

<p style="text-align: center;">NEGATIVE DECLARATION OF THE SOLANO COUNTY DEPARTMENT OF RESOURCE MANAGEMENT</p>

PROJECT TITLE:

Use Permit U-17-09 & Marsh Development Permit MD-17-02 Verizon Wireless (Hwy 680/Cygnus)

PROJECT DESCRIPTION AND LOCATION:

Environmental Setting:

The project site is located near the intersection of Marshview Road and Goodyear Road to the east of Interstate 680 (I-680) in a rural area of Solano County. The property sits near the access ramp for northbound Interstate 680. The 2.8-acre parcel is vacant of structures and is approximately 1.5 miles southeast of the boundary of the City of Fairfield. The project site is located on Assessor's Parcel Number (APN) 0046-110-280.

The parcel is mostly flat with the elevation gradually increasing adjacent to the three roads, I-680 on-ramp, Goodyear and Marshview. Goodyear Road borders the property to the north and east followed by the Suisun Marsh. Marshview Road borders the property to the south and the northbound on-ramp to I-680 borders the project to the west. The parcel has several mature trees along the I-680 on-ramp and a couple of trees scattered along Goodyear Road. There is an existing barbed wire fence that runs partially along Marshview Road and then extends north along the on-ramp. The property is covered in grasses and some scattered shrubs.

Project Description:

The applicant, Verizon Wireless, is requesting a conditional use permit and marsh development permit to construct a 50' wireless communication facility, a slimline monopole painted dark green, in the southwest corner of the parcel. The project would consist of the following:

Monopole:

The proposed facility consists of a 50' slimline monopole painted dark green with the antennas divided into two sectors or split centerlines. There will be a total of four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' on the pole. The antenna mounts will be 1' apart on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted dark green to match the antennas and monopole. All cables and wiring will be located within the monopole.

Equipment Compound:

The proposed 33' x 33' (1189 sf) lease area is to be located underneath the monopole. The equipment compound will be surrounded by a 9' tall chain link fence with green privacy slats. The lease area will contain all the outdoor equipment cabinets necessary to operate the site. The applicant is proposing to install the equipment cabinets on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level. No emergency generator is proposed for this site.

Access and Utilities:

The tower will be located within the parcel approximately 125' west off Goodyear Road. The applicant is proposing a new 15' wide gravel driveway off Goodyear Road to access the facility. Power and land-based telecommunications service will be provided from a nearby joint utility pole

located near the proposed tower. All power and telco lines will be located underground. No water or septic is required as the site is unmanned.

FINDINGS:

The Solano County Department of Resource Management has evaluated the Initial Study which was prepared in regards to the project. The County found no potentially significant adverse environmental impacts likely to occur. The County determined that the project qualifies for a Negative Declaration. The Initial Study of Environmental Impact, including the project description, findings and disposition, are attached.

PREPARATION:

This Negative Declaration was prepared by the Solano County Department of Resource Management. Copies may be obtained at the address listed below.



Michael Yankovich, Planning Program Manager
Solano County Dept. of Resource Management
675 Texas Street, Suite 5500
Fairfield, CA 94533
(707) 784-6765

Verizon
Use Permit No. U-17-09 &
Marsh Development Permit No. MD-17-02

Draft Initial Study and
Mitigated Negative Declaration



View of proposed cell tower location.

May 16, 2018

Prepared By
Department of Resource Management
County of Solano

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DEPARTMENT OF RESOURCE MANAGEMENT PART II OF INITIAL STUDY OF ENVIRONMENTAL IMPACTS

Introduction

The following analysis is provided by the Solano County Department of Resource Management as a review of and supplement to the applicant's completed "Part I of Initial Study". These two documents, Part I and II, comprise the Initial Study prepared in accordance with the State CEQA Guidelines, Section 15063.

Project Title:	Verizon Wireless (Hwy 680/Cygnus)
Application Number:	U-17-09 and MD-17-02
Project Location:	Northwest corner of Marshview Road and Goodyear Road, off I-680 outside of Fairfield
Assessor Parcel No.(s):	0046-110-280
Project Sponsor's Name and Address:	Complete Wireless Consulting on behalf of Verizon Wireless 2009 V Street Sacramento, CA 95818

General Information

This document discusses the proposed project, the environmental setting for the proposed project, and the impacts on the environment from the proposed project and any measures incorporated which will minimize, avoid and/or provide mitigation measures for the impacts of the proposed project on the environment.

- ☐ Please review this Initial Study. You may order additional copies of this document from the Planning Services Division, Resource Management Department, County of Solano at 675 Texas Street, Suite 5500, Fairfield, CA, 94533.
- ☐ We welcome your comments. If you have any comments regarding the proposed project, please send your written comments to this Department by the deadline listed below.
- ☐ Submit comments via postal mail to

Planning Services Division
Resource Management Department
Attn: Karen Avery, Senior Planner
675 Texas Street Suite 5500
Fairfield, CA 94533

- ☐ Submit comments via fax to: (707) 784-4805
- ☐ Submit comments via email to: kmavery@solanocounty.com
- ☐ **Submit comments by the deadline of: June 18, 2018**

Next Steps

After comments are received from the public and any reviewing agencies, the Department may recommend that the environmental review is adequate and that a Negative Declaration be adopted or that the environmental review is not adequate and that further environmental review is required.

ENVIRONMENTAL DETERMINATION

On the basis of this initial study:

- ☒ I find the proposed project could not have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project proponent has agreed to revise the project to avoid any significant effect. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find the proposed project could have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT (EIR)** is required.
- ☐ I find the proposed project could have a significant effect on the environment, but at least one effect has been (1) adequately analyzed in a previous document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the previous analysis as described in the attached initial study.
An EIR is required that analyzes only the effects that were not adequately addressed in a previous document.
- ☐ I find that although the proposed project could have a significant effect on the environment, no further environmental analysis is required because all potentially significant effects have been (1) adequately analyzed in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (2) avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are included in the project, and further analysis is not required.

May 15, 2018
Date

Karen Avery
Karen Avery
Senior Planner

1.0 ENVIRONMENTAL SETTING and PROJECT DESCRIPTION

1.1 ENVIRONMENTAL SETTING:

The project site is located near the intersection of Marshview Road and Goodyear Road to the east of Interstate 680 (I-680) in a rural area of Solano County. The property sits near the access ramp for northbound Interstate 680. The 2.8-acre parcel is vacant of structures and is approximately 1.5 miles southeast of the boundary of the City of Fairfield. The project site is located on Assessor's Parcel Number (APN) 0046-110-280.

The parcel is mostly flat with the elevation gradually increasing adjacent to the three roads, I-680 on-ramp, Goodyear and Marshview. Goodyear Road borders the property to the north and east followed by the Suisun Marsh. Marshview Road borders the property to the south and the northbound on-ramp to I-680 borders the project to the west. The parcel has several mature trees along the I-680 on-ramp and a couple of trees scattered along Goodyear Road. There is an existing barbed wire fence that runs partially along Marshview Road and then extends north along the on-ramp. The property is covered in grasses and some scattered shrubs.

1.2 PROJECT DESCRIPTION:

The applicant, Verizon Wireless, is requesting a conditional use permit and marsh development permit to construct a 50' wireless communication facility, a slimline monopole painted dark green, in the southwest corner of the parcel. The project would consist of the following:

Monopole:

The proposed facility consists of a 50' slimline monopole painted dark green with the antennas divided into two sectors or split centerlines. There will be a total of four (4), eight foot (8') panel antennas with two antennas centered at 46' and two antennas centered at 37' on the pole. The antenna mounts will be 1' apart on the pole. The remote radio units and surge protectors are to be placed behind the antennas and painted dark green to match the antennas and monopole. All cables and wiring will be located within the monopole.

Equipment Compound:

The proposed 33' x 33' (1189 sf) lease area is to be located underneath the monopole. The equipment compound will be surrounded by a 9' tall chain link fence with green privacy slats. The lease area will contain all the outdoor equipment cabinets necessary to operate the site. The applicant is proposing to install the equipment cabinets on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level (see Appendices 6.7). No emergency generator is proposed for this site.

Access and Utilities:

The tower will be located within the parcel approximately 125' west off Goodyear Road. The applicant is proposing a new 15' wide gravel driveway off Goodyear Road to access the facility. Power and land-based telecommunications service will be provided from a nearby joint utility pole located near the proposed tower. All power and telco lines will be located underground. No water or septic is required as the site is unmanned.

1.2.1 ADDITIONAL DATA:

NRCS Soil Classification:	Class II and III
---------------------------	------------------

Agricultural Preserve Status/Contract No.:	N/A
Non-renewal Filed (date):	
Airport Land Use Referral Area:	Zone C – proposed tower below 100' no review required by Airport Land Use Commission
Alquist Priolo Special Study Zone:	N/A
Primary or Secondary Management Area of the Suisun Marsh:	Secondary Management Area
Primary or Secondary Zone identified in the Delta Protection Act of 1992:	N/A
Other:	None

1.2.2 Surrounding General Plan, Zoning and Land Uses

	General Plan	Zoning	Land Use
Property	Agriculture/	A-20	Vacant
North	Marsh/Resource Conservation Overlay	MP- Marsh Preservation	Marsh
South	Agriculture/Travis Reserve Overlay	A-20	Vacant
East	Marsh/Resource Conservation	MP- Marsh Preservation	Marsh
West	Agriculture	A-20	Interstate 680

1.3 CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE LAND USE CONTROLS:

1.3.1 General Plan

The proposed project would occur on land designated Agriculture per the Solano County General Plan. The property is also within the Secondary Management Area of the Suisun Marsh which requires approval of a marsh development permit for development of a telecommunications facility within the Secondary Management Area.

1.3.2 Zoning

The site is located on land zoned Agricultural (A-20). This designation allows new wireless telecommunications facilities subject to approval of a Conditional Use Permit by the Planning Commission. Per Section 28.81 (D)(5)(b) of the Solano County Zoning Regulations, all wireless facilities constructed within ¾ mile of a designated scenic corridor shall conform with the height limit in the zoning district in which they are located. The proposed wireless facility is located within ¾ mile of Interstate 680, which is a designated scenic corridor in the Solano County General Plan. The height limit in the A-20 zoning district is 35'. The proposed monopole is 50'. The applicant is requesting that the Planning Commission grant an exception to this height limitation per Section 28.81(D)(5)(e).

1.4 Permits and Approvals Required from Other Agencies (Responsible, Trustee and Agencies with Jurisdiction):

1.41 Agencies that May Have Jurisdiction over the Project

- a. Federal Communications Commission (FCC)
- b. California Public Utility Commission (CPUC)

AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES AND AVOIDANCE, MINIMIZATION AND/OR PROTECTION MEASURES

This chapter discusses the potential for adverse impacts on the environment. Where the potential for adverse impacts exist, the report discusses the affected environment, the level of potential impact on the affected environment and methods to avoid, minimize or mitigate for potential impacts to the affected environment.

Findings of SIGNIFICANT IMPACT

Based on the Initial Study, Part I as well as other information reviewed by the Department of Resource Management, the project does not have the potential for significant impacts to any environmental resources.

Findings of LESS THAN SIGNIFICANT IMPACT Due to Mitigation Measures Incorporated into the Project

Based on the Initial Study, Part I as well as other information reviewed by the Department of Resource Management, the following environmental resources were considered and the potential for significant impacts were reduced to less than significant due to mitigation measures incorporated into the project. A detailed discussion of the potential adverse effects on environmental resources is provided below:

Findings of LESS THAN SIGNIFICANT IMPACT

Based on the Initial Study, Part I as well as the review of the proposed project by the Department of Resource Management, the following environmental resources were considered and the potential for impact is considered to be less than significant. A detailed discussion of the potential adverse effects on environmental resources is provided below:

- | | |
|---|--------------------------------|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Geology and Soils | |
| <input type="checkbox"/> Greenhouse Gas Emissions | |
| <input type="checkbox"/> Hydrology and Water | |

Findings of NO IMPACT

Based on the Initial Study, Part I as well as the review of the proposed project by the Department of Resource Management, the following environmental resources were considered but no potential for adverse impacts to these resources were identified. A discussion of the no impact finding on environmental resources is provided below:

- | | |
|--|--|
| <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Population & Housing |
| <input type="checkbox"/> Air Quality | |
| <input type="checkbox"/> Biological Resources | |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation |
| | <input type="checkbox"/> Transportation & Traffic |
| <input type="checkbox"/> Land Use Planning | |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Utilities & Service Systems |

2.1 Aesthetics

Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock out-croppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Increase the amount of shading on public open space (e.g. parks, plazas, and/or school yards)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a-c. Section 28-81(D)(5)(b) (Solano County Zoning Regulations) General Requirements describes the requirements which all wireless communication facilities must meet. These requirements state that wireless communication facilities constructed within $\frac{3}{4}$ mile from a designated scenic corridor may not exceed the height limit established within the zoning district in which the site is located. The project site is located adjacent to Interstate 680 which is designated a scenic corridor by the Resources Chapter of the Solano County General Plan. The proposed monopole is within an A-20 zoning district which has a height limit of 35'. The applicant is proposing a 50' slimline monopole. Section 28.81(D)(5)(e) allows the applicant to apply for an exception to the height limitation and the Planning Commission has the authority to grant this exception and approve a wireless project exceeding the height limit established within a zoning district. In this case, the applicant is requesting such an exception be granted by the Planning Commission.

The applicant submitted a series of photo simulations (Appendices – 6.5) of the site showing the proposed monopole as it would be viewed from various locations within the vicinity of the project. The

photo simulation of the view looking southeast from across Interstate 680 (shown below) is the most visible to passers-by in this rural area of Solano County. The photo simulation shows the proposed 50' slimline monopole, painted dark green, with the two separate antenna arrays mounted closely to the pole.

Per this photo simulation and project drawings submitted by the applicant, the equipment cabinets are proposed to be located within an equipment compound surrounded by a 9' chainlink fence with green slat inserts. The height of the fence and opaque nature of the fence is designed to screen the equipment cabinets from view.



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While the project is still visible, the slimline monopole painted dark green is shorter in stature than existing trees in the area which helps blend the pole into the surroundings. The 9' tall chainlink fence with green slats screens the equipment cabinets from public view. When considering the speed of the traffic flow of southbound travelers along this portion of I-680, where the speed limit is 65 mph, visual impacts to passers-by should be **less than significant**.

d. The project plans indicate that there will be two downward facing LED lights that will be located within the compound near the equipment cabinets. These lights will be the only lights in the area as there are no street lights in the vicinity. These lights will create a new light source, especially if these lights remain on during nighttime hours. However, the application states that the lights are operated by motion sensor which should reduce nighttime lighting impacts. **Less than significant impacts** expected.

e. The project would not increase shading on public open space. **No impact.**

2.2 Agricultural Resources

Would the project

	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The subject parcel is zoned for agricultural uses with Class II and III soils. The parcel is not under an active Williamson Act contract. Since the construction of Interstate 680 in the 1970's, there is no evidence that the 2.8-acre parcel was used for crops or grazing land, this could be due to the size and location of the parcel near the freeway. The property is zoned Agricultural-20, which allows a wireless communications facility with an approved use permit. The proposed facility will not lead to the conversion of adjacent agricultural property to non-agricultural use. **No impacts** to agricultural resources are anticipated.

2.3 Air Quality

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

concentrations?

- | | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| e. | Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion:

a-e. The project site is in a rural area of Solano County and is managed by the Bay Area Air Quality Management District. The project will have no impacts on implementation of the applicable air quality plans established by the BAAQMD. Once the facility is established, the site will remain unmanned. Service technicians will visit the site on a monthly basis. No other site visits are anticipated. The amount of traffic will have no impact on the air quality for the specific parcel or general area. The proposed telecommunication facility would not cause a substantial increase of new emissions, additional pollutant concentrations, or objectionable odors and **no impacts** to air quality are expected.

2.4 Biological Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc., through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

☐ ☐ ☐ ☒

Discussion:

a The project site was disturbed during the construction of Interstate 680 in the early 1970's. The property is located within the Secondary Management Area of the Suisun Marsh. However, the Solano County General Plan did not designate this area as a priority habitat area per Figure RS-2 possibly due to its previous disturbance and proximity to the freeway. **No impacts** expected.

b-f. The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites, conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **No impact.**

2.5 Cultural Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Cause a substantial adverse change in the significance of an historical resource as defined in CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a-d. There are no structures proposed for removal, historical or otherwise. The proposed telecommunications facility will be located on grounds that were previously disturbed during construction of Interstate 680 and Marshview and Goodyear Roads. No changes in archaeological, paleontological or geologic resources are anticipated. State law (Section 7050.5 of the California Health and Safety Code) dictates that any human remains found during construction activities shall be reported to the proper official(s). Therefore, **no impacts** are anticipated.

2.6 Geology and Soils

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.					
1)	Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2)	Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4)	Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, differential settlement, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-i,ii. The Public Health and Safety Chapter of the General Plan indicates that the area is near the Green Valley Fault which runs north/south along I-680 thru the Cordelia and Green Valley areas of Fairfield. Rupture of this fault or any fault, could expose people or structures to potential substantial adverse effects and strong ground shaking. However, properly designed structures, using the current Uniform Building Code requirements, should reduce any damage from ground shaking and impacts are considered to be **less than significant**.

a.iii & c. Figure HS-9 (Liquefaction Potential) of the Health and Safety chapter in the General Plan, shows the subject property to be located within an area of medium liquefaction potential. A geotechnical study will be required for any building permit approval to ensure the foundation for the monopole and equipment cabinets meet the required standards for the soil conditions on site. Thus impacts are anticipated to be **less than significant**.

a.iv. The project site is not located in an area known for landslides, per Solano County General Plan Figure HS-8 – Landslide Stability. **No impact.**

b. The placement of the cell block foundation for the monopole and equipment cabinets will require a minimal amount of surface displacement and should not result in a substantial loss of topsoil. **No impacts** are expected.

d. As noted above, the site specific geotechnical studies would be required at the time of building permit application. This would verify the absence or presence of potentially expansive soils and any mitigation necessary. Therefore, impacts are expected to be **less than significant**.

e. The communications facility is unmanned and will not require the installation of a waste water disposal system. No impacts to soils with regard to septic systems are anticipated. **No impact.**

2.7 Greenhouse Gas Emissions

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a. No one single project can have a significant impact on greenhouse gas emissions (GhG) as the impact of GhG emissions is considered to be global in nature. **No impact.**

b. As proposed, the project should not conflict with goals and policies of the Solano County Plan which are intended to reduce or indirectly reduce GhG emissions. Nor would the project conflict with the County's recently adopted Climate Action Plan (June 2011). **Less than significant impact.**

2.8 Hazards and Hazardous Materials

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-d. The project site is not listed on a list of hazardous materials site and the applicant has indicated that no hazardous materials will be stored on the property. The applicant is required to submit a report to the FCC indicating compliance of the proposed facility with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. A study was conducted by Hammett & Edison, Inc. (Appendices 6.4) which concluded that the proposed project would comply with the prevailing standards for limiting public exposure to radio frequency energy and the proposal would not cause a significant impact on the environment. **No impacts** are anticipated.

e-f. The project is located within Zone C of the Travis Air Force Base Land Use Compatibility Plan. Per the Travis Air Force Airport Land Use Table 1, because the height of the proposed monopole is not greater than 100', the site is not required to be reviewed by the Solano Airport Land Use Commission. The proposed monopole is also below the height of the Federal Aviation Requirements Part 77 surface area height requirements as shown in Figure 3. The site is unmanned and no people are expected to be effected by the proposed project; therefore, **no impact** should occur.

g-h. The project would not impair the implementation or physically interfere with an emergency response or evacuation plan. The project site is not located in an area of high fire risk and should not expose people or structures to a significant risk of loss. **No impact.**

2.9 Hydrology and Water

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. Be subject to inundation by seiche, tsunamis, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion:

a-i. The project is an unmanned telecommunications facility and therefore poses no impact to groundwater since neither water wells nor septic systems are proposed. According to FEMA maps, the property is located within a 100-year flood zone (Zone AE) (Panel #06095C0463F – 08/03/2016). The 1189 square foot compound will be covered in ¾" crushed stone which is permeable. The monopole and equipment cabinets will be placed on foundation of cell blocks (441 square feet). These cell blocks sit on top of a prepared surface but are removable. The cell blocks are 7' x 7' and are 2' thick. The 441 square foot foundation would not substantially alter the direction of storm water runoff; as a result, no impact is expected. The proposed construction would not violate any water quality standards or waste discharge requirements. No waste water is expected to be produced as part of this project. A **less than significant impact** to water quality or waste discharge is expected.

j. Per the Health and Safety Chapter of the Solano County General Plan, the proposed project is located in an area prone to inundation due to dam or levee failure, seiche, tsunami, or mudflow. The wireless facility is unmanned and is proposed to be built 2' above the existing elevation and possibly more if through the building permit process, a higher elevation is required. Therefore, the project will have a **less than significant impact**.

2.10 Land Use and Planning

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The project would not divide an established community as the project is in a rural area of Solano County. The project site is zoned Agricultural (A-20) which allows wireless telecommunications facilities with an approved use permit. The General Plan designates the subject property as Agriculture. The project site is within the Secondary Management Area of the Suisun Marsh which requires approval of a marsh permit for the wireless facility. The applicant is applying for both the use permit and marsh development permit. The project, as proposed, will not conflict with any habitat conservation plan or natural community conservation plan. **No impacts** are expected.

2.11 Mineral Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

residents of the state?

- | | | | | | |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| b. | Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|----|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Discussion:

a-b. There are no known mineral resources of value to the region in the project area and no locally important mineral resource recovery sites delineated in County documents. Therefore, no mineral resources will be lost and **no impacts** will occur.

2.12 Noise

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Exposure of persons to or generation of, excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-d. There will be minor short term and long term noise associated with the proposed communications facility. Minor short-term noise will result from the operation of construction equipment and would continue until construction is completed in an estimated 30-45 days.

An Environmental Noise Analysis was conducted by Bollard Acoustical Consultants, Inc. dated June 21, 2016 (Appendices 6.6). The noise generated on the site would come from the equipment cabinets operating within the compound. The analysis studied the cabinets and air conditioning unit proposed to be used at the site. The study concluded that the sound level at nearest property line would be 51 dBLdn which is below the standards set forth by the Solano County General Plan for Agricultural Zoning (75 Ldn) and within the 65 dB Ldn limit stated in Section 28.70.10 of the Land Use Regulations of the Solano County Zoning Regulations. The proposed project will have a **less than significant impact** in regards to noise.

There may be a minor increase in long-term ambient noise level from the equipment cabinets. The equipment cabinets contain a fan component for cooling the equipment should the equipment begin to overheat. The need for the fans occurs mostly in the daytime hours when daytime temperatures are higher and rarely during the cooler evenings. The nearest residence is approximately 2600' from the edge of the compound. Per the Solano County General Plan, noise reduction reduces up to 6 decibels per doubling of distance from the point source. The predicted noise level would be less than 20 dB Leq which is less than the 50 dBLeq decibel limits as established by the General Plan and Zoning Regulations. Again, the proposed project would have a **less than significant impact**.

e-f. The project is located in Zone C of the Travis Airport Land Use Compatibility Plan; however, the site is unmanned and will not expose people to excessive noise. **No impact**.

2.13 Population and Housing

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The proposed project will not induce population growth directly or indirectly or construct infrastructure that could induce population growth. The project does not involve the displacement of homes or people or necessitate construction of more housing elsewhere. **No impact**.

2.14 Public Services

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

The project itself will have a minimal effect on public services.

(a 1-5) The Fire District has adequate facilities and this project does not require the need for new fire station facilities. The Sheriff's Department has adequate facilities and staff to serve the area. The project would not require the need for new schools or parks. Approval of this proposed project would have **no impact** on public services.

2.15 Recreation

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Physically degrade existing recreational resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-c. The proposed project would not increase the number of use of existing parks or other recreational facilities, nor require the construction or expansion of new recreational facilities nor physically degrade existing recreational resources. **No impact.**

2.16 Transportation and Traffic

Checklist Items: Would the project	Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a,b,e,f. After initial construction, the only vehicular traffic associated with the project would be routine monthly maintenance visits by service technicians. The addition of one visit per month by the cellular carrier would not represent an impact to Goodyear Road which is maintained by Solano County Public Works Engineering. This small increase in traffic would not have significant impacts on the existing traffic load and capacity of the street systems. There would be no impact to level of service standard, change in air traffic patterns, or impact to emergency access or parking capacity. The applicant has

designed a new driveway access from Goodyear Road. The gravel access road will be 15' wide and will provide parking and turning radius for a service vehicle as well as emergency vehicles. **No impact.**

c. The project is located near Travis Air Force Base but the height of the monopole is 50' and does not require further study by the Airport Land Use Commission. **No impact.**

g. The proposed project does not conflict with adopted policies, plans, or programs supporting alternative transportation. **No impact.**

2.16 Utilities and Service Systems

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e.	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a-g. Wastewater and potable water are not required for this telecommunications facility and this project will not generate any wastewater. Power and telephone service will be obtained from existing power poles located on the property via a proposed utility easement. All utilities will be located underground. **No impacts** are anticipated.

2.17 Mandatory Findings of Significance

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Does the project have the potential to (1) degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Does the project 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion:

a. The project will not 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 an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory.

b. The project will not have impacts that are individually limited, but cumulatively considerable.

c. The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.

3.0 Agency Coordination and Public Involvement

3.1 Consultation and Coordination with Public Agencies

The Initial Study is being circulated for public comment.

3.2 Public Participation Methods

The Initial Study is available at the Solano County Department of Resource Management and online at the Department's Planning Services Division website at:

<http://www.solanocounty.com/depts/rm/documents/eir/default.asp>

Interested parties may contact the planner assigned to this project at the contact points provided below:

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Senior Planner
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Resource Management Department
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4.0 List of Preparers

This Initial Study was prepared by the Solano County Department of Resource Management. The following staff and consultants contributed to the preparation of this Initial Study:

Solano County Department of Resource Management Staff

5.0 Distribution List

State Agencies

Caltrans – District 4 Oakland
San Francisco Bay Conservation and Development Commission

County

Marsh Development Permit Contact List

6.0 Appendices

- 6.1 Initial Study, Part I – Use Permit application**
- 6.2 Assessor's Parcel Map**
- 6.3 Development Plans**
- 6.4 EMF Exposure Study – Hammet & Edison, Inc. – June 20, 2016**
- 6.5 Photo Simulations of Site**
- 6.6 Noise Analysis – Bollard Acoustical Consultants, Inc. – June 21, 2016**
- 6.7 Cell Block Design Information**

APPENDICES

6.1

Project Support Statement Rev. 1
Verizon Wireless

Site Name: Hwy 680 Cygnus
Location: NW Corner of Marshview Rd. and Goodyear Rd., Fairfield, CA
APN: 0046-110-28

Introduction

Verizon Wireless is seeking to improve communications service to residences, businesses, public services, and area travelers in Solano County, California. Verizon maintains a strong customer base in Solano County and strives to improve coverage for both existing and potential customers. The proposed facility is needed to bring coverage to Highway 680 between two other Verizon sites along this highway named "Hwy 680/Goldhill" to the north and "Hwy 680/Parish" to the south. This project will expand Verizon's existing network and improve call quality, signal strength, and wireless connection services in Solano County. The improved wireless service will benefit residents, local businesses, public services, and roadway safety throughout the region.

Location/Design

Verizon Wireless proposes building a new wireless telecommunication facility at the northwest corner of Marshview Road and Goodyear Road along I-680 near Fairfield. The property is located in the Exclusive Agriculture (A-20) zone. The surrounding area consists of similarly zoned (A-20) parcels. The Suisun Marsh is to the east of the area, but the subject parcel is not within the boundaries of the Marsh Preservation zone. According to Jaime Michaels, Principal Permit Analyst of the San Francisco Bay Area Conservation and Development Commission (BCDC), the subject parcel is in the secondary management area and BCDC does not have permitting authority over this project. The parcel is 2.80 acres and is currently being used as a vacant lot. The facility will consist of a new 50' slimline monopole and associated ground equipment installed in an undeveloped area in the southwest quadrant of the parcel. There are no dwellings in the vicinity of this site. The facility is located within $\frac{3}{4}$ of a mile of Interstate 680, which is designated as a scenic highway in the Solano County General Plan.

Project Description

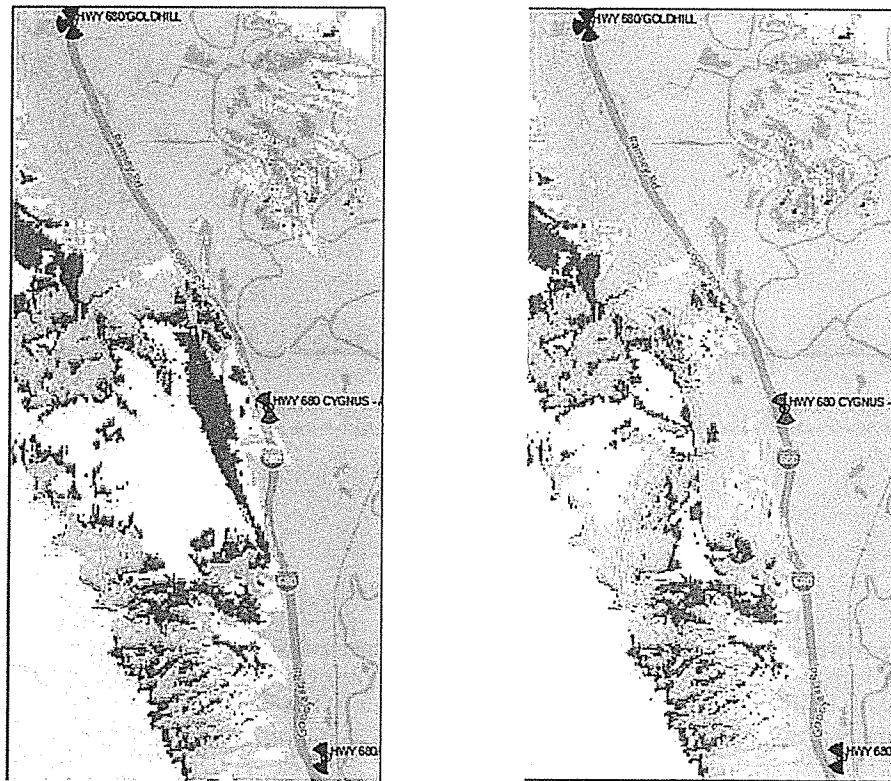
The proposed facility consists of four (4) Verizon Wireless panel antennas with associated equipment mounted on a new 50' monopole painted green. The 33' x 33' lease area will have a 9' tall chain link fence with green privacy slats at the perimeter to conceal all equipment from public view. The fence will be topped with barbed wire and will have a locking gate. The lease area will contain all equipment for the facility at the base of the monopole structure, including outdoor equipment cabinets. All ground equipment will be installed on a 21' x 21' concrete pad of cell blocks to raise the equipment 2' above ground level to accommodate the base flood elevation. The unmanned facility will be continuously electronically monitored to provide enhanced wireless network coverage 24 hours a day, 7 days a week.

A previously submitted design for this site included a 65' tall monopole with 6 panel antennas installed with a 62' centerline height. This design was considered by the County but rejected due to concerns about the visual impact in the CEQA analysis based on the proximity to I-680. In response to these concerns, the currently proposed 50' tall slimline monopole reduced the overall

height and number of antennas, as well as minimizing the distance from the pole to the antennas. A total of four antennas are divided into two centerlines with two antennas each, further minimizing the profile of this monopole. These changes are proposed in order to satisfy the visual impact component of CEQA review that caused concern with the previous design. Due to the proximity of the facility to I-680, a designated scenic highway in the Solano County General Plan, a lower overall height of 50' is proposed as a compromise to be closer to the zone maximum height while still filling a significant coverage gap in this area.

Facility Need and Coverage Maps

Below, please see the comparison of the two maps. The first map shows the target area currently lacking wireless coverage on the Verizon Wireless network. The second map show what the coverage will be like upon activation of the proposed facility. The uncolored areas show poor or no coverage, the area shown in red shows some outdoor and indoor coverage, the area marked in yellow shows some indoor coverage and good outdoor coverage, and the area marked in green indicates good indoor, in-car, and outdoor coverage. Please note that much of the red and yellow areas are replaced by green following activation of the proposed facility along the targeted section of I-680.



As shown in these coverage maps, the target area (map center, labeled “Hwy 680 Cygnus”) is filled with much more green, indicating far greater indoor and in car coverage along in the area surrounding the proposed facility, especially along I-680, providing much better coverage for travelers along this busy highway. Some areas that were red are now yellow, indicating new in-car service where previously there was none. Two other existing Verizon Wireless facilities are marked on the map as “Hwy680/Goldhill” to the north and “Hwy680/Parrish” to the south.

Larger versions of these coverage maps are provided with this application.

Public Benefits of Improved Wireless Service

Modern life has become increasingly dependent upon wireless communications. Wireless access is critical to many facets of everyday life, such as safety, recreation, and commerce. This site will allow current and future Verizon Wireless customers to have access to wireless services in the areas shown on the Coverage Maps included in this application. Additionally, this site will serve as a backup to the existing landline service in the area and will provide improved wireless communication, which is essential to first responders, community safety, local businesses and area residents. As a backup system to traditional landline phone service, mobile phones have proven to be extremely important during natural disasters and other catastrophes.

Aesthetic Impacts

The previously proposed facility included a 65' tall monopole with 6 antennas at one centerline height. This was the height determined necessary by the Verizon Wireless RF Engineer for the signal to reach the intended service area and to provide redundancy in the event of an outage of other facilities in the area. CEQA Review by Solano County based including the scenic highway component found that the justification of redundancy was insufficient to compensate for the visual impact caused by the 65' height.

Due to this, the County rejected the 65' design and the Verizon Wireless RF Engineer redesigned the facility to have a lower height of 50' with split centerlines and only 4 total antennas. The proposed 50' tall facility height complies with the County's development standards for wireless facilities in the A-20 zoning designation, and has been designed at its minimum functional height, and is also closer to the zone height maximum imposed by the General Plan due to its proximity to the scenic I-680 corridor. Please see Site Plans included in this application for elevation drawings and the included photosimulations.

Statement of Commitment to Allow Collocation

The proposed facility has been designed in a manner that will structurally accommodate additional antennas and/or future collocation. Verizon Wireless welcomes other carriers to collocate on their facilities whenever possible.

Safety Benefits of Improved Wireless Service

Verizon Wireless offers its customers multiple services such as voice calls, text messaging, mobile email, picture/video messaging, mobile web, navigation, broadband access, V CAST, and E911 services. Mobile phone use has become an extremely important tool for first responders and serves as a back-up system in the event of a natural disaster.

Construction Schedule

The construction of the facility will be in compliance with all local rules and regulations. The crew size will range from two to ten individuals. The construction phase of the project will last approximately two months and will not exceed acceptable noise levels.

Lighting

Unless tower lighting is required by the FAA the only lighting on the facility will be a shielded downward tilted manually operated light by the door within the fenced area.

Compliance with FCC Standards

This project will not interfere with any TV, radio, telephone, satellite, or other signals. Any interference would be against federal law and a violation of Verizon Wireless's FCC license. An RF report verifying compliance with FCC guidelines is included with this submittal.

Notice of Actions Affecting Development Permit

In accordance with California Government Code Section 65945(a), Verizon Wireless requests notice of any proposal to adopt or amend the: general plan, specific plan, zoning ordinance, ordinance(s) affecting building or grading permits that would in any manner affect this development permit. Any such notice may be sent to 2009 V Street, Sacramento.

RECEIVED



DEPARTMENT OF RESOURCE MANAGEMENT PLANNING SERVICES APPLICATION FORM

675 Texas Street Suite 5500, Fairfield, CA 94533

NOV 03 2017

(707) 784-6765 Phone

(707) 784-4805 Fax

COUNTY OF SOLANO
RESOURCE MANAGEMENT

www.solanocounty.com

Application Type: ☒ New ☐ Extension (maps) ☐ Minor Revision ☐ Map Modification

<input type="checkbox"/> Administrative Permit (AD)	<input type="checkbox"/> Minor Use Permit (MU)	<input type="checkbox"/> Sign Permit (SGN)
<input type="checkbox"/> Architectural Review (AR)	<input type="checkbox"/> Mobilehome Storage Permit (MH)	<input checked="" type="checkbox"/> Use Permit (U)
<input type="checkbox"/> General Plan Amendment (G)	<input type="checkbox"/> Mutual Agreement (MA)	<input type="checkbox"/> Variance (V)
<input type="checkbox"/> Major Subdivision (S)	<input type="checkbox"/> Performance Standards (PS)	<input type="checkbox"/> Waiver (WA)
<input checked="" type="checkbox"/> Marsh Development Permit (MD)	<input type="checkbox"/> Policy Plan Overlay (PP)	<input type="checkbox"/> Zone Text Amendment (ZT)
<input type="checkbox"/> Minor Subdivision (MS)	<input type="checkbox"/> Rezone (Z)	

FOR OFFICE USE ONLY

Application No: U-17-09 MR# MD-17-02 Hrg: AD ZA PO BOS Date Filed: 11/3/17 Plnr: mn

Project Name: Verizon Wireless "Hwy 680 Cygnus"

Subject Site Information

Site Address: NW corner of Marshview Rd and Goodyear Rd City: Fairfield State: CA Zip:

Assessor's Parcel Number (s): 0046-110-280 Size (sq. ft/acre): 2.80 acres

Preferred Property Access by Staff: ☒ OK to access ☐ Call applicant before access ☐ Call owner before access

Contact Information

Property Owner Name: Seth Parish

Contact Name: Seth Parish Phone: (707) 486-1412 Email:

Mailing Address: P.O. Box 6 City: Benicia State: CA Zip: 94510-0006

Architect/Engineer/Land Surveyor Company Name: MST Architects, Inc.

Contact Name: Manuel S. Tsihlas Phone: (916) 341-0405 Email: manuel@mstarchitects.com

Mailing Address: 801 Alhambra Blvd., Suite 2 City: Sacramento State: CA Zip: 95816

Applicant/Company Name: Cellco Partnership (Delaware) dba Verizon Wireless, c/o Complete Wireless Consulting, Inc.

Contact Name: Benjamin Merritt Phone: (916) 747-0624 Email: bmerritt@completewireless.net

Mailing Address: Complete Wireless Consulting, 2009 V Street City: Sacramento State: CA Zip: 95818

Other Contacts:

Name: Phone: Email:

Mailing Address: City: State: Zip:

3 Williamson Act Contract

- A. Is any portion of the property under Williamson Act Contract? ☐ Yes ☒ No

If yes, Contract No. _____ please provide a copy.

- If yes, has a Notice of Non-Renewal been filed? ☐ Yes ☐ No

If yes, please provide a copy.

- B. Are there any agricultural conservation, open space or similar easements affecting the use of the project site?
(such easements do not include Williamson Act contracts)

☐ Yes ☒ No *if yes, please list and provide a copy.*

4 Additional Background Information

- A. Does the proposal propose the demolition or alteration of any existing structures on the subject site?

☐ Yes ☒ No *If yes, please describe in the project narrative.*

- B. List any permits that are required from Solano County and/or other local, state, federal agencies (i.e. building permit, Department of Fish and Game permits, etc.)

FCC registration, Solano County building permit

- C. List any known previously approved projects located on the property (i.e. Use Permit, Parcel Maps, etc). Identify the project name, type of project and date of approval.

N/A

- D. List any known professionally prepared reports for the project (i.e. biological survey, traffic study, geologic, hazardous materials, etc.)

RF compliance report, acoustic study

- E. Does the project involve Housing and Urban Development (HUD) federal funding? ☐ Yes ☒ No
Is HUD funding anticipated? ☐ Yes ☒ No

If yes, indicate the type of funding (i.e. CDBG grant, HOME, Investment Partnership Program, etc), funding amount, whether awarded or application pending and fiscal year of award or application request.

H. Is this part of a larger project? If yes, please explain. ☒ Yes ☐ No

Facility will connect with the larger Verizon Wireless network

5 Existing Conditions

Describe in general the project site and surrounding properties as they presently exist; including but not limited to, information on existing land uses, unique physical and topographic features, soil stability, plants and animals, cultural, historical, or scenic aspects, and any other information which would assist the Department in understanding the project's environmental setting. Clear, representative color photographs may be submitted to show the project area. Draw in property boundaries on the photographs.

A. Project site:

The project site is currently undeveloped. The terrain is slightly elevated. The planned lease area is located at the southern end of the property.

B. Surrounding properties:

Undeveloped, parcels border Hwy 680

C. Existing use of land:

Undeveloped

D. Describe number and type of existing structures:

	Type/Number	Square Feet
Residential		
Agricultural		
Commercial		
Industrial		
Other	0	

E. Describe existing vegetation on site, including number and type of existing trees.

Grassy areas with a few deciduous trees along borders of parcel.

F. If in agricultural use, describe type of use or crop (cattle, sheep, hay, vegetables, fruit, etc).

- Q. List and describe the nature and location of all existing easements serving or affecting the property, including access, utility, and other public or private easements (see deed or recent preliminary title report).

Please see Site Plans.

- R. List and describe any freestanding and attached signage on the property. Describe the dimensions, area and height. Include the location on the site plan.

None

6 Proposed Changes to the Site

- A. Topography and grading (attach copy of grading plan showing existing and proposed topography and drainage patterns.) N/A, no grading is proposed.

i. Percent of site previously graded: _____%.

ii. Project area (area to be graded or otherwise disturbed): _____sq. ft./acres.

iii. Estimate amount of soil to be moved (cut and/or fill):

_____Less than 50 cubic yds³ _____More than 50 cubic yds³ _____More than 1000 cubic yds³

iv. Estimate amount of soil to be:

Imported _____yd³ Exported _____yd³ Used on site _____yd³.

- B. Number, size and type of trees, and type and quantity of vegetation to be removed. (size of trees = diameter at 4ft. above grade)

No trees will be removed or disturbed in the construction of this project.

- C. Number, type and use of existing structures to be removed, and removal schedule:

None

- D. Describe proposed fencing and/or visual screening (landscaping):

The facility will be a painted monopole, and all equipment will be contained within outdoor equipment cabinets, and surrounded by a fence.

- E. Proposed access to project site (road name, driveway location, etc.):

Proposed wide access easement (Please see Site Plans)

- F. Proposed source and method of water supply:

N/A

- G. Proposed method of sewage disposal (specify agency if public sewer):

N/A

G. Slope of property:

Flat or sloping (0 - 6% slope) 2.80 acres
 Rolling (7 - 15% slope) _____ acres
 Hilly (16 - 24% slope) _____ acres
 Steep (> 24% slope) _____ acres

H. Describe existing drainage conditions on site. Indicate direction of surface flows, adjacent parcels affected.
N/A, proposed facility will not interfere with existing drainage

I. Describe land uses on adjacent parcels (specify types of crops if agricultural).

North	Undeveloped	South	Marshview Rd, Undeveloped
East	Goodyear Rd, Suisun Marsh	West	Hwy 680 off-ramp, Undeveloped

J. Distance to nearest residence(s) or other adjacent use(s): 7,303 ft (ft/mi)

K. Describe and indicate location of any power lines, water mains, pipelines or other transmission lines which are located on or adjacent to the property.

Power lines across Goodyear Rd from parcel. Existing streetlight on southwestern corner of parcel.

L. Describe number and location of natural creeks or water courses through or adjacent to the property. Specify names (if any). Indicate whether ephemeral (brief flows following rains), intermittent (seasonal flows during wet season), or perennial (year-round flows).

None

M. Describe number and location of man-made drainage channels through or adjacent to the property. Specify names, if any.

None

N. Identify and describe any on-site or adjacent marshes, wetlands, vernal pools, wet meadows, riparian (i.e. dependant on water bodies) vegetation, etc.:

None

O. Are there any unique, sensitive, rare, threatened, or endangered animals, plants, or habitats on the project site or located in close proximity which may be affected by the project?

Yes _____ No X Don't Know _____ If yes, please list:

P. Describe existing vehicle access(s) to property:

Goodyear Rd

H. Provisions for solid/hazardous waste disposal (specify company or agency if applicable):

N/A

I. List hazardous materials or wastes handled on-site:

Diesel fuel will be stored on-site for standby generator.

J. Duration of construction and/or anticipated phasing:

Construction will take approximately two months.

K. Will the proposed use be affected by or sensitive to existing noise in the vicinity? If so, describe source (e.g. freeway, industrial) and distance to noise source.

No.

7 Proposed Site Utilization

A. RESIDENTIAL PROJECTS

1. Number of structures: Single Family: _____ Multi-family: _____ Accessory: _____

If multi-family, number of units: _____ Maximum height: _____

2. Signage: Freestanding: _____ Dimension(s): _____ Area: _____ (sq.ft)
Attached/Wall: _____ Dimensions(s): _____ Area: _____ (sq.ft)

B. NON-RESIDENTIAL PROJECTS (Commercial, Industrial, Agricultural, Other)

1. Lot coverage:

Building coverage: 2,500 sq. ft lease area (sq.ft) Surfaced area: _____ (sq.ft)

Landscaped or open space: _____ (sq.ft)

2. Total floor area: _____ (sq.ft)

3. Number of stories: _____ Maximum height: 80' (ft.)

4. Proposed hours of operation:

Days: 7 days per week, 24 hours per day

From: _____ a.m./p.m to _____ a.m./p.m

Year round: ☒ Yes ☐ No

Months of operation: from _____ through _____

5. Proposed construction schedule: TBD
Daily construction schedule: from _____ a.m./p.m. to _____ a.m./p.m.
Days of construction: _____
6. Will this project be constructed in phases? Describe:
No, construction should last approximately two months.
7. Maximum number of people using facilities:
At any one time: Varies depending on number of Verizon users in the area.
Throughout day: _____
8. Total number of employees: 0, facility will be unmanned
Expected maximum number of employees on site: A technician will visit site 1-2 times per month
During a shift: 0 During day: 0
9. Number of parking spaces proposed: 0
10. Maximum number of vehicles expected to arrive at site:
At any one time: 0 day: 0
11. Radius of service area: Facility will provide Verizon 4G LTE service throughout southeastern Solano County. Please see Coverage Maps.
12. Type of loading/unloading facilities:
N/A
13. Type of exterior lighting proposed:
Hooded and down-tilted security lights outside equipment cabinets.
14. Describe all anticipated noise-generating operations, vehicles or equipment on-site.
Standby generator will run once per week for 15 minutes for maintenance purposes, and air conditioning units on equipment shelter will run as needed. Please see Acoustic Study.
15. Describe all proposed uses which may emit odors detectable on or off-site.
N/A
16. Describe all proposed freestanding and wall signage. Include the dimensions, area and height.
Warning signs and emergency contact information will be provided at site. Please see Site Plans and RF study.

8 Environmental Checklist

Indicate the following items applicable to the project or its effects. Discuss in Section 9 all items checked "Yes" or "Maybe". **Attach additional sheets as necessary.**

	YES	MAYBE	NO	
A. Change in existing natural features including any bays, tidelands, lakes, streams, beaches, natural landforms or vegetation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
B. Change in scenic views or vistas from existing residential areas, public lands or roads.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
C. Change in scale, pattern or character of general area of project.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
D. Increased amounts of solid waste or litter.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
E. Dust, ash, smoke, fumes or odors on site or in vicinity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
F. Change in ground water quality or quantity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
G. Alteration of existing drainage patterns, or change in surface water quantity or quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
H. Change in existing noise or vibration levels.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Acoustic Study provided.</i>
I. Construction on filled land or construction or grading on slopes of 25% or more.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
J. Storage, use or disposal of materials potentially hazardous to man or wildlife, including gasoline and diesel fuel. (See Environmental Health Division for assistance or information).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Diesel fuel for standby generator.</i>
K. Increase in demand for public services (police, fire, water, sewer, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
L. Increase in fossil fuel consumption (electricity, natural gas, oil, etc.).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Diesel fuel for standby generator.</i>
M. Change in use of or access to an existing recreational area or navigable stream.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
N. Change in traffic or vehicular noise on road system in immediate vicinity.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
O. Increased hazards for vehicles, bicycles or pedestrians.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P. Removal of agricultural or grazing lands from production.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Q. Relocation of people.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

9 Additional Information by Applicant

In order to make this application COMPLETE, please submit any additional data, information or special study reports that may be necessary to determine whether the project may have significant effect on the environment or to evaluate any adverse impacts, and to determine how they may be mitigated. Add additional pages as necessary.

10 Information Verification - Signed by Owner and Applicant

Owner and Applicant must sign below certifying that all information is to the best of his/her knowledge true and correct.

If the applicant is not the owner of record of all property included in this application, the signature given below is certification that the owners of record have knowledge of and consent to the filing of this application and supporting information. Additionally, the undersigned does hereby authorize representatives of the County to enter upon the above mentioned property for inspection purposes. This certification acknowledges that if the project exceeds double that of the application fee, applicants are subject to the hourly billing rate of staff time. You will be notified if the project is approaching this threshold.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Owner signature: [Signature] Date: 10-16-15

PRINTED NAME: Seth Parish

Owner signature: _____ Date: _____

PRINTED NAME: _____

Applicant signature: [Signature] Date: 11/3/17

PRINTED NAME: Benjamin Merritt, Land Use Planning Specialist, Complete Wireless Consulting, Inc.

For Office Use Only

Planning Permit Fee(s)	Environmental Review Fees
<u>U. 17.09</u> \$ <u>6216</u>	Initial Study \$ <u>1046.75</u>
<u>MD. 17.02</u> \$ <u>783</u>	Archaeological Study (Sonoma State NWIC) \$ <u>75</u>
_____ \$ _____	Negative Declaration \$ <u>2177</u>
_____ \$ _____	CA Fish and Games (ND or EIR) \$ <u>3298.75</u>
_____ \$ _____	Initiate EIR \$ <u>-</u>
_____ \$ _____	Mitigation Monitoring Plan \$ <u>-</u>
Total \$ <u>6999</u>	Total \$ <u>5515</u>
Total Fees Paid (P + E) \$ <u>6999 + 3298.75</u>	Receipt No.: <u>1052044</u> DATE: <u>3298.75</u>
	<u>10,297.75 pd</u>

Fish & Game - not paid

Staff verify: Zoning: _____ GP Land Use & Consistency: _____

Comments: _____ Staff/Date: _____

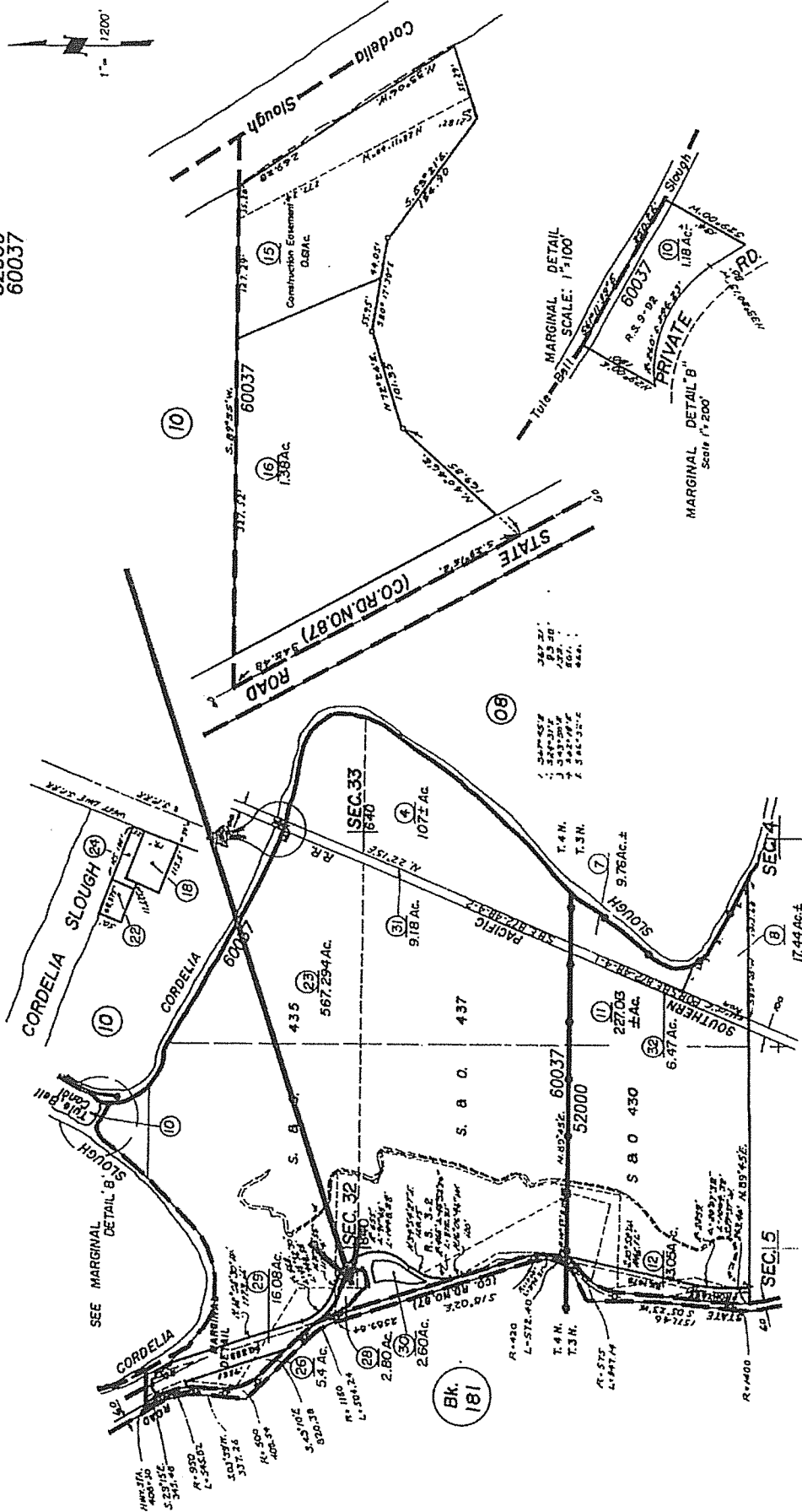
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6.2

T.3 & 4N., R.2W., M.D.B.& M.

Tax Area Code
52000
60037

46-11



NOTE: This map is for assessment purposes only. It is not intended to define legal boundary rights or imply compliance with land division laws.

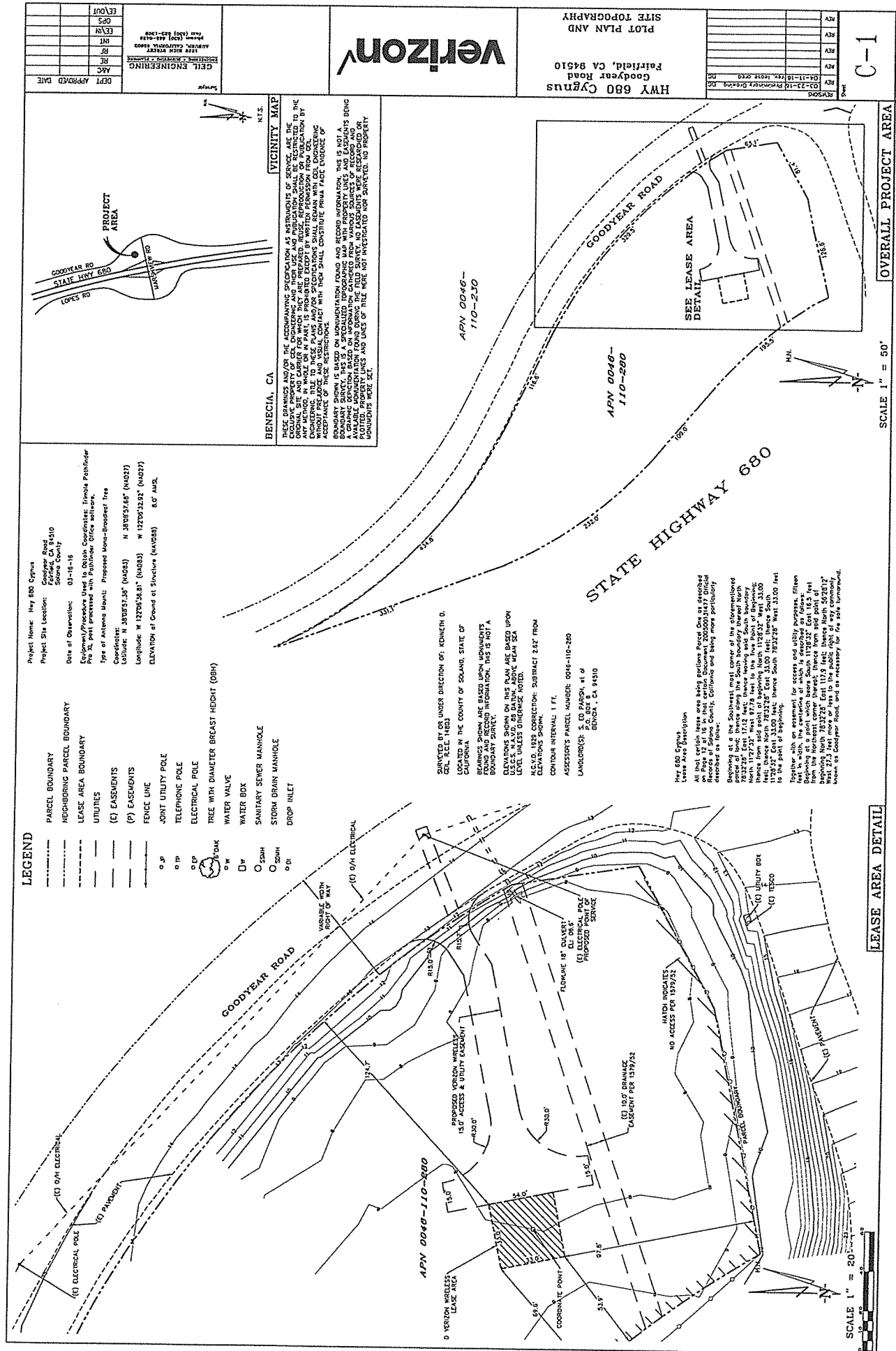
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Adt. Br. 30	10-26-03	CU
REVISION	DATE	BY

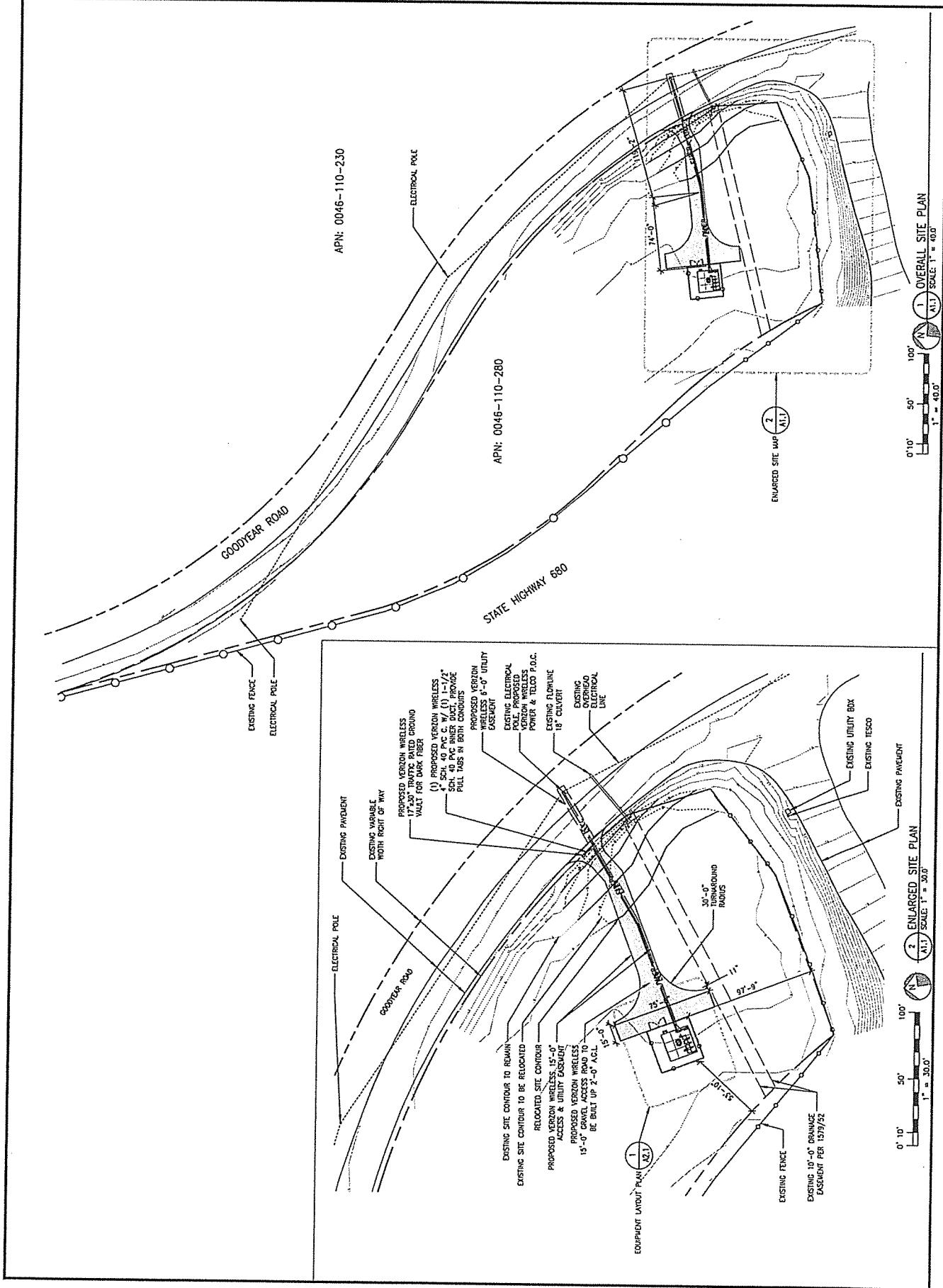
Assessor's Map Bk. 46 Pg. 11
County of Solano, Calif.

Assessor's Block Numbers Shown in Ellipses, Assessor's Parcel Numbers Shown in Circles

08-10

6.3







MST ARCHITECTS
 1119 West 17th Street, Suite 100
 San Francisco, CA 94115
 Tel: 415.774.1119
 Fax: 415.774.1120
 www.mstarchitects.com

THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF MST ARCHITECTS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MST ARCHITECTS.

COMPLETE
 02/15/2017

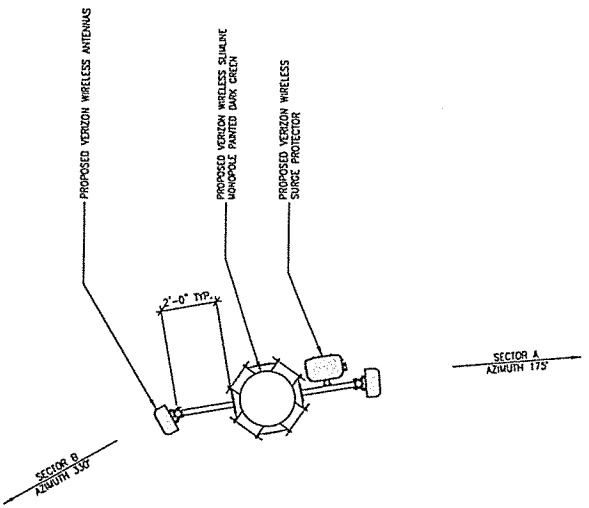
Verizon
 HWY 680 CYGNUS
 GOODFAR ROAD
 FAIRFIELD, CA 94534

SHEET TITLE:
 ANTENNA LAYOUT PLAN

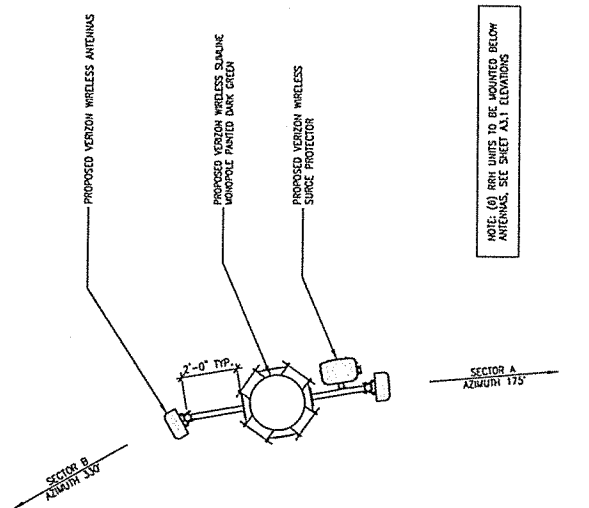
1 ANTENNA LAYOUT PLAN @ 47'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 37'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 27'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 17'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 7'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 0'-0" A.G.L.

1 ANTENNA LAYOUT PLAN @ 47'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 37'-0" A.G.L.
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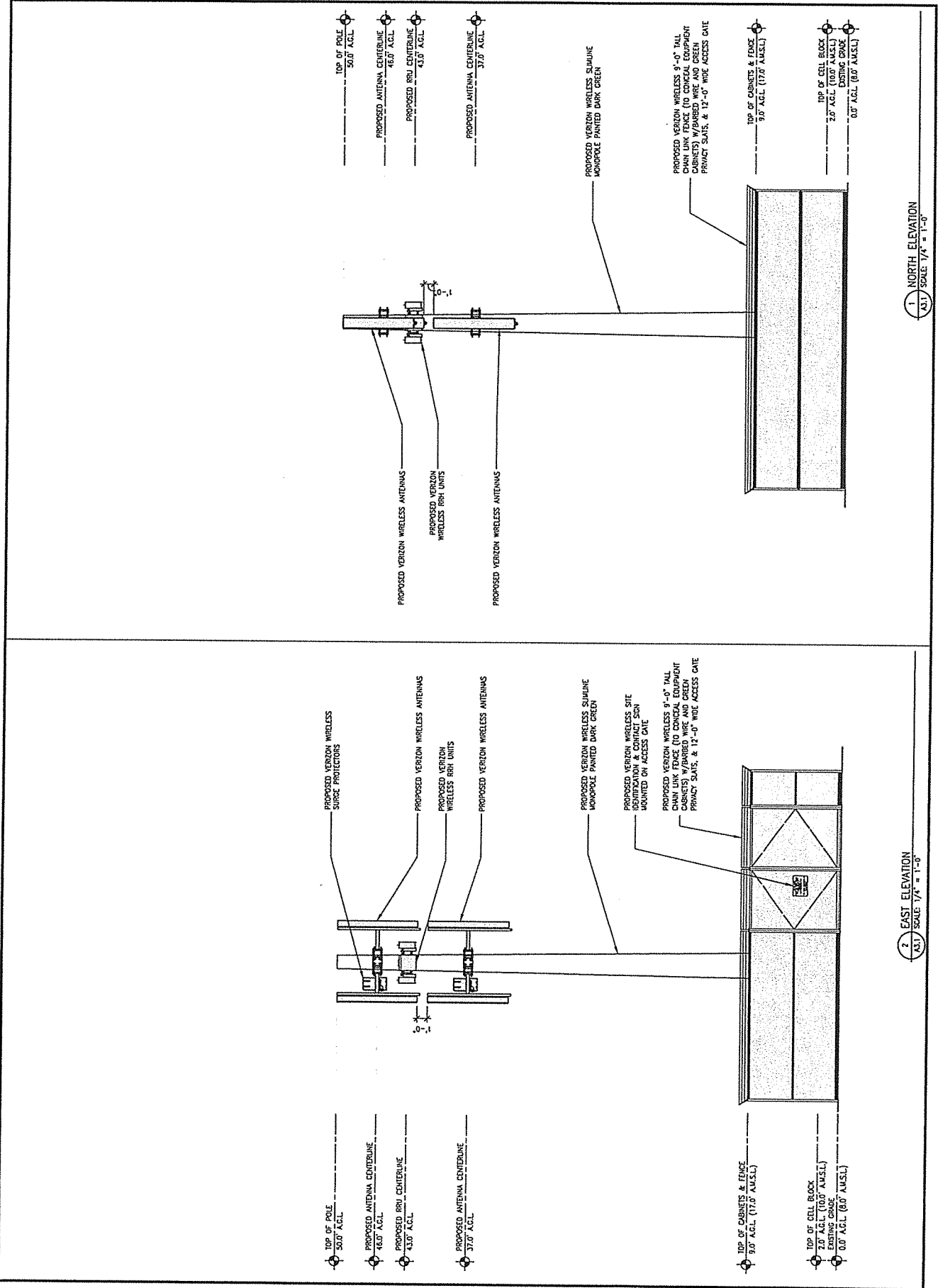
EQUIPMENT SCHEDULE (PRELIMINARY & SUBJECT TO CHANGE)				
EQUIPMENT	DESCRIPTION	SECTOR A	SECTOR B	TOTAL
ANTENNA	TO BE DETERMINED	2	2	4
RRH	TO BE DETERMINED	2	2	4
SURGE PROTECTOR/HYBRID	HYBRID DC3315 / HYBRID TRUNK CABLE	2/2	2/2	2/2
COAXIAL CABLE	N/A	0	0	0



1 ANTENNA LAYOUT PLAN @ 47'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 37'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 27'-0" A.G.L.
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 1 ANTENNA LAYOUT PLAN @ 7'-0" A.G.L.
 1 ANTENNA LAYOUT PLAN @ 0'-0" A.G.L.



6.4

**Verizon Wireless • Proposed Base Station (Site No. 2999954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, 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. 2999954 “Highway 680 Cygnus”) proposed to be located at Goodyear Road in Fairfield, 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 pole to be sited near the Marshview Road interchange with Interstate 680 in unincorporated Solano County, at Goodyear Road near Fairfield. The proposed operation will, together with the existing base station near the site, 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)	5–80 GHz	5.00 mW/cm ²	1.00 mW/cm ²
WiFi (and unlicensed uses)	2–6	5.00	1.00
BRS (Broadband Radio)	2,600 MHz	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



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

P9QV
Page 1 of 3

**Verizon Wireless • Proposed Base Station (Site No. 2999954 “Highway 680 Cygnus”)
Goodyear Road • Fairfield, California**

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 MST Architects, Inc., dated May 5, 2016, it is proposed to install six Andrew Model SBNHH-1D65C directional panel antennas on a new 65-foot steel pole to be sited in an open area near the on-ramp from Marshview Road to the northbound lanes of Interstate 680, near Goodyear Road south of Fairfield. The antennas would employ no downtilt, would be mounted at an effective height of about 62 feet above ground, and would be oriented in groups of three toward 175°T and 330°T. The maximum effective radiated power in any direction would be 14,140 watts, representing simultaneous operation at 4,240 watts for AWS, 3,890 watts for PCS, 3,360 watts for cellular, and 2,650 watts for 700 MHz service.

Presently located on a utility pole about 370 feet to the southeast are similar antennas for use by T-Mobile. For the limited purpose of this study, the transmitting facilities of that carrier are assumed to be as follows:

Service	Maximum ERP	Antenna Model	Downtilt	Height
AWS	4,400 watts	Ericsson AIR21	2°	23 ft
PCS	2,200	Ericsson AIR21	2	23
700 MHz	1,800	Andrew LNX-6514DS	2	23



**Verizon Wireless • Proposed Base Station (Site No. 2999954 "Highway 680 Cygnus")
Goodyear Road • Fairfield, California**

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation by itself is calculated to be 0.026 mW/cm², which is 2.9% of the applicable public exposure limit. The maximum calculated cumulative level at ground, for the simultaneous operation of both carriers, is 8.5% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels. There are no buildings within 1,000 feet of the proposed location.

No Recommended Mitigation Measures

Due to their mounting location and height, the Verizon antennas would not be accessible to unauthorized persons, 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 near Goodyear Road in Fairfield, 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 Nos. E-13026 and M-20676, which expire on June 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



William F. Hammett
William F. Hammett, P.E.
707/996-5200

June 20, 2016



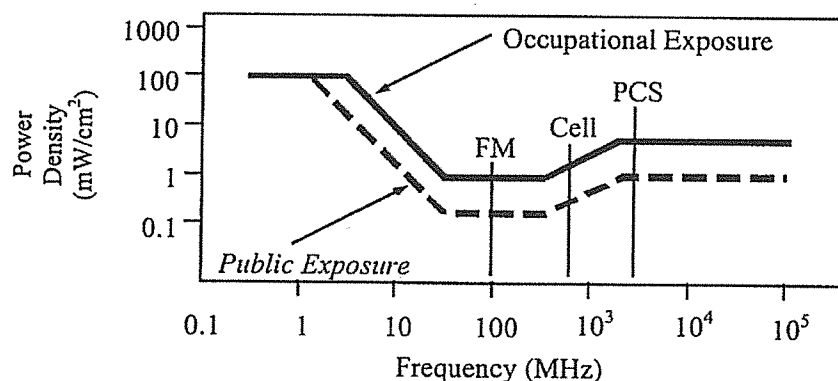
HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

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



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



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

FCC Guidelines
Figure 1

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/cm²,

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/cm²,

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



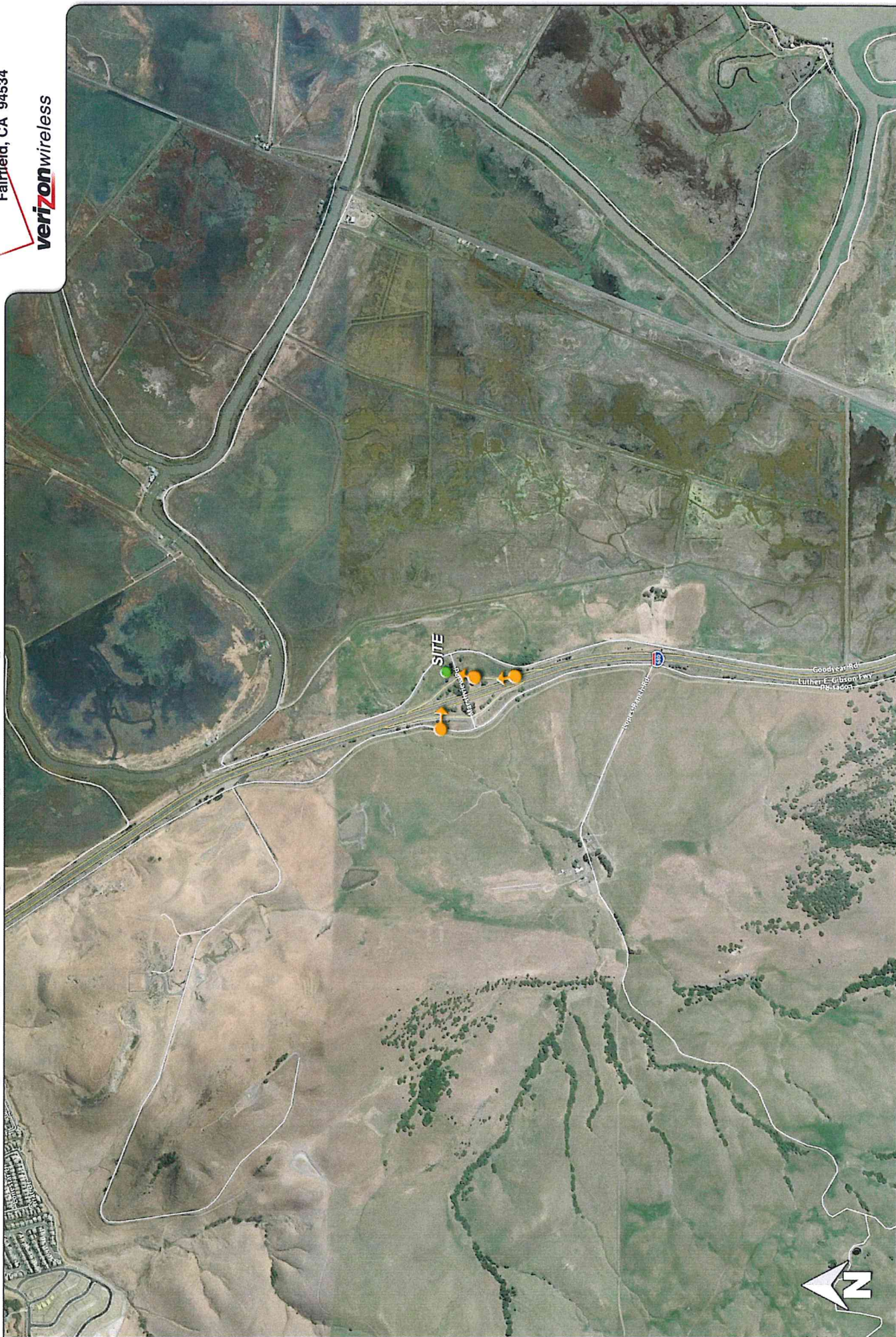
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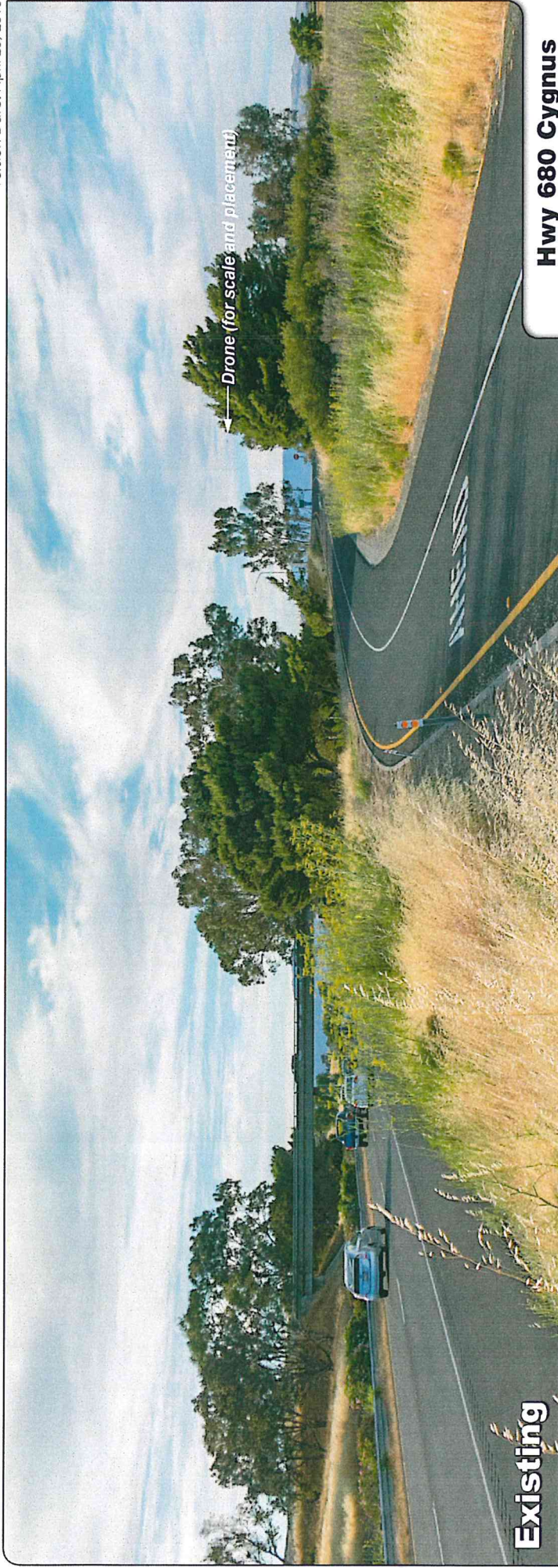
Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534

verizonwireless

Aerial photograph showing the viewpoints for the photosimulations.



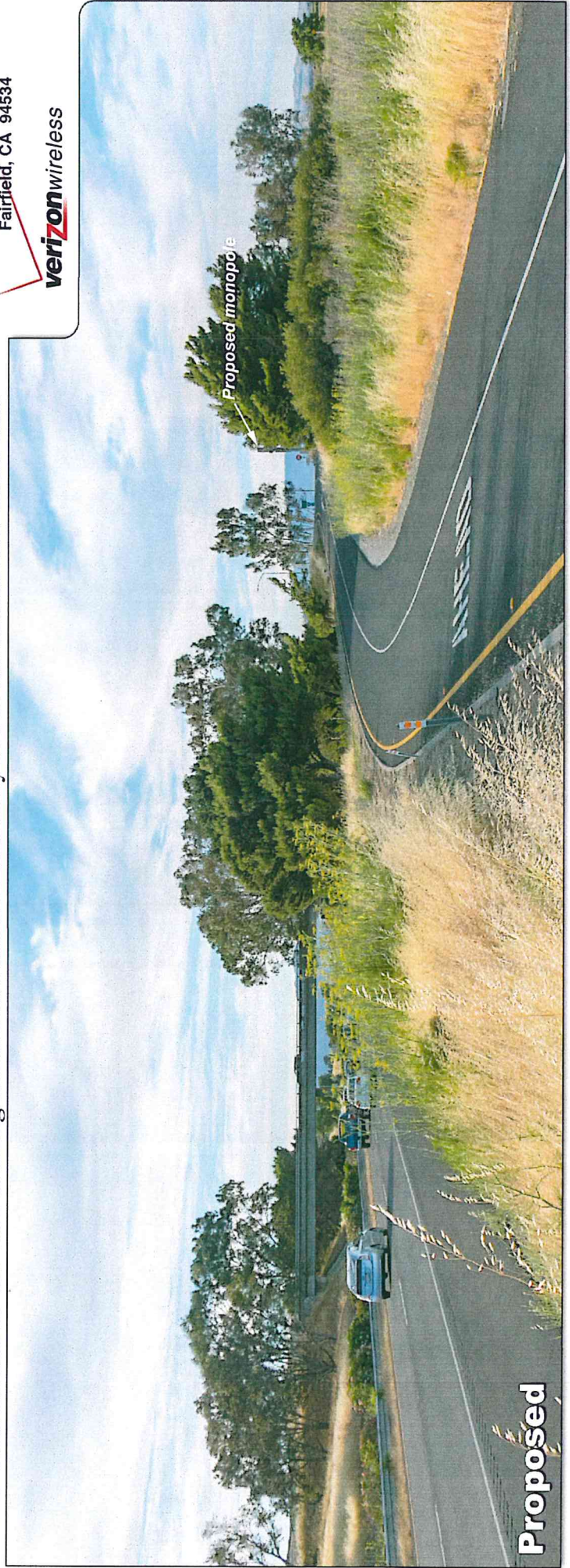


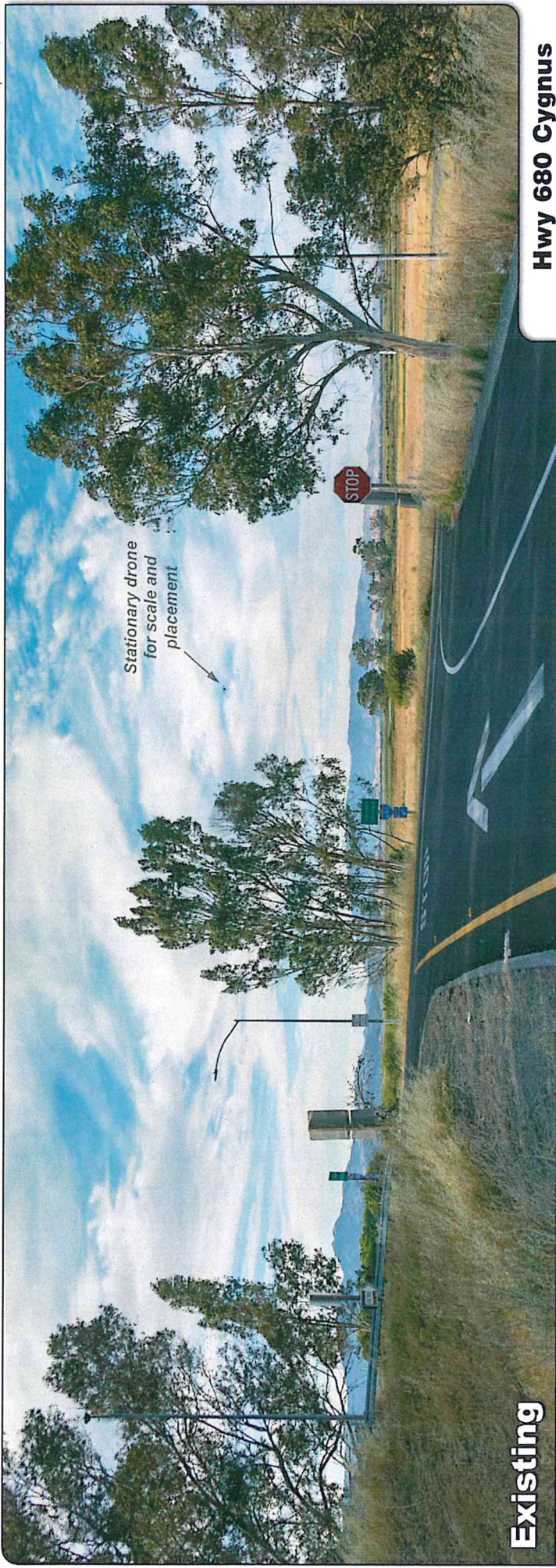
Hwy 680 Cygnus

Goodyear Road
Fairfield, CA 94534

verizonwireless

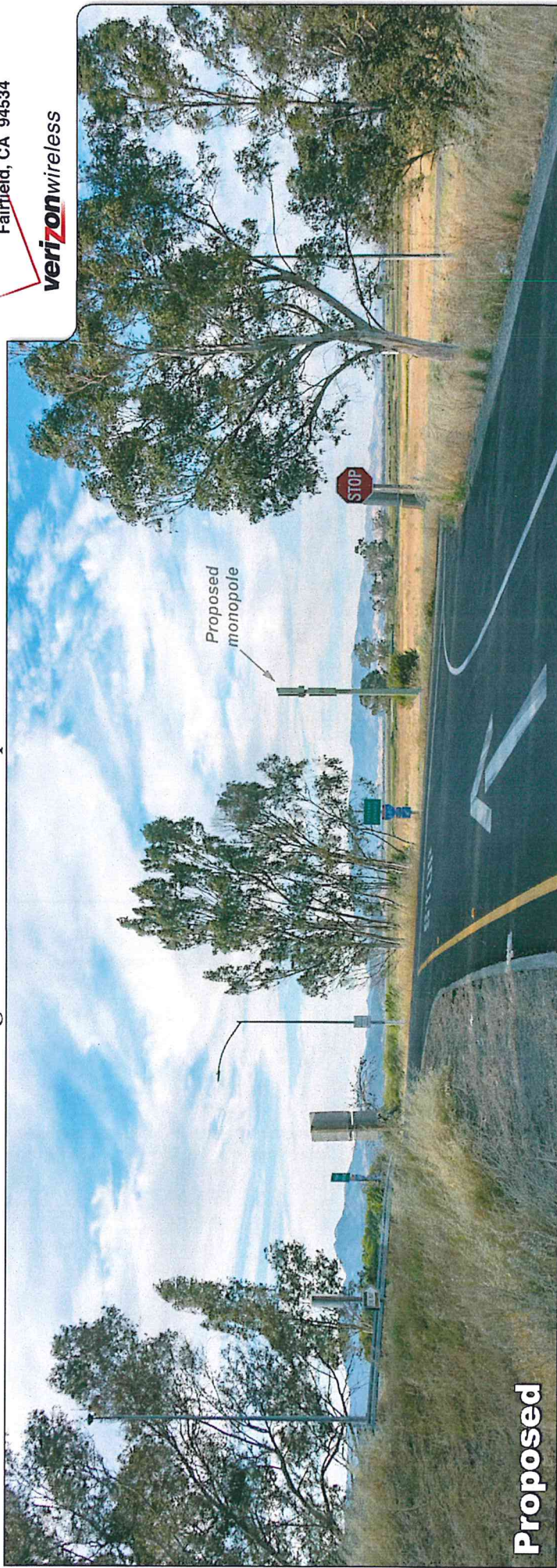
Photosimulation of the view looking north from northbound Hwy 680 at the Marshview Road exit.

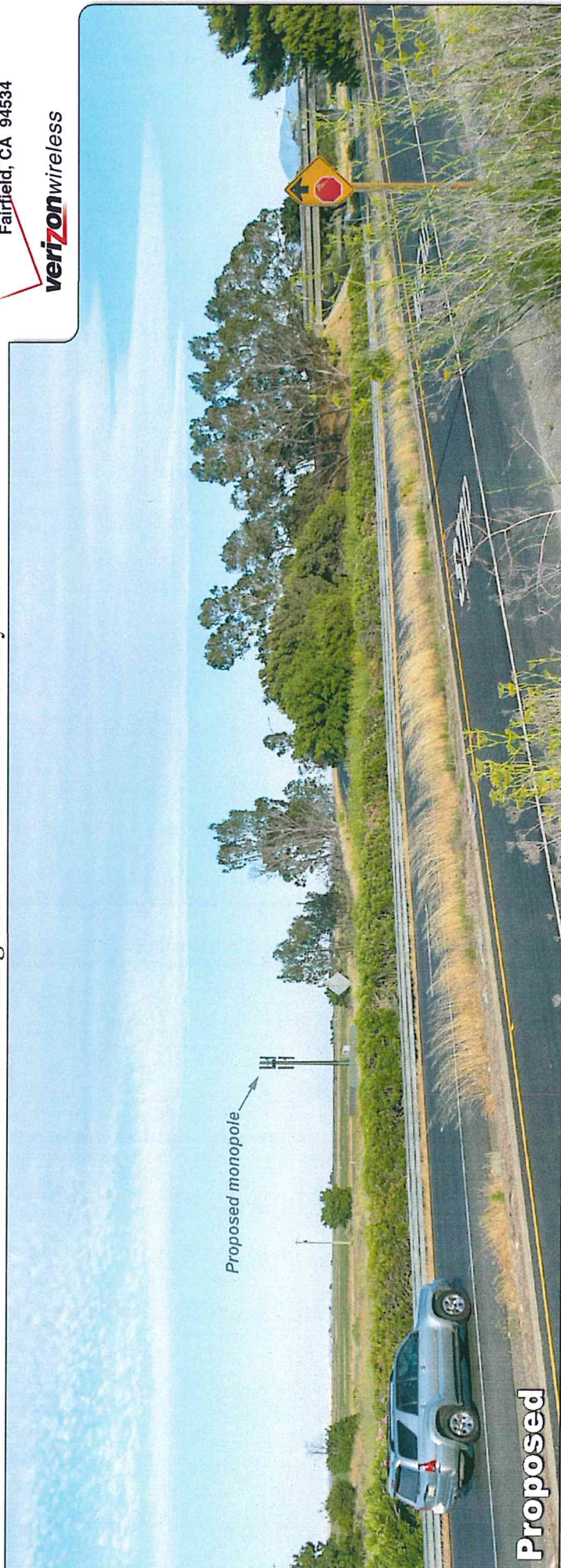
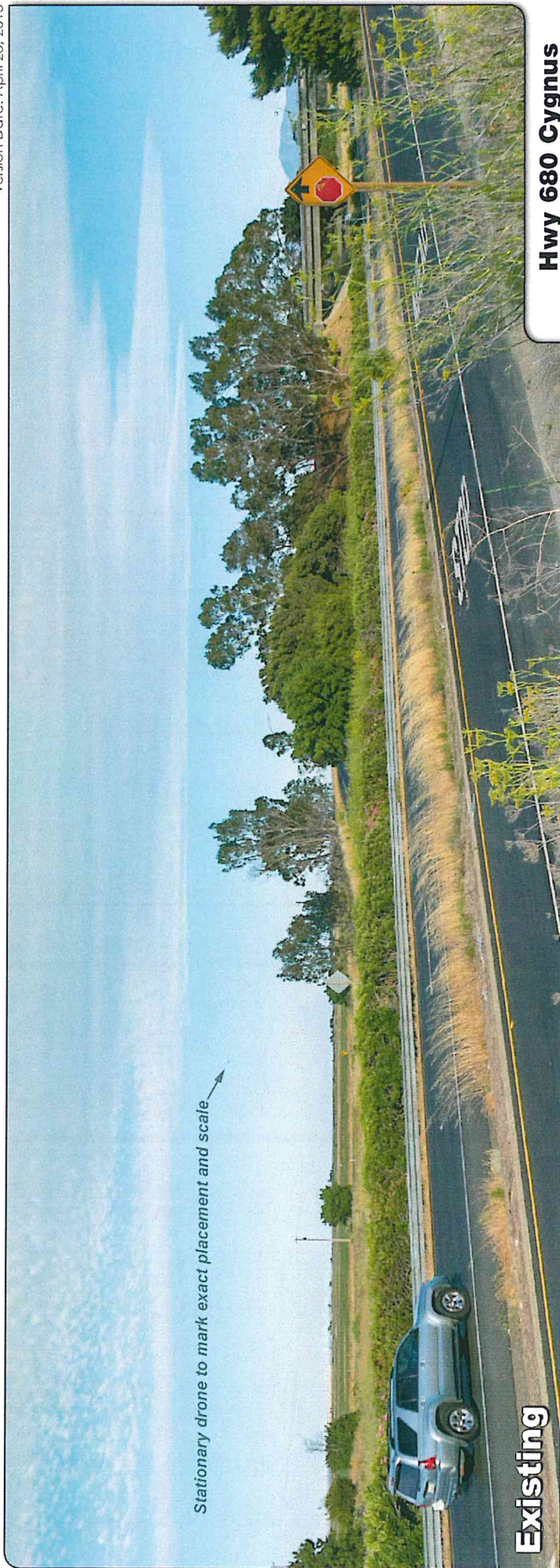




Hwy 680 Cygnus
Goodyear Road
Fairfield, CA 94534
verizonwireless

Photosimulation of the view looking north from the offramp at Marshview Road.





6.6

Environmental Noise Analysis

Hwy 680 Cygnus Cellular Facility

Solano County, California

BAC Job # 2015-237

Prepared For:

Complete Wireless Consulting

Attn: Ms. Kim Le
2009 V Street
Sacramento, CA 95818

Prepared By:

Bollard Acoustical Consultants, Inc.



Paul Bollard, President

June 21, 2016



Introduction

The Hwy 680 Cygnus Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the construction of a monopole tower, and the installation of outdoor equipment cabinets inside a fenced area located on Goodyear Road (APN: 0046-110-280) in Fairfield, California (Solano County). The outdoor equipment cabinets have been identified as the primary noise sources associated with the project. Please see Figure 1 for the general site location. The studied site design is dated May 13, 2016.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the project outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

Solano County General Plan Public Health & Safety Element

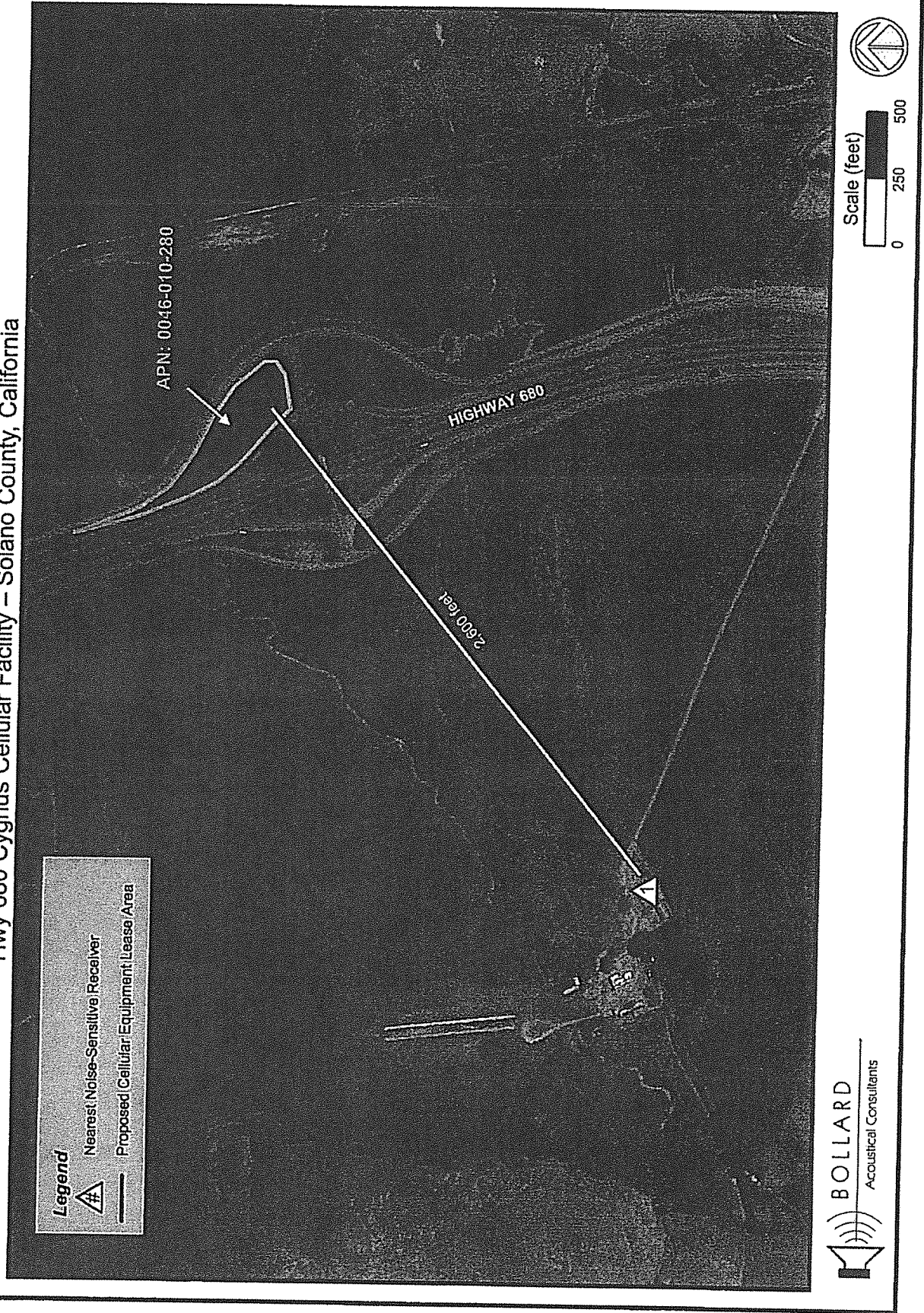
The Solano County General Plan Public Health & Safety Chapter contains a noise section that establishes acceptable noise level limits for non-transportation (stationary) noise sources, such as those proposed by the project. The County's non-transportation noise level standards applied to residential land uses are provided below in Table 1. The General Plan requires that the noise level standards set forth below in Table 1 be applied at the common outdoor activity areas (e.g., backyards) of the residential land uses.

Table 1 Noise Level Standards for Non-Transportation Noise Sources – Residential Land Uses Solano County Noise Element of the General Plan		
Noise Level Descriptor	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Hourly L_{eq} , dB	55	50
Maximum Level (L_{max}), dB	70	65
Source: Solano County General Plan, Public Health & Safety Element		

Solano County Code

Section 28.70.10(B)(1)(b) of the Solano County Code, which pertains to general development standards applicable to all uses in every zoning district, requires that all uses of land shall not generate noise that exceeds 65 dBA L_{dn} at any property line.

Figure 1
Proposed Cellular Equipment Lease Area & Distance to Nearest Noise-Sensitive Receiver
Hwy 680 Cygnus Cellular Facility – Solano County, California



Section 28.81(D)(10) of the Solano County Code, which pertains to noise generation of wireless communications facilities, reads as follows:

All wireless communication facilities shall be designed to minimize noise. If a facility is located in or within 100 feet of a residential district, noise attenuation measures shall be included to reduce noise levels to a maximum exterior noise level of 50 L_{dn} at the facility site's property lines.

Noise Standards Applied to the Project

The Solano County General Plan non-transportation (stationary) noise level standards seen in Table 1 were applied to the project. In addition to the general plan noise level standards, the Solano County Code, Section 28.70.10(B)(1)(b), property line noise level standard of 65 dB L_{dn} was applied at the nearest property line. Compliance with the 65 dB L_{dn} noise level standard at the nearest property line would ensure compliance at all other property lines.

The proposed facility is located within and adjacent to agriculturally zoned land (A 20 Exclusive Agriculture). The nearest residential district is located over a mile away to the northwest. Because the facility is located well in excess of 100 feet from the nearest residential district, Section 28.81(D)(10) of Solano County Code was not applied to the project.

Project Noise Generation

The project proposes the installation of three equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: one Ericsson eNB RBS6101, one Charles Industries 48V Power Plant and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided in Table 2. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 2 Reference Noise Level Data of Proposed Equipment Cabinets			
Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Ericsson eNB RBS6101	1	53	5
Charles Industries 48V Power Plant	1	60	5
McLean T-20	1	66	5
Notes: Manufacturer specification sheets provided as Appendix C.			

Predicted Facility Noise Levels at Nearby Sensitive Receptor

Assessment Relative to Solano County General Plan:

The project parcel and the adjacent parcels are zoned agricultural (A 20 Exclusive Agriculture) which are not typically considered sensitive to noise. The proposed cellular facility maintains a separation of approximately 2,600 feet from the outdoor activity area of the nearest noise-sensitive receptor, identified as receiver 1 (APN:0180-130-010) on Figure 1. Assuming standard spherical spreading

loss (-6 dB per doubling of distance), project-equipment noise exposure at the closest receiver was calculated and the results of those calculations are presented below in Table 3.

Table 3 Summary of Project-Related Noise Exposure at Nearest Noise-Sensitive Receptor Hwy 680 Cygnus Verizon Wireless Telecommunications Facility Project		
Nearest Noise Sensitive Receptor¹	Distance from Cellular Equipment (feet)²	Predicted Cabinet Noise Levels (Leq, dBA)³
1	2,600	<20
Notes: ¹ Receptor location and distance are shown on Figure 1. ² Predicted equipment noise levels were applied at outdoor activity areas of nearest noise-sensitive receptors. ³ The three equipment cabinets were conservatively assumed to be in operation concurrently.		

Because the proposed equipment cabinets could potentially be in operation during nighttime hours, the operation of the cabinets would be subject to the County's nighttime noise level standard of 50 dB Leq. As shown in Table 3, the predicted equipment cabinet noise levels of less than 20 dB Leq at the outdoor activity areas of the nearest noise-sensitive receiver locations would satisfy the Solano County 50 dB Leq nighttime noise level standard. As a result, no additional noise mitigation measures would be warranted for this aspect of the project.

Assessment Relative to Solano County Code:

The proposed project equipment maintains a separation of approximately 65 feet from the nearest property line to the west. To predict cellular facility noise emissions relative to the Solano County Code 65 dB Ldn noise standard at the nearest property line, the number of hours per day the equipment would be in operation must be known. For the purpose of this analysis, the equipment cabinets were conservatively assumed to be operating continuously for 24 hours.

Assuming standard spherical spreading loss (-6 dB per doubling of distance), the project-equipment noise exposure at the nearest property line was calculated to be 51 dB Ldn. As a result, no additional noise mitigation measures would be warranted for the project.

Conclusions

Based on the equipment noise level data and analyses presented above, project-related equipment noise exposure is expected to satisfy the Solano County General Plan noise exposure limits applied at the outdoor activity areas of the nearest noise-sensitive land uses. In addition, project-related equipment noise exposure is expected to satisfy the Solano County Code noise exposure limits applied at the nearest property line. As a result, no additional noise mitigation measures would be warranted for this project.

This concludes our environmental noise assessment for the proposed Hwy 680 Cygnus Cellular Facility in Solano County, California. Please contact BAC at (916) 663-0500 or paulb@bacnoise.com with any questions or requests for additional information.

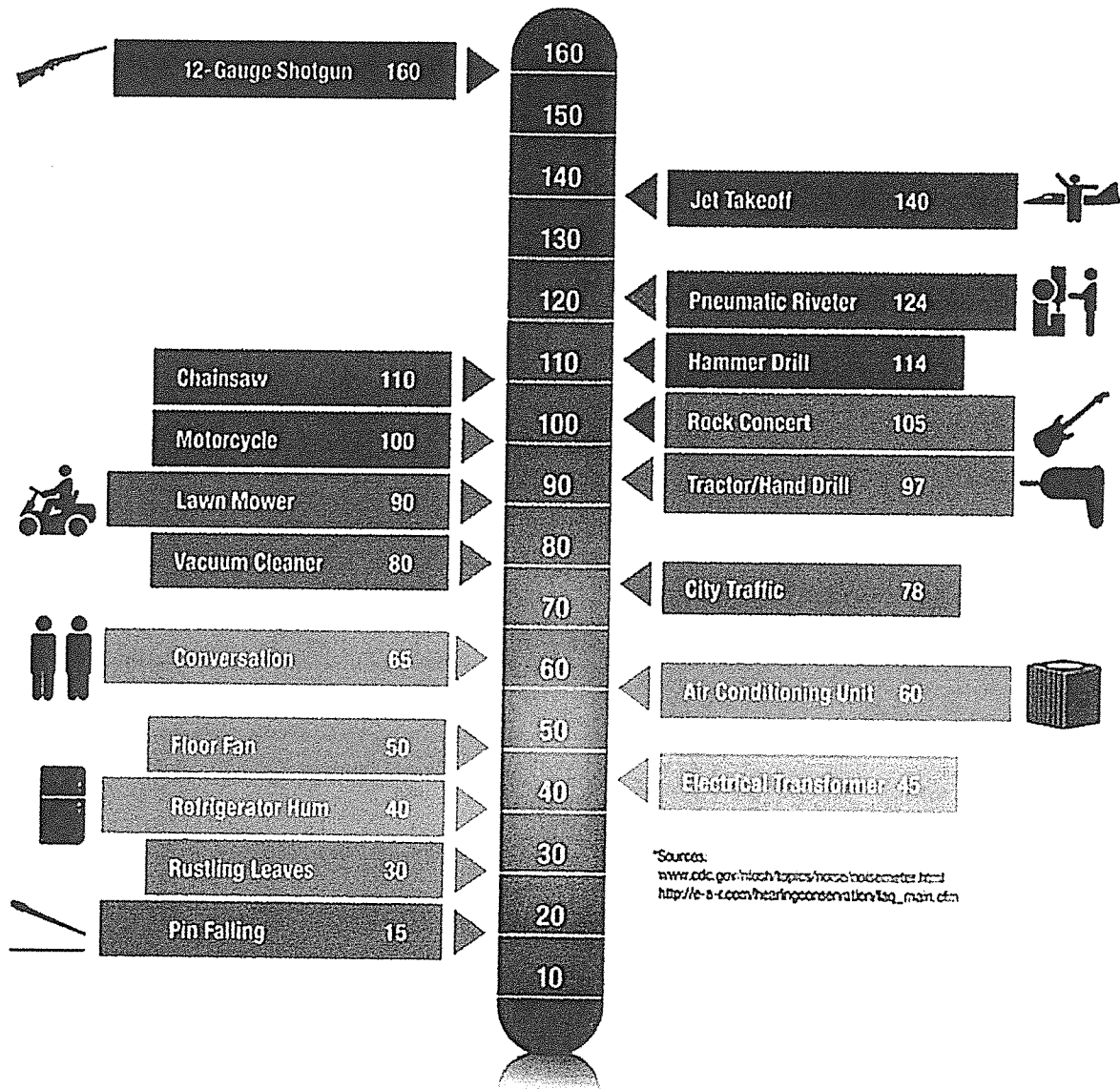
Appendix A Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

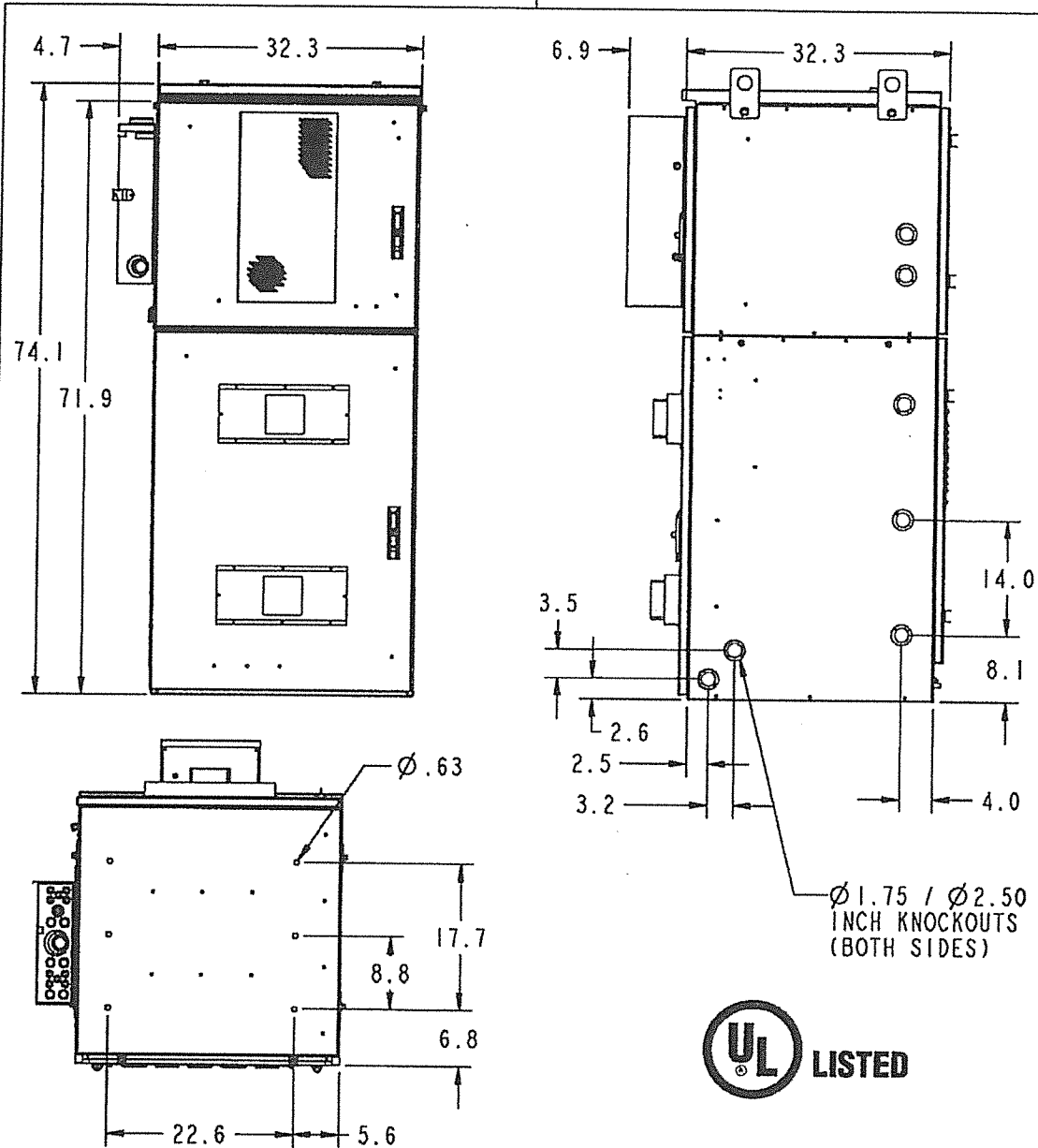


Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources Decibel Scale (dBA)*



Appendix C-1



WEIGHT WITH BATTERIES:
2296 LBS.

NorthStar NSB-170FT batteries
at 128 lbs each, Qty 12

WEIGHT WITHOUT BATTERIES:
760 LBS.

MAX NOISE LEVEL:
55-60dB

CHARLES PART #
CUBE-SS4C215XC1

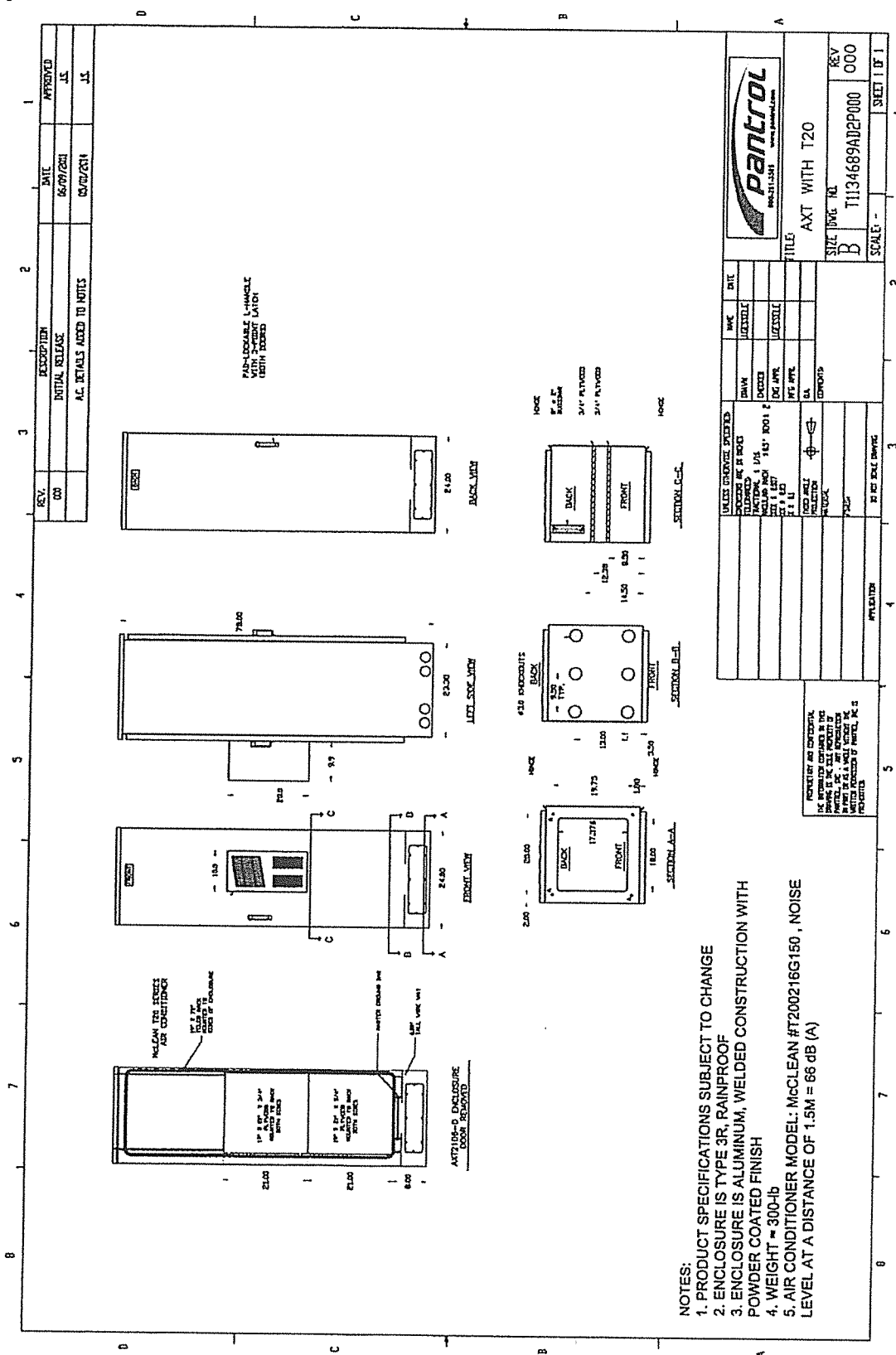


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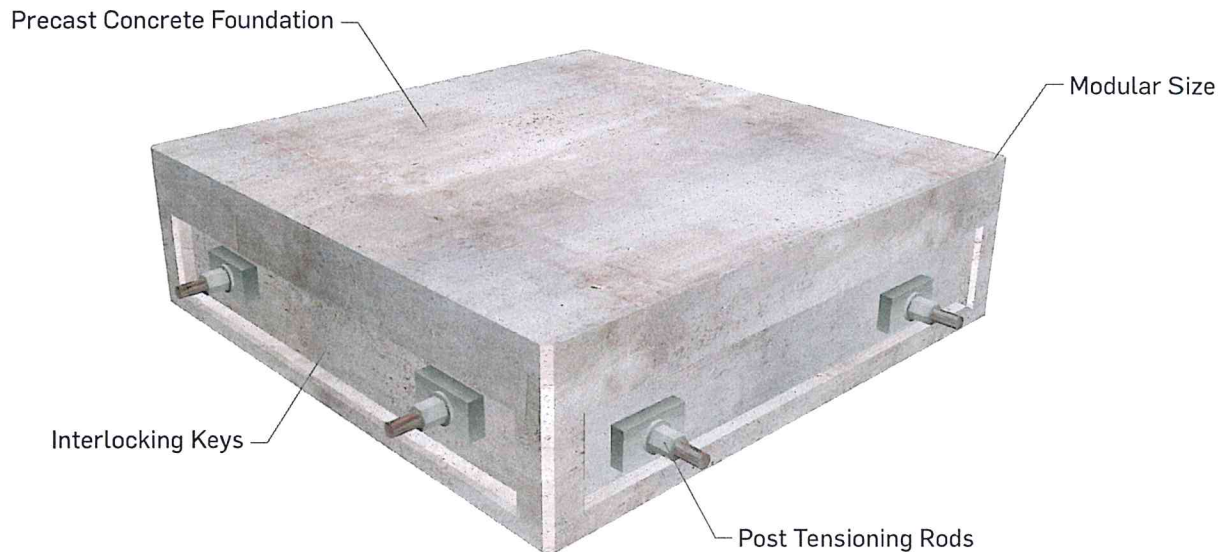
Verizon Wireless
Large Site Support Enclosure

Appendix C-2



6.7

CELL BLOCKS® FOUNDATION SYSTEM



A PRECAST FOUNDATION SYSTEM DESIGNED FOR THE WIRELESS INDUSTRY

Oldcastle Precast CELL BLOCKS are a precast, post-tensioned foundation system designed specifically for the wireless communications industry. CELL BLOCKS foundations accommodate monopoles, towers, power/telco pedestals, shelters, equipment cabinets, precast walls, chain link fencing and stairs. Since they are deployed at grade level and do not penetrate the soil, CELL BLOCKS can be used at contaminated and environmentally or archaeologically sensitive sites. CELL BLOCKS eliminate the need for concrete trucks and drilling rigs, making them ideal for remote sites.

APPLICATIONS

- > Monopoles or towers
- > Shelter or cabinets
- > Power and battery units
- > Radar dishes

FEATURES

- Engineered per site providing stamped drawings
- Deployed at grade level
- Manufactured in a controlled environment
- Can easily be disassembled, moved and re-installed

BENEFITS

- Savings-development/design/permitting
- May not require soil reports
- Predictability in construction
- Sustainable - can be repurposed



For more information please contact **Phil Colflesh** at the National Sales Office (888) 965-3227 or send an email to phil.colflesh@oldcastle.com.

CELL BLOCKS-EASY INSTALLATION

Pre-engineered CELL BLOCKS require minimal site preparation. Block fabrication runs concurrently with the permitting process, facilitating aggressive construction schedule reductions. Typically, the foundation, shelter, and monopole (or lattice) are deployed in a single day. Once the blocks are post tensioned on day of installation, the foundation is full strength. No time delay for curing time associated with traditional methods. CELL BLOCKS are widely accepted by regulatory agencies.

