Negative Declaration & Notice Of Determination

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING
976 OSOS STREET • ROOM 200 • SAN LUIS OBISPO • CALIFORNIA 93408 • (805) 781-5600

ENVIRONMENTAL DETERMINATION NO. ED14-205 **DATE:** 9/10/15

PROJECT/ENTITLEMENT: Karen Wise & Verizon Wireless Conditional Use Permit; DRC2014-00100

APPLICANT NAME: Verizon Wireless
ADDRESS: 2785 Mitchell Drive, Bldg. 9, Walnut Creek, CA 94598
CONTACT PERSON: Tricia Knight (agent) **Telephone:** (805) 448-4221

PROPOSED USES/INTENT: Request by Karen Wise & Verizon Wireless for a Conditional Use Permit to allow the construction and operation of an unmanned wireless communication facility, consisting of one new 75' tall artificial eucalyptus tree ("mono-eucalyptus") supporting twelve 6' tall panel antennas, twelve new Remote Radio Units (RRUs), and four Raycaps (two located in the equipment area). The panel antennas would be located in two sectors of six panel antennas each, one sector mounted at a height of 59' and the other at height of 67' (measured to center of antennas) on the proposed mono-eucalyptus. The project also includes installation of two GPS antennas, an electric meter located near the base of the mono-eucalyptus, and new equipment cabinets and a 132 gallon diesel standby generator located on concrete slabs. All proposed above ground improvements will be located within a 24' x 42' lease area, surrounded by an 8' high wood fence enclosure. The project involves approximately 350' linear feet of trenching for a new power/telco utility route, with a total project site disturbance of approximately 1,050 square feet of a 5-acre parcel.

LOCATION: 2286 South Halcyon Road, Arroyo Grande, CA 93420

LEAD AGENCY: **County of San Luis Obispo**
Dept of Planning & Building
976 Osos Street, Rm. 200
San Luis Obispo, CA 93408-2040
Website: http://www.sloplanning.org

STATE CLEARINGHOUSE REVIEW: YES ☒ **NO** ☐

OTHER POTENTIAL PERMITTING AGENCIES: N/A

ADDITIONAL INFORMATION: Additional information pertaining to this Environmental Determination may be obtained by contacting the above Lead Agency address or (805)781-5600.
COUNTY "REQUEST FOR REVIEW" PERIOD ENDS AT ..... 4:30 p.m. (2 wks from above DATE)

30-DAY PUBLIC REVIEW PERIOD begins at the time of public notification

Notice of Determination

State Clearinghouse No. _____

This is to advise that the San Luis Obispo County_____ as ☐ *Lead Agency* ☐ *Responsible Agency* approved/denied the above described project on _____, and has made the following determinations regarding the above described project:

The project will not have a significant effect on the environment. A Negative Declaration was prepared for this project pursuant to the provisions of CEQA. Mitigation measures and monitoring were made a condition of approval of the project. A Statement of Overriding Considerations was not adopted for this project. Findings were made pursuant to the provisions of CEQA.

This is to certify that the Negative Declaration with comments and responses and record of project approval is available to the General Public at the 'Lead Agency' address above.

	Cody Scheel		County of San Luis Obispo
Signature	**Project Manager Name**	**Date**	**Public Agency**

Initial Study Summary – Environmental Checklist

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING
976 OSOS STREET • ROOM 200 • SAN LUIS OBISPO • CALIFORNIA 93408 • (805) 781-5600

(ver 5.7)Using Form

Project Title & No. **Karen Wise & Verizon Wireless Conditional Use Permit;ED14-205 (DRC2014-00100)**

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The proposed project could have a "Potentially Significant Impact" for at least one of the environmental factors checked below. Please refer to the attached pages for discussion on mitigation measures or project revisions to either reduce these impacts to less than significant levels or require further study.

☒ Aesthetics	☐ Geology and Soils	☐ Recreation
☐ Agricultural Resources	☐ Hazards/Hazardous Materials	☐ Transportation/Circulation
☐ Air Quality	☐ Noise	☐ Wastewater
☐ Biological Resources	☐ Population/Housing	☐ Water /Hydrology
☐ Cultural Resources	☐ Public Services/Utilities	☐ Land Use

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the Environmental Coordinator finds that:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Cody Scheel — Cody Scheel — 9/3/15
Prepared by (Print) — Signature — Date

Airlin Singewald — Ellen Carroll, Environmental Coordinator
Reviewed by (Print) — Signature — (for) — Date

Project Environmental Analysis

The County's environmental review process incorporates all of the requirements for completing the Initial Study as required by the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study includes staff's on-site inspection of the project site and surroundings and a detailed review of the information in the file for the project. In addition, available background information is reviewed for each project. Relevant information regarding soil types and characteristics, geologic information, significant vegetation and/or wildlife resources, water availability, wastewater disposal services, existing land uses and surrounding land use categories and other information relevant to the environmental review process are evaluated for each project. Exhibit A includes the references used, as well as the agencies or groups that were contacted as a part of the Initial Study. The County Planning Department uses the checklist to summarize the results of the research accomplished during the initial environmental review of the project.

Persons, agencies or organizations interested in obtaining more information regarding the environmental review process for a project should contact the County of San Luis Obispo Planning Department, 976 Osos Street, Rm. 200, San Luis Obispo, CA, 93408-2040 or call (805) 781-5600.

A. PROJECT

DESCRIPTION: Request by Karen Wise & Verizon Wireless for a Conditional Use Permit to allow the construction and operation of an unmanned wireless communication facility, consisting of one new 75' tall artificial eucalyptus tree ("mono-eucalyptus") supporting twelve 6' tall panel antennas, twelve new Remote Radio Units (RRUs), and four Raycaps (two located in the equipment area). The panel antennas would be located in two sectors of six panel antennas each, one sector mounted at a height of 59' and the other at height of 67' (measured to center of antennas) on the proposed mono-eucalyptus. The project also includes installation of two GPS antennas, an electric meter located near the base of the mono-eucalyptus, and new equipment cabinets and a 132 gallon diesel standby generator located on concrete slabs. All proposed above ground improvements will be located within a 24' x 42' lease area, surrounded by an 8' high wood fence enclosure. The project involves approximately 350' linear feet of trenching for a new power/telco utility route, with a total project site disturbance of approximately 1,050 square feet of a 5-acre parcel. The proposed project is within the Residential Rural land use category and is located at 2286 South Halcyon Road, approximately 500 feet east of the intersection of El Campo Road, adjacent to the north side of the community of Palo Mesa. The site is in the South County Inland sub area of the South County planning area.

ASSESSOR PARCEL NUMBER(S): 075-232-054

Latitude: 35 degrees 4 ' 25" N Longitude: -120 degrees 34' 23" W **SUPERVISORIAL DISTRICT #** 4

B. EXISTING SETTING

PLAN AREA: South County **SUB**: South County **COMM:** Rural

LAND USE CATEGORY: Residential Rural

COMB. DESIGNATION: None

PARCEL SIZE: 5 acres

TOPOGRAPHY: Nearly level

VEGETATION: Agriculture Urban-built up

EXISTING USES: Single-family residence(s) agricultural uses

SURROUNDING LAND USE CATEGORIES AND USES:

North: Residential Rural; single-family residence(s)	*East:* Residential Rural; single-family residence(s)

South: Residential Suburban; single-family residence(s), golf-course	*West:* Residential Rural; undeveloped

C. ENVIRONMENTAL ANALYSIS

During the Initial Study process, at least one issue was identified as having a potentially significant environmental effects (see following Initial Study). Those potentially significant items associated with the proposed uses can be minimized to less than significant levels.

COUNTY OF SAN LUIS OBISPO
INITIAL STUDY CHECKLIST

1. AESTHETICS *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Create an aesthetically incompatible site open to public view?	☐	☒	☐	☐
b) Introduce a use within a scenic view open to public view?	☐	☒	☐	☐
c) Change the visual character of an area?	☐	☐	☒	☐
d) Create glare or night lighting, which may affect surrounding areas?	☐	☐	☐	☒
e) Impact unique geological or physical features?	☐	☐	☒	☐
f) Other: _____	☐	☐	☐	☐

Setting. The project site is located on South Halcyon Road, an area of predominately residential rural and residential suburban development. The property is five acres and is adjacent to four to five acre parcels to the north, east and west. The parcels to the west are undeveloped, and the parcels to the north and east are developed with single family residences. Immediately to the south, across South Halcyon Road, is a golf course and residential suburban development.

The subject parcel has been substantially disturbed and contains several agricultural accessory structures, greenhouses and two single family residences. The topography of the site is nearly level. Vegetation on the property consists of primarily avocado trees, with some grasses, shrubs and ornamental landscaping. There are also pine trees that appear to have been planted in rows that follow the west and south property boundary along South Halcyon Road.

South Halcyon Road is the primary public viewing corridor in the area. Travel along South Halcyon Road is mainly by the residents of the rural area. The wireless facility is a stealth design as an artificial eucalyptus tree approximately 75 feet in height. The proposed facility would be sited near the west property line within a row of pine trees ranging in height from approximately 60 to 85 feet. Though the proposed mono-eucalyptus would not be located adjacent to existing eucalyptus trees, the proposed facility would be compatible with the surrounding landscape since there are many scattered eucalyptus trees in the area, including a large grove of eucalyptus trees located on the immediate parcel to the north.

Regulatory Setting

Land Use Ordinance Section 22.30.180 establishes the following screening standard for wireless communication facilities:

All facilities shall be screened with vegetation or landscaping. Where screening with vegetation is not feasible, the facilities shall be disguised to resemble rural, pastoral architecture (ex: windmills, barns, trees) or other features determined to blend with the surrounding area and be finished in a texture and color deemed unobtrusive to the neighborhood in which it is located.

Conservation and Open Space Element Policy VR 9.3 states:

Locate, design and screen communications facilities, including towers, antennas, and associated equipment and buildings in order to avoid views of them in scenic areas, minimize their appearance and visually blend with the surrounding natural and built environments. Locate such facilities to avoid ridge tops where they would silhouette against the sky as viewed from major public view corridors and locations.

Conservation and Open Space Element Policy VR 9.4 states:

Encourage collocation of communication facilities (one or more carriers sharing a site, tower, or equipment) when feasible and where it would avoid or minimize adverse visual effects.

Impact. The proposed unmanned wireless communications facility would be visible from South Halcyon Road, West El Campo Road, and possibly Aloma Way, which are all public roads. The design for this facility, a mono-eucalyptus, is a stealth feature that reduces visual impacts on the surrounding rural area. The proposed project site is surrounded by rural residences, a golf course, existing eucalyptus and pine trees, agricultural uses and greenhouses. The project does not propose outdoor lighting.

The proposed project could have a potentially significant impact on visual resources since it would introduce a new use that could be visually incompatible with the character of the surrounding rural landscape. The applicant submitted photo-simulations of the proposed facility from key viewing angles along West El Campo Road, and Valley Oaks Lane (private road). The photo-simulations demonstrate that the site will be visible from each of these roads. However, since the facility is designed to appear like a eucalyptus tree, it would blend with the surrounding landscape and would not attract attention. This design is consistent with the goals of the County's communications facilities ordinance.

Mitigation/Conclusion. Since the proposed facility would visually blend with the landscape, it would not be readily discernible as a wireless communications facility. This is consistent with the visual screening standard for wireless communications facilities which requires facilities to either be completely screened by vegetation or disguised to resemble natural or built features of the landscape. In order to reduce visual impacts, the project is subject to mitigation measures that require the applicant to use the most realistic appearing faux eucalyptus structure, with an organic and non-symmetrical form and realistic bark texture and foliage colors. In addition, the applicant is required to submit material and color test samples of all visual elements of the mono-eucalyptus pole. These measures, discussed in detail in the mitigation summary table (Exhibit B), would reduce the project's potential visual impacts to a level of insignificance.

2. AGRICULTURAL RESOURCES *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Convert prime agricultural land, per NRCS soil classification, to non-agricultural use?*	☐	☐	☒	☐
b) *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?*	☐	☐	☒	☐
c) *Impair agricultural use of other property or result in conversion to other uses?*	☐	☐	☒	☐
d) *Conflict with existing zoning for agricultural use, or Williamson Act program?*	☐	☐	☐	☒
e) *Other:* _____	☐	☐	☐	☐

Setting. Project Elements. The following area-specific elements relate to the property's importance for agricultural production:

Land Use Category: Residential Rural

State Classification: Not prime farmland

Historic/Existing Commercial Crops: Avocados

In Agricultural Preserve? Yes, Nipomo Mesa

Under Williamson Act contract? No

The soil type(s) and characteristics on the subject property include:

Oceano sand (0 - 9 % slope). This nearly level to gently sloping sandy soil is considered well drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities. The soil is considered Class VI without irrigation and Class IV when irrigated.

Oceano sand, (9 - 30 % slope). This moderately sloping sandy soil is considered well drained. The soil has low erodibility and low shrink-swell characteristics, as well as having potential septic system constraints due to: poor filtering capabilities, steep slopes. The soil is considered Class VI without irrigation and Class is not rated when irrigated.

Impact. The project is located in a predominantly non-agricultural area with some agricultural operations (avocado orchards) occurring on-site and on the adjacent parcel to the east. The total size of the avocado orchard is about 10 acres. The project is located in a 1,008 square foot equipment area with the existing avocado tree orchard operation located approximately 30 feet to the east of the proposed equipment area. The project does not propose to remove any avocado trees. Installation of the new wireless facility is not expected to interfere with these existing operations. No significant impacts to agricultural resources are anticipated.

Mitigation/Conclusion. Based on the above discussion, and the proposed facility being unmanned, impacts to agriculture would be less than significant and no mitigation measures are necessary.

3. AIR QUALITY

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Violate any state or federal ambient air quality standard, or exceed air quality emission thresholds as established by County Air Pollution Control District?*	☐	☐	☒	☐
b) *Expose any sensitive receptor to substantial air pollutant concentrations?*	☐	☐	☒	☐
c) *Create or subject individuals to objectionable odors?*	☐	☐	☒	☐
d) *Be inconsistent with the District's Clean Air Plan?*	☐	☐	☒	☐
e) *Result in a cumulatively considerable net increase of any criteria pollutant either considered in non-attainment under applicable state or federal ambient air quality standards that are due to increased energy use or traffic generation, or intensified land use change?*	☐	☐	☒	☐
GREENHOUSE GASES				
f) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*	☐	☐	☒	☐
g) *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*	☐	☐	☒	☐
h) *Other:* _____	☐	☐	☐	☐

Setting. The Air Pollution Control District (APCD) has developed and updated their CEQA Air Quality Handbook (2012) to evaluate project specific impacts and help determine if air quality mitigation measures are needed, or if potentially significant impacts could result. To evaluate long-term emissions, cumulative effects, and establish countywide programs to reach acceptable air quality levels, a Clean Air Plan has been adopted (prepared by APCD).

Greenhouse Gas (GHG) Emissions are said to result in an increase in the earth's average surface temperature. This is commonly referred to as global warming. The rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the earth's climate system. This is also known as climate change. These changes are now thought to be broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels.

The passage of AB32, the California Global Warming Solutions Act (2006), recognized the need to reduce GHG emissions and set the greenhouse gas emissions reduction goal for the State of California into law. The law required that by 2020, State emissions must be reduced to 1990 levels.

This is to be accomplished by reducing greenhouse gas emissions from significant sources via regulation, market mechanisms, and other actions. Subsequent legislation (e.g., SB97-Greenhouse Gas Emissions bill) directed the California Air Resources Board (CARB) to develop statewide thresholds.

In March 2012, the San Luis Obispo County Air Pollution Control District (APCD) approved thresholds for GHG emission impacts, and these thresholds have been incorporated the APCD's CEQA Air Quality Handbook. APCD determined that a tiered process for residential / commercial land use projects was the most appropriate and effective approach for assessing the GHG emission impacts. The tiered approach includes three methods, any of which can be used for any given project:

1. Qualitative GHG Reduction Strategies (e.g. Climate Action Plans): A qualitative threshold that is consistent with AB 32 Scoping Plan measures and goals; or,
2. Bright-Line Threshold: Numerical value to determine the significance of a project's annual GHG emissions; or,
3. Efficiency-Based Threshold: Assesses the GHG impacts of a project on an emissions per capita basis.

For most projects the Bright-Line Threshold of 1,150 Metric Tons CO2/year (MT CO2e/yr) will be the most applicable threshold. In addition to the residential/commercial threshold options proposed above, a bright-line numerical value threshold of 10,000 MT CO2e/yr was adopted for stationary source (industrial) projects.

It should be noted that projects that generate less than the above mentioned thresholds will also participate in emission reductions because air emissions, including GHGs, are under the purview of the California Air Resources Board (or other regulatory agencies) and will be "regulated" either by CARB, the Federal Government, or other entities. For example, new vehicles will be subject to increased fuel economy standards and emission reductions, large and small appliances will be subject to more strict emissions standards, and energy delivered to consumers will increasingly come from renewable sources. Other programs that are intended to reduce the overall GHG emissions include Low Carbon Fuel Standards, Renewable Portfolio standards and the Clean Car standards. As a result, even the emissions that result from projects that produce fewer emissions than the threshold will be subject to emission reductions.

Under CEQA, an individual project's GHG emissions will generally not result in direct significant impacts. This is because the climate change issue is global in nature. However, an individual project could be found to contribute to a potentially significant cumulative impact. Projects that have GHG emissions above the noted thresholds may be considered cumulatively considerable and require mitigation.

Impact. As proposed, the project will result in the disturbance of approximately 1,050 square feet. This will result in the creation of construction dust, as well as short- and long-term vehicle emissions. The project will be moving less than 1,200 cubic yards/day of material and will disturb less than four acres of area, and therefore will be below the general thresholds triggering construction-related mitigation. The project is also not in close proximity to sensitive receptors that might otherwise result in nuisance complaints and be subject to limited dust and/or emission control measures during construction.

From an operational standpoint, based on Table 1-1 of the CEQA Air Quality Handbook (2012), the project will not exceed operational thresholds triggering mitigation because it involves the construction and operation of an unmanned wireless communications facility, which, once constructed, would only generate approximately one vehicle trip every four to six weeks for routine maintenance. This is substantially less than the amount of vehicle traffic associated with a single family residence, which is estimated to generate about 10 vehicle trips per day. The project is consistent with the general level of development anticipated and projected in the Clean Air Plan. No significant air quality impacts are

expected to occur.

This project is most similar to "general light industrial." Using the GHG threshold information described in the Setting section, the project is expected to generate less than the Bright-Line Threshold of 1,150 metric tons of GHG emissions. Therefore, the project's potential direct and cumulative GHG emissions are found to be less significant and less than a cumulatively considerable contribution to GHG emissions. Section 15064(h)(2) of the CEQA Guidelines provide guidance on how to evaluate cumulative impacts. If it is shown that an incremental contribution to a cumulative impact, such as global climate change, is not 'cumulatively considerable', no mitigation is required. Because this project's emissions fall under the threshold, no mitigation is required.

Mitigation/Conclusion. No significant impacts are anticipated and no mitigation measures are necessary.

4. BIOLOGICAL RESOURCES *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Result in a loss of unique or special status species* or their habitats?	☐	☐	☒	☐
b) Reduce the extent, diversity or quality of native or other important vegetation?	☐	☐	☒	☐
c) Impact wetland or riparian habitat?	☐	☐	☐	☒
d) Interfere with the movement of resident or migratory fish or wildlife species, or factors, which could hinder the normal activities of wildlife?	☐	☐	☒	☐
e) Conflict with any regional plans or policies to protect sensitive species, or regulations of the California Department of Fish & Wildlife or U.S. Fish & Wildlife Service?	☐	☐	☒	☐
f) Other: _____	☐	☐	☐	☐

*** Species – as defined in Section15380 of the CEQA Guidelines, which includes all plant and wildlife species that fall under the category of rare, threatened or endangered, as described in this section.**

Setting. The following are existing elements on or near the proposed project relating to potential biological concerns:

On-site Vegetation: Avocado trees, pine trees, grasses, shrubs and ornamental landscaping.

Site's tree canopy coverage: Approximately 50%

The closest creek is an unnamed tributary to Black Lake located approximately 1.1 miles south.

The Natural Diversity Database (or other biological references) identified the following species potentially existing within approximately one mile of the proposed project:

Habitat(s)

None

Vegetation

Pismo clarkia (Clarkia speciosa ssp. immaculate) FE, SR, List 1B

Pismo clarkia *(Clarkia speciosa* ssp. *immaculate)* has been found about 0.4 mile to the north. This annual herb occurs on low, sandy hills (up to the 185 meter (600-foot) elevation) from Pismo to Edna Valley. Pismo clarkia populations are found in valley and foothill grasslands, and in the margins between chaparral and oak woodland communities near the coast. This species is listed as Federally endangered, State rare, and extremely rare by CNPS (List 1B, RED 3-3-3).

Santa Margarita manzanita (Arctostaphylos pilosula ssp. pilosula) List 1B

Santa Margarita manzanita (*Arctostaphylos pilosula* ssp. *pilosula*) has been found in the project area. This evergreen shrub is found on shale soils in closed-cone coniferous forest, chaparral; and cismontane woodland areas between the 170 and 1,100-meter elevations (555 to 3,600 feet). The typical blooming period is December-March. Santa Margarita manzanita is considered rare by CNPS (List 1B, RED 3-2-3).

Sand Mesa manzanita (Arctostaphylos rudis) List 1B

Sand mesa manzanita *(Arctostaphylos rudis)* has been found about 0.8 mile to the east. This evergreen shrub is generally found on sandy soils in chaparral and coastal scrub areas between the 25 and 230-meter (80 to 760 foot) elevations (Tibor 2001). The blooming period is November-February. The sand mesa manzanita is considered rare by CNPS (List 1B, RED 2-2-3).

Wildlife

None

Impact. The proposed project would result in the disturbance of approximately 1,050 square feet for the construction of a wireless telecommunications facility. The proposal involves trenching and construction of an artificial eucalyptus tree and installation of equipment cabinets and a generator on concrete slabs located on a disturbed area of the site. The location of the proposed facility has been previously disturbed due to its historic use for parking tractors and other farm equipment and is denuded of vegetation. The site does not support any Pismo clarkia, manzanita or other native vegetation. The project site does not contain habitat for special status wildlife species.

Mitigation/Conclusion. No significant biological impacts are expected to occur, and no mitigation measures are necessary.

5. CULTURAL RESOURCES *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Disturb archaeological resources?	☐	☐	☒	☐
b) Disturb historical resources?	☐	☐	☒	☐
c) Disturb paleontological resources?	☐	☐	☒	☐
d) Other: _____	☐	☐	☐	☐

Setting. The project is located in an area historically occupied by the Obispeno Chumash. . No historic structures are present and no paleontological resources are known to exist in the area.

Impact. The project is not located in an area that would be considered culturally sensitive due to lack of physical features typically associated with prehistoric occupation. No evidence of cultural materials was noted on the property. Impacts to historical or paleontological resources are not expected.

Mitigation/Conclusion. County land Use Ordinance Section 22.10.040 includes a provision that construction work cease in the event resources are unearthed with work allowed to continue once the issue is resolved. The proposed property lacks the physical features (e.g. nearby source of surface water or rock outcroppings) that are typical of a prehistoric occupation. The site is a pre-disturbed area due to the existing agriculture operations. No significant cultural resource impacts are expected to occur, and no mitigation measures are necessary.

6. GEOLOGY AND SOILS *Will the project:*	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Result in exposure to or production of unstable earth conditions, such as landslides, earthquakes, liquefaction, ground failure, land subsidence or other similar hazards?	☐	☐	☒	☐
b) Be within a California Geological Survey "Alquist-Priolo" Earthquake Fault Zone", or other known fault zones*?	☐	☐	☒	☐
c) Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from project-related improvements, such as vegetation removal, grading, excavation, or fill?	☐	☐	☒	☐
d) Include structures located on expansive soils?	☐	☐	☒	☐
e) Be inconsistent with the goals and policies of the County's Safety Element relating to Geologic and Seismic Hazards?	☐	☐	☒	☐
f) Preclude the future extraction of valuable mineral resources?	☐	☐	☒	☐
g) Other: _____	☐	☐	☐	☐

*** Per Division of Mines and Geology Special Publication #42**

Setting. The following relates to the project's geologic aspects or conditions:

Topography: Nearly level

Within County's Geologic Study Area?: No

Landslide Risk Potential: Low

Liquefaction Potential: Moderate

Nearby potentially active faults?: No Distance? Not applicable

Area known to contain serpentine or ultramafic rock or soils?: No

Shrink/Swell potential of soil: Low

Other notable geologic features? None

Impact. As proposed, the project will result in the disturbance of approximately 1,050 square feet in previously disturbed and developed areas of the site where the existing agricultural operations have occurred. No significant impacts are expected to occur.

Mitigation/Conclusion. Under Chapter 18 of the California Building Code, the project may be required to submit a soils engineering report with the construction permit application and to implement the recommendations of the report. There is no evidence that measures above what will already be required by ordinance or codes are needed.

7. HAZARDS & HAZARDOUS MATERIALS - ***Will the project:***	**Potentially Significant**	**Impact can & will be mitigated**	**Insignificant Impact**	**Not Applicable**
a) Create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on, or adjacent to, a site which is included on a list of hazardous material/waste sites compiled pursuant to Gov't Code 65962.5 ("Cortese List"), and result in an adverse public health condition?	☐	☐	☒	☐
e) Impair implementation or physically interfere with an adopted emergency response or evacuation plan?	☐	☐	☒	☐
f) If within the Airport Review designation, or near a private airstrip, result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Increase fire hazard risk or expose people or structures to high wildland fire hazard conditions?	☐	☐	☒	☐
h) Be within a 'very high' fire hazard severity zone?	☐	☐	☐	☒

7. HAZARDS & HAZARDOUS MATERIALS - *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
i) Be within an area classified as a 'state responsibility' area as defined by CalFire?	☐	☐	☒	☐
j) Other: _____	☐	☐	☐	☐

Setting. The project is not located in an area of known hazardous material contamination. The project is not within the Airport Review area.

With regards to potential fire hazards, the subject project is within the "High" Fire Hazard Severity Zone(s) in a state responsibility area as defined by CalFire. The project would require verification from the responsible fire agency (CAL FIRE) that all conditions prepared in the Fire Safety Plan have been met prior to final approval. Based on the County's fire response time map, it will take approximately 0-5 minutes to respond to a call regarding fire or life safety. Refer to the Public Services section for further discussion on Fire Safety impacts.

Impact. The project does not propose the use of hazardous materials, nor the generation of hazardous wastes. The proposed project is not found on the 'Cortese List' (which is a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5). The project is not expected to conflict with any regional emergency response or evacuation plan. Furthermore, the Department of Environmental Health reviewed the proposed project and will require the applicant to submit to the Department of Environmental Health, a hazardous materials business plan (Leslie Terry, March 12, 2015).

The applicant submitted a radio frequency report (Hammett & Edison, Inc.; February 23, 2015) for the project. The report concluded that the proposed facility would comply with applicable FCC standards for radiation emissions. For a person anywhere at ground level, the maximum ambient radiation exposure due to the proposed communications facility would be 0.70 percent of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building (including the nearby residence) is 1.1 percent of the public exposure limit. These results include several "work-case" assumptions and therefore are expected to overstate actual power density levels.

Mitigation/Conclusion. No significant impacts as a result of hazards or hazardous materials are anticipated, and no mitigation measures are necessary.

8. NOISE *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Expose people to noise levels that exceed the County Noise Element thresholds?	☐	☐	☒	☐
b) Generate permanent increases in the ambient noise levels in the project vicinity?	☐	☐	☒	☐
c) Cause a temporary or periodic increase in ambient noise in the project vicinity?	☐	☐	☒	☐

8. NOISE

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
d) Expose people to severe noise or vibration?	☐	☐	☒	☐
e) If located within the Airport Review designation or adjacent to a private airstrip, expose people residing or working in the project area to severe noise levels?	☐	☐	☐	☒
f) Other: _____	☐	☐	☐	☐

Setting. The project is not within close proximity of loud noise sources, and will not conflict with any sensitive noise receptors (e.g., residences). The nearest sensitive noise receptors to the site are the existing residences on the property which are located approximately 320 feet to the east of the proposed wireless facility. Based on the Noise Element's projected future noise generation from known stationary and vehicle-generated noise sources, the project is within an acceptable threshold area.

Impact. The project is not expected to generate loud noises, nor conflict with the surrounding uses. However, the project would introduce noise generating equipment into a relatively quiet rural area. The facility's primary noise sources include an emergency back-up generator. As a standard condition of approval to ensure the project will not conflict with any sensitive noise receptors, the emergency back-up generator shall be sound attenuated to meet applicable County and State exterior noise standards, and the project shall be maintained in compliance with the County Noise Element. The back-up emergency generator shall have a noise baffle cover and shall not exceed a maximum noise level of 65 dB at a distance of 50 feet from the generator. The project generator will be operational only during emergencies and for about 15 minutes each month for monthly maintenance during the daytime. In addition, the proposed facility will be unmanned and as such would not be considered noise sensitive.

Mitigation/Conclusion. No significant noise impacts are anticipated, and no mitigation measures are necessary.

9. POPULATION/HOUSING

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Induce substantial growth in an area either directly (e.g., construct new homes or businesses) or indirectly (e.g., extension of major infrastructure)?	☐	☐	☒	☐
b) Displace existing housing or people, requiring construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Create the need for substantial new housing in the area?	☐	☐	☒	☐

9. POPULATION/HOUSING

Will the project:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
d) Other: _____	☐	☐	☐	☐

Setting In its efforts to provide for affordable housing, the county currently administers the Home Investment Partnerships (HOME) Program and the Community Development Block Grant (CDBG) program, which provides limited financing to projects relating to affordable housing throughout the county. The County's Inclusionary Housing Ordinance requires provision of new affordable housing in conjunction with both residential and nonresidential development and subdivisions.

Impact. The proposed project is not anticipated to induce growth, create the need for new housing, or use a substantial amount of fuel or energy to construct and maintain. The proposed wireless communications facility would not result in a need for a significant amount of new housing or displace existing housing. No significant population and housing impacts are anticipated.

Mitigation/Conclusion. No significant population and housing impacts are anticipated, and no mitigation measures are considered necessary.

10. PUBLIC SERVICES/UTILITIES

Will the project have an effect upon, or result in the need for new or altered public services in any of the following areas:

	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Fire protection?	☐	☐	☒	☐
b) Police protection (e.g., Sheriff, CHP)?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Roads?	☐	☐	☒	☐
e) Solid Wastes?	☐	☐	☐	☒
f) Other public facilities?	☐	☐	☐	☐
g) Other: _____	☐	☐	☐	☐

Setting. The project area is served by the following public services/facilities:

Police: County Sheriff Location: Oceano (Approximately __ miles to the east)

Fire: Cal Fire (formerly CDF) Hazard Severity: High Response Time: 0-5 minutes

Location: Approximately __ miles to the east

School District: Lucia Mar Unified School District.

For additional information regarding fire hazard impacts, go to the 'Hazards and Hazardous Materials' section.

Impact. No significant project-specific impacts to utilities or public services were identified. This project, along with others in the area, will have a cumulative effect on police/sheriff and fire protection.

The project would not affect service levels related to schools or solid wastes because it does not involve the construction of buildings for human habitation. The project's direct and cumulative impacts are within the general assumptions of allowed use for the subject property that was used to estimate the fees in place.

Mitigation/Conclusion. Regarding cumulative effects, public facility (County) and school (State Government Code 65995 et seq.) fee programs have been adopted to address this impact, and will reduce the cumulative impacts to less than significant levels.

11. RECREATION

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Increase the use or demand for parks or other recreation opportunities?*	☐	☐	☐	☒
b) *Affect the access to trails, parks or other recreation opportunities?*	☐	☐	☐	☒
c) *Other* _____	☐	☐	☐	☐

Setting. The County's Parks and Recreation Element does not show that a potential trail goes through the proposed project site. The project is not proposed in a location that will affect any trail, park, recreational resource, coastal access, and/or Natural Area.

Impact. The proposed project will not create a significant need for additional park, Natural Area, and/or recreational resources.

Mitigation/Conclusion. No significant recreation impacts are anticipated, and no mitigation measures are necessary.

12. TRANSPORTATION/CIRCULATION

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) *Increase vehicle trips to local or areawide circulation system?*	☐	☐	☒	☐
b) *Reduce existing "Level of Service" on public roadway(s)?*	☐	☐	☒	☐
c) *Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance, slow vehicles)?*	☐	☐	☒	☐
d) *Provide for adequate emergency access?*	☐	☐	☒	☐
e) *Conflict with an established measure of effectiveness for the performance of the circulation system considering all modes of transportation (e.g. LOS, mass transit, etc.)?*	☐	☐	☒	☐

12. TRANSPORTATION/CIRCULATION *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
f) Conflict with an applicable congestion management program?	☐	☐	☐	☒
g) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐
h) Result in a change in air traffic patterns that may result in substantial safety risks?	☐	☐	☐	☒
i) Other: _____	☐	☐	☐	☐

Setting. The County has established the acceptable Level of Service (LOS) on roads for this rural area as "C" or better. The existing road network in the area including the project's access street (South Halcyon Road) is operating at acceptable levels. Based on existing road speeds and configuration (vertical and horizontal road curves), sight distance is considered acceptable.

Referrals were sent to County Public Works, and no significant traffic-related concerns were identified. The project is within the South County Area 2 Circulation Fee area. This fee provides the means to collect "fair share" monies from new development to help fund certain regional road improvements that will be needed once the area reaches "buildout". The project will be subject to this fee.

Impact. After construction, the proposed unmanned wireless communications facility is estimated to generate about one vehicle trip every six to eight weeks for routine maintenance. This small amount of additional traffic will not result in a significant change to the existing road service or traffic safety levels. The project will be required to pay traffic impact fees to mitigate its contribution to cumulative traffic impacts in the South County Road Fee area.

Mitigation/Conclusion. No significant traffic impacts were identified, and no mitigation measures above what are already required by ordinance are necessary.

13. WASTEWATER *Will the project:*	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Violate waste discharge requirements or Central Coast Basin Plan criteria for wastewater systems?	☐	☐	☐	☒
b) Change the quality of surface or ground water (e.g., nitrogen-loading, day-lighting)?	☐	☐	☐	☒
c) Adversely affect community wastewater service provider?	☐	☐	☐	☒
d) Other: _____	☐	☐	☐	☐

Setting/Impact. The proposed project consists of an unmanned wireless communications facility and would not generate wastewater or require wastewater disposal.

Mitigation/Conclusion. Given that the proposed facility will not generate wastewater, impacts would be less than significant and no mitigation measures are necessary.

14. WATER & HYDROLOGY

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
QUALITY				
a) Violate any water quality standards?	☐	☐	☒	☐
b) Discharge into surface waters or otherwise alter surface water quality (e.g., turbidity, sediment, temperature, dissolved oxygen, etc.)?	☐	☐	☒	☐
c) Change the quality of groundwater (e.g., saltwater intrusion, nitrogen-loading, etc.)?	☐	☐	☒	☐
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?	☐	☐	☒	☐
e) Change rates of soil absorption, or amount or direction of surface runoff?	☐	☐	☒	☐
f) Change the drainage patterns where substantial on- or off-site sedimentation/ erosion or flooding may occur?	☐	☐	☒	☐
g) Involve activities within the 100-year flood zone?	☐	☐	☐	☒
QUANTITY				
h) Change the quantity or movement of available surface or ground water?	☐	☐	☒	☐
i) Adversely affect community water service provider?	☐	☐	☐	☒
j) Expose people to a risk of loss, injury or death involving flooding (e.g., dam failure,etc.), or inundation by seiche, tsunami or mudflow?	☐	☐	☐	☒
k) Other: _____	☐	☐	☐	☐

Setting. The project does not require any water supply.

The topography of the project is nearly level The closest creek from the proposed development is

approximately ___ miles away. As described in the NRCS Soil Survey, the soil surface is considered to have low erodibility.

DRAINAGE – The following relates to the project's drainage aspects:

Within the 100-year Flood Hazard designation? No

Closest creek? Distance? Approximately __ feet

Soil drainage characteristics: Well drained

SEDIMENTATION AND EROSION – Soil type, area of disturbance, and slopes are key aspects to analyzing potential sedimentation and erosion issues. The project's soil types and descriptions are listed in the previous Agriculture section under "Setting". As described in the NRCS Soil Survey, the project's soil erodibility is as follows:

Soil erodibility: Low

A sedimentation and erosion control plan is required for all construction and grading projects (LUO Sec. 22.52.120, CZLUO Sec. 23.05.036) to minimize these impacts. When required, the plan is prepared by a civil engineer to address both temporary and long-term sedimentation and erosion impacts. Projects involving more than one acre of disturbance are subject to the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which focuses on controlling storm water runoff. The Regional Water Quality Control Board is the local extension who monitors this program.

Impact – Water Quality/Hydrology

With regards to project impacts on water quality the following conditions apply:

- ✓ Approximately 1,050 square feet of site disturbance;
- ✓ The project will be subject to standard County requirements for drainage, sedimentation and erosion control for construction and permanent use;
- ✓ The project is not on highly erodible soils, nor on moderate to steep slopes;
- ✓ The project is not within a 100-year Flood Hazard designation;
- ✓ The project is more than 100 feet from the closest creek or surface water body;

Water Quantity

Based on the project description, the project will not use any water.

Mitigation/Conclusion. As specified above for water quality, existing regulations and/or required plans will adequately address surface water quality impacts during construction and permanent use of the project. No additional measures above what are required or proposed are needed to protect water quality, and no significant impacts from water use are anticipated.

15. LAND USE

Will the project:

	Inconsistent	Potentially Inconsistent	Consistent	Not Applicable
a) Be potentially inconsistent with land use, policy/regulation (e.g., general plan [County Land Use Element and Ordinance], local coastal plan, specific plan, Clean Air Plan, etc.) adopted to avoid or mitigate for environmental effects?	☐	☐	☒	☐

15. LAND USE

Will the project:	Inconsistent	Potentially Inconsistent	Consistent	Not Applicable
b) Be potentially inconsistent with any habitat or community conservation plan?	☐	☐	☐	☒
c) Be potentially inconsistent with adopted agency environmental plans or policies with jurisdiction over the project?	☐	☐	☐	☒
d) Be potentially incompatible with surrounding land uses?	☐	☐	☒	☐
e) Other: _____	☐	☐	☐	☐

Setting/Impact. Surrounding uses are identified on Page 2 of the Initial Study. The proposed project was reviewed for consistency with policy and/or regulatory documents relating to the environment and appropriate land use (e.g., County Land Use Ordinance, Local Coastal Plan, etc.). Referrals were sent to outside agencies to review for policy consistencies (e.g., CAL FIRE for Fire Code). The project was found to be consistent with these documents (refer also to Exhibit A on reference documents used).

The project is not within or adjacent to a Habitat Conservation Plan area. The project is consistent or compatible with the surrounding uses as summarized on page 2 of this Initial Study.

The proposed project is a stealth design that would blend with the rural character of the landscape. Since the proposed facility would visually blend with the landscape, it would not be readily discernable as a wireless communications facility. This is consistent with the visual screening standards for wireless communications facilities which require new facilities to either be completely screened by vegetation or disguised to resemble natural or built features of the landscape.

The proposed project is subject to the following Planning Area Standard(s) as found in the County's LUO:

1. LUO Section 22.98.070 South County Planning Area – South County Inland Sub Area
2. LUO Section 22.98.070 B Edge of Nipomo Mesa
3. LUO Section 22.98.070 F Nipomo Mesa Water Conservation Area

Mitigation/Conclusion. No inconsistencies were identified and therefore no additional measures above what will already be required were determined necessary.

16. MANDATORY FINDINGS OF SIGNIFICANCE

Will the project:	Potentially Significant	Impact can & will be mitigated	Insignificant Impact	Not Applicable
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or pre-history?	☐	☐	☒	☐

b) ***Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)*** ☐ ☐ ☒ ☐

c) ***Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*** ☐ ☒ ☐ ☐

For further information on CEQA or the County's environmental review process, please visit the County's web site at "www.sloplanning.org" under "Environmental Information", or the California Environmental Resources Evaluation System at: http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines for information about the California Environmental Quality Act.

Exhibit A - Initial Study References and Agency Contacts

The County Planning Department has contacted various agencies for their comments on the proposed project. With respect to the subject application, the following have been contacted (marked with an ☒) and when a response was made, it is either attached or in the application file:

Contacted	Agency	Response
☒	County Public Works Department	**Attached**
☒	County Environmental Health Services	**Attached**
☐	County Agricultural Commissioner's Office	**Not Applicable**
☐	County Airport Manager	**Not Applicable**
☐	Airport Land Use Commission	**Not Applicable**
☐	Air Pollution Control District	**Not Applicable**
☐	County Sheriff's Department	**Not Applicable**
☐	Regional Water Quality Control Board	**Not Applicable**
☐	CA Coastal Commission	**Not Applicable**
☐	CA Department of Fish and Wildlife	**Not Applicable**
☒	CA Department of Forestry (Cal Fire)	**Attached**
☐	CA Department of Transportation	**Not Applicable**
☐	Community Services District	**Not Applicable**
☒	Other _____	**Attached**
☐	Other _____	**Not Applicable**

*** "No comment" or "No concerns"-type responses are usually not attached*

The following checked ("☒") reference materials have been used in the environmental review for the proposed project and are hereby incorporated by reference into the Initial Study. The following information is available at the County Planning and Building Department.

☒ Project File for the Subject Application

County documents

☐ Coastal Plan Policies
☒ Framework for Planning (Coastal/Inland)
☒ General Plan (Inland/Coastal), includes all maps/elements; more pertinent elements:
  - ☒ Agriculture Element
  - ☒ Conservation & Open Space Element
  - ☐ Economic Element
  - ☒ Housing Element
  - ☒ Noise Element
  - ☐ Parks & Recreation Element/Project List
  - ☒ Safety Element
☒ Land Use Ordinance (Inland/Coastal)
☐ Building and Construction Ordinance
☒ Public Facilities Fee Ordinance
☐ Real Property Division Ordinance
☒ Affordable Housing Fund
☐ Airport Land Use Plan
☐ Energy Wise Plan
☒ South County Area Plan/South County sub area and Update EIR
☐ Design Plan
☐ Specific Plan
☒ Annual Resource Summary Report
☐ Circulation Study

Other documents

☒ Clean Air Plan/APCD Handbook
☒ Regional Transportation Plan
☒ Uniform Fire Code
☒ Water Quality Control Plan (Central Coast Basin – Region 3)
☒ Archaeological Resources Map
☒ Area of Critical Concerns Map
☒ Special Biological Importance Map
☒ CA Natural Species Diversity Database
☒ Fire Hazard Severity Map
☒ Flood Hazard Maps
☒ Natural Resources Conservation Service Soil Survey for SLO County
☒ GIS mapping layers (e.g., habitat, streams, contours, etc.)
☐ Other

In addition, the following project specific information and/or reference materials have been considered as a part of the Initial Study:

Radio Frequency Site Compliance Report, Hammett & Edison Inc., February 23, 2015

Verizon Wireless & SAC Wireless Engineering Group, Photo Simulations, August 25, 2015

Exhibit B - Mitigation Summary Table

Per Public Resources Code Section 21081.6, the following measures also constitute the mitigation monitoring and/or reporting program that will reduce potentially significant impacts to less than significant levels. These measures will become conditions of approval (COAs) should the project be approved. The Lead Agency (County) or other Responsible Agencies, as specified in the following measures, are responsible to verify compliance with these COAs.

Visual Resources

V-1. **At the time of application for construction permits**, the construction drawings shall reflect the following specifications:

a. The mono-eucalyptus shall be designed and constructed to appear as an organic, non-symmetrical form, with varying branch lengths and shapes and clusters installed in random, seemingly natural-occurring patterns. The lowest branches shall begin at a sufficient elevation to blend with the existing tree line as viewed from all surrounding public roads. Realistic bark texture shall run the entire length of the mono-eucalyptus.

b. The mono-eucalyptus "leaves" shall not be all one color. Varying shades of hues shall be used appropriately to replicate a living plant. Mono-eucalyptus colors shall be field matched with the existing mature eucalyptus trees in the area.

c. Plans, specifications and estimates shall require the submittal of material and color test samples of all visible elements of the mono-eucalyptus to the County Department of Planning and Building for review and approval. The plans, specifications and estimates and construction schedule shall provide for revisions and corrections to the test samples prior to preparation of the final plans.

d. Antennas shall be hidden and not extend beyond the ends of the artificial branches. Antennas and associated support arms and hardware shall be textured and or colored to blend with the mono-eucalyptus branches and needles.

e. The coaxial cables and cable tray shall be located below the fence line and shall not be visible to the public.

f. Fencing shall be the minimum necessary to meet FCC guidelines. All fencing shall be designed and installed to minimize the visibility of the fencing and all other improvements as viewed from public roadways. Fencing material consistent with rural agricultural operations shall be utilized. Chain link fencing is prohibited.

V-2. **At the time of application for construction permits**, the applicant shall submit accurate, scaled engineering and architectural drawings of the mono-eucalyptus tree exactly as proposed. Mono-eucalyptus plans shall not include generic illustrations of a typical mono-eucalyptus tree. The drawings shall include elevations and plan views. Mono-eucalyptus plans shall include specific dimensions of all faux branches, leaves, leaf clusters, including spacing and arrangements for each component that will be used on the project. Once approved, the mono-eucalyptus tree plans shall be specifically used (in conjunction with approved color and material samples and other related documents) as a basis for assessing condition compliance during construction. The plans, specifications and estimates and construction schedule shall provide for revisions and corrections to the mono-eucalyptus engineering and architectural plans prior to preparation of the final plans.

V-3. **Prior to issuance of construction permits**, the applicant shall submit material and color test samples of all visible elements of the mono-eucalyptus to the County Department of Planning and Building for review and approval. This submittal shall include both photographs of actual existing mono-eucalyptus trees constructed by the selected vendor, as well as physical samples of the faux foliage and branch materials to be used. The mono-eucalyptus shall be constructed of the highest quality, most durable and realistic appearing faux foliage and branches. The color of the faux foliage shall be field matched with the existing mature eucalyptus trees in the area.

V-4. **Prior to issuance of construction permits**, the applicant shall submit a color sample for the proposed antennas and associated support arms and hardware to the County Department of Planning and Building for review and approval. Only non-reflective materials shall be used, and all exterior finishes shall be textured and/or colored to blend with the mono-eucalyptus branches and leaves.

DEVELOPER'S STATEMENT FOR WISE & VERIZON WIRELESS CONDITIONAL USE PERMIT DRC2014-00100

The applicant agrees to incorporate the following measures into the project. These measures become a part of the project description and therefore become a part of the record of action upon which the environmental determination is based. All development activity must occur in strict compliance with the following mitigation measures. These measures shall be perpetual and run with the land. These measures are binding on all successors in interest of the subject property.

> **Note:** The items contained in the boxes labeled "Monitoring" describe the County procedures to be used to ensure compliance with the mitigation measures.

The following mitigation measures address impacts that may occur as a result of the development of the project:

Visual Resources

V-1. **At the time of application for construction permits**, the construction drawings shall reflect the following specifications:

a. The mono-eucalyptus shall be designed and constructed to appear as an organic, non-symmetrical form, with varying branch lengths and shapes and clusters installed in random, seemingly natural-occurring patterns. The lowest branches shall begin at a sufficient elevation to blend with the existing tree line as viewed from all surrounding public roads. Realistic bark texture shall run the entire length of the mono-eucalyptus.

b. The mono-eucalyptus "leaves" shall not be all one color. Varying shades of hues shall be used appropriately to replicate a living plant. Mono-eucalyptus colors shall be field matched with the existing mature eucalyptus trees in the area.

c. Plans, specifications and estimates shall require the submittal of material and color test samples of all visible elements of the mono-eucalyptus to the County Department of Planning and Building for review and approval. The plans, specifications and estimates and construction schedule shall provide for revisions and corrections to the test samples prior to preparation of the final plans.

d. Antennas shall be hidden and not extend beyond the ends of the artificial branches. Antennas and associated support arms and hardware shall be textured and or colored to blend with the mono-eucalyptus branches and needles.

e. The coaxial cables and cable tray shall be located below the fence line and shall not be visible to the public.

f. Fencing shall be the minimum necessary to meet FCC guidelines. All fencing shall be designed and installed to minimize the visibility of the fencing and all other improvements as viewed from public roadways. Fencing material consistent with rural agricultural operations shall be utilized. Chain link fencing is prohibited.

V-2. **At the time of application for construction permits**, the applicant shall submit accurate, scaled engineering and architectural drawings of the mono-eucalyptus tree exactly as proposed. Mono-eucalyptus plans shall not include generic illustrations of a typical mono-eucalyptus tree. The drawings shall include elevations and plan views. Mono-eucalyptus plans shall include specific dimensions of all faux branches, leaves, leaf clusters, including spacing and arrangements for each component that will be used on the project. Once approved, the mono-eucalyptus tree plans shall be specifically used (in conjunction with approved color and material samples and other related documents) as a basis for assessing condition compliance during construction. The plans, specifications and estimates and construction schedule shall provide for revisions and corrections to the mono-eucalyptus engineering and architectural plans prior to preparation of the final plans.

V-3. **Prior to issuance of construction permits**, the applicant shall submit material and color test samples of all visible elements of the mono-eucalyptus to the County Department of Planning and Building for review and approval. This submittal shall include both photographs of actual existing mono-eucalyptus trees constructed by the selected vendor, as well as physical samples of the faux foliage and branch materials to be used. The mono-eucalyptus shall be constructed of the highest quality, most durable and realistic appearing faux foliage and branches. The color of the faux foliage shall be field matched with the existing mature eucalyptus trees in the area.

V-4. **Prior to issuance of construction permits**, the applicant shall submit a color sample for the proposed antennas and associated support arms and hardware to the County Department of Planning and Building for review and approval. Only non-reflective shall be used, and all exterior finishes shall be textured and/or colored to blend with the mono-eucalyptus branches and leaves.

Monitoring: Required at the time of application for construction permits. Compliance will be verified by the County Department of Planning and Building in consultation with the County Public Works Department.

The applicant understands that any changes made to the project description subsequent to this environmental determination must be reviewed by the Environmental Coordinator and may require a new environmental determination for the project. By signing this agreement, the owner(s) agrees to and accepts the incorporation of the above measures into the proposed project description.

Karen J. Wise
Signature of Landowner(s)

9-1-2015
Date

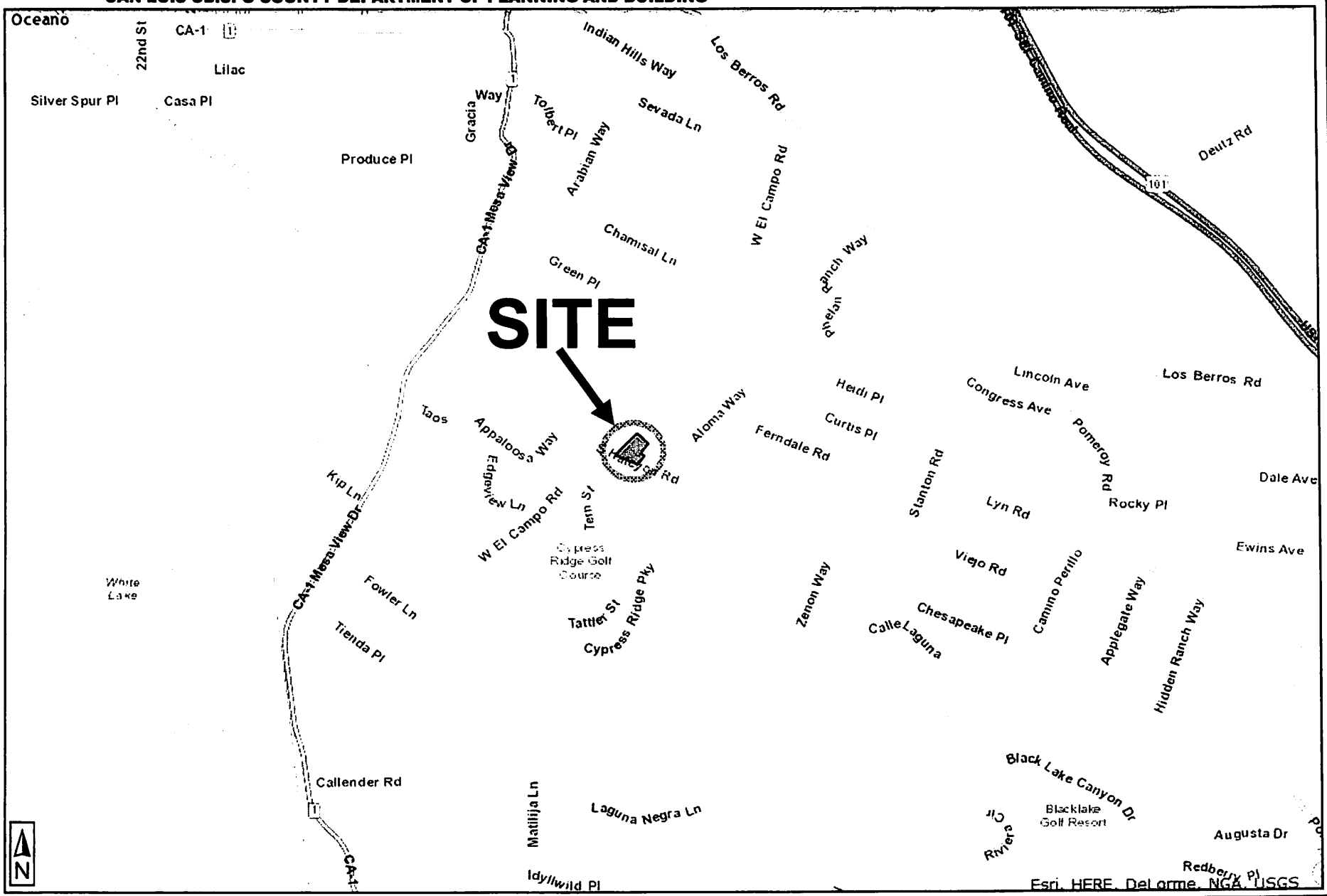
Karen J. Wise
Name (Print)

Tricia Knight
Signature of Tenant

9-2-15
Date

Tricia Knight
Name (Print)

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING



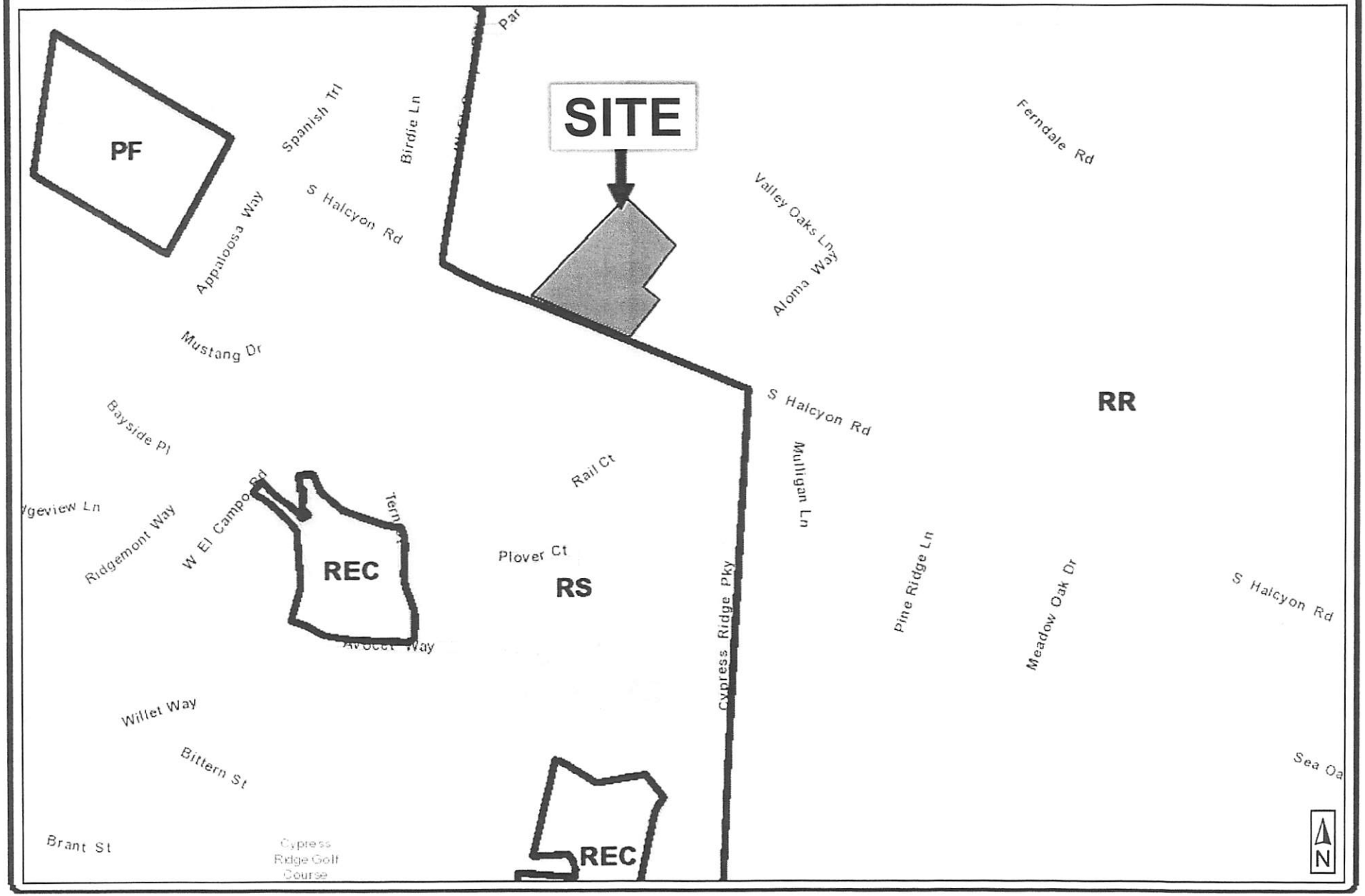
PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Vicinity Map

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING



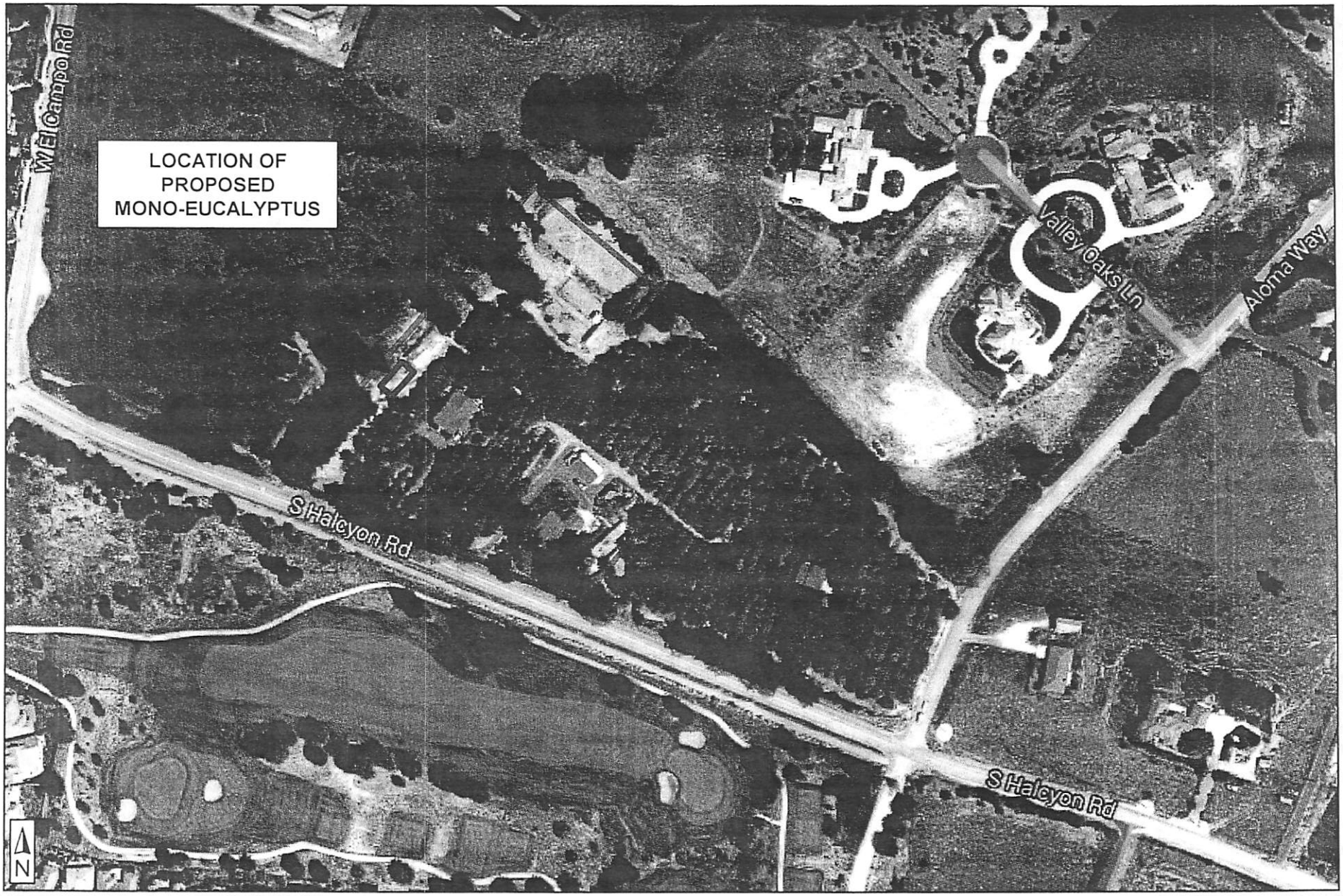
PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Land Use Category Map

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING



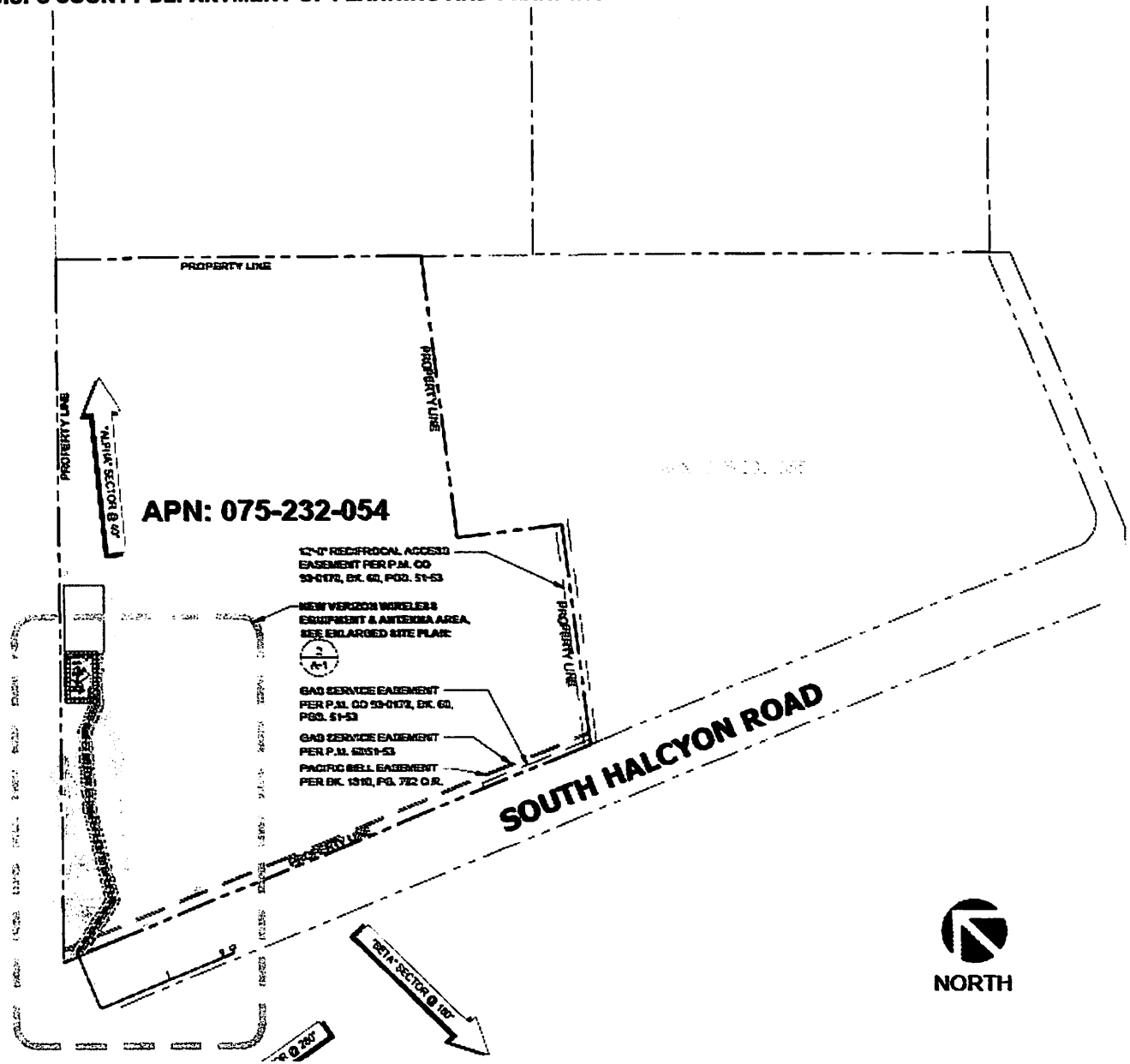
PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Aerial Photo

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND PLANNING

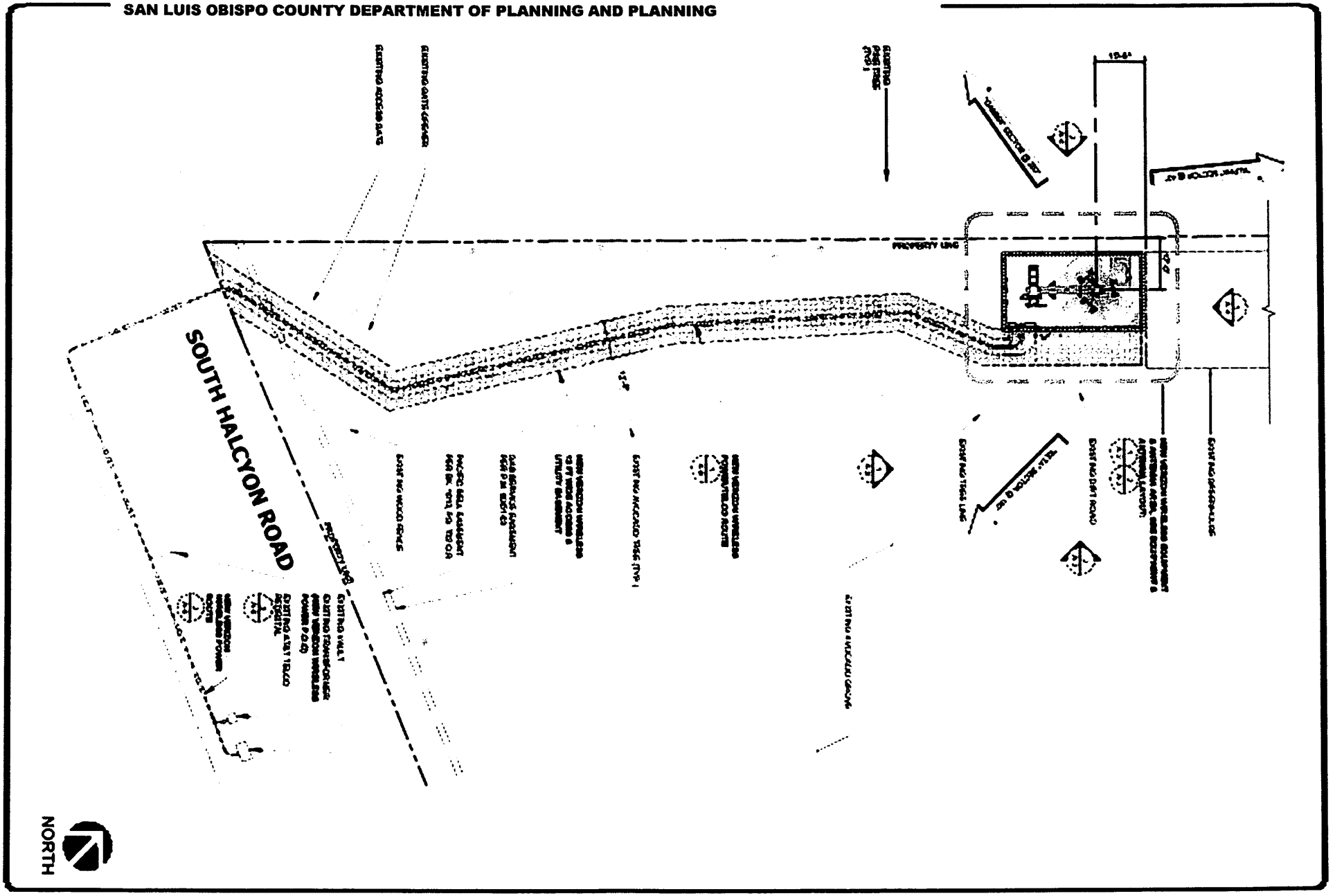


PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Overall Site Plan

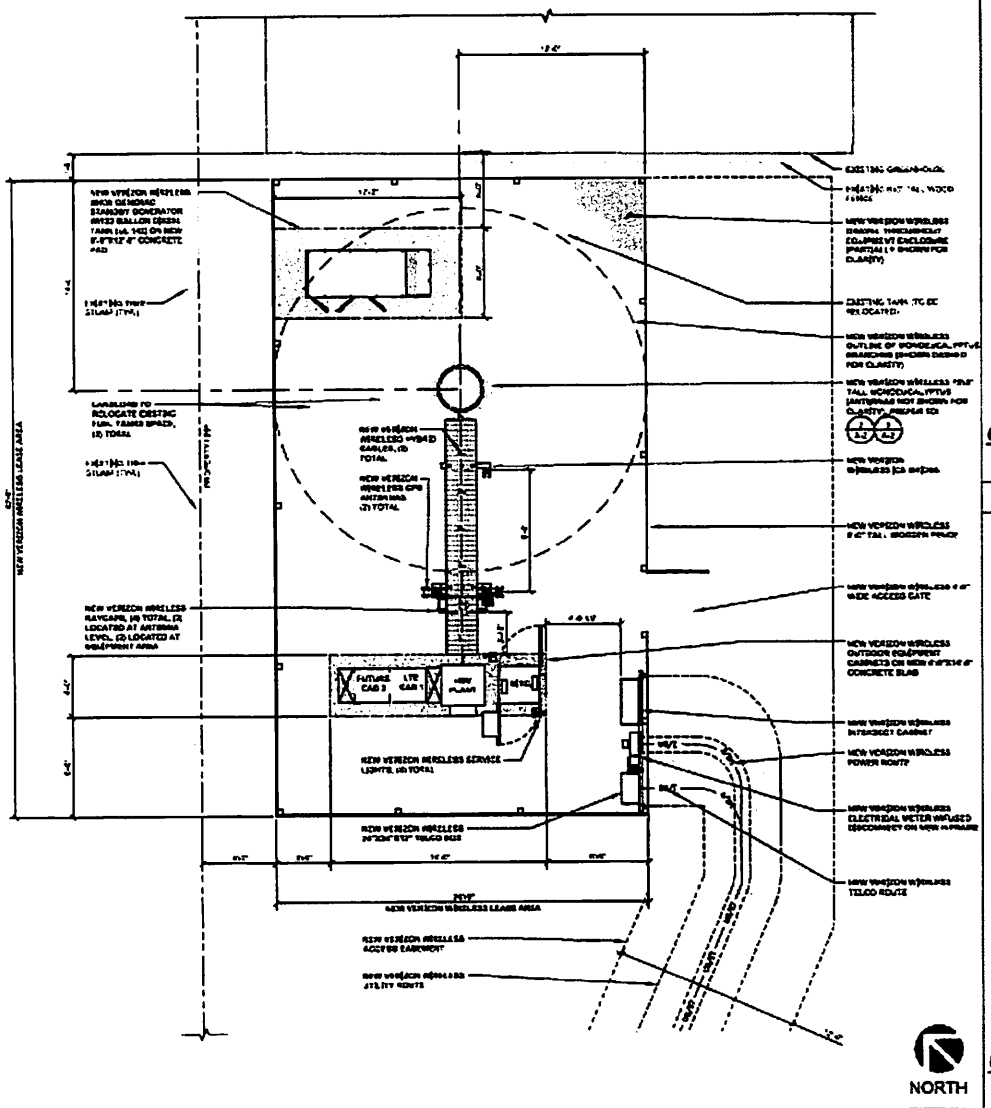


PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

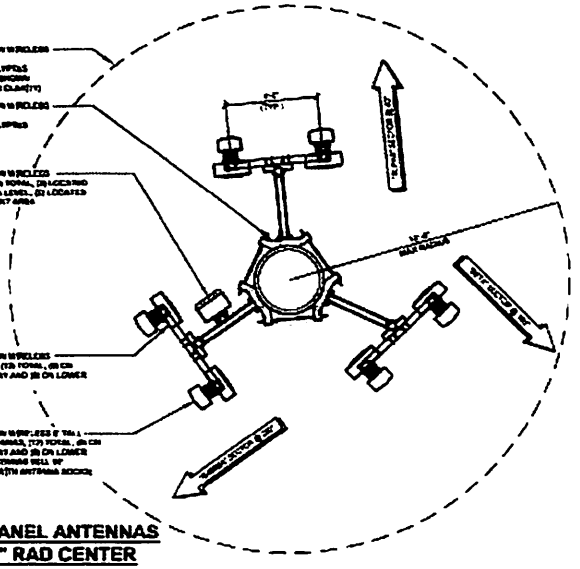
EXHIBIT

Enlarged Site Plan



NORTH

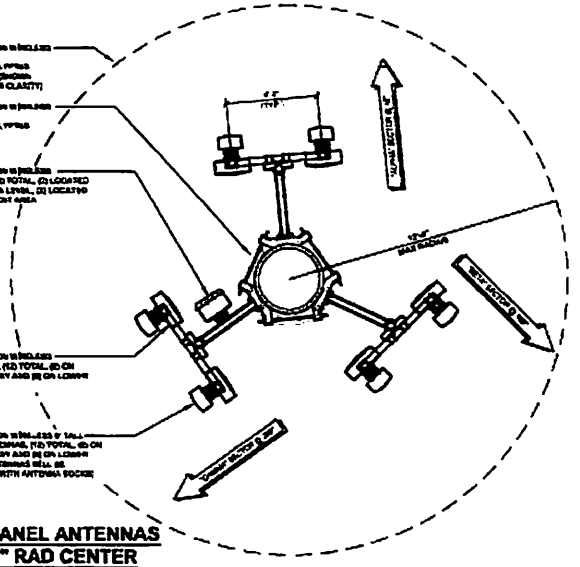
EQUIPMENT LAYOUT | SCALE: 1/8" = 1'-0" (24x36) (OR) 1/16" = 1'-0" (11x17) | 1



6' TALL PANEL ANTENNAS
@ 67'-0" RAD CENTER

NORTH

ANTENNA LAYOUT | SCALE: 3/8" = 1'-0" (24x36) (OR) 3/16" = 1'-0" (11x17) | 3



6' TALL PANEL ANTENNAS
@ 59'-0" RAD CENTER

NORTH

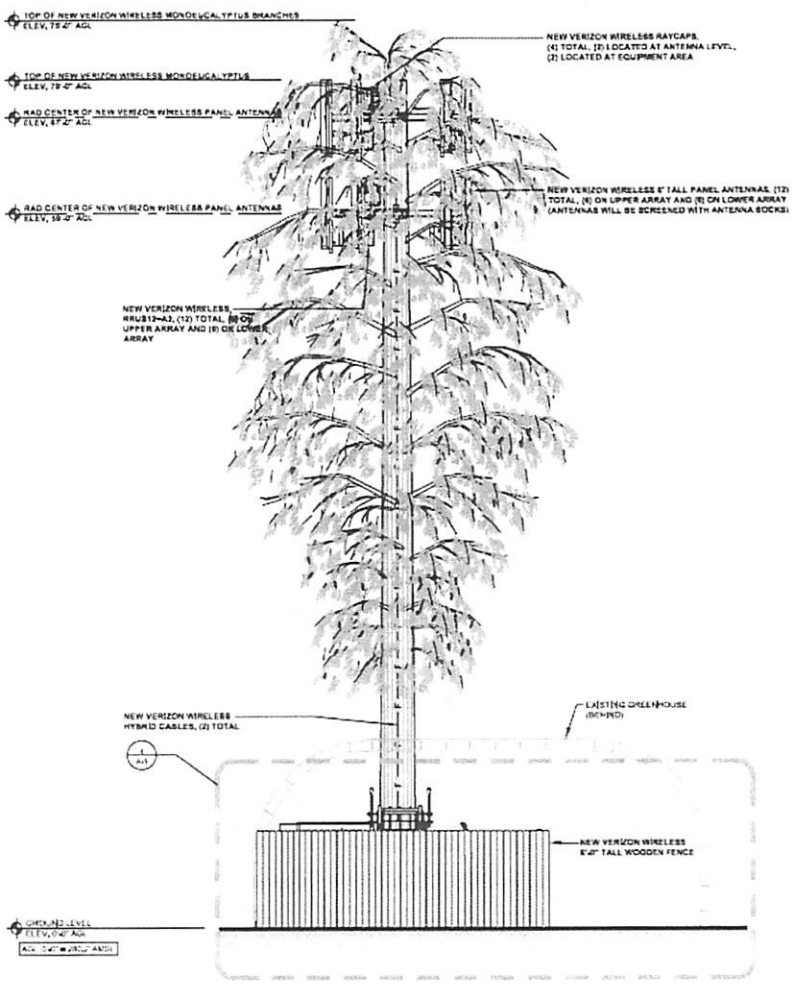
ANTENNA LAYOUT | SCALE: 3/8" = 1'-0" (24x36) (OR) 3/16" = 1'-0" (11x17) | 2

PROJECT

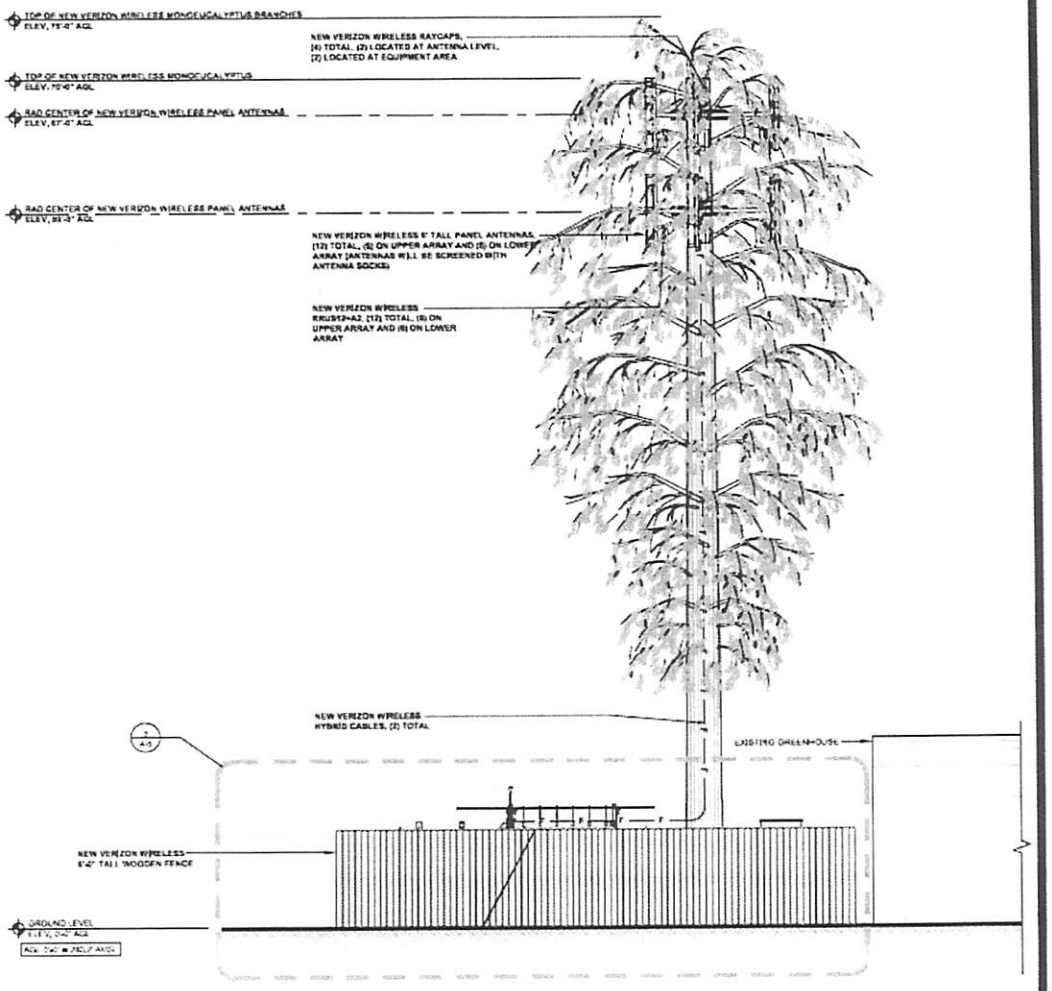
Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Equipment & Antenna Layout Plan



SOUTHWEST ELEVATION



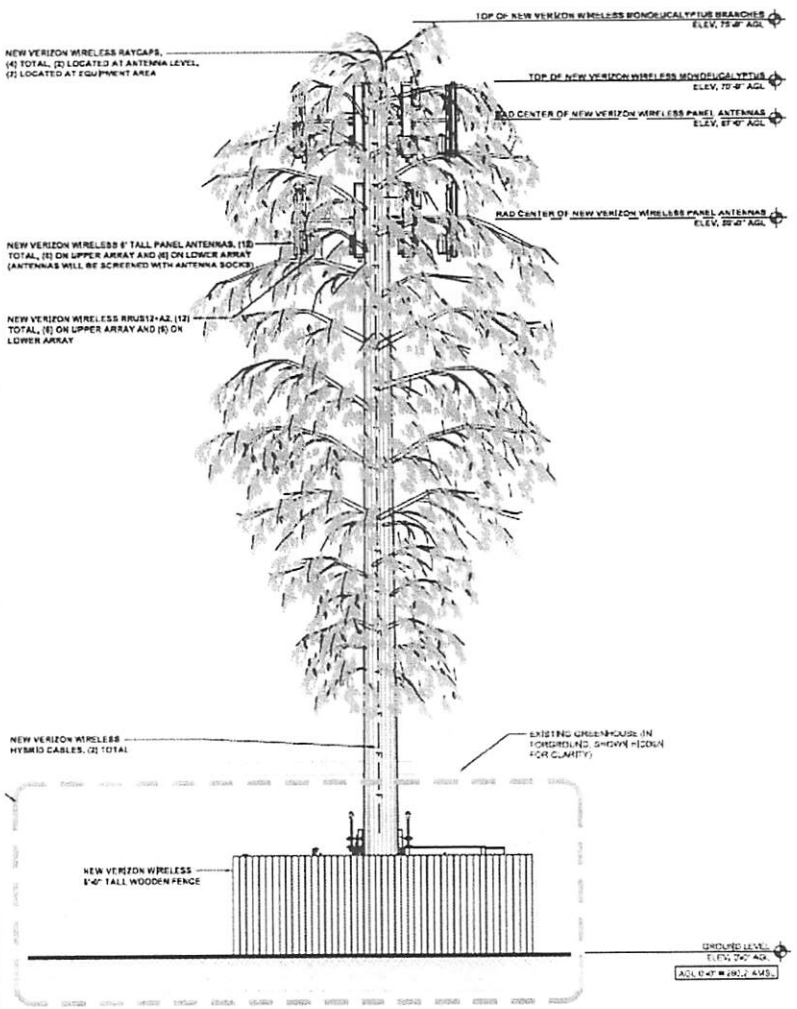
SOUTHEAST ELEVATION

PROJECT

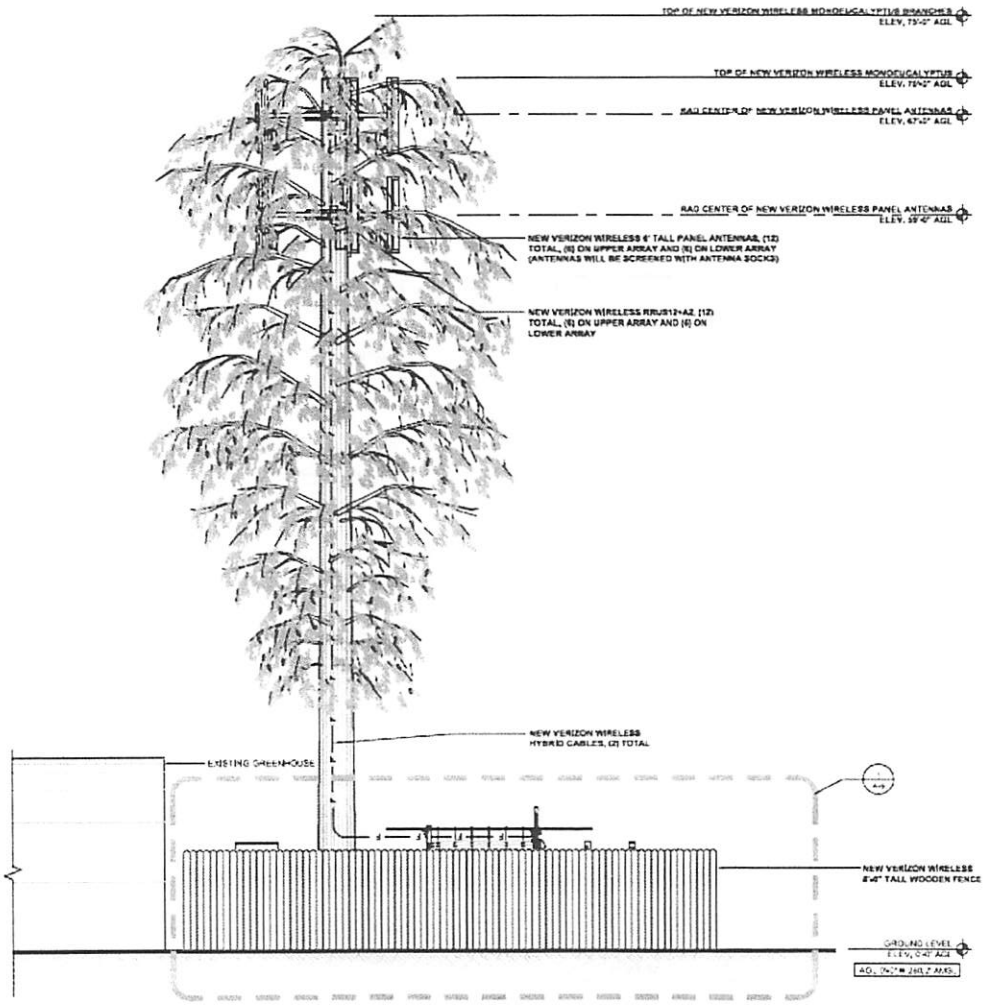
Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Southwest & Southeast Elevations



NORTHEAST ELEVATION



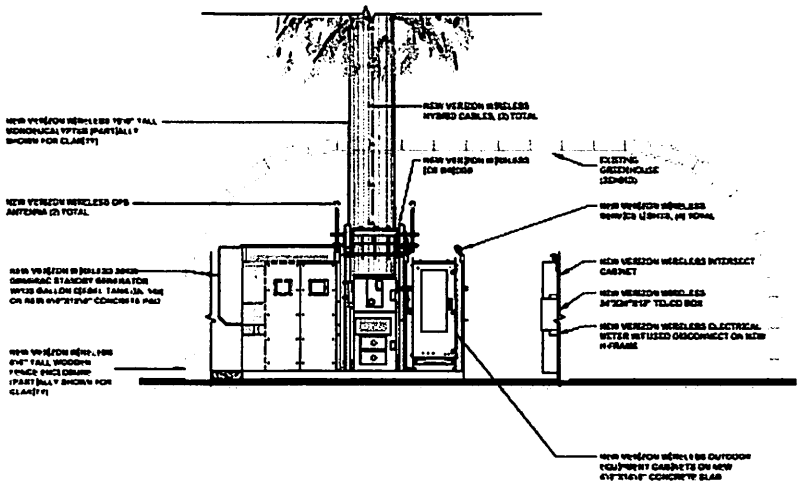
NORTHWEST ELEVATION

PROJECT

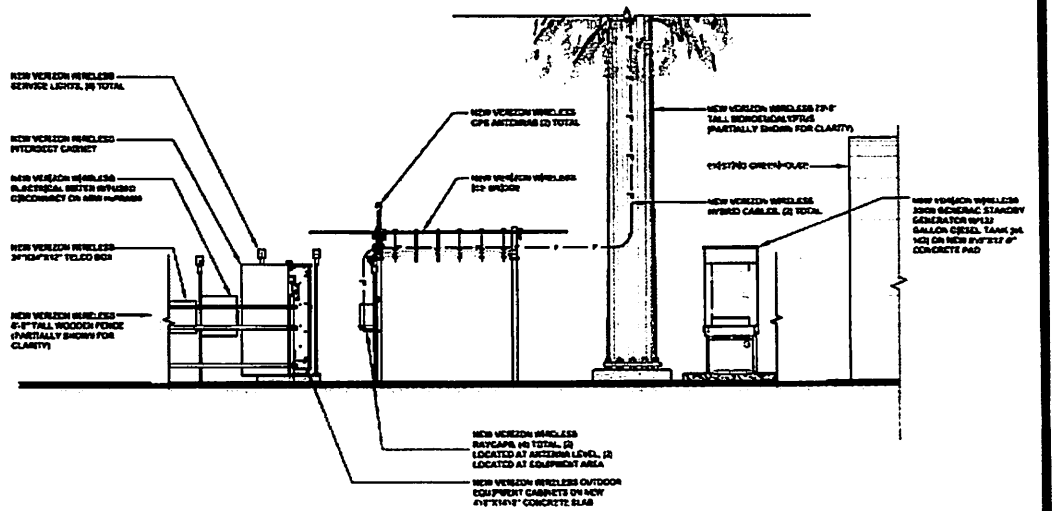
Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

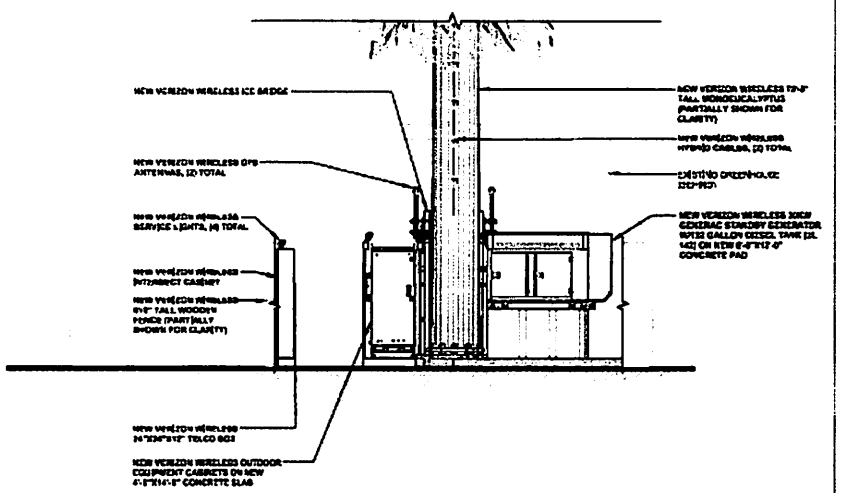
Northeast & Northwest Elevations



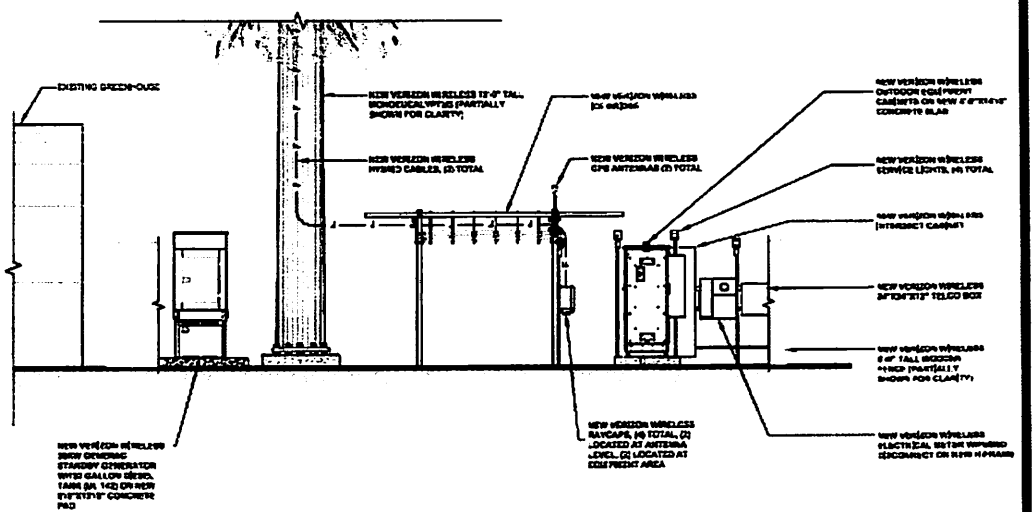
SOUTHWEST ELEVATION | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 4



SOUTHEAST ELEVATION | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 3



NORTHEAST ELEVATION | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 2



NORTHWEST ELEVATION | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 1

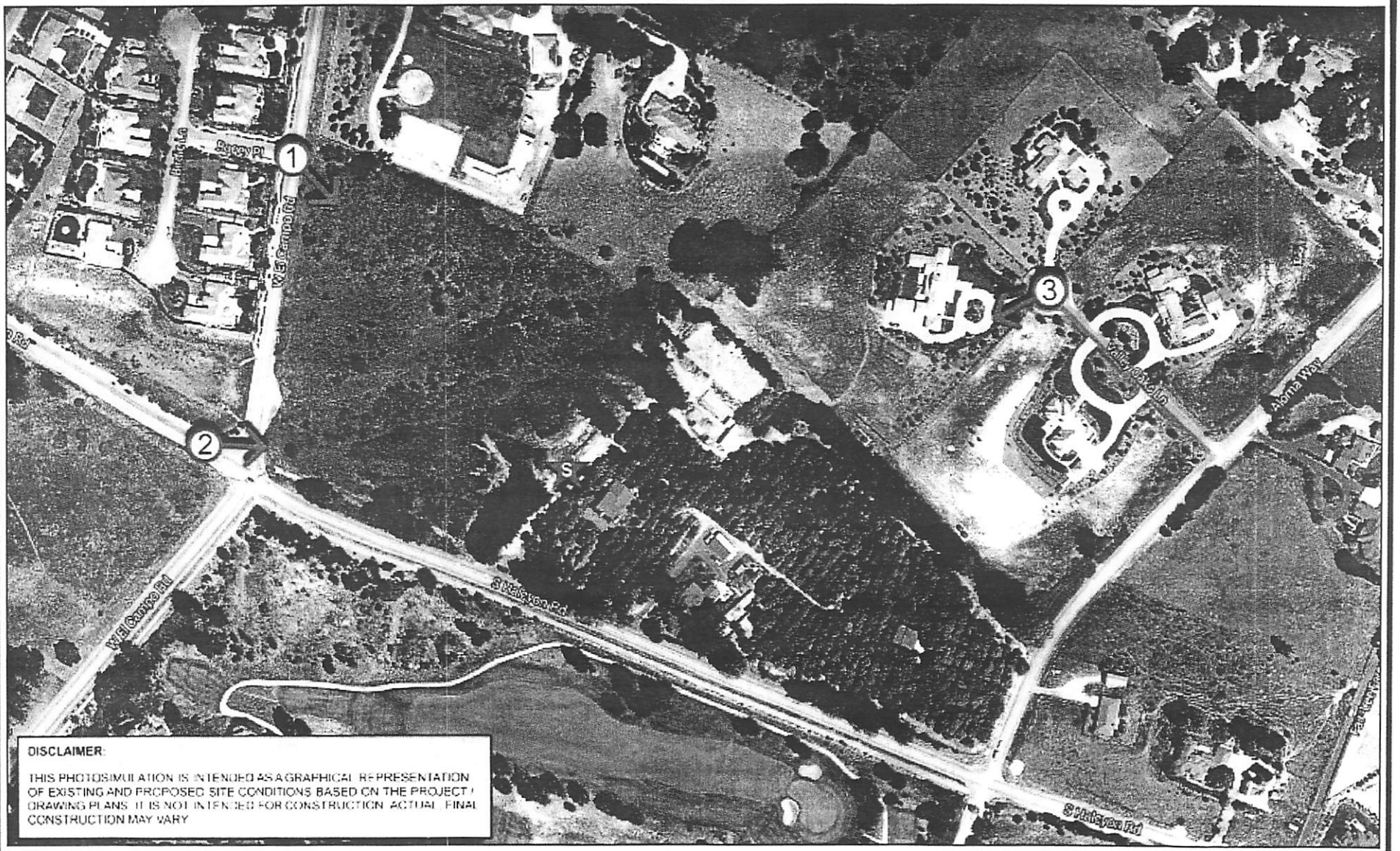
PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Equipment Elevations

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND PLANNING



PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

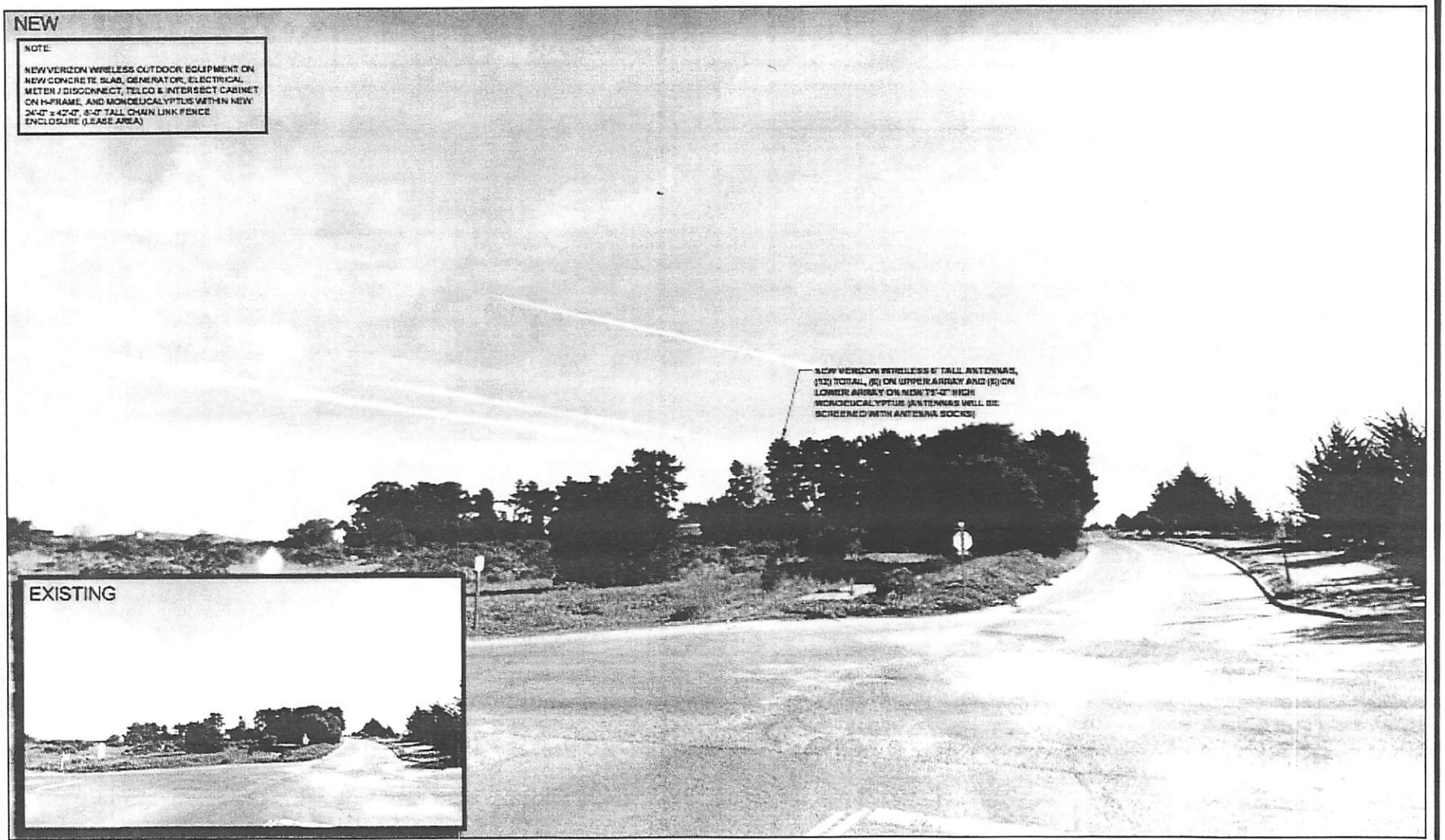
Photosimulation Viewpoints Vicinity Map

PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Photosimulation View 1

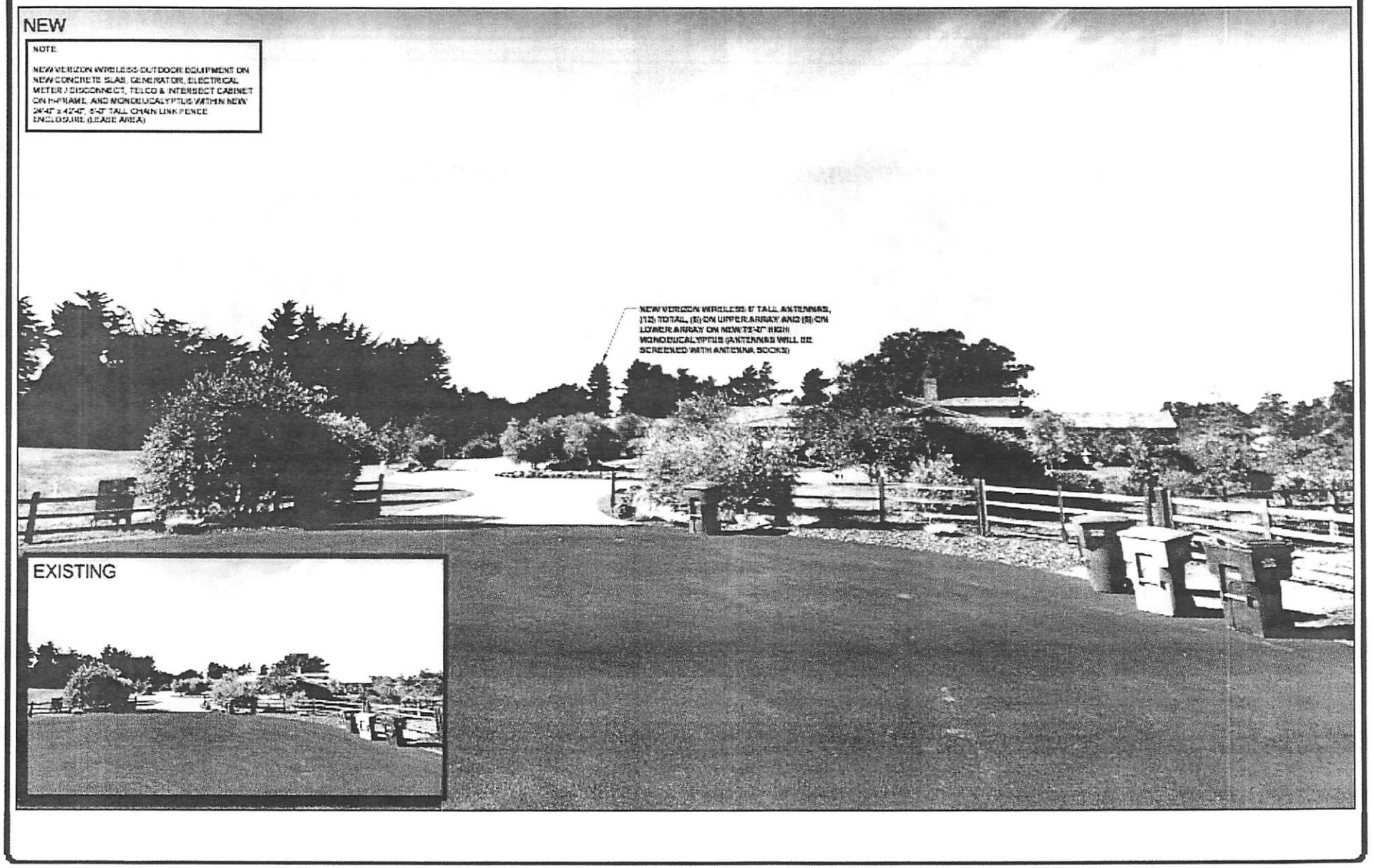


PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Photosimulation View 2

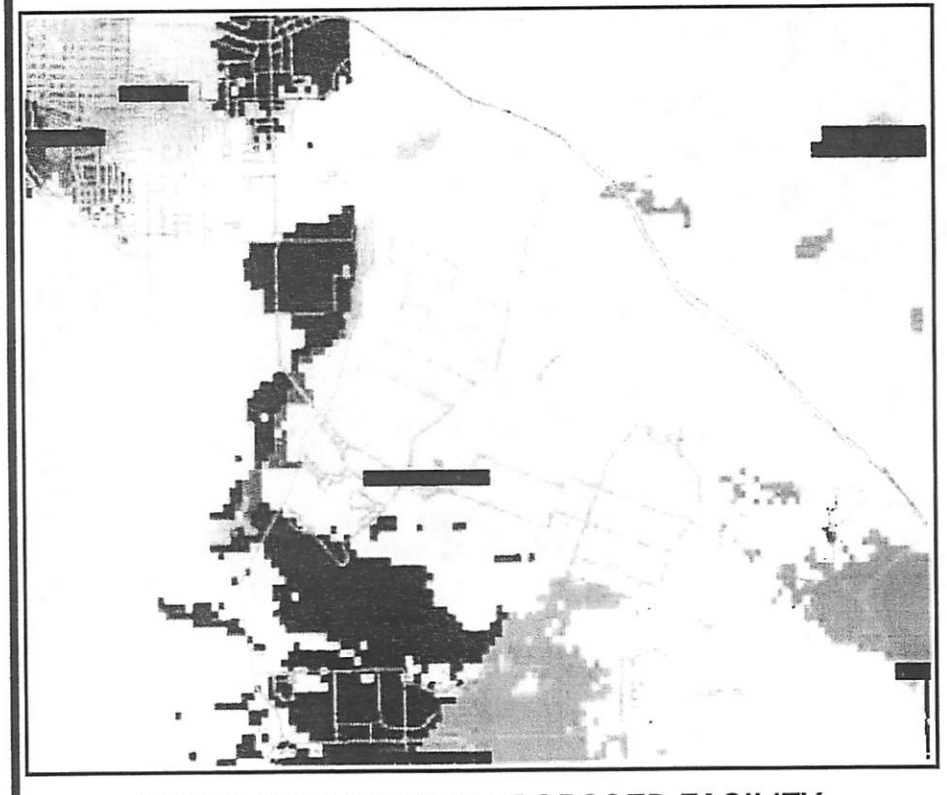


PROJECT

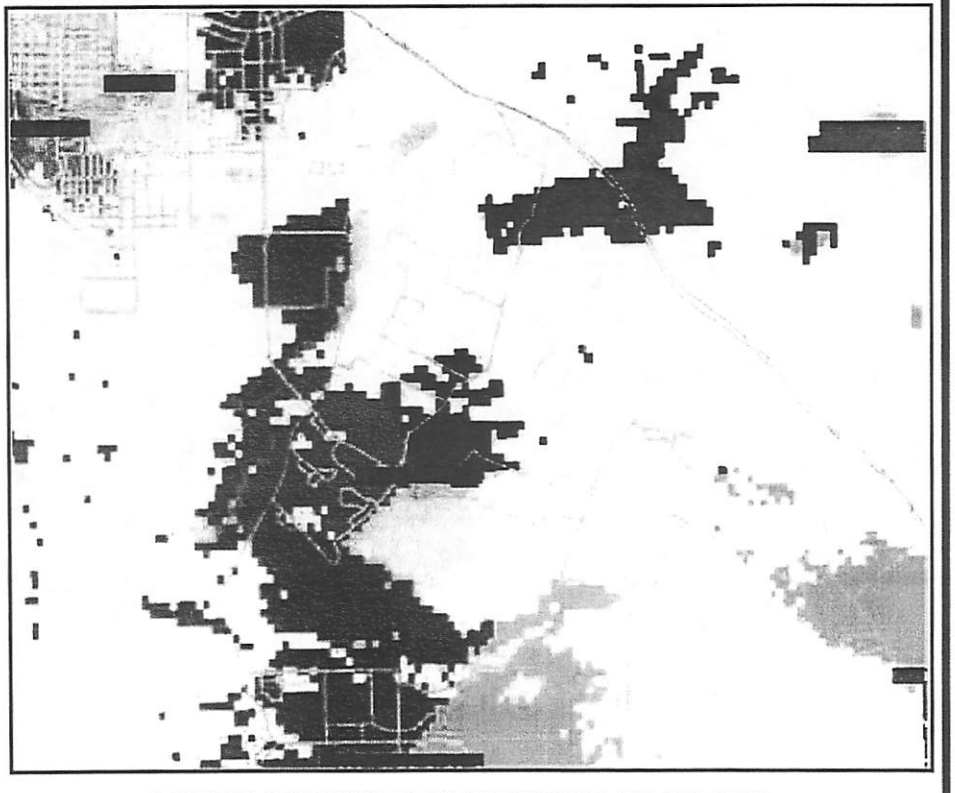
Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Photosimulation View 3



COVERAGE WITHOUT PROPOSED FACILITY



COVERAGE WITH PROPOSED FACILITY

PROJECT

Wise & Verizon Wireless
Conditional Use Permit / DRC2014-00100

EXHIBIT

Propagation Maps

SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

THIS IS A NEW PROJECT REFERRAL

DATE: 3/2/2015

FR ~~TO~~: P.W.

TO ~~FROM~~: Cody Scheel (805-781-5157 or cscheel@co.slo.ca.us)
South County Team / Development Review

PROJECT DESCRIPTION: DRC2014-00100 WISE – Proposed conditional use permit for a wireless communications facility with an 8-ft chain link fence around a 24x48-ft lease area, one prefab equipment cabinet, two GPS units, one standby generator, one electrical meter, one 70-ft monopine tree, twelve 6-ft panel antennas, twelve RRHs, and four raycaps. Site location is 2286 So Halcyon Rd, Arroyo Grande. APN: 075-232-054

Return this letter with your comments attached no later than: 14 days from receipt of this referral. CACs please respond within 60 days. Thank you.

PART 1 - IS THE ATTACHED INFORMATION ADEQUATE TO COMPLETE YOUR REVIEW?

- ☑ YES (Please go on to PART II.)
- ☐ NO (Call me ASAP to discuss what else you need. We have only 10 days in which we must obtain comments from outside agencies.)

PART II - ARE THERE SIGNIFICANT CONCERNS, PROBLEMS OR IMPACTS IN YOUR AREA OF REVIEW?

- ☐ YES (Please describe impacts, along with recommended mitigation measures to reduce the impacts to less-than-significant levels, and attach to this letter)
- ☑ NO (Please go on to PART III)

PART III - INDICATE YOUR RECOMMENDATION FOR FINAL ACTION.

Please attach any conditions of approval you recommend to be incorporated into the project's approval, or state reasons for recommending denial.

IF YOU HAVE "NO COMMENT," PLEASE SO INDICATE, OR CALL.

1. ENCROACHMENT PERMIT REQUIRED FOR NEW UTILITIES. ALL UTILITIES SHALL BE BURIED UNDER HALCYON RD. NO ABOVE GRADE APPURTENANCES SHALL BE PLACE IN PUBLIC ROW.

Date	Name	Phone
3.10.15	GLENN MARSHALL	1596

COUNTY GOVERNMENT CENTER • SAN LUIS OBISPO • CALIFORNIA 93408 • (805)781-5600
EMAIL: planning@co.slo.ca.us • FAX: (805) 781-1242 • WEBSITE: http://www.sloplanning.org

SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

THIS IS A NEW PROJECT REFERRAL

DATE: 3/2/2015

TO: Env. Health

MAR 4 2015

SR14 3145

FROM: Cody Scheel (805-781-5157 or cscheel@co.slo.ca.us)
South County Team / Development Review

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Applicant shall submit, to this office, the hazardous materials business plan for the proposed cell site. The plans shall be reviewed and approved prior to final sign-off. Please contact Aaron LaBarre at 781-5595 if you have any questions.

3/12/15	[illegible]	x 5551
Date	Name	Phone

CAL FIRE
San Luis Obispo
County Fire Department

635 N. Santa Rosa • San Luis Obispo, CA 93405
Phone: 805-543-4244 • Fax: 805-543-4248
www.calfireslo.org

Robert Lewin, Fire Chief

March 10, 2015

County of San Luis Obispo
Department of Planning & Building
County Government Center
San Luis Obispo, CA. 93408

Subject: DRC2014-00100 Verizon Wireless communications facility at 2286 South Halcyon Road, Arroyo Grande. ***FIRE SAFETY PLAN***

CAL FIRE/ San Luis Obispo County Fire Department has reviewed the referral information in regards to the proposed wireless communication facility and antenna project located in San Luis Obispo County. The project is located in State Responsibility Area within a " ***High***" Fire Hazard Severity Zone for wildland fires. This project site has an approximate 5 minute response time from the nearest County Fire Station. The following items are required:

- The proposed 12-foot wide "Verizon Wireless access easement" must provide an all-weather surface capable of supporting a minimum 20-ton load capacity.
- Vertical clearance of 13'6" is required the entire length of the roadway.
- Roadways shall be a minimum 10-foot wide clearance of vegetation.
- A fire engine turnaround is required near the cell site vaults/structures that meet the county standard.
- A fuel reduction zone may be required around the project site. CAL FIRE/ County Fire will work with the applicant and the San Luis Obispo County Department of Planning and Building to ensure adequate "defensible space" from wildland fire threat while working to satisfy any possible visual screening requirements.
- Access to all associated equipment shall be controlled by means of a locked gate or fence.
- If a gate is to be installed at the driveway they must provide adequate means of emergency access. This department may require a "Knox" switch to ensure access during emergencies.
- A minimum 40:BC rated fire extinguisher in all vaults/structures.

If I may provide additional assistance or information please do not hesitate to contact me at (805)543-4244

Sincerely,

Travis Craig
Fire Captain

Re: DRC2014-00100 WISE, South County E-Referral, CUP, Arroyo Grande
Michael Stoker to: Cody Scheel 03/04/2015 07:23 AM
Cc: Cheryl Journey, Martin Mofield, Charles Moloney

Cody,

Please find the building departments comments for DRC2014-00100 below. Please let me know if you have any questions.

In regards to this preliminary review, a building permit is required. The drawings specify the work to be completed consists of a wireless communication facility with an 8-ft chain link fence around a 24x28 lease area, one prefab equipment cabinet, two GPS units, one standby generator, one electric meter, one 70-ft monopine tree, twelve RRHs, and four raycaps. A California State licensed design professional (Architect/Engineer) shall prepare plans in compliance with current codes adopted by the County of San Luis Obispo (2013 California Building Standards Codes and Title 19 of the SLO County Codes).

While a thorough plan review will be conducted at the time of the building permit application, the following items are noted to assist design review;

1) Provide isometric / single line drawings for the electrical elements to verify compliance with the 2013 versions of the California Electrical Code.
2) Provide complete structural plans (foundation, framing, welding, bolt connections, etc) and supporting documentation (calculations, specifications, ICC ES-reports, etc) for the new structures located on the site to verify compliance with the 2013 CBSC and referenced standards.
3) Provide details for anchorage for all equipment. For equipment weighing more than 400 lbs, provide calculations for seismic anchorage in accordance with ASCE 7-08, Chapter 13.
4) Specify post-installed anchorage (expansion or epoxy anchors). Indicate manufacturer's name and ICC report number. Anchors shall be approved for installation into cracked concrete.
5) Provide an equipment schedule on the plans and supporting documentation with approved listings.
6) Provide a list of required special inspection on the cover sheet of the plans as required by CBC, including Chapter 17. Also, the special inspector performing the inspection will need to be listed on the cover sheet and Statement of qualifications provided to the County of San Luis Obispo for review and approval.

Thanks

Michael Stoker
Building Division Supervisor, CASp

SOUTH COUNTY ADVISORY COUNCIL
PO Box 2355 Nipomo, CA 93444-2355

March 25, 2015

Supervisor Lynn Compton, 4th District Supervisor
County Government Center
San Luis Obispo, CA 93408a

Dear Supervisor Compton:

The SCAC took the following actions at its March 23, 2015 meeting:

Wise: DRC2014-00100 - 2286 South Halcyon- APN 075-232-054. A proposed CUP for a wireless communications facility. The Council unanimously recommended approval with a request to replace the faux pine tree with a faux eucalyptus tree.

Van Petten: DRC2014-00097 – 916 Mesa View Dr. Arroyo Grande – APN: 075-281-014. A proposed minor use permit to demo a single family residence of 1316 sf and construct a single family residence of 4,372 sf with a modified bluff setback. 40 Eucalyptus trees to be removed, side setback reduction with an existing driveway to be improved to CAL Fire standards on an irregular flag lot. After a thorough discussion, the Council recommended unanimous approval.

CALTRANS: DRC2014-00095 – Highway 1 at Sheridan Rd. – APN: 000-000-000. Proposed conditional use permit/development plan to widen Highway 1 at Sheridan RD. to construct a two-way left turn channel and remove fixed objects within 20 feet of roadway. 480 Eucalyptus trees to be removed from a 30' x 100' area on the side of the road. A resident who testified at the Land Use Committee objected to the tree removal due to health concerns related to particle matter, wind and noise that are currently blocked by the trees. The Council recommended approval but requested that as many trees as possible be retained as a buffer for adjacent property owners.

On behalf of the South County Advisory Council,

Richard Wright,
Correspondence Secretary

SAN LUIS OBISPO COUNTY

DEPARTMENT OF PLANNING AND BUILDING

THIS IS A NEW PROJECT REFERRAL

DATE: 3/2/2015

TO: _____

FROM: Cody Scheel (805-781-5157 or cscheel@co.slo.ca.us)
South County Team / Development Review

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IF YOU HAVE "NO COMMENT," PLEASE SO INDICATE, OR CALL.
I enthusiatically support this project to improve cellular service for our phones. The location is unobstrusive and I do not expect interference with other devices. My only regret is that Verizon will not be extending fiber internet service from this location.

march 10, 2015	Walter Whipple	
Date	Name	Phone

Verizon Wireless • Proposed Base Station (Site No. 249603 "Mesa View Drive")
2286 South Halcyon Road • Arroyo Grande, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 249603 "Mesa View Drive") proposed to be located at 2286 South Halcyon Road in Arroyo Grande, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon proposes to install directional panel antennas on a tall steel pole, configured to resemble a pine tree, to be located at 2286 South Halcyon Road in Arroyo Grande. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

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

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
BRS (Broadband Radio)	2,600	5.00	1.00
WCS (Wireless Communication)	2,300	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.40	0.48
[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 "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky.

Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. 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 describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by Verizon, including zoning drawings by SAC Wireless, LLC, dated January 12, 2015, it is proposed to install twelve Andrew directional panel antennas – six Model LNX-6514DS-A1M and six Model HBXX-6517DS-A2M – on a new 70-foot steel pole, configured to resemble a pine tree, to be sited to the southwest of the greenhouse located at 2286 South Halcyon Road in Arroyo Grande. The antennas would be mounted in stacked pairs – two of each model – with no downtilt at effective heights of about 59 and 67 feet above ground and would be oriented toward 40°T, 180°T, and 280°T. The maximum effective radiated power in any direction would be 12,000 watts, representing simultaneous operation at 4,950 watts for AWS, 4,510 watts for PCS, and 2,540 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.0063 mW/cm^2, which is 0.70% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 1.1% 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 from the proposed operation.

* Including the residence located at least 70 feet away, according to Google Maps images.

No Recommended Mitigation Measures

Due to their mounting locations, the Verizon antennas would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. It is presumed that Verizon will, as an FCC licensee, take adequate steps to ensure that its employees or contractors receive appropriate training and comply with FCC occupational exposure guidelines whenever work is required near the antennas themselves.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 2286 South Halcyon Road in Arroyo Grande, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2015. This work has been carried out under her direction, and all statements are true and correct of her own knowledge except, where noted, when data has been supplied by others, which data she believes to be correct.

REGISTERED PROFESSIONAL ENGINEER
ANDREA L. BRIGHT
E 20309
Exp. 3-31-2015
ELECTRICAL
STATE OF CALIFORNIA

Andrea L. Bright, P.E.
707/996-5200

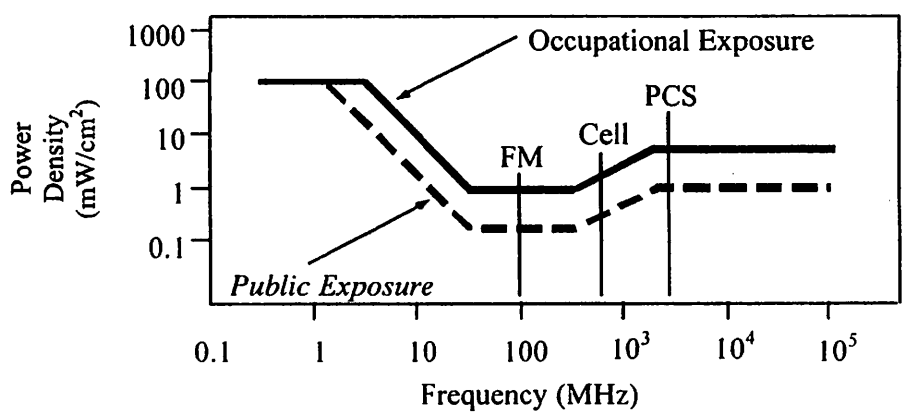
February 23, 2015

FCC Radio Frequency Protection Guide

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

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

Frequency	Electromagnetic Fields (f is frequency of emission in MHz)					
Applicable Range (MHz)	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm^2)	
0.3 – 1.34	614	*614*	1.63	*1.63*	100	*100*
1.34 – 3.0	614	*823.8/f*	1.63	*2.19/f*	100	*180/f²*
3.0 – 30	1842/ f	*823.8/f*	4.89/ f	*2.19/f*	900/ f²	*180/f²*
30 – 300	61.4	*27.5*	0.163	*0.0729*	1.0	*0.2*
300 – 1,500	3.54√f	*1.59√f*	√f/106	*√f/238*	f/300	*f/1500*
1,500 – 100,000	137	*61.4*	0.364	*0.163*	5.0	*1.0*



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

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
P_{net} = net power input to the antenna, in watts,
D = distance from antenna, in meters,
h = aperture height of the antenna, in meters, and
η = aperture efficiency (unitless, typically 0.5-0.8).

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

Far Field.

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

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

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.