The proposed new antennas will be located below previously approved antennas on the existing camouflaged pole and will not result in a visual impact to the scenic resource.

### **Access Road**

The road and electrical utilities to the project site were installed to serve the first wireless communications facility, and were also used to access and serve the second facility. Since the date of original installation, the approved erosion control measures and surfacing of the access road have not weathered well. The road has developed erosion gullies and minor slope failures are occurring along the existing road cut. The requirement to install retaining walls along the existing road cuts, gravel surfacing along the length of the access road, and asphalt the upper portion of the access road where it switches back to the existing base station was placed on the approval of Commercial Development Permit 02-0343. As that approval has not yet been implemented, these requirements will be applied to this application as well.

Additionally, pampas grass has begun to establish itself along the side of the existing access road. The subject property is located within a biotic resource area (San Andreas Oak Woodland/San Andreas Maritime Chaparral) and the pampas grass should be eradicated before it becomes more widespread. It also appears that the disturbance caused by the grading of the road is what

allowed the pampas grass to become established. The removal of the pampas grass from the areas along the side of the access road was another requirement of the previous approval which will also be applied to this application. No other biotic resource issues have been identified by Environmental Planning staff.

#### Conclusion

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

#### Staff Recommendation

- APPROVAL of Application Number **03-0544**, 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](http://www.co.santa-cruz.ca.us)

Report Prepared By Randall Adams  
Santa Cruz County Planning Department  
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Santa Cruz CA 95060  
Phone Number: (831) 454-3218  
E-mail: [randall.adams@co.santa-cruz.ca.us](mailto:randall.adams@co.santa-cruz.ca.us)

## 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 facility will be co-located on an existing tower that is camouflaged to appear as a natural pine tree. The subject property for the proposed project is located within the Highway One scenic comdor. The currently proposed project will locate additional antennas below the existing antennas on the camouflaged tower. The lack of visibility of the project site from the scenic corridor, due to the topography of the area and the existing camouflage, will result in no visual impact to the scenic corridor as a result of this project. 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, as the property is located upslope from the highway and the property is on the inland side of the scenic corridor with no significant public vista available beyond the slope in front of the subject property. The existing public views from the scenic highway will remain relatively unchanged as a result of this project.

An alternative sites analysis was not required for the proposed project, due to the fact the proposed wireless communication facility will be co-located on site with three existing wireless communications facilities. Per Section 13.10.661(c)(3) of the County Code, applications for co-located wireless communications facilities within a restricted zoning district (such as the Residential Agriculture zone district) are not required to submit an alternative sites analysis. Furthermore, the creation of an additional site for a wireless communication facility in the immediate area would require additional road grading, electrical utilities, and the erection of additional towers that would create unnecessary, additional impacts to the scenic and natural resources that are located in the project vicinity.

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 presence of the existing wireless communications facilities on the project site, with the associated road and utilities infrastructure, as well as *the* existing negligible visual impact to the Highway One scenic corridor, result in the determination that the currently proposed project site is the environmentally superior site for this project. The creation

of an additional wireless communications facility along the Highway One scenic corridor, including the grading of a new access road and equipment site in adjacent vegetated areas, would most likely result in more visually intrusive project and cause additional impact to the natural resources in the surrounding areas.

An alternative sites analysis was not required for the proposed project, due to the fact the proposed wireless communication facility will be co-located on site with three existing wireless communications facilities. Per Section 13.10.661(c)(3) of the County Code, applications for co-located wireless communications facilities within a restricted zoning district (such as the Residential Agriculture zone district) are not required to submit an alternative sites analysis.

Furthermore, the creation of an additional site for a wireless communication facility in the immediate area would require additional road grading, electrical utilities, and the erection of additional towers that would create unnecessary, additional impacts to the scenic and natural resources that are located in the project vicinity.

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 single family residential use is in compliance with the SU (Special Use) zone district and (R-R) Rural Residential General Plan designation, in which it is located. Single family dwellings are a principal permitted use within the SU zone district for parcels with a residential General Plan land use designation. The existing and proposed uses, as designed, are compatible with the zone district and General Plan designation.

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 a wireless communications tower, which will be approximately 56 feet in height, and this elevation 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 12 percent of the most restrictive applicable limit.

Application#: 03-0544  
APN: 049-131-23  
Owner: John Brady, trustee

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.

Not Applicable

## Development Permit Findings

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

This finding can be made, in that the maximum ambient RF levels at ground level due to the existing wireless communications facilities and the proposed operation are calculated to be 12 percent of the most restrictive applicable limit.

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

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

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

This finding can be made, in that the installation of wireless communications facilities that are co-located with existing wireless communication facilities are allowed uses within the SU (Special Use) zone district, without the requirement of further alternatives analysis. The project site is located within the SU (Special Use) zone district with a residential General Plan land use designation.

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

This finding can be made, in that the proposed wireless Communication facility will be co-located on an existing camouflaged tower. Wireless communication facility installations that are co-located with existing wireless communication facilities: such as this proposal, are an environmentally superior alternative to the creation of new wireless communication facility installations and their associated visual and environmental impacts.

The subject property for the proposed project is located within the Highway One scenic corridor. The existing ground-mounted tower is camouflaged from view from the scenic comdor. The proposed facility will be co-located on **an** existing tower that is camouflaged to appear as a natural pine tree. The currently proposed project will locate additional antennas below the existing antennas on the camouflaged tower. The lack of visibility of the project site from the scenic corridor, due to the topography of the area and the existing and proposed camouflage, will

result in no visual impact to the scenic corridor as a result of this project. 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, as the property is located upslope from the highway and the property is on the inland side of the scenic corridor with no significant public vista available beyond the slope in front of the subject property. The existing public views from the scenic highway will remain relatively unchanged as a result of this project.

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

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

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

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 result in increasing traffic to unacceptable levels in **the** vicinity.

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

This finding can be made, in that the **proposed** wireless communication facility will be co-located on **an** existing ground-mounted tower that is camouflaged to appear as a natural pine tree. 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 ground-mounted tower that is camouflaged to reduce potential visual impacts to the surrounding neighborhood.

## Conditions of Approval

- Exhibit A: Project Plans entitled "Nextel of California, Larkin Valley, Site Number CA-0159-A", prepared by MSA Architecture & Planning, 8 sheets, dated 7/30/03 with revisions through 10/8/04.
- I. This permit amends and incorporates all of the findings and conditions of Commercial Development Permit 96-0292, Commercial Development Permit 99-0140, and Commercial Development Permit 02-0343, 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. This permit authorizes the existing wireless communications facilities to continue operation, with an additional wireless communications facility to be co-located below existing antennas on the existing, camouflaged, ground-mounted pole, and the placement of additional equipment boxes and associated utilities to serve the proposed new facility per the approved Exhibit A for this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant and/or 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. 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. The applicant shall obtain approval from the California Public Utilities Commission and the Federal Communications Commission to install and operate this facility.
- III. Prior to issuance of a Building Permit the applicant/owner shall:
- A. Submit proof that these conditions have been recorded in the official records of the County of Santa Cruz (Office of the County Recorder).
- B. 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 and color of the proposed camouflage materials for Planning Department approval.
2. Grading, drainage, and erosion control plans.

3. Construction plans and details for the proposed retaining walls to prevent further slope failure along the existing access road, for the resurfacing of the access road from the top of the existing asphalt road to the existing camouflaged tower site, the placement of gravel along the entire surface of the existing access road to prevent further erosion, and any other necessary erosion control measures to prevent further erosion created by or along the existing access road.
  4. All new electric and telecommunications lines shall be placed underground.
  5. A notation, with any necessary details, that discusses the method for removing the pampas grass that is located along the existing access road and in the vicinity of the project site.
  6. Details showing compliance with fire department requirements.
- C. 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 the exterior finish and camouflage materials, for annual visual inspection and follow up repair, painting, and resurfacing as necessary.
- D. Meet all requirements of and pay all required drainage fees to the County Department of Public Works, Drainage.
- E. Obtain an Environmental Health Clearance for this project from the County Department of Environmental Health Services.
- F. Meet all requirements and pay any applicable plan check fee of the California Department of Forestry/County Fire.
- G. Submit 3 copies of a geotechnical report prepared and stamped by a licensed Geotechnical Engineer.
- IV. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:
- A. All site improvements shown on the final approved Building Permit plans shall be installed.
  - B. All inspections required by the building permit shall be completed to the

satisfaction of the County Building Official.

- C. The required road surface and slope retention improvements shall be completed to the satisfaction of the Environmental Planning section of the Planning Department.
- D. The existing pampas grass shall be removed from the project site and the area surrounding the access road.
- E. The project must comply with all recommendations of the approved soils reports.
- F. Pursuant to Sections 16.40.040 and 16.42.100 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.100, shall be observed.

V. Operational Conditions

- A. Additional Facilities: A Planning Department review that includes a public hearing shall be required for any future co-location at this wireless communications facility.
- B. Equipment Modifications: 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.
- C. Camouflage: The camouflage materials, and the ground-mounted tower, shall be permanently maintained and replacement materials and/or paint shall be applied as necessary to maintain the camouflage of the tower.
- D. Access Road: The access road shall be permanently maintained in a manner that prevents erosion from the road surface and slope failure at adjacent slopes above or below the road surface. Any accelerated erosion or slope failure on or adjacent to the access road, as a result of neglect or lack of maintenance, will be in violation of the conditions of this permit.
- E. Pampas Grass: The existing pampas **grass** shall be removed from the project site and the area surrounding the access road. Continuous maintenance will be required to ensure that pampas grass does not become reintroduced on the subject property. Any increase in the number of pampas grass specimens in the project vicinity due to lack of **maintenance**, will be in violation of the conditions of this

permit.

- F. Noise: All noise generated from the approved use shall **be** contained on the property.
- G. Lighting: All site, building, security and landscape lighting shall be directed onto the lease site and away from the scenic corridor and adjacent properties. Light sources shall not be visible from adjacent properties. Light sources can be shielded by landscaping, structure, fixture design or other physical means. Building and security lighting shall be integrated into the building design.
- H. If ~~future~~ technological advances would allow for reduced visual impacts resulting from the proposed telecommunication facility, the applicant agrees though 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.

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**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.

Application # 03-0544  
APN: 049-131-23  
Owner: John Brady, trustee

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

Approval Date: \_\_\_\_\_

Effective Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

\_\_\_\_\_  
Don Bussey  
Deputy Zoning Administrator

\_\_\_\_\_  
Randall Adams  
Project Planner

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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: 03-0544

Assessor Parcel Number: 049-131-23

Project Location: 1253 Trabing Road

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

Person or Agency Proposing Project: Nextel **of** California

Contact Phone Number: **(925) 250-1744**

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

Specify type:

- E.  Categorical Exemption

Specify type: 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.

\_\_\_\_\_  
Randall Adams, Project Planner

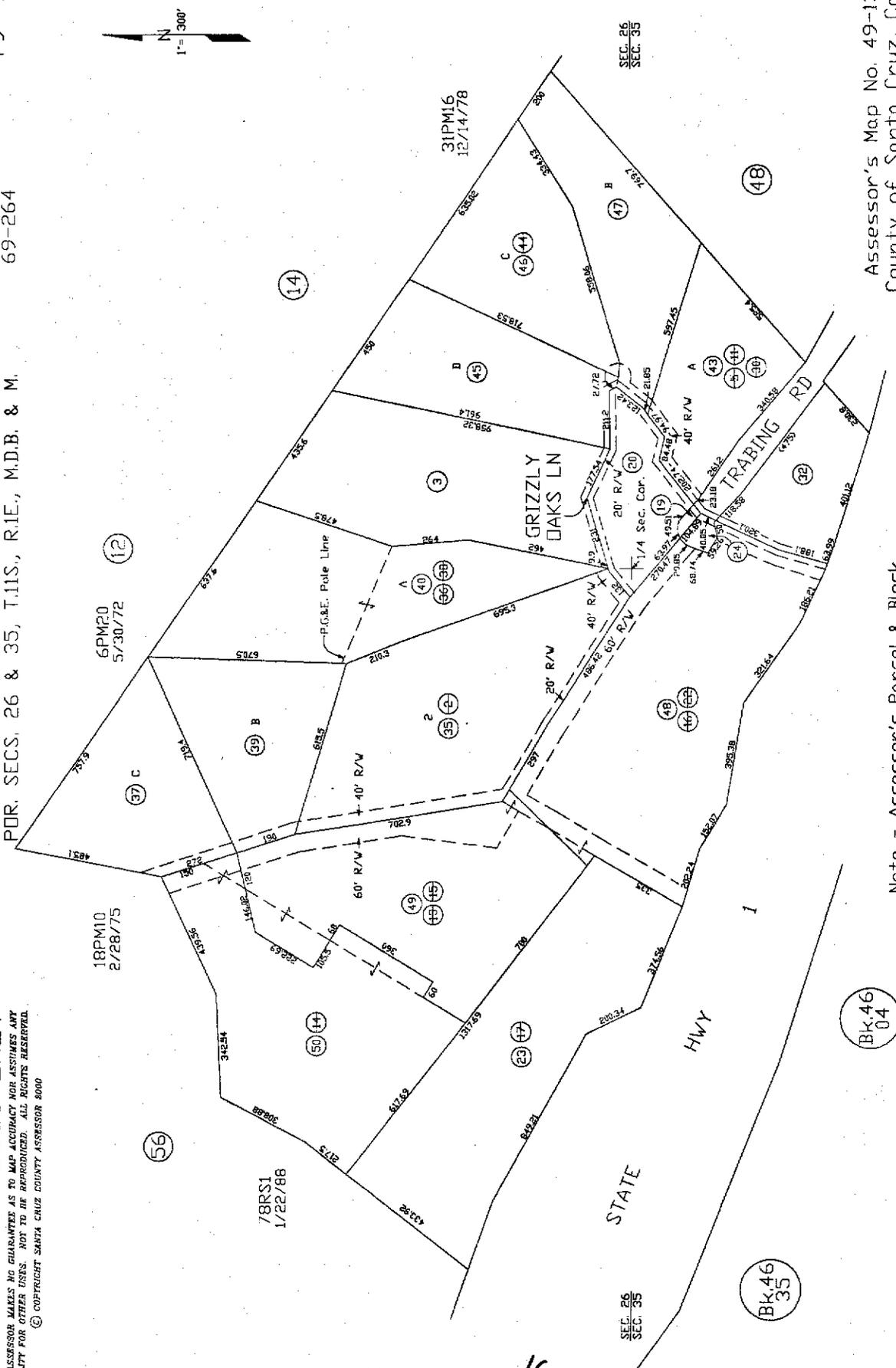
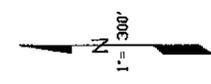
Date: \_\_\_\_\_

**FOR TAX PURPOSES ONLY**  
 THE ASSESSOR MAKES NO GUARANTEE AS TO MAP ACCURACY NOR ASSUMES ANY LIABILITY FOR OTHER USES. NOT TO BE REPRODUCED. ALL RIGHTS RESERVED.  
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**SAN ANDREAS RANCHO**  
 POR. SECS. 26 & 35, T.11S., R.1E., M.D.B. & M.

Tax Area Code  
 69-264

49-13



Assessor's Map No. 49-13  
 County of Santa Cruz, Calif.  
 March 2000

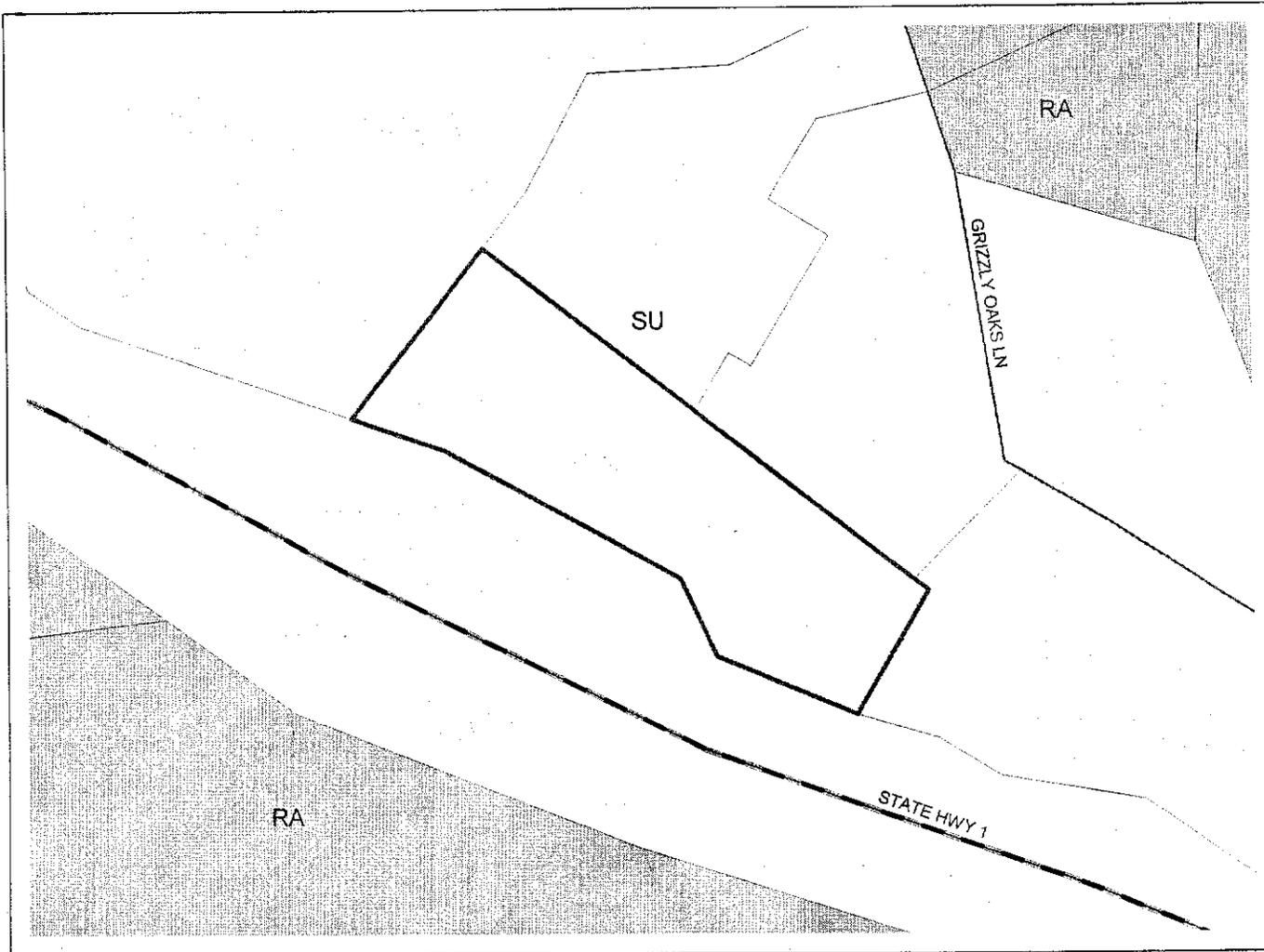
Note - Assessor's Parcel & Block Numbers Shown in Circles.

Electronically redrawn 2/19/00 KSA  
 Rev. 2/18/00 KSA (Rev. 10/9/98)  
 Rev. 6/1/00 (when changed page refs.)

**EXHIBIT**

111

# Zoning Map



### Legend

-  APN 049-131-23
-  State highways
-  Streets
-  SU
-  RA



Map created by Santa Cruz County  
Planning Department:  
December 2003



Tetra Tech Communication Services  
 1255 Treat Blvd. Suite 800  
 Walnut Creek, CA 94596  
 Main (925) 279-5780  
 Fax (925) 279-2683

December 19<sup>th</sup>, 2003

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

RE: Santa Cruz County File # **03-0544**

Nextel Communications Project # Ca0159A "Larkin Valley"

Dear Santa Cruz County Planning,

My name is David Ney. I am an agent for Tetra Tech Communications Services, and represent Nextel of California in the aforementioned project. We seek a (Level 5) Conditional Use Permit to construct and operate an unmanned wireless communication facility at:

**1253 Trabiug Road Watsonville, CA 95076**  
**A.P.N. # 049 - 131 - 23**

I've enclosed the following documents, in accordance with Section 13.10.662: "Application Requirements for Wireless Communication Facilities", taken from the interim Santa Cruz County Wireless Communications Facilities Draft Ordinance:

- Exhibit A - *Submittal Fee Check \$5000.00*
- Exhibit B - *Letter of Authorization from Properly Owner*
- Exhibit C - *Project Synopsis/ Statement of Operations*
- Exhibit D - *Supplemental Application Information*
- Exhibit E - *Ambient Radio Frequency Fields Report (NIE/EMF study)*
- Exhibit F - *Photo-simulations of Proposal*
- Exhibit G - *One (1) Required set of 8.5" x 11" folded plans*
- Exhibit H - ~~10~~ *One (1) Required sets of 24" x 36" folded plans*
- Exhibit I - *One (1) set Structural Calculations*

Thank You,

David A. Ney  
 Project Manager  
 Tetra Tech Communications  
 Representing Nextel of California  
 925/250-1498  
 dne@ttwireless.com

**LETTER OF AUTHORIZATION**

TO THE COUNTY OF: County of Santa Cruz

APPLICATION FOR ZONING/USE/BUILDING PERMIT

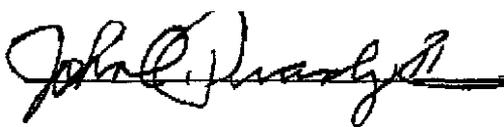
as owner(s) of the below described property, docs/do hereby appoint Nextel of California, Inc. as agent for the purpose of consummating any application necessary to ensure their ability to use and/or construct improvements to the property leased, or licensed, to them for the purpose of constructing a communications site.

I understand that the application may be denied, modified or approved with conditions and that such conditions or modifications must be complied with prior to issuance of building permits.

I/We hereby authorize the employees of the County of Santa Cruz to enter upon the subject property during normal business hours as necessary to inspect the property for the purpose of processing this application.

Located at: 1253 Trabing Rd., Watsonville, CA 95076

Assessor's Parcel Number: 049-131-23

Signature of Property Owner: 

Date: 7-25-03

Site #: CA-159

Larkin Valley

EXHIBIT G



**Tetra Tech Communication Services**  
1255 Treat Blvd. Suite 800  
Walnut Creek, CA 94596  
Main (925) 279-5780  
Fax (925) 279-2683

## Project Synopsis

### Nature of Request

Nextel Communications ("Nextel") seeks approval of a Conditional Use Permit, and all related permits to allow the co-location of a communication facility on an existing parcel, developed with a "mono-pole". The existing mono-pole belongs to Sprint Sites USA, 1510 Rochelle Boulevard, Suite 300, Mailstop TXIVGK0301, Irving, Texas 75039. The proposed plan calls for (12) new antennas, 3 sectors, with four antennas per sector. The sectors will face 30 degrees (northeast), 115 degrees (southeast) and 305 degrees (northwest). The antennas are to be mounted below the existing configuration, at an operating center of 36.5' above ground level. The existing tower is 45.6' tall, with a 7-foot extension being proposed by another carrier. The Nextel proposal will be situated at the bottom of the tower. The ancillary equipment shelter will be placed adjacent to the tower, within the existing compound, on the northwest side. The shelter will be set on a structural steel platform, which will reside on 4 concrete piers. The equipment installation will be approximately 15' x 9' or 135 square feet (developed), within a 20' x 18' "lease area" (undeveloped).

### Property Description

The subject property is located at 1253 Trabing Road Road, Watsonville, Ca 95076. The Assessor's Parcel # of the property is 049 - 131 - 23. The property owner is Mr. John Brady, of the same address. The existing facilities are located at the west side of the property. The property is a Rural Residential zone, developed with two existing communications facilities. The site has neighboring residential structures at 500 feet and approximately 1250' from the communication facility. The latitude/longitude coordinates for the existing mono-pole are 36 degrees, 56 minutes, 24.04 seconds North, and 121 degrees, 50 minutes, 03.40 seconds West (NAD 83). The ground elevation at the base of the existing mono-pole is 493' above mean sea level. The property has no public access, situated at the end of a private road, and is completely screened from public view by existing trees and foliage. The existing facility is the only location within a one - mile radius that is approved for telecommunications use.

### Project Description

Nextel Communications proposes to provide service for the area around this parcel by installing (12) new antennas to an existing "mono-pole". The flat panel antennas will be mounted below the existing antennas, at an operating center height of 36.5' above ground level. The existing pole stands at 45.6' in height, so the proposal calls for a ten-foot extension of the pole for the installation. The proposed installation does not present a significant visual impact to the surrounding area, and calls for screening to match the existing conditions. The equipment shelter is to be placed within the existing compound, screened by a new wooden fence and matching landscaping. The entire facility is on private property and is not within any public access. No on-site generator will be required with this proposal. Access to the project site will be gained through permission of the property owner, and will only be gained by authorized Nextel employees and contractors for periodic monitoring. There are no hazardous materials used in conjunction with this facility. The base station is intended to provide coverage along Highway 1, and the surrounding area of Larkin Valley. This facility is being proposed in strict accordance with Nextel Communications' FCC license requirements.

EXHIBIT G



**Tetra Tech Communication Services**  
1255 Treat Blvd. Suite 800  
Walnut Creek, CA 94596  
Main (925) 279-5780  
Fax (925) 279-2683

### Statement of Operations

The proposed Nextel facility requires only electrical and telephone services, which are available at the site. No nuisances will be created by the proposed installation, and the facility will not endanger public safety or health. The expanded service will benefit the public. Cellular technology does not interfere with any other forms of electronic communication, public or private. Construction of the facility may be done with minimal impact to the surrounding area, and the entire complex is securely self-contained.

Upon completion of the project, periodic maintenance will occur, but the site is to operate as an unmanned facility. The site is self-monitoring, and connects directly to central office computers, which alert personnel to any equipment malfunction or security breach. No on-site water or sanitation facilities will be required in this proposal.

### Zoning Analysis

Pursuant to The County of Santa Cruz Wireless Telecommunication Services (WTS) guidelines, the proposed use is permitted in this Zoning District, subject to approval of a Conditional Use Permit. The proposal is consistent with the County design and review guidelines for commercial antenna installation. The project calls for co-location with existing facilities, and is architecturally integrated into the existing conditions. The proposal is put forth in the least obtrusive manner possible, and is separated from areas of public access. This proposal adheres to all of the design guidelines outlined in the current County Zoning Ordinance.

### Compliance with Federal Regulations

Nextel Communications' installations comply fully with all Federal Communications Commission (FCC) guidelines, governing construction requirements, technical standards, interference protection, power level and height restrictions, and radio frequency regulations. Additionally, Nextel will comply with all Federal Aviation Administration (FAA) standards on cellular base station operations. Nextel's facilities are proposed and built in strict accordance with all Federal (NEPA), State (CEQA) and local environmental regulations. All required NIER exposure limits and areas of occupational exposure are to be designated by FCC standard signage, posted conspicuously at the site. Maximum exposure levels at ground level around the installation will be less than 3% of allowable FCC standards for public exposure (per Hammett - Edison analysis attached to this application). Nextel of California installations are built in strict compliance with California Public Utilities Commission (CPUC) standards, and are specifically engineered by PG&E and SBC for compliance.

### Alternative Site Analysis

The area surrounding the subject parcel **does** not contain another wireless facility within 5,000 feet. **This** site was selected for very specific reasons: 1) The view of the intended coverage area, 2) The fact that a site exists and co-location is encouraged by the jurisdiction, and 3) the design of the proposal integrates with the current zoning standards for the County of Santa Cruz. In addition to this, the existing layout facilitates construction in a non-invasive manner.

Our goal in determining this site as one for **our** proposal is based on minimizing impacts, visual and others, and to adhere as closely as possible to the zoning standards set forth by the jurisdiction regarding cellular base stations.

No other reasonable candidates exist within the search area, and to create a new facility on another parcel would mean closer encroachment to residential areas, greater visual impacts to the community, and a more intrusive

EXHIBIT G

construction process. The permitted zoning and favorable co-location of this facility make it the ideal candidate for Nextel to provide improved service to this area.

Amendment

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

Technical Review

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



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**Supplemental Application Information**

(1) Pre Application Meeting

Tetra Tech Communications has met with the Santa Cruz County Planning Department in October of 2003. Issues discussed were site location, zoning classifications and co- location policies. Since co- locations on existing facilities are encouraged by the county ordinance, the proposed site was considered favorable due to the surrounding conditions. and the private access to the site. This proposal meets with the county's expectations and guidelines, and does not pose a significant impact to the existing conditions.

(2) Submittal Information

(i) Identity and Legal Status of the Applicant

Nextel Communications Corporation  
DBA "Nextel of California"

(ii) Name Address and Telephone Number

Nextel of California  
1255 Treat Boulevard  
Suite 800  
Walnut Creek, CA 94596  
9251279-2300

(iii) Name, Address, Telephone # of Authorized Agent

Tetra Tech Communications Services, Inc.  
1255 Treat Boulevard  
Suite 800  
Walnut Creek, CA 94596  
Contact Representative: David Ney - ph.925/250-1498

(iv) Address, Parcel Map Description Lat/Long

1253 Trabing Road  
Watsonville, Ca 95076  
A.P.N. # 049 - 131 - 23

36' 50.03' 24.04" N  
121' 50' 03.40" W  
(NAD 83)

**EXHIBIT G**

(v) **Narrative of Future Sites (5 year plan)**

The build out plan for Nextel of California is determined by RF engineers who design the system to allow for the maximum blanketing coverage, while using the least amount of sites in the area. This limits the number of visual impacts in the area, and can minimize the expense of building the network, thus keeping the price of wireless services down, while quality of service remains good. The current 3<sup>rd</sup> generation network will require 6 to 10 sites throughout Santa Cruz county. Preliminary studies have determined that currently, 6 sites fall within the jurisdiction of Santa Cruz County, with the remaining sites yet to be determined by Nextel engineers.

(vi) **Wireless Services to be Provided**

**Benefits to the Community**

Wireless technology can provide many benefits to the County of Santa Cruz County residents. These benefits include:

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

(vii) **California Public Utilities Commission**

Nextel of California is registered with the CPUC under General Order 159A as:

- 1) Nextel of California
- 2) Nextel Communications Corporation

(viii) **Federal Communications Commission**

Nextel Communications is registered with the Telecommunications Bureau as:

FCC License # **WPOH392**

Date of issuance: **06/17/98**

\*Site- specific FCC licenses are issued as each new site goes on –air.

(ix) **FCC Compliance with NIER Standards**

Exhibit E, which describes NIER/EMF compliance issues regarding this proposal. This report is submitted respectively by Hammett & Edison, an independent consultant that examines the safety of cellular installations.

**EXHIBIT G**

(x) **Security Considerations**

The proposed area of installation is not accessible to the general public, being located on private property. Only authorized technicians will be allowed access to the facility, through permission of the property owner.

Federal Law mandates that all areas, in compliance with FCC guidelines, shall include ANSI compliant RF sign in a visible place for workers approaching the site.

(xi) **Visual Impact Study**

Exhibit F, photographic simulations, which show what the site will look **like from** the nearest public vantage point.

**Nextel SMR • Proposed Base Station (Site No. CA-0159A)  
1253 Trabing Road • Watsonville, California**

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

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Nextel SMR, a wireless telecommunications carrier, to evaluate the base station (Site No. CA-0159A) proposed to be located at 1253 Trabing Road in Watsonville, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Prevailing Exposure Standards**

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent Institute of Electrical and Electronics Engineers ("IEEE") Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes nearly identical exposure limits. A summary of the FCC's exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

The most restrictive thresholds for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

<u>Personal Wireless Service</u>	<u>Approx. Frequency</u>	<u>Occupational Limit</u>	<u>Public Limit</u>
Personal Communication ("PCS")	1,950 MHz	5.00 mW/cm <sup>2</sup>	1.00 mW/cm <sup>2</sup>
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



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**Nextel SMR • Proposed Base Station (Site No. CA-0159A)  
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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 Nextel, including zoning drawings by MSA Architecture & Planning, Inc., dated September 30, 2003, it is proposed to mount up to twelve Andrew Model DB844H65E-XY directional antennas on an existing 45<sup>1</sup>/<sub>2</sub>-foot pole, configured to resemble a tree, located at 1253 Trabing Road in Watsonville. The antennas would be mounted at an effective height of about 30<sup>1</sup>/<sub>2</sub> feet above ground and would be oriented in three groups toward 30°T with 3" downtilt, toward 115°T with 6" downtilt, and toward 305°T with 6° downtilt. The maximum effective radiated power in any direction would be 1000 watts, representing ten channels operating simultaneously at 100 watts each.

Presently located or proposed to be located on the same pole *or* its extension are similar antennas for use by AT&T Wireless and by Sprint PCS, and located on another pole about 40 feet to the west are antennas for use by Cingular Wireless, other telecommunications carriers. AT&T reports that it will be using six Allgon Model 7250.03 directional panel PCS antennas mounted at an effective height of about 52 feet above ground; those antennas will be oriented in pairs at 120" spacing, operating with a maximum effective radiated power in any direction of 565 watts. Sprint reports that it is using twelve EMS panel antennas mounted at an effective height of about 38<sup>1</sup>/<sub>2</sub> feet above ground, operating with a maximum effective radiated power in any direction of 4,000 watts; three Model RV105 16-04-DP antennas are oriented toward 30°T, six Model RV3320-02-DP antennas are oriented in groups of three toward 110°T and 310°T, and three Model RV10513-04-DP antennas are oriented toward 210°T. Cingular reports that it is using DAFA Model 49210 panel antennas mounted at an effective height of about 16 feet above ground; those antennas are oriented toward 120°T and 295°T, operating with a maximum effective radiated power in any direction of 590 watts.



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Nextel SMR • Proposed Base Station (Site No. CA-0159A)  
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**Study Results**

The maximum ambient RF level at any ground level location within 1,000 feet due to the proposed Nextel operation by itself is calculated to be 0.068 mW/cm<sup>2</sup>, which is 12% of the applicable public limit. The maximum calculated cumulative level at any ground level location within 1,000 feet for the simultaneous operation of all four carriers is 67% of the public exposure limit, occurring on a small rise to the west of the site. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels. Figure 3 attached provides the specific data required under Santa Cruz County Code Section 13.10.659(g)(2)(ix), for reporting the analysis of RF exposure conditions.

**Recommended Mitigation Measures**

It is recommended that measurements be conducted when the Nextel station is ready to begin operation, in order to identify any areas that may exceed the public standard and to develop at that time any appropriate mitigation measures for achieving compliance with the FCC-adopted guidelines for both public and occupational exposure conditions.

**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that the base station proposed by Nextel SMR at 1253 Trabing Road in Watsonville, 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. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2005. This work has been carried out 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.

December 19, 2003



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



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NX0159595  
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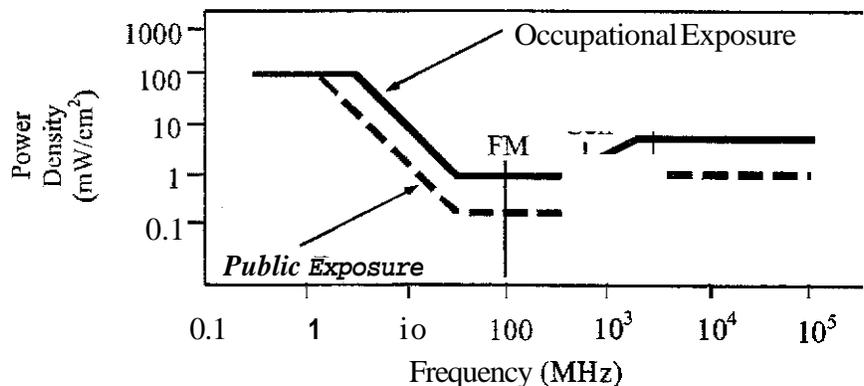
EXHIBIT

## FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz." These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

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

Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm <sup>2</sup> )	
0.3– 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34– 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f<sup>2</sup></i>
3.0– 30	18421f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f <sup>2</sup>	<i>180/f<sup>2</sup></i>
30– 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300– 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500– 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



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



**HAMMETT & EDISON, INC.**  
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FCC Guidelines  
Figure 1

**EXHIBIT G**

## RFR.CALC™ Calculation Methodology

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

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

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications 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  
 $\lambda$  = 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:

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

where  $\theta_{BW}$  = 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:

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

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

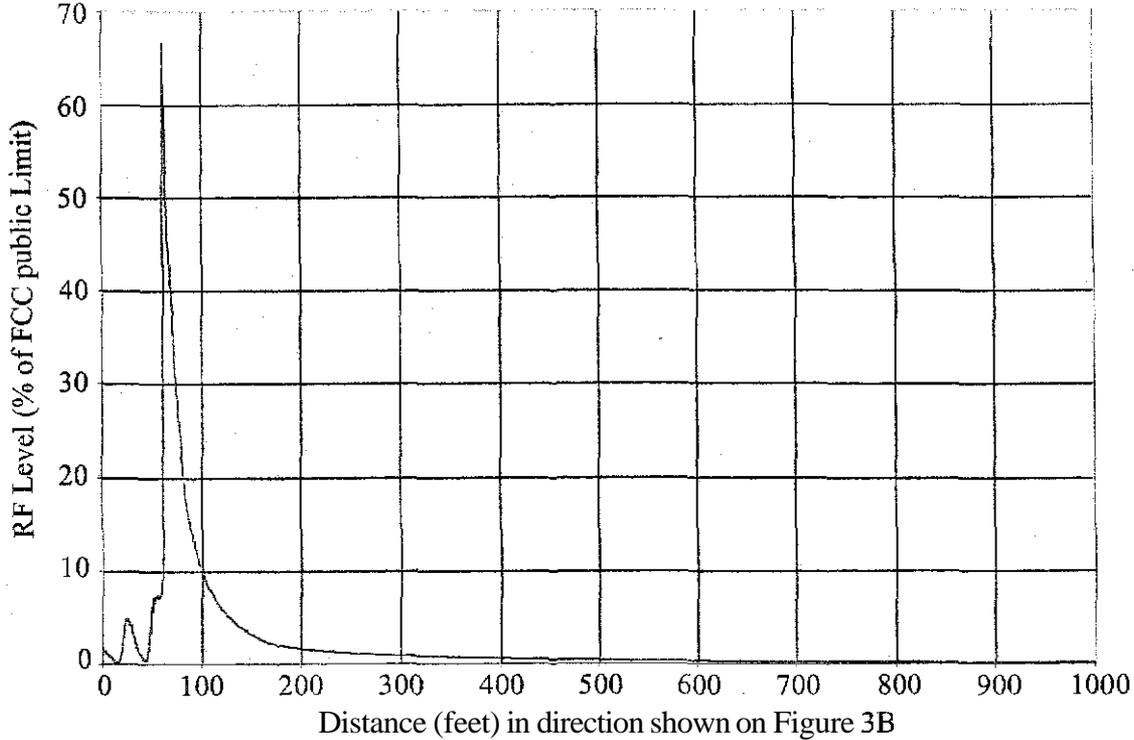
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units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

**Nextel SMR • Proposed Base Station (Site No. CA-0159A)  
1253 Trabing Road • Watsonville, 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 levels 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 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**



Distance (feet)	50	100	200	300	500	750	1,000
RF level (% limit)	6.0%	10.0%	1.6%	0.87%	0.38%	0.17%	0.11%

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) - 1,000 watts

Effective Nextel antenna height above ground - 30 1/2 feet

Other sources nearby - AT&T, Sprint PCS, and Cingular wireless

Other sources within one mile - No AM, FM, or TV broadcast stations

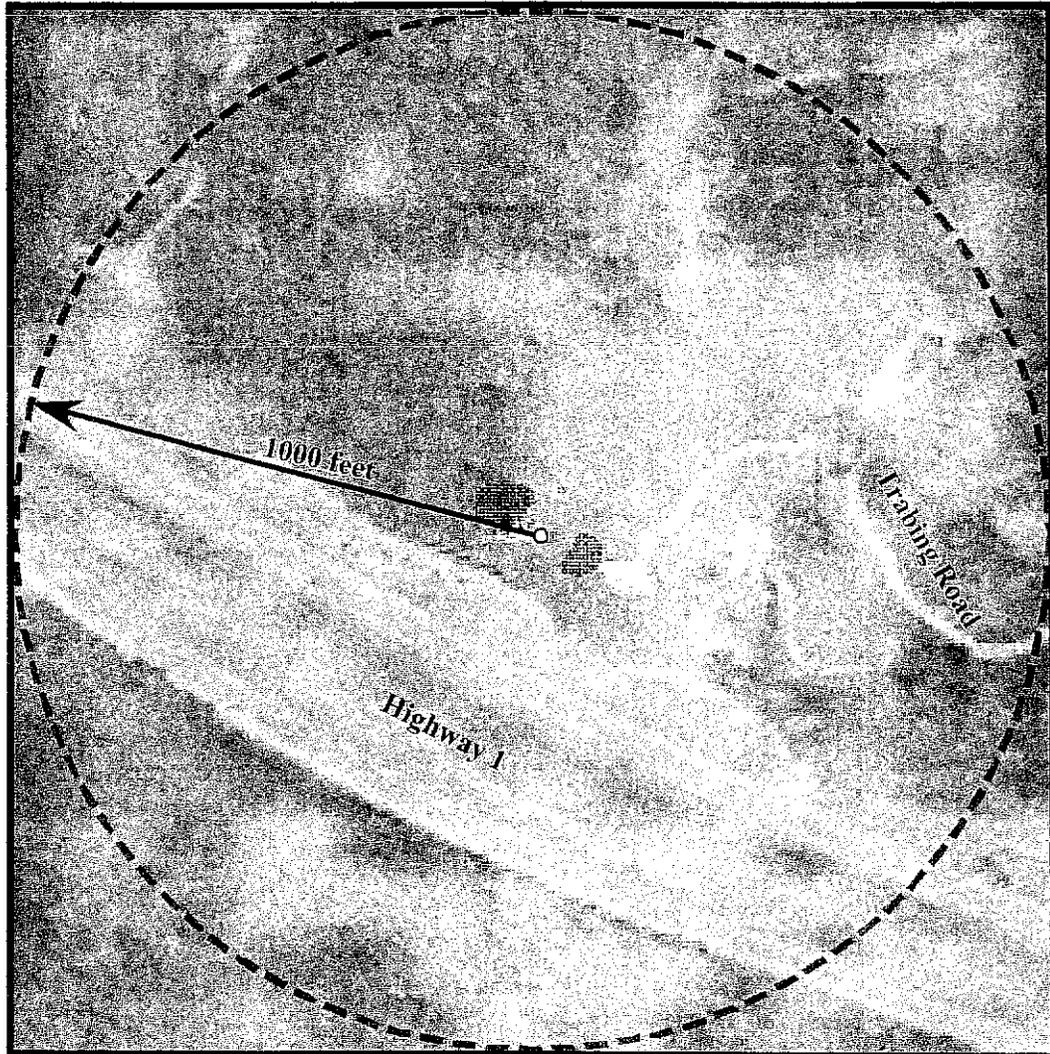
No two-way stations close enough to affect compliance

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

Nextel SMR • Proposed Base Station (Site No. CA-0159A)  
1253 Trabing Road • Watsonville, California

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

For Simultaneous Operation of Nextel SMR,  
AT&T Wireless, Sprint PCS, and Cingular Wireless



Aerial photo from Mapquest.

Legend	
blank	- less than 5% of FCC public limit ( <i>i.e.</i> , more than 20 times below)
▒	- 5% and above near ground level (highest level is 67%)

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.



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

NX0159595  
Figure 3B

**EXHIBIT G**



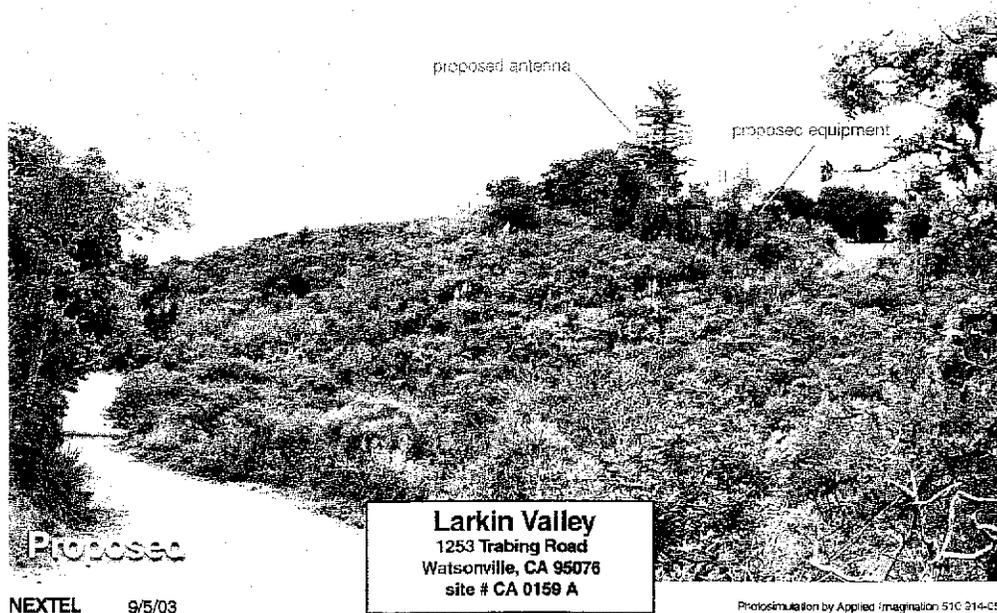
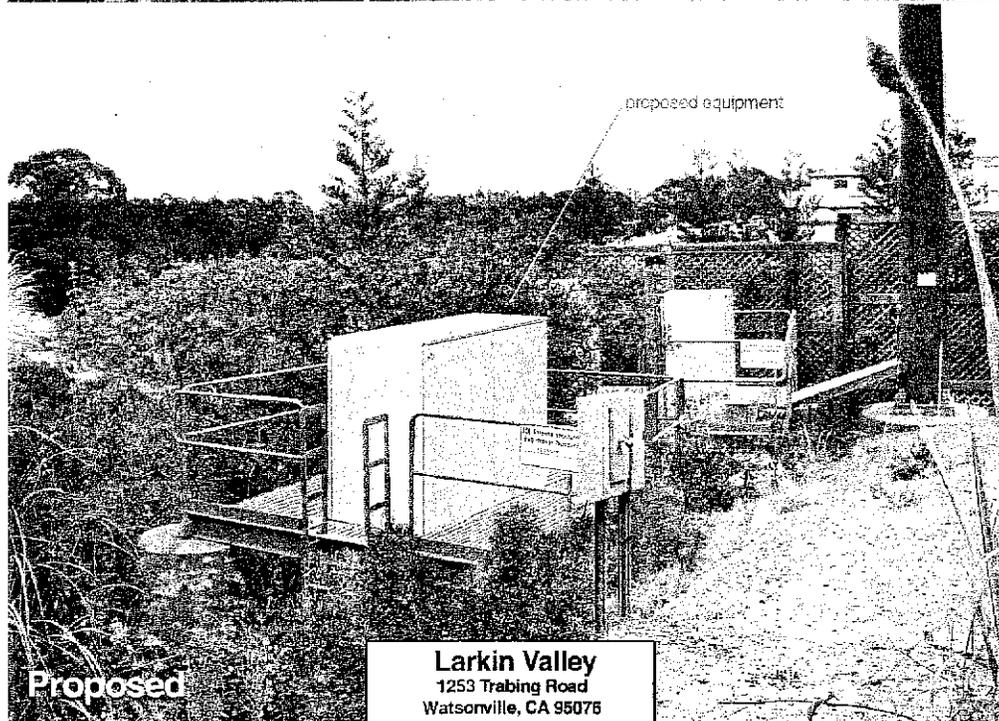
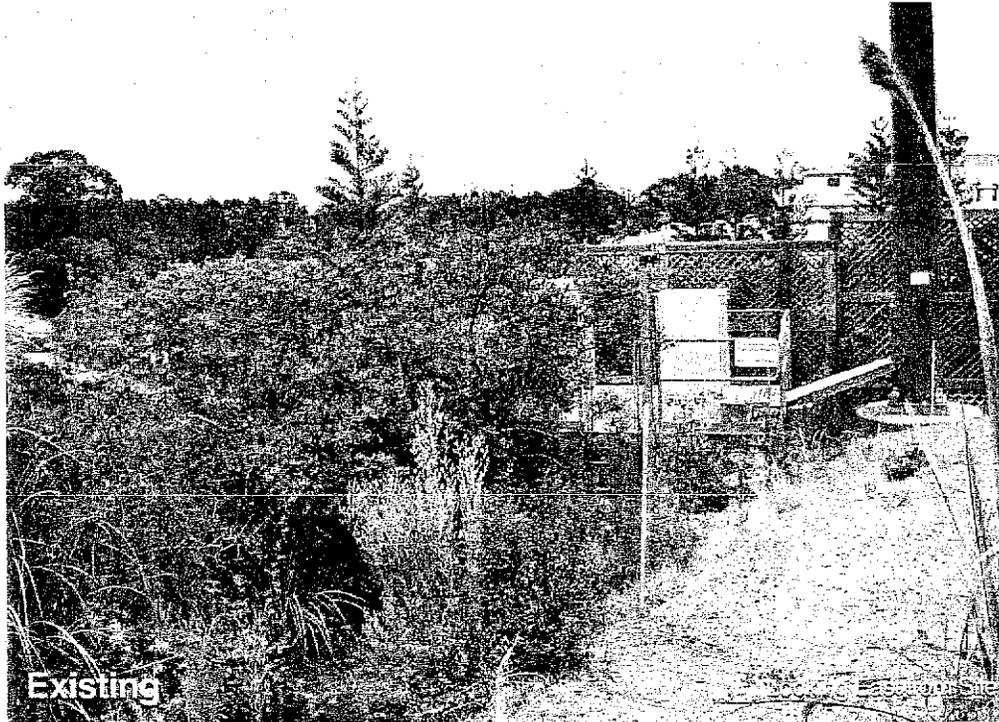


EXHIBIT G 1

34

VIEW 1



NEXTEL 9/5/03

Photosimulation by Applied Imagination 510 914-0500

EXHIBIT G

C O U N T Y O F S A N T A C R U Z  
D I S C R E T I O N A R Y A P P L I C A T I O N C O M M E N T S

Project Planner: Randall Adams  
Application No. : 03-0544  
APN: 049 131-23

Date: November 17, 2004  
Time: 14.39 03  
Page. 1

Environmental Planning Completeness Comments

===== REVIEW ON JANUARY 14, 2004 BY ROBERT S LOVELAND =====  
NO COMMENT

Environmental Planning Miscellaneous Comments

===== REVIEW ON JANUARY 14, 2004 BY ROBERT S LOVELAND =====

1. This project is subject to all the "Conditions of Approval" outlined in development permit 02-0343.

Dpw Drainage Completeness Comments

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

===== REVIEW ON JANUARY 6, 2004 BY ALYSON B TOM ===== See miscellaneous comments for issues to be addressed prior to building permit issuance.

Dpw Drainage Miscellaneous Comments

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

===== REVIEW ON JANUARY 6, 2004 BY ALYSON B TOM ===== The following should be addressed prior to building permit issuance:

- 1) Provide a drainage plan that clearly shows all new impervious areas and describes how these areas will drain.
- 2) This site is located in a groundwater recharge zone. If the proposed impervious areas (paved, concrete, roof, etc.) total 500 square feet or more then all additional runoff should be retained on site and allowed to percolate into the ground. Clarify what the net increase in impervious area due to this project is

All submittals related to this project should be made through the Planning Department.

For questions regarding this review Public Works storm water management staff is available from 8-12 Monday through Friday.

Environmental Health Completeness Comments

===== REVIEW ON JANUARY 8, 2004 BY JIM G SAFRANEK =====  
NO COMMENT

Environmental Health Miscellaneous Comments

===== REVIEW ON JANUARY 8, 2004 BY JIM G SAFRANEK =====  
Planning to collect appropriate disc. permit fee for EHS review.

Discretionary Comments - Continued

Project Planner: Randal Adams  
Application No.: 03-0544  
APN: 049-131-23

Date: November 17, 2004  
Time: 14:39:03  
Page: 2

Cal Dept of Forestry/County Fire Completeness Comm

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

===== REVIEW ON DECEMBER 31, 2003 BY COLLEEN L BAXTER ===== DEPARTMENT  
NAME: CDF/COUNTY FIRE Add the appropriate NOTES and DETAILS showing this information  
on your plans and RESUBMIT, with an annotated copy of this letter: The access road  
shall be in place to the following standards prior to any framing construction, or  
construction will be stopped: - The access road surface shall be "all weather", a  
minimum 6" of compacted aggregate base rock, Class 2 or equivalent, certified by a  
licensed engineer to 95% compaction and shall be maintained. - ALL WEATHER SURFACE:  
shall be minimum of 6" of compacted Class II base rock for grades up to and includ-  
ing 5%, oil and screened for grades up to and including 15% and asphaltic concrete  
for grades exceeding 15%, but in no case exceeding 20%. The maximum grade of the ac-  
cess road shall not exceed 20%, with grades greater than 15% not permitted for dis-  
tances of more than 200 feet at a time. The access road shall have a vertical  
clearance of 14 feet for its entire width and length, including turnouts. A turn-  
around area which meets the requirements of the fire department shall be provided  
for access roads and driveways in excess of 150 feet in length. Drainage details for  
the road or driveway shall conform to current engineering practices, including ero-  
sion control measures. All private access roads, driveways, turn-around and bridges  
are the responsibility of the owner(s) of record and shall be maintained to ensure  
the fire department safe and expedient passage at all times. All Fire Department  
building requirements and fees will be addressed in the Building Permit phase. Plan  
check is based upon plans submitted to this office. Any changes or alterations shall  
be re-submitted for review prior to construction. 72 hour minimum notice is required  
prior to any inspection and/or test. Note: As a condition of submittal of these  
plans, the submitter, designer and installer certify that these plans and details  
comply with the applicable Specifications, Standards, Codes and Ordinances, agree  
that they are solely responsible for compliance with applicable Specifications,  
Standards, Codes and Ordinances, and further agree to correct any deficiencies noted  
by this review, subsequent review, inspection or other source, and, to hold harmless  
and without prejudice, the reviewing agency. ===== UPDATED ON MAY 12, 2004 BY  
COLLEEN L BAXTER ===== DEPARTMENT NAME: CDF/COUNTY FIRE Add the appropriate NOTES  
and DETAILS showing this information on your plans and RESUBMIT, with an annotated  
copy of this letter: The access road shall be 18 feet minimum width and maximum  
twenty percent slope. All bridges, culverts and crossings shall be certified by a  
registered engineer. Minimum capacity of 25 tons. Cal-Trans H-20 loading standard.  
The access road shall be in place to the following standards prior to any framing  
construction, or construction will be stopped: - The access road surface shall be  
"all weather", a minimum 6" of compacted aggregate base rock, Class 2 or equivalent,  
certified by a licensed engineer to 95% compaction and shall be maintained. - ALL  
WEATHER SURFACE: shall be minimum of 6" of compacted Class II base rock for grades  
up to and including 5%, oil and screened for grades up to and including 15% and as-  
phaltic concrete for grades exceeding 15%, but in no case exceeding 20%. The maximum  
grade of the access road shall not exceed 20%, with grades greater than 15% not per-  
mitted for distances of more than 200 feet at a time. The access road shall have a  
vertical clearance of 14 feet for its entire width and length, including turnouts. A  
turn-around area which meets the requirements of the fire department shall be  
provided for access roads and driveways in excess of 150 feet in length. Drainage  
details for the road or driveway shall conform to current engineering practices, in-

Discretionary Comments - Continued

Project Planner: Randal Adams  
Application No.: 03-0544  
APN: 049-131-23

Date: November 17, 2004  
Time: 14:39:03  
Page: 3

cluding erosion control measures. All private access roads, driveways, turn-around and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times. SHOM on the plans, DETAILS of compliance with the driveway requirements. The driveway shall be 12 feet minimum width and maximum twenty percent slope. The driveway shall be in place to the following standards prior to any framing construction, or construction will be stopped: - The driveway surface shall be "all weather", a minimum 6" of compacted aggregate base rock. Class 2 or equivalent certified by a licensed engineer to 95% compaction and shall be maintained. - ALL WEATHER SURFACE: shall be a minimum of 6" of compacted Class II base rock for grades up to and including 5%, oil and screened for grades up to and including 15% and asphaltic concrete for grades exceeding 15%, but in no case exceeding 20%. - The maximum grade of the driveway shall not exceed 20%, with grades of 15% not permitted for distances of more than 200 feet at a time. - The driveway shall have an overhead clearance of 14 feet vertical distance for its entire width. - A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length. - Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures. - All private access roads, driveways, turn-arounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times. - The driveway shall be thereafter maintained to these standards at all times. All Fire Department building requirements and fees will be addressed in the Building Permit phase. Plan check is based upon plans submitted to this office. Any changes or alterations shall be re-submitted for review prior to construction. 72 hour minimum notice is required prior to any inspection and/or test. Note: As a condition of submittal of these plans, the submitter, designer and installer certify that these plans and details comply with the applicable Specifications, Standards, Codes and Ordinances. agree that they are solely responsible for compliance with applicable Specifications, Standards, Codes and Ordinances, and further agree to correct any deficiencies noted by this review, subsequent review, inspection or other source, and, to hold harmless and without prejudice, the reviewing agency

Cal Dept of Forestry/County Fire Miscellaneous Com

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===== REVIEW ON DECEMBER 31, 2003 BY COLLEEN L BAXTER =====  
===== UPDATED ON MAY 12, 2004 BY COLLEEN L BAXTER =====

EXHIBIT H