COUNTY OF SAN MATEO
PLANNING AND BUILDING DEPARTMENT

DATE: August 3, 2023

TO: Zoning Hearing Officer

FROM: Planning Staff

SUBJECT: Consideration of a Use Permit Renewal, pursuant to § 6512.6 of the San Mateo County Zoning Regulations, to allow the continued operation of a wireless telecommunications facility located at 8888 Cabrillo Highway in the unincorporated Moss Beach area of San Mateo County.

County File Number: PLN 1999-00949 (Sprint/Nextel)

PROPOSAL

The applicant, Nicole Comach of Global Signal Acquisitions/Crown Castle, proposes on behalf of Sprint/Nextel to renew an existing Use Permit (PLN 1999-00949) to allow the continued operation of a wireless telecommunication facility located at 8888 Cabrillo Highway.

RECOMMENDATION

Approve the Use Permit Renewal for County File No. PLN 1999-00949, by making the required findings and adopting the conditions of approval identified in Attachment A of this report.

BACKGROUND

Report Prepared By: Tiare Peña, Project Planner, Telephone 650/363-1850

Applicant: Nicole Comach for Global Signal Acquisitions III, LLC (Crown Castle)

Property Owner: Montara Water and Sanitary District

Public Notification: Ten (10) day advanced notification for the hearing was mailed to property owners within 300 feet of the project parcel and a notice for the hearing published in the Half Moon Bay Review and San Mateo Times newspapers.

Location: West Side of Cabrillo Highway, Moss Beach (Approximately three miles north of Half Moon Bay)

APN: 037-310-010
Site Size: 4.79 acres

Project Size: 135 sq. ft.

Existing Zoning: RM-CZ/DR (Resource Management/ Coastal Zone/ Design Review)

General Plan Designation: General Open Space

Existing Land Use: Public Utility/Offices

Flood Zone: FEMA Flood Zone Map indicates the parcel is located in Zone X, (area of minimal flooding) per Panel No. 06031CO117E, effective October 16, 2012.

Environmental Evaluation: Exempt; CEQA Guidelines § 15301, Class 1 (Continued operation of an existing facility).

Setting: The site is an irregularly shaped parcel developed with offices, two cellular monopoles spaced approximately 10 feet apart, and an equipment cabinet on the west side of Cabrillo Highway and approximately 3 miles north of the city limits of Half Moon Bay. Additional carriers Verizon and AT&T are co-located on the Sprint site as well as on a secondary monopole spaced approximately 10 feet away.

Background: The specific Sprint/Nextel site is developed with a 48-foot-tall monopole, four 5-foot panel antennas, five utility cabinets within a garage, and a GPS antenna mounted on the garage, as approved in 1996 (old county file number USE 96-0039). The area containing the equipment is fenced and is immediately adjacent to the offices of the Montara Water and Sanitary District. Two additional carriers (Verizon and AT&T) are co-located on the site and located on a second monopole.

Chronology:

Date		Action
December 23, 1999	-	Initial Application for Coastal Development Permit, Use Permit and Resource Management/Coastal Zone District permit submitted.
August 3, 2000	-	Zoning Hearing Officer Approves Use Permit.
August 24, 2006	-	Use Permit Administrative Review and Inspection completed.
May 20, 2012	-	Application for Use Permit Renewal and Amendment submitted.
August 29, 2012	-	Application deemed complete.
November 15, 2012	-	Zoning Hearing Officer Public Hearing; UP Renewal and Amendment approved.
July 22, 2022		Application for renewal submitted and deemed complete

DISCUSSION

A. KEY ISSUES

1. Conformance with General Plan

Staff has determined that the project complies with all applicable General Plan policies, with specific discussion of the following:

a. Chapter 1 - Vegetative, Water, Fish and Wildlife Resources

Policy 1.22 (*Regulate Development to Protect Vegetative, Water, Fish, and Wildlife Resources*) requires land use and development activities to be regulated so as to prevent and, if infeasible, mitigate to the extent possible, significant adverse impacts on vegetative, water, fish and wildlife resources. The wireless telecommunication facility has existed at the developed site for over 20 years. Continued operation is not anticipated to impact vegetative, water, fish and wildlife resources.

b. Chapter 4 - Visual Quality

Policy 4.20 (*Utility Structures*) and Policy 4.21 (*Scenic Corridors*) require the minimization of adverse visual impacts and protecting and enhancing the visual quality of scenic corridors by managing the location and appearance of structural development. Staff finds that the project does not adversely impact the visual quality of the site, as the color scheme blends with the existing environment. Condition No. 4 on Attachment A continues to require that the facility be maintained with the approved light grey and green colors.

c. Chapter 7 - General Land Use

The County's General Plan designates this area as General Open Space, but the parcel is developed with MWSD's office building and other associated facilities. Per County Zoning Regulations § 6500, Use Permits, Wireless Telecommunication Facilities are allowed to locate in this area subject to the granting of a Use Permit.

2. Compliance with Wireless Telecommunication Facilities Ordinance

According to § 6512.6 of the Wireless Telecommunication Facilities Ordinance, renewals of use permits for existing facilities built prior to January 9, 2009, are subject to the provisions of the Ordinance related to new facilities. Staff has reviewed the project against the provisions of the Wireless Telecommunication Facilities Ordinance and determined that the project complies with all applicable standards; the provisions most relevant to the subject facility are discussed below.

a. §6512.2.C prohibits wireless telecommunication facilities to be located in areas where co-location on existing facilities would provide equivalent coverage with less environmental impact. The facility was established under Use Permit approval in 2000 and has been in continual operation. There are two additional carriers (Verizon and AT&T) located on an adjacent monopole.

b. § 6512.2.D requires wireless telecommunication facilities to be constructed so as to accommodate and be made available for co-location unless technologically infeasible. As stated previously, there are two additional carriers (Verizon and AT&T) located on the adjacent monopole. As of the time of the writing of this report, the applicant has not received any request from additional carriers for co-location opportunities.

3. Conformance with Zoning Regulations

The RM/CZ zoning regulations require that, “Public views within and from Scenic Corridors shall be protected and enhanced, and development shall not be allowed to significantly obscure, detract from, or negatively affect the quality of these views. Vegetative screening or setbacks may be used to mitigate such impacts. Colors and plant materials have been selected as necessary to minimize visual impacts of development upon Scenic Corridors.”

The project site is located along the Cabrillo Highway in Moss Beach, which is designated a County Scenic Corridor. This project is mostly screened from view from Cabrillo Highway by existing vegetation and topography but can be seen briefly next to the existing office building. The requirement to maintain the facility in the approved light grey and green colors helps the facility blend with the existing vegetation. As such, staff has determined that the facility does not constitute a significant negative impact to the quality of views in the immediate vicinity.

The facility does not further reduce any public view of the ocean. As per Zoning § 6325.1 (*Primary Scenic Resources Areas Criteria*), the elements of the facility pose a minimal visual impact, as the ocean is not visible from Cabrillo Highway at this location. Staff has added a condition of approval that requires the applicant to ensure the facility maintains colors that blend in with the environment.

4. Conformance with Use Permit Findings

Under the provisions of § 6500 of the County's Zoning Regulations, wireless communication facilities are permitted in any zoning district upon issuance of a use permit with the following two findings required:

a. **Find that the establishment, maintenance and/or conducting of the use will not, under the circumstances of the particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood.**

As discussed previously in this report, the wireless telecommunication facility does not have an adverse impact on coastal resources including sensitive habitats, ocean views or visual resources within the Cabrillo Highway Scenic Corridor.

Further, the applicant has submitted a Radio Frequency (RF) report that analyzes the cumulative emissions resulting from the existing facility including the analysis of emissions from adjacent carriers. The maximum cumulative RF level of all facilities would be 9.0% of the Federal Standard, thereby meeting emission criteria as required by the California Public Utilities Commission and the Federal Communications Commission. Further, because the facility is unmanned and requires only one to two service visits per month, it does not create additional traffic, noise, or intensity of use of the property. Therefore, this finding can be made.

b. **Find that the use is necessary for the public health, safety, convenience or welfare.**

This project will continue to improve the clarity, range and capacity of the existing cellular network in the area and will enhance service for the public in general and for emergency services. Therefore, staff has determined this use is necessary.

5. Compliance with Conditions of the Last Approval

Staff has reviewed the previous Use Permit conditions of approval for Sprint/Nextel (PLN 1999-00949), last approved November 15, 2012, and has determined that Sprint/Nextel is in compliance with all previous

conditions; see Attachment E of this report. No physical changes are proposed as part of the renewal. Previous conditions that remain relevant, are included in Attachment A of this staff report

B. CONSIDERATION BY MID-COAST COMMUNITY COUNCIL

The MCCC was sent a referral of this application and at the time of the writing of this report has not sent comments regarding the use permit renewal.

C. ENVIRONMENTAL REVIEW

This project is exempt under Guidelines § 15301(d) (Class 1; Continued Operation of an Existing Facility) of the California Environmental Quality Act (CEQA).

D. REVIEWING AGENCIES

1. Department of Public Works
2. Building Inspection

ATTACHMENTS

A. Recommended Findings and Conditions of Approval
B. Location Map and Vicinity Map
C. Site Plan
D. Photo Simulation
E. Previous Conditions of Approval

TGP:mda – TGPHH0223_WMU.DOCX

Attachment A

County of San Mateo
Planning and Building Department

RECOMMENDED FINDINGS AND CONDITIONS OF APPROVAL

Project File Number: PLN 1999-00949 Hearing Date: August 3, 2023

Prepared By: Tiare Peña For Adoption By: Zoning Hearing Officer

RECOMMENDED FINDINGS

For the Environmental Review, Find:

1. That the project is categorically exempt from the California Environmental Quality Act (CEQA) Guidelines under provisions of §15301, Class 1, for the continued operation of existing public or private facilities involving no additional physical changes and no expansion of use.

For the Use Permit, Find:

2. That the establishment, maintenance and/or conducting of the proposed use will not, under the circumstances of this particular case, result in a significant adverse impact to coastal resources, or be detrimental to the public welfare or injurious to property or improvements in said neighborhood because the facility will not introduce any significant visual, noise, odor, or light impacts to the surrounding neighborhood.

3. That the approval of this use permit renewal for an existing cellular telecommunication facility is necessary for the public health, safety, convenience or welfare of the community as the site provides telecommunications coverage to the surrounding community, which benefits both private and public users.

CONDITIONS OF APPROVAL

1. This approval applies only to the proposal, documents, and plans described in this report and submitted to and approved by the Zoning Hearing Officer on August 3, 2023. Modifications beyond that which was approved by the Zoning Hearing Officer will be subject to review and approval by the Community Development Director and may require review at a public hearing. Minor modifications that are largely consistent with this approval may be approved at the discretion of the Community Development Director.

2. This permit shall be valid for ten (10) years from the date of this approval and shall expire on August 3, 2033. If continuation of this use is desired, the applicant shall file a use permit renewal application with the Planning and Building Department six months prior to its expiration and pay the fees applicable at that time.

3. This use permit renewal shall be for the continued operation of the existing telecommunication facility only. Any substantial change or change in intensity of use shall require an amendment to the use permit, which requires an application for amendment, payment of applicable fees, and consideration at a public hearing.

4. The applicant shall continue to maintain the color of all existing facilities in a manner that is consistent with the color samples on file (light gray and green). Over time paint colors fade and, as result, facilities may become more visually prominent than initially proposed. The applicant shall continue to take all necessary measures to ensure that the site remains consistent with all approved colors.

5. This installation shall be removed in its entirety at that time when this technology becomes obsolete, when the facility is no longer needed to achieve coverage objectives, or if the facility remains inactive for six consecutive months. If any of these circumstances occur, the entire facility, including all antennas and associated equipment, cables, power supplies, etc., shall be removed and the site shall be returned to its pre-construction state to the extent practicable.

6. The applicant shall keep their FCC license active and in good standing throughout this permit's 10-year term. The applicant shall immediately notify the Planning and Building Department if any changes to their license occur.

TGP:mda – TGPHH0223_WMU.DOCX

SiteSafe
A QUALTEK Company

8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 • 703.276.1169 fax
info@sitesafe.com • www.sitesafe.com

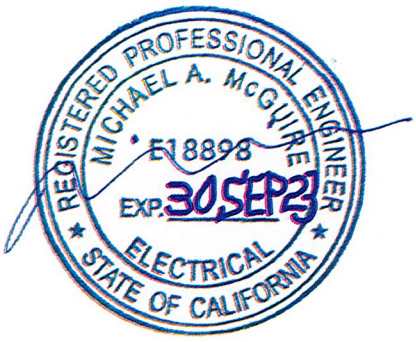
Crown Castle
Site BU Number – 880454
Assessment Purpose – CUP Renewal
Site Name – MONTARA SANITARY DISTRICT
Site Compliance Report

8888 Cabrillo Highway
Montara, CA 94038

Latitude: N37-32-03.20
Longitude: W122-31-06.30
Structure Type: Monopole

Report generated date: June 16, 2023
Report by: Leo Romero
Customer Contact: Jim Lee

Crown Castle is compliant with the FCC Rules and Regulations.



sealed 16jun2023

Crown Castle
MONTARA SANITARY DISTRICT - 880454
Radio Frequency (RF) Site Compliance Report

8888 Cabrillo Highway, Montara, CA 94038

8618 Westwood Center Drive • Suite 315 • Vienna, VA 22182
703.276.1100 • info@sitesafe.com

Table of Contents

1 Executive Summary

Crown Castle has contracted with Site Safe, LLC (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the communications site, 880454 - MONTARA SANITARY DISTRICT, located at 8888 Cabrillo Highway, Montara, CA, is in compliance with the Federal Communications Commission (FCC) Rules and Regulations for RF exposure.

This report contains a detailed summary of the RF environment at the site including:

- Diagram of the site
- Inventory of the make / model of all antennas
- Theoretical MPE based on modeling

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled."

Crown Castle is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65.

Crown Castle plans to submit for CUP renewal.

This document and the conclusions herein are based on the information provided by Crown Castle.

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

2 Site Compliance

2.1 Site Compliance Statement

Upon evaluation of the cumulative RF exposure levels from all operators at this site, Sitesafe has determined that:

Crown Castle is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65.

The compliance determination is based on theoretical modeling, RF signage placement recommendations, and/or the level of restricted access to the antennas at the site. Any deviation from the Crown Castle deployment plan could result in the site being rendered non-compliant upon further evaluation.

2.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. No additional RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels. Where applicable, barriers can consist of locked doors, fencing, railing, rope, chain, paint striping or tape, combined with RF alert signage.

Crown Castle is compliant with the FCC Rules and Regulations.

Note: The owner/operator of the adjacent monopole 2 depicted in the site diagrams should be made aware of the potential for exposure to RF above the General Public MPE limit on said adjacent monopole 2. If any work or maintenance is to be performed on elevated parts of the adjacent monopole 2, it is recommended that the Sprint's Beta sector(s) be powered down to avoid potential exposure in excess of the General Public MPE limit.

Note: Sitesafe recommends that persons accessing any adjacent trees in excess of 22' above ground level (i.e. landscape and arborist contractors or other maintenance workers) within 152' directly in front of any antennas on either monopole 1 or 2 are informed of areas where RF levels exceed the FCC General Public limit.

Note: Ensure all existing signage documented in this report still exists on site unless otherwise indicated.

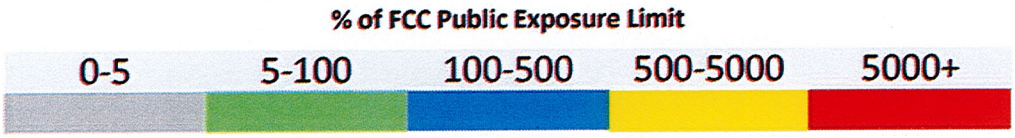
Note: For overall compliance, access to the site (i.e., access road, gate, climbing point(s), etc.) must be locked/ restricted.

3 Analysis

3.1 RF Exposure Diagram

The RF diagram(s) below display theoretical percentage of the Maximum Permissible Exposure for all systems at the site. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC **General Public** Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:



This table displays the maximum theoretical percentage of the FCC's General Public MPE limits:

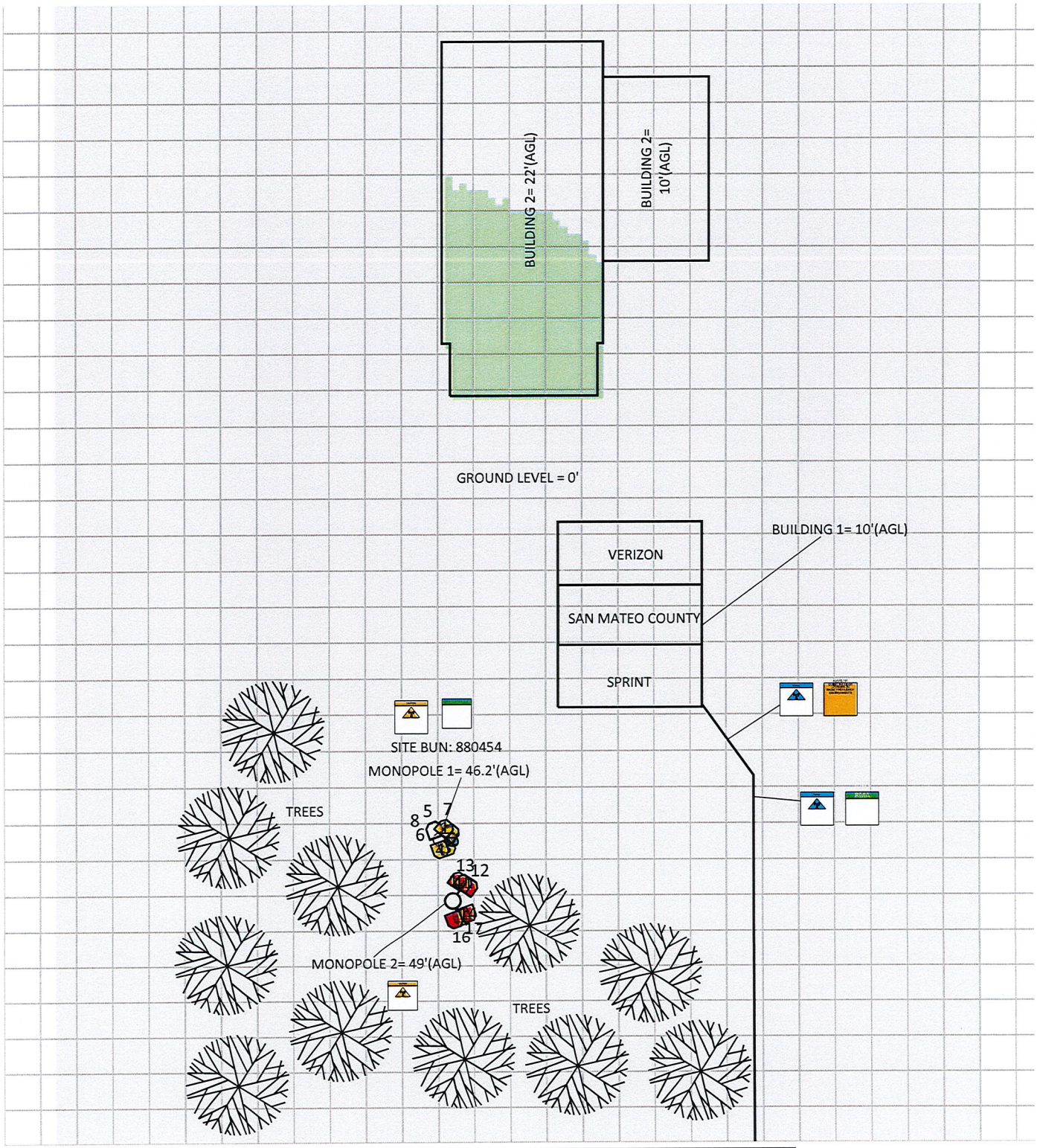
	General Public Levels:	
Exposure Type:	**Spatial Average**	**Spatial Average**
Reference Level:	**Top of Buildings**	**Ground**
Composite:	9.0% (Building 2)	<1.0%

Note: On the diagrams shown below, each level is marked with a height. For all diagrams that are marked as *Spatially Averaged*, the modeling program will spatially average the exposure within the area six feet above each set level. This provides an accurate spatial average of the percentage of the FCC's MPE limits within an accessible area.

In the RF exposure simulations below, all heights are reflected with respect to ground level. Each different area, rooftop, or platform level is labeled with its height relative to the main site level. Exposure is calculated appropriately based on the relative height and location of that area to all antennas. The analyzed elevations in the RF exposure simulations are as follows:

- Ground Level = 0'
- Building 1 = 10'
- Building 2 = 10' and 22'

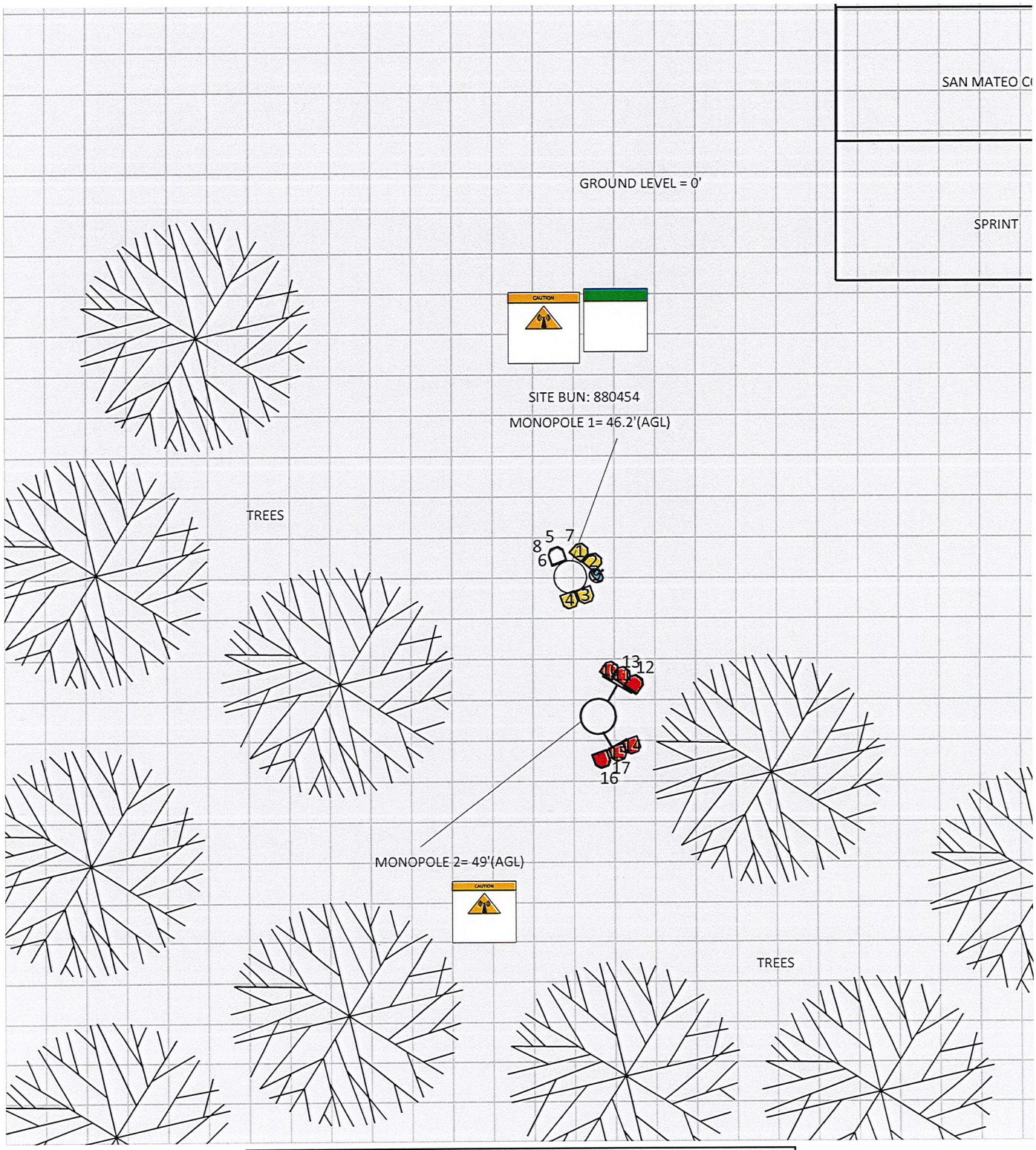
RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Composite View



www.sitesafe.com
6/16/2023 6:54:38 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Detailed View



% of FCC Public Exposure Limit

0-5	5-100	100-500	500-5000	5000+

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | DISH | UNKNOWN CARRIER

Barrier Signage Legend

No-sign | Notice | Caution | Warning | Notice 2 | Caution 2 | Warning 2

Existing Barrier ——— Proposed Barrier/Sign — — — Remove Barrier/Sign - - - /X

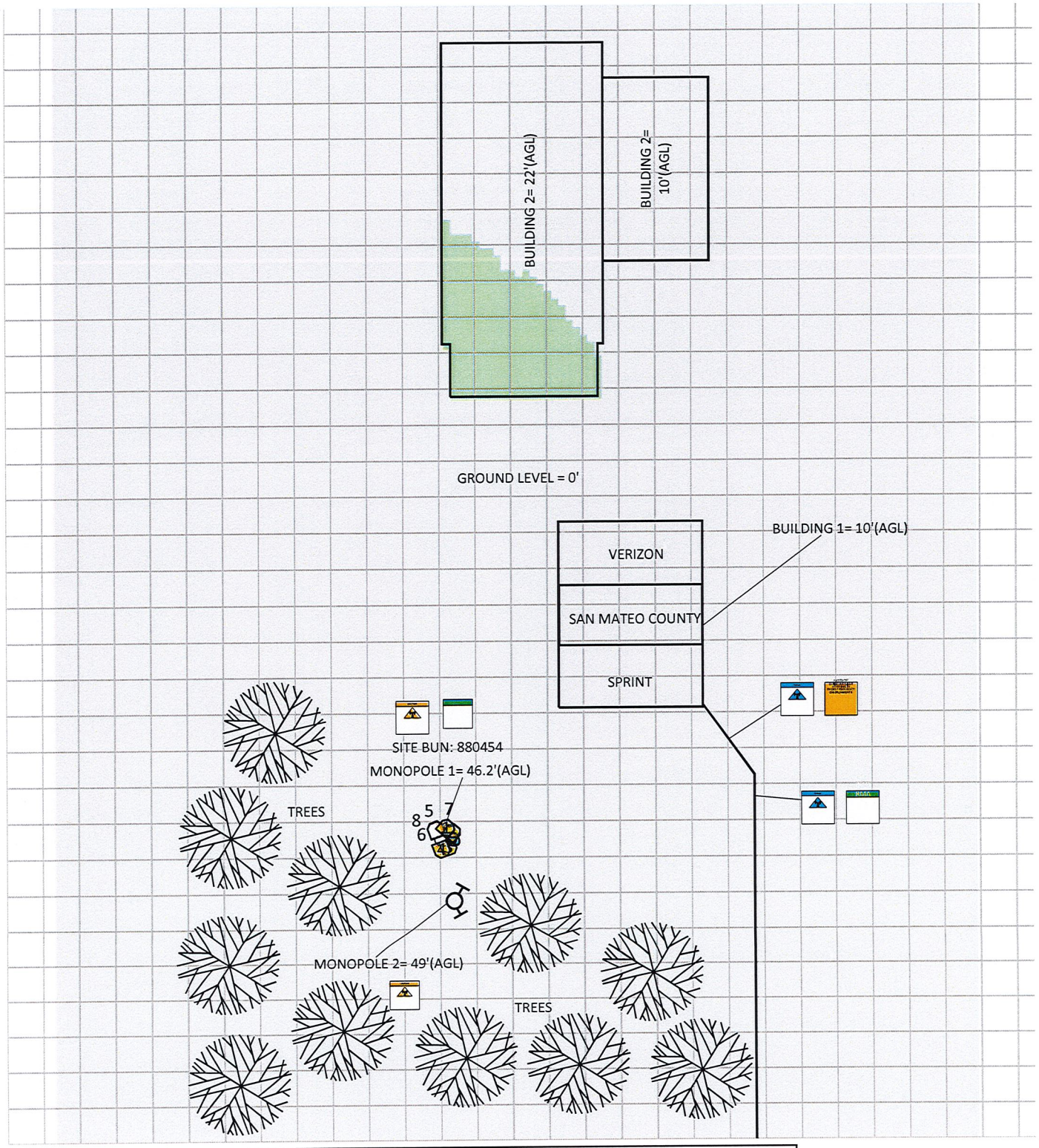
(Feet)

0 4.2 8.4

www.sitesafe.com
6/16/2023 6:55:30 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

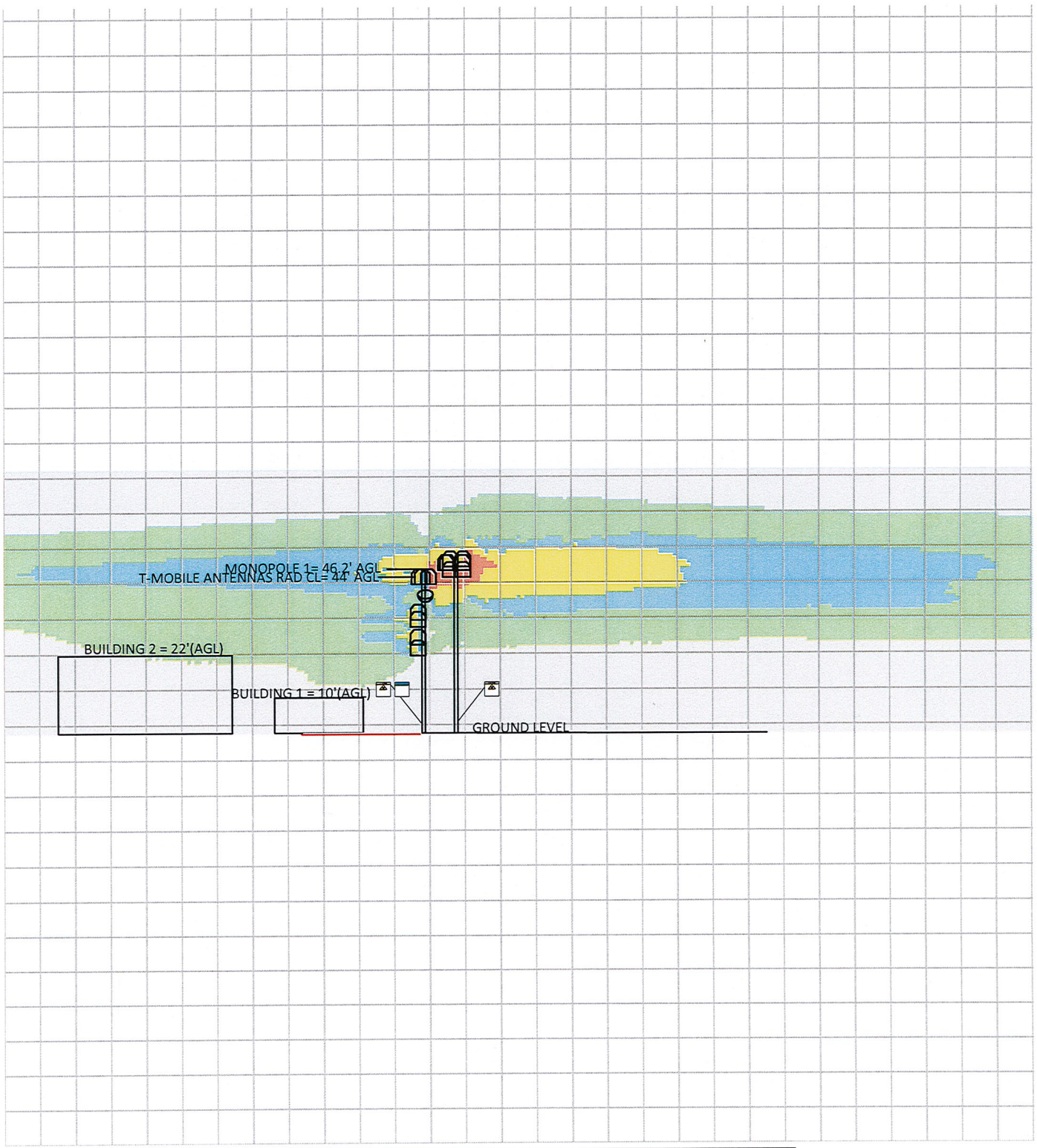
RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Sprint Contribution



www.sitesafe.com
6/16/2023 6:57:55 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Elevation View



% of FCC Public Exposure Limit

0-5 | 5-100 | 100-500 | 500-5000 | 5000+

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | DISH | UNKNOWN CARRIER

Proposed Barrier/Sign

Remove Barrier/Sign /X

(Feet)

0 20 40

www.sitesafe.com
6/16/2023 7:04:57 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Single Level (0)

4 Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. This inventory was provided by the customer and was utilized by Sitesafe to perform theoretical modeling of RF exposure. The inventory coincides with the site diagrams in this report, identifying each antenna's location at 880454 - MONTARA SANITARY DISTRICT. The antenna information collected includes the following information:

- Licensee or wireless operator name
- Frequency or frequency band
- Transmitter power – Transmitter Power Output ("TPO"), Effective Radiated Power ("ERP"), or Equivalent Isotropic Radiated Power ("EIRP")
- Antenna manufacturer make, model, and gain

For other carriers at this site, equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers or data provided by Crown Castle.

The following antenna inventory was provided by the customer and was utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	40	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	40	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	40	63.7	8	13.75	200.00	TPO	Watt	1	0.00	4742.75	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	UMTS	40	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	40	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	40	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	44	0	0
2	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	LTE	40	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
2	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	5G	40	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	160	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	160	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	160	63.7	8	13.75	200.00	TPO	Watt	1	0.00	4742.75	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	UMTS	160	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	160	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	160	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	44	0	0
4	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	LTE	160	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
4	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	5G	160	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
5	SAN MATEO COUNTY CA	Antel BXA-171063-4CF	Panel	1900		340	63.0	2.1	13.51	60.00	TPO	Watt	1	0.00	1346.33	27	0	0
6	SAN MATEO COUNTY CA	Kathrein CL6-450B	Yagi	488		340	60.0	2.1	9.97	115.00	ERP	Watt	1	0.00	115	24	0	0

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
7	SAN MATEO COUNTY CA	Kathrein CL6-450B	Yagi	488		340	60.0	2.1	9.97	115.00	ERP	Watt	1	0.00	115	34	0	0
8	SAN MATEO COUNTY CA	Antel BXA-171063-4CF	Panel	1900		340	63.0	2.1	13.51	60.00	TPO	Watt	1	0.00	1346.33	32	0	0
9	SAN MATEO COUNTY CA	Andrew VP2-180A	Aperture	17915		50.1	2.0	2	37.66	51.90	EIRP	dBmW	1	0.00	94.44	39	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	751	LTE	35	66.0	4.6	11.29	40.00	TPO	Watt	2	0.00	1076.69	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	LTE	35	61.0	4.6	11.47	40.00	TPO	Watt	2	0.00	1122.25	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	CDMA	35	61.0	4.6	11.47	20.00	TPO	Watt	4	0.00	1122.25	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS1	35	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS3	35	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	751	LTE	35	71.0	4.6	10.73	40.00	TPO	Watt	2	0.00	946.43	48	0	2
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	850	LTE	35	63.0	4.6	11.39	40.00	TPO	Watt	2	0.00	1101.77	48	0	2
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	1900	LTE	35	60.0	4.6	15.19	40.00	TPO	Watt	4	0.00	5285.91	48	0	2
12	VERIZON WIRELESS	Ericsson AIR6449	Panel	3700	5G	35	12.0	2.8	23.55	40.00	TPO	Watt	8	0.00	72468.62	49	0	3
13	VERIZON WIRELESS	Ericsson 4408	Panel	3550	LTE/CBRS	35	65.0	0.7	9.41	5.00	TPO	Watt	4	0.00	174.59	46	0	8
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS1	160	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	751	LTE	160	66.0	4.6	11.29	40.00	TPO	Watt	2	0.00	1076.69	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	LTE	160	61.0	4.6	11.47	40.00	TPO	Watt	2	0.00	1122.25	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	CDMA	160	61.0	4.6	11.47	20.00	TPO	Watt	4	0.00	1122.25	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS3	160	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	751	LTE	160	71.0	4.6	10.73	40.00	TPO	Watt	2	0.00	946.43	48	0	2

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	850	LTE	160	63.0	4.6	11.39	40.00	TPO	Watt	2	0.00	1101.77	48	0	2
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	1900	LTE	160	60.0	4.6	15.19	40.00	TPO	Watt	4	0.00	5285.91	48	0	2
16	VERIZON WIRELESS	Ericsson AIR6449	Panel	3700	5G	160	12.0	2.8	23.55	40.00	TPO	Watt	8	0.00	72468.62	49	0	3
17	VERIZON WIRELESS	Ericsson 4408	Panel	3550	LTE/CBRS	160	65.0	0.7	9.41	5.00	TPO	Watt	4	0.00	174.59	46	0	8

Note: The Z reference indicates antenna height above ground level (AGL). ERP values provided by the client and used in the modeling may be greater than are currently deployed. For additional modeling information, refer to Appendix B.

5 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I, Michael A. McGuire, P.E., am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC, a duly authorized/registered engineering firm (in this state, as applicable) on behalf of Site Safe, LLC; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

June 16, 2023

Appendix A – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, inaccessible cable runs, inaccessible antennas or equipment, etc.) or information or data supplied by Crown Castle, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix B – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict exposure exposure greater than 100% of the applicable MPE level may not actually occur but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF exposure diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible for taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

General Population/Uncontrolled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are *unaware* of the potential for exposure and who have no control over their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with the FCC Rules and Regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF exposure diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All Crown Castle employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

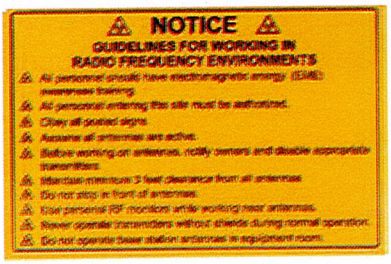
1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal protective monitor (PPM), successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- adding new antennas that may have been located on the site
- removing of any existing antennas
- changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Section 3.1 to inform <u>everyone</u> who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, a RF Guideline Signage is recommended to be posted at the main site access point(s). The signs below are examples of signs meeting FCC guidelines.



5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 5% or less of the General Public MPE limits. *The General Public can access these areas with no restrictions.*

- Green represents areas predicted to be between 5% and 100% of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- Blue represents areas predicted to be between 100% and 500% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Yellow represents areas predicted to be between 500% and 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Red represents areas predicted to be greater than 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*

7. For an Occupational environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 1% or less of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Green represents areas predicted to be between 1% and 20% of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Blue represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure.
- Yellow represents areas predicted to be between 100% and 1000% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure. Transmitter power reduction and/or time-averaging may be required.
- Red represents areas predicted to be greater than 1000% of the Occupational MPE limits. These areas are not safe for workers to be in for prolonged periods of time. Special procedures must be adhered to, such as lockout/tagout or transmitter power reduction, to minimize worker exposure to EME.

8. Use of a Personal Protective Monitor (PPM): When working around antennas, Sitesafe strongly recommends the use of a PPM. Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available at the following sites:
https://www.fcc.gov/general/radio-frequency-safety-0
https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety

OSHA has additional information available at:
https://www.osha.gov/SLTC/radiofrequencyradiation/index.html

Appendix E – Regulatory Basis

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for evaluating the effects of RF exposure in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

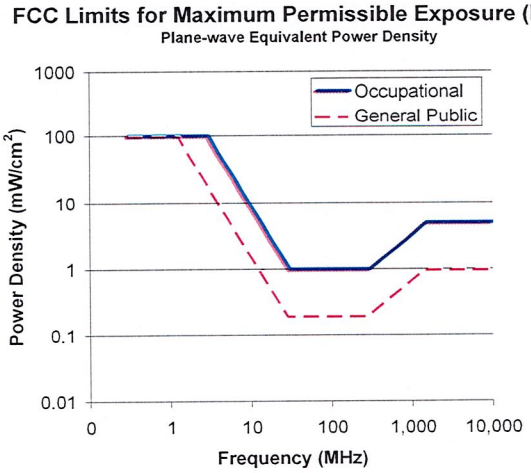
FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limits. The General Public limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF hazard signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF hazard signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Appendix F – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a worker's understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet-based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Site RF Exposure Diagram(s): Section 3 of this report contains RF Diagram(s) that outline various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst-case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.

CROWN CASTLE

SITE NAME: MONTARA SANITARY DISTRICT
SITE TYPE: MONOPOLE
TOWER HEIGHT: 46'-3"

BUSINESS UNIT #: 880454
SITE ADDRESS: 8888 CABRILLO HIGHWAY MONTARA, CA 94038
COUNTY: SAN MATEO
JURISDICTION: SAN MATEO COUNTY

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	MONTARA SANITARY DISTRICT
SITE ADDRESS:	8888 CABRILLO HIGHWAY MONTARA, CA 94038
COUNTY:	SAN MATEO
MAP/PARCEL #:	037-310-010
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	37.534222
LONGITUDE:	-122.518417
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	140'-2"
CURRENT ZONING:	RM-CZ/DR
JURISDICTION:	SAN MATEO COUNTY
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	MONTARA SANITARY DISTRICT PO BOX 370131 MONTARA, CA 94037
TOWER OWNER/APPLICANT:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
ELECTRIC PROVIDER:	PACIFIC GAS & ELECTRIC 800-743-5000
TELCO PROVIDER:	ATT 611

PROJECT TEAM

A&E FIRM:	TELCYTE INFRASTRUCTURE SERVICES 3450 N HIGLEY RD, SUITE 102 MESA, AZ 85215 CWOLFE@TELCYTE.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	4301 HACIENDA DRIVE, SUITE 410 PLEASANTON, CA 94588 CAMPBELL A&Z, LLC - ENTITLEMENT CONSULTANT MICHAEL J CAMPBELL 602-616-8396 CAMPBELLAZ1@EARTHLINK.NET

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
C-1.1	OVERALL SITE PLAN
C-1.2	SITE PLAN
C-2	EXISTING ELEVATION
C-3	EXISTING ANTENNA PLAN & SCHEDULE
C-4	EXISTING ANTENNA PLAN & SCHEDULE

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 22X34. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

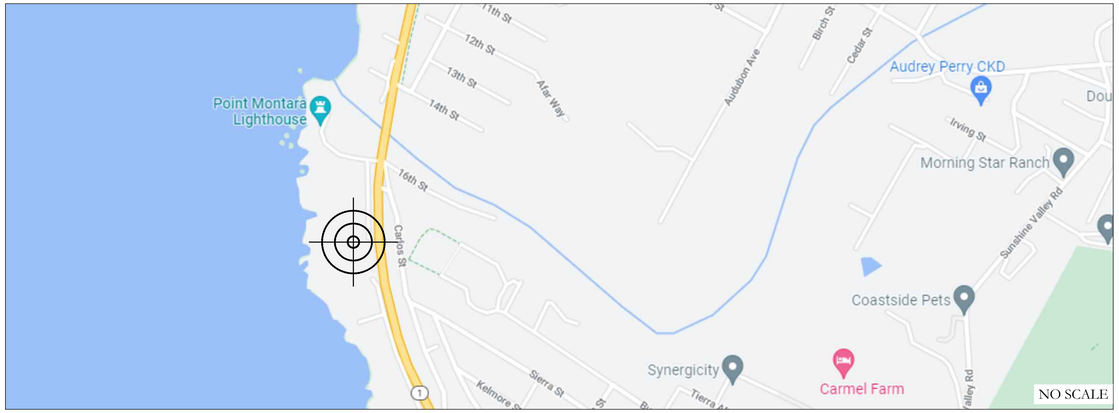
PROJECT DESCRIPTION

CROWN CASTLE PROPOSES TO RENEW THE SPECIAL USE PERMIT FOR AN EXISTING WIRELESS COMMUNICATION FACILITY.

- NO CHANGES ARE PROPOSED TO THE PROJECT.

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER

LOCATION MAP



FROM SAN FRANCISCO INTERNATIONAL AIRPORT. GET ON I-380 W IN SAN BRUNO (2.8 MI). HEAD SOUTHWEST ON AIRPORT ACCESS RD 0.2 MI. CONTINUE STRAIGHT TO STAY ON AIRPORT ACCESS RD 0.1 MI. SLIGHT LEFT ONTO INTERNATIONAL TERMINAL ARRIVALS LEVEL 0.1 MI. KEEP LEFT TO STAY ON INTERNATIONAL TERMINAL ARRIVALS LEVEL 0.3 MI. TAKE THE I-380 W RAMP TO I-280 2.0 MI. TAKE I-280 N TO CA-1 S IN DALY CITY. TAKE EXIT 47 FROM I-280 N (5.6 MI). CONTINUE ONTO I-380 W 1.0 MI. USE THE RIGHT 3 LANES TO TAKE EXIT 5A TO MERGE ONTO I-280 N TOWARD SAN FRANCISCO 4.1 MI. TAKE EXIT 47 TO MERGE ONTO CA-1 S TOWARD PACIFICA 0.5 MI. FOLLOW CA-1 S TO YOUR DESTINATION (11.5 MI). MERGE ONTO CA-1 S 11.4 MI. TURN RIGHT ONTO 16TH ST 92 FT. TURN LEFT

APPLICABLE CODES/REFERENCE DOCUMENTS

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2019 CBC (2018 IBC W/AMMENDMENTS)
MECHANICAL	2019 CMC (2018 IMC W/AMMENDMENTS)
ELECTRICAL	2019 CEC (2017 NEC W/AMMENDMENTS)
FIRE	2019 CFC (2018 IFC W/AMMENDMENTS)

CALL CALIFORNIA ONE CALL
(800) 227-2600
CALL 3 WORKING DAYS BEFORE YOU DIG!

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

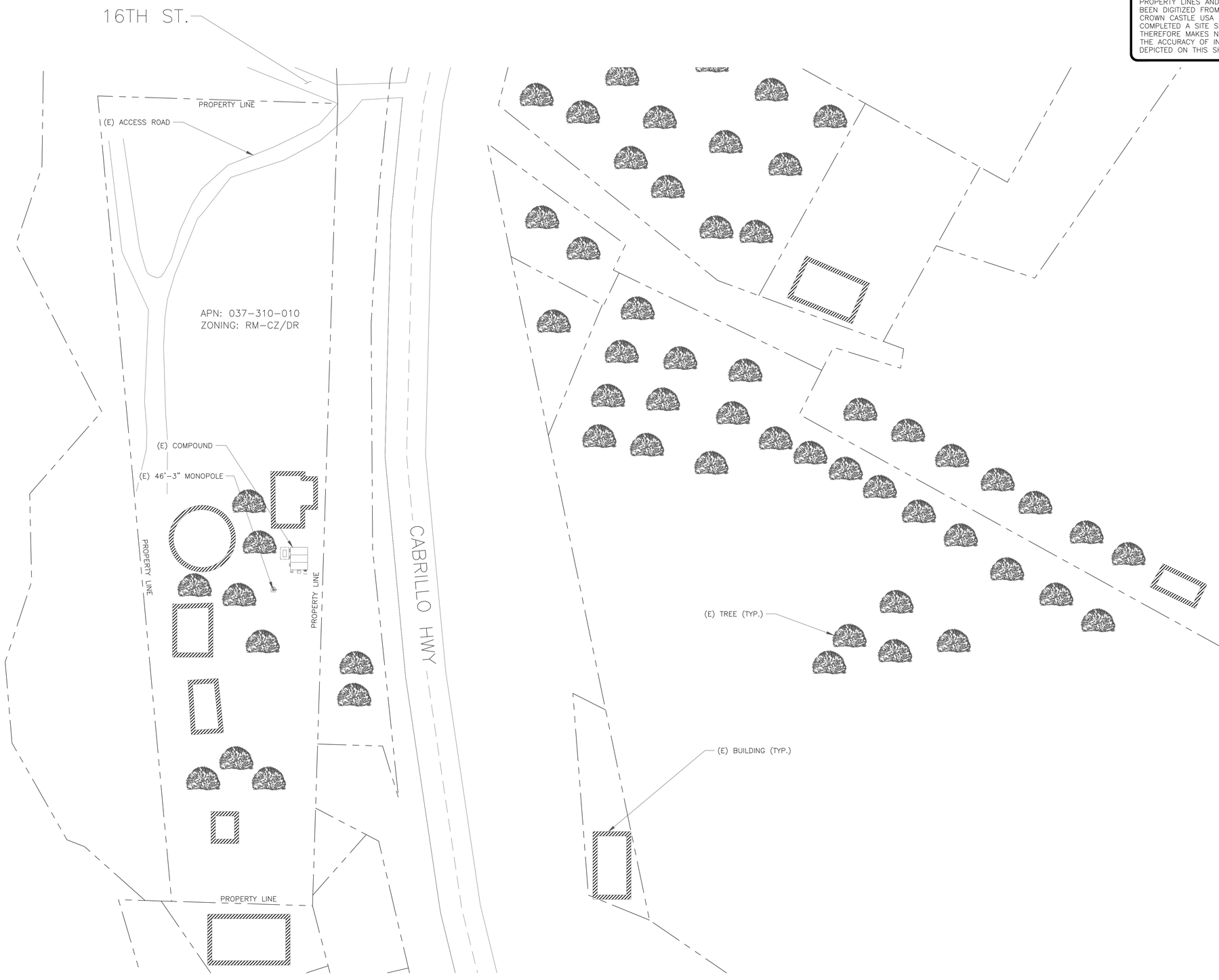
TELCYTE INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

SHEET NUMBER: T-1
REVISION: 0



1 OVERALL SITE PLAN

SCALE: 60' 30' 0 60' 1" = 60'-0" (FULL SIZE) 1" = 120'-0" (11x17)

N

SITE PLAN DISCLAIMER:

PROPERTY LINES AND STRUCTURES HAVE BEEN DIGITIZED FROM GOOGLE MAPS. CROWN CASTLE USA INC. HAS NOT COMPLETED A SITE SURVEY AND THEREFORE MAKES NO CLAIMS AS TO THE ACCURACY OF INFORMATION DEPICTED ON THIS SHEET.

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

TELCYTE INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

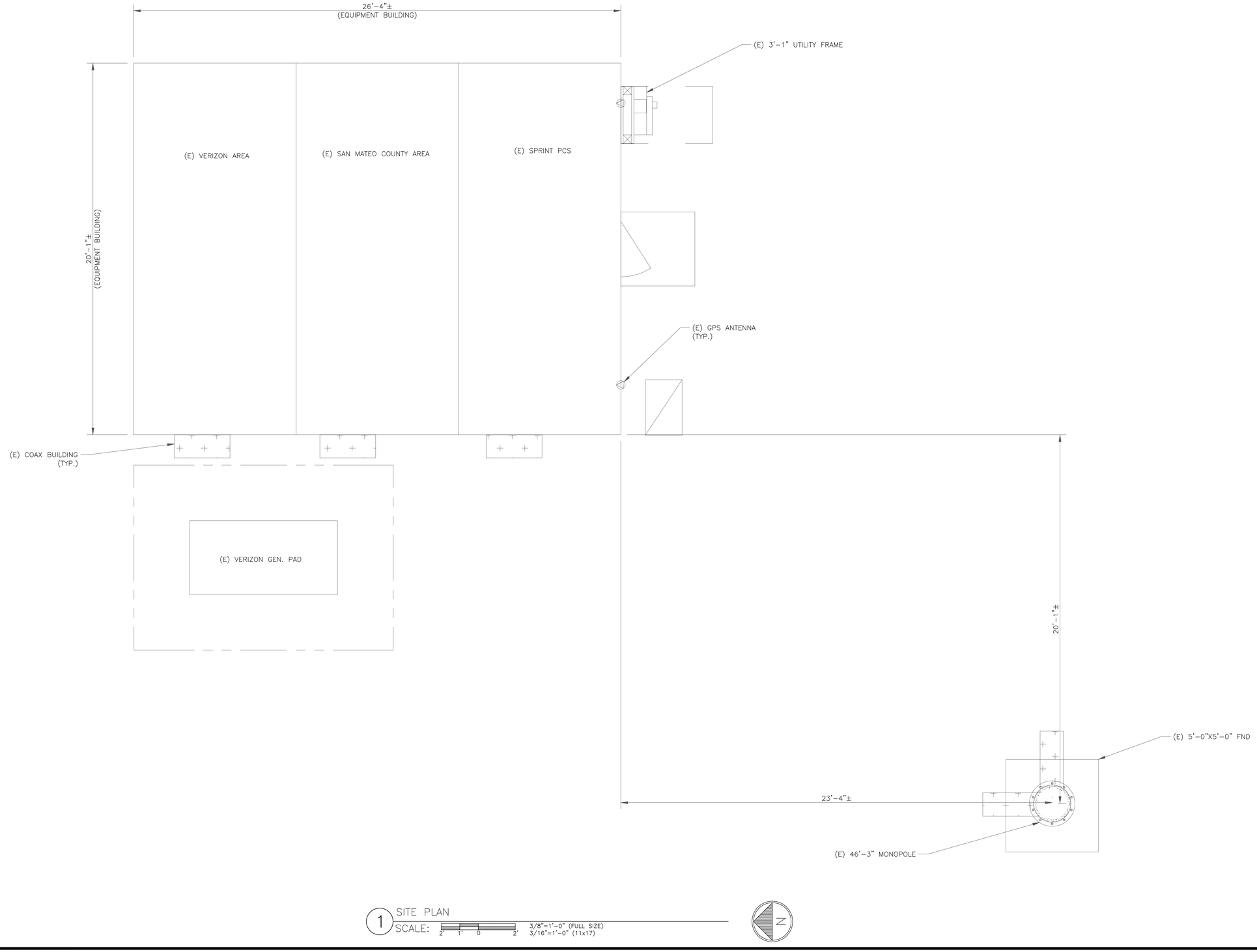
BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

SHEET NUMBER: C-1.1

REVISION: 0



1 SITE PLAN

SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

N

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

TELCYTE INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

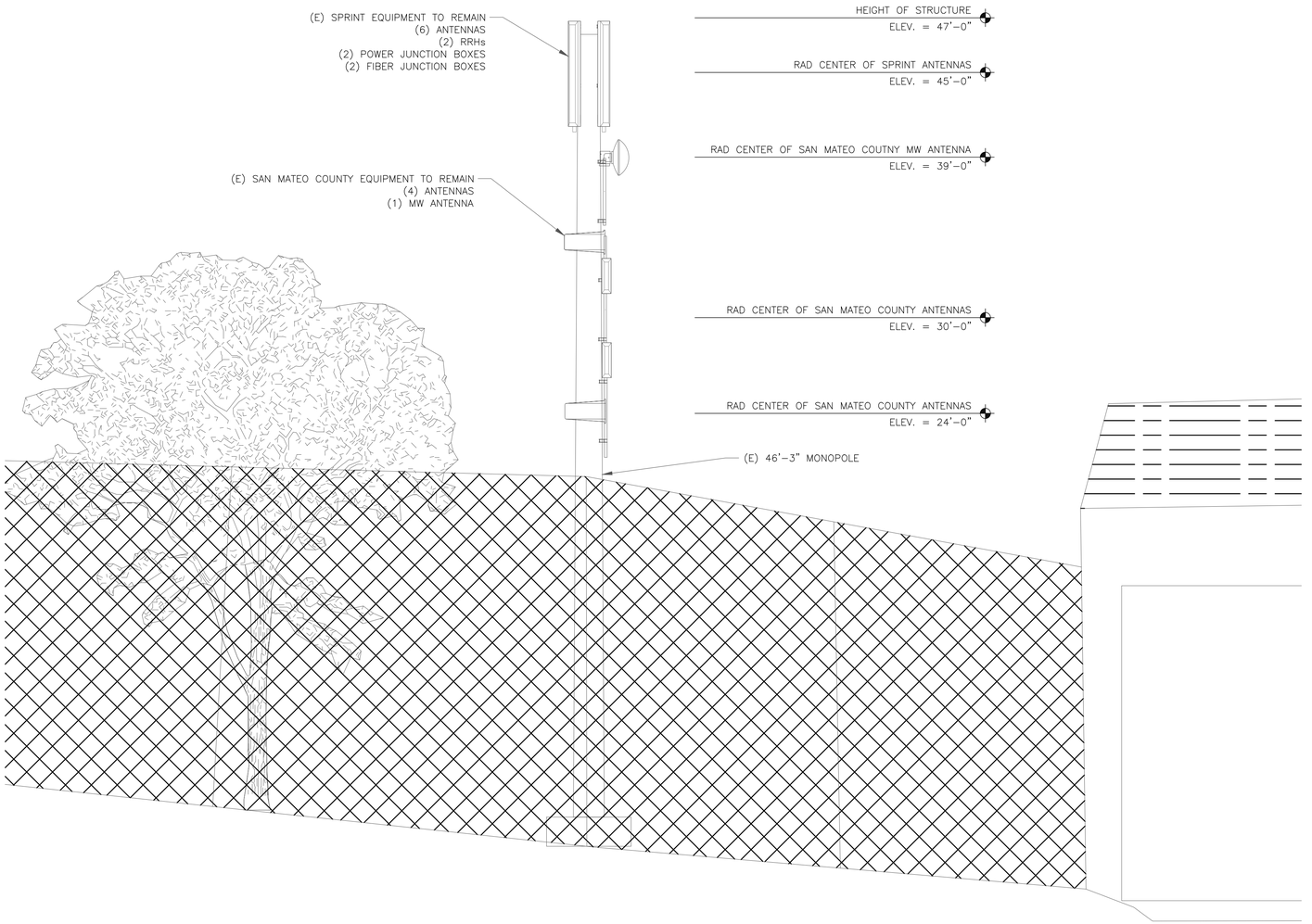
BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

SHEET NUMBER: C-1.2

REVISION: 0



1 EXISTING ELEVATION
SCALE: NOT TO SCALE

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

TELCYTE
INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

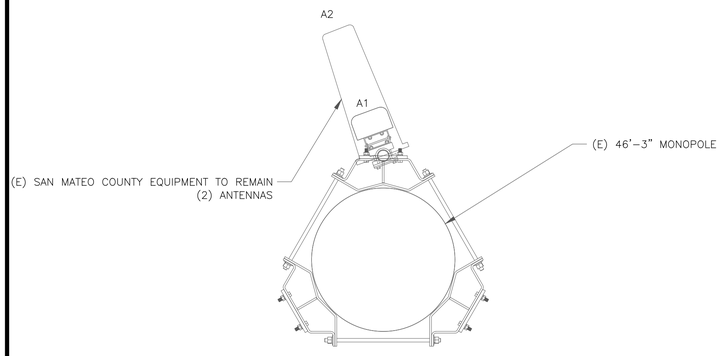
REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

SHEET NUMBER: C-2

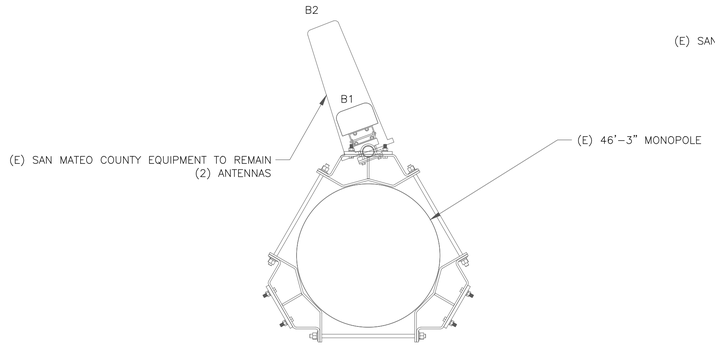
REVISION: 0

EQUIPMENT SCHEDULE

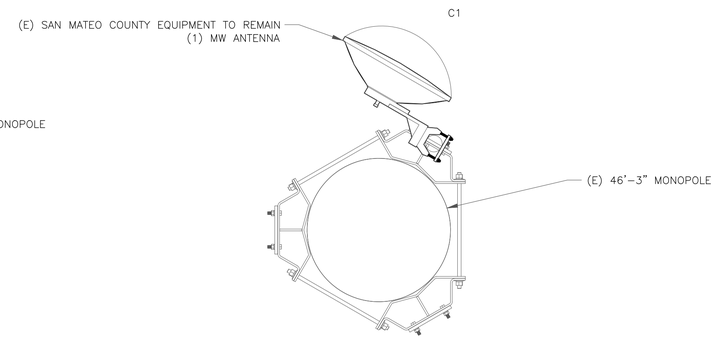
POSITION	ANTENNA				RADIO			DIPLEXER			TMA			SURGE PROTECTION		CABLES			
	CARRIER	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
ALPHA																		
A1	SAN MATEO COUNTY	ANTEL – BXA–171063/4CD	340°	27'–0"	–	–	–	–	–	–	–	–	–	–	2	COAX	7/8"	55'–0"
A2	SAN MATEO COUNTY	KATHREIN – CL6–450B	340°	24'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BETA																		
B1	SAN MATEO COUNTY	KATHREIN – CL6–450B	340°	34'–0"	–	–	–	–	–	–	–	–	–	–	2	COAX	7/8"	60'–0"
B2	SAN MATEO COUNTY	ANTEL – BXA–171063/4CD	340°	32'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
GAMMA																		
C1	SAN MATEO COUNTY	ANDREW – VP2–180A	30°	39'–0"	–	–	–	–	–	–	–	–	–	–	1	MW LINE	EW180	65'–0"



1 EXISTING SAN MATEO COUNTY ANTENNA PLAN @24'–0" & 27'–0"
SCALE: NOT TO SCALE



2 EXISTING SAN MATEO COUNTY ANTENNA PLAN @32'–0" & 34'–0"
SCALE: NOT TO SCALE



3 EXISTING SAN MATEO COUNTY ANTENNA PLAN @39'–0"
SCALE: NOT TO SCALE

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

TELCYTE INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

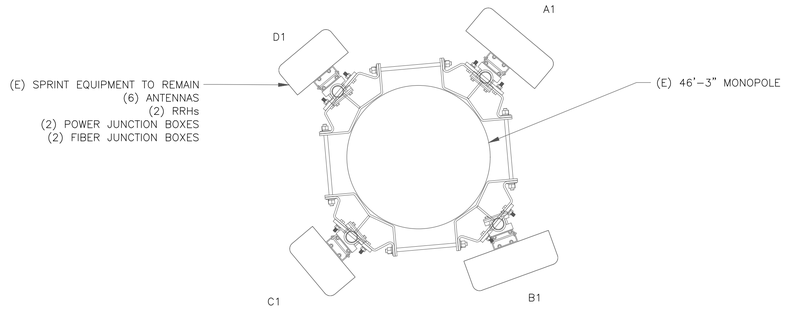
SHEET NUMBER: C-3

REVISION: 0

EQUIPMENT SCHEDULE

ALPHA

POSITION	ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABLES			
	CARRIER	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
A1	SPRINT	KMW – ETCR–654L12H6	40°	44'–0"	–	–	–	–	–	–	–	–	1 1	POWER JUNCTION BOX FIBER JUNCTION BOX	1	HYBRID	TYPE 1A	70'–0"
BETA																		
B1	SPRINT	KMW – ETCR–654L12H6	160°	44'–0"	1	RFD01F–26A	TOWER	–	–	–	–	–	1 1	POWER JUNCTION BOX FIBER JUNCTION BOX	1	HYBRID	TYPE 1A	70'–0"
GAMMA																		
C1	SPRINT	SAMSUNG – TME–RRH–P4 PH1 SAMSUNG – TME–RRH–B8	230°	46'–0" 44'–0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
DELTA																		
D1	SPRINT	SAMSUNG – TME–RRH–P4 PH1 SAMSUNG – TME–RRH–B8	320°	46'–0" 44'–0"	1	RFD01F–26A	TOWER	–	–	–	–	–	–	–	–	–	–	–



1 EXISTING SPRINT ANTENNA PLAN @45'–0"
SCALE: NOT TO SCALE

JURISDICTIONAL APPROVAL:

CROWN CASTLE
1505 WESTLAKE AVENUE NORTH, SUITE 800
SEATTLE, WA 98109

TELCYTE INFRASTRUCTURE SERVICES
3450 N HIGLEY RD - SUITE 102,
MESA, AZ 85215

BU #: **880454**
MONTARA SANITARY DISTRICT
8888 CABRILLO HIGHWAY
MONTARA, CA 94038
EXISTING 46'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	06/24/22	MM	CUP RENEWAL	JD

SHEET NUMBER: C-4

REVISION: 0

SiteSafe
A QUALTEK Company

8618 Westwood Center Drive, Suite 315, Vienna, VA 22182
703.276.1100 • 703.276.1169 fax
info@sitesafe.com • www.sitesafe.com

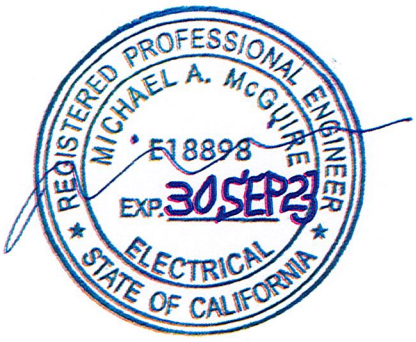
Crown Castle
Site BU Number – 880454
Assessment Purpose – CUP Renewal
Site Name – MONTARA SANITARY DISTRICT
Site Compliance Report

8888 Cabrillo Highway
Montara, CA 94038

Latitude: N37-32-03.20
Longitude: W122-31-06.30
Structure Type: Monopole

Report generated date: June 16, 2023
Report by: Leo Romero
Customer Contact: Jim Lee

Crown Castle is compliant with the FCC Rules and Regulations.



sealed 16jun2023

Crown Castle
MONTARA SANITARY DISTRICT - 880454
Radio Frequency (RF) Site Compliance Report

8888 Cabrillo Highway, Montara, CA 94038

8618 Westwood Center Drive • Suite 315 • Vienna, VA 22182
703.276.1100 • info@sitesafe.com

Table of Contents

1 Executive Summary

Crown Castle has contracted with Site Safe, LLC (Sitesafe), an independent Radio Frequency (RF) regulatory and engineering consulting firm, to determine whether the communications site, 880454 - MONTARA SANITARY DISTRICT, located at 8888 Cabrillo Highway, Montara, CA, is in compliance with the Federal Communications Commission (FCC) Rules and Regulations for RF exposure.

This report contains a detailed summary of the RF environment at the site including:

- Diagram of the site
- Inventory of the make / model of all antennas
- Theoretical MPE based on modeling

This report addresses exposure to radio frequency electromagnetic fields in accordance with the FCC Rules and Regulations for all individuals, classified in two groups, "Occupational or Controlled" and "General Public or Uncontrolled."

Crown Castle is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65.

Crown Castle plans to submit for CUP renewal.

This document and the conclusions herein are based on the information provided by Crown Castle.

If you have any questions regarding RF safety and regulatory compliance, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

2 Site Compliance

2.1 Site Compliance Statement

Upon evaluation of the cumulative RF exposure levels from all operators at this site, Sitesafe has determined that:

Crown Castle is compliant with the FCC Rules and Regulations, as described in OET Bulletin 65.

The compliance determination is based on theoretical modeling, RF signage placement recommendations, and/or the level of restricted access to the antennas at the site. Any deviation from the Crown Castle deployment plan could result in the site being rendered non-compliant upon further evaluation.

2.2 Actions for Site Compliance

Based on common industry practice and our understanding of FCC and OSHA requirements, this section provides a statement of recommendations for site compliance. No additional RF alert signage recommendations have been proposed based on theoretical analysis of MPE levels. Where applicable, barriers can consist of locked doors, fencing, railing, rope, chain, paint striping or tape, combined with RF alert signage.

Crown Castle is compliant with the FCC Rules and Regulations.

Note: The owner/operator of the adjacent monopole 2 depicted in the site diagrams should be made aware of the potential for exposure to RF above the General Public MPE limit on said adjacent monopole 2. If any work or maintenance is to be performed on elevated parts of the adjacent monopole 2, it is recommended that the Sprint's Beta sector(s) be powered down to avoid potential exposure in excess of the General Public MPE limit.

Note: Sitesafe recommends that persons accessing any adjacent trees in excess of 22' above ground level (i.e. landscape and arborist contractors or other maintenance workers) within 152' directly in front of any antennas on either monopole 1 or 2 are informed of areas where RF levels exceed the FCC General Public limit.

Note: Ensure all existing signage documented in this report still exists on site unless otherwise indicated.

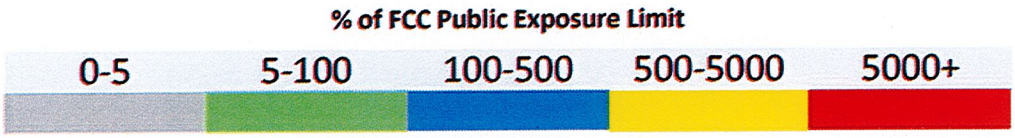
Note: For overall compliance, access to the site (i.e., access road, gate, climbing point(s), etc.) must be locked/ restricted.

3 Analysis

3.1 RF Exposure Diagram

The RF diagram(s) below display theoretical percentage of the Maximum Permissible Exposure for all systems at the site. These diagrams use modeling as prescribed in OET Bulletin 65 and assumptions detailed in Appendix B.

The key at the bottom of each diagram indicates if percentages displayed are referenced to FCC **General Public** Maximum Permissible Exposure (MPE) limits. Color coding on the diagram is as follows:



This table displays the maximum theoretical percentage of the FCC's General Public MPE limits:

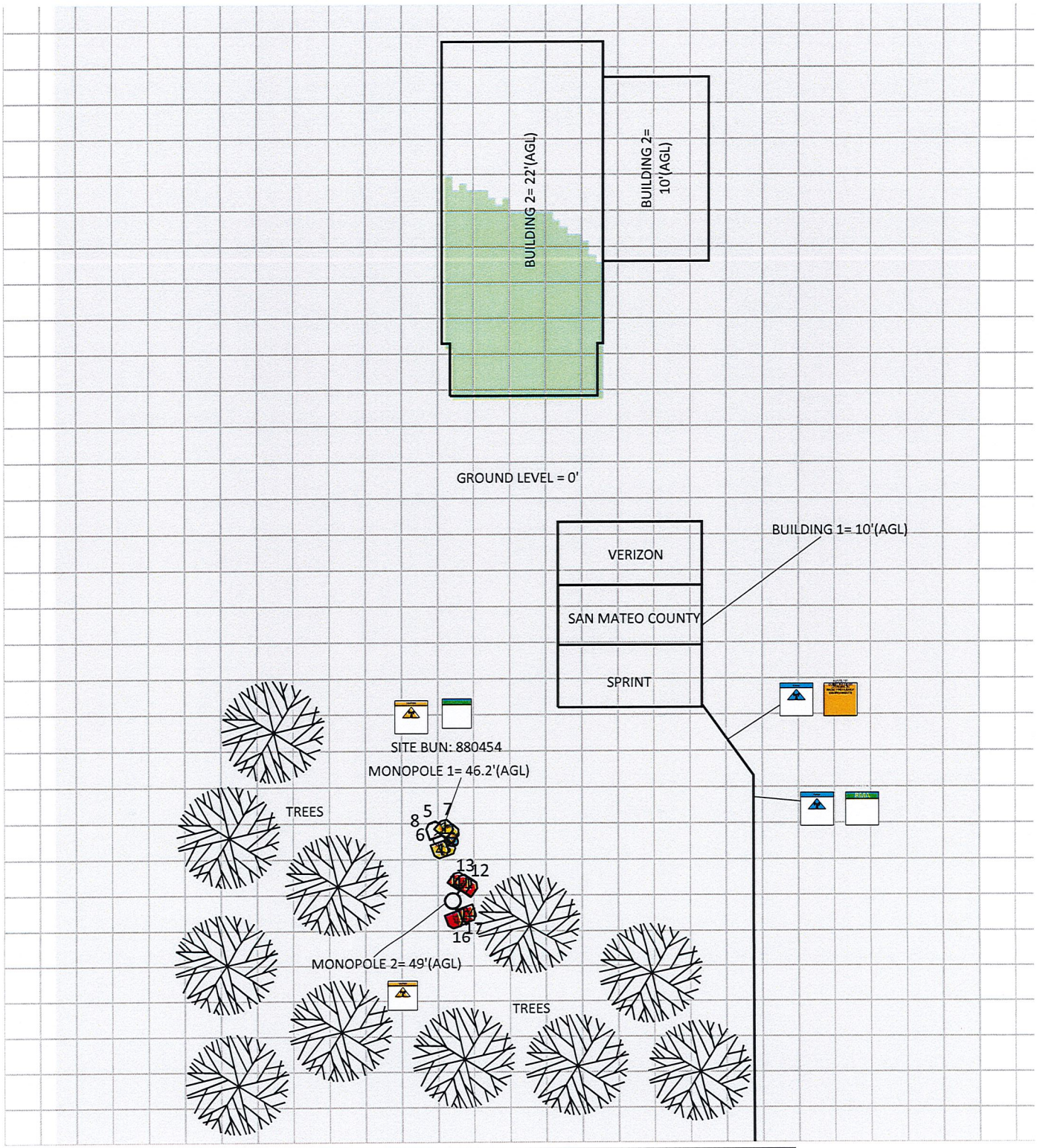
	General Public Levels:	
Exposure Type:	**Spatial Average**	**Spatial Average**
Reference Level:	**Top of Buildings**	**Ground**
Composite:	9.0% (Building 2)	<1.0%

Note: On the diagrams shown below, each level is marked with a height. For all diagrams that are marked as *Spatially Averaged*, the modeling program will spatially average the exposure within the area six feet above each set level. This provides an accurate spatial average of the percentage of the FCC's MPE limits within an accessible area.

In the RF exposure simulations below, all heights are reflected with respect to ground level. Each different area, rooftop, or platform level is labeled with its height relative to the main site level. Exposure is calculated appropriately based on the relative height and location of that area to all antennas. The analyzed elevations in the RF exposure simulations are as follows:

- Ground Level = 0'
- Building 1 = 10'
- Building 2 = 10' and 22'

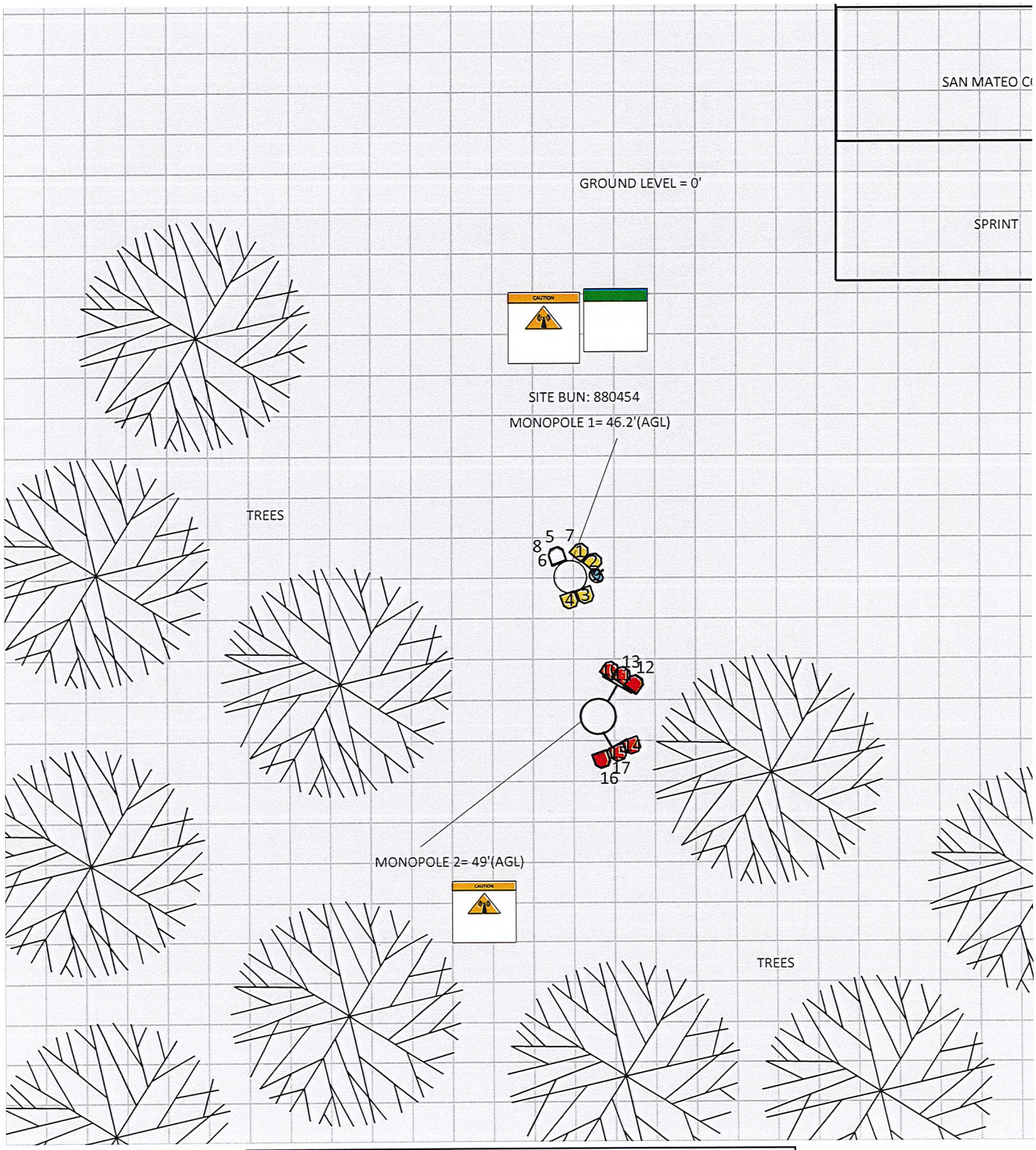
RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Composite View



www.sitesafe.com
6/16/2023 6:54:38 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Detailed View



% of FCC Public Exposure Limit

0-5	5-100	100-500	500-5000	5000+

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | DISH | UNKNOWN CARRIER

Barrier Signage Legend

No-sign | Notice | Caution | Warning | Notice 2 | Caution 2 | Warning 2

Existing Barrier ——— Proposed Barrier/Sign — — — Remove Barrier/Sign - - - /X

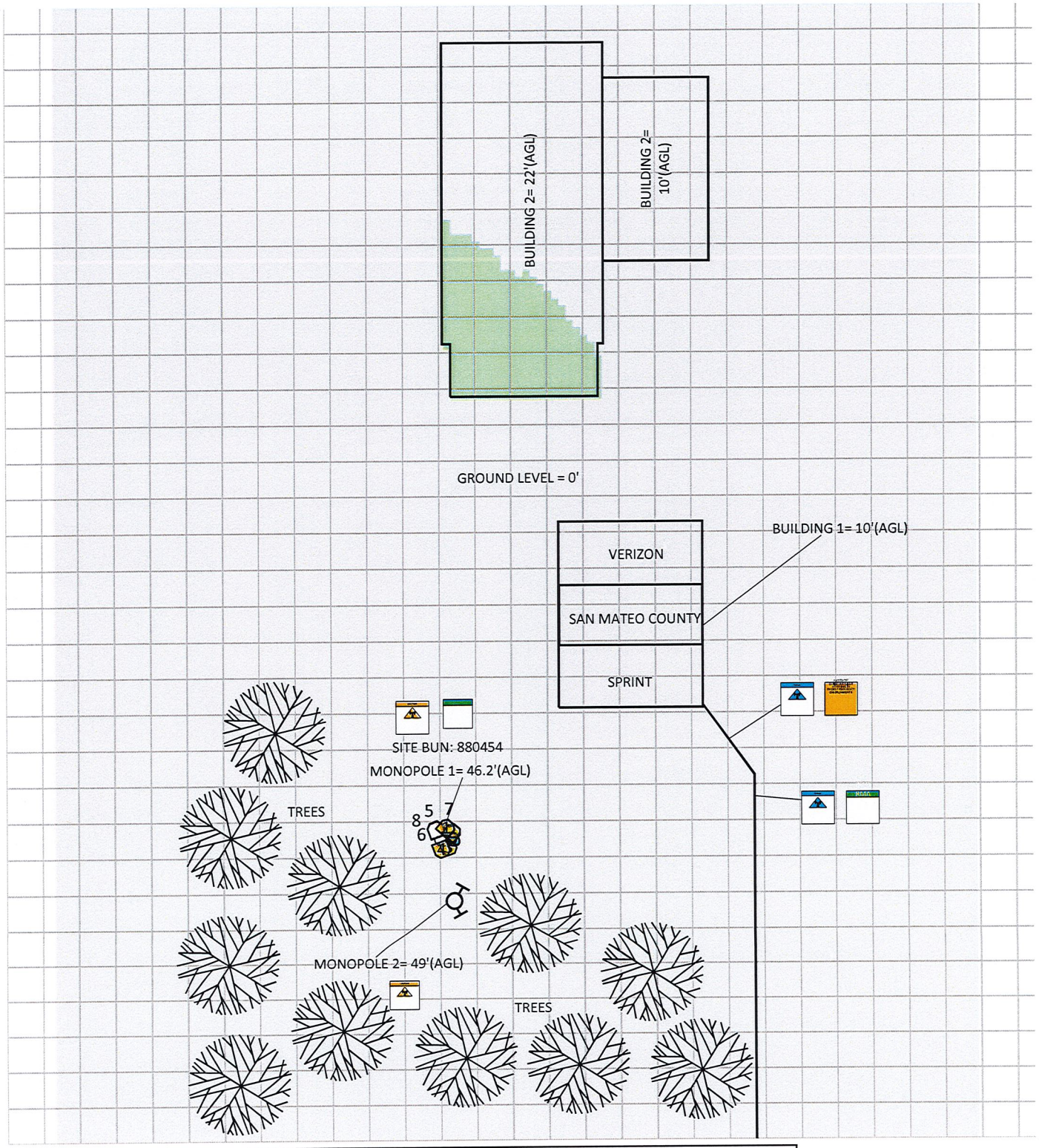
(Feet)

0 4.2 8.4

www.sitesafe.com
6/16/2023 6:55:30 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

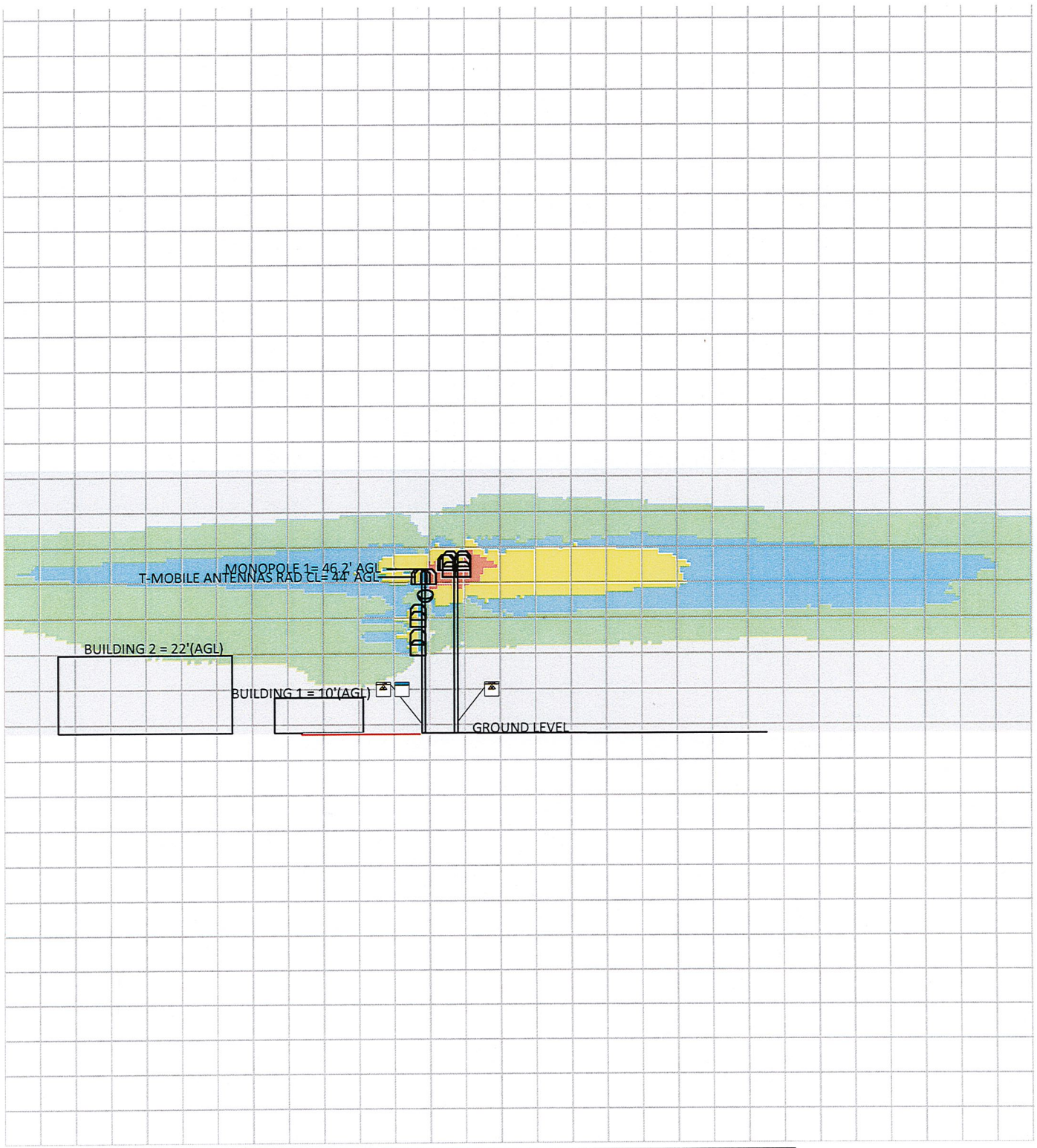
RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Sprint Contribution



www.sitesafe.com
6/16/2023 6:57:55 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Spatially Averaged

RF Exposure Simulation For: MONTARA SANITARY DISTRICT
Elevation View



% of FCC Public Exposure Limit

0-5 | 5-100 | 100-500 | 500-5000 | 5000+

AT&T MOBILITY LLC | VERIZON WIRELESS | T-MOBILE | SPRINT | DISH | UNKNOWN CARRIER

Proposed Barrier/Sign

Remove Barrier/Sign /X

(Feet)

0 20 40

www.sitesafe.com
6/16/2023 7:04:57 AM

Sitesafe OET-65 Model
Near Field Boundary:
1.5 * Aperture
Reflection Factor: 1
Single Level (0)

4 Antenna Inventory

The Antenna Inventory shows all transmitting antennas at the site. This inventory was provided by the customer and was utilized by Sitesafe to perform theoretical modeling of RF exposure. The inventory coincides with the site diagrams in this report, identifying each antenna's location at 880454 - MONTARA SANITARY DISTRICT. The antenna information collected includes the following information:

- Licensee or wireless operator name
- Frequency or frequency band
- Transmitter power – Transmitter Power Output ("TPO"), Effective Radiated Power ("ERP"), or Equivalent Isotropic Radiated Power ("EIRP")
- Antenna manufacturer make, model, and gain

For other carriers at this site, equipment, antenna models and nominal transmit power were used for modeling, based on past experience with radio service providers or data provided by Crown Castle.

The following antenna inventory was provided by the customer and was utilized to create the site model diagrams:

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	40	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	40	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	40	63.7	8	13.75	200.00	TPO	Watt	1	0.00	4742.75	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	UMTS	40	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	40	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
1	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	40	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	44	0	0
2	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	LTE	40	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
2	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	5G	40	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	LTE	160	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	600	5G	160	62.8	8	13.35	100.00	TPO	Watt	1	0.00	2162.72	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	700	LTE	160	63.7	8	13.75	200.00	TPO	Watt	1	0.00	4742.75	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	UMTS	160	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	1900	LTE	160	64.9	8	15.25	140.00	TPO	Watt	1	0.00	4689.52	44	0	0
3	SPRINT (T-MOBILE)	RFS APXVAALL24_43-U-NA20	Panel	2100	LTE	160	59.4	8	16.45	280.00	TPO	Watt	1	0.00	12363.97	44	0	0
4	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	LTE	160	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
4	SPRINT (T-MOBILE)	Ericsson AIR6449 B41	Panel	2500	5G	160	12.5	2.8	22.65	150.00	TPO	Watt	1	0.00	27611.58	44	0	0
5	SAN MATEO COUNTY CA	Antel BXA-171063-4CF	Panel	1900		340	63.0	2.1	13.51	60.00	TPO	Watt	1	0.00	1346.33	27	0	0
6	SAN MATEO COUNTY CA	Kathrein CL6-450B	Yagi	488		340	60.0	2.1	9.97	115.00	ERP	Watt	1	0.00	115	24	0	0

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
7	SAN MATEO COUNTY CA	Kathrein CL6-450B	Yagi	488		340	60.0	2.1	9.97	115.00	ERP	Watt	1	0.00	115	34	0	0
8	SAN MATEO COUNTY CA	Antel BXA-171063-4CF	Panel	1900		340	63.0	2.1	13.51	60.00	TPO	Watt	1	0.00	1346.33	32	0	0
9	SAN MATEO COUNTY CA	Andrew VP2-180A	Aperture	17915		50.1	2.0	2	37.66	51.90	EIRP	dBmW	1	0.00	94.44	39	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	751	LTE	35	66.0	4.6	11.29	40.00	TPO	Watt	2	0.00	1076.69	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	LTE	35	61.0	4.6	11.47	40.00	TPO	Watt	2	0.00	1122.25	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	CDMA	35	61.0	4.6	11.47	20.00	TPO	Watt	4	0.00	1122.25	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS1	35	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
10	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS3	35	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	751	LTE	35	71.0	4.6	10.73	40.00	TPO	Watt	2	0.00	946.43	48	0	2
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	850	LTE	35	63.0	4.6	11.39	40.00	TPO	Watt	2	0.00	1101.77	48	0	2
11	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	1900	LTE	35	60.0	4.6	15.19	40.00	TPO	Watt	4	0.00	5285.91	48	0	2
12	VERIZON WIRELESS	Ericsson AIR6449	Panel	3700	5G	35	12.0	2.8	23.55	40.00	TPO	Watt	8	0.00	72468.62	49	0	3
13	VERIZON WIRELESS	Ericsson 4408	Panel	3550	LTE/CBRS	35	65.0	0.7	9.41	5.00	TPO	Watt	4	0.00	174.59	46	0	8
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS1	160	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	751	LTE	160	66.0	4.6	11.29	40.00	TPO	Watt	2	0.00	1076.69	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	LTE	160	61.0	4.6	11.47	40.00	TPO	Watt	2	0.00	1122.25	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	850	CDMA	160	61.0	4.6	11.47	20.00	TPO	Watt	4	0.00	1122.25	48	0	0
14	VERIZON WIRELESS	Andrew SBNHH-1D65A	Panel	2100	LTE/AWS3	160	62.0	4.6	14.60	40.00	TPO	Watt	2	0.00	2307.23	48	0	0
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	751	LTE	160	71.0	4.6	10.73	40.00	TPO	Watt	2	0.00	946.43	48	0	2

Ant ID	Operator	Antenna Make and Model	Type	TX Freq (MHz)	Technology	Az (Deg)	Hor BW (Deg)	Ant Len (ft)	Ant Gain (dBd)	Power	Power Type	Power Units	TX Count	Misc Loss	Total ERP (Watts)	Z (ft) (AGL)	MDT (Deg)	EDT (Deg)
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	850	LTE	160	63.0	4.6	11.39	40.00	TPO	Watt	2	0.00	1101.77	48	0	2
15	VERIZON WIRELESS	Commscope NNHH-65A-R4-V1	Panel	1900	LTE	160	60.0	4.6	15.19	40.00	TPO	Watt	4	0.00	5285.91	48	0	2
16	VERIZON WIRELESS	Ericsson AIR6449	Panel	3700	5G	160	12.0	2.8	23.55	40.00	TPO	Watt	8	0.00	72468.62	49	0	3
17	VERIZON WIRELESS	Ericsson 4408	Panel	3550	LTE/CBRS	160	65.0	0.7	9.41	5.00	TPO	Watt	4	0.00	174.59	46	0	8

Note: The Z reference indicates antenna height above ground level (AGL). ERP values provided by the client and used in the modeling may be greater than are currently deployed. For additional modeling information, refer to Appendix B.

5 Engineer Certification

The professional engineer whose seal appears on the cover of this document hereby certifies and affirms:

That I am registered as a Professional Engineer in the jurisdiction indicated in the professional engineering stamp on the cover of this document; and

That I, Michael A. McGuire, P.E., am currently and actively licensed to provide (in this state/jurisdiction as indicated within the professional electrical engineering seal on the cover of this document) professional electrical engineering services, as an employee of Hurricane Hill Development Company, PLLC, a duly authorized/registered engineering firm (in this state, as applicable) on behalf of Site Safe, LLC; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission (FCC) as well as the regulations of the Occupational Safety and Health Administration (OSHA), both in general and specifically as they apply to the FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Site Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Leo Romero.

June 16, 2023

Appendix A – Statement of Limiting Conditions

Sitesafe will not be responsible for matters of a legal nature that affect the site or property.

Due to the complexity of some wireless sites, Sitesafe performed this analysis and created this report utilizing best industry practices and due diligence. Sitesafe cannot be held accountable or responsible for anomalies or discrepancies due to actual site conditions (i.e., mislabeling of antennas or equipment, inaccessible cable runs, inaccessible antennas or equipment, etc.) or information or data supplied by Crown Castle, the site manager, or their affiliates, subcontractors or assigns.

Sitesafe has provided computer generated model(s) in this Site Compliance Report to show approximate dimensions of the site, and the model is included to assist the reader of the compliance report to visualize the site area, and to provide supporting documentation for Sitesafe's recommendations.

Sitesafe may note in the Site Compliance Report any adverse physical conditions, such as needed repairs, observed during the survey of the subject property or that Sitesafe became aware of during the normal research involved in performing this survey. Sitesafe will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because Sitesafe is not an expert in the field of mechanical engineering or building maintenance, the Site Compliance Report must not be considered a structural or physical engineering report.

Sitesafe obtained information used in this Site Compliance Report from sources that Sitesafe considers reliable and believes them to be true and correct. Sitesafe does not assume any responsibility for the accuracy of such items that were furnished by other parties. When conflicts in information occur between data provided by a second party and physical data collected by Sitesafe, the physical data will be used.

Appendix B – Assumptions and Definitions

General Model Assumptions

In this site compliance report, it is assumed that all antennas are operating at **full power at all times**. Software modeling was performed for all transmitting antennas located on the site. Sitesafe has further assumed a 100% duty cycle and maximum radiated power.

The site has been modeled with these assumptions to show the maximum RF energy density. Sitesafe believes this to be a *worst-case* analysis, based on best available data. Areas modeled to predict exposure exposure greater than 100% of the applicable MPE level may not actually occur but are shown as a *worst-case* prediction that could be realized real time. Sitesafe believes these areas to be safe for entry by occupationally trained personnel utilizing appropriate personal protective equipment (in most cases, a personal monitor).

Thus, at any time, if power density measurements were made, we believe the real-time measurements would indicate levels below those depicted in the RF exposure diagram(s) in this report. By modeling in this way, Sitesafe has conservatively shown exclusion areas – areas that should not be entered without the use of a personal monitor, carriers reducing power, or performing real-time measurements to indicate real-time exposure levels.

Definitions

5% Rule – The rules adopted by the FCC specify that, in general, at multiple transmitter sites actions necessary to bring the area into compliance with the guidelines are the shared responsibility of all licensees whose transmitters produce field strengths or power density levels at the area in question in excess of 5% of the exposure limits. In other words, any wireless operator that contributes 5% or greater of the MPE limit in an area that is identified to be greater than 100% of the MPE limit is responsible for taking corrective actions to bring the site into compliance.

Compliance – The determination of whether a site complies with FCC standards with regards to Human Exposure to Radio Frequency Electromagnetic Fields from transmitting antennas.

Decibel (dB) – A unit for measuring power or strength of a signal.

Duty Cycle – The percent of pulse duration to the pulse period of a periodic pulse train. Also, may be a measure of the temporal transmission characteristic of an intermittently transmitting RF source such as a paging antenna by dividing average transmission duration by the average period for transmission. A duty cycle of 100% corresponds to continuous operation.

Effective (or Equivalent) Isotropic Radiated Power (EIRP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna.

Effective Radiated Power (ERP) – The product of the power supplied to the antenna and the antenna gain in a given direction relative to a half-wave dipole antenna.

Gain (of an antenna) – The ratio, usually expressed in decibels, of the power required at the input of a loss-free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. Gain may be considered for a specified polarization. Gain may be referenced to an isotropic antenna (dBi) or a half-wave dipole (dBd) antenna.

General Population/Uncontrolled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are *unaware* of the potential for exposure and who have no control over their exposure. General Population is also referenced as General Public.

Generic Antenna – For the purposes of this report, the use of "Generic" as an antenna model means the antenna information was not provided and could not be obtained while on site. In the event of unknown information, Sitesafe will use its industry specific knowledge of antenna models to select a worst-case scenario antenna to model the site.

Isotropic Antenna – An antenna that is completely non-directional. In other words, an antenna that radiates energy equally in all directions.

Maximum Measurement – This measurement represents the single largest measurement recorded when performing a spatial average measurement.

Maximum Permissible Exposure (MPE) – The rms and peak electric and magnetic field strength, their squares, or the plane-wave equivalent power densities associated with these fields to which a person may be exposed without harmful effect and with acceptable safety factor.

Occupational/Controlled Environment – Defined by the FCC as an area where RF exposure may occur to persons who are **aware** of the potential for exposure as a condition of employment or specific activity and can exercise control over their exposure.

OET Bulletin 65 – Technical guideline developed by the FCC's Office of Engineering and Technology to determine the impact of RF exposure on humans. The guideline was published in August 1997.

OSHA (Occupational Safety and Health Administration) – Under the Occupational Safety and Health Act of 1970, employers are responsible for providing a safe and healthy workplace for their employees. OSHA's role is to promote the safety and health of America's working men and women by setting and enforcing standards; providing training, outreach and education; establishing partnerships; and encouraging continual process improvement in workplace safety and health. For more information, visit www.osha.gov.

Radio Frequency Exposure or Electromagnetic Fields – Electromagnetic waves that are propagated from antennas through space.

Spatial Average Measurement – A technique used to average a minimum of ten (10) measurements taken in a ten (10) second interval from zero (0) to six (6) feet. This measurement is intended to model the average energy a 6-foot tall human body will absorb while present in an electromagnetic field of energy.

Transmitter Power Output (TPO) – The radio frequency output power of a transmitter's final radio frequency stage as measured at the output terminal while connected to a load.

Appendix C – Rules & Regulations

Explanation of Applicable Rules and Regulations

The FCC has set forth guidelines in OET Bulletin 65 for human exposure to radio frequency electromagnetic fields. Specific regulations regarding this topic are listed in Part 1, Subpart I, of Title 47 in the Code of Federal Regulations. Currently, there are two different levels of MPE - General Public MPE and Occupational MPE. An individual classified as Occupational can be defined as an individual who has received appropriate RF training and meets the conditions outlined below. General Public is defined as anyone who does not meet the conditions of being Occupational. FCC and OSHA Rules and Regulations define compliance in terms of total exposure to total RF energy, regardless of location of or proximity to the sources of energy.

It is the responsibility of all licensees to ensure these guidelines are maintained at all times. It is the ongoing responsibility of all licensees composing the site to maintain ongoing compliance with the FCC Rules and Regulations. Individual licensees that contribute less than 5% MPE to any total area out of compliance are not responsible for corrective actions.

OSHA has adopted and enforces the FCC's exposure guidelines. A building owner or site manager can use this report as part of an overall RF Health and Safety Policy. It is important for building owners/site managers to identify areas in excess of the General Population MPE and ensure that only persons qualified as Occupational are granted access to those areas.

Occupational Environment Explained

The FCC definition of Occupational exposure limits apply to persons who:

- are exposed to RF energy as a consequence of their employment;
- have been made aware of the possibility of exposure; and
- can exercise control over their exposure.

OSHA guidelines go further to state that persons must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

In order to consider this site an Occupational Environment, the site must be controlled to prevent access by any individuals classified as the General Public. Compliance is also maintained when any non-occupational individuals (the General Public) are prevented from accessing areas indicated as Red or Yellow in the attached RF exposure diagram. In addition, a person must be aware of the RF environment into which they are entering. This can be accomplished by an RF Safety Awareness class, and by appropriate written documentation such as this Site Compliance Report.

All Crown Castle employees who require access to this site must complete RF Safety Awareness training and must be trained in the use of appropriate personal protective equipment.

Appendix D – General Safety Recommendations

The following are *general recommendations* appropriate for any site with accessible areas in excess of 100% General Public MPE. These recommendations are not specific to this site. These are safety recommendations appropriate for typical site management, building management, and other tenant operations.

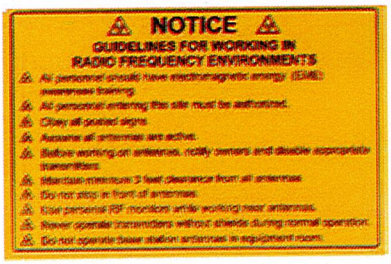
1. All individuals needing access to the main site (or the area indicated to be in excess of General Public MPE) should wear a personal protective monitor (PPM), successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.

2. All individuals needing access to the main site should be instructed to read and obey all posted placards and signs.

3. The site should be routinely inspected and this or similar report updated with the addition of any antennas or upon any changes to the RF environment including:

- adding new antennas that may have been located on the site
- removing of any existing antennas
- changes in the radiating power or number of RF emitters

4. Post the appropriate **NOTICE**, **CAUTION**, or **WARNING** sign at the main site access point(s) and other locations as required. Note: Please refer to RF Exposure Diagrams in Section 3.1 to inform <u>everyone</u> who has access to this site that beyond posted signs there may be levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, a RF Guideline Signage is recommended to be posted at the main site access point(s). The signs below are examples of signs meeting FCC guidelines.



5. Ensure that the site door remains locked (or appropriately controlled) to deny access to the general public if deemed as policy by the building/site owner.

6. For a General Public environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 5% or less of the General Public MPE limits. *The General Public can access these areas with no restrictions.*

- Green represents areas predicted to be between 5% and 100% of the General Public MPE limits. *The General Public can access these areas with no restrictions.*
- Blue represents areas predicted to be between 100% and 500% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Yellow represents areas predicted to be between 500% and 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*
- Red represents areas predicted to be greater than 5000% of the General Public MPE limits. *The General Public should be restricted from accessing these areas.*

7. For an Occupational environment the five color levels identified in this analysis can be interpreted in the following manner:

- Gray represents areas predicted to be at 1% or less of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Green represents areas predicted to be between 1% and 20% of the Occupational MPE limits. *Workers can access these areas with no restrictions.*
- Blue represents areas predicted to be between 20% and 100% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure.
- Yellow represents areas predicted to be between 100% and 1000% of the Occupational MPE limits. Workers can access these areas assuming they have basic understanding of EME awareness and RF safety procedures and understand how to limit their exposure. Transmitter power reduction and/or time-averaging may be required.
- Red represents areas predicted to be greater than 1000% of the Occupational MPE limits. These areas are not safe for workers to be in for prolonged periods of time. Special procedures must be adhered to, such as lockout/tagout or transmitter power reduction, to minimize worker exposure to EME.

8. Use of a Personal Protective Monitor (PPM): When working around antennas, Sitesafe strongly recommends the use of a PPM. Wearing a PPM will properly forewarn the individual prior to entering an RF exposure area.

Keep a copy of this report available for all persons who must access the site. They should read this report and be aware of the potential hazards with regards to RF and MPE limits.

Additional Information

Additional RF information is available at the following sites:
https://www.fcc.gov/general/radio-frequency-safety-0
https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety

OSHA has additional information available at:
https://www.osha.gov/SLTC/radiofrequencyradiation/index.html

Appendix E – Regulatory Basis

FCC Rules and Regulations

In 1996, the Federal Communications Commission (FCC) adopted regulations for evaluating the effects of RF exposure in 47 CFR § 1.1307 and 1.1310. The guideline from the FCC Office of Engineering and Technology is Bulletin 65 ("OET Bulletin 65"), *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields*, Edition 97-01, published August 1997. Since 1996 the FCC periodically reviews these rules and regulations as per their congressional mandate.

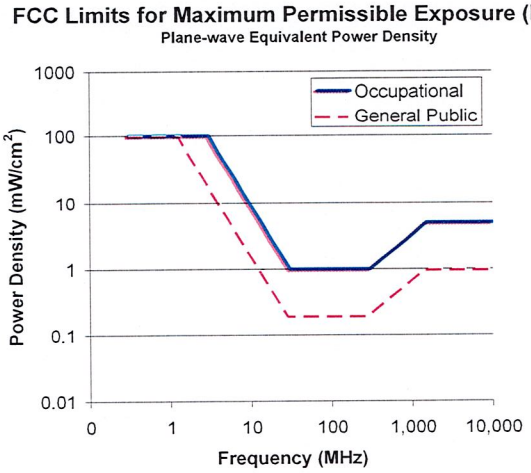
FCC regulations define two separate tiers of exposure limits: Occupational or "Controlled environment" and General Public or "Uncontrolled environment". The General Public limits are generally five times more conservative or restrictive than the Occupational limits. The General Public limits apply to *accessible* areas where workers or the general public may be exposed to Radio Frequency (RF) electromagnetic fields.

Occupational or Controlled limits apply in situations in which persons are exposed as a consequence of their employment and where those persons exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

An area is considered a Controlled environment when access is limited to these aware personnel. Typical criteria are restricted access (i.e. locked or alarmed doors, barriers, etc.) to the areas where antennas are located coupled with proper RF hazard signage. A site with Controlled environments is evaluated with Occupational limits.

All other areas are considered Uncontrolled environments. If a site has no access controls or no RF hazard signage it is evaluated with General Public limits.

The theoretical modeling of the RF electromagnetic fields has been performed in accordance with OET Bulletin 65. The Maximum Permissible Exposure (MPE) limits utilized in this analysis are outlined in the following diagram:



Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Appendix F – Safety Plan and Procedures

The following items are general safety recommendations that should be administered on a site by site basis as needed by the carrier.

General Maintenance Work: Any maintenance personnel required to work immediately in front of antennas and / or in areas indicated as above 100% of the Occupational MPE limits should coordinate with the wireless operators to disable transmitters during their work activities.

Training and Qualification Verification: All personnel accessing areas indicated as exceeding the General Population MPE limits should have a basic understanding of EME awareness and RF Safety procedures when working around transmitting antennas. Awareness training increases a worker's understanding to potential RF exposure scenarios. Awareness can be achieved in a number of ways (e.g. videos, formal classroom lecture or internet-based courses).

Physical Access Control: Access restrictions to transmitting antennas locations is the primary element in a site safety plan. Examples of access restrictions are as follows:

- Locked door or gate
- Alarmed door
- Locked ladder access
- Restrictive Barrier at antenna (e.g. Chain link with posted RF Sign)

RF Signage: Everyone should obey all posted signs at all times. RF signs play an important role in properly warning a worker prior to entering into a potential RF Exposure area.

Assume all antennas are active: Due to the nature of telecommunications transmissions, an antenna transmits intermittently. Always assume an antenna is transmitting. Never stop in front of an antenna. If you have to pass by an antenna, move through as quickly and safely as possible thereby reducing any exposure to a minimum.

Site RF Exposure Diagram(s): Section 3 of this report contains RF Diagram(s) that outline various theoretical Maximum Permissible Exposure (MPE) areas at the site. The modeling is a worst-case scenario assuming a duty cycle of 100% for each transmitting antenna at full power. This analysis is based on one of two access control criteria: General Public criteria means the access to the site is uncontrolled and anyone can gain access. Occupational criteria means the access is restricted and only properly trained individuals can gain access to the antenna locations.