MERA NEXT GENERATION RADIO
COMMUNICATION SYSTEM

DRAFT SUBSEQUENT
ENVIRONMENTAL IMPACT REPORT

SCH #99092073

VOLUME 1 OF 2

SEPTEMBER 2019

MARIN EMERGENCY RADIO AUTHORITY (MERA)

MARIN EMERGENCY RADIO AUTHORITY

c/o Town of Corte Madera
300 Tamalpais Drive, Corte Madera, CA 94925

NOTICE OF COMPLETION AND NOTICE OF PUBLIC HEARING
MERA NEXT GENERATION RADIO COMMUNICATIONS SYSTEM PROJECT
DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT (SCH #99092073)
PROJECT TITLE: MERA NEXT GENERATION RADIO COMMUNICATION SYSTEM
LEAD AGENCY: MARIN EMERGENCY RADIO AUTHORITY

Facilities and meetings comply with the Americans With Disabilities Act. If accommodations are needed, please contact the Marin Emergency Radio Authority (MERA) Operations Officer at (415) 473-4368.

NOTICE IS HEREBY GIVEN that a Draft Subsequent Environmental Impact Report (Draft SEIR) has been completed for the project identified below and is on file with the Marin County Department of Public Works, 3501 Civic Center Drive, Room 304, San Rafael, California, and available for public review between the hours of 8:00 a.m. to 5:00 p.m., Monday through Friday. Copies of the Draft SEIR may be obtained from the Department of Public Works. In addition, a copy is available for review at the Marin County Civic Center Library, the Central Santa Rosa Library, and all branches of the Marin County library. All appendices incorporated into the Draft SEIR are also available for public review at the Marin County Department of Public Works office. A copy of the Draft SEIR and all appendices can also be accessed from a link on the Marin County website, https://www.marincounty.org/depts/pw/divisions/projects/mera

PROJECT DESCRIPTION: The MERA radio system is vital for emergency countywide communications between police, firefighters and public works crews. The emergency communications system is a network of radio antennas and equipment linked with microwave connections. However, the combination of older equipment and recent changes to frequency requirements by the *Congressional Jobs Bill HR 3630* now requires an upgrade of all Ultra High Frequency (T-band) radio communications systems, including the MERA system. The Next Gen System would update the current backbone network to utilize new radio frequencies in the 700MHz band to vacate the UHF (T-band) frequencies currently utilized. The Next Gen System would also utilize Project 25 (P25) technology to provide improved public service and emergency radio coverage within the County of Marin. Funding for the project is generated by a parcel tax that was authorized by Marin County voters in 2014.

The current MERA system includes 15 active communications sites. The Next Gen System would retain and upgrade 10 of the functioning sites, decommission five existing sites and add equipment to eight new sites, which include previously developed infrastructure not part of the MERA system. Existing infrastructure at the eight new sites include communication facilities or water storage tanks, and a water wellhead site in northern Marin County.

Existing sites used in Next Gen System:

- Civic Center
- Big Rock Ridge
- Mt. Tamalpais
- Mt. Barnabe
- Point Reyes Hill
- Dollar Hill
- San Pedro Ridge
- Mt. Tiburon
- Sonoma Mountain
- Stewart Point

New sites proposed for Next Gen System:

- Prime Site (Sheriff's dispatch center)
- Tomales (existing cell phone site)
- Coyote Peak (a water wellhead site)
- Skyview Terrace (an MMWD water tank site)
- Muir Beach (a local water tank site)
- Wolfback Ridge (an existing broadcast tower)
- OTA Mt. Burdell (an existing broadcast tower)
- Mill Valley Water Tank (MMWD water tank)

The five sites to be decommissioned as part of the Next Gen System are: Forbes Hill in San Rafael, Mt. Burdell near Novato, Mill Valley City Hall and Mill Valley Police Station, and the Bay Hill Road site in Sonoma County.

PROJECT LOCATIONS: Figure 1 shows the Next Gen System configuration and Table 1 provides a summary description of the communication sites including assessor parcel numbers and coordinates. A more detailed project description with a list of existing and proposed facilities at each site can be found on the MERA website: https://www.marincounty.org/depts/pw/divisions/projects/mera

SUMMARY OF IMPACT CONCLUSIONS: The Draft SEIR evaluates the project with respect to the following topical issues:

1) Land Use & Planning	7) Biological Resources	13) Aesthetics/Visual Resources
2) Population & Housing	8) Energy & Natural Resources	14) Cultural Resources
3) Geology and Soils	9) Hazards and Hazardous Materials Radio Frequency Analysis	15) Tribal Cultural Resources
4) Hydrology and Water Quality	10) Noise	16) Agriculture and Forestry Resources
5) Air Quality	11) Public Services and Recreation	17 Greenhouse Gas Emissions
6) Transportation/Traffic	12) Utilities & Service Systems	18) Mineral Resources

The Draft SEIR finds that the projects would result in significant or potentially significant environmental impacts related to topical issues # 7, 9, 13, 14, 15 and recommends the implementation of feasible mitigation measures to either avoid or reduce to a level of insignificance the identified environmental impacts. The Draft SEIR finds that the proposed project would result in significant unavoidable aesthetic/visual resource impacts.

REVIEW PERIOD: This Notice of Completion of the Draft SEIR commences a 45-day public review period. Interested persons are invited to review and comment on the Draft SEIR. Written comments may be sent **no later than 4:00pm on the closing date of October 21, 2019** to:

Ernest Klock, MERA Operations Officer
3501 Civic Center Drive, Room 304, San Rafael, CA 94903
email: MERA-EIR@marincounty.org

PUBLIC MEETING DATE AND LOCATION: A public hearing on the Draft SEIR will be conducted by the MERA. Oral and written comments on the Draft SEIR may be presented to the MERA at the hearing, scheduled for:

October 10, 2019 from 6:00pm to 8:00pm
Board of Supervisors Chambers
3501 Civic Center Drive - Room #330, San Rafael, CA

Please call the Marin County Department of Public Works at (415) 473-6530 on or after October 7, 2019 in order to obtain a copy of the agenda, or visit our website at https://www.marincounty.org/depts/pw/divisions/projects/mera.

The project is not located on any of the lists of sites enumerated under Section 65962.5 (Hazardous Sites) of the Government Code.

If this project is challenged in court, the challenge may be limited to raising only those issues raised in written correspondence submitted during the 45-day Draft SEIR public review period or at the public hearing described in this notice. (Government Code Section 65009[b][2]).

Ernest Klock, Operations Officer, MERA
Phone: 415-473-4368

Table 1. MERA Sites and Locations for CEQA Evaluation

Site Name and Number	APN	Jurisdiction	Coordinates	Previous EIR	Comments
1. Prime Site EOF^	165-220-11	City of San Rafael	38.019167, -122.541528	N	New site at Sheriff's Dispatch
2. Civic Center	179-270-11	City of San Rafael	37.999056, -122.531306	Y	Upgrades
3. Big Rock	164-300-04	Marin County	38.059194, -122.604250	Y	Upgrades
4. Mt. Tamalpais	197-120-31	Marin County	37.929006, -122.587084	Y	Upgrades
5. Mt. Barnabe	168-240-01	Marin County	38.026751, -122.716321	Y	Upgrades
6. Bolinas Fire Station	193-030-20	Marin County	N/A	Y	Dropped from original system
7. Bolinas Ridge	197-120-30	Marin County	N/A	Y	Dropped from original system
8. Point Reyes Hill	109-160-23	Marin County	38.079836, -122.866944	Y	Upgrades
9. Forbes Hill	010-261-02	City of San Rafael	N/A	Y	Decommission
10. Dollar Hill	011-051-02	City of San Rafael	37.980262, -122.529354	Y	Upgrades
11. San Pedro Ridge	015-250-21	City of San Rafael	37.990205, -122.500139	Y	Upgrades
12. Mt. Burdell	125-180-17	City of Novato	N/A	Y	Decommission
13. Novato PD	153-061-28	City of Novato	N/A	Y	Dropped from original system
14. Mt. Tiburon	058-261-39	Town of Tiburon	37.890440, -122.464796	Y	Upgrades
15. Mill Valley City Hall	028-014-16	City of Mill Valley	N/A	Y	Decommission
16. Mill Valley Police Station*	030-250-01	City of Mill Valley	N/A	Y	Decommission
17. Bay Hill Road	100-190-07	Sonoma County	N/A	Y	Decommission
18. Sonoma Mountain	136-190-09	Sonoma County	38.261015, -122.903629	Y	Upgrades
19. Stewart Point**	188-090-15	Marin County	38.185833, -122.825167	Y	Upgrades
20. Tomales***	100-050-42	Marin County	38.017000, -122.546000	N	New site with cell tower and equipment
21. Coyote Peak	106-110-03	Marin County	37.863289, -122.585512	N	New site with existing water wellheads
22. Skyview Terrace Water Tank	165-220-02	City of San Rafael	37.851085, -122.498376	N	New site with MMWD water tank
23. Muir Beach	199-262-11	Marin County	38.149888, -122.593239	N	New site with local water tank
24. Wolfback Ridge	200-120-02	Marin County	37.902735, -122.558010	N	New site with existing 100' tower
25. Mt. Burdell OTA^	125-160-01	Marin County	38.261015, -122.903629	N	New site with existing structure and tower
26. Mill Valley Water Tank	046-070-03	Marin County	38.185833, -122.825167	N	New site with existing MMWD water tank

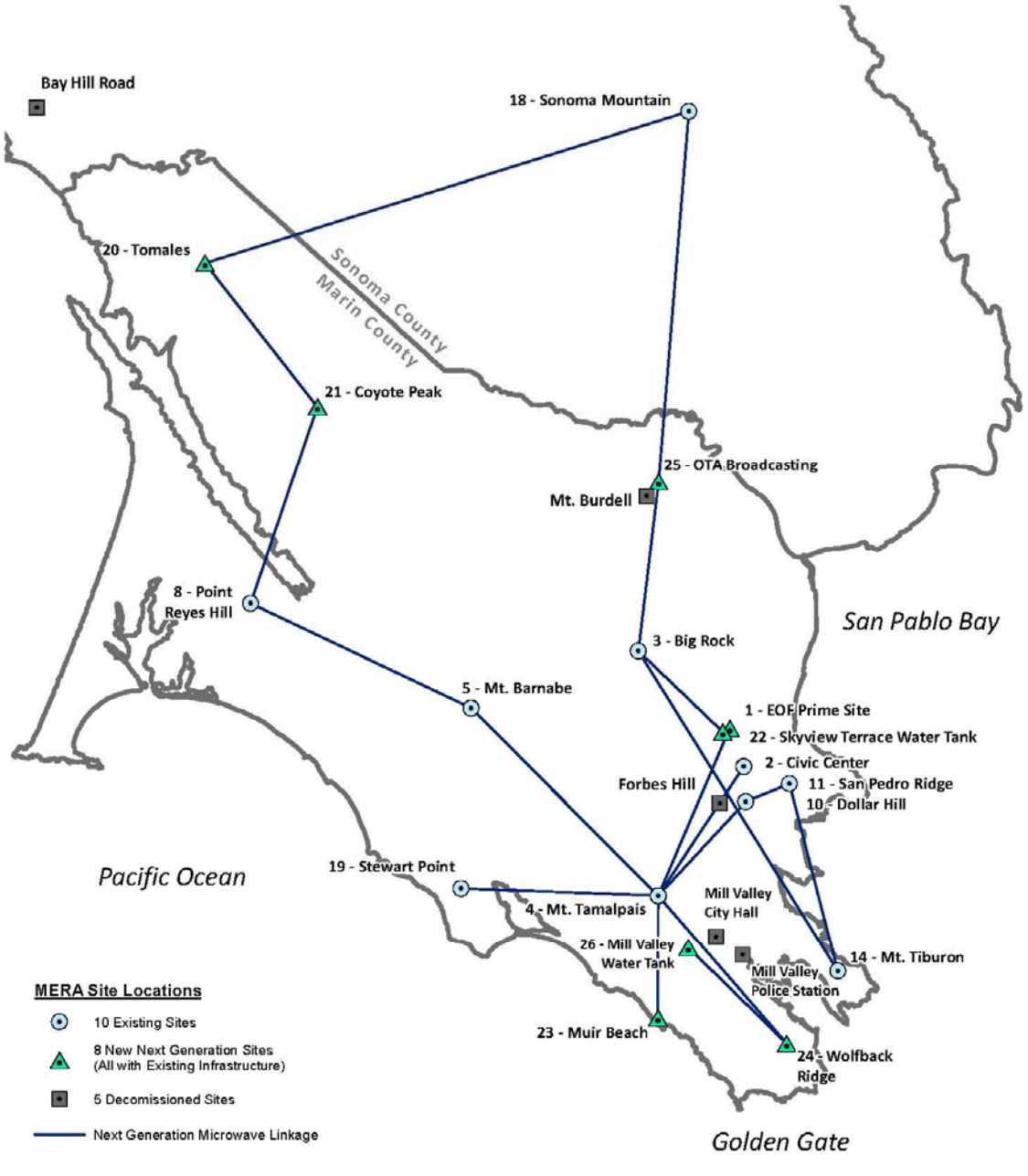
* Added to original EIR as an adjustment before its publication so signal from Mill Valley City Hall would be detected.

** Added to original EIR with a CEQA Amendment in 2006.

***Added to original EIR with a Categorical Exemption in 2012. Incorporated into SEIR to discuss whole action.

^ EOF = Emergency Operations Facility, OTA = Over-the-Air Broadcasting

Figure 1. MERA Next Generation System Configuration



Sources: National Geographic Basemap, WRA | Prepared By: czumwalt, 5/3/2018

MERA Next Generation Communications System

0 2.5 5 Miles N

wra ENVIRONMENTAL CONSULTANTS

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SCH #99092073

Prepared for:

Marin Emergency Radio Authority

Ernest Klock, MERA Operations Officer

c/o Town of Corte Madera
300 Tamalpais Drive
Corte Madera, CA 94925

SEPTEMBER 2019

Prepared by:

wra
ENVIRONMENTAL CONSULTANTS
www.wra-ca.com

Pursuant to: California Environmental Quality Act, P.R.C. 21000 et seq.;
State of California Guidelines, California Administrative Code, 15000 et seq.

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I. INTRODUCTION

A. MERA PURPOSE, MEMBERS, AND AUTHORITY

The Marin Emergency Radio Authority (MERA) is a joint exercise of powers authority pursuant to a Joint Power Agreement executed in 1998, under authority granted by the California Government Code (Article 1, Section 6500 of Chapter 5, Division 7, Title I). MERA is comprised of 25 public agency members (Table II-1) and its purpose is to plan, finance, implement, manage, own, and operate a multijurisdictional and countywide public safety, public service, and emergency radio system. This system consists of a network of antenna sites that include towers, monopoles, microwave dishes, radio antennas, and interconnected radio equipment.

Table I-1: MERA Member Agencies

Municipal Members	**Public Utility and Community Service Districts**
City of Belvedere	Inverness Public Utility District
Town of Corte Madera	Marin Community College District
Town of Fairfax	Marin Municipal Water District
City of Larkspur	Marin Transit
City of Mill Valley	Marinwood Community Services District
City of Novato	
Town of Ross	**Police and Fire Protection Districts**
Town of San Anselmo	Bolinas Fire Protection District
City of San Rafael	Central Marin Police Authority
City of Sausalito	Kentfield Fire Protection District
Town of Tiburon	Novato Fire Protection District
	Ross Valley Fire Department
County of Marin	Southern Marin Fire Protection District
All Departments	Stinson Beach Fire Protection District
	Tiburon Fire Protection District

As a joint exercise of powers authority, MERA received its existing powers from those governments, agencies, and members by which it was created, and under that structure, MERA controls all aspects of development and operation of MERA facilities, even when those facilities are located within another local agency's jurisdictional boundaries (MERA 2018).

B. NEED FOR THE NEXT GENERATION PROJECT

The MERA radio system is vital for emergency countywide communications between police, firefighters, and public works crews. The Marin Humane Society, American Red Cross, US Coast

Guard, California Department of Fish and Game, and some ambulance companies have also been given access to the existing radio system. The emergency communications system is a network of radio antennas and equipment linked with microwave and broadband connections to provide integrated inter-agency voice communications. Recent changes to federal frequency requirements mandated by the *Congressional Jobs Bill HR 3630* require an upgrade of all existing UHF (T-band or 400 MHz) radio communications systems, including MERA, to 700 MHz systems by 2024. The Next Gen System would upgrade the existing system to the new standards, improve MERA's ability to maintain the system, and utilize Project 25 (P25) technology to provide improved public service and emergency radio coverage within the County of Marin. Funding for the Next Gen System is generated by a parcel tax as authorized by Marin County voters in 2014.

Similar to the purpose of the current MERA System, analyzed in the original EIR and certified in 2000, the Next Gen System is MERA's response to the need to upgrade radio communications facilities for Marin County, local municipalities, and public agencies to provide essential emergency communications benefiting residents, businesses, and visitors. The Next Gen System would improve the current system's coverage area and operational reliability to provide regional and wide-area conversations between public safety dispatchers and mobile units throughout most of Marin County. Individual cities and member agencies will continue to share this common backbone for compartmentalized communication links and inter-departmental group communications, while retaining autonomous operations.

C. RELATIONSHIP OF THIS SEIR TO THE ORIGINAL EIR

The subject of this Draft Subsequent Environmental Impact Report (SEIR) is the proposed MERA Next Gen System. The project consists of updating ten existing communications facilities in Sonoma and Marin Counties and adding new communications equipment to eight new sites, all of which have existing infrastructure but have been previously unused by MERA. These modifications are referred to as the MERA Next Generation System (Next Gen System, Next Gen, or proposed project). A detailed description of the proposed project is contained in Section III. Project Description, of this SEIR. Because the project will require approval of discretionary actions by MERA, and State regulatory agencies, it is subject to the California Environmental Quality Act (CEQA), for which MERA is the designated lead agency. A detailed Initial Study and Draft Environmental Impact Report (EIR) were prepared for the original *Marin Public Safety and Emergency Communication System* in 1999 and the Final EIR was certified in 2000 (SCH# 1999092073). The 1999 Initial Study was prepared to determine if any portion of the original (current) MERA System would have a significant effect on the environment. This document found that the original project could in fact have a significant effect on the environment, and therefore the 1999 Draft EIR was prepared to detail impacts relating to Aesthetic Resources, Biological Resources, Radio Frequency Hazards, and Land Use Consistency. The Final EIR for the original MERA project was certified in November 2000 and was amended to include the Stewart Point site (commonly referred to as the Martinelli site) in 2006.

These previously completed environmental studies remain valid for the sites and equipment evaluated; however, based on this documentation, it has been determined that the proposed project may have a significant effect on the environment and that a SEIR should be prepared to

build upon the previously certified CEQA documents. This SEIR evaluates the new environmental impacts resulting from the proposed MERA Next Gen project and defines compliance activities needed to address new regulations put into place since the original EIR was certified. Below is a summary of changes in the regulatory requirements since the 1999 documents were written, as well as a review of the topics found not to be significant in the 1999 Initial Study and Draft EIR.

D. REGULATORY REQUIREMENT CHANGES

The primary regulatory changes to CEQA since the certification of the original EIR in 2000 affect the evaluations of Greenhouse Gasses, Tribal Cultural Resources, and in some cases Land Use. Public safety thresholds regarding exposure to Radio Frequency hazards remain the same as those used in the original EIR.

Greenhouse Gasses (GHGs):

Assembly Bill 32 (AB 32) established the Global Warming Solutions Act of 2006, requiring the State to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020. Senate Bill 97 (SB 97), adopted in 2007, required the Governor's Office of Planning and Research to develop CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions," and the Resources Agency certified and adopted these amendments to the guidelines on December 30, 2009.

Tribal Cultural Resources:

In September 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code (PRC) concerning the evaluation of impacts on tribal cultural resources under CEQA and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze a project's impacts on tribal cultural resources separately from archaeological resources (PRC Section 21074; 21083.09), and it required the Office of Planning and Research to update Appendix G of the CEQA Guidelines by July 1, 2016 to provide sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09).

Updates in Land Use Regulations:

County General Plan Updates- Both Marin and Sonoma Counties have updated their General Plans since the original EIR, in 2007 and 2008, respectively. The Marin Countywide Plan is organized around corridors, and the 2007 update added a fourth corridor, the Baylands Corridor, along with updates to guidelines for the cities, towns, and unincorporated areas of Marin. The Sonoma County General Plan update carries forward the major goals and policies of the 1989 Plan and retains the overall format, with the broad purpose to express policies that will guide decisions on future growth, development, and conservation of resources through 2020. However, as a joint powers authority, MERA is not subject to Marin and Sonoma County regulatory authority and therefore these changes do not affect MERA's Next Gen project.

Municipal Updates in local General Plans- Several municipalities evaluated in the Draft EIR (1999) have since updated their General Plans, including San Rafael, Milly Valley, and Tiburon; however,

as a joint powers authority, MERA is not subject to local regulatory authority and therefore these changes do not affect MERA's Next Gen project.

E. ENVIRONMENTAL EFFECTS FOUND NOT SIGNIFICANT IN THE 1999 DRAFT EIR

The 1999 Initial Study found that the original MERA System project would have *No Impact*, a *Less Than Significant Impact,* or a *Less than Significant Impact with Mitigation* on the environment in certain topic areas. The 1999 Draft EIR incorporated the analysis of the Initial Study by reference and held that said topic areas would not be further evaluated. These impact areas are as follows:

1. Agricultural Resources
2. Air Quality
3. Cultural Resources
4. Geology/Soils
5. Hydrology/Water Quality
6. Mineral Resources
7. Noise
8. Population/Housing
9. Public Services
10. Recreation
11. Transportation/Circulation
12. Utilities/Service Systems

The above listed topics are therefore outside the scope of this SEIR for the ten previously evaluated, current MERA sites that are proposed to be part of the Next Gen System. The impact areas listed above will, however, be discussed for the eight sites new to MERA and those discussions are found in Section VI.

F. FOCUS OF THIS SEIR

This SEIR evaluates the environmental effects of changes brought about by the Next Gen system as compared to the existing MERA system. The existing MERA system as it operates now is the baseline for this evaluation. From this baseline condition, this SEIR evaluates changes in the physical characteristics, changes in the long-term operations, and changes in the applicable regulatory requirements to determine if there are new impacts that may result from developing the proposed Next Gen project. This analysis also considers the effects of the brief transition period from the original MERA system to the Next Gen System, known as the 'change-over' period, in which both systems will be operational to allow for continued MERA radio operations while testing of the Next Gen system is completed.

G. REPORT ORGANIZATION

This Draft SEIR is organized into eleven sections as follows:

Section I (Introduction): This section provides an introduction and description of the intended uses of the SEIR, an environmental review process history, the changes in the regulatory environment since the original EIR, and the environmental effects found not to be significant.

Section II (Executive Summary): This section identifies the Lead Agency and provides a summary of the project description, areas of known controversy, environmental impacts that would result from implementation of the proposed project, alternatives to the proposed project, issues to be resolved, proposed mitigation measures, and levels of significance for impacts before and after mitigation.

Section III (Project Description): This section includes a detailed description of the proposed project including project location, the existing setting, project characteristics, project objectives, project refinements from the original EIR analysis, and required discretionary actions and other agency approvals.

Section IV (Environmental Impact Analysis): This section provides a description of the thresholds of significance for aesthetics, biological, cultural resources, land use, and radio frequency exposure used to assess the significance of project impacts in this SEIR.

Section V (Existing Conditions and Impacts at Each Site): This section is organized by MERA site, with a discussion of existing conditions and an assessment and discussion of the significance of impacts associated with the proposed project at each site location.

Section VI (CEQA-Required Analysis): This section provides a discussion of the following CEQA-mandated topics: cumulative impacts, unavoidable significant effects, significant irreversible environmental changes, and growth-inducing impacts.

Section VII (Alternatives to the Proposed Project): This section includes an analysis of a reasonable range of alternatives to the proposed project. The range of alternatives selected is based on their ability to feasibly attain most of the basic objectives of the project and that would avoid or substantially lessen any of the significant effects of the project.

Section VIII (Report Preparation): This section presents a list of the lead agency, other agencies, and consultant team members that contributed to the preparation of the Draft SEIR. This section also identifies persons consulted during the preparation of the Draft SEIR.

Section IX (References): All of the sources of information used in the preparation of the Draft SEIR are listed in this section.

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II. EXECUTIVE SUMMARY

A. INTRODUCTION

This Executive Summary provides a brief description of the proposed project, areas of known controversy, and unresolved issues. The executive summary also identifies which environmental impacts associated with the proposed project are significant, what specific mitigation measures have been identified to reduce or avoid each significant impact, and the level of significance of the impact after mitigation. This Executive Summary is intended as an overview and should be used in conjunction with a thorough reading of the Draft SEIR. The text of this Draft SEIR, including figures, tables, and appendices serve as the basis for the Executive Summary.

B. SUMMARY OF PROPOSED PROJECT

The Marin Emergency Radio Authority (MERA) proposes the Next Gen Communication System (Next Gen System, Next Gen, or proposed project), an upgrade to Marin County's existing emergency radio communications system that will improve the County's emergency communication capabilities during daily public service and critical emergencies. The proposed project would replace equipment at currently operating communications sites as well as install telecommunications facilities at new sites where public and private infrastructure already exists. In total, 10 existing sites would be upgraded, eight new sites would be introduced, and five sites would be decommissioned.

In 1999, MERA prepared an Initial Study (IS) for the original public safety and emergency radio system. The IS found that the original project could result in possible aesthetic, biological and radio frequency emission impact. In 2000, an Environmental Impact Report (EIR) further expanded the site-by-site evaluation outlined in the IS regarding the project's potentially significant environmental impacts. As the presently proposed project builds upon and modifies the previously analyzed project, the original IS and EIR are incorporated into this Subsequent EIR (SEIR) by reference and the SEIR has been structured to mirror the subject matter and format of the 2000 Final EIR, taking into consideration changes and developments to the CEQA Guidelines and case law that have occurred since the publication of that document. Accordingly, this SEIR analyzes similar environmental issues to the 2000 Final EIR and includes a general analysis of the project's potentially significant environmental impacts as well as a site-by-site analysis.

C. AREAS OF KNOWN CONTROVERSY/ISSUES TO BE RESOLVED

Section 15123 of the CEQA Guidelines requires an EIR to identify areas of controversy known to the lead agency, including issues raised by agencies and the public, and issues to be resolved. On May 17, 2018 MERA published a Notice of Preparation (NOP) of a Subsequent EIR (SEIR) for the MERA Next Generation Project. The NOP informed Responsible Agencies, Trustee Agencies, the public, and other interested parties about the proposal and its environmental effects, so they could be prepared to provide input on the scope and content of the SEIR. The

NOP also gave notice of a public scoping meeting and a 30-day public comment period to provide interested members of the public an opportunity to present oral or written comments on the issues to be evaluated in the Draft SEIR. The scoping meeting was held on May 31, 2018, and no members of the public attended. The 30-day public comment period ran from May 17 to June 18, 2018, and five written comment letters were received. The stamped NOP, a full transcript of the scoping meeting, as well as all comments received from the public or other agencies, can be viewed in Appendix E.

Additional stakeholder outreach meetings addressing site-specific environmental concerns were held throughout 2018. Public meetings to identify environmental issues of concern are outlined in Table II-1 below, which provides the stakeholder name, primary site(s) of interest, and date of outreach.

Table II-1. Stakeholder Meetings

Stakeholder	Site	Date
General Public	Project-wide CEQA Scoping Meeting	May 31, 2018
Marin Managers Association	Project-wide	April 26, 2018
Marin County Office of Education Land Owner	Coyote Peak	May 9, 2018 and June 19, 2018, November 13, 2019
General Public	Tomales	June 22, 2018
General Public	Skyview Terrace Water Tank	August 23, 2018
Golden Gate National Recreation Area	Muir Beach	August 29, 2018
Mill Valley City Council	Mill Valley	June 4, 2018
Muir Beach Community Water District	Muir Beach	December 12, 2018
Federated Indians of Graton Rancheria (FIGR)	Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, Stewart Point, Tomales, Coyote Peak, Skyview Terrace Water Tank, Muir Beach	July 31, 2018 and Letter dated February 1, 2019

Environmental concerns raised during the meetings outlined in Table II-1 include:

- Aesthetic changes associated with modifications to existing towers
- Aesthetic changes associated with the construction of new towers
- Impacts to biological resources while improving the existing road to Coyote Peak
- Alterations to the significance of historic resources at three sites
- Possible alterations to tribal cultural resources at 13 sites
- Radio frequency emissions within controlled spaces with worker access
- Radio frequency emissions in uncontrolled spaces with public access
- Consistency with coastal development standards

D. SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

Section 15123 of the CEQA Guidelines requires an EIR to identify each significant effect on the environment, recommend mitigation measures, and evaluate a range of feasible alternatives that would reduce or avoid identified impacts while still meeting the Project's objectives. Refer to Chapter VII (Alternatives to the Proposed Project) of this Draft SEIR for an analysis of the alternatives to the proposed project. The alternatives presented include:

- Alternative 1: No Project Alterative – 16 Sites, Two Zone Simulcast System (400 MHz)
- Alternative 2: Upgrade Existing Sites – 16 Sites, Two Zone Simulcast System (700 MHz)
- Alternative 3: Original Motorola Solutions Proposal – 15 Sites, Two Zone Simulcast System (700 MHz)
- Alternative 4: Revised Project Design – 16 Sites, Two Zone Simulcast System (700 MHz)

Alternatives 1 and 2 would meet zero and one of MERA's five project objectives, respectively. These alternatives would not create any additional environmental impacts, but they also would not increase reliability or improve radio coverage. It has been determined that Marin County requires a more reliable communications network for emergency situations, to provide first responders the resources they need to keep the citizens of Marin County safe, but Alternatives 1 and 2 would leave coverage and reliability gaps in the system.

Alternative 3 has a reduced physical footprint, with less potential for environmental impacts than the Proposed Project because it has one fewer new sites. However, the power required to boost radio signals in order to compensate for the smaller number of tower sites would cause the MERA system signal to extend beyond the geographic boundaries established to limit conflicts with radio systems in surrounding areas.

Alternative 4 has a reduced physical footprint as well, with less potential for environmental impacts than the Proposed Project due to the elimination of the Tomales site. This alternative would also reduce aesthetic impacts by removing the Tomales Site and by finding alterative locations for the Mill Valley Water Tank and Skyview Terrace Water Tank Sites. However, these benefits to aesthetics in some areas are achieved only by creating more significant visual impacts at the alternative locations, potentially affecting nearby residences.

E. APPROVAL CONSIDERATIONS

This Draft SEIR was prepared to evaluate the potential environmental impacts associated with the proposed project (State Clearinghouse No. 199092073) and was completed in conformance with the California Environmental Quality Act (California Public Resources Code, Section 21000, et seq.), the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.), and Marin County policies, standards, and procedures. The purpose of this Draft SEIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft SEIR describes potential impacts related to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided. As described above, this Draft SEIR also describes various alternatives designed to reduce or avoid identified significant environmental impacts.

After considering this Draft SEIR, along with any changes to the Draft SEIR made in written response to public comments received on the Draft SEIR, MERA's Governing Board will determine whether to certify the Final SEIR. If certified, a Final SEIR will become a guidance document to the MERA Governing Board and other entities with discretionary approval over the project. Following certification, the Governing Board will then decide whether to approve the proposed project or an alternative to the proposed project. The Governing Board will also determine which mitigation measures can feasibly reduce the significant impacts of the project.

F. SUMMARY OF SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table II-2 on the following page lists and summarizes the significant environmental impacts associated with the Proposed Project (in the order in which they appear in this document), lists the mitigation measures recommended to reduce or avoid the identified impact, and identifies the level of impact remaining after mitigation implementation. The sites where an impact or mitigation measure apply are noted in the first column. Project-wide impacts are discussed by impact area in further detail in Chapter IV, while site-specific impacts are discussed in Chapter V.

Table II-2
Summary of Significant Environmental Impacts and Mitigation Measures

Significant Environmental Impact	**Mitigation Measures**	**Level of Impact After Mitigation**
AESTHETICS		
a) Except as provided in Public Resources Code Section 21099, would the project have a substantial adverse effect on a scenic vista?	**Mitigation Measure AES-5***	***Significant and Unavoidable***
Impact AES-5: The project would have a substantial adverse effect on a scenic vista. *Site:* Skyview Terrace Water Tank	*Mitigation Measure AES-5:* The public trail that extends southward from the access road shall be reconstructed to allow pedestrians to access the open space area south of the site where views to Mt. Tamalpais and Big Rock Ridge would be unobstructed by the project. After implementation of mitigation the impact would remain significant and unavoidable.	*Significant and Unavoidable*
b) Except as provided in Public Resources Code Section 21099, would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**Mitigation Measure AES-2**	***Significant and Unavoidable***
Impact AES-2: The project would substantially damage scenic resources within a state scenic highway. *Site:* Tomales	*Mitigation Measure AES-2:* A six-foot tall, dark or earth-tone colored, opaque fence shall be incorporated into the perimeter fence on the north and west sides of the MERA facility to screen views of the equipment shelter from State Route 1 and from Whitaker Road. The fence shall also screen the same views of the existing cellular equipment structure, with permission from the owner/operator of that facility. Painted wood, permanently colored composite material (Trex or similar), or black vinyl chain-link with dark vinyl slats are material options suitable to screen views of the equipment structures. MERA shall maintain the proposed galvanized grey color of the 75-foot monopole at the Tomales site to minimize contrast with the sky on the hilltop location.	*Significant and Unavoidable*

* *Impacts and mitigation measures are numbered sequentially in subsequent chapters based on the order in which individual sites are addressed.*

c) Except as provided in Public Resources Code Section 21099, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings in a non-urbanized area; or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality?	**Mitigation Measures AES-3 through AES-9**	***Significant and Unavoidable***
Impact AES-3: The project would substantially degrade the existing character or quality of public views of the site and its surroundings in a non-urbanized area. *Site*: Tomales, Coyote Peak	*Mitigation Measure AES-3:* Upon completion of tower and structure construction, MERA shall remove all debris from the site, define all vehicular access points and turnarounds, and complete finish grading including road surfacing where needed and soil preparation for planting. Vehicular areas shall be graded to drain. Areas outside of vehicular zones shall be loosened or scarified if compacted, amended as needed and prepared to facilitate native seed germination. Hydroseed/mulch or hand-broadcast seeding and mulch shall complete site restoration. For sites steeper than 3:1 restored areas shall also include installation of straw waddles perpendicular to the slope at 20-foot intervals. The equipment shelter, fuel tank, and emergency generator shall be painted dark earth tone colors to minimize contrast in the landscape and chain link fencing shall be black vinyl-coated.	*Significant and Unavoidable*
Impact AES-4: The project would substantially degrade the existing character or quality of public views of the site and its surroundings in a non-urbanized area. *Site:* Coyote Peak	*Mitigation Measure AES-4*: MERA shall screen close up views of the Coyote Peak site by including opaque fencing in the perimeter fence around the project site to to screen the generator and fuel tank. The fence shall be at least ten feet away from any structure.	*Significant and Unavoidable*

Impact AES-6: The project would substantially degrade the existing character or quality of public views of the site and its surroundings in a non-urbanized area. *Site:* Skyview Terrace Water Tank	*Mitigation Measure AES-5:* Please see above. *Mitigation Measure AES-6*: A combination of berms, opaque fencing and native grassland hydroseeding shall be installed to screen views of the equipment shelter from points east and west of the ridgeline. Equipment on the site shall be aligned to maximize space for the berm construction and the trail (Mitigation Measure AES-5). The top of the berm and the six-foot tall fence shall be contoured to mimic the broad naturalized landform of the ridgeline and shall be high enough to screen the shelter (but not the monopole) from lower elevation views such as Highway 101 to the east and Park Ridge Road to the west. Berms shall be mulched and hydroseeded to minimize erosion potential and to allow for germination during winter rains. Any erosion of the berm shall be immediately repaired.	*Significant and Unavoidable*
Impact AES-7: The project would substantially degrade the existing character or quality of public views of the site and its surroundings in a non-urbanized area. *Site:* Muir Beach	*Mitigation Measure AES-7:* The monopole shall be painted the same rusty-brown color as the restroom and shall blend with the adjacent water tank, as shown in Figure V.O-7. The back side of microwave dishes, and other equipment on the top of the water tank (to the extent feasible) shall be painted to match the tower. Front surfaces of microwave dishes cannot be painted and shall remain grey. Landscaping and opaque fencing are provided as part of the project to screen views of the equipment structure.	*Significant and Unavoidable*
Impact AES-8: The project would substantially degrade the existing character or quality of public views of the site and its surroundings in a non-urbanized area. *Site:* Mill Valley Water Tank	*Mitigation Measure AES-8*: The monopole shall be painted a dark color on the bottom to blend with the adjacent water tank and vegetation. Above the top of the tank the tower shall be galvanized steel to minimize contrast with the sky.	*Significant and Unavoidable*
d) Except as provided in Public Resources Code Section 21099, would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**Mitigation Measure AES-1**	***Less than Significant***

Impact AES-1: The project would create a new source of light which could adversely affect nighttime views. *Site:* All sites with an exterior 'porch' light	*Mitigation Measure AES-1:* The outdoor 'porch light' specified at most of the Next Gen Sites will include a shield around the top of the light source to stop upward glare and to protect dark nighttime skies. A timer will also prevent the light from staying on all night.	*Less than Significant*
CULTURAL RESOURCES		
a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**Mitigation Measure CULT-1**	***Less than Significant***
Impact CULT-1: The project would cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5. *Site*: All	*Mitigation Measure CULT-1:* During construction, if buried cultural or archaeological resources are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with relevant agencies. These archaeological resources could include buried historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone, or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Native American archaeological materials could include obsidian and chert flaked stone tools (such as projectile points and knives), midden (darkened soil created culturally from use and containing heat-affected rock, artifacts, animal bones, or shellfish remains), and/or groundstone implements (such as mortars and pestles).	*Less than Significant*
b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**Mitigation Measure CULT-1**	***Less than Significant***
Impact CULT-2: The project would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. *Site:* All	*Mitigation Measure CULT-1:* Please see above.	*Less than Significant*

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature[†]?	**Mitigation Measure CULT-2**	***Less than Significant***
Impact CULT-3: The project would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. *Site:* All	*Mitigation Measure CULT-2:* If buried paleontological resources or unique geologic features are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with relevant agencies.	*Less than Significant*
d) Would the project disturb any human remains, including those interred outside of formal cemeteries?	**Mitigation Measure CULT-3**	***Less than Significant***
Impact CULT-3: The project would disturb human remains, including those interred outside of formal cemeteries. *Site:* All	*Mitigation Measure CULT-3:* Upon accidental discovery of human remains, disturbance shall stop within the vicinity of the find and within other areas reasonably suspected to contain additional human remains. The Sonoma or Marin County coroner shall be contacted immediately. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours. The NAHC shall subsequently identify the most likely living descendent, who may make recommendations to the landowner or the person responsible for excavation regarding acceptable means of treating or disposing of the remains and any associated grave items. If the NAHC is unable to identify the most likely descendent, the descendent fails to make a recommendation within 24 hours of notification, the landowner rejects the recommendation, or mediation by NAHC fails to yield a mutually agreeable recommendation, the landowner or representative shall rebury the remains and associated items with appropriate dignity on the same property in a location not subject to further subsurface disturbance	*Less than Significant*

[†] As of December 2018, paleontological resources are no longer considered a Cultural Resources issue and are analyzed in the context of Geology and Soils per Appendix G of the CEQA Guidelines. Although the remainder of this SEIR uses the updated CEQA Guidelines, paleontological resources have been retained in the Cultural Resources chapter of this document for consistency with the 2000 EIR.

TRIBAL CULTURAL RESOURCES		
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	**Mitigation Measure CULT-1**	***Less than Significant***
Impact TRIBE-1: The project would cause a substantial adverse change in the significance of a tribal cultural resource listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in PRC Section 5020.1(k). *Site:* All	*Mitigation Measure CULT-1:* Please see above.	*Less than Significant*
b) Would the project cause a substantial adverse change in a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?	**Mitigation Measures TRIBE-1 through TRIBE-3**	***Less than Significant***
Impact TRIBE-2: The project would cause a substantial adverse change in a resource determined by the lead agency to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1	*Mitigation Measure TRIBE-1:* If the design of the proposed project is substantially altered after the conclusion of initial consultation with FIGR, final plans and specifications shall be submitted to FIGR's Tribal Heritage Preservation Officer, or designated representative, prior to construction. FIGR shall be provided reasonable opportunity to review the plans and specifications for potential tribal cultural impacts resulting from project excavation, grading, or mobilization. Based on the outcome of this review, FIGR may amend the list of sites requiring a tribal cultural monitor provided to MERA. *Mitigation Measure TRIBE-2:* A tribal monitor with stop work authority shall be present during project excavation and grading to watch for the appearance of tribal cultural resources at the sites designated by FIGR. Unless modified by an	*Less than Significant*

Site: All‡	updated list from FIGR, monitors will be present at the following 13 sites, which were preliminarily identified as having potential for disturbance of tribal cultural resources: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, Stewart Point, Tomales, Coyote Peak, Skyview Terrace Water Tank, and Muir Beach. *Mitigation Measure TRIBE-3:* Contractors and construction personnel involved with any form of ground disturbance at the sites designated as culturally sensitive by FIGR shall be advised of the possibility of encountering subsurface tribal cultural resources. If any such resources are encountered or suspected to have been encountered, work shall be halted within 100 feet of the find until FIGR has been notified and given the opportunity to assess the significance of the find. If the find is determined to be a significant tribal cultural resource, MERA shall consult with FIGR to develop a plan to preserve the resource's significance to the extent feasible.	
BIOLOGICAL RESOURCES		
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	**Mitigation Measures BIO-1 through BIO-9**	***Less than Significant***
Impact BIO-1: The project would have a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. *Site:* Stewart Point	*Mitigation Measure BIO-1*: Within one month prior to commencement of construction, a qualified biologist shall flag the Marin manzanita individual within the Study Area. The qualified biologist shall notify the construction foreman as to the location of the special-status plant and identify the type of flagging used to ensure that contact with this species is avoided by construction crews. Just before construction, orange avoidance fencing shall be temporarily erected around the individual manzanita to keep construction equipment and crews away.	*Less than Significant*

‡Mitigation Measure TRIBE-1 applies uniformly across Next Gen sites. Mitigation Measures TRIBE-2 and TRIBE-3 apply only to sites identified as potentially sensitive for tribal cultural resources by FIGR. These sites currently include Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, Stewart Point, Tomales, Coyote Peak, Skyview Terrace, and Muir Beach. This list is subject to change upon changes to the project design.

Impact BIO-2: The project would have a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. *Site:* Point Reyes Hill, Dollar Hill, Mt. Tiburon, Tomales, Muir Beach, Mill Valley Water Tank	*Mitigation Measure BIO-2*: Project activities shall, to the extent feasible, occur outside of the nesting season from September 1 – January 31. Where this is infeasible and project activities occur during the nesting season (February 1 through August 31), a nesting bird survey shall be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities. If nests are identified, a no-disturbance buffer shall be implemented to avoid impacts to nesting birds. The radius of a surrounding buffer will be determined by a qualified biologist and shall range from 25 feet to 500 feet depending on the species and protection status of that species. *Mitigation Measure BIO-3:* No more than 14 days before the start of ground disturbance activities at the Tomales Site, a biologist shall conduct pre-construction surveys of the Project Site, including a 50-foot buffer, to determine if American badger dens are present. If American badger dens are determined to be present, the biologist shall monitor them for activity to determine whether the den is active. If the den is determined to be occupied by a female with young, ground disturbance and construction activity shall be avoided within 50 feet of the den until the young have matured and dispersed. If the den is determined to be active, but a female with young are not present, burrow exclusion using passive measures such as one-way doors or equivalent shall be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens shall be excavated by hand to prevent them from being re-occupied during construction. *Mitigation Measure BIO-4:* Work at the Tomales Site shall be avoided during night hours (half an hour before sunrise to half an hour before sunset) when California red-legged frog individuals may be dispersing across the site. In addition, no ground disturbing work shall occur within 24 hours of rain events that generate greater than 0.25 inch of accumulated precipitation or during rain events predicted to accumulate 0.25 inch of precipitation. *Mitigation Measure BIO-5:* A pre-construction burrowing owl survey shall be performed prior to start of ground disturbance activities at the Tomales Site, regardless of the time of year, as burrowing owls may use the Project Site during the non-nesting season. The survey shall be performed according to the standards set forth by the 2012 CDFW Staff report for Burrowing Owl Mitigation. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless, after consultation with the CDFW, a qualified biologist verifies that either: (1) the birds have not begun egg-laying and incubation; or (2)	*Less than Significant*

	that juveniles from the occupied burrows are foraging independently and capable of independent survival.	
Impact BIO-3: The project would have a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. *Site:* Coyote Peak	*Mitigation Measure BIO-6:* No more than 14 days before the start of ground disturbance activities at the Coyote Peak site, a biologist shall conduct pre-construction surveys within 50 feet of the Project Site to determine if American badger dens are present. If American badger dens are determined to be present, the biologist shall monitor them for activity to determine whether the den is active. If the den is determined to be occupied by a female with young, ground disturbance and construction activity shall be avoided within 50 feet of the den until the young have matured and dispersed. If the den is determined to be active, but a female with young is not present, burrow exclusion using passive measures such as one-way doors or equivalent shall be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens shall be excavated by hand to prevent them from being re-occupied during construction. *Mitigation Measure BIO-7*: Work at the Coyote Peak site shall be avoided during night hours (half an hour before sunrise to half an hour before sunset) when California red-legged frog individuals may be dispersing across the Project Site. In addition, no ground disturbing work may occur within 24 hours of rain events that generate greater than 0.25 inch of accumulated precipitation or during rain events predicted to accumulate 0.25 inch of precipitation. Within 48 hours prior to installation of temporary steel grates spanning the top of bank of the ephemeral streams, a qualified biologist shall survey intermittent streams within the Project Site. If California red-legged frog are observed during the survey, work shall not proceed in that area until the qualified biologist verifies that the frogs have left the area on their own and there is no potential for the proposed work activities to result in injury or mortality. In addition, if California red-legged frog are observed in the Project Area during the preconstruction survey, a biological monitor shall be present for the remainder of ground disturbing activities. *Mitigation Measure BIO-8:* Project activities at the Coyote Peak site shall occur to the extent feasible, outside of the nesting season from September 1 – January 31. If this is not possible, and project activities are initiated during the nesting season (February 1 through August 31), then a nesting bird survey shall be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities. If nests are identified, a no-disturbance buffer shall be implemented to	*Less than Significant*

	avoid impacts to nesting birds. The radius of a surrounding buffer will be determined by a qualified biologist and shall range from 25 feet to 500 feet depending on the species and protection status of that species.	
Impact BIO-3: The project would have a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. *Site:* Mill Valley Water Tank	*Mitigation Measure BIO-9:* Within two weeks prior to commencement of construction, a qualified biologist shall flag the Oakland star-tulip population within the Study Area. The qualified biologist shall notify the construction foreman as to the location of the special-status plant population and identify the type of flagging used to ensure that this populations is properly avoided by construction crews.	*Less than Significant*
b, c) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS; or on state or federally protected wetlands?	**Mitigation Measure BIO-7**	***Less than Significant***
Impact BIO-4: The project would have a substantial adverse effect on a riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS; or on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA). *Site:* Coyote Peak	*Mitigation Measure BIO-7:* Please see above.	*Less than Significant*
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**Mitigation Measures BIO-2 through BIO-5**	***Less than Significant***
Impact BIO-3: The project would conflict with a local policy or ordinance protecting biological resources.	*Mitigation Measure BIO-2:* Please see above. *Mitigation Measure BIO-3:* Please see above. *Mitigation Measure BIO-4:* Please see above.	*Less than Significant*

Site: Tomales	*Mitigation Measure BIO-5:* Please see above.	
POTENTIAL HAZARDS		
a) Would the radio frequency exposure exceed established FCC exposure limits for workers or the general public?	**Mitigation Measures RF-1 through RF-3.**	***Less than Significant***
Impact RF-1: Based on SiteSafe measurements and models, as well as the site's layout and signage, SiteSafe concluded that all uncontrolled areas with public access were within the public MPE limit, but that controlled access areas on the rooftop should be noticed. *Site:* Prime Site EOF	*Mitigation Measure RF-1:* MERA shall install exposure warning signs at rooftop entries and selected antenna mounts in the controlled access rooftop area according to SiteSafe's individual report for the Prime Site EOF (pages 10-30 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In summary, MERA shall install a NOTICE sign at antennas 11-27 and a CAUTION sign at antennas 28-32. Signage location details can be viewed on pages 19-20 of Appendix D to the SEIR.	*Less than Significant*
Impact RF-2: Based on SiteSafe measurements and models, as well as the site's layout and signage, SiteSafe concluded that all uncontrolled areas with public access were within the public MPE limit, but that controlled access areas on the rooftop should be noticed. *Site:* Civic Center	*Mitigation Measure RF-2:* MERA shall install exposure warning signs at rooftop entries and at identified antenna mounts in the controlled access rooftop area according to SiteSafe's individual report for the Civic Center Site (pages 31-46 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In summary, MERA shall install a NOTICE sign at antennas 31-35 and a CAUTION sign at antennas 18-30 and 8-12. Signage location details can be viewed on page 37 of Appendix D to the SEIR.	*Less than Significant*
Impact RF-3: Based on SiteSafe measurements and models, as well as the site's layout and signage, SiteSafe concluded that all uncontrolled areas with public access were within the public MPE limit, but that controlled access areas on top of the water tank near the monopole should be noticed. *Site:* Mt. Tiburon	*Mitigation Measure RF-3:* MERA shall install an exposure warning sign at selected locations in the controlled access rooftop area according to SiteSafe's individual report for the Mt. Tiburon Site (pages 172-183 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In Summary, MERA shall install a NOTICE sign at the access of the water tank. Signage location details can be viewed on page 178 of Appendix D to the SEIR.	*Less than Significant*

AIR QUALITY AND GREENHOUSE GAS EMISSIONS		
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	**Mitigation Measures AIR-1 and AIR-2.**	***Less than Significant***
Impact AIR-1: The project may conflict with or obstruct implementation of the applicable air quality plan. Site: All	*Mitigation Measure AIR-1*: The Construction Project Manager shall be responsible for following requirements in Mitigation Measure AIR-1 and MERA shall be responsible for ensuring this compliance. • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). • All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications, and all equipment will be checked by a certified visible emissions evaluator. • A publicly visible sign with the telephone number and person to contact at the lead agency regarding any dust complaints shall be posted in or near the project site. The contact person shall respond to complaints and take corrective action within 48 hours. The Air District‘s phone number shall also be visible to ensure compliance with applicable regulations. *Mitigation Measure AIR-2*: The Construction Project Manager shall be responsible for following requirements in Mitigation Measure AIR-2 and MERA shall be responsible for ensuring this compliance. • Emergency power generators shall be equipped with emission control devices.	*Less than Significant*

GEOLOGY AND SOILS		
a-ii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?	**Mitigation Measure GEO-1**	***Less than Significant***
Impact GEO-1: The project may cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. *Site*: All	*Mitigation Measure GEO-1*: A design-level geotechnical report shall be prepared for the facilities proposed at each of the communication sites. A qualified geotechnical engineer and engineering geologist shall prepare the document, and this design-level report shall provide criteria for site preparation, pavement, and foundations. Site-specific earthquake forces shall also be identified and incorporated into the design of structures. All structures, including towers and earthworks, shall conform to the applicable earthquake design standard such as the California Building Standards Code.	*Less than Significant*
f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**Mitigate Measure GEO-2**	***Less than Significant***
Impact GEO-2: The project may destroy a unique paleontological resource or site or unique geologic feature. *Site:* All	*Mitigation Measure GEO-2:* If buried paleontological resources or unique geologic features are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified registered geologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate procedures for its treatment or avoidance.	*Less than Significant*
NOISE		
a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	**Mitigation Measure NOISE-1**	***Less than Significant***
Impact NOISE-1: The project may result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in	*Mitigation Measure NOISE-1:*	*Less than Significant*

excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. *Site*: All	1) The Contractor shall comply with local standards regarding noise generation and hours of construction during all phases of the project construction. The Construction Project Manager or designated representative shall provide the Contractor with the applicable restrictions. 2) At sites where the general public would be regularly exposed to the sound of air conditioning units and emergency power generators (Prime Site EOF, Civic Center, Mt. Tiburon, Mill Valley Water Tank, and to some degree Muir Beach), those units and generators shall be equipped with noise reduction features. 3) The Construction Project Manager or designated representative shall verify that all workers on-site are aware of and understand applicable noise restrictions. This will be accomplished by on-site meetings with each contractor and their employees prior to the start of construction. 4) The Construction Project Manager shall verify that project documents specify the use of equipment that meets the requirements of this mitigation measure and shall maintain a written record of compliance.	

III. PROJECT DESCRIPTION

A. INTRODUCTION

The MERA emergency communications system is a network of radio communications sites that link first responders with centralized information and dispatch centers with each other. This system serves first responders with mobile radios in their vehicles, and with hand-held radios when outside vehicles throughout Marin County. The Next Gen System would utilize an updated suite of digital mobile radio communications equipment, developed collaboratively by the Marin Emergency Radio Authority (MERA) and equipment manufacturers, to ensure that two-way radios are interoperable using the latest Project 25 ("P25") technology standard. This will improve both daily public service and response during critical emergencies with improved radio coverage and reliability throughout the County.

The MERA Next Generation Communications System (Next Gen System, Next Gen, or proposed project) consists of a combination of upgrades to equipment at existing communications sites, and development of facilities on some new sites where public infrastructure facilities already exist such as water tanks, well heads, or other public and private utility and communication facilities. The MERA Next Gen System is designed as a single interconnected communications system. Because of the interconnected nature of the system, no single telecommunications site may stand alone, nor can a single site be removed or relocated without requiring the relocation or redesign of some or all the other sites that comprise the rest of the radio system. Therefore, the telecommunications sites that comprise the MERA Next Gen System are considered a single "project" in compliance with the provisions of the California Environmental Quality Act (CEQA).

B. LOCATION AND SETTING

The proposed Next Gen System would continue to serve Marin County, California through various improvements to the existing radio communication system. Marin County is located north of San Francisco, at the north end of the Golden Gate Bridge, on a broad peninsula between the Pacific Ocean and San Pablo Bay. Marin County's urbanized areas lie on the east side of the peninsula, along the US Highway 101 corridor, while western Marin County is rural, mountainous, and generally comprised of agricultural land and coastal communities. Coastal mountains make up the major topography of Marin County, including Mount Tamalpais with an elevation of 2,572 feet, making it the highest peak in the County. The Next Gen System relies on selected high-elevation sites, constructed mostly on mountain tops or ridgelines, to provide line-of-sight communications among the County's coastal mountains, valley locations, and bayside communities.

C. PROJECT NEED

The existing MERA system is the backbone of the 911 emergency communications system in Marin County, and handles 4.4 million radio calls annually (MERA 2014). The existing system was designed for a maximum capacity of 2,500 radios and now supports nearly 3,000 radios.

System projections over 20 years indicate a future need for 5,000 radios. In addition, original system vendors no longer support the older equipment and federal laws will soon require system replacement.

The Next Gen System is vital for continued countywide, inter-jurisdictional emergency voice communications among first responders and other public service providers, in order to effectively respond to daily emergencies, and to coordinate the broader responses needed during major events such as large fires, floods and earthquakes. The combination of older equipment that is difficult to maintain, and recent changes in federal frequency requirements mandated by the *Congressional Jobs Bill HR 3630 (2012)* necessitates an upgrade of all UHF (T-band) public safety radio communications systems, including MERA's, by 2023. Funding for the Next Gen System is generated by a parcel tax that was authorized by Marin County voters in 2014.

The Next Gen System is MERA's response to the federal mandate and the need to upgrade radio communications equipment facilities for Marin County, local municipalities, and public agencies to continue to provide necessary and required emergency communications benefiting county residents, businesses, and visitors. The Next Gen System will improve the current system's ability to provide regional and wide-area conversations between public safety dispatchers and mobile units operating throughout most of Marin County. Individual cities and member agencies will continue to share this common backbone for compartmentalized communication links and inter-departmental group communications, while also retaining autonomous operations.

Project Objectives

MERA's objectives for the Next Gen System were developed over time beginning in 2009 when modernization of the system was first considered. MERA commissioned the *MERA System Design Report* (AECOM, April 2010) to identify a range of feasible designs for the Next Gen System. The report presented various forward-looking plans to modernize the existing MERA system. The report considered system capacity, quality of service, short-term versus long-term needs, costs, interoperability, coverage, population density served, microwave paths, frequency availability, and potential environmental impacts.

Specific project objectives were created to consolidate the multitude of considerations in a few succinct statements that could be used to assess the effectiveness of proposals to modernize and expand the existing MERA system. Member agencies defined the original objectives and they have subsequently been refined and used in conjunction with site selection criteria to evaluate the various Next Gen System design proposals. MERA's Next Gen Project objectives are:

1. Install a new radio communications system as approved in Measure A by a vote of the public in November 2014.
2. Modify the existing aging MERA system with new 700 MHz equipment to meet revised FCC requirements by 2023.

3. Improve Marin County communications coverage to reduce 911 response times and ensure reliable communications among first responders during major events, and everyday operations.
4. Provide Next Gen System communications coverage to meet 97% reliability in the Motorola contracted coverage area with delivered audio quality of 3.4 or better as measured by TSB-88 testing methods.
5. Relocate the radio system's Network Core and Prime Site from the Marin County Civic Center to the Emergency Operations Facility (EOF).
6. Maintain compliance with all applicable land use, permitting, and California Environmental Quality Act (CEQA) requirements.
7. Satisfy the MERA site selection criteria (below) to provide required coverage and reliability with minimum impacts to surrounding communities.

MERA Site Selection Criteria

In order to meet the Project Objectives above, MERA adopted a set of criteria for evaluating proposed designs for the new system (including the selection of new sites), and these criteria have been applied during the development of the design for the system evaluated in this Draft Supplemental EIR (Draft SEIR). Under the MERA criteria, the Next Gen System must:

1. Continue as a land-based microwave/wireless system.
2. Incorporate the Marin County Emergency Operations Facility (EOF).
3. Maximize the use of existing sites and other existing infrastructure facilities.
4. Minimize the number of new sites while still meeting the project's objective for improved coverage.
5. Combine facilities and equipment to minimize new antennas and building space needs.
6. Use previously developed sites, if possible.
7. Locate antennas high enough to keep radio frequency emission levels near the ground well within the limits set by the FCC for uncontrolled public access.
8. Minimize tower heights and visual impact to the fullest extent possible.

D. GENERAL PROJECT DESCRIPTION

Overview of Existing System

The existing MERA System allows for autonomous operation within agencies, as well as interagency radio channels to provide reliable communications among multiple state, county and municipal agencies. The system is integral for day-to-day communications among police, fire and public works crews, and supports first responders in emergency situations. The system can also expand to support disaster response and recovery in acute situations such as earthquakes, floods, and wildfires. The existing MERA System provides communications with acceptable radio coverage in most of Marin County, however radio coverage is marginal in West Marin coastal and rural communities, including Muir Beach and Tomales.

The existing MERA system currently includes 16 active communications sites. The MERA sites are connected by microwave radio links to provide common communication channels and centralized management of local and wide-area communications. The new MERA Next Gen System would retain and upgrade ten of the functioning sites, decommission five existing sites, and add equipment to eight new sites not previously part of the MERA system, for a total of 18 active sites.

10 Existing Sites Included in Next Gen System

- Civic Center
- Big Rock Ridge
- Mt. Tamalpais
- Mt. Barnabe
- Point Reyes Hill
- Dollar Hill
- San Pedro Ridge
- Mt. Tiburon
- Sonoma Mountain
- Stewart Point

5 Existing Sites Decommissioned in Next Gen System

- Forbes Hill, San Rafael
- Mt. Burdell, Novato
- Mill Valley City Hall
- Mill Valley Public Safety Building
- Bay Hill Road, Sonoma County

Six dispatch centers also currently interface with the existing MERA system. These dispatch centers are owned and operated by individual member agencies and are not considered part of MERA. The six dispatch facilities are: Sheriff's Communications Center, County backup dispatch, Marin County fire dispatch (Woodacre), Fairfax Police Department (PD) dispatch, Novato PD dispatch, and San Rafael PD dispatch. Each dispatch site is linked to the overall MERA System either by microwave radio links or leased wire connections.

Next Gen System Additions to the Existing MERA System

Eight new sites are proposed as part of the Next Gen System. All sites have some existing infrastructure from previous development, such as existing communications facilities, existing

water storage tanks, or existing water well-heads. Each of the eight sites proposed as part of the Next Gen System are briefly introduced here, with additional information provided in the project description below:

- Prime Site EOF Emergency Operations Facility (EOF)
- Tomales An existing cell tower and equipment site
- Coyote Peak A water well-head site for the Walker Creek Ranch
- Skyview Terrace Marin Municipal Water District (MMWD) water tank site
- Muir Beach Muir Beach Community Services District water tank site
- Wolfback Ridge Broadcast facility with towers
- Mt. Burdell OTA Broadcast facility with tower
- Mill Valley Water Tank MMWD water tank site

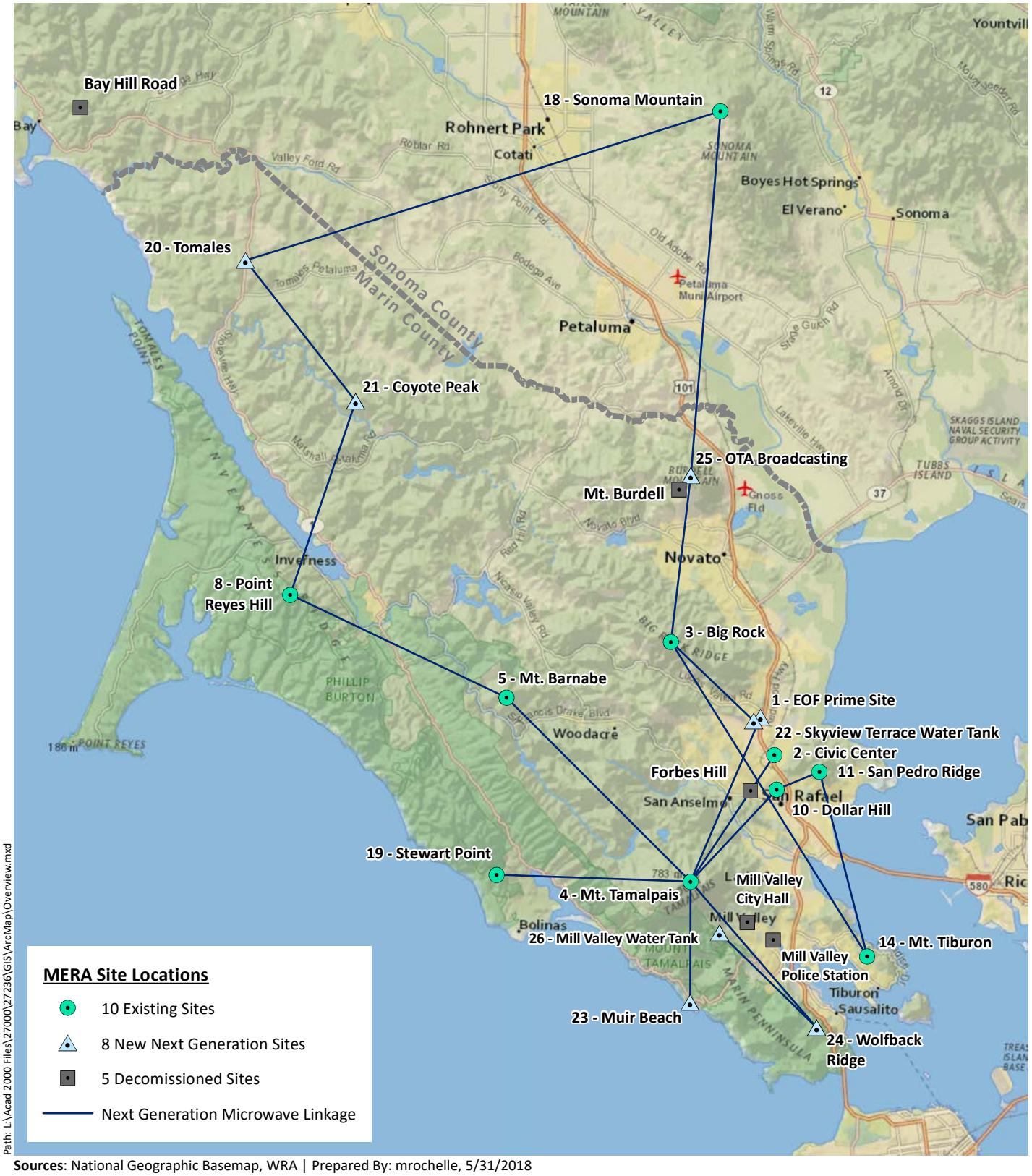
Overall Project Summary

The MERA Next Gen System would retain and upgrade 10 of the currently functioning sites, add equipment to eight new sites, including the relocation of the Prime Site from the Marin County Civic Center to the Emergency Operations Facility (EOF), and decommission five sites. Table III-1 summarizes this information (sites new to MERA are shown in blue, current MERA sites proposed for the Next Gen in green, and sites not part of the proposed Next Gen project in white) and Figure III-1 shows each site location within the network configuration. The updates to existing sites and development of new sites are considered together as a change to the current Marin Public Safety and Emergency Communications System (SCH#99092073) under CEQA. This Draft SEIR details changes to the project and analyzes potential environmental impacts.

Table III-1. Summary of MERA Next Gen Site Locations and Actions

Site Name and #	APN	Jurisdiction	Coordinates	2000 EIR	Actions
1. Prime Site EOF^	165-220-11	City of San Rafael	38.019167, -122.541528	No	New at EOF
2. Civic Center	179-270-11	City of San Rafael	37.999056, -122.531306	Yes	Upgrades
3. Big Rock Ridge	164-300-04	Marin County	38.059194, -122.604250	Yes	Upgrades
4. Mt. Tamalpais	197-120-31	Marin County	37.929006, -122.587084	Yes	Upgrades
5. Mt. Barnabe	168-240-01	Marin County	38.026751, -122.716321	Yes	Upgrades
6. Bolinas Fire Station	193-030-20	Marin County	N/A	Yes	Dropped from original system
7. Bolinas Ridge	197-120-30	Marin County	N/A	Yes	Dropped from original system
8. Point Reyes Hill	109-160-23	Marin County	38.079836, -122.866944	Yes	Upgrades
9. Forbes Hill	010-261-02	City of San Rafael	N/A	Yes	Decommission
10. Dollar Hill	011-051-02	City of San Rafael	37.980262, -122.529354	Yes	Upgrades
11. San Pedro Ridge	015-250-21	City of San Rafael	37.990205, -122.500139	Yes	Upgrades
12. Mt. Burdell	125-180-17	City of Novato	N/A	Yes	Decommission
13. Novato PD	153-061-28	City of Novato	N/A	Yes	Dropped from original system
14. Mt. Tiburon	058-261-39	Town of Tiburon	37.890440, -122.464796	Yes	Upgrades
15. Mill Valley City Hall	028-014-16	City of Mill Valley	N/A	Yes	Decommission
16. Mill Valley Public Safety Building*	030-250-01	City of Mill Valley	N/A	Yes	Decommission
17. Bay Hill Road	100-190-07	Sonoma County	N/A	Yes	Decommission
18. Sonoma Mountain	136-190-09	Sonoma County	38.261015, -122.903629	Yes	Upgrades
19. Stewart Point**	188-090-15	Marin County	38.185833, -122.825167	Yes	Upgrades
20. Tomales***	100-050-42	Marin County	38.017000, -122.546000	No	New site with existing cell tower equipment
21. Coyote Peak	106-110-03	Marin County	37.863289, -122.585512	No	New site with existing water wellheads
22. Skyview Terrace Water Tank	165-220-02	City of San Rafael	37.851085, -122.498376	No	New site with existing MMWD water tank
23. Muir Beach	199-262-11	Marin County	38.149888, -122.593239	No	New site with local water tank
24. Wolfback Ridge	200-120-02	Marin County	37.902735, -122.558010	No	New site with existing structure and 100' tower
25. Mt. Burdell OTA^	125-160-01	Marin County	38.261015, -122.903629	No	New site with existing structure and tower
26. Mill Valley Water Tank	046-070-03	Marin County	38.185833, -122.825167	No	New site with existing MMWD water tank

* Added to original system to relay signals from Mill Valley City Hall. ** Added to original EIR with a CEQA Addendum in 2006.
*** 2012 Categorical Exemption, added into SEIR to address whole action. ^ EOF = Emergency Operations Facility,
BLUE – New MERA Site, GREEN – Existing MERA Site, WHITE – Decommissioned MERA Site OTA = Over-the-Air Broadcasting.



Sources: National Geographic Basemap, WRA | Prepared By: mrochelle, 5/31/2018

Figure III-1. MERA Next Generation System Configuration

MERA Next Generation Communications System

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E. SITE-SPECIFIC SETTINGS AND PROPOSALS

1. Prime Site EOF

The Prime Site is to be relocated from the Marin County Civic Center to the County Emergency Operations Facility (EOF) in San Rafael, at Assessor's Parcel Number (APN) 165-220-11 (Figure III-2). Access is provided via Los Gamos Road. This location has not been analyzed in previous CEQA documents and is a change from the original EIR (MERA 2000).

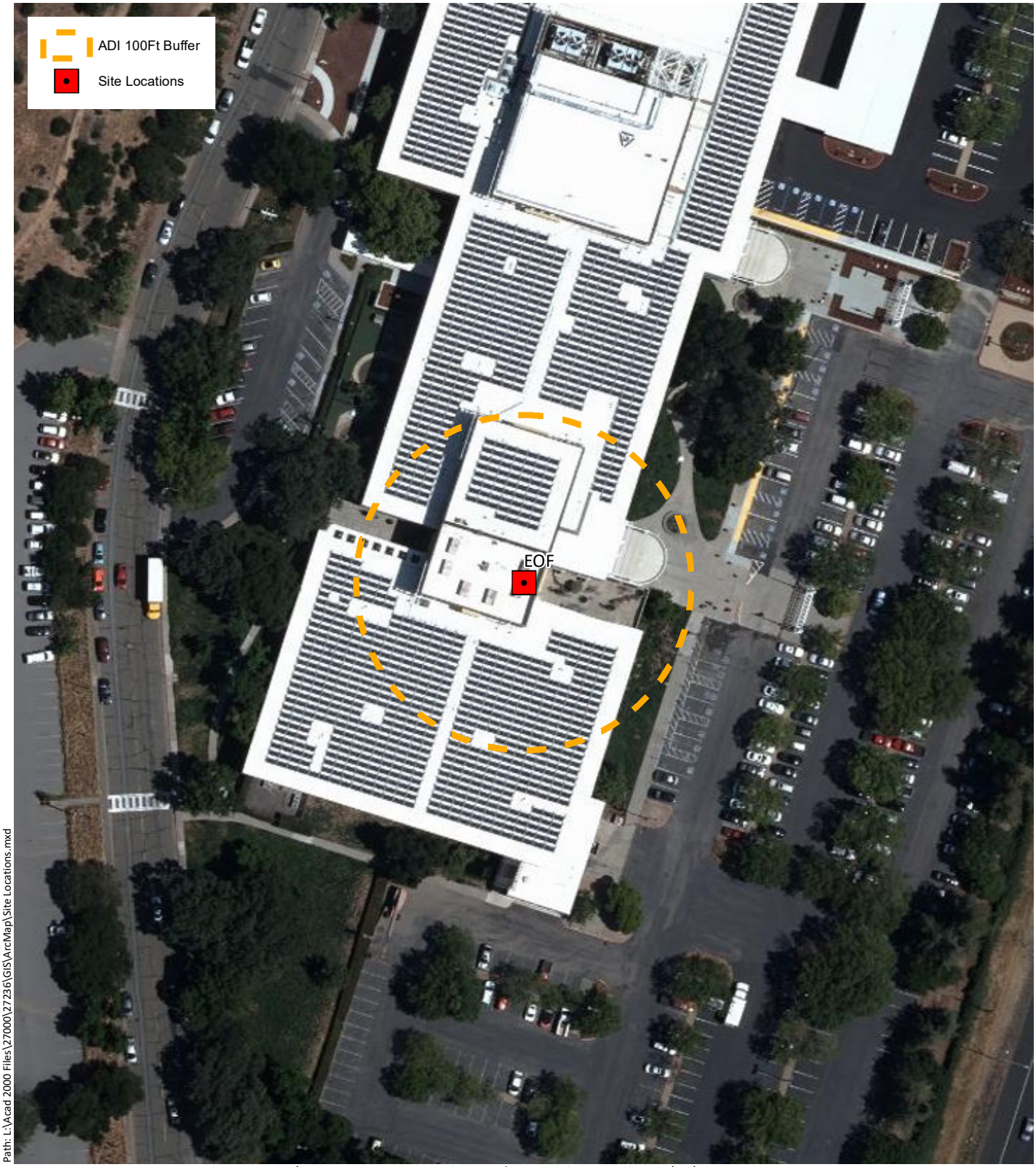
Existing Conditions: Current communications equipment includes 19 County-owned antennas mounted on an exterior lattice structure on the roof of the EOF to support existing dispatch systems. No MERA equipment has yet been installed or constructed at this site. A photo of the site is provided below. The current Prime Site, at the Civic Center, is described next as Site 2.

Next Gen System Proposals: Existing non-MERA equipment and proposed MERA Next Gen adjustments to equipment on the lattice structure are shown in elevation in Figure III-23. (Elevation figures and site plans are at the end of this section.) The MERA Next Gen System would require the following adjustments to the existing communications equipment located on the roof of the EOF, with MERA ultimately controlling about 10% of all visible components in the lattice structure:

- Addition of new 3-foot and 6-foot diameter microwave dishes in and above the lattice structure, and
- Replacement of 12 Yagi-type antennas with 19 vertical pole antennas.



Photo III-1: Site 1 Prime Site EOF, as seen from Highway 101 at Smith Ranch Road.
The MMWD water tank at Site 22, Skyview Terrace can be seen on the hill in the background.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-2. Site 1 - Prime Site EOF Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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2. Civic Center

The Next Gen System Civic Center site is the same site analyzed in the original EIR, located at APN 179-270-11, with access via Civic Center Drive in San Rafael (Figure III-3). It will no longer serve as the Prime Site, but a microwave radio link to the County EOF (the proposed new Prime Site) will be included in the Next Gen System.

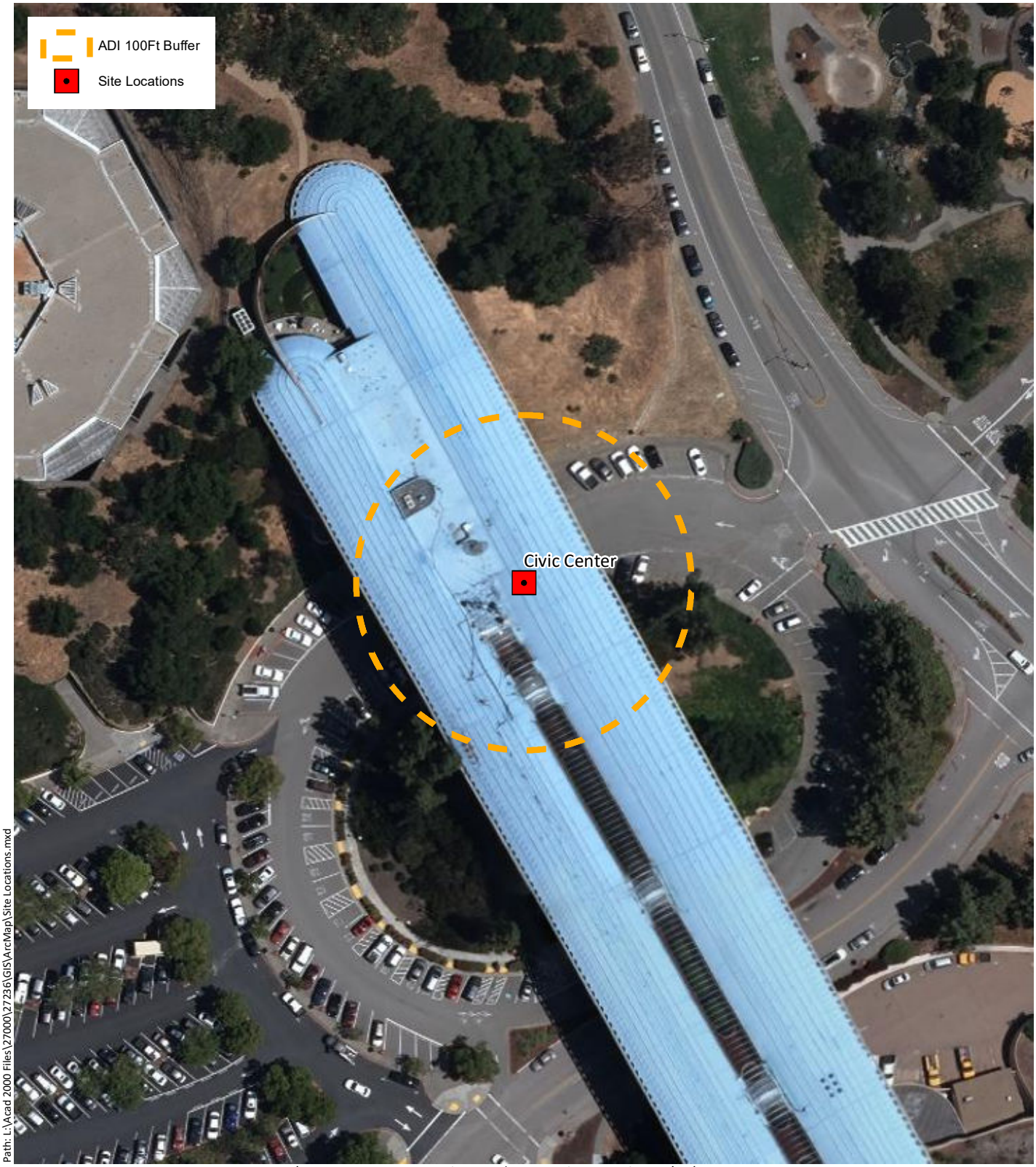
Existing Conditions: The Civic Center site is an existing MERA facility located on the second deck of the Marin County Civic Center building, which is on the Federal Register of Historic Places. Existing communications equipment visible on the roof includes County-owned microwave dishes and antennas mounted directly on the roof, and an unused tripod mount. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations at the Civic Center site are provided in Figure III-24. A site plan for the Civic Center site can be viewed in Figure III-25. (Elevation figures and site plans are at the end of this section.) The MERA Next Gen System would require the following minor modifications to the existing equipment, with MERA controlling about 5% of the visible equipment on the roof:

- One new 3-foot diameter microwave dish to be installed on the unused tripod mount.



Phot III-2: Site 2 Civic Center, as seen from Southbound Highway 101.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-3. Site 2 - Civic Center Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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3. Big Rock Ridge

The Big Rock Ridge site is the same site analyzed in the original EIR, located on Big Rock Ridge between Lucas Valley and Novato in unincorporated Marin County, at APN 164-300-04 (Figure III-4). The Big Rock Ridge site is a privately-owned shared communications site with numerous tenants. MERA leases space on the existing tower and in one of the existing buildings. Access is provided by a gated and locked four-wheel-drive (4WD) road from the southwest.

Existing Conditions: The Big Rock Ridge site consists of a privately owned 100-foot-high, four legged lattice tower and two small buildings totaling 400 square feet in area and 9 feet in height. MERA leases space for their equipment at the site, which consists of four 4-foot diameter and two 6-foot diameter microwave dishes, two 4-foot high panel antennas, and one 15-foot long vertical pole antenna on the privately-owned tower. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations, including alternatives (in blue), are provided in Figure III-26. A site plan for the Big Rock Ridge Site can be viewed in Figure III-27, at the end of this section. The MERA Next Gen System would require the following minor modifications, with MERA ultimately controlling less than 5% of the visible components at the site:

- Existing Tower: Remove four microwave (MW) dishes. Add four vertical pole antennas; remove one pole and two panel antennas.
- Add one new 20’ pipe mount to the existing building with two microwave dishes, one 6’ and one 3’ diameter, and one 6’ microwave dish on the side of the existing building.
- Alternative Mounting Locations for Three MW Dishes:
    - 1 - Remount all dishes on existing tower (preferred) and reinforce foundation.
    - 2 - Mount one dish on the side of the existing building, Mount two dishes on a 30’ tall tapered monopole near the base of the existing tower.



Photo III-3: Site 3 Big Rock Ridge (left), and the State of California Communications Site (right) from the trail in Terra Linda Ridge Open Space.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-4. Site 3 - Big Rock Ridge Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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4. Mt. Tamalpais

The Next Gen Mt. Tamalpais site is the same site analyzed in the original EIR, located at APN 197-120-31 within a fully developed gated and locked privately owned mountain top radio operations site in unincorporated Marin County (Figure III-5). Access is provided via the Panoramic Highway, Ridgecrest Boulevard and the secured Middle Peak Road.

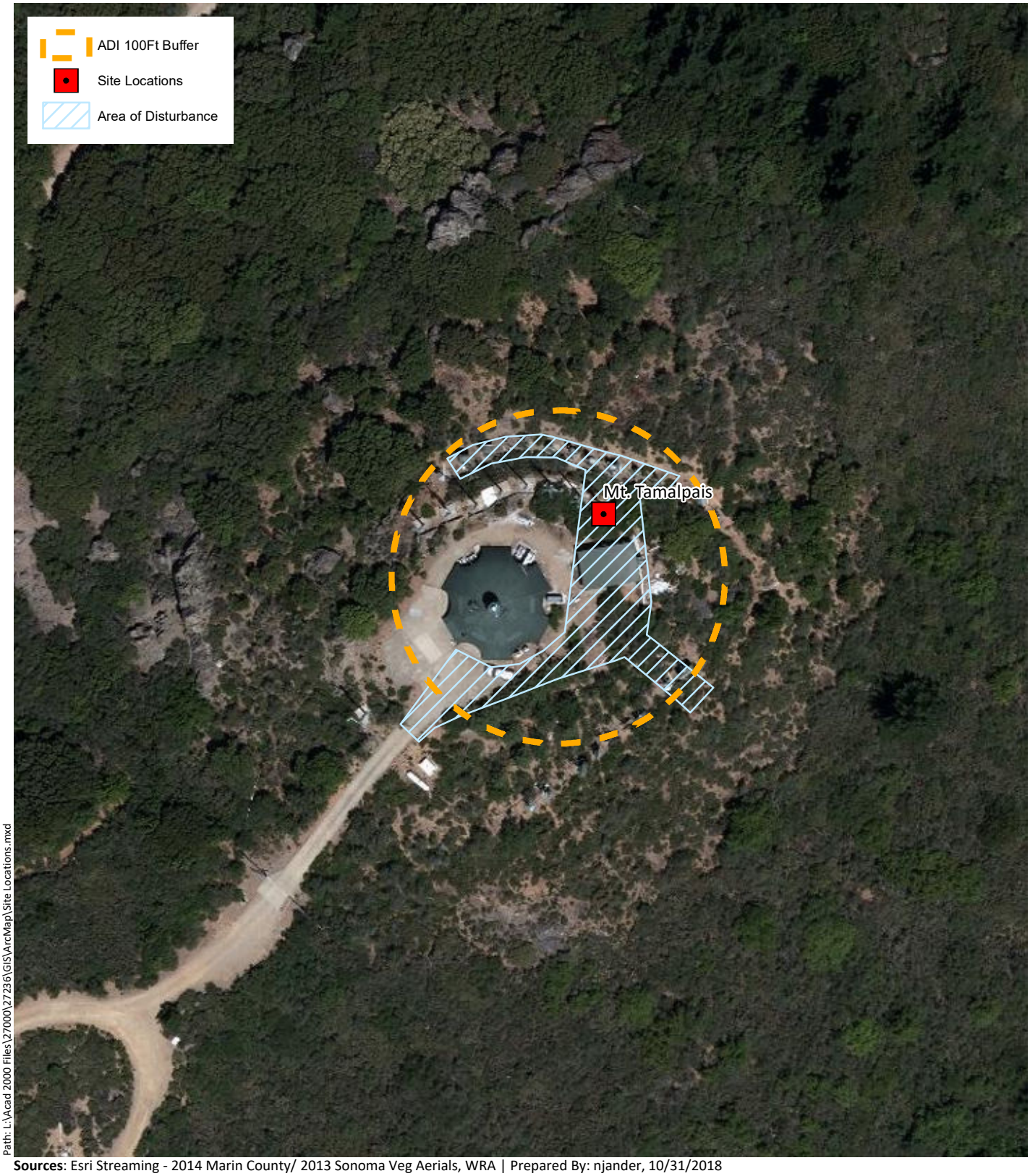
Existing Conditions: The site contains two privately owned concrete buildings; MERA leases 300 square feet of space within the smaller building, the other building is 30 feet in diameter with a dome-shaped roof painted green. Communications equipment visible on the site includes eight 60-foot tall monopoles in a row at the top of the peak supporting 129 existing antennas. Surrounding the peak are 28 microwave dishes on eight to ten-foot poles or small lattice structures. MERA currently leases space for two antennas on one existing 60-foot monopole, and for five of the 28 microwave dishes at the site. A photo is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations can be viewed in Figure III-28. Proposed monopole and lattice tower changes are provided in Figure III-29 and a Mt. Tamalpais site plan can be viewed in Figure III-30. Figures III-28 through III-30 are at the end of this section. The Next Gen System would require the following minor modifications to the existing equipment, with MERA ultimately controlling less than 5% of the visible equipment at the site:

- Reinforcement of the existing MERA monopole foundation,
- Add four vertical pole antennas and remove two antennas from a single monopole,
- Installation of a new generator and propane tank and replacement of the HVAC, and
- Replacement of five 8 to 10-foot-tall lattice towers with 20-foot-tall lattice towers, including the addition of seven microwave dishes and the removal of five microwave dishes.



Photo III-4: Site 4 Mt. Tamalpais Middle Peak as seen from the East Peak parking lot.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-5. Site 4 - Mt. Tamalpais Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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5. Mt. Barnabe

The Mt. Barnabe site is an existing MERA facility analyzed in the original EIR, located at APN 168-240-01, with access provided via unnamed dirt roads to the south (APN 168-240-21) and west (APN 168-080-09) in unincorporated Marin County (Figure III-6).

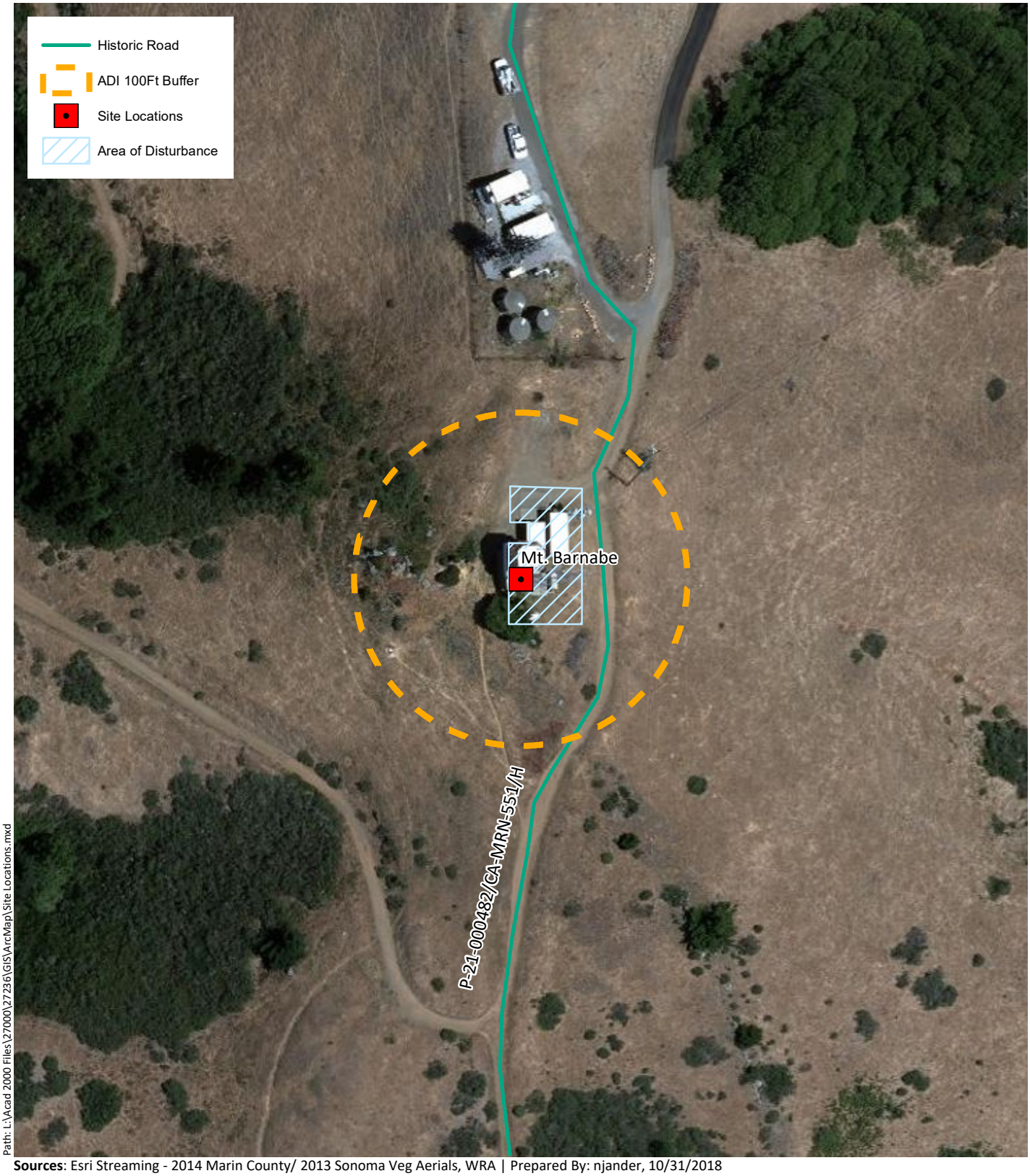
Existing Conditions: Existing communications equipment visible on the site includes a County Fire Lookout Tower and a 70-foot tall three-legged lattice tower with 32 antennas. The highest antennas extend 13 feet above the top of the tower. MERA owns an equipment shelter, generator, propane tank, and a 25-foot-tall microwave monopole which supports six antennas. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment as well as proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-31, and a site plan for the Mt. Barnabe site can be viewed in Figure III-32 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 35% of the visible equipment at the site:

- Reinforcement of the existing monopole and tower foundations,
- Addition of three vertical pole antennas and removal of two antennas from the existing lattice tower, and
- Addition of two microwave dishes and removal of three microwave dishes from the existing monopole.



Photo III-5: Site 5 Mt. Barnabe, as seen from the end of Portola Avenue, near Forest Knolls.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-6. Site 5 - Mt. Barnabe Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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6. Bolinas Fire Station

The Bolinas Fire Station site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project.

7. Bolinas Ridge

The Bolinas Ridge site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project.

8. Point Reyes Hill

The Point Reyes Hill site is an existing gated and locked MERA facility analyzed in the original EIR, located at APN 109-160-23, with access provided via Drakes View Drive and Mt. Vision Road in unincorporated Marin County (Figure III-7).

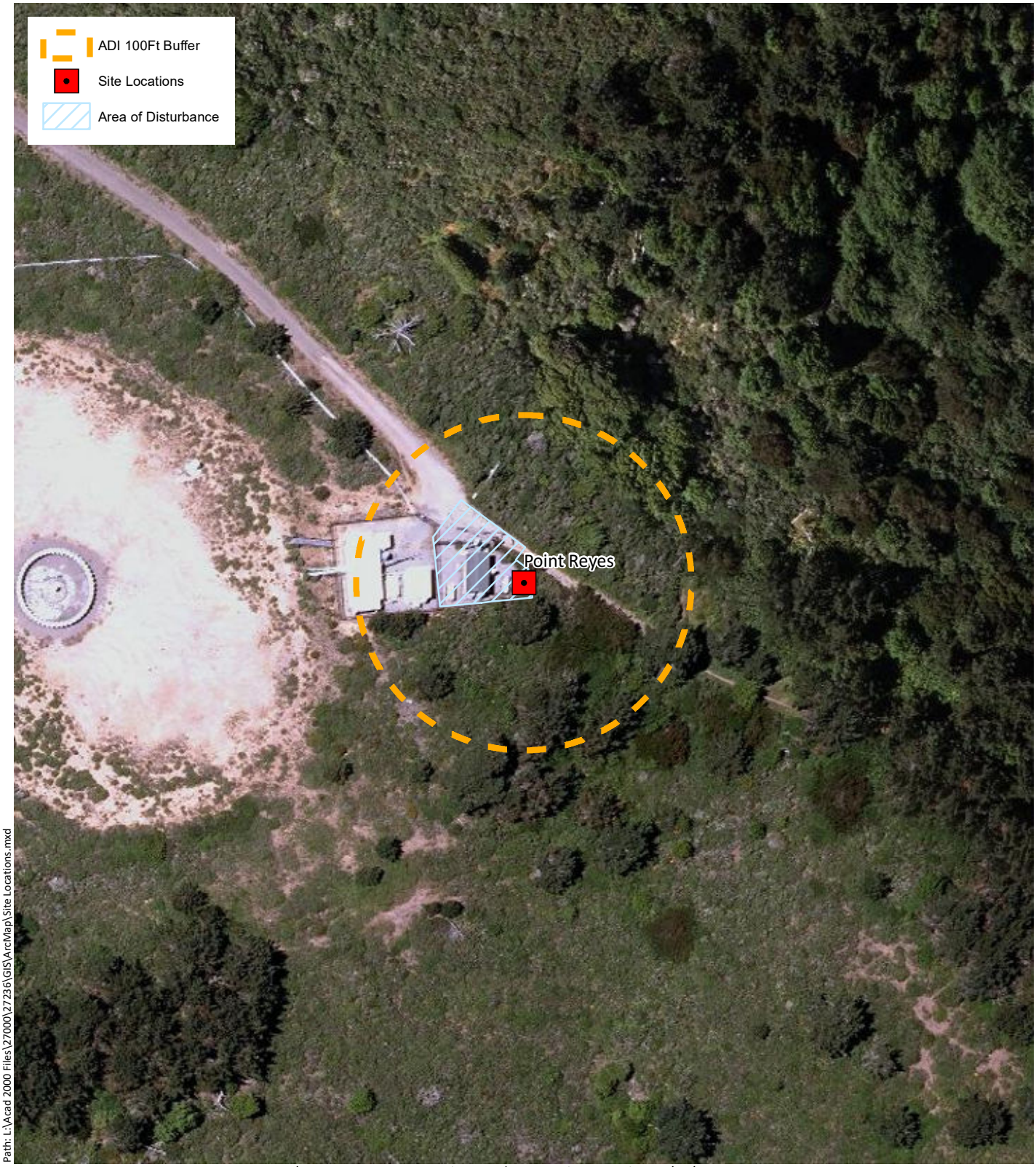
Existing Conditions: The site is occupied by the existing MERA enclosure and a Federal Aviation Administration (FAA) communications and radio navigation enclosure. The FAA site includes a large, visually concealed VORTAC radio navigation antenna and two existing buildings within a small fenced site surrounded by Point Reyes National Seashore. The adjacent fenced MERA compound is built on National Park Service land and includes a 200 square foot prefabricated shelter, an emergency generator, a propane fuel tank, two 17-foot-tall, 12-inch-diameter monopoles with multiple antennas and one 29-foot-tall wooden MERA utility pole supporting an FAA-owned Yagi-type (small horizontal) antenna. A site photo is below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-33. A site plan for the Point Reyes Hill site can be viewed in Figure III-34, at the end of this section. The MERA Next Gen System would require the following modifications to the existing equipment and structures, with MERA ultimately controlling about 60% of the visible components (including the FAA antenna on the MERA monopole) within their enclosure:

- Reinforcement of the existing monopole foundation,
- Replacement of the existing 29-foot wood utility pole with a new 40-foot steel monopole to support reinstalled FAA antenna and two new MERA 3-foot diameter microwave dishes,
- New cable bridge between the MERA shelter and the new monopole, and
- Addition of three antennas and removal of three antennas on the existing monopoles, and replace the HVAC units in the existing MERA shelter.



Photo III-6: Site 8 Point Reyes Hill, as seen from the end of Mt. Vision Road.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-7. Site 8 - Point Reyes Hill Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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9. Forbes Hill

The Forbes Hill site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 010-261-02 with access via Hepburn Heights Road in San Rafael.

Existing Conditions: The Forbes Hill site is an existing gated MERA communications facility comprised of one radio equipment building of 400 square feet, a 60-foot antenna tower, a generator, and a fuel tank within a fenced enclosure. The public has access to the area around the enclosure, which is next to MMWD's Forbes Hill Reservoir.

Next Gen System Proposals: MERA would remove the building, generator, fuel tank, tower, dishes, antennas, and perimeter fence and would then regrade the site. Use of the site as a communications facility would cease.



Photo III-7: Site 9 Forbes Hill, and the MMWD water tank as seen from the adjacent open space.

10. Dollar Hill

The Dollar Hill site is an existing MERA facility analyzed in the original EIR, located at APN 011-051-02, with access provided via Robert Dollar Drive in San Rafael (Figure III-8).

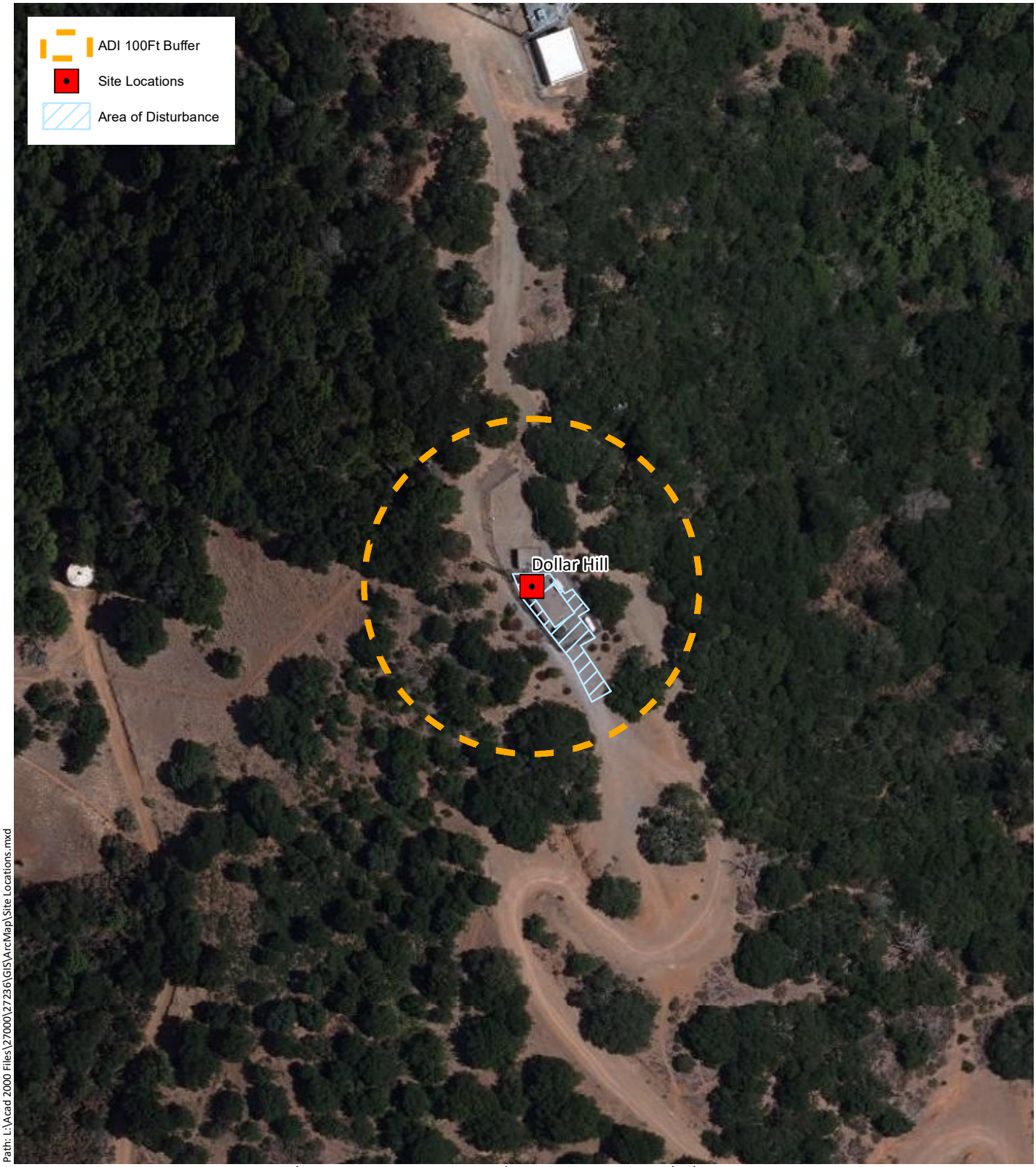
Existing Conditions: The site contains two existing CBA buildings, each 200 square feet in area and nine feet high, plus a water tank and pump. Existing communications equipment visible on the site includes a shelter, generator, propane tank and a 60-foot-tall three-legged tower with 18 antennas, of which five belong to MERA. The larger three-sided tower 350-feet to the north (to the right in the photo below) is a completely separate communications site not related to MERA.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-35, and a site plan for the Dollar Hill site can be viewed in Figure III-36 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 70% of the visible equipment at this specific site:

- Reinforcement of the existing tower foundation,
- Addition of two 6-foot-diameter microwave dishes and removal of two microwave dishes from the existing tower, and
- Addition of ten antennas and removal of three antennas from the existing tower.



Photo III-8: Site 10 Dollar Hill, as seen from San Rafael High School ballfield.
The MERA tower is at the top center of Dollar Hill, the triple tower (right) is privately owned and not affiliated with MERA.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-8. Site 10 - Dollar Hill Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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11. San Pedro Ridge

The privately-owned San Pedro Ridge site contains an existing MERA facility analyzed in the original EIR, located at APN 015-250-21. San Pedro is an existing gated and locked communications site, with access provided via Bay Hills Drive in San Rafael (Figure III-9).

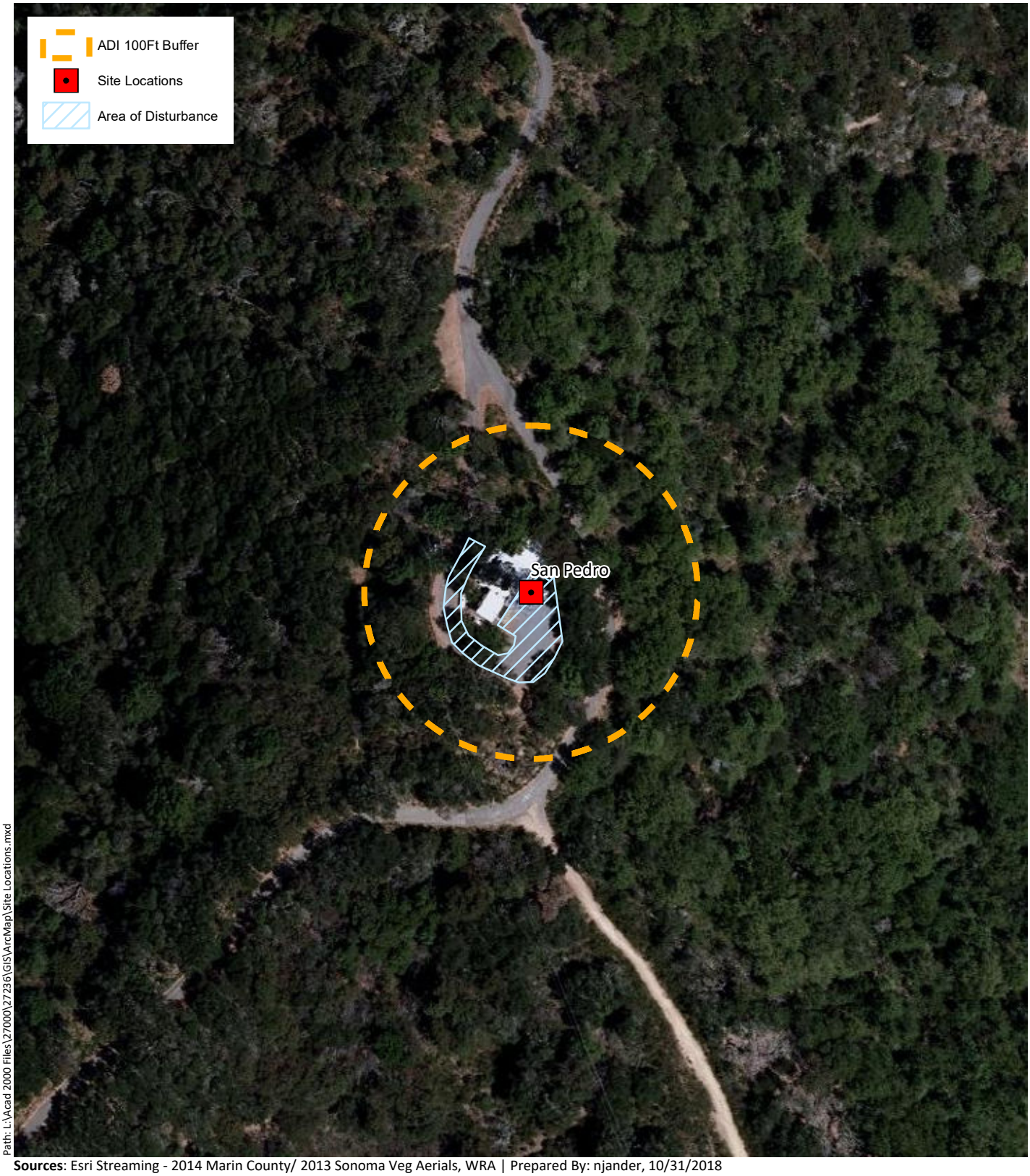
Existing Conditions: The site contains one existing concrete building in a fenced enclosure. The site is located on the San Pedro Ridge northeast of downtown San Rafael. Existing communications equipment visible on the site includes microwave dishes and 52 antennas placed on a privately owned 100-foot-tall tower with three legs and 12 feet wide sides. MERA leases space on this tower. A photo of the site is provided below.

Next Gen System Proposals: Existing equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-37 and a site plan for the San Pedro Ridge site can be viewed in Figure III-38 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling about 15% of the visible equipment at the site:

- Reinforcement of the existing tower foundation,
- Addition of one 3-foot-diameter and one 6-foot-diameter microwave dishes and removal of two microwave dishes from the existing tower, and
- Addition of four vertical pole antennas and removal of three antennas from the existing tower.



Photo III-9: Site 11 San Pedro Ridge, as seen from Main Drive near Glenwood Elementary School.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-9. Site 11 - San Pedro Ridge Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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12. Mt. Burdell

The privately-owned Mt. Burdell site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 125-180-17, at the end of the Burdell Mountain Fire Road on the northern border of the City of Novato.

Existing Conditions: The site is located on the southwestern slope of Mt. Burdell within an existing AT&T telecommunications facility. Existing communications equipment includes a 79-foot-tower with four legs.

Next Gen System Proposals: MERA will not renew the lease on this site and decommissioning will include the removal of all MERA equipment. MERA will cease all maintenance activities, but the site will remain operational and will be maintained by existing owners and lessees.

13. Novato Police Department

The Novato Police Department site was dropped from the original MERA System and never constructed. Therefore, this site would not need to be decommissioned and no action would occur on this site for the Next Gen System project. It should be noted that the City of Novato does operate their own police dispatch equipment which is connected to the MERA system.

14. Mt. Tiburon

The Mt. Tiburon site is an existing MERA facility analyzed in the original EIR, located at APN 058-261-39 on the Tiburon Peninsula. Access is provided via Mt. Tiburon Road (Figure III-10).

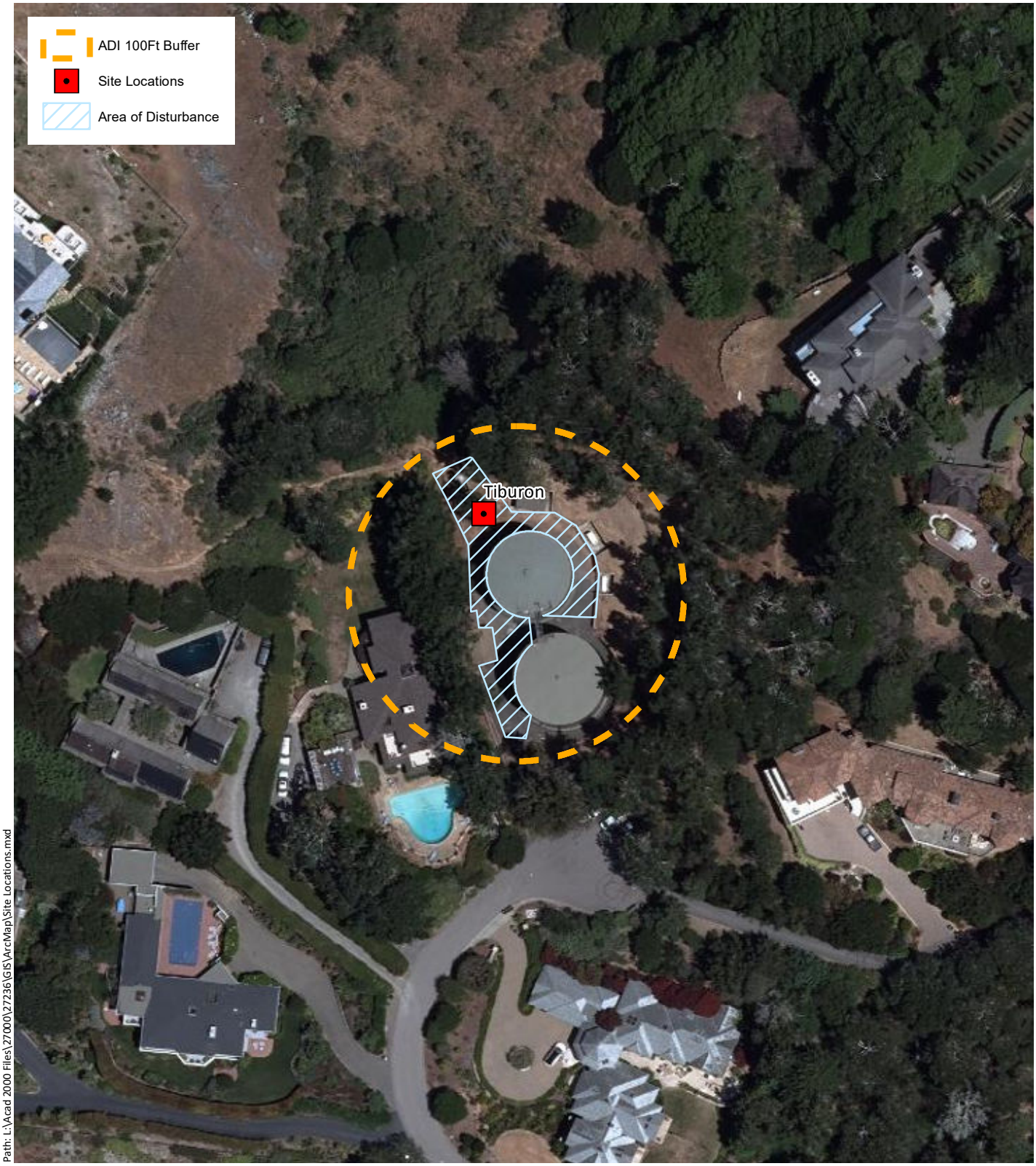
Existing Conditions: The gated and locked site has two MMWD water tanks, two small MMWD equipment shelters, and a small amount of Southern Marin Dispatch agency communications equipment. MERA-owned equipment at this site includes a 14-ft x 10-ft equipment shelter, an emergency power generator, a propane fuel tank, a 60-foot-tall monopole (with the highest antennas reaching to 70 feet) and two microwave dishes on a 22-foot-tall monopole. A photo of the site is provided below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-39 and a site plan for the Mt. Tiburon site can be viewed in Figure III-40 at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures with MERA ultimately controlling nearly all of the visible communications equipment at the site:

- Reinforcement of the existing monopole foundations,
- Addition of one 3-foot-diameter and one 4-foot-diameter microwave dishes and removal of two microwave dishes from the existing 22-foot monopole, and
- Addition of four antennas and removal of three antennas from the existing 60-foot monopole.



Photo III-10: Site 14 Mt. Tiburon, as seen from Tiburon Ridge Trail.
The monopoles and two water tanks on the site are camouflaged in green.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-10. Site 14 - Mt. Tiburon Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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15. Mill Valley City Hall

The Mill Valley City Hall site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 028-014-16 with access via Corte Madera Avenue in Mill Valley, Marin County.

Existing Conditions: The site is comprised of communications equipment on the roof of the Mill Valley City Hall, which is used for emergency telecommunications.

Next Gen System Proposals: Decommissioning will include the removal of all MERA equipment.

16. Mill Valley Public Safety Building

The Mill Valley Public Safety Building site is an element of the current MERA System, but it will be decommissioned and will not be operational as part of the Next Gen System. It is located at APN 030-250-01 with access via Hamilton Drive in Mill Valley.

Existing Conditions: The site is comprised of communications equipment on the roof of the Mill Valley Public Safety Building, which is used for city administration, police and fire protection, and public safety and emergency telecommunications.

Next Gen System Proposals: Decommissioning will include the removal of all MERA equipment.

17. Bay Hill Road

The Bay Hill Road site is an element of the current MERA System, but it will be decommissioned and will not be operation as part of the Next Gen System. It is located in Sonoma County at APN 100-190-07, with access provided via Bay Hill Road followed by a gated dirt road.

Existing Conditions: The site is comprised of an existing communications facility on a hill near the intersection of Bay Hill Road and State Highway 1, amidst agricultural land in southwestern unincorporated Sonoma County, approximately 2.5 miles east of Bodega Bay.

Next Gen System Proposals: MERA will not renew the lease on this property. Decommissioning will include the removal of all MERA equipment and MERA will cease all maintenance activities, but the site will remain operational for other existing owners and lessees.

18. Sonoma Mountain

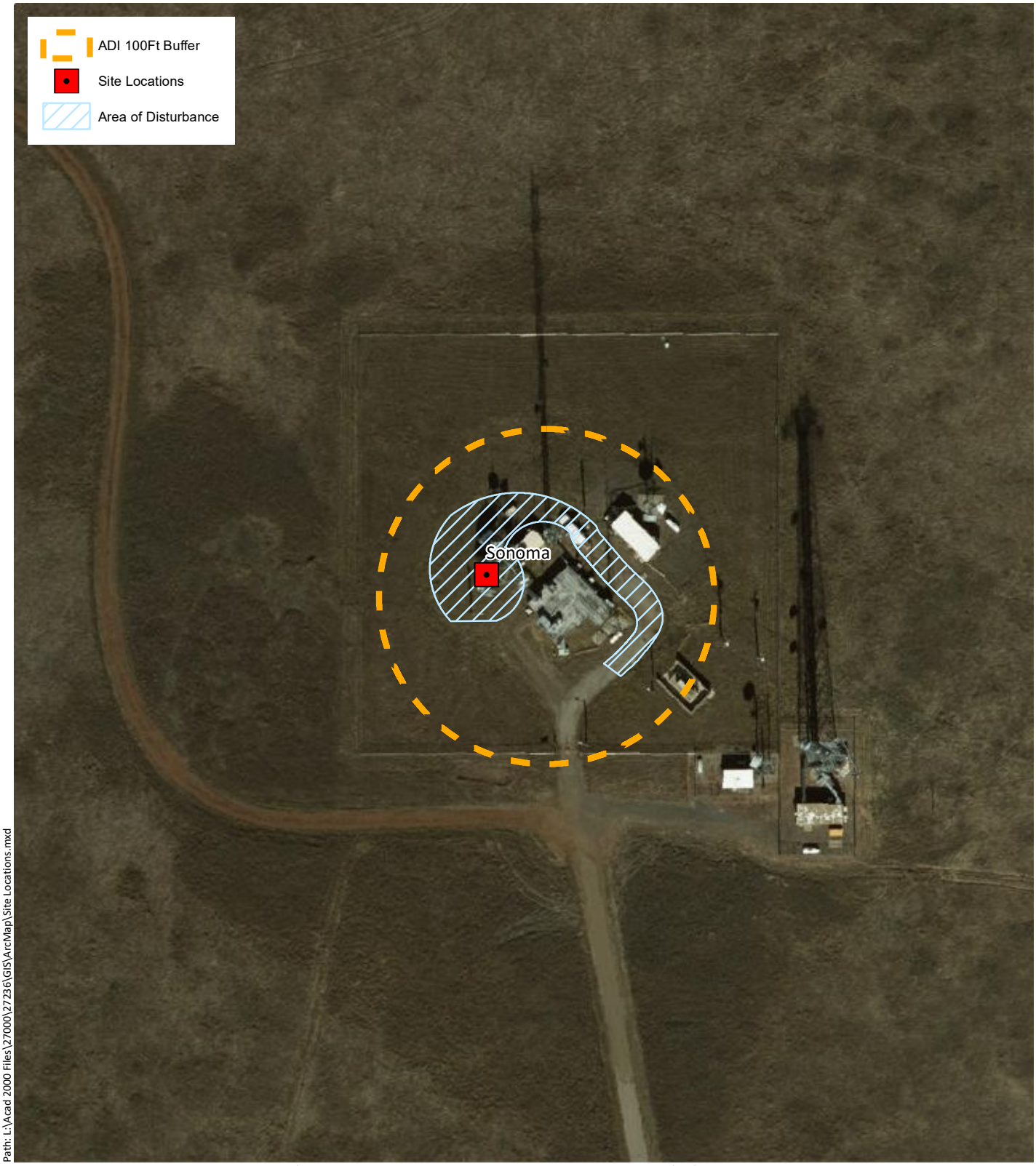
The Sonoma Mountain site contains an existing MERA facility analyzed in the original EIR, located at APN 136-190-09, on the northwest side of Sonoma Mountain in unincorporated central Sonoma County (Figure III-11). Access is provided by Adobe Road to Sonoma Mountain Road.

Existing Conditions: The gated and locked site is an existing telecommunications facility and contains two tall towers, two shorter microwave towers, generators with fuel tanks, and three existing buildings. Sonoma County owns the existing 190-foot three-legged guyed lattice radio tower (taller tower to the left in the photo below), on which 39 antennas are mounted, none of which are owned by MERA. MERA constructed, and now Sonoma County owns, the smaller three-legged 40-foot-tall microwave tower (face width of 12 feet) which has 32 antennas, none of which are owned by MERA. An adjacent compound with a larger tower is next to the Sonoma County compound.

- Next Gen System Proposals: Existing MERA and non-MERA equipment, as well as proposed MERA Next Gen adjustments to equipment elevations, are provided in Figure III-41 and a site plan for the Sonoma Mountain site can be viewed in Figure III-42, at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA ultimately controlling less than 5% of the visible communications equipment at the site: Addition of two 6-foot diameter microwave dishes to the existing 40-foot microwave tower (far left).



Photo III-II: Site 18 Sonoma Mountain, as seen from the air looking north to Mount Saint Helena. This is a multi-user site no MERA equipment is located on either of the tall towers.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-11. Site 18 - Sonoma Mountain Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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19. Stewart Point

The Stewart Point site is an existing MERA facility, added to the original EIR with a CEQA Addendum in 2006, located at APN 188-090-15 on the Bolinas Peninsula in unincorporated Marin County (Figure III-12). Direct access to the site is provided by a graded fire road coming from Mesa Road.

Existing Conditions: The gated and locked site, often referenced as the Martinelli property, contains an existing prefabricated shelter measuring 150 square feet and nine feet high, an emergency generator and fuel tank. Existing communications equipment visible on the site includes a 35-foot-tall by 12-inch diameter monopole, with 11 antennas. The highest antennas reach to 45 feet in height. MERA leases the site from a private landowner but owns the tower and nearly all of the equipment. A photo of the site is provided below.

Next Gen System Proposals: Existing MERA equipment and proposed MERA Next Gen adjustments to equipment elevations are provided in Figure III-43 and a site plan for the Stewart Point site can be viewed in Figure III-44. All elevation figures and site plans are included at the end of this section. The MERA Next Gen System would require the following minor modifications to the existing equipment and structures, with MERA continuing to control all visible communications equipment at the site:

- Reinforcement of the existing monopole foundation,
- Addition of one 4-foot-diameter microwave dish and three vertical pole antennas to the existing monopole,
- Removal of one microwave dish and two antennas from the existing monopole,
- Replacement of the existing emergency generator, and
- Replacement of the existing HVAC unit in the equipment shelter.



Photo III-12: Site 19 Stewart Point, from the dirt access road on the Martinelli Ranch



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-12. Site 19 - Stewart Point Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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20. Tomales

The Tomales site is located at APN 100-050-42 at Parks Ranch near Tomales, with access provided via a dirt driveway off of State Route 1 (Figure III-13). There are aboveground and belowground utilities along State Route 1 as well, approximately 500 and 700 feet from the site, respectively (Figure III-14). The site was approved for MERA's use in 2012 pursuant to the Categorical Exemption to CEQA for construction of small structures and facilities, Section 15303, Class 3 of the CEQA Guidelines.

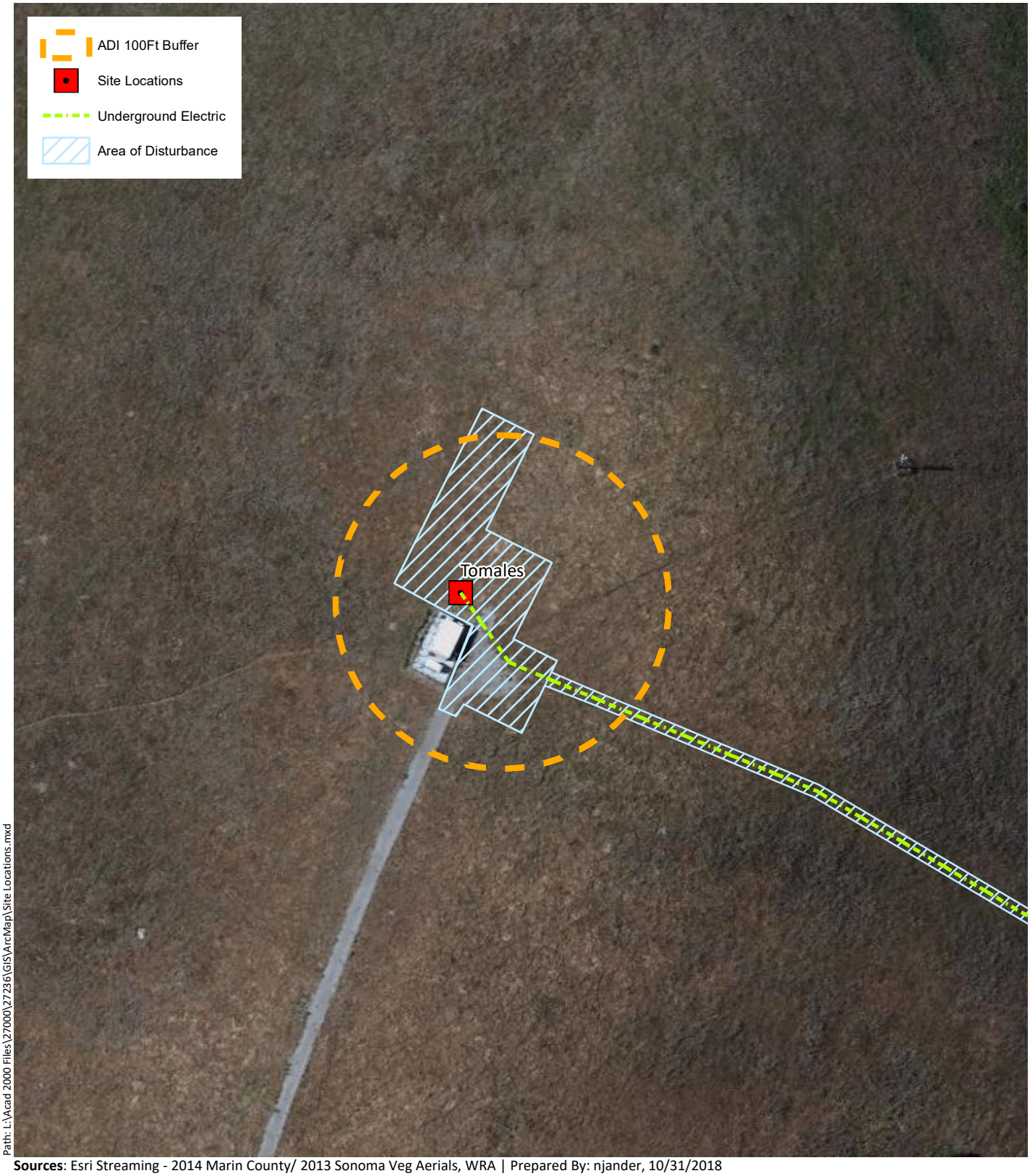
Existing Conditions: The site supports an existing cell tower site, with two small towers and an equipment shelter. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-45, an overall site plan in Figure 46, and a detailed Tomales site plan in Figure III-47. All elevation figures and site plans are included at the end of this section. The MERA Next Gen System would require the following improvements with MERA ultimately controlling about 70% of the visible communications equipment at the site:

- New 75-foot-tall monopole mounted with one 3-foot-diameter and one 6-foot-diameter microwave dishes, and three vertical pole and five dipole antennas,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot-tall perimeter fence, and
- New belowground power cable from the southeast corner of the site to follow the same path as the existing underground line.



Photo III-13: Site 20 Tomales, near the trees, as seen from the private access road.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

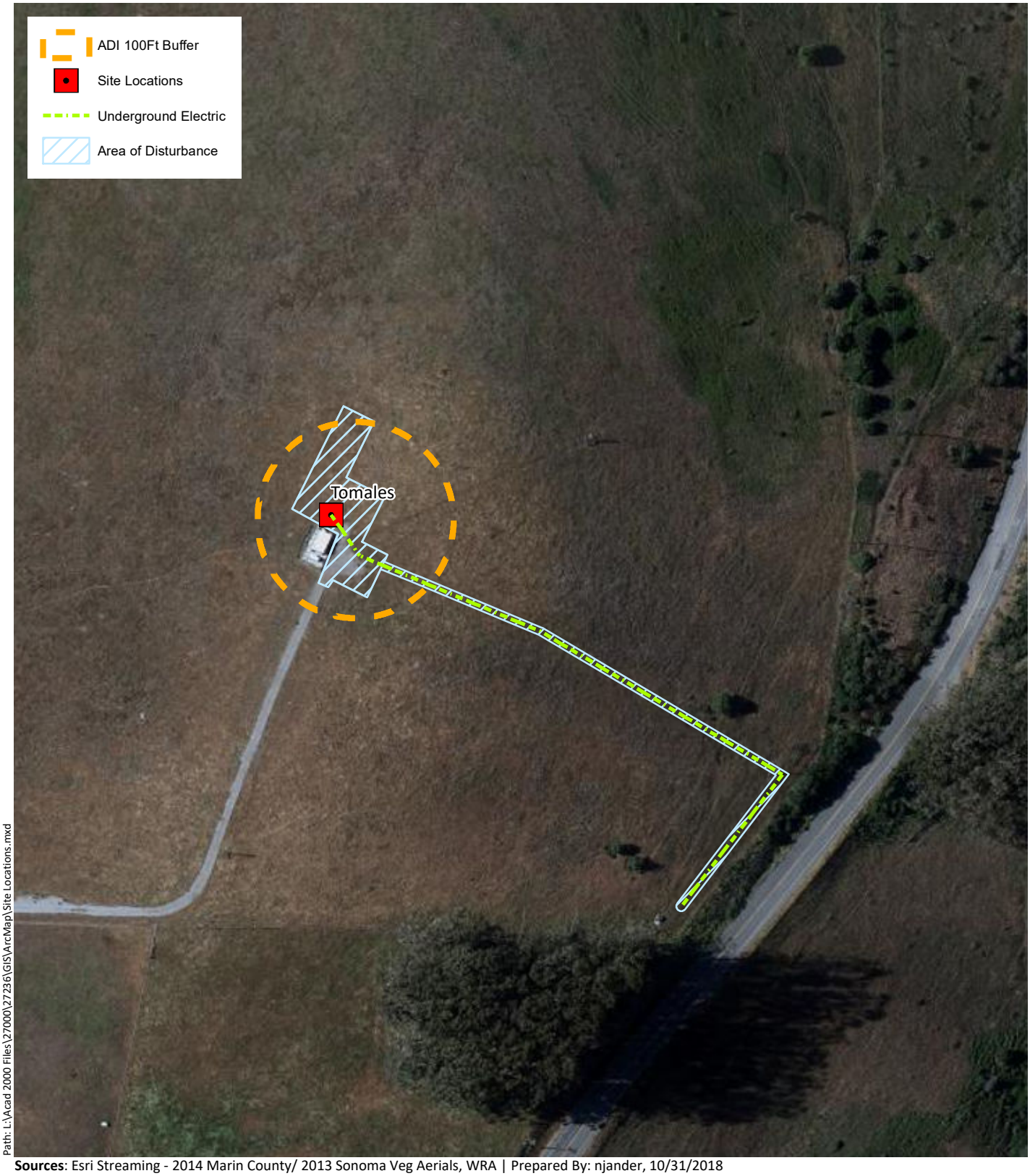
Figure III-13. Site 20 - Tomales Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-14. Site 20 - Tomales Underground Electric Location

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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21. Coyote Peak

The Coyote Peak site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 106-110-03 in unincorporated Marin County, with access provided through Walker Creek Ranch, a Marin County Outdoor Education Facility operated by the Marin County Office of Education (Figures III-15 and III-16). Walker Creek Ranch is located at 1700 Marshall Petaluma Road, and the site is on a hilltop, accessible with 4WD behind two locked gates.

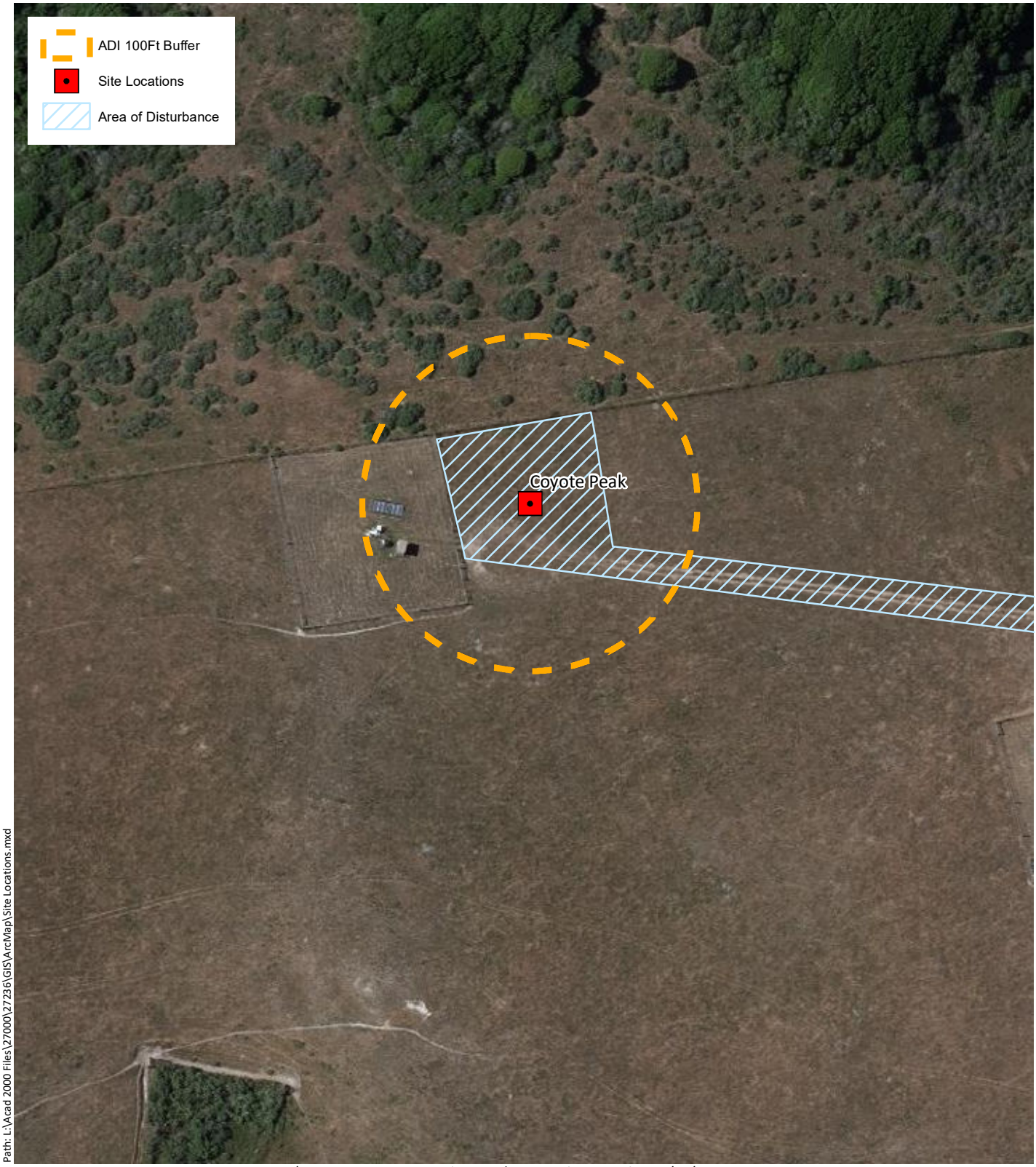
Existing Conditions: Marin County Office of Education (MCOE) owns the site which includes two existing water wellheads surrounded by actively grazed range lands. Each fenced wellhead enclosure contains solar panels and a small shed. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-48, an overall site plan in Figure III-49, and a detailed Coyote Peak site plan in Figure III-50, at the end of this section. The MERA Next Gen System would require improvements listed below, with MERA ultimately controlling about 98% of all visible equipment at the hilltop site:

- New 60-foot-tall monopole mounted with two 3-foot-diameter microwave dishes and three vertical pole antennas,
- New equipment shelter measuring about 240 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot high perimeter fence,
- Grading of 1.5-mile road, with cuts of three to eight feet deep in short sections, plus widening of three turns for equipment access (Figure III-15), and
- Installation of new underground power line beneath regraded road.



Photo III-14: Site 21 Coyote Peak with existing water well pump house for Walker Creek Ranch.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

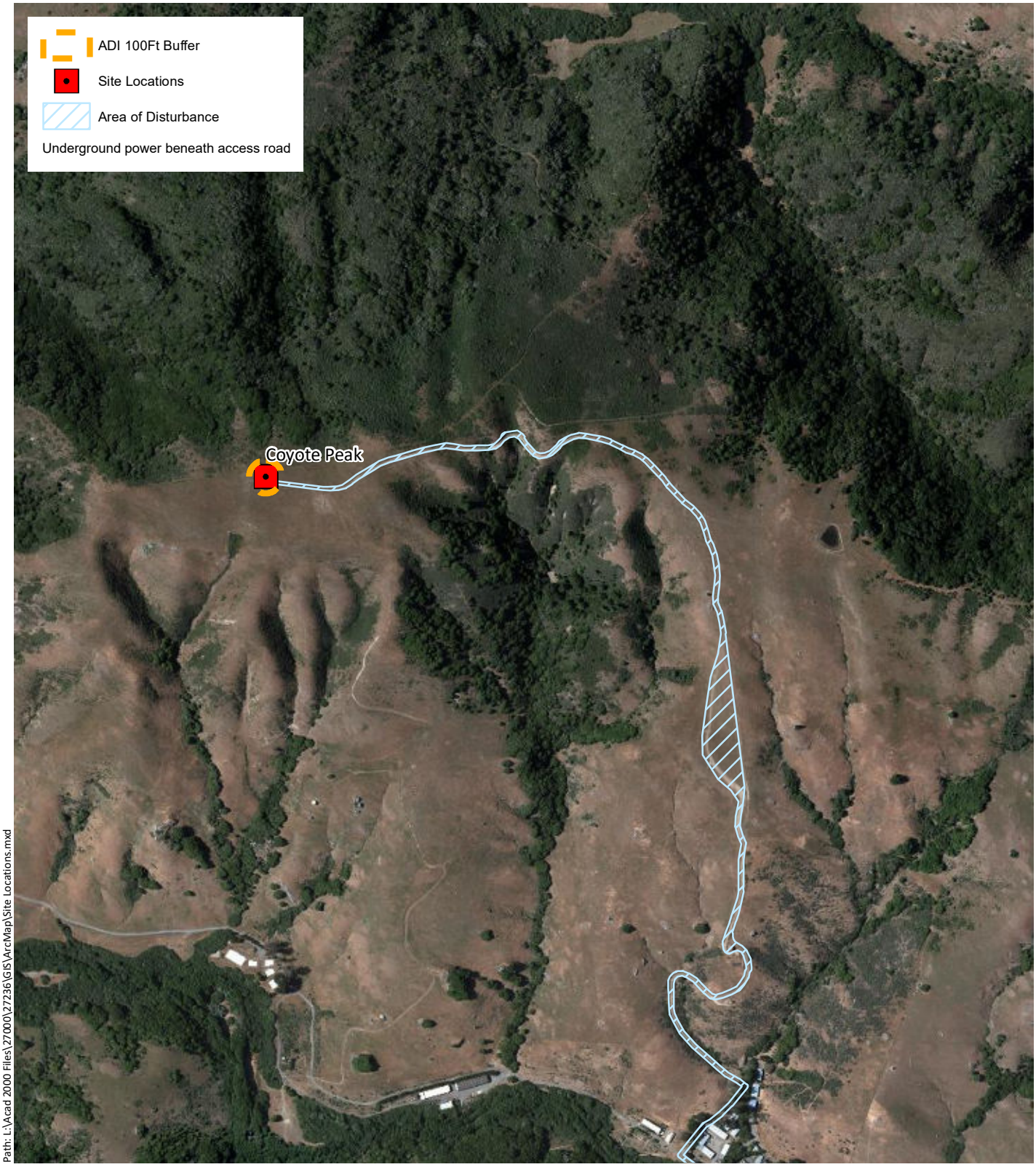
Figure III-15. Site 21 - Coyote Peak Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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Sources: **Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018**

Figure III-16. Site 21 - Coyote Peak Access Road

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 250 500
Feet

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22. Skyview Terrace (Near Existing MMWD Water Tank)

The Skyview Terrace site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 165-220-02 near Lucas Valley Road with access via Skyview Terrace to a 300 yard segment of 4WD road behind a locked gate, in San Rafael (Figure III-17).

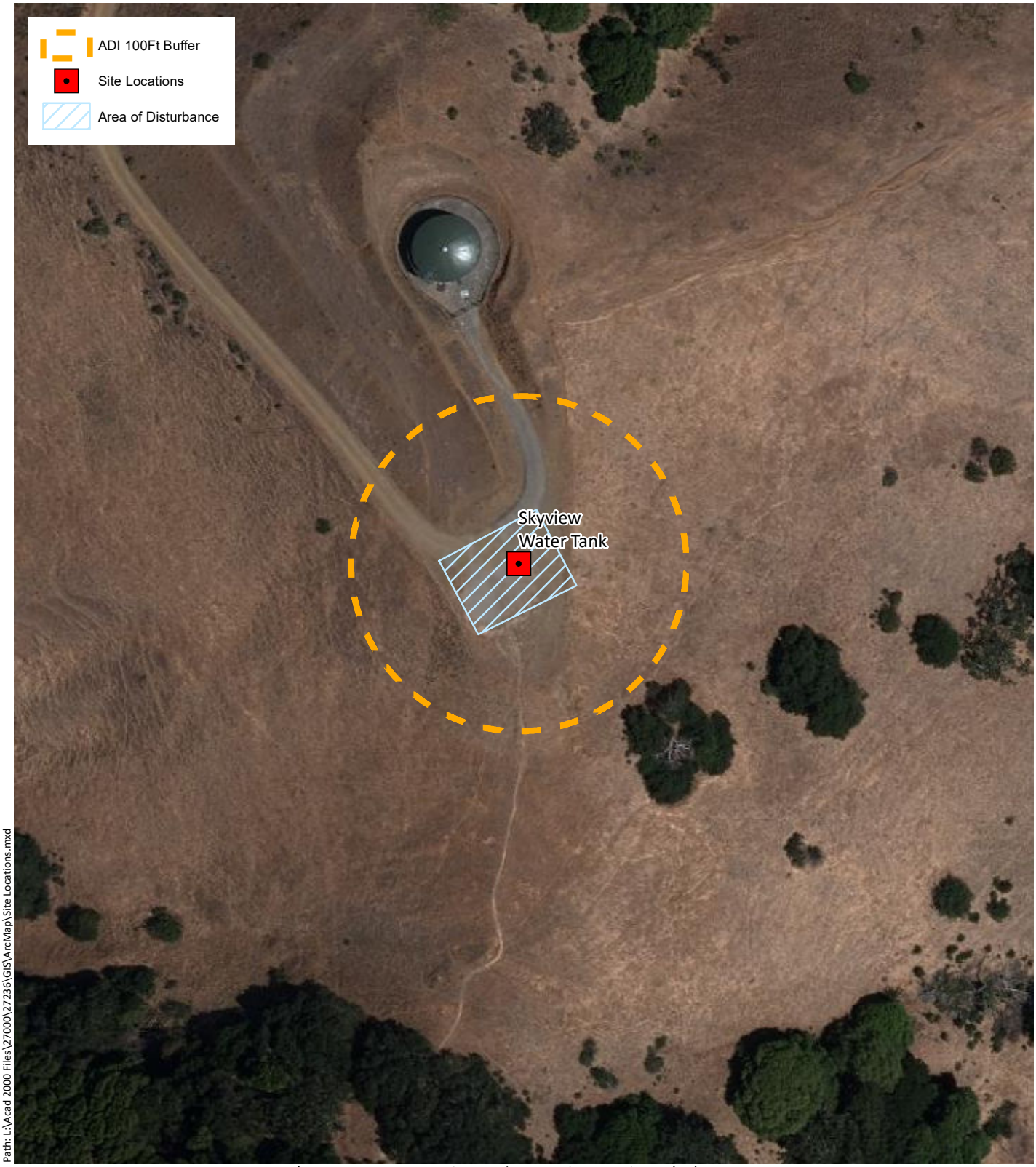
Existing Conditions: The site is currently developed with an MMWD water tank which is mostly shielded by a berm but still somewhat visible from State Route 101. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-51, and an overall and detailed site plan can be viewed as Figures III-52 and III-53, respectively, as included at the end of this section. With the water tank, overall MERA equipment at the site would be about ~40% of the total, but since the tank is hidden behind the berm, the estimated visible total of MERA equipment occupying the site increases to approximately 80%. The MERA Next Gen System would require the following improvements:

- New 35-foot-tall monopole mounted with two 3-foot-diameter microwave dishes,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator and fuel tank,
- New six-foot-tall perimeter fence, and
- Installation of new underground power line beneath access road.



Photo III-15: Site 22 Skyview Terrace, looking south from MMWD water tank to Mt Tamalpais. The equipment shelter and 35-foot tall monopole would be placed in the flat area to the left of the truck.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-17. Site 22 - Skyview Terrace Water Tank Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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23. Muir Beach

The Muir Beach site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 199-262-11, with access provided via State Route 1 and the Muir Beach Overlook in unincorporated Marin County (Figure III-18).

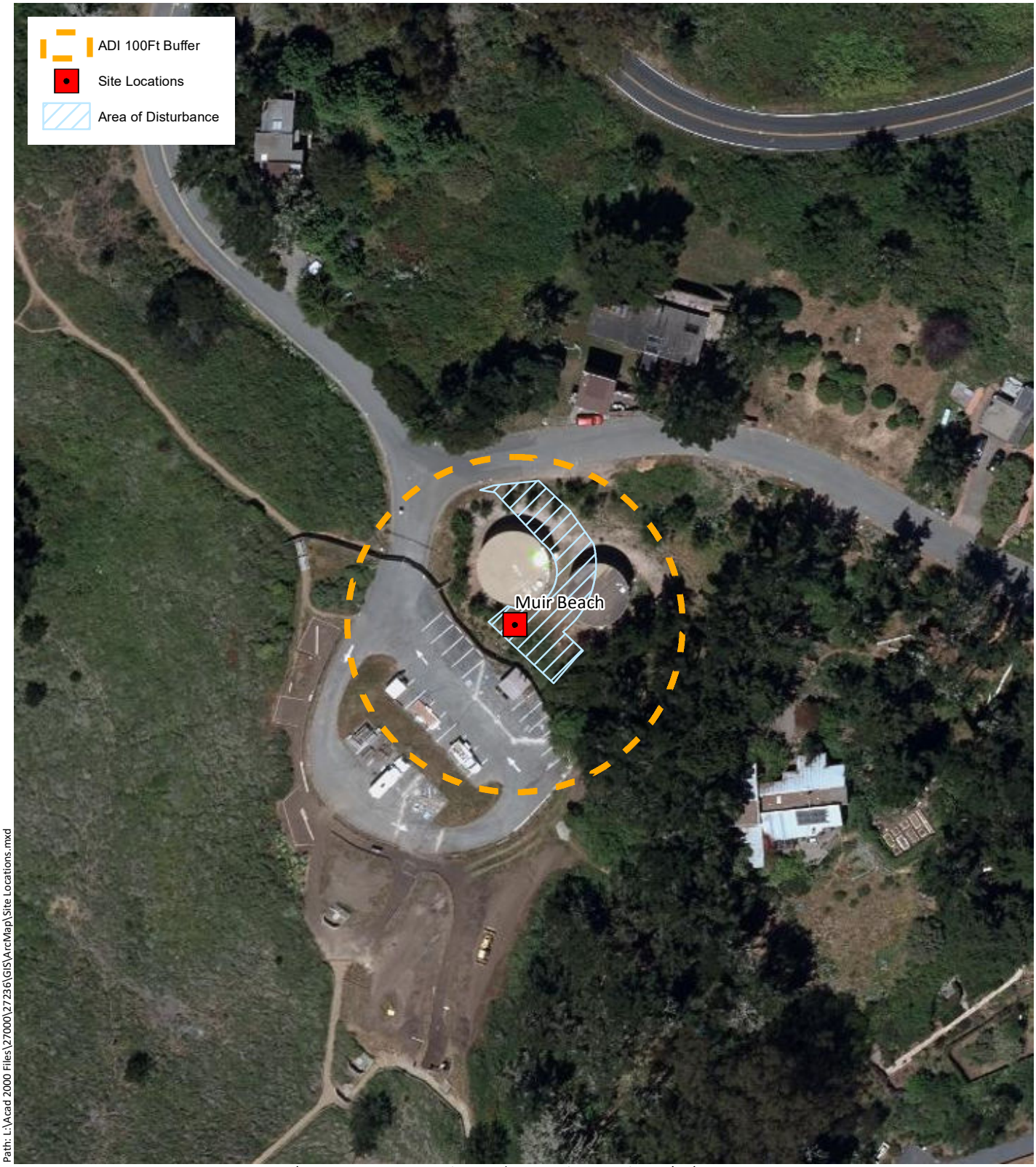
Existing Conditions: The site is currently developed with a Muir Beach Community Services District (MBCSD) water tank and is adjacent to an existing Golden Gate National Recreation Area (GGNRA) scenic overlook parking lot and public restrooms. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-54 and a site plan for the Muir Beach site can be viewed in Figure III-54, as included at the end of this section. The MERA Next Gen System would require improvements listed below, with MERA ultimately controlling about 40% of the visible equipment (when the MBCSD water tank and GGNRA restrooms are considered) at the site:

- New 60-foot-tall monopole mounted with three vertical pole antennas with the highest antenna reaching to 70 feet,
- One new 3-foot diameter microwave dish mounted on existing water tank,
- New equipment shelter measuring 150 square feet in area and 10 feet high,
- New generator,
- New six-foot-tall perimeter fence, and
- Installation of new underground power line from Seacape Drive.



Photo III-16: Site 23 Photo from within Muir Beach Community Services District Water Tank site. The foundation is from a previously demolished water tank, the NPS restroom is in the center and the Muir Beach overlook is beyond. The proposed MERA facility would be between the old foundation and the restroom.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-18. Site 23 - Muir Beach Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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24. Wolfback Ridge

The Wolfback Ridge site is an existing radio, television, and telecommunications site. The site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 200-120-02, with access provided via Wolfback Ridge Road and Sundial Road (a dirt road) in unincorporated Marin County (Figure III-19).

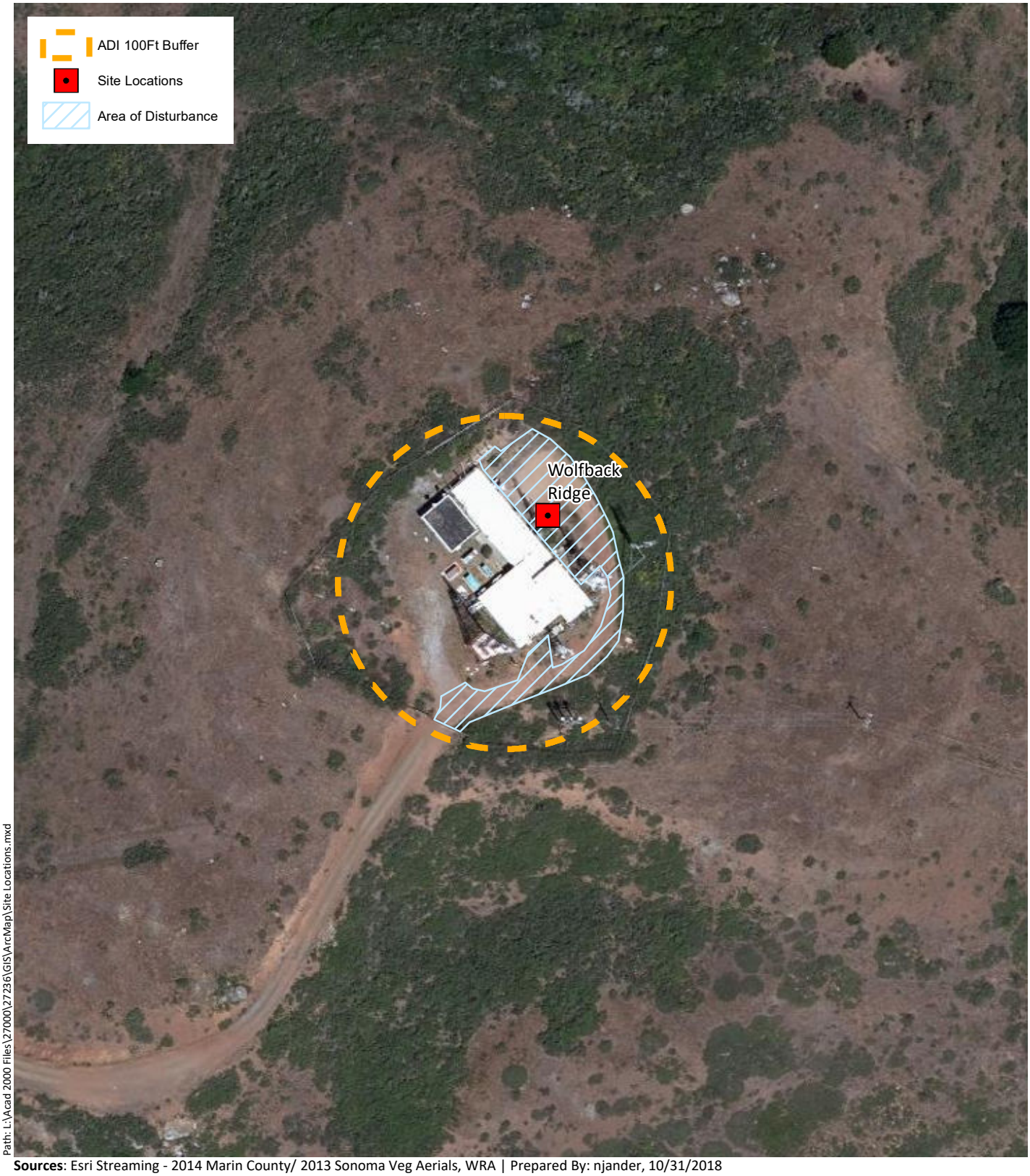
Existing Conditions: The privately owned site is currently developed as an active antenna site with 60 antennas on seven towers up to 100-feet tall. The private hilltop site (owned by Sundial Broadcasting) is surrounded by GGNRA land. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-56 and a site plan for the Wolfback Ridge site can be viewed in Figure III-57 as included at the end of this section. MERA would lease space for four vertical pole antennas and two microwave dishes on existing towers. The MERA Next Gen System would utilize the existing building and fence and would require the following improvements, with MERA ultimately controlling less than 5% of the visible components at the site:

- Reinforcement of the existing 100-foot-tall tower foundation,
- Four new vertical pole antennas on existing privately owned 100-foot tower and one six-foot diameter and one three-foot-diameter microwave dishes on existing privately owned 20-foot monopole, and
- New generator and fuel tank.



Photo III-17: Site 24 Wolfback Ridge, from Gerbode Valley Trail near Fort Cronkite looking east. Wolfback Ridge communications tower is to the right and power line towers are to the left.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-19. Site 24 - Wolfback Ridge Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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25. Mt. Burdell OTA Broadcasting

The Mt. Burdell OTA site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 125-160-01, with access provided via access roads to the west at APN 125-120-03 in unincorporated Marin County (Figure III-20).

Existing Conditions: The site is developed as a commercial broadcasting site with an existing two-story building, a 60-foot-tall monopole, and perimeter fencing. MERA is removing their equipment from the existing MERA Mt. Burdell site and adding new equipment to this OTA site, where currently no MERA equipment is installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-58 and a site plan is provided in Figure III-59, as included at the end of this section. The MERA Next Gen System would require the following improvements, with MERA ultimately controlling less than 10% of the visible components at the site:

- Reinforcement of the existing monopole foundation,
- Addition of two 6-foot-diameter microwave dishes and four vertical pole antennas to existing monopole,
- Removal of one 20-foot tall broadcast antenna from existing pole, and
- Replacement of existing HVAC unit in the existing equipment shelter.



Photo III-18: Site 25 Mt. Burdell OTA, from the north access on Burdell Mountain.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-20. Site 25 - Mt. Burdell OTA Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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26. Mill Valley Water Tank

The Mill Valley Water Tank site is proposed as a new Next Gen site and was not evaluated in the original EIR. It is located at APN 046-070-03 at the intersection of Edgewood Avenue and Sequoia Valley Road in Mill Valley (Figure III-21).

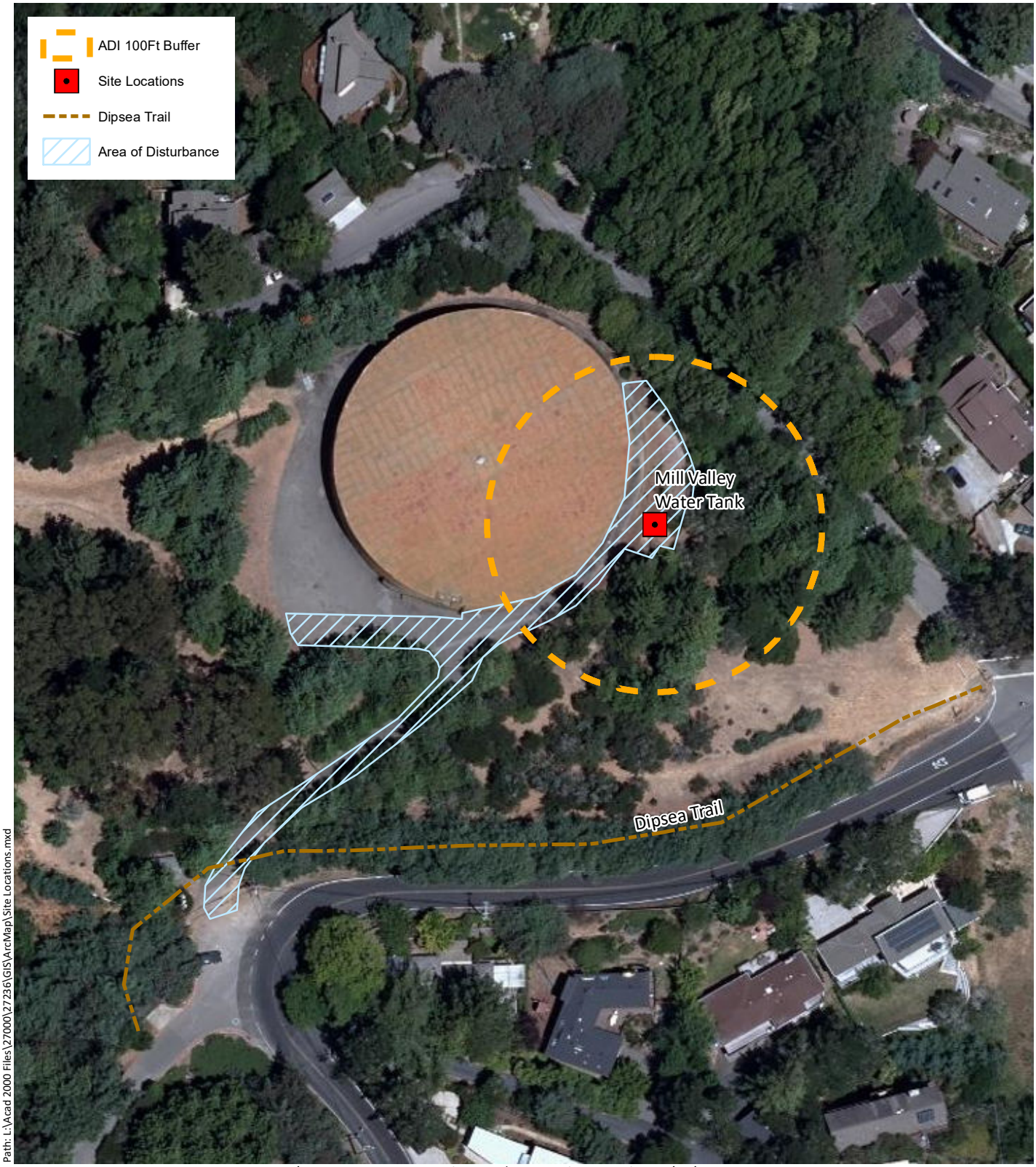
Existing Conditions: The site is currently developed with an existing 500,000 gallon MMWD water tank which is mostly screened from view by trees. No MERA facilities have yet been constructed or installed. A photo of the site is provided below.

Next Gen System Proposals: Elevations of proposed MERA equipment are provided in Figure III-60 and a site plan for the Mill Valley Water Tank site is provided in Figure III-61, as included at the end of this section. The MERA Next Gen System would require the following improvements, with MERA ultimately controlling about 20% of the visible components at the site, (as seen from the Edgewood Avenue intersection and without screening vegetation which will be retained):

- New 55-foot-tall monopole, with one 3-foot-diameter microwave dish and four vertical pole antennas that rise 11-feet above the monopole.
- New 10-foot tall retaining wall along the northeast side of the new shelter,
- New equipment shelter measuring 240 square feet in area and 10 feet high,
- New generator and fuel tank,
- New 6-foot-tall perimeter fence, and
- Installation of new underground power line beneath access road.



Photo III-19: Site 26 Mill Valley Water Tank, as seen from the access road at the Dipsea Trail.



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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure III-21. Site 26 - Mill Valley Water Tank Location Map

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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F. Construction Activities and Schedule

Construction could begin after this SEIR is certified and the final engineering design is approved by the MERA Governing Board. Sites located within the jurisdiction of the California Coastal Commission will require a coastal development permit before construction can begin on these sites. Site construction would take less than one year for the entire Next Gen System. After construction, the change-over period would last approximately one-year to allow for complete testing of the new system while the existing system provides continuous communications. Both the existing MERA system and the proposed Next Gen System would be operational during the change-over period. Upon completion of testing, original equipment would be removed and the completed Next Gen Communications system would be fully operational.

The duration of construction at any given site would vary according to the nature and extent of the proposed facilities. Most sites have only minor equipment changes, such as new antennas or microwave dishes on existing towers or monopoles. Construction duration at these sites would range from a few days to a few weeks. Removal of original equipment would take another few weeks. Other sites, shown below in Table III-2 would require monopole or tower foundation improvements to meet seismic safety standards. These sites could require deeper excavations directly adjacent to the existing monopole or tower and construction duration may take up to 8 weeks to complete the foundation work.

Table III-2. Sites with Foundation Improvements

Site #	Site Name
3	Big Rock Ridge
4	Mt. Tamalpais
5	Mt. Barnabe
8	Pt. Reyes
10	Dollar Hill
11	San Pedro Ridge
14	Mt. Tiburon
19	Stewart Point

Five new sites, which do not have existing communications infrastructure, would have more extensive construction requirements. These five sites include: Site 20 Tomales, Site 21 Coyote Peak, Site 22 Skyview Terrace, Site 23 Muir Beach, and Site 26 Mill Valley Water Tank (Site 24 Wolfback Ridge and Site 25 Mt. Burdell OTA are existing communications facilities with towers and equipment, which MERA would lease). These five sites would require grading of the immediate area around the proposed tower, a deep foundation for a new monopole, and shallow slab foundations for the small equipment building, fuel tank, and generator. Small laydown areas at the generally flat sites would receive shallow grading to remove grass and shrubby vegetation

to provide a clean assembly space for tower construction, materials, and equipment. Construction at these sites would include a new shelter building, installation of a monopole, a generator, and fuel tank. A six-foot tall perimeter fence would provide protection for each site.

Coyote Peak is the one site that would require more extensive grading of two overly steep sections of the existing 1.5-mile graded dirt access road. Access road construction would necessarily precede any site construction. Underground power lines would also be installed to serve the Coyote Peak site. At present, power is only available at lower elevation on the valley floor. At Coyote Peak, the site construction would last six months during the dry summer season.

Upon completion of all construction, Motorola would conduct testing and optimization of the system, which would take approximately one year. Regular operation of the Next Gen System would begin in 2021, and is required by 2023. The proposed project, similar to the original MERA system, is expected to operate for approximately 20 years. During that time, regular inspections and maintenance would occur on each site, requiring monthly routine maintenance trips. A summary of the construction activities and physical changes at each site is provided as Table III-3, and a preliminary construction schedule is provided as Figure III-22 below.

Table III-3. Summary of Construction Activities by Site

Note: Sites are listed in the same order as evaluated in the original EIR. Sites new to MERA for the Next Gen System are displayed in blue, current MERA sites proposed for the Next Gen System are shown in green, and sites with no color are not part of the proposed Next Gen project.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
1	**Prime Site EOF** (Emergency Operations Facility)	165-220-11	38.019167, -122.541528	29.0	Existing rooftop communications equipment at EOF with 19 existing antennas on lattice structure supporting existing dispatch systems.	New Prime Site for MERA Next Gen System. 12 Yagi-type antennas would be removed and replaced with 19 vertical pole antennas). New 3' diameter and 6' diameter microwave dishes would be placed above lattice structure.
Existing MERA Sites Proposed for Next Gen System (Green)						
2	**Civic Center**	179-270-11	37.999056, -122.531306	46.0	Existing antennas on roof, no tower. Building is on Federal Register of Historic Places and has design guidelines to be considered.	Add one new 3' diameter microwave dish on roof, no tower.
3	**Big Rock Ridge**	164-300-04	38.059194, -122.604250	1,886.0	Existing 100'' tower w 4 legs, with 12' sides. 2 Ex. Buildings, each ~20' x 20' x 9' high.	Existing Tower: Remove four microwave (MW) dishes. Reinforce foundation. Add four vertical pole antennas; remove one pole and two panel antennas. Add one new 20' pipe mount to the existing building with two microwave dishes, one 6' diameter and one 3' diameter, and one 6' microwave dish on the side of the existing building. Alternative Mounting Locations for Three MW Dishes: 1 - Remount all dishes on existing tower (preferred); 2 - Mount one dish on the side of the existing building. Mount two dishes on a 30' tall tapered monopole near the base of the existing tower.
4	**Mt. Tamalpais**	197-120-31	37.929006, -122.587084	2,516.0	Existing 60' tall monopole is among eight others at developed mountain top radio operations site surrounded by 28 microwave dishes on 8-10' poles. 2 existing concrete buildings: MERA building is H9', W15', L 20'. Second building is 30' diameter with dome shaped roof.	4 antennas added, 2 antennas removed on existing monopole and reinforce foundation. New MERA generator, propane tank, replace HVAC in existing MERA building. Replace five 8'-10' tall lattice towers radiating around monopole with 20' tall lattice towers. 7 dishes added, 5 dishes removed.
5	**Mt. Barnabe**	168-240-01	38.026751, -122.716321	1,470.0	Existing County fire lookout and radio tower. Existing 70' tall 3 leg tower with 12' wide sides. Antennas reach to 83' height. Existing 25' tall x 2' diameter microwave monopole. Existing shelter and emergency generator.	3 antennas added, 2 antennas removed on existing tower. 2 microwave dishes added, 3 microwave dishes removed on existing monopole. Reinforce tower/ monopole foundations, replace HVAC units in existing building.
6	**Bolinas Fire Station**	193-030-20	**Dropped from Original MERA System - Not Proposed for Next Gen System**			No action.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
7	**Bolinas Ridge**	197-120-30	**Dropped from Original MERA System - Not Proposed for Next Gen System**			No action.
8	**Point Reyes Hill**	109-160-23	38.079836, -122.866944	1,324.0	Existing hilltop site occupied by large, visually concealed FAA VORTAC antenna surrounded by Point Reyes National Seashore. 2 existing CBA buildings within FAA fenced enclosure. One existing shelter in MERA enclosure. Two existing 17' tall x 12" diameter monopoles with multiple antennas, and one 29' wood utility pole with one Yagi-type antenna.	Replace existing 29' wood utility pole with a new 40' monopole to support reinstalled Yagi-type antenna and two new 3' diameter microwave dishes. New cable bridge between E. building and new monopole. Replace HVAC units in existing building. 3 antennas added, 2 antennas removed on existing monopole and reinforce foundation.
9	**Forbes Hill**	010-261-02	**MERA Decommission - Not Proposed for Next Gen System**			MERA would remove the building, generator and fuel tank, the tower, dishes, antennas and perimeter fence and regrade the site. Use of the site as a communications facility would cease.
10	**Dollar Hill**	011-051-02	37.980262, -122.529354	663.0	60' tall, 3 Leg tower with 12' face width. 2 existing CBA buildings. Existing water tank and pump.	2 microwave dishes and 10 antennas added, 2 microwave dishes and 3 antennas removed on existing tower and reinforce foundation.
11	**San Pedro Ridge**	015-250-21	37.990205, -122.500139	1,062.0	100' tall, 3 leg tower each with 12' face width. Existing concrete building 9' x 15' x 9H.	2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed on existing tower and reinforce foundation.
12	**Mt. Burdell*** (#25 is Next Gen OTA site)	125-180-17	**MERA Decommission - Not Proposed for Next Gen System**			MERA will not renew the lease at this site, will remove all MERA equipment, and will perform no additional maintenance. The site will remain operational and will be maintained by existing owners and lessees.
13	**Novato Police Dept**	153-061-28	**Dropped from Original MERA System - Not Proposed for Next Gen System**			No action. Microwave link and dispatch center owned by City of Novato to remain.
14	**Mt. Tiburon**	058-261-39	37.890440, -122.464796	518.0	Existing 60' tall monopole and another 22' tall monopole. Existing equipment shelter and generator. Two 50’ diameter MMWD water tanks and water equipment shelter	2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed on existing towers and reinforce existing tower foundations. Replace HVAC in existing shelter.
15	**Mill Valley City Hall**	028-014-16	**MERA Decommission - Not Proposed for Next Gen System**			All MERA equipment to be removed.
16	**Mill Valley Public Safety Building**	030-250-01	**MERA Decommission - Not Proposed for Next Gen System**			All MERA equipment to be removed.
17	**Bay Hill Road**	100-190-07	**MERA Decommission - Not Proposed for Next Gen System**			MERA will not renew the lease and remove all MERA equipment, no additional maintenance will be performed. The site will remain operational for existing owners and lessees.

Site #	Site Name	APN	Coordinates	Ground Elevation (ft)	Existing Infrastructure at Site	Proposed Physical Changes at Site for MERA Next Gen System
18	**Sonoma Mountain**	136-190-09	38.348389, -122.578333	2,448.0	Hill top has 3 buildings and two towers. 190' tower is 3 leg guyed lattice with 20" face. 40' microwave tower is 3 leg, w/ face width of 12'.	2 microwave dishes added to existing 40' microwave tower.
19	**Stewart Point** (CEQA Amendment)	188-090-15	37.930389, -122.720194	779.0	Existing 35' tall x 12" dia. monopole. Existing equipment shelter. ~10' x 15' x 9"H with generator.	1 microwave dish and 3 antennas added, 1 microwave dish and 2 antennas removed to/from existing monopole and reinforce foundation. Replace HVAC in existing building.
New Sites Proposed for Next Gen System (Blue)						
20	**Tomales** (Categorical Exemption)	100-050-42	38.261015, -122.903629	487.0	Existing Cell tower and equipment shelter sited to minimize visual impacts.	Propose new 75' tall monopole, new shelter, fence, generator, and fuel tank. New antennas include 2 microwave dishes and 8 antennas. New below ground power cable from SE corner of site to follow same path as existing underground line.
21	**Coyote Peak** (Walker Creek Ranch)	106-110-03	38.185833, -122.825167	968.0	Two water well pump heads on ridgetop within actively grazed range lands. Controlled access through Walker Creek Ranch, a Marin County. Outdoor Education Facility.	Propose new 60' tall monopole, shelter, fence, generator, and fuel tank. New antennas include 2 microwave dishes and 3 antennas. 1.5 Mile road requires regrading with cuts 3-8 feet deep in short areas, and widening of three turns. Underground power line, from valley floor to ridge, to be under the road.
22	**Skyview Terrace**	165-220-02	38.017000, -122.546000	387.0	Next to existing MMWD water tank near Lucas Valley Road. Visible from Hwy 101.	Propose new 35' tall monopole with 2 microwave dishes, shelter, fence, generator, underground power line, and fuel tank.
23	**Muir Beach**	199-262-11	37.863289, -122.585512	367.0	Existing Muir Beach Community Services District Water Tank. Next to existing GGNRA scenic overlook parking lot and public restrooms.	Propose new 60' tall monopole with 3 antennas, a shelter, fence, generator and fuel tank, plus one new MW dish on existing water tank.
24	**Wolfback Ridge**	200-120-02	37.851085, -122.498376	1,115.0	Very active antenna site with multiple towers on private hilltop site surrounded by GGNRA.	Propose 2 microwave dishes and 4 antennas on existing 100' tower, new generator, and fuel tank. Reinforce existing tower foundation. Propose use of existing building and fence.
25	**Mt. Burdell OTA**	125-160-01	38.149888, -122.593239	1,573.0	Existing communications site with existing 60' tall monopole. MERA is moving from existing Mt. Burdell site (#12).	Will use existing 60' monopole, remove one antenna, and add 2 additional microwave dishes and 4 additional antennas. Reinforce existing tower foundation and replace existing HVAC in existing shelter.
26	**Mill Valley Water Tank**	046-070-03	37.902735, -122.558010	565.0	Existing MMWD 500,000 Gal Water Tank in trees. At Sequoia at Edgewood.	Propose new 55' tall monopole, with 1 microwave dish and 4 antennas on the south side of the existing water tank. A new shelter, fence, generator, and fuel tank below a wall and in the trees proposed on east side of existing water tank.

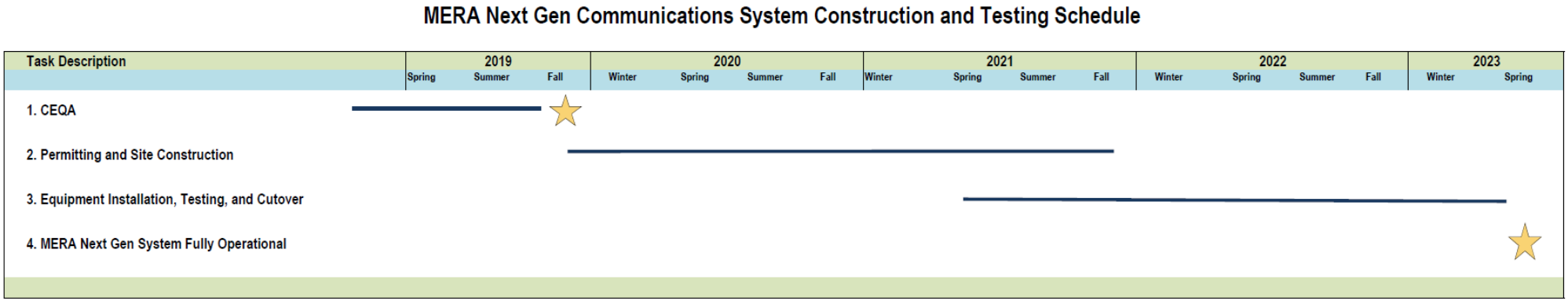


Figure III-22. Preliminary MERA Construction and Testing Schedule

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G. Best Management Practices

The following Best Management Practices (BMPs) will be implemented by MERA staff and all contractors throughout the construction and operational phase of the project, as relevant.

Fuel Containment BMPs:

Transportation of Fuels:

- All project equipment will be inspected for leaks prior to being brought on-site and regularly throughout construction.
- Prior to transporting fuels, vehicles will be inspected for leakage and other potential safety problems.
- Vehicles carrying fuels will be equipped with: Shovels, barrier tape, absorbent socks or pads, four- to six- millimeter plastic bags or heavy-duty trash bags, personal protective clothing (e.g., gloves), and absorbent pads to contain a small spill should one occur during transport.
- All fuels will be properly signed (placard) and/or marked and properly containerized and labeled at all times, including during transportation.
- Transfer of materials from large to small containers will not be done by hand pouring, but will be accomplished using appropriate equipment including pumps, hoses, and safety equipment.

Construction Phase:

Equipment will be fueled, to the extent possible, at local gas stations and material/staging yards. In cases where it is not feasible to transport equipment off of the site for fueling purposes, a fueler/oiler truck or pickup with a bulk tank, will fuel the piece of equipment on-site.

Routine equipment maintenance will occur at designated staging areas or commercial facilities. In the case of equipment failure on-site, maintenance may need to occur. Any equipment maintenance conducted on-site will be done with care to ensure that hazardous materials are not spilled during the maintenance activities. In addition, additional spill control materials will be on-site to provide adequate protection to soil and other resources from contamination.

Storage of Fuels:

Fuels will only be stored in the designated material yards. The Prime Construction Contractor will not be allowed to store large containers without approval from MERA.

Precautions at the material yard will include limiting the quantity of fuels stored, fortifying barriers or providing additional containment between fuel materials, and using trained personnel to monitor activities at the yard. Clean-up materials, including absorbent spill pads and plastic bags (spill kits) will also be stored in these areas.

- Storage Containers: Containers will be compatible with the wastes stored in the containers. If the container is damaged or leaks, the waste will be transferred to a container in good condition. The Prime Construction Contractor will inspect containers at least weekly to discover any leaks in the containers or the containment systems. Containers used for transportation will comply with USDOT requirements.
- Incompatible Wastes: Wastes that are not compatible with other wastes will not be stored in the same container or in an unwashed container that previously held an incompatible material.
- Ignitable or Reactive Wastes: Wastes that may ignite or are reactive will be located at least 50 feet from the material yard (fly yard) property line and "NO SMOKING" signs will be posted in conspicuous places wherever there is a hazard from ignitable or reactive waste.
- Container Management: Containers holding hazardous waste will be kept closed during transfer and storage, except when it is necessary to add or remove waste.
- Secondary Containment: Secondary containment will consist of bermed or diked areas that are lined and capable of holding 110 percent of the volume of the stored material and will be provided for fuel and oil tanks stored on-site.

The Prime Construction Contractor will be responsible for maintaining an adequate inventory of spill response and clean-up materials at project work areas to provide for quick and immediate response to spills.

This equipment includes a minimum of two spill kits (kept in 55-gallon drums or compatible containers) containing the following items and available on-site at the material yard:

- Shovels
- Absorbent pads/materials
- Personal protective gear
- Medical first-aid supplies
- Bung wrench (non-sparking)
- Phone list with emergency contact numbers
- Storage containers
- Communications equipment
- All fuel and service vehicles will carry a minimum 20 pounds of suitable absorbent material to handle potential spills.
- Radios or other communication equipment will be maintained in construction vehicles and other easily accessible locations so that project personnel can quickly report spills.

Wildfire BMPs:

- Information will be kept on-site and discussed at a tailboard before each construction day regarding precautions to be taken during high fire danger, a list of tools, available

communications, and water supply to be kept on hand, as well as other actions to reduce ignition risk and to ensure rapid control of a fire during the early stage.

- All earthmoving and portable equipment with internal combustion engines will be equipped with spark arrestors to reduce the potential for igniting a wildland fire.
- Portable tools powered by gasoline-fueled internal combustion engines will not be used within 25 feet of any flammable materials.
- Flammable materials will be removed to a minimum distance of 10 feet from any equipment that could produce a spark, fire, or flame.
- The Marin County Fire Department will approve final Project plans to ensure adequate fire access. In addition, as a condition of Project approval, fire flow tests will be performed and verified by Marin County Fire Department to ensure compliance with the Fire Code.

RF Safety BMPs:

- MERA is responsible for ensuring that all site owners post the appropriate NOTICE, CAUTION, or WARNING sign at the main site access points and other locations as required. Signs will inform ***everyone*** who has access to this site that beyond posted signs there may be RF levels in excess of the limits prescribed by the FCC. In addition to RF Advisory Signage, RF Guideline Signage will be posted at the main site access points. The signs below are examples of signs meeting FCC Guidelines. Signs will be posted at other locations as required by FCC Guidelines.









- MERA is responsible for coordinating with all site owners to ensure that site doors remain locked or appropriately controlled to deny access to the general public.
- MERA is responsible for ensuring that all individuals needing access to the main area of any site, or the area indicated to be in excess of General Public MPE, will wear a personal RF Exposure monitor, successfully complete proper RF Safety Awareness training, and have and be trained in the use of appropriate personal protective equipment.
- MERA is responsible for ensuring that all individuals needing access to the main area of any site will be instructed to read and obey all posted placards and signs.
- MERA is responsible for ensuring that all sites will be routinely inspected with the addition of any antennas or upon any change to the RF environment.

H. Permits

MERA is subject to all applicable State and federal permits, but as a Joint Powers Authority operating under the laws applicable to the County, MERA is not subject to county and local permitting requirements. The applicable state and federal permits for the MERA Next Gen System vary depending upon the proposed construction at each of the sites. Below is a list of applicable construction permits as they affect each site:

Coastal Development Permits

Coastal Development Permits are state permits issued for projects within the Coastal Zone issued by the Marin County Community Development Agency (CDA) as an agent of the California Coastal Commission. CDA reviews project applications for consistency with the Local Coastal Programs (LCP) Units 1 and 2 in Marin County. The LCP is intended to ensure that the local government's development plans, policies, and ordinances conform to the Coastal Act of 1976. The Act's goals are to protect and conserve the state's coastal resources and to maximize public use and enjoyment of them. The program's policies and objectives address land use for new development, assessment of hazard areas, shoreline access and natural habitat protection. The full policy language can be found in Appendix D.

LCP-Unit 1 regulates land use in the southern portion of Marin County, which includes Stewart Point (Site 19) and Muir Beach (Site 23). Stewart Point operates under an existing coastal permit, but Muir Beach would need to apply for a Coastal Development Permit under LCP-Unit 1.

LCP-Unit 2 regulates land use in the northern portion of Marin County, which specifically affects Point Reyes Hill (Site 8), and Tomales (Site 20). A Coastal Development Permit was acquired for the proposed Tomales site after it was approved by MERA in 2012, but the permit was allowed to expire in anticipation of the site being included in this Draft SEIR in order to assess the whole of MERA's Next Gen project. The Point Reyes Hill site operates under an existing right-of-way permit issued by the National Park Service. MERA will submit a new "Application for Transportation and Utility Systems and Facilities on Federal Lands" when proposed site changes and related environmental impacts are confirmed.

Waste Discharge Requirements (WDR) Permit

The WDR is issued by the San Francisco Regional Water Quality Control Board (RWQCB) for any portion of the project that affect waters of the state under the Porter Cologne Act. Waters of the state are broadly defined and generally affect all water. In terms of permitting most of MERA's antenna sites do not generate appreciable runoff, nor are they sited near wetlands, surface waters, or any other areas of water concentration.

The road to Coyote Peak (Site 21) is the one exception, as temporary fills would affect minor wetlands associated with roadside ditches that are otherwise in uplands. The existing road to Coyote Peak also crosses two small upland drainages that currently flow through culverts under the road. Temporary road widening of about four additional feet, upstream of the existing culvert, would accommodate larger than usual construction equipment, and would be temporarily bridged with steel plates to keep fill from entering these two upland seasonal drainages, particularly below

designated top-of-bank lines. The RWQCB determines at its discretion if a WDR Permit is required.

Unites States Army Corps of Engineers (Corps) 404 Permit to Fill Wetlands

The Corps permit would be issued by the San Francisco regional office and is typically required to fill any waters of the U.S. There is however an exception for wetlands associated with roadside ditches in uplands. For the minor wetland fills on Coyote Peak Road, MERA would qualify for the exception; however, confirmation is always at the discretion of the Corps.

California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (SAA)

CDFW issues SAA's when there are impacts to streambeds that are below top-of-bank. At Coyote Peak, the two four-foot sections of streambeds temporarily affected by road widening for construction would be temporarily shaded, but because they would be bridged, there would be no fill affecting any area below top-of-bank. CDFW typically does not provide advance confirmation that a permit would NOT be required. Marin County offers a permit review process with all permitting agencies to provide advance feedback for project proponents in advance of permitting.

I. FIGURES

Table III-4 below provides a reference list of all site plan and elevation figures for each of the 18 MERA Next Gen sites referenced throughout this chapter of the SEIR. Figures III-1 through III-22 (the Next Gen configuration overview and site-specific location figures) are positioned throughout the Project Description immediately after they are referenced. Figures III-23 through III-61 (site-specific elevation figures and site plans) are located sequentially below.

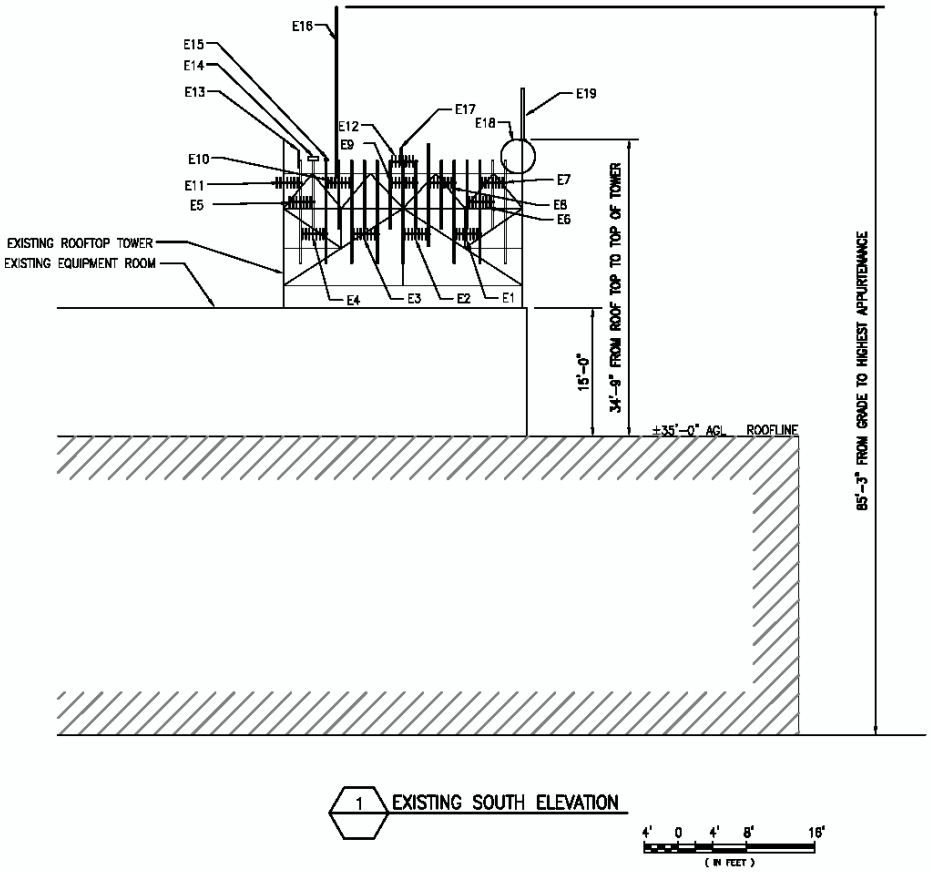
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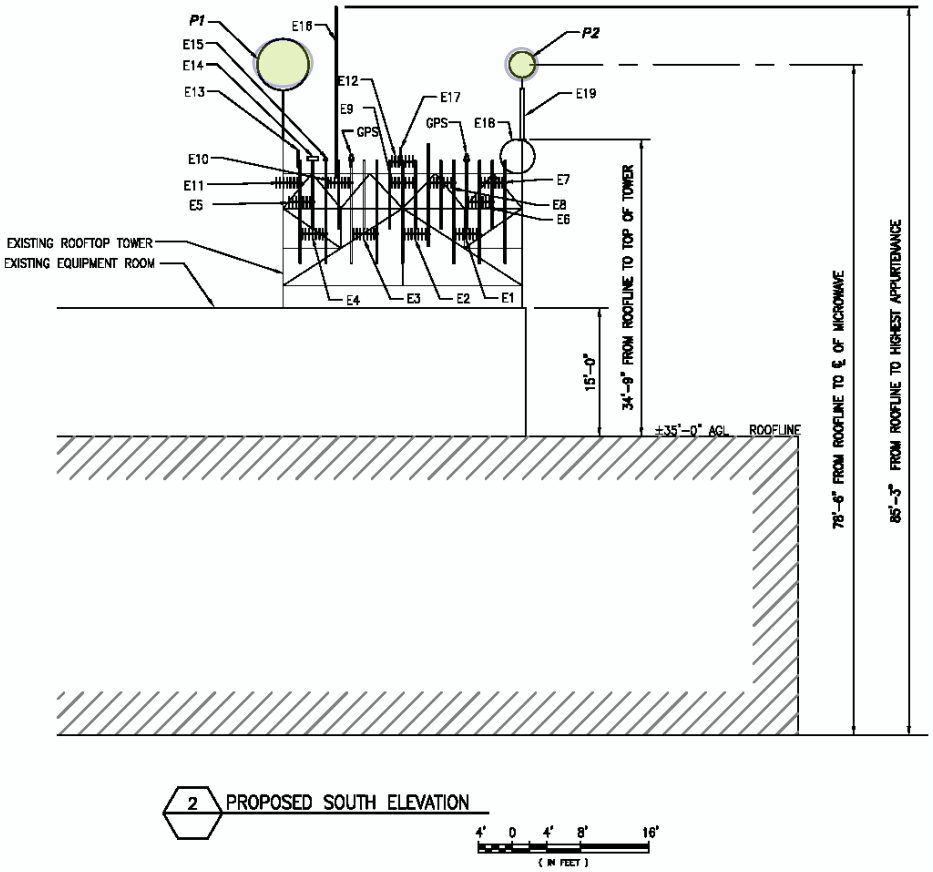
Table III-4. Reference Table of Site Plan and Elevation Figures

Note: Sites new to MERA for the Next Gen System are displayed in blue, current MERA sites proposed for the Next Gen System are shown in green.

Ch. V Section	Site #	Site Name	Location Figure #	Elevation Figure #	Site Plan Figure #
		Next Gen Overview	1	N/A	N/A
A	1	Prime Site EOF	2	23	N/A
B	2	Civic Center	3	24	25
C	3	Big Rock Ridge	4	26	27
D	4	Mt. Tamalpais	5	28-29	30
E	5	Mt. Barnabe	6	31	32
F	8	Point Reyes Hill	7	33	34
G	10	Dollar Hill	8	35	36
H	11	San Pedro Ridge	9	37	38
I	14	Mt. Tiburon	10	39	40
J	18	Sonoma Mountain	11	41	42
K	19	Stewart Point	12	43	44
L	20	Tomales	13-14	45	46-47
M	21	Coyote Peak	15-16	48	49-50
N	22	Skyview Terrace	17	51	52-53
O	23	Muir Beach	18	54	55
P	24	Wolfback Ridge	19	56	57
Q	25	Mt. Burdell OTA	20	58	59
R	26	Mill Valley Water Tank	21	60	61
		Preliminary Construction Schedule	22	N/A	N/A

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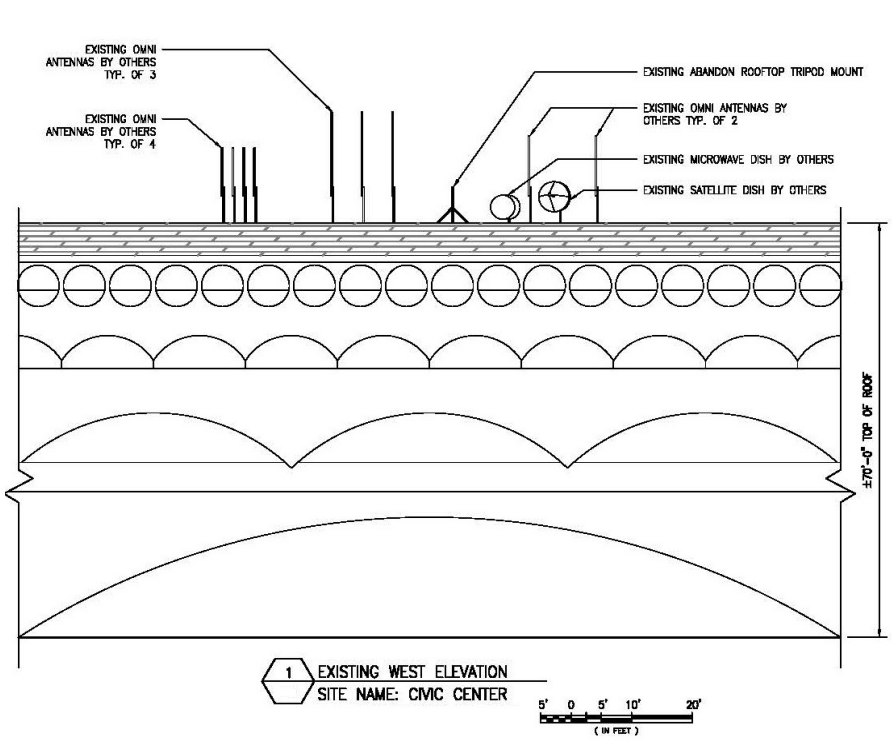


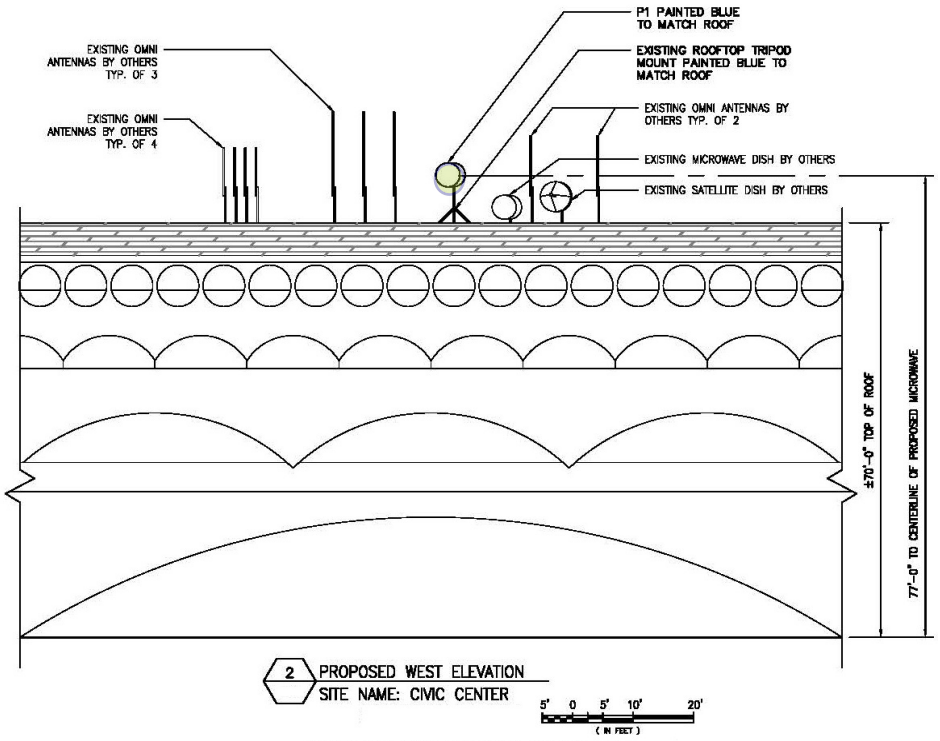


Source: Motorola, 2018

Figure III-23. Site 1 - Prime Site EOF Existing and Proposed Elevations

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PROPOSED ROOFTOP MERA EQUIPMENT

ANTENNA #	ANTENNA MODEL	LOADING HEIGHT (FT.) BASE	LOADING HEIGHT (FT.) TOP	ANTENNA SIZE (FT.)	TYPE	AZIMUTH	QUANTITY	LINE TYPE	NOTES	ANTENNA OWNED BY
P1	SC3-W100AC	77'-0"	77'-0"	3'ø	DISH	212.2°	1	EW105	MT. TAM	MERA
--	--	--	--	--	--	--	--	--	--	--
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Source: Motorola, 2018

Figure III-24. Site 2 - Civic Center Existing and Proposed Elevations

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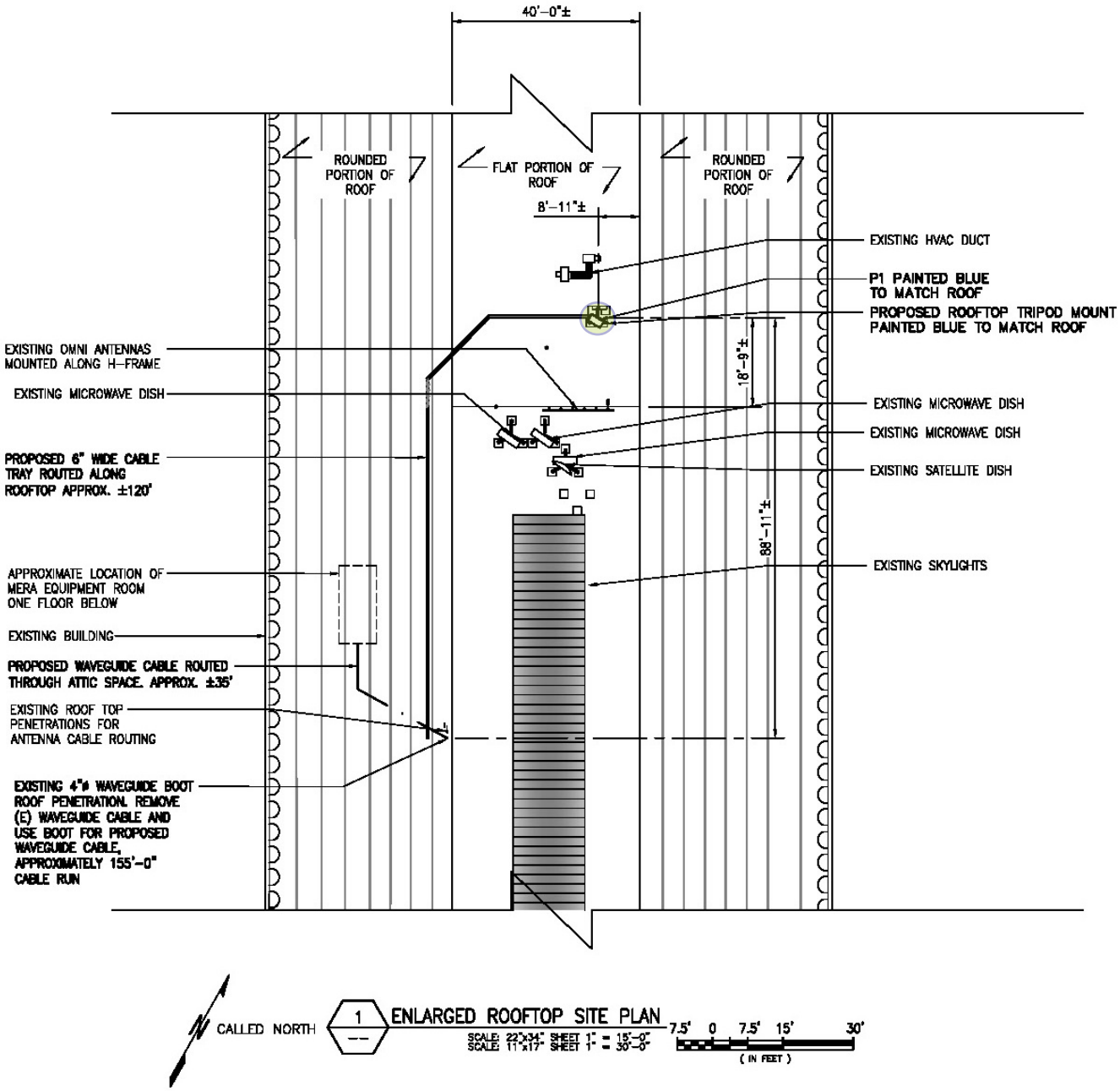
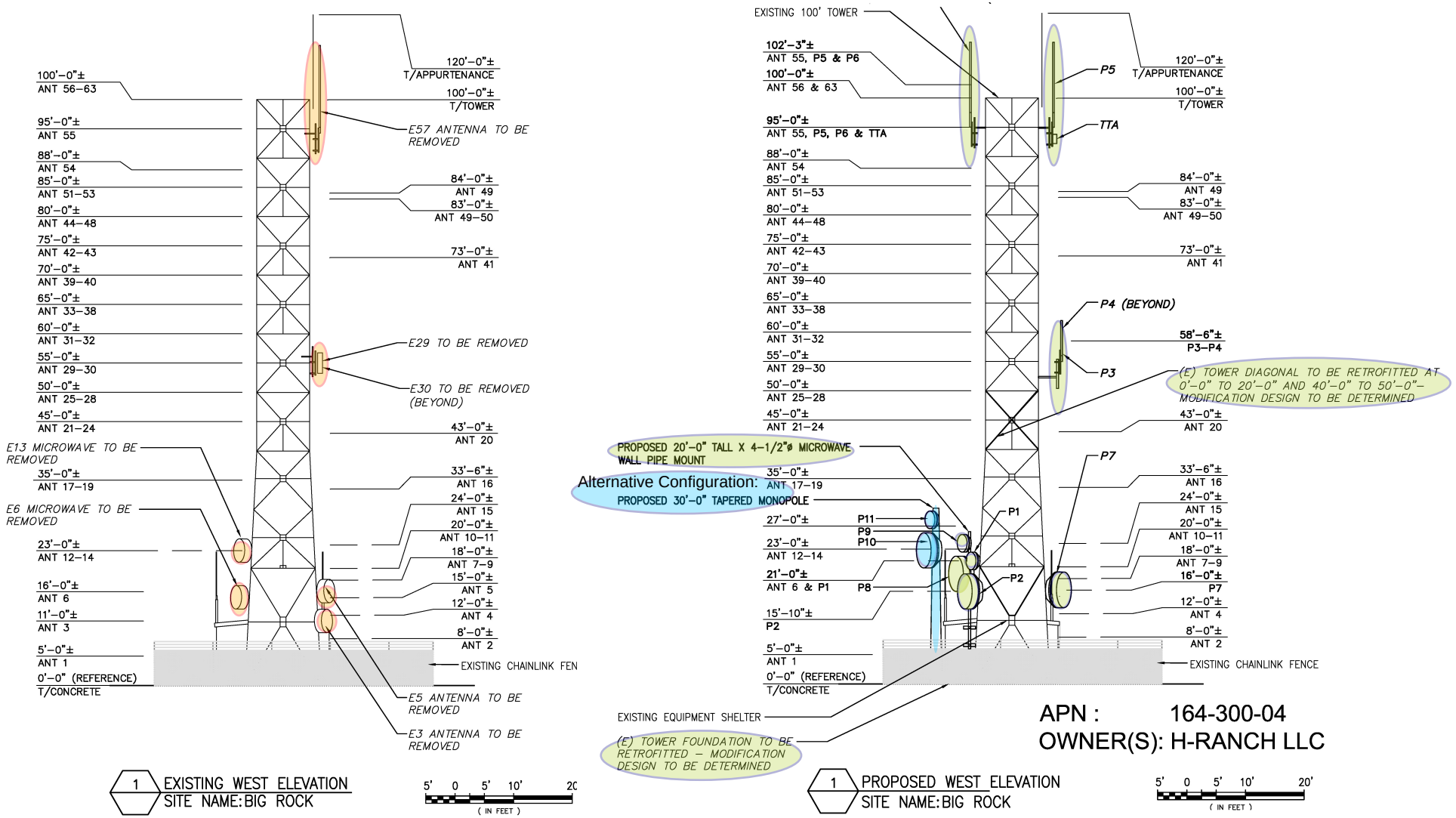


Figure III-25. Site 2 - Civic Center Site Plan

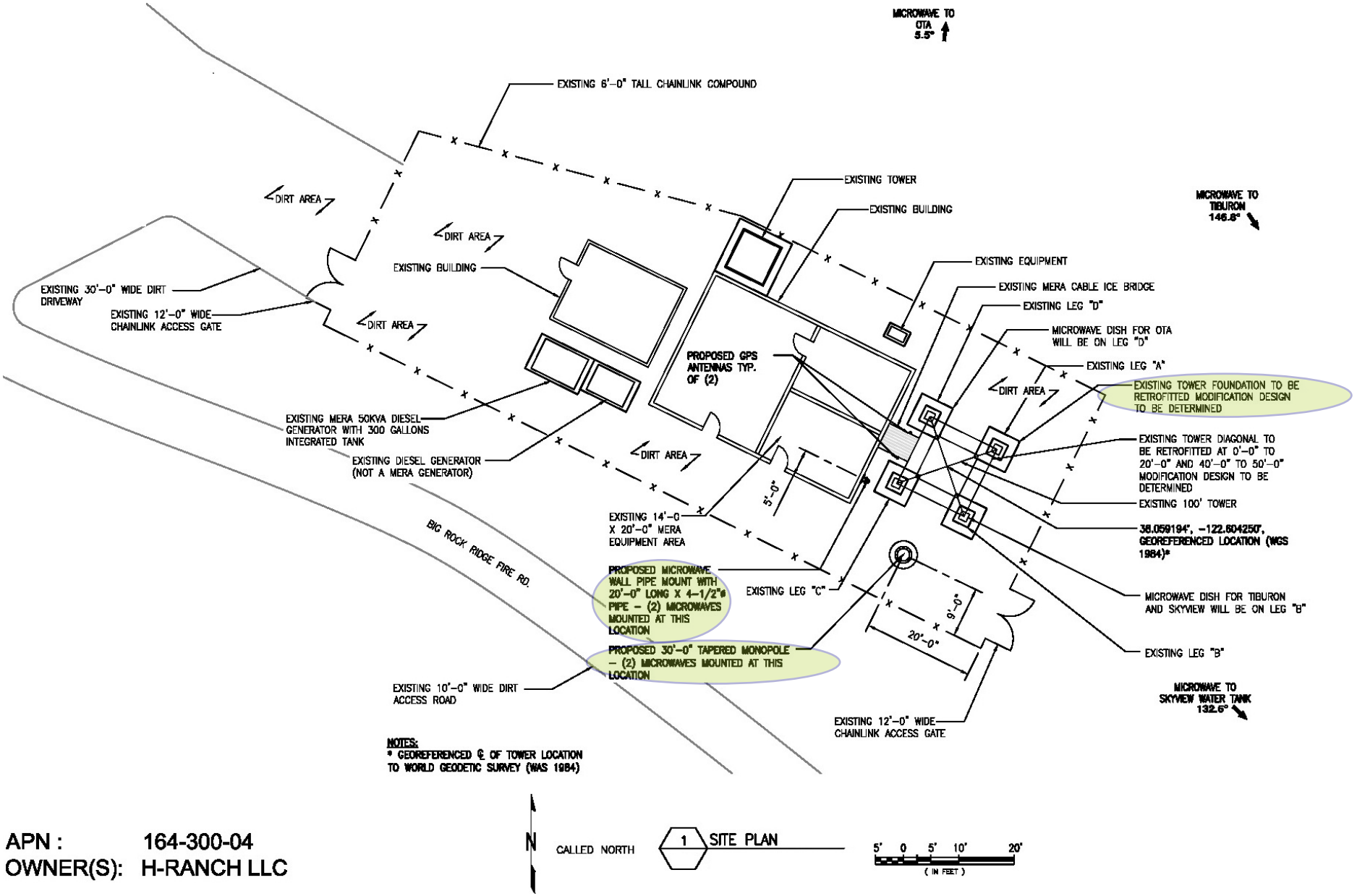
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Source: Motorola, 2018

Figure III-26. Site 3 - Big Rock Ridge Existing and Proposed Elevations

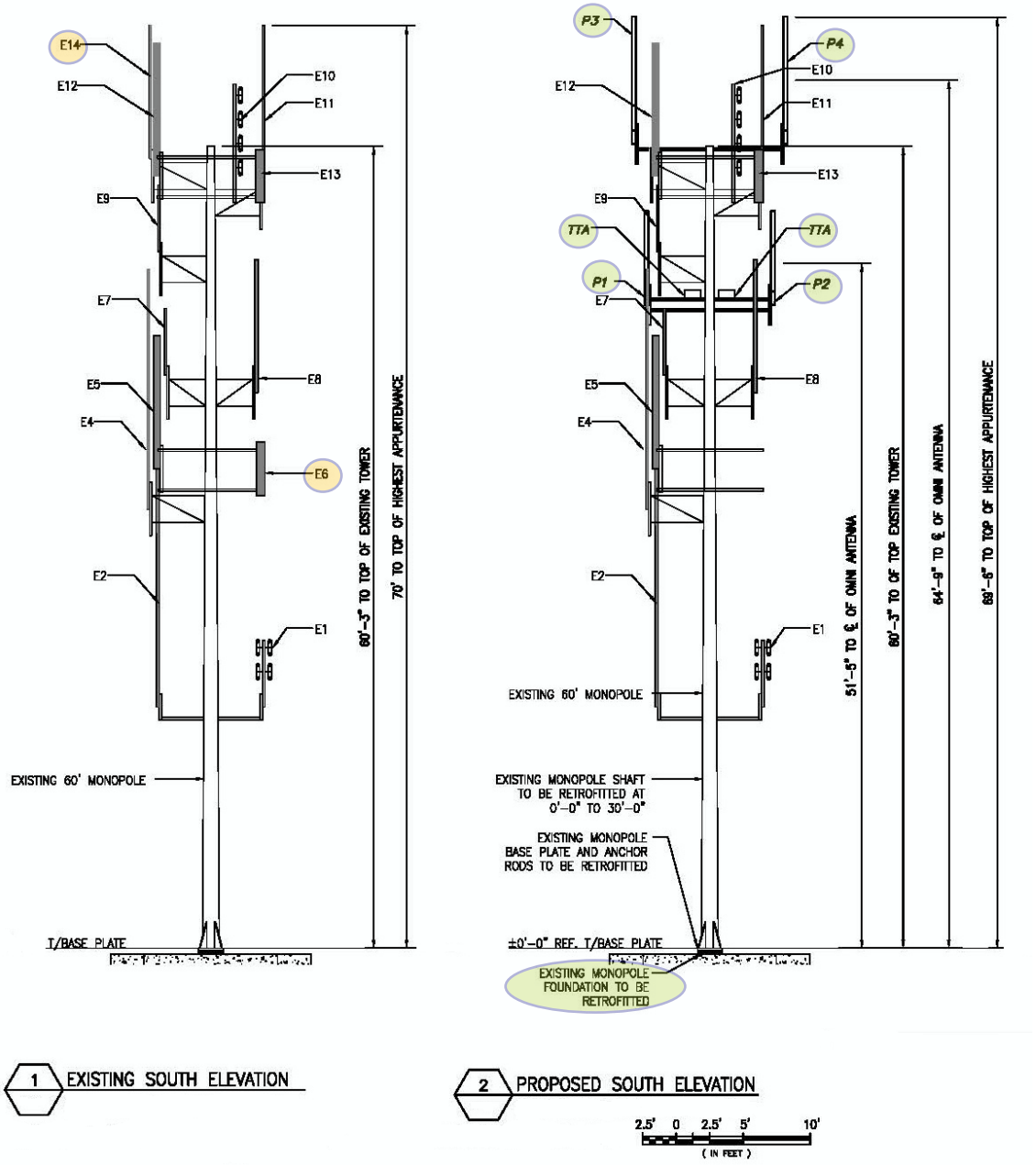
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Source: Motorola, 2018

Figure III-27. Site 3 - Big Rock Ridge Site Plan

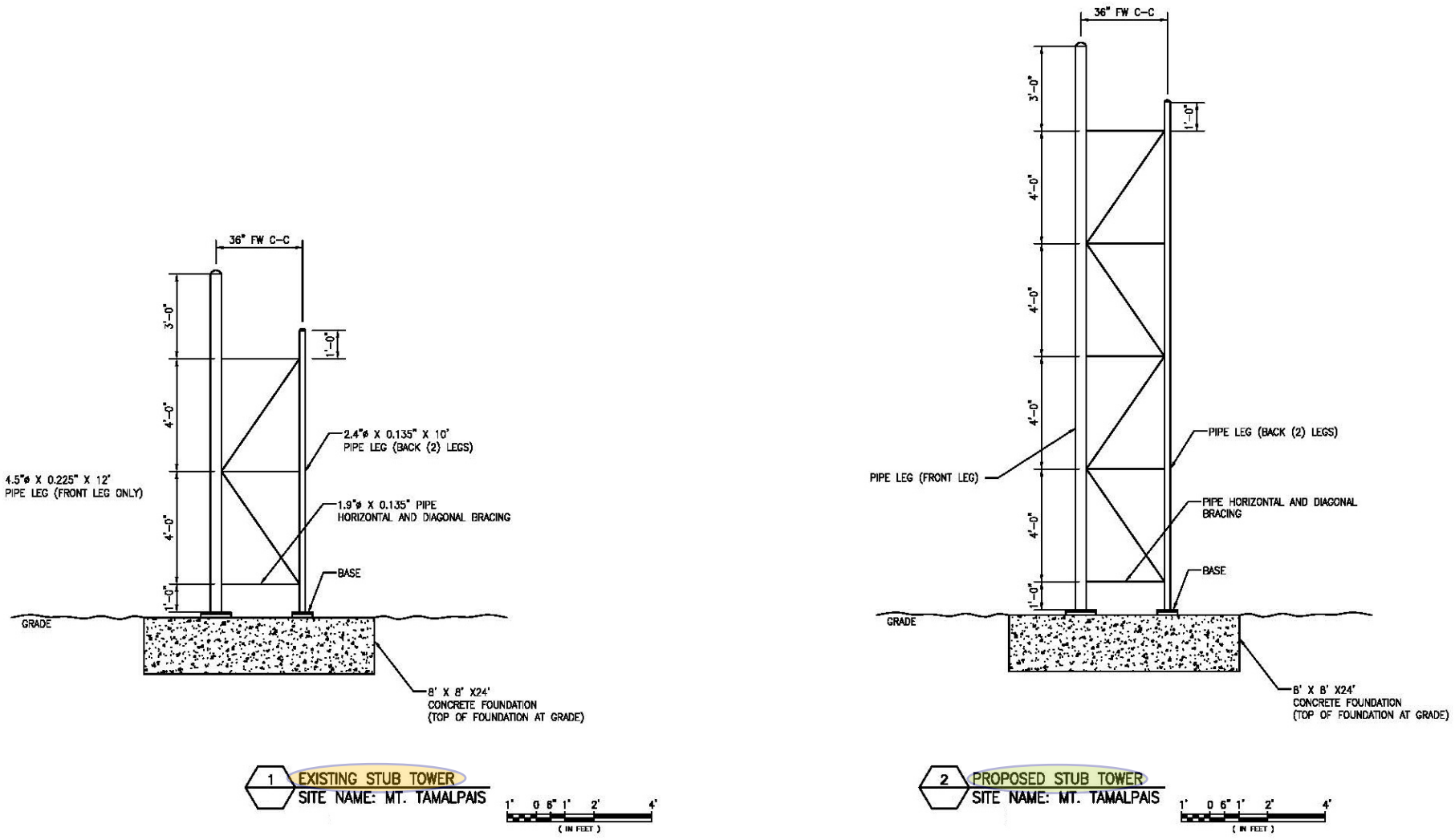
ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-28. Site 4 - Mt. Tamalpais Existing and Proposed Elevations

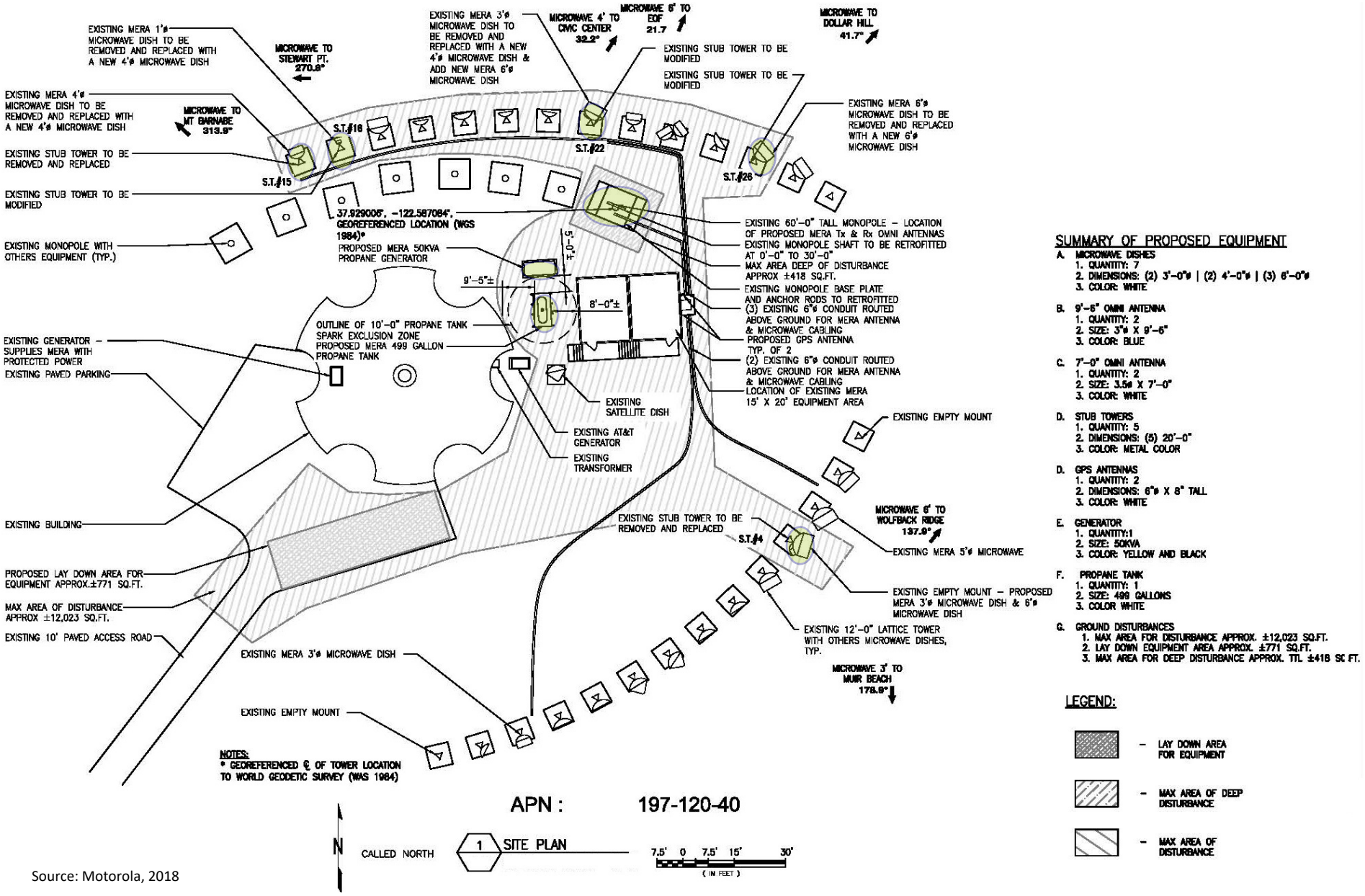
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-29. Site 4 - Mt. Tamalpais Existing and Proposed Stub Tower Elevations

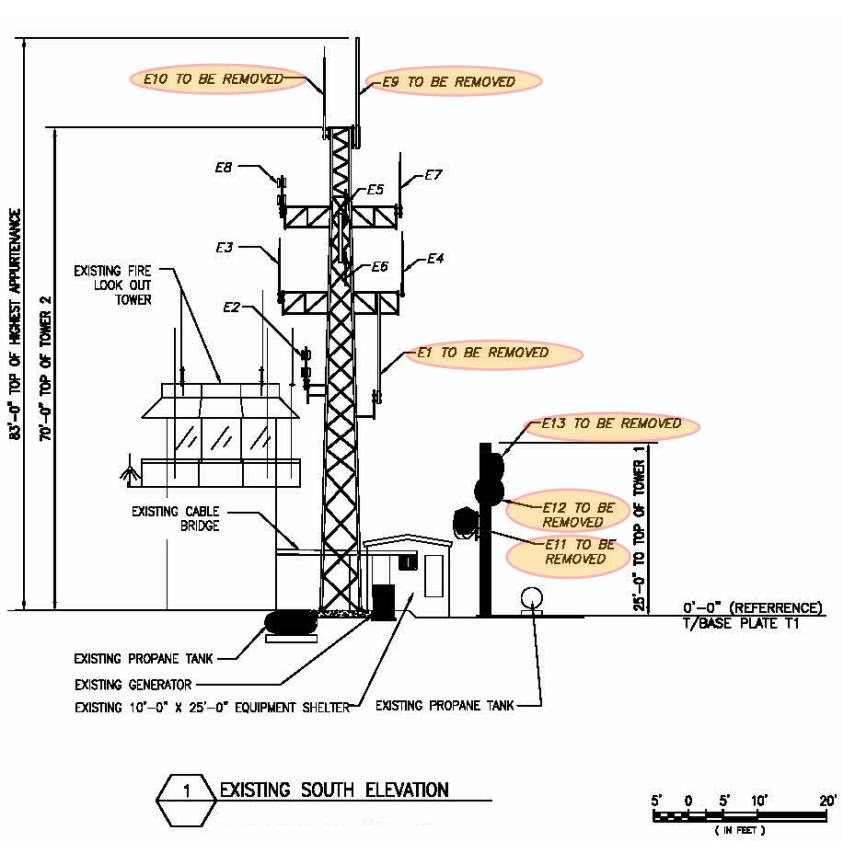
wra
ENVIRONMENTAL CONSULTANTS

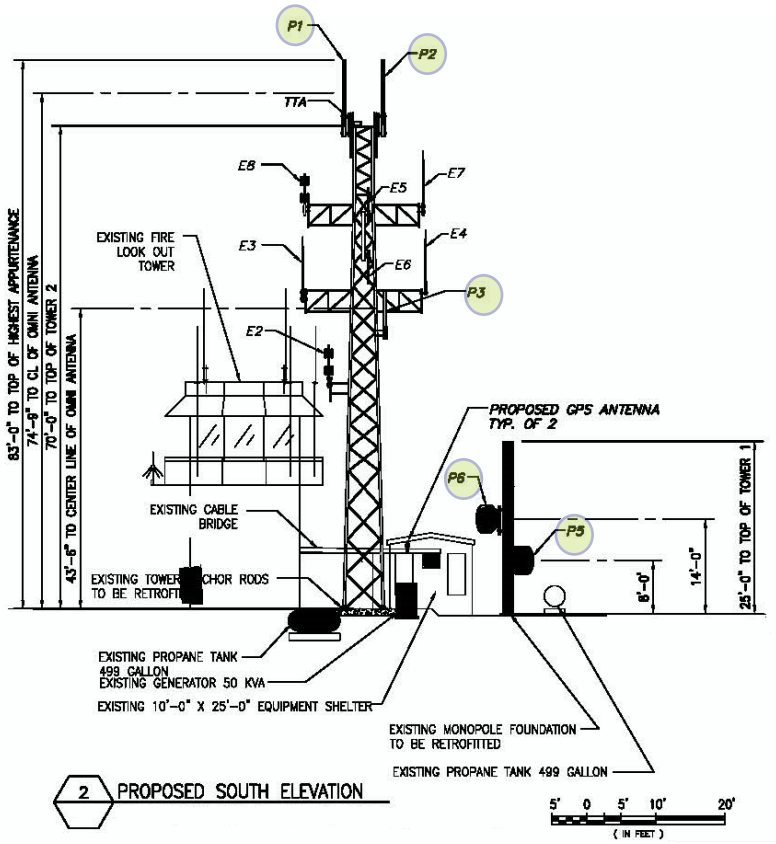


Source: Motorola, 2018

Figure III-30. Site 4 - Mt. Tamalpais Site Plan

wra ENVIRONMENTAL CONSULTANTS

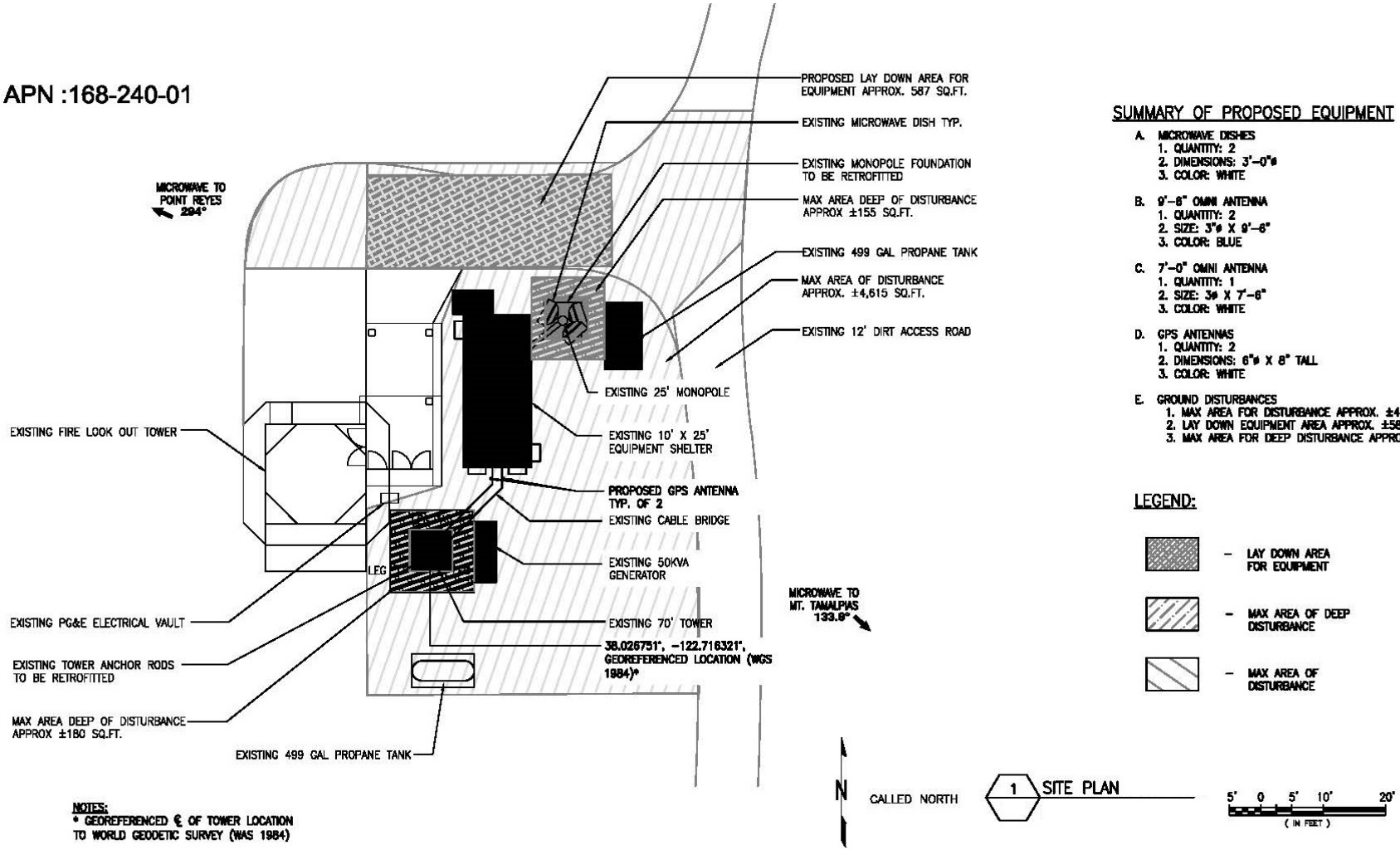




Source: Motorola, 2018

Figure III-31. Site 5 - Mt. Barnabe Existing and Proposed Elevations

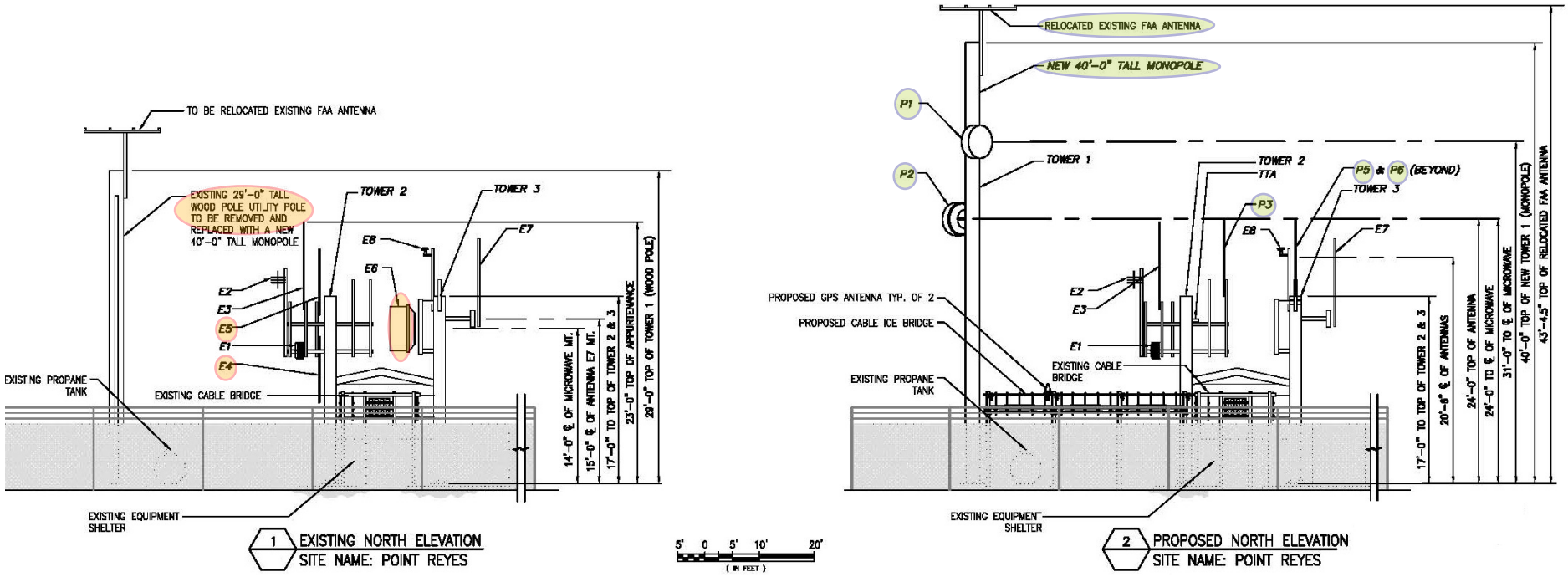
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-32. Site 5 - Mt. Barnabe Site Plan

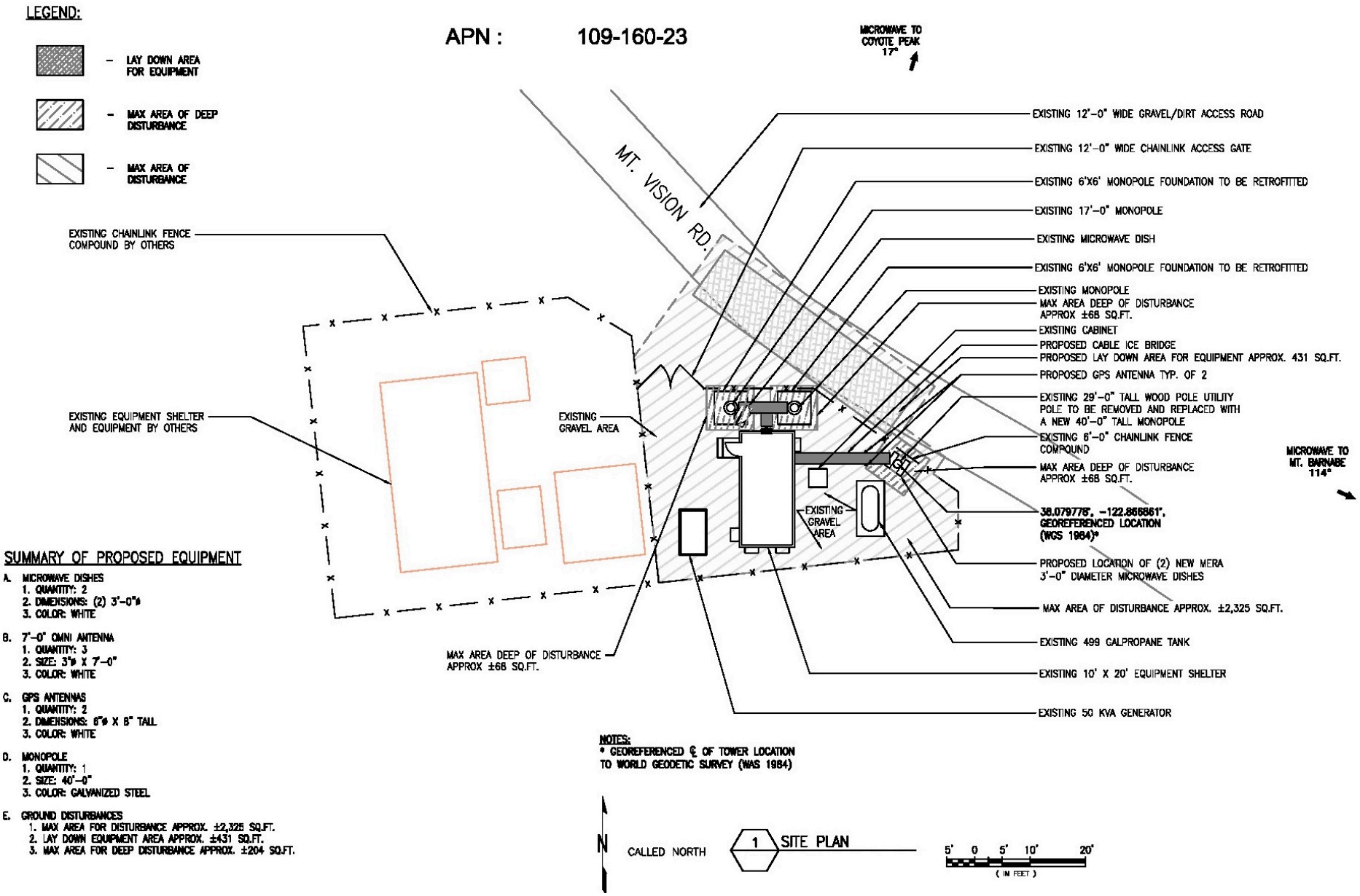
wra ENVIRONMENTAL CONSULTANTS



Source, Motorola, 2018

Figure III-33. Site 8 - Point Reyes Hill Existing and Proposed Elevations

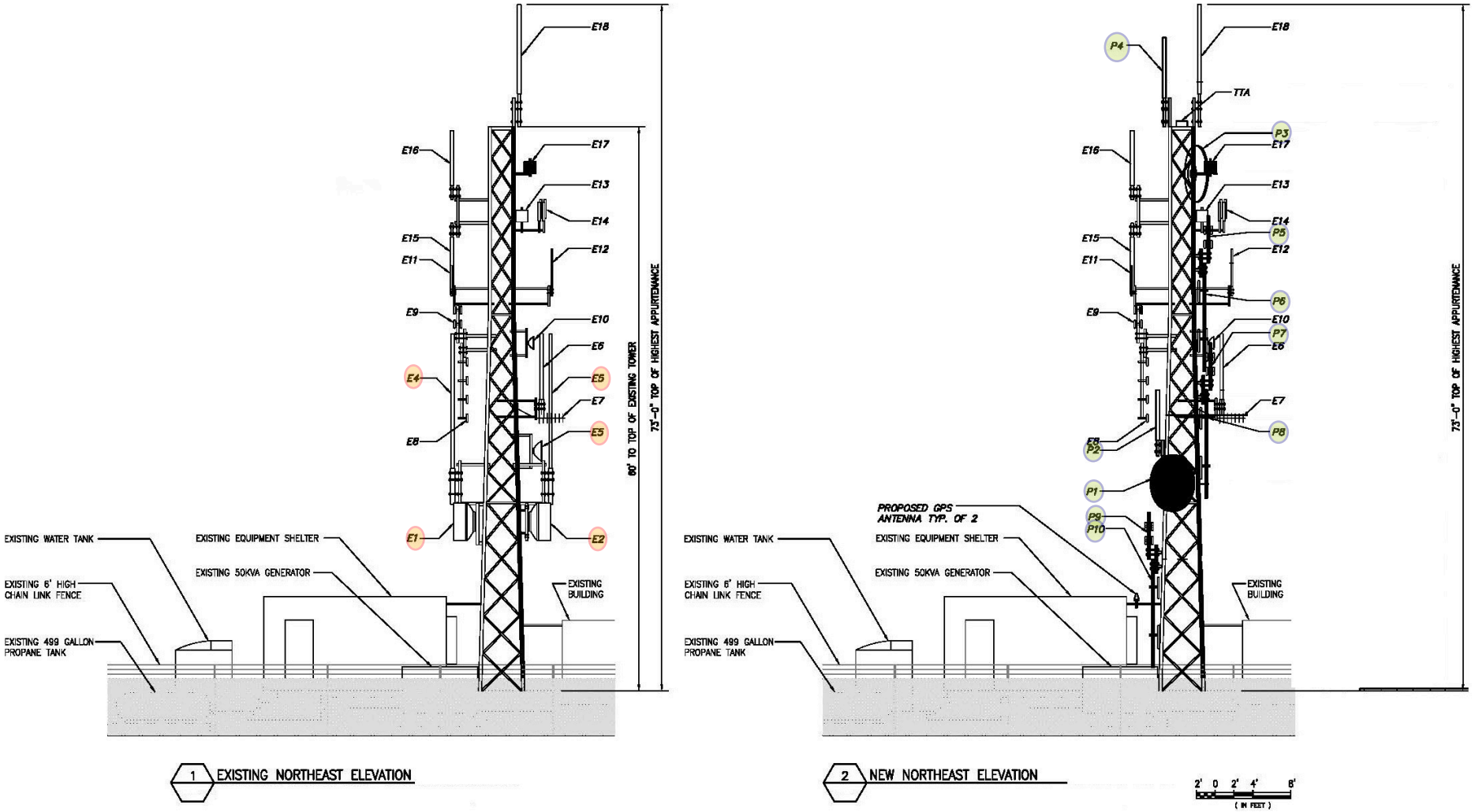
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-34. Site 8 - Point Reyes Hill Site Plan

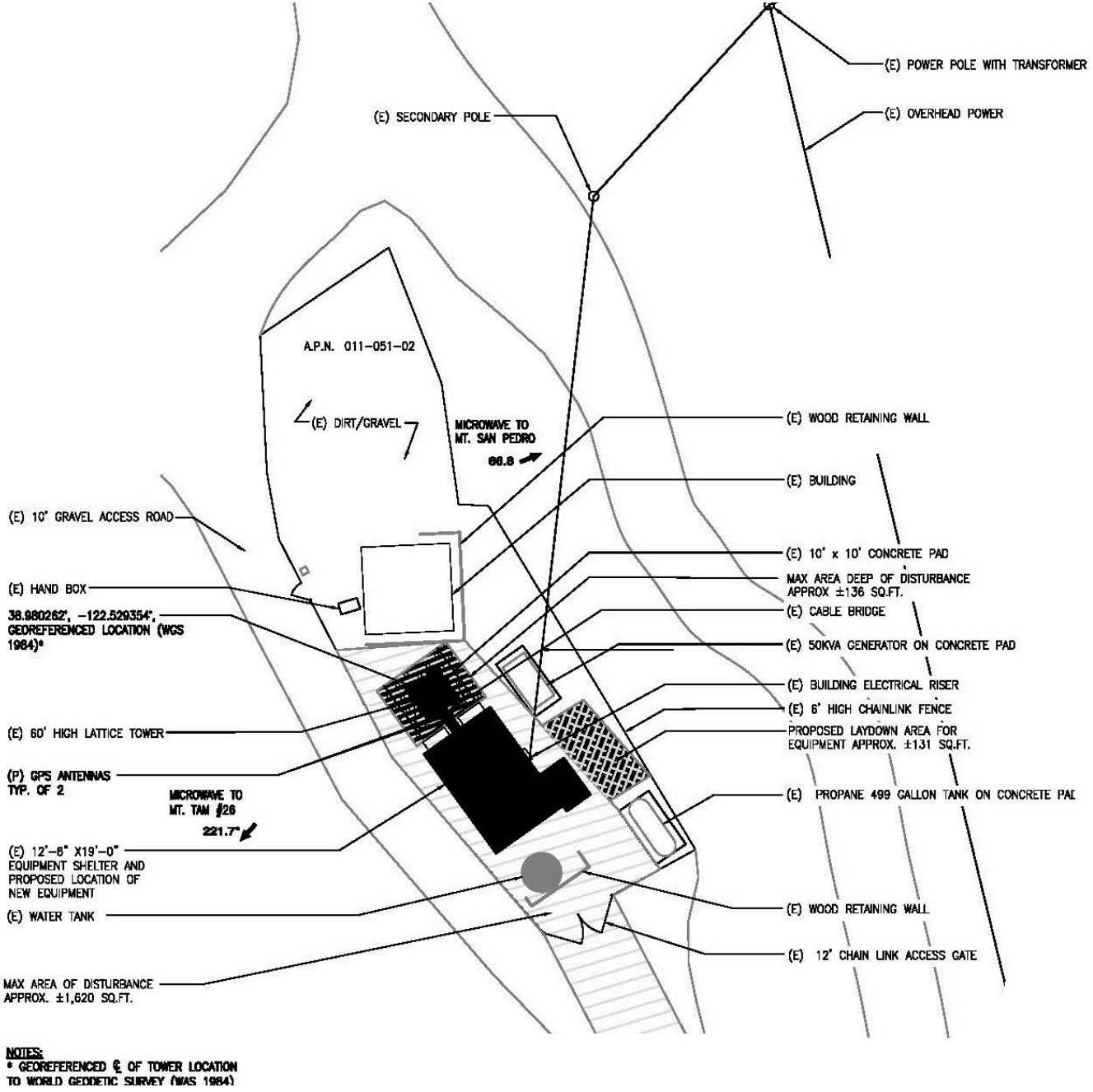
ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-35. Site 10 - Dollar Hill Existing and Proposed Elevations

wra
ENVIRONMENTAL CONSULTANTS



SUMMARY OF PROPOSED EQUIPMENT

A. MICROWAVE DISHES
1. QUANTITY: 2
2. DIMENSIONS: (2) 6'-0"ø
3. COLOR: WHITE

B. GPS ANTENNAS
1. QUANTITY: 2
2. SIZE: 5"ø X 8"
3. COLOR: WHITE

C. 9'-6" OMNI ANTENNAS
1. QUANTITY: (2)
2. DIMENSIONS: 3"ø X 9'-6"
3. COLOR: BLUE

D. 7'-0" OMNI ANTENNAS
1. QUANTITY: (2)
2. DIMENSIONS: 3.5"ø X 7'-0"
3. COLOR: WHITE

E. CONVENTIONAL ANTENNA DB404
1. QUANTITY: 3
2. SIZE: 5'-0" TALL
3. COLOR: GALVANIZE STEEL

F. CONVENTIONAL ANTENNA 440-2
1. QUANTITY: 3
2. DIMENSIONS: 11'-6" TALL
3. COLOR: GALVANIZED STEEL

G. GROUND DISTURBANCES

1. MAX DISTURBANCE AREA	±1,620 SQ.FT.
2. LAY DOWN AREA	±131 SQ.FT.
3. DEEP DISTURBANCE AREA	±136 SQ.FT.

LEGEND:

- LAY DOWN AREA FOR EQUIPMENT
- MAX AREA OF DEEP DISTURBANCE
- MAX AREA OF DISTURBANCE

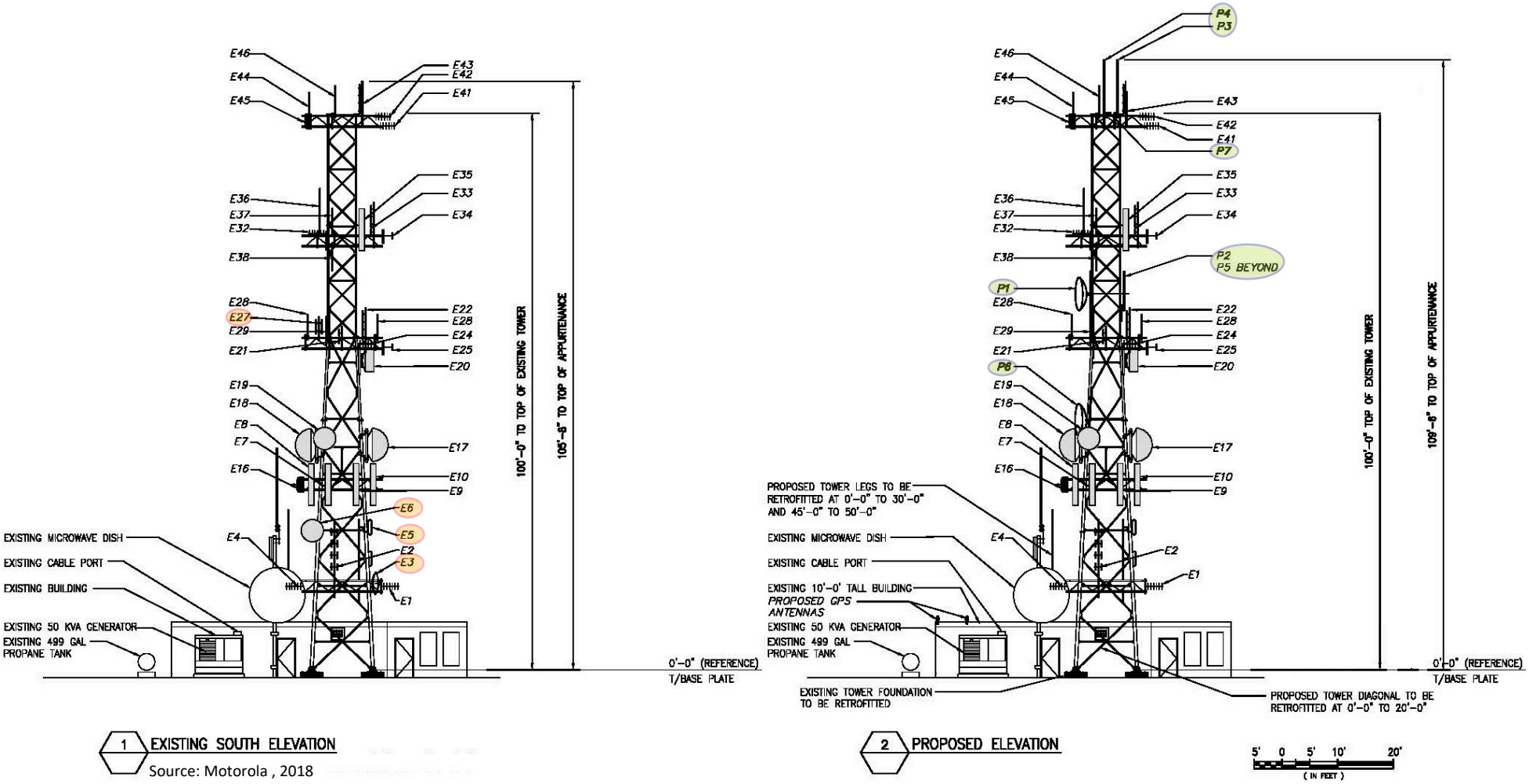
N CALLED NORTH

Source: Motorola, 2018

5' 0 5' 10' 20'
(IN FEET)

Figure III-36. Site 10 - Dollar Hill Site Plan

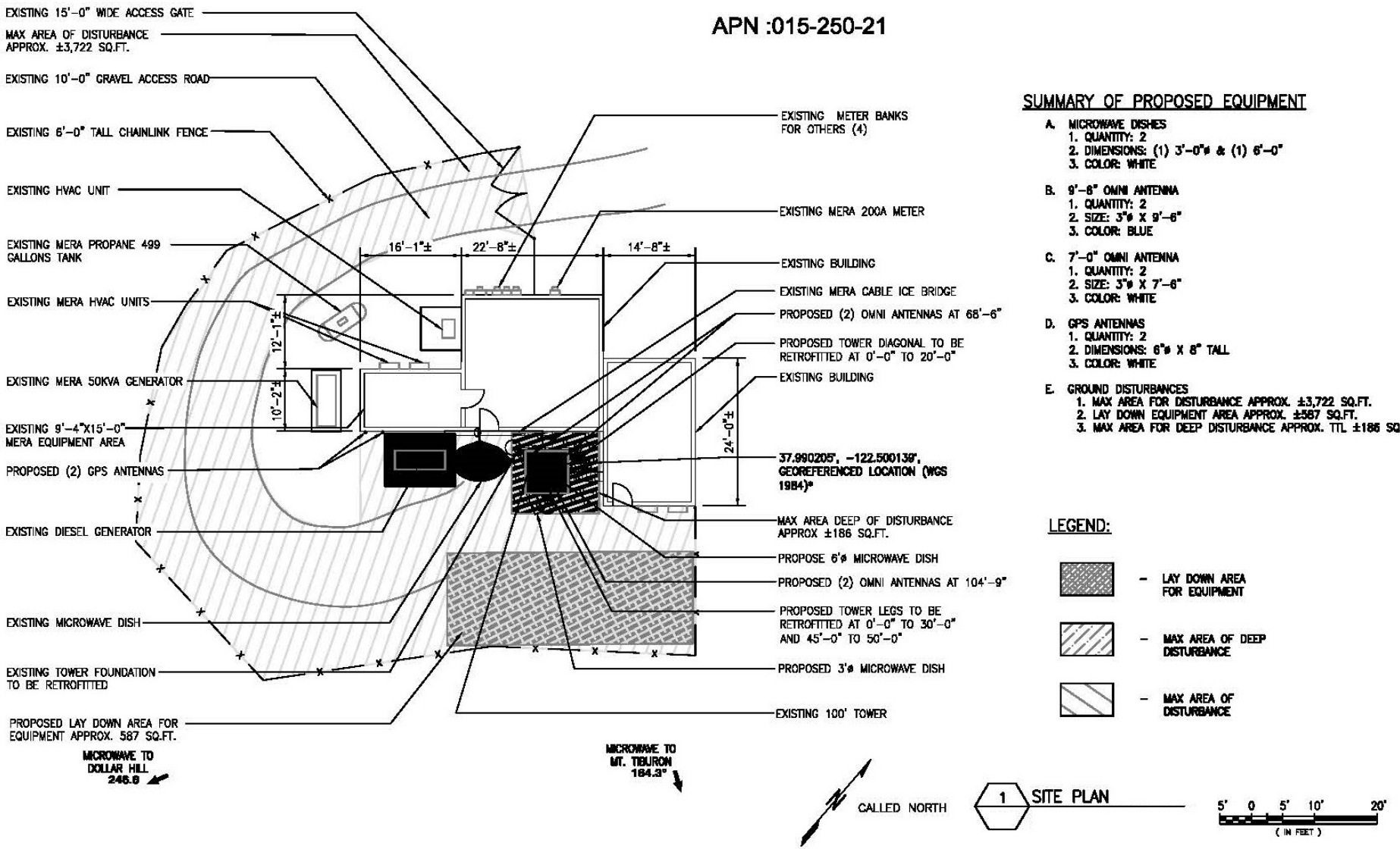
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola , 2018

Figure III-37. Site 11 - San Pedro Ridge Existing and Proposed Elevations

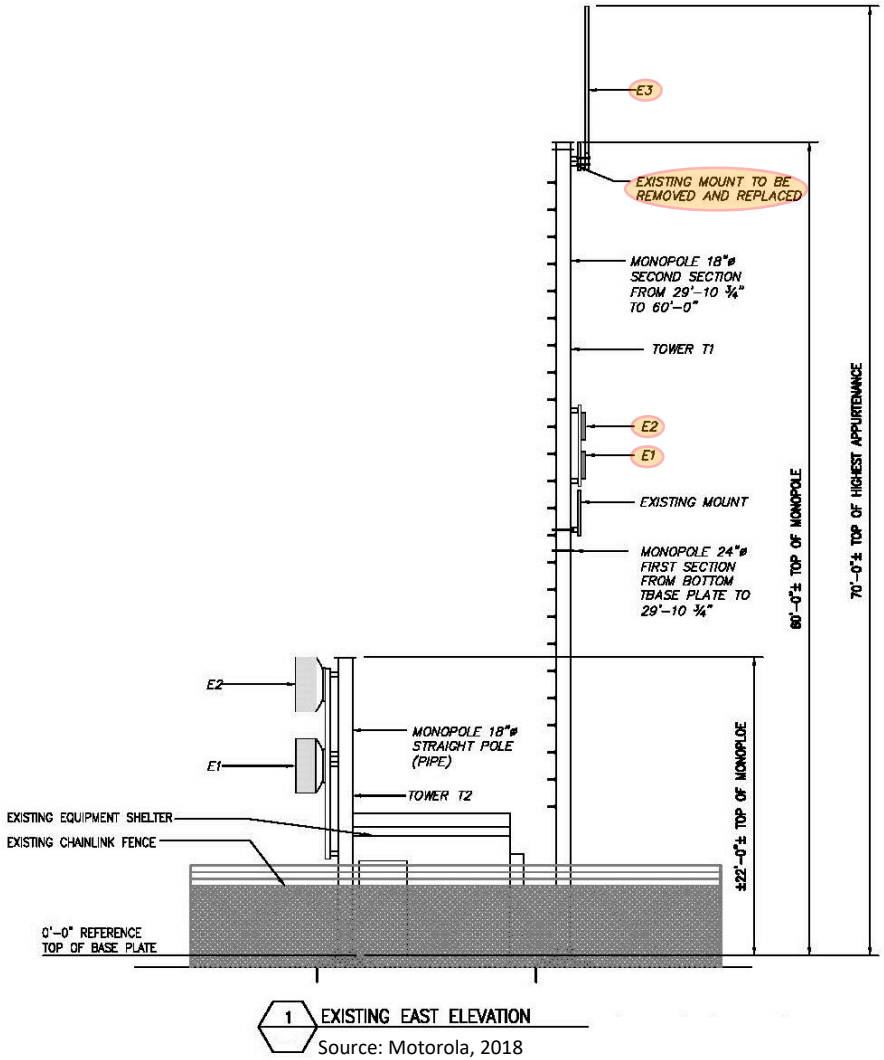
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-38. Site 11 - San Pedro Ridge Site Plan

wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

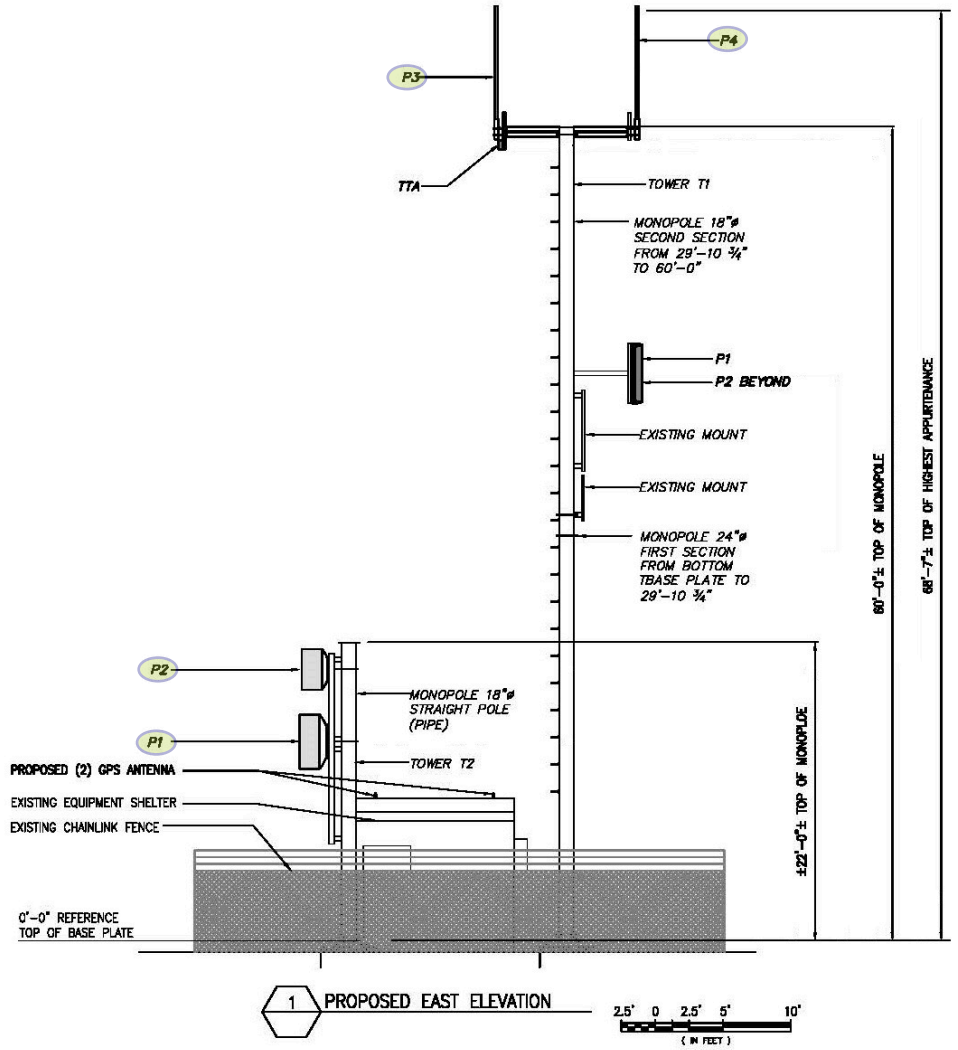
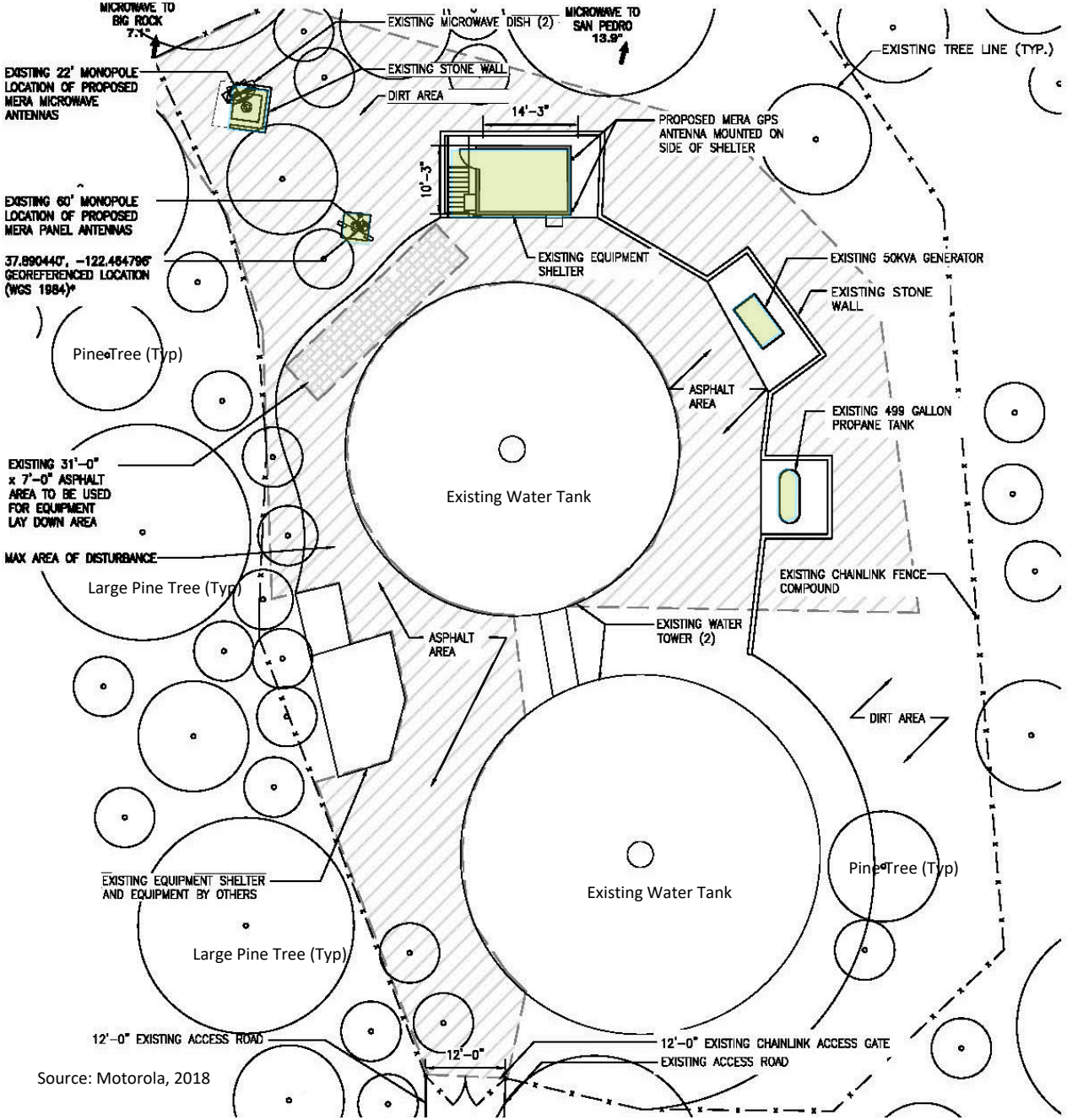


Figure III-39. Site 14 - Mt. Tiburon Existing and Proposed Elevations

wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

SUMMARY OF PROPOSED EQUIPMENT

A. GPS ANTENNAS
1. QUANTITY: 2
2. DIMENSIONS: 6"ø X 8" TALL
3. COLOR: WHITE

B. MICROWAVE DISHES
1. QUANTITY: 2
2. DIMENSIONS: (1) 3'-0"ø & (1) 4'-0"ø
3. COLOR: WHITE

C. 9'-6" OMNI ANTENNAS
1. QUANTITY: (2)
2. DIMENSIONS: 3"ø X 9'-6"
3. COLOR: BLUE

D. 4'-5" PANEL ANTENNAS
1. QUANTITY: (2)
2. DIMENSIONS: 4'-5" TALL X 2'-1" WIDE X 8.5"
3. COLOR: WHITE

C. GROUND DISTURBANCES
1. MAX AREA OF DISTURBANCE ±6861 SQ. FT.
2. LAY DOWN AREA – OVER EXISTING ASPHALT APPROX. ±214 SQ. FT.

- LAY DOWN AREA FOR EQUIPMENT
- MAX AREA OF DISTURBANCE

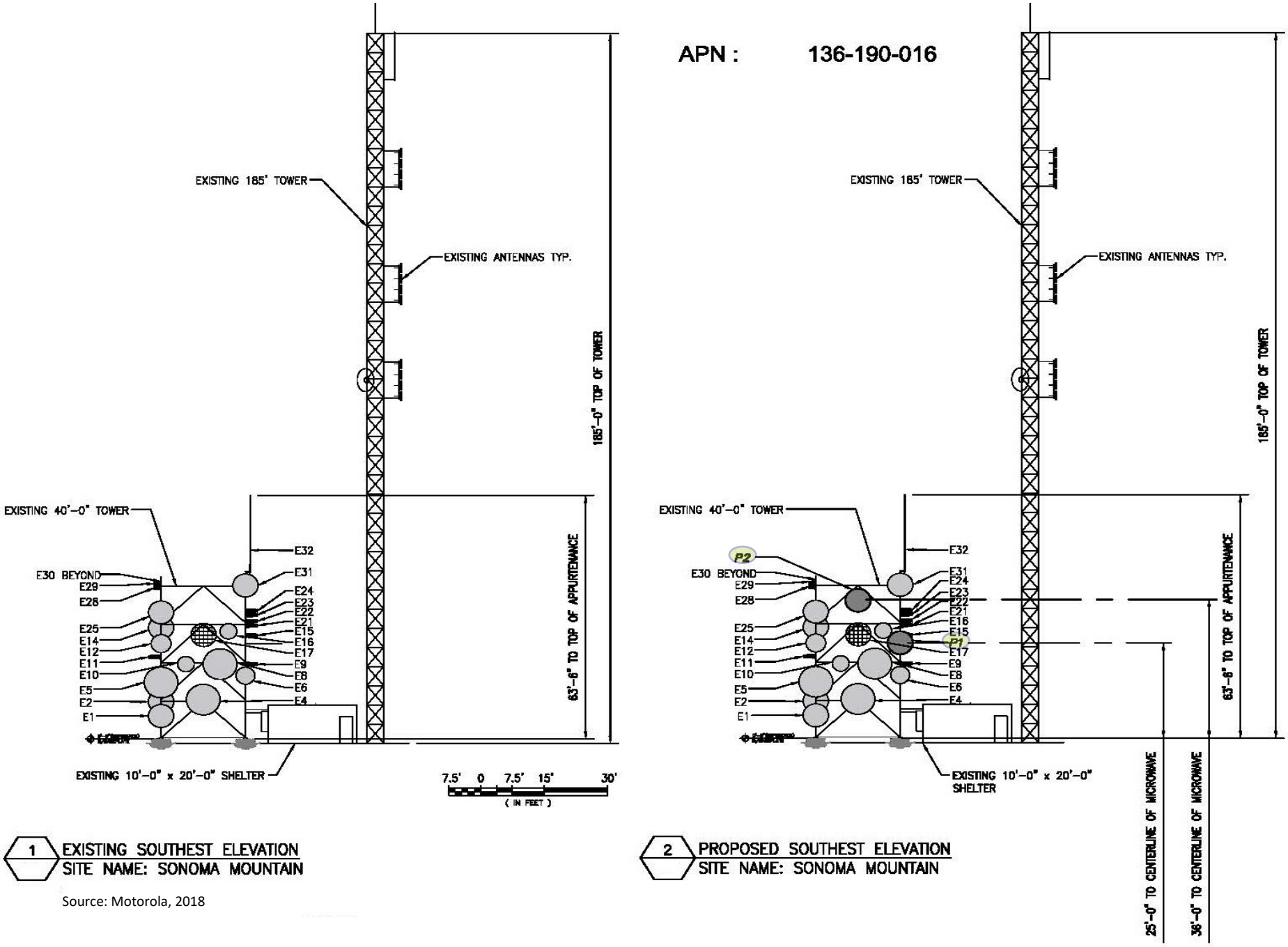
MERA Facility

N CALLED NORTH

5' 0 5' 10' 20'
(IN FEET)

Figure III-40. Site 14 - Mt. Tiburon Site Plan

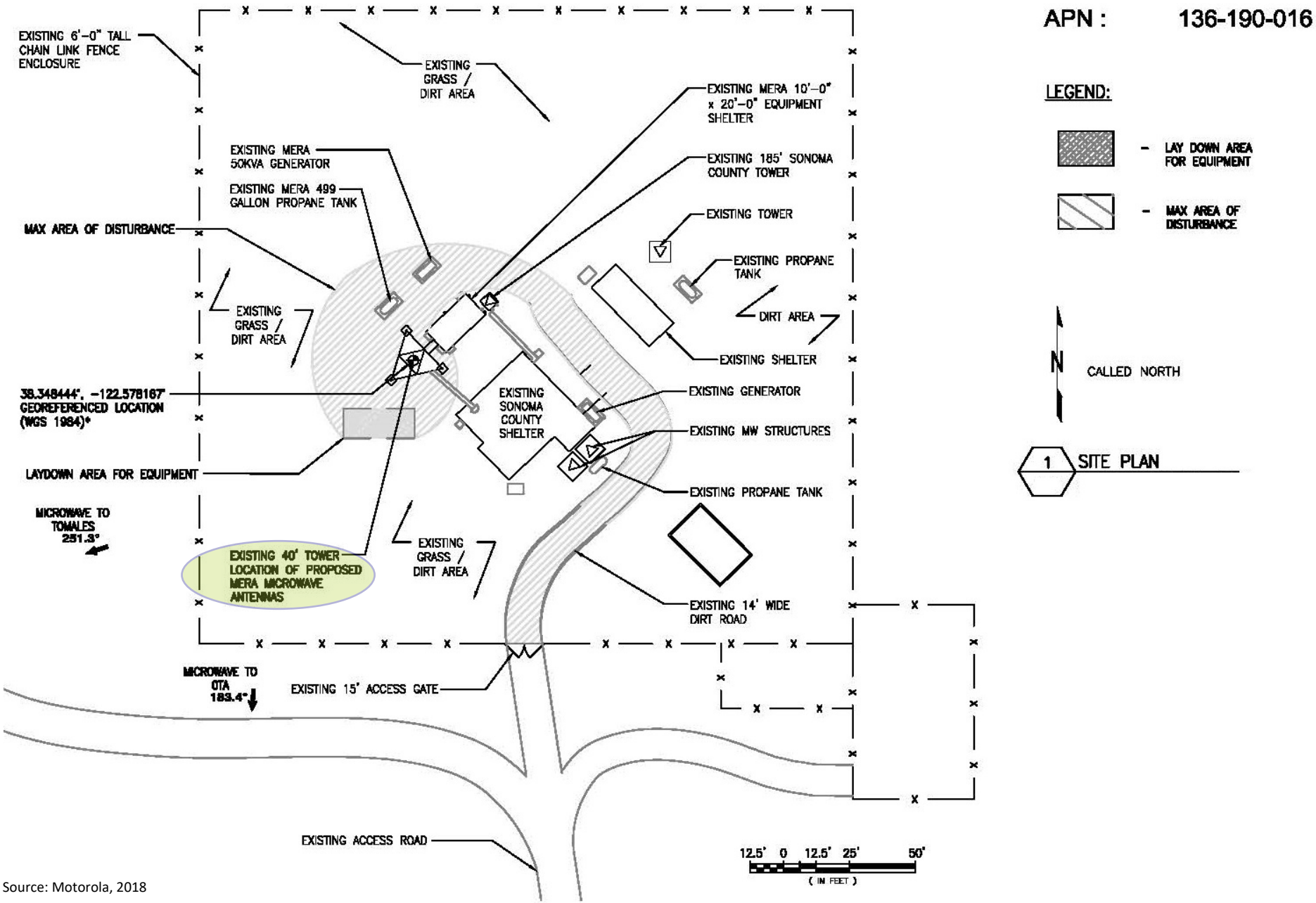
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-41. Site 18 - Sonoma Mountain Existing and Proposed Elevations

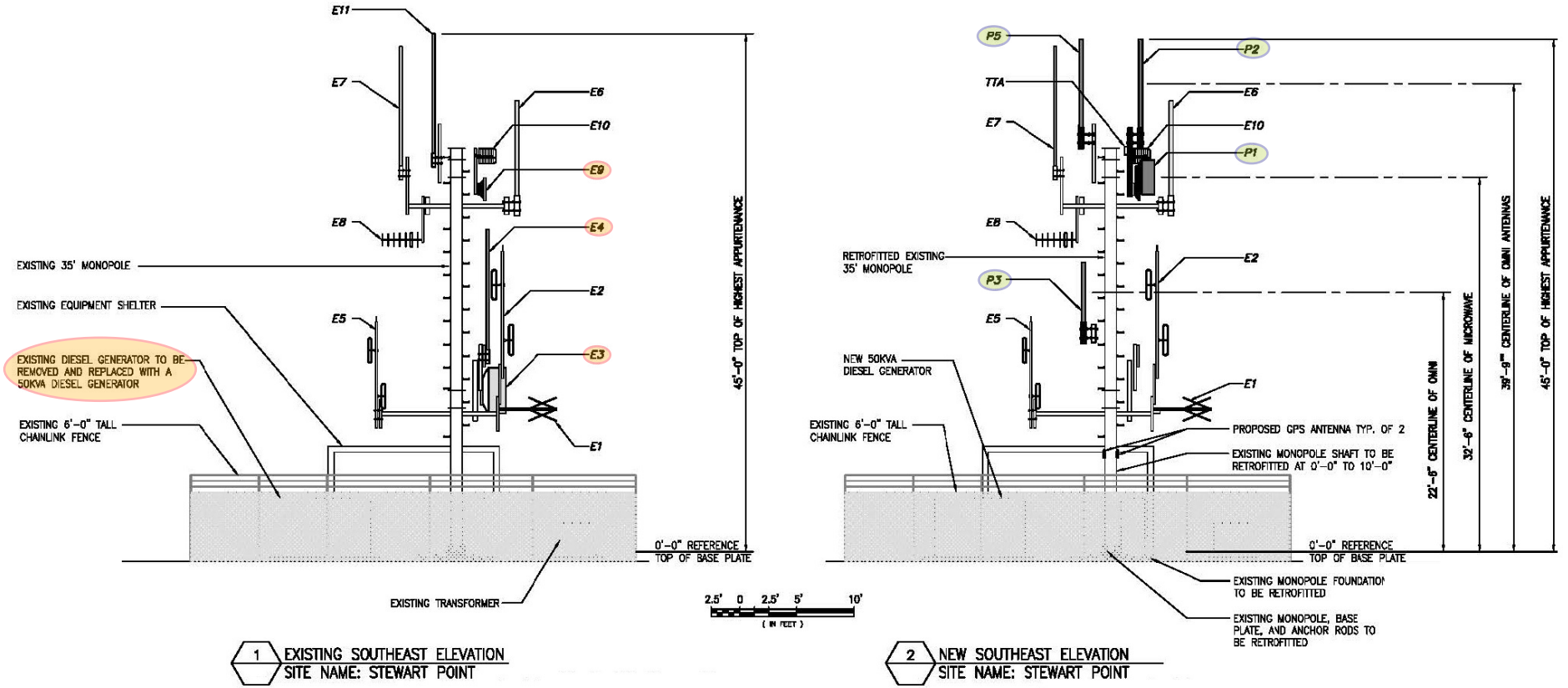
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-42. Site 18 - Sonoma Mountain Site Plan

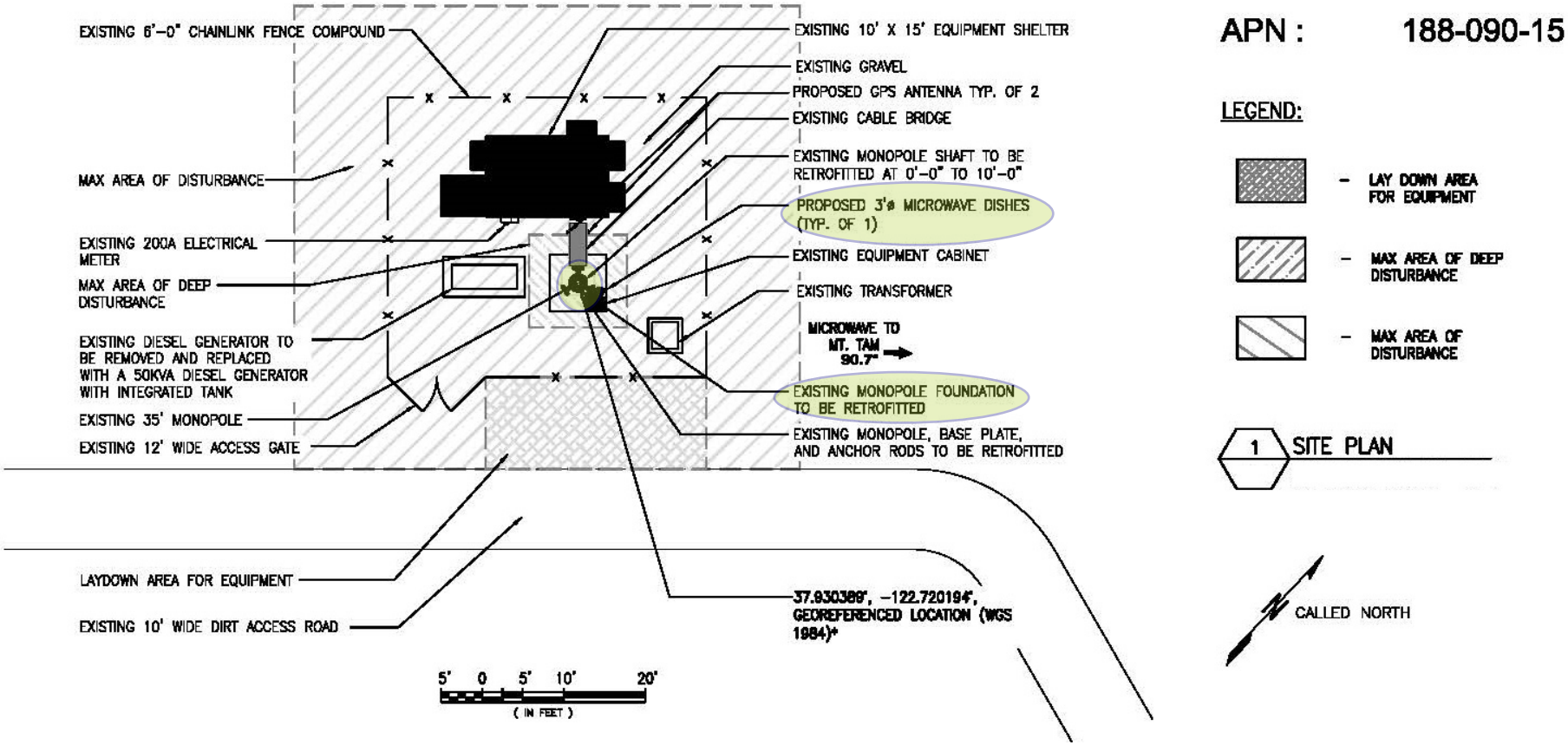
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-43. Site 19 - Stewart Point Existing and Proposed Elevations

wra ENVIRONMENTAL CONSULTANTS



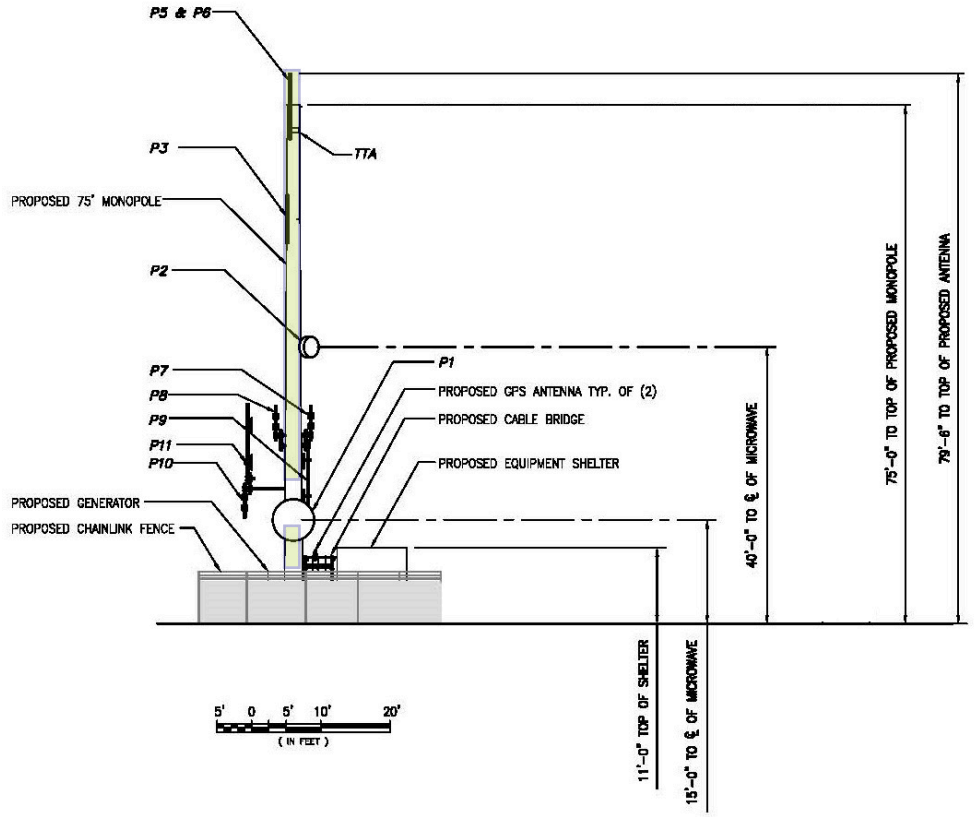
Source: Motorola, 2018

Figure III-44. Site 19 - Stewart Point Site Plan

wra ENVIRONMENTAL CONSULTANTS



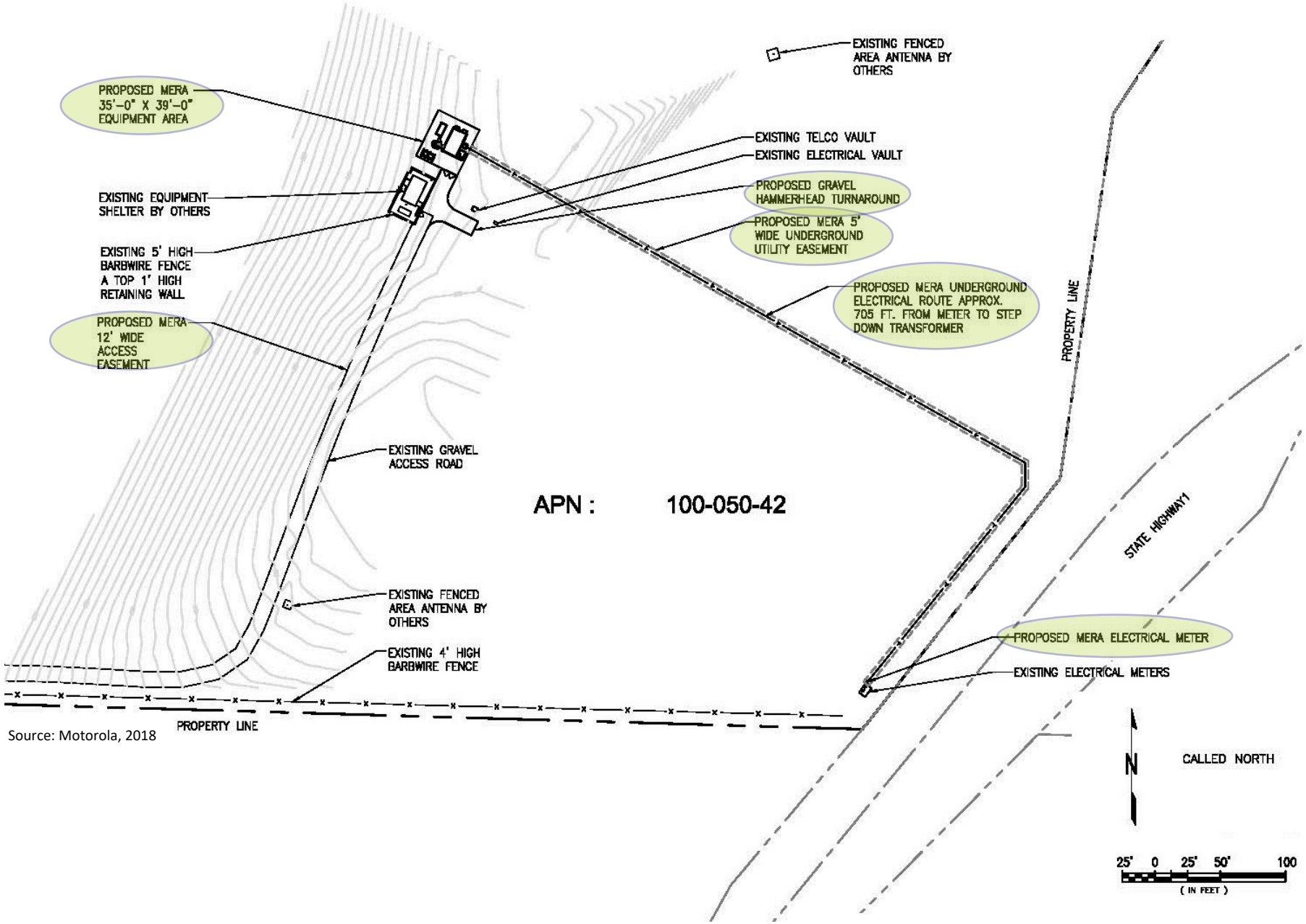
Existing Cellular Equipment Shelter at Tomales Site
Cell Tower is behind photographer. New monopole and equipment shelter would be to the right.
Source: WRA 2018



Proposed communications equipment on new 75-foot monopole.
Source: Motorola 2018

Figure III-45. Site 20 - Tomales Existing Equipment Photo and Proposed Elevation

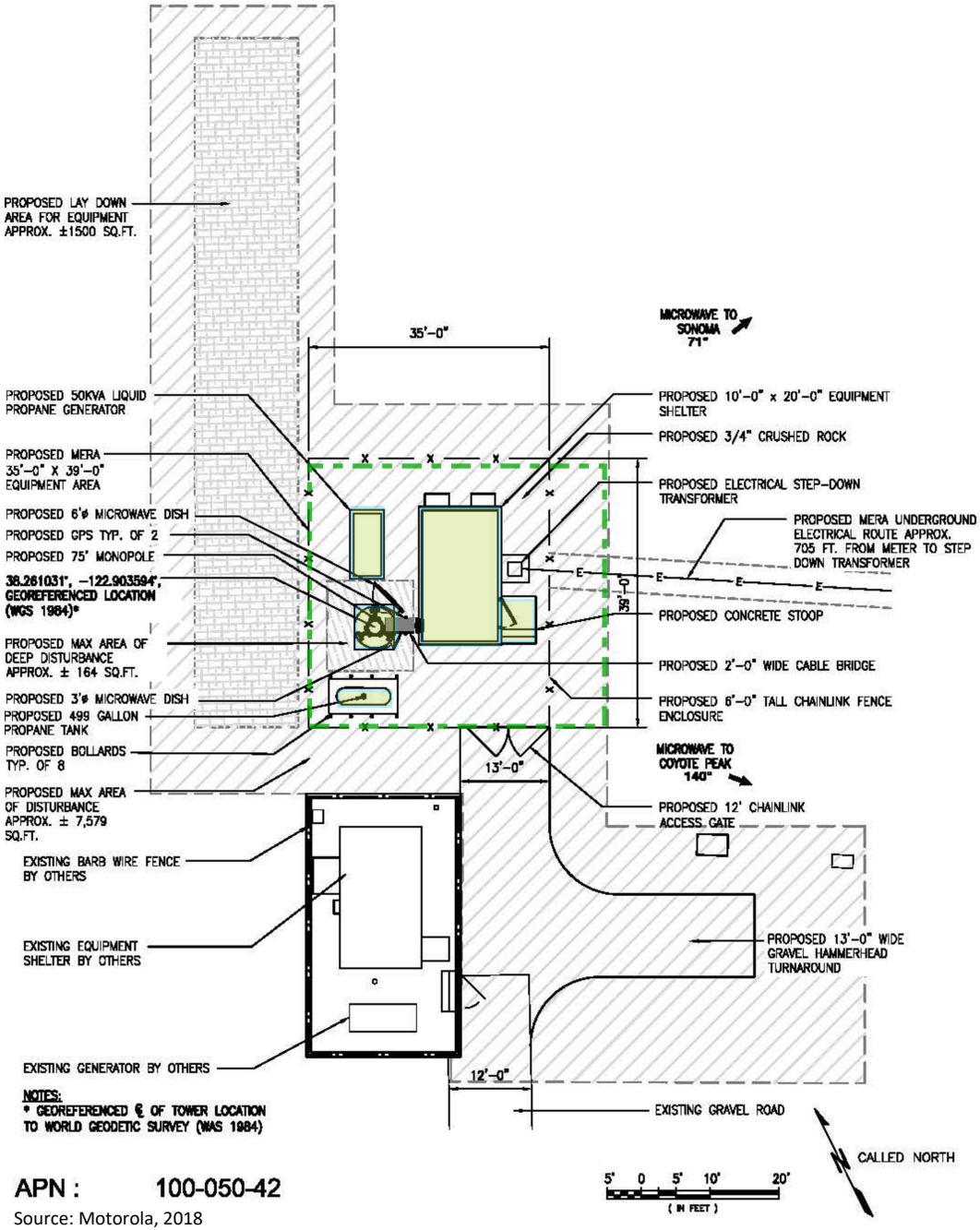
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-46. Site 20 - Tomales Enlarged Site Plan

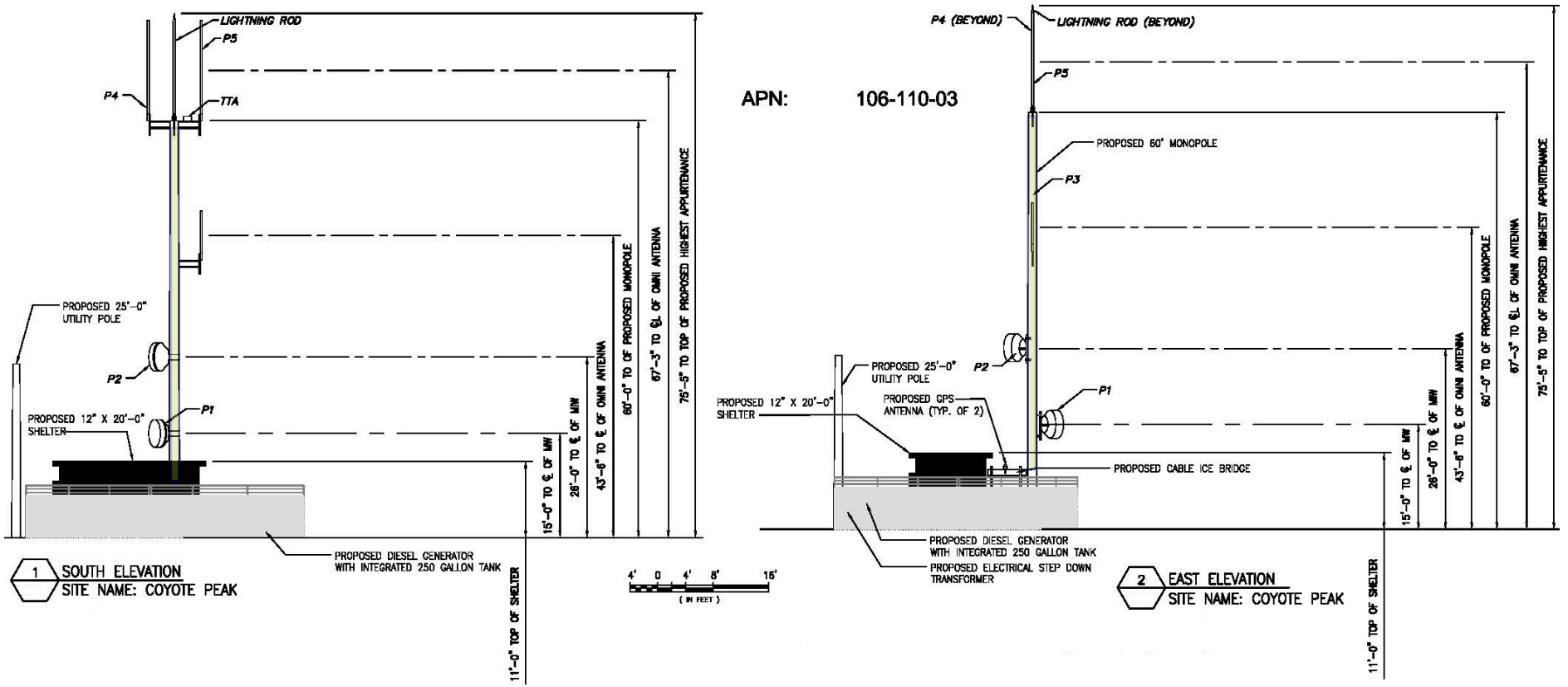
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-47. Site 20 - Tomales Site Plan

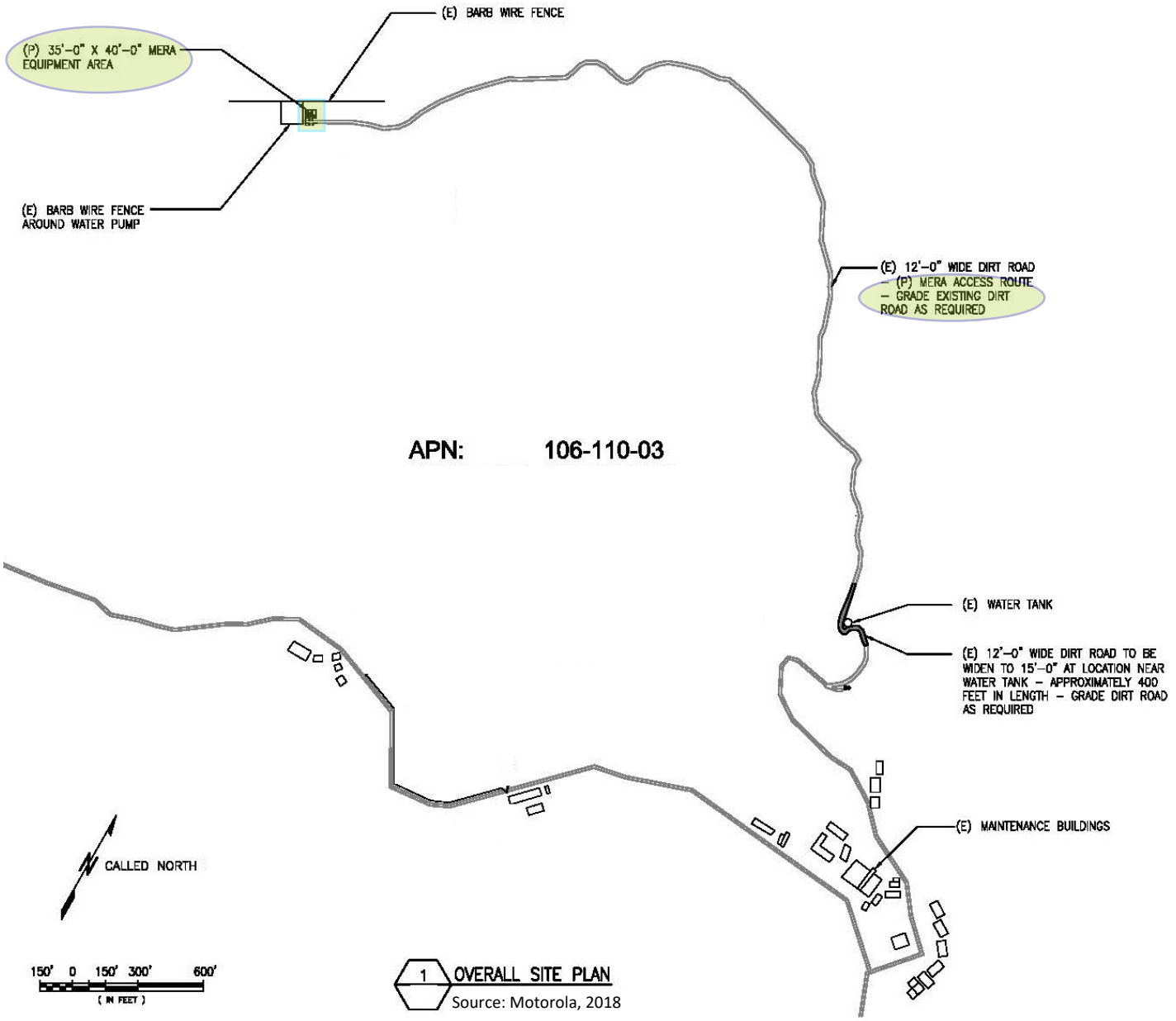
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-48. Site 21 - Coyote Peak - Two Proposed Elevations

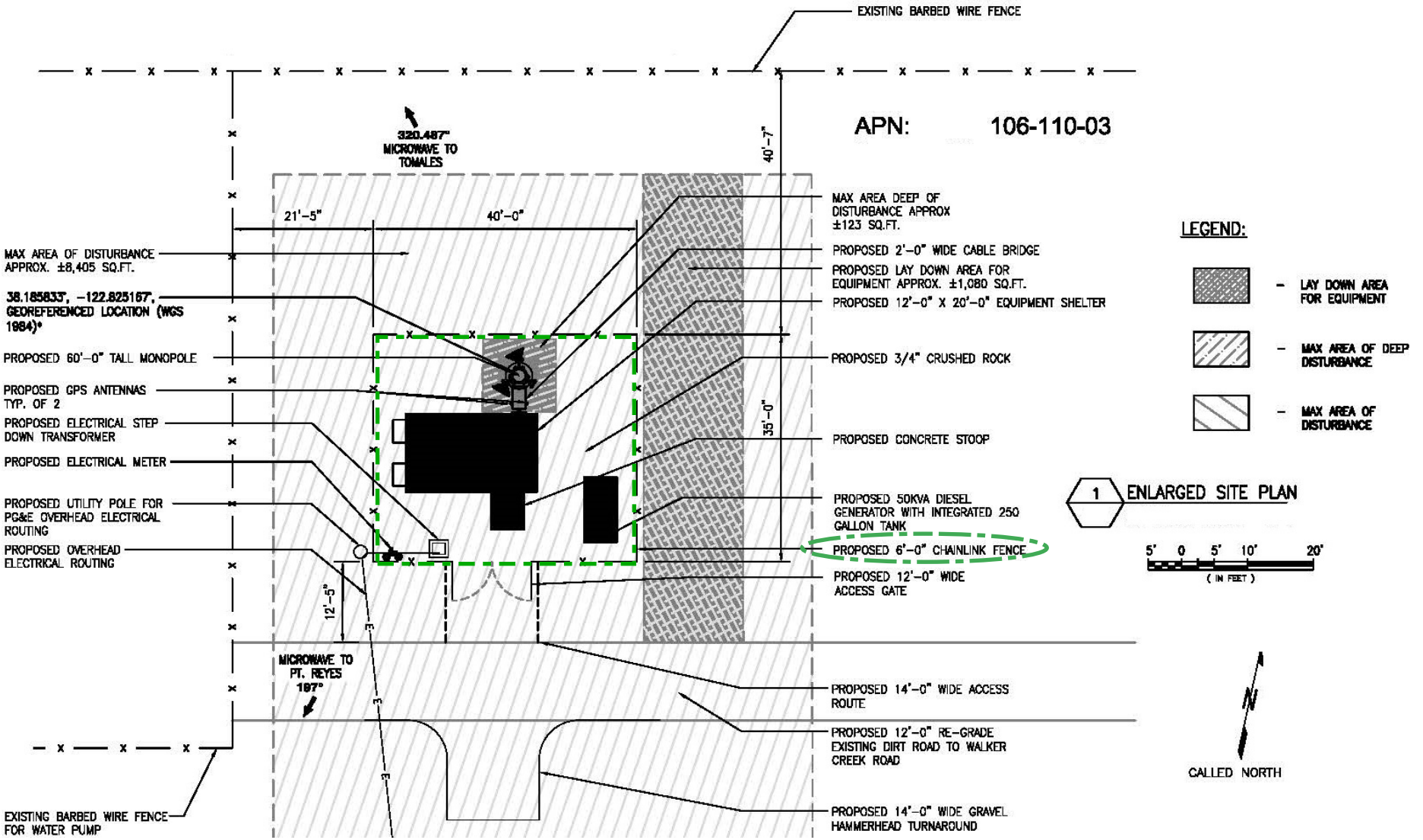
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-49. Site 21 - Coyote Peak Overall Site Plan

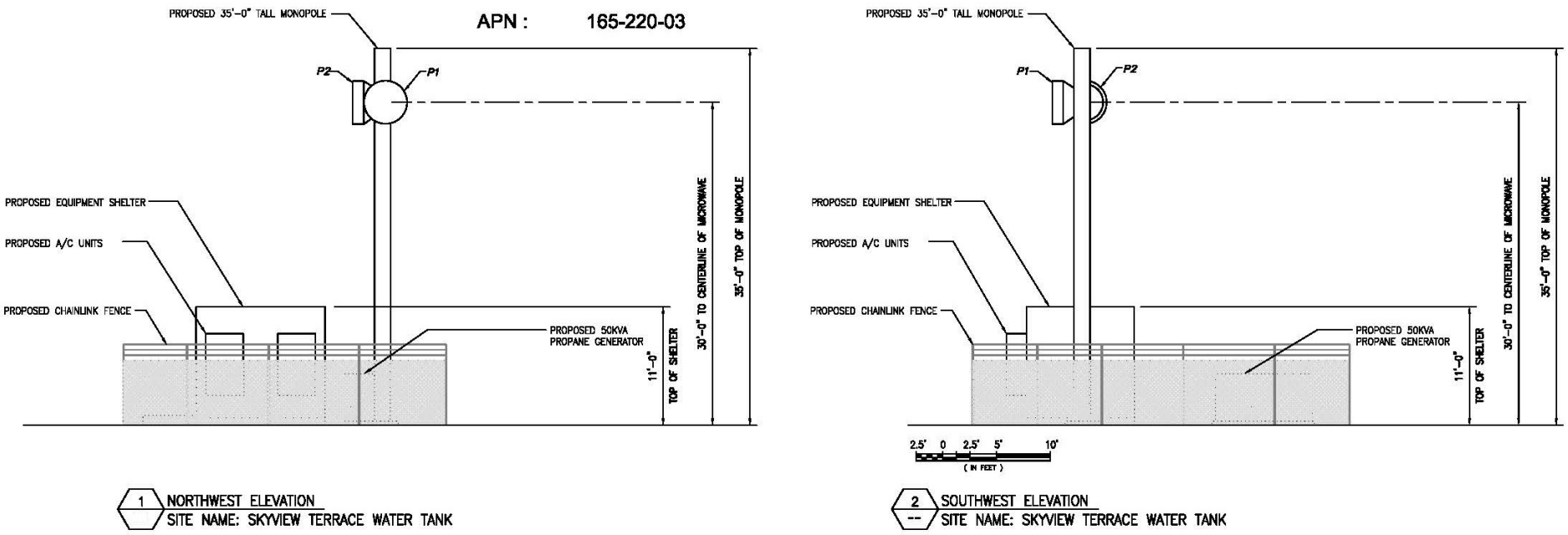
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-50. Site 21 - Coyote Peak Detailed Site Plan

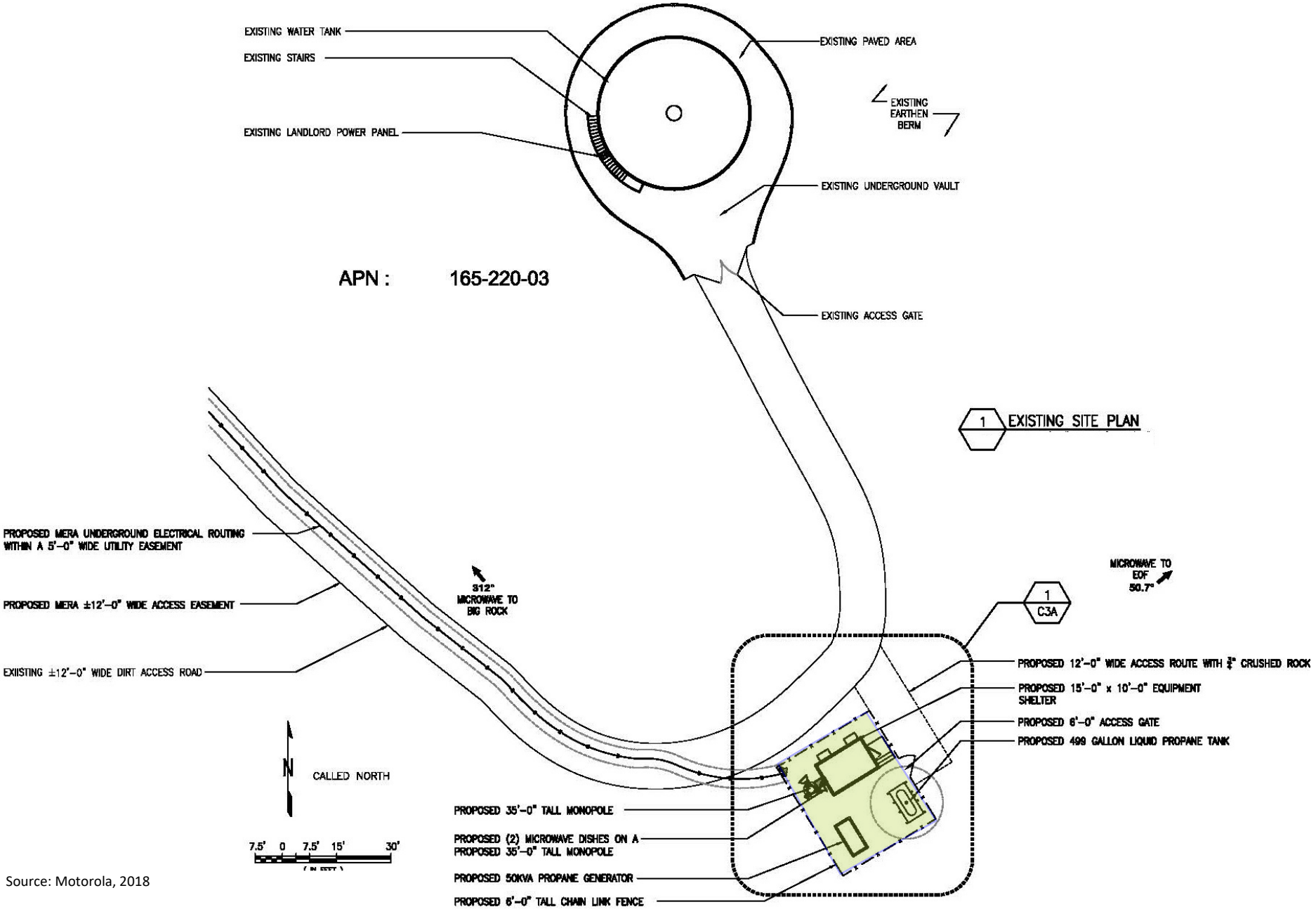
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-51. Site 22 - Skyview Terrace Water Tank - Two Proposed Elevations

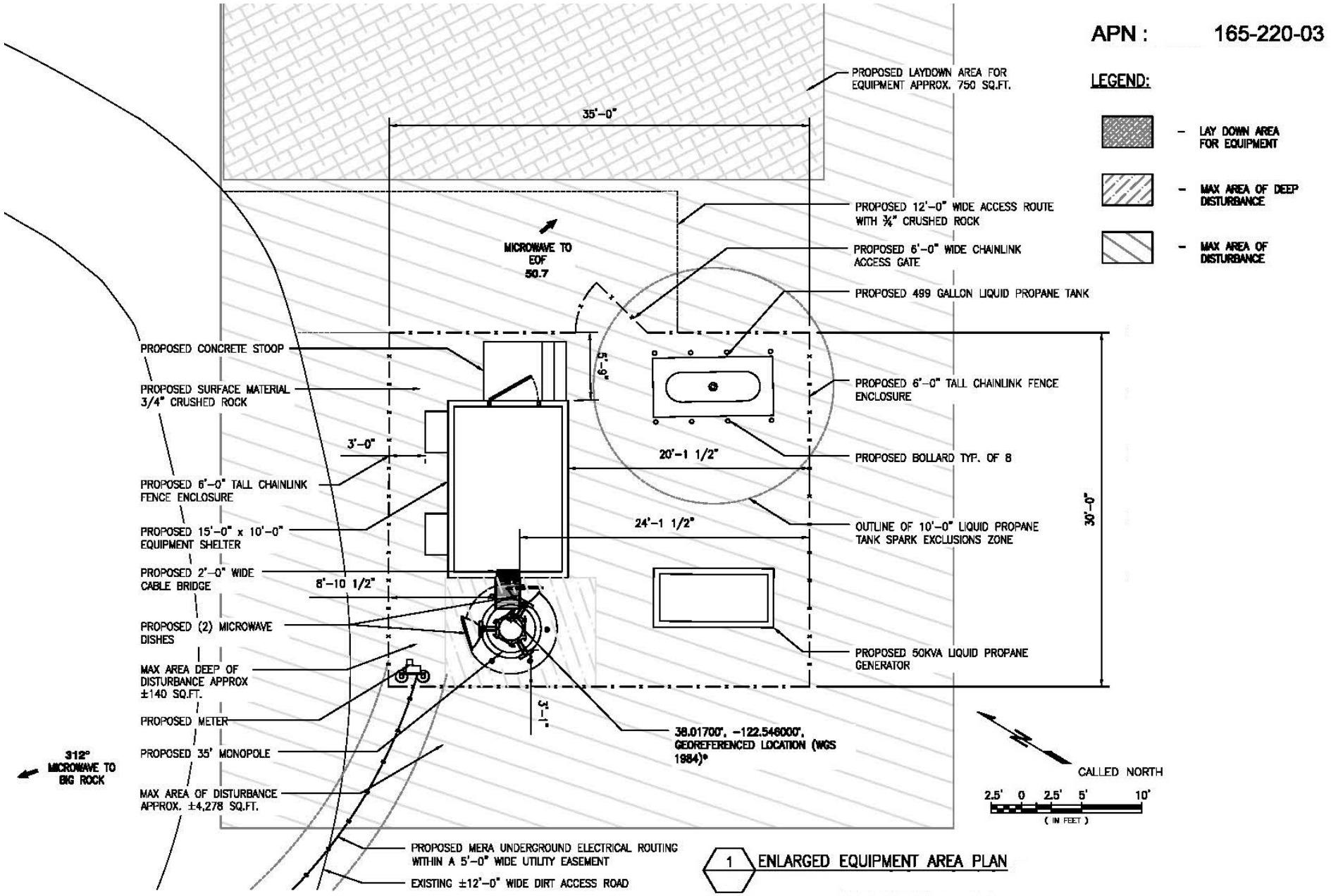
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-52. Site 22- Skyview Terrace Water Tank Overall Site Plan

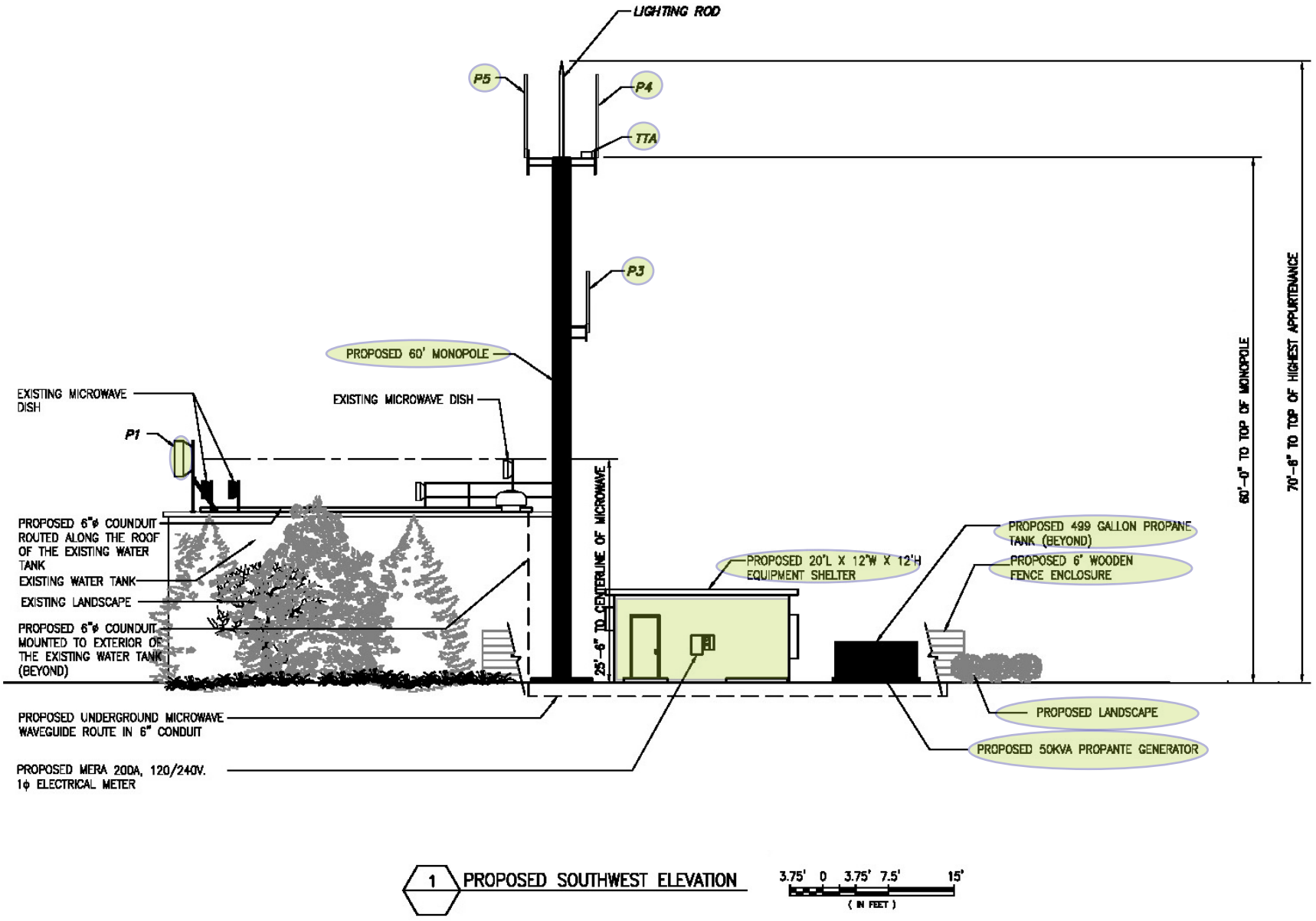
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-53. Site 22 - Skyview Terrace Water Tank Detailed Site Plan

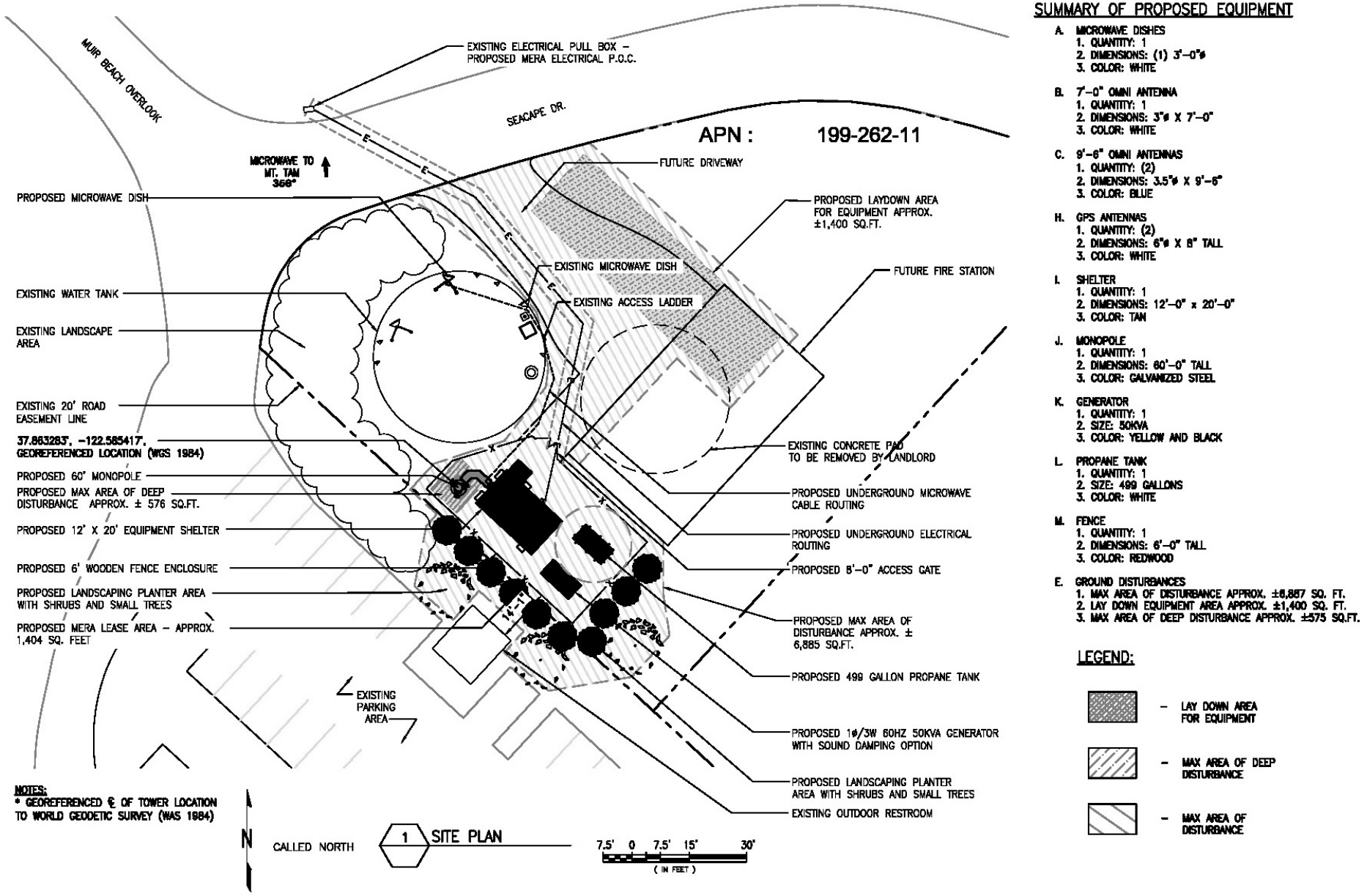
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-54. Site 23 - Muir Beach Proposed Elevation

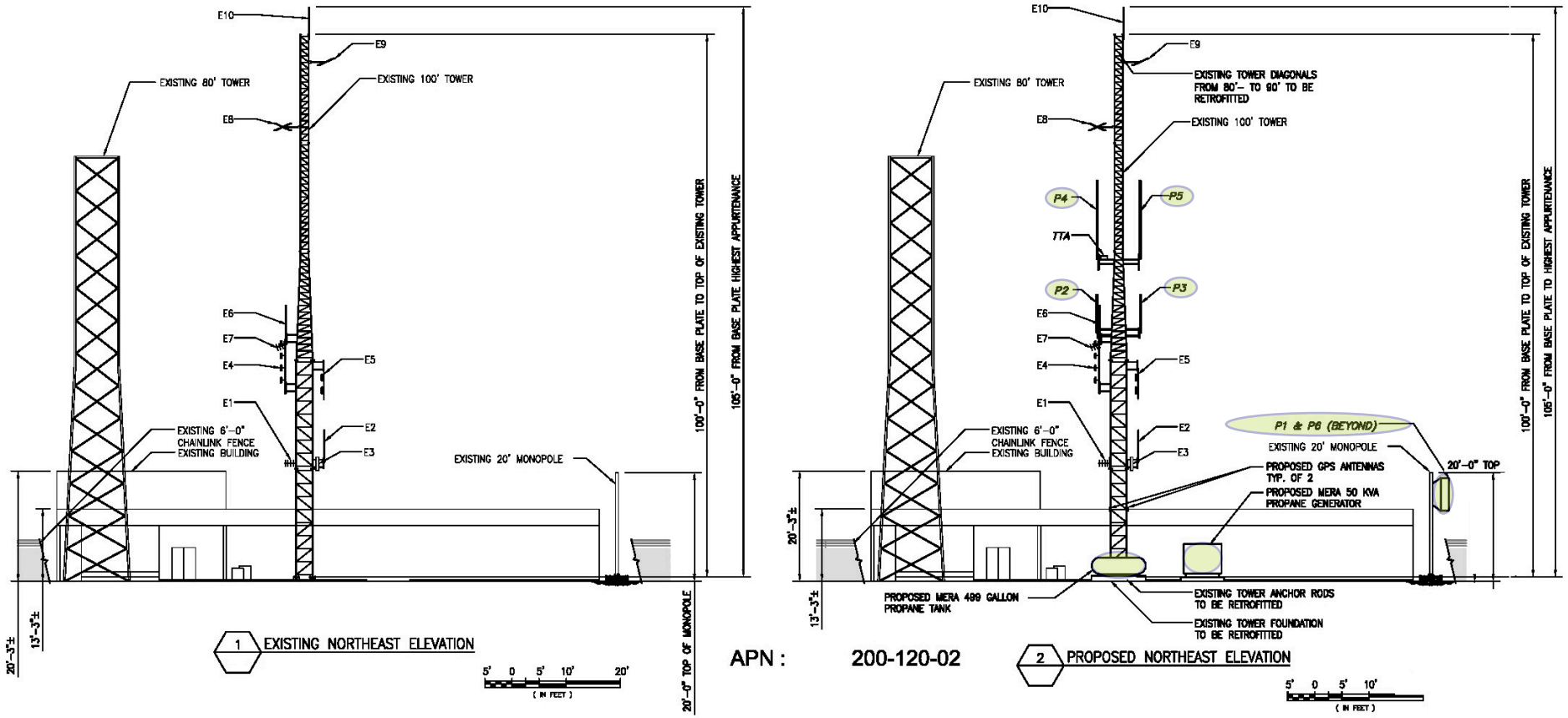
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-55. Site 23 - Muir Beach Site Plan

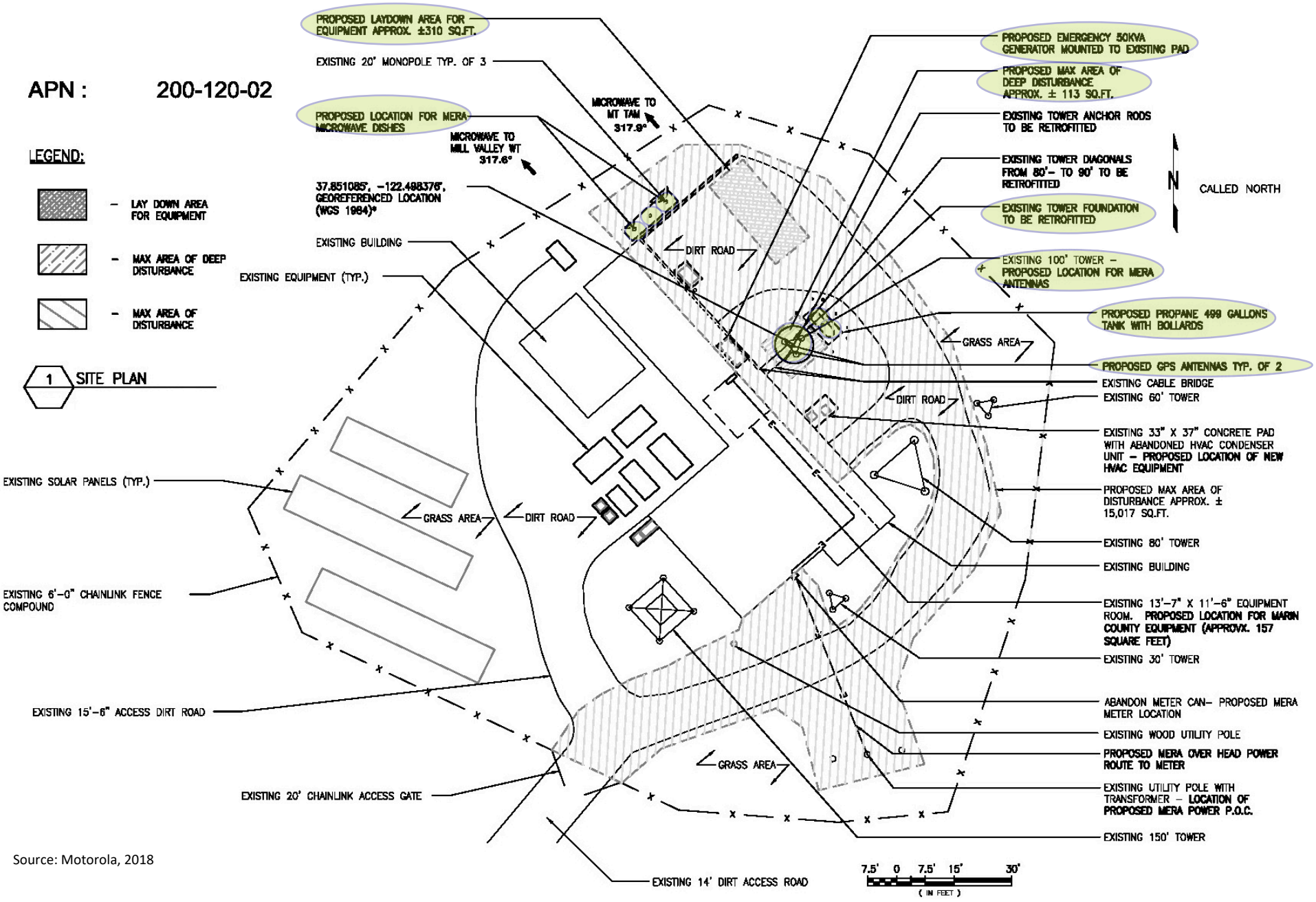
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola 2018

Figure III-56. Site 24 - Wolfback Ridge Existing and Proposed Elevations

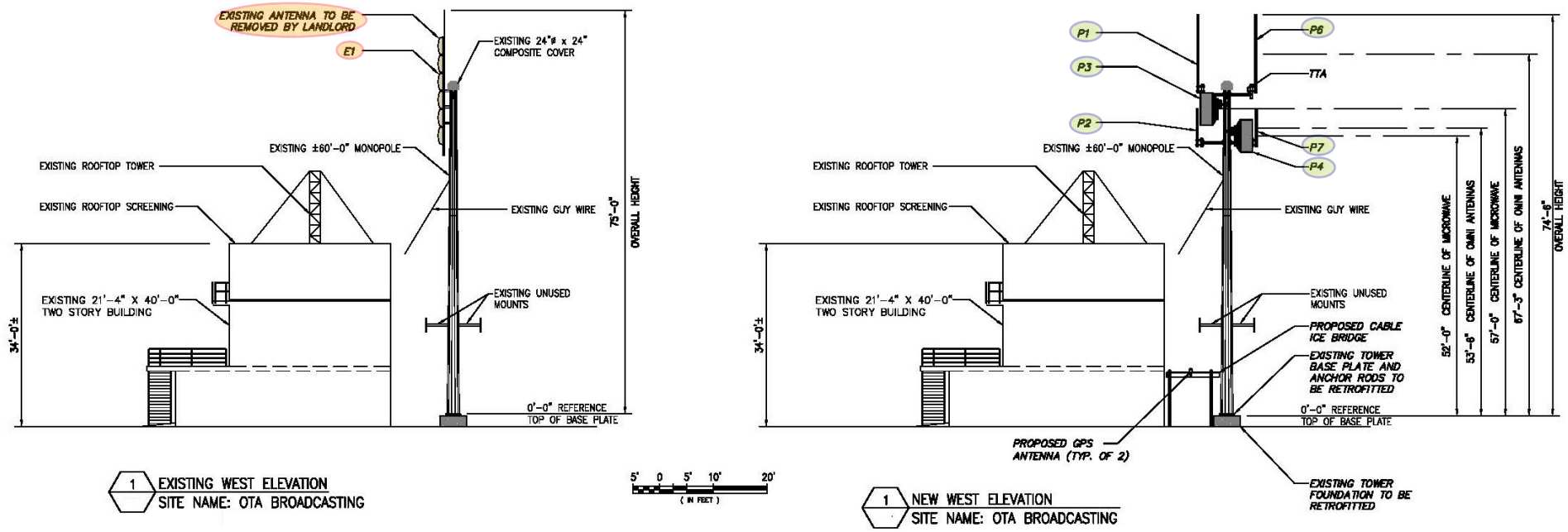
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-57. Site 24 - Wolfback Ridge Site Plan

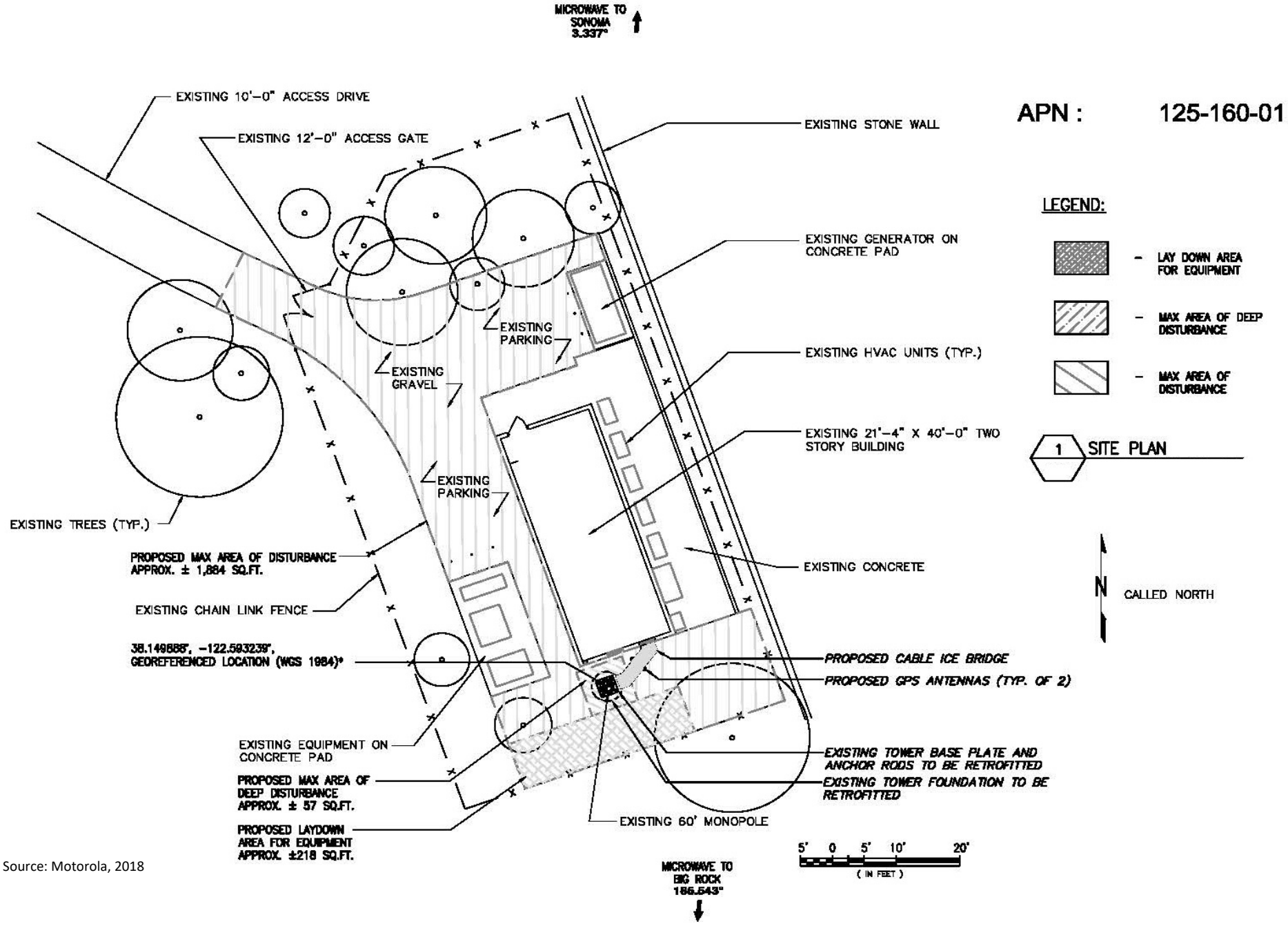
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-58. Site 25 - Mt. Burdell OTA Existing and Proposed Elevations

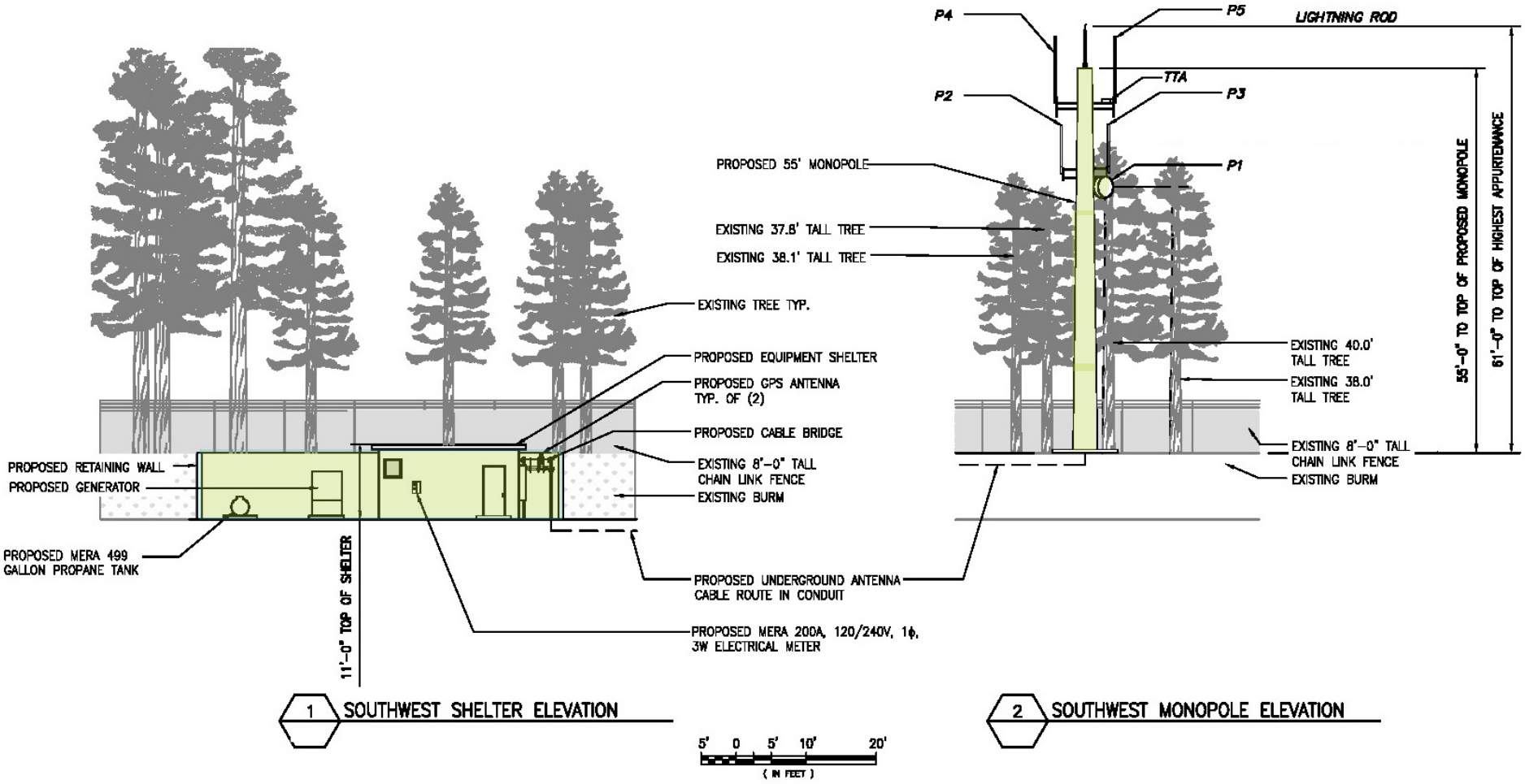
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-59. Site 25 - Mt. Burdell OTA Site Plan

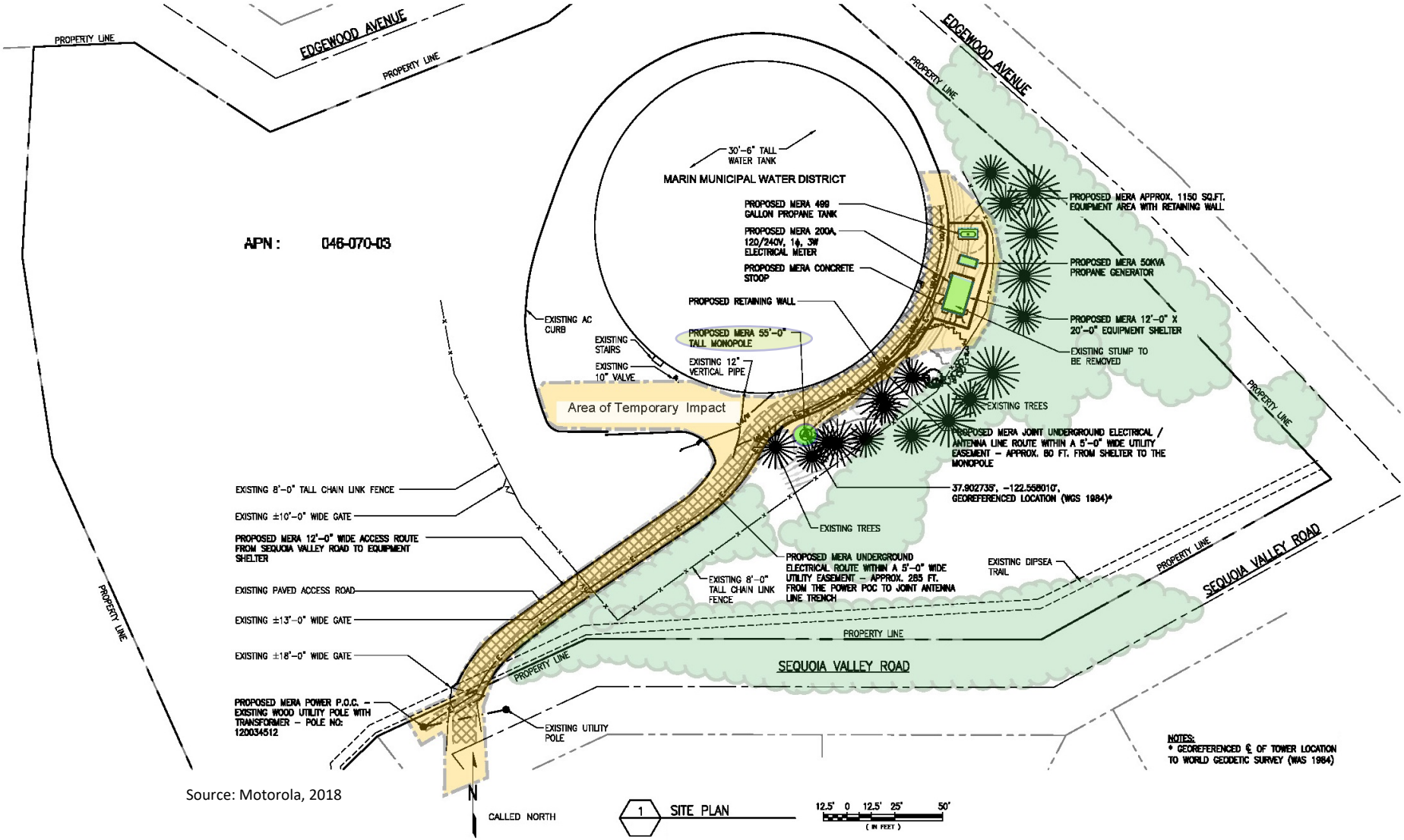
wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-60. Site 26 - Mill Valley Water Tank Proposed Elevations

wra ENVIRONMENTAL CONSULTANTS



Source: Motorola, 2018

Figure III-61. Site 26 - Mill Valley Water Tank Overall Site Plan

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IV. ENVIRONMENTAL IMPACT ANALYSIS
A. AESTHETICS

A. INTRODUCTION

An essential part of the Environmental Impact Report is an analysis of the impacts to a number of environmental resource factors that are specifically detailed in Appendix G of the CEQA Guidelines. Because this is a subsequent EIR, this analysis builds on the original 2000 EIR and expands the analysis to address the updates planned for the proposed Next Gen system. It also addresses regulatory changes since the original 2000 EIR, including the recent adoption of new CEQA thresholds. The five primary resource areas which are most likely to experience impacts from the Next Gen System include: A) Aesthetic resources, B) Cultural and tribal cultural resources, C) Biological resources, D) Land use consistency and, E) Potential hazards. This Chapter introduces each of these topics in separate subsections (A-E) with discussions of the broad regional setting, applicable federal and state regulatory requirements, and the methodology used.

The CEQA Appendix G "thresholds of impact significance", as updated in early 2019, are the criteria used to evaluate potential environmental impacts from the Next Gen System. Each CEQA threshold asks a specific question about how the project could affect a specific resource. All CEQA thresholds of impact significance are introduced by topic in each of the following subsections. Thresholds that apply to the overall MERA Next Gen system are evaluated as they are introduced in each of the following subsections (A-E). All other CEQA thresholds related to impacts only at individual sites are addressed in the site-by-site evaluations in Chapter V, Existing Conditions and Impacts at Each Site.

Aesthetic resources are often referred to as visual resources, because these resources are often plainly visible to the general public. Certain high-quality visual resources are protected such as those in parklands, public shorelines, scenic vistas and scenic highways. Marin County has many protected aesthetic resources, including shorelines, mountains, beaches, and extensive federal, state, and local parklands. Forests and grasslands, grazed lands and row crops also contribute to the character of the landscape, and are sometimes protected with conservation easements. It is in this rich aesthetic setting that the existing MERA system operates. The existing MERA system is the baseline for this SEIR analysis, including this analysis of aesthetic impacts that would result from the MERA Next Gen System.

Definitions

Scenic Vista – A scenic vista is a broad panoramic overview of a landscape often from an elevated perspective that can be viewed by the public. Designated roadside scenic vistas and scenic vistas from protected parklands are addressed in this analysis.

Visual Character – Visual character is the arrangement of all visual features (i.e., anything visible, such as trees, hills, houses, sky, water, towers, roads, power lines, etc.) in a view or set of views, much like features are combined to compose a painting or series of paintings. The arrangement of visible features on the ground produce the visual character of a site and its surroundings. Visual character is an objective depiction about what is visible, not an interpretation of beauty.

Scenic Quality – Scenic Quality allows for more interpretation, but still adheres to commonly held understandings regarding visual elements. Scenic quality is simply rated as high, medium or low, to minimize subjectivity. Explanations for ratings may address common perceptions regarding composition, color, contrast and a variety of other visual descriptors. Most of the scenic quality in the natural settings of Marin County is high.

B. REGIONAL SETTING

The regional setting for the MERA Next Gen project includes Marin and southern Sonoma Counties, which are part of the North Bay region in the greater San Francisco Bay Area. The North Bay is generally characterized by vegetated hills and valleys draining both westward to the coast and inland towards San Francisco Bay. The Pacific coastline is dramatic and largely undeveloped with a few small coastal towns. Inland areas are comprised of coastal mountains, agricultural land in the valleys, oak woodlands, and deep redwood forests.

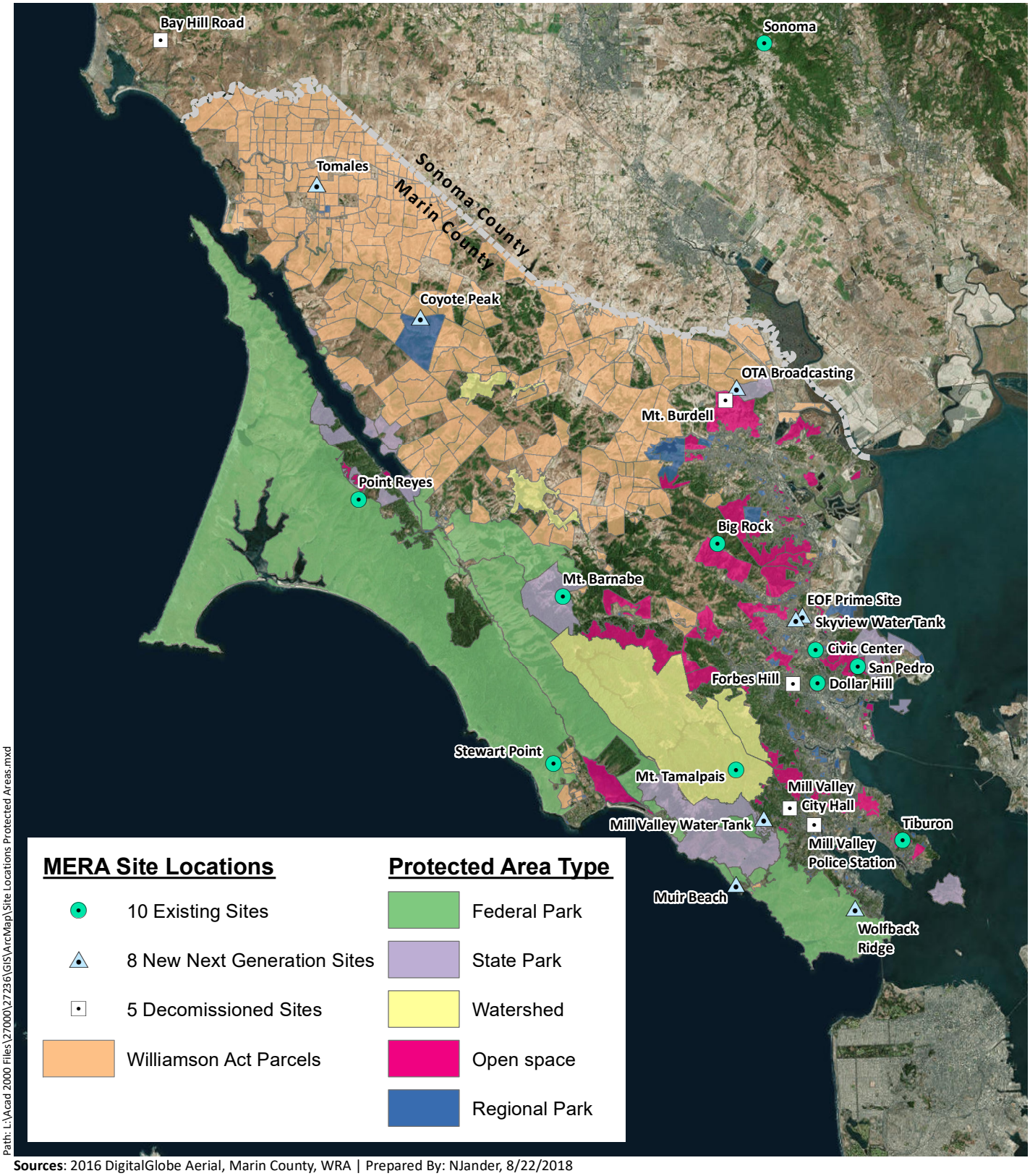
Urban areas straddle State Highway 101, and some elevated urban areas have views of San Francisco Bay. Other important aesthetic resources include numerous ridgelines and peaks, including Mt. Tamalpais, the highest peak visible throughout most of the area. To the north is the Petaluma River Valley--its eastern edge defined by Sonoma Peak which is home to several dairy ranches.

Protected Parklands

Extensive lands in Marin County are protected, often for their scenic quality. A map of the protected parklands and aesthetic resources in Marin County is provided as Figure IV.A-1.

The National Park Service (NPS) manages a large coastal area in the Golden Gate National Recreation Area (GGNRA), the Point Reyes National Seashore, and, further inland, the Muir Woods National Monument. The 2014 GGNRA General Management Plan identifies the area's scenic beauty as an important resource, and it sets forth policies to maintain public access via trails and scenic roads to undeveloped landscapes. It protects scenic quality by ensuring that new development is designed, sited, and constructed to minimize visual intrusion into the natural environment.

The California Department of Parks and Recreation (CDPR) manages the Mount Tamalpais State Park (on the south side of the mountain, away from the Mt. Tamalpais Site), the Samuel P. Taylor State Park (adjacent to the Mount Barnabe site), Olompali State Historic Park (adjacent to the Mt. Burdell OTA Site), and China Camp State Park (near the San Pedro Ridge Site). Protection of scenery and biological resources in park areas is a primary objective of State Park regulations (CDPR, 2019).



Sources: 2016 DigitalGlobe Aerial, Marin County, WRA | Prepared By: NJander, 8/22/2018

Figure IV.A – 1 Aesthetic Resources in Marin County

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Marin County Parks owns and operates a 16,000-acre network of protected regional parks and open space preserves mostly in central and eastern Marin County (MCP, 2019). MERA communications sites in or adjacent to Marin County Open Space Lands include SkyView Terrace, Big Bock Ridge, and Mt Tiburon.

The MERA site on Sonoma Mountain is within the existing Sonoma County communications complex which is located slightly west of Jack London State Park. To the north is the North Sonoma Mountain Open Space Preserve, which is managed by Sonoma County, and may be expanded with a potential future acquisition of land at the top of Sonoma Mountain (SCRP, 2019) that includes the Sonoma County communications site.

The Marin Municipal Water District (MMWD) owns and manages 21,000 acres of watershed lands on Mt. Tamalpais that include the existing MERA site. MMWD's Mt. Tamalpais Watershed Management Policy states that "The [lands are] held in trust as a natural wildland of great biological diversity, as scenic open space and as an area for passive outdoor recreation for Marin and much of the Bay Area..." (MMWD, 2019) -

Protected Agricultural Lands

The Williamson Act, officially known as the California Land Conservation Act of 1965, protects agricultural lands by enabling local governments to enter into contracts with private landowners. These agreements restrict land use on specific parcels to only agricultural use or related open space uses such as open grazing lands, row crops, orchards, and rural farmlands, all of which contribute greatly to the aesthetic quality and character of an area. Some limited small scale non-agricultural activities may be authorized provided the activity does not directly conflict with the agricultural use or limit its economic viability

The Marin Agricultural Land Trust (MALT) administers many of the Williamson Act parcels and has protected over 50,000 acres on 85 farms and ranches, investing over $85 million to protect agricultural lands in western Marin County (MALT, 2019).

C. FEDERAL AND STATE REGULATORY SETTING

Federal Scenic Protections

Golden Gate National Recreation Area and Point Reyes National Seashore General Plans

Adopted in 2014, the GGNRA General Management Plan (GMP) is a land use management document covering National Park Service (NPS) lands in the GGNRA and the Muir Woods National Monument. The GMP provides guidance on land use decisions within the GGNRA but stipulates that future decisions will be made using a number of criteria for maximizing the life and value of public resources. The GMP addresses planning issues such as conflicts with recreational opportunities, sustainable resource management, and scenic beauty and natural character, among others. The Plan divides GGNRA into regions and discusses resources, opportunities, and other key planning considerations for each section of the park. The Wolfback Ridge Site is privately owned and surrounded by GGNRA lands, and the Muir Beach Site is directly adjacent to the GGNRA Muir Beach Scenic Overlook.

The Point Reyes National Seashore GMP was adopted by the NPS in 1980. The GMP guides land use decisions for NPS lands in the Point Reyes National Seashore and the northern sections of the GGNRA. The Plan outlines management objectives pertaining to park access, natural and ecological resource conservation, and the monitoring of non-recreational land use to ensure compatibility with nearby recreational and conservation activity. The NPS began the process of amending the GMP in 2017, but until the amendment is adopted, which is anticipated in early 2020, the 1980 GMP remains the governing GMP for Point Reyes National Seashore. The MERA Point Reyes Hill Site is within Point Reyes National Seashore.

Coastal Zone Management Act (CZMA)

The U.S. Congress passed the Coastal Zone Management Act (CZMA) in 1972. The CZMA is administered by the National Oceanic and Atmospheric Administration (NOAA) with a goal to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." The Act authorized the federal government to make grants to any coastal state for the purpose of administering that state's management program at a state level for federally approved state programs. California's management program under the CZMA is overseen by the California Coastal Commission, which has delegated its authority to coastal counties under the California Coastal Act of 1976. This program is described in more detail below.

State Scenic Protections

California Coastal Act

The California Legislature enacted the California Coastal Act in 1976, mandating that coastal counties manage the conservation and development of their coastal resources through comprehensive planning and regulatory documents under the Local Coastal Program (LCP). Each county's LCP, which identifies the location, type, densities, and other rules for future development in the coastal zone, must gain approval from the California Coastal Commission. Each LCP includes a land use plan and its associated implementing measures. These programs govern decisions that determine the short- and long-term conservation and use of coastal land, water, and other resources. Although administered at the county level, the LCP is a state program pursuant to the Coastal Act (Public Resources Code (PRC) Section 3000-30900). MERA is subject to the requirements of Marin County LCP Units I and II at those sites that are within the LCP's jurisdiction.

State Scenic Highway Program

The California Department of Transportation (Caltrans) administers the State Scenic Highway Program, established through the State Legislature in 1963, to preserve and protect scenic highway corridors from projects that would diminish the aesthetic value of lands adjacent to highways (Sections 260 et seq. of the California Streets and Highways Code). Scenic highway corridors are defined as the land adjacent to and visible by motorists from a scenic highway that are comprised of scenic and natural features. Scenic corridor boundaries are defined by topography, vegetation, and/or jurisdictional lines (Caltrans, [no date]). The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated and are identified in Section 263 of the Streets and Highways Code.

According to the Departmental Transportation Advisory Committee, the characteristics of scenic highways include: 1) landforms (the dominant physical characteristics of the natural corridor, such as gently rolling hills or rugged cliffs, streams, geologic formations, and distant ridges), 2) vegetation (distinctive vegetation within view, such as row crops, orchards, chaparral, or woodlands), 3) structures (buildings may be included in scenic corridors and may add to scenic quality), and 4) panoramas (scenic overlooks with panoramic views of urban, rural, or natural areas).

In Marin County there are no officially designated state scenic highways. However, State Route 1 along the coast, State Route 37 across the northern edge of San Pablo Bay, and the northern end of U.S. Route 101 north of Novato (Shultis and Cass, 2018) are considered eligible for designation. To provide a conservative analysis, this document treats eligible highways as if they were officially designated scenic highways.

In Sonoma County, portions of Highway 12 and 116 are designated state scenic highways and the existing communications site on Mount Sonoma is visible along portions of these roadways. The Sonoma Mountain Site is also slightly west of a portion of Highway 12 that is considered eligible for designation (Shultis and Cadd, 2018).

Locally, Sonoma County designates Sonoma Mountain Road as a scenic corridor (Sonoma County, 2016). In addition to scenic corridors, the Sonoma County General Plan designates scenic landscape units and Sonoma Mountain, including the MERA project site, is designated as a scenic landscape unit (Sonoma County 2016).

Williamson Act Parcels

The Williamson Act, as introduced above, protects agricultural lands from future development, preserves our agricultural heritage, and retains the aesthetic character of agricultural lands in the rural landscape.

Locally Designated Scenic Resources

With the exception of the local coastal plan requirements, MERA is not subject to the codes and ordinances of the cities, counties, and special districts in which Next Gen facilities will be constructed, including zoning and building codes. See more in Chapter IV.D - Land Use Consistency. This means that MERA is not legally subject to the Marin County policies described below, although the intent of these visual policies is considered in this analysis.

The Marin Countywide Plan calls for protection of visual quality in designated Ridge and Upland Greenbelt Areas (RUGAs). The County designated RUGAs are along visually prominent ridgetops, hillsides, and other important scenic resources that the County targets for conservation. Development is limited in these areas, and the County has formulated various policies to protect views of RUGAs. The Next Gen Sites located in or immediately adjacent to RUGAs include Big Rock Ridge, San Pedro Ridge, Wolfback Ridge, Mt. Tiburon, and Mt. Burdell OTA.

Other important scenic areas, although are not formally designated, are valuable due to their visual quality and popularity. Popular scenic areas potentially affected by the project could include

Mt. Tamalpais, Panoramic Highway and Ridgecrest Road, the Muir Beach Scenic Overlook, the Marin Headlands Coastal Trail, Big Rock Ridge, and the Bay Area Ridge Trail crossing.

D. APPROACH TO EVALUATING AESTHETICS AT MERA FACILITIES

This analysis of aesthetic resources begins by examining the existing regional setting of Marin and southern Sonoma Counties described above. The regulatory setting outlines the legal protections afforded to certain specific aesthetic resources, such as parklands and scenic highways. Chapter V analyzes the visual setting at each site individually and considers the unique visual character and setting of each site, taking into account the surrounding landscape, all equipment visible on the towers, and other visible infrastructure, such as roads and power lines, that all contribute to the visual setting.

CEQA Guidelines establish four thresholds that are the criteria by which the project's effects on aesthetic resources are evaluated. These aesthetic thresholds assess potential impacts to: 1) scenic vistas, 2) scenic highways, 3) visual character, and 4) increased light or glare. If the analysis identifies impacts that are "significant", then mitigation measures are defined to limit the visual impacts identified. In some cases, impacts may exceed the effectiveness of mitigation, and those impacts are described as "significant and unavoidable".

Key Observation Points (KOPs) in the vicinity of project sites are selected, and before and after photos are used to evaluate project impacts. KOPs are selected by the lead agency from a broader set of photographs to be representative of available and potentially sensitive, publicly accessible views. On June 20, 2018, MERA officials, environmental, and visual consultants selected 59 KOP photos from a set of nearly 200 photos to portray the project from both distant and close up perspectives. In this analysis, three to four KOPs are selected per site to represent the full range of publicly accessible views. In all cases, a near view was selected to provide a detailed perspective of the project site, and a distant view of the site was chosen to show the site in a wider visual context. If needed, additional KOPs were selected to show views from a nearby designated scenic resource or other important point. For each KOP there are two images: the existing condition (the baseline for the analysis), and the proposed condition (computer generated photo-realistic simulation) of the site after the project is completed. Information about quality control and accuracy in the production of photo simulations is provided in Appendix A.

The potential number of observers with access to that view and the typical duration of the view are also considered in KOP evaluations. Durations are highly variable, ranging from seconds in a passing car to hours on a trail to years from within an office or residence. All photo simulations are included in the site-by-site evaluations found in Chapter V.

Some noticeable visible changes made by the project, however may not be significant, and, in some cases, a trained eye may be required to discern the differences. In other cases, visible changes could be adverse and still not be significant because of the existing visual character of the setting.

Impact determinations consider the effect of the project on the visual character of an area. A negative change in the visual character of an area, or the obstruction of an existing scenic vista

which has been available to the general public would be considered an impact. Visual impacts at night are also evaluated by considering any sources of additional light or nighttime glare from the project.

E. THRESHOLDS OF SIGNIFICANCE

To determine whether a proposed project will result in a significant adverse effect to aesthetics, Appendix G of the CEQA Guidelines suggests an analysis that considers whether the project would:

a) *Have a substantial adverse effect on a scenic vista?*

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

c) *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? Or in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

F. REGIONAL IMPACTS ANALYSIS AND MITIGATION MEASURES

All existing sites were evaluated in the original EIR (MERA, 2000). Thresholds b) and d) above were found to be less-than-significant in the Initial Study (1999) and were not discussed in the EIR. Impacts related to thresholds a) and c) were found to be less than significant at the sites that were eventually developed, except at Forbes Hill and Dollar Hill, where impacts were found to be significant and unavoidable despite mitigation. Due to the localized nature of the Next Gen System's potential effects on aesthetic resources, many impacts are discussed site-by-site in Chapter V, Existing Conditions and Impacts. There are, however, several common impacts or lack of impacts addressed below for the majority of sites.

The CEQA Guidelines require that an analysis of aesthetics impacts consider whether the project would:

a) *Have a substantial adverse effect on a scenic vista?*

Most MERA sites are elevated and have a potential to provide an overview of the surrounding landscape. However, most of the Next Gen Sites are already developed; and are not readily accessible to the general public, meaning that they do not provide publicly accessible scenic vistas. Previously developed and restricted-access sites that could otherwise offer a scenic vista include: Big Rock, Ridge Mt. Tamalpais, San Pedro Ridge, Sonoma Mountain, and Wolfback Ridge. These sites already have existing towers and communications equipment, and the degree of change from the existing baseline condition is very low. The Tomales and Coyote Peak Sites also have existing infrastructure. Although the project would have a higher degree of change at these sites, public access is restricted. Consequently, there is little potential for a substantial

adverse effect on a scenic vista, and the project would have a ***less-than-significant*** impact at these sites.

Some sites are highly vegetated and do not offer scenic vistas: Point Reyes Hill, Stewart Point, and Mill Valley Water Tank. At these three sites, there is little potential for a substantial adverse effect on a scenic vista, and the project's impact would be ***less than significant***. No further consideration of these sites relative to this criterion is required.

Five sites have the potential to provide a publicly accessible scenic vista: Mt. Barnabe, Dollar Hill, Mt. Tiburon, Skyview Terrace Water Tank, and Muir Beach. The aesthetic impacts to these sites and the recommended mitigation measures are summarized below and fully addressed in Chapter V.

At the Mt. Barnabe, Dollar Hill, and Mt. Tiburon Sites, MERA Next Gen proposals focus on replacing antennas and microwave dishes on existing towers and monopoles. Existing facilities already adversely affect available scenic vistas, and the minor changes required by the project do not affect the availability of scenic vistas at these sites. Therefore, the impact is ***less than significant***.

At Skyview Terrace Water Tank, new impacts were identified to an existing scenic vista of surrounding ridgelines and other landmarks from within the designated open space that surrounds the project. Thus, the project impacts at this location were found to be ***significant and unavoidable.*** Proposed mitigation includes the reconstruction of a trail that would provide visitors access to other observation points along the ridge where views would not be obstructed.

At the Muir Beach Site, the proposed Next Gen improvements were found to create ***less-than-significant*** impacts on scenic vistas toward the ocean and coastal bluffs. Views of the Pacific Ocean to the west and existing vistas of the ocean and coastal bluffs to the north and south would not be affected, since the proposed equipment will be installed east of the scenic overlook parking lot. Furthermore, existing tree cover conceals the proposed site when viewed from nearby ridgelines, State Route 1 and the Marin Headlands Coastal Trail to the north. Views of Mt. Tamalpais from the overlook and parking lot are, however, affected.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

While the Tomales Site is not visible from a designated state scenic highway, it is visible from State Route 1, which is eligible for designation as a state scenic highway. As a conservative approach, this analysis treats eligibility for state scenic highway designation the same as a designated scenic highway and this criterion is thoroughly addressed in Chapter V. At Tomales the impact is found to be ***significant and unavoidable***, and mitigation measures are provided. However, even with mitigation measures implemented the impact of the project at the Tomales Site is still significant and unavoidable.

All remaining Next Gen Sites are located away from a designated state scenic highway or an eligible scenic highway, and there is no potential to substantially damage scenic resources located at those sites. Therefore, at those 17 sites there is ***no impact.***

c) *In non-urbanized areas, substantially degrade the existing visual character or quality of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The potential for the Next Gen System to degrade the existing visual character or quality of each site and its surroundings is addressed on a site-by-site basis in Chapter V (Existing Conditions and Impacts at Each Site).

At the Tomales, Coyote Peak, Skyview Terrace Water Tank, Muir Beach, and Mill Valley Water Tank Sites, the introduction of additional infrastructure does substantially degrade the existing visual character or quality of the site and surroundings and, therefore, at these five sites there are ***significant and unavoidable*** impacts. Mitigation Measures for each of the five impacted sites is described in Chapter V, though even with mitigation, the impacts remain ***significant and unavoidable***.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Each of the project sites either has or will have a manually operated 'porch light' at the front door of the equipment structure to aid workers in accessing the site at night. This light is to be turned off at departure and will remain off until needed again. No other external lighting either on the structure or on the towers will be installed; therefore, visual impacts at night due to artificial light or nighttime glare would be minimal, but implementation Mitigation Measure AES-1 would reduce ensure the impact is ***less than significant with mitigation incorporated***. Since this impact is the same for all sites, threshold d) is not discussed further in Chapter V.

Mitigation Measure AES-1

The outdoor 'porch light' at each of the Next Gen Sites will include a shield around the top of the light source to stop upward glare and to protect dark nighttime skies. A timer will also prevent the light from being left on.

Summary of Site-Specific Environmental Impacts and Mitigation Measures

Site-by-site evaluations of criteria a) through c) are found in Chapter V (Existing Conditions and Impacts at Each Site). The following is a summary of those impacts, which are also shown in Table IV.A–1.

Potentially significant impacts related to criterion a) were found at the Skyview Terrace Water Tank Site, as mentioned previously. Mitigation Measure AES-5, which would provide trail access to another location along the ridge that is less impacted by the project, would reduce impacts to the scenic vista, but they would still remain ***significant and unavoidable*** even after mitigation.

Potentially significant impacts related to criterion c) were found at the Tomales Site. Despite implementation of Mitigation Measure AES-2, which would help shield MERA structures from State Route 1, analysis showed that impacts to scenic resources would remain ***significant and unavoidable***.

Potentially significant impacts related to criterion c) were found at the Tomales, Coyote Peak, Skyview Terrace Water Tank, Muir Beach, Mill Valley Water Tank, and Forbes Hill Sites. Mitigation Measures AES-3, AES-4, AES-6, AES-7, AES-8, and AES-9 require a variety of screening, color blending activities, and other site design features. However, despite implementation of these measures, analysis showed that impacts to visual character or quality would remain ***significant and unavoidable***.

Table IV.A-1 Summary of Aesthetics Impacts by Site

Site	Site Name	2000 EIR	MERA Proposals	MERA (% of total)	a) Scenic Vistas	b) Scenic Highways	c) Visual Character	Impact *of Next Gen Facilities
A	Prime Site EOF^	No	New MW/ antennas at EOF	~10%				Limited
B	Civic Center	Yes	Microwave on Historic Rooftop	<5%				Low
C	Big Rock Ridge	Yes	Upgrades	< 5%				Low
D	Mt. Tamalpais	Yes	Upgrades	< 5%				Low
E	Mt. Barnabe	Yes	Upgrades	~35%				Low
F	Point Reyes Hill	Yes	Upgrades	~60%				Limited
N/A	Forbes Hill	Yes	Decommission	N/A				Beneficial
G	Dollar Hill	Yes	Upgrades	~70%				Limited
H	San Pedro Ridge	Yes	Upgrades	~15%				Low
N/A	Mt. Burdell	Yes	Decommission	N/A				None
I	Mt. Tiburon	Yes	Upgrades	100%				Low
N/A	Mill Valley City Hall	Yes	Decommission	N/A				None
N/A	Mill Valley Public Safety Building	Yes	Decommission	N/A				None
N/A	Bay Hill Road	Yes	Decommission	N/A				None
J	Sonoma Mountain	Yes	Upgrades	<5%				Low
K	Stewart Point**	Yes	Upgrades	100%				Low
L	Tomales***	No	New site with existing cell tower equipment	<70%		♦		Significant

Site	Site Name	2000 EIR	MERA Proposals	MERA (% of total)	a) Scenic Vistas	b) Scenic Highways	c) Visual Character	Impact *of Next Gen Facilities
M	Coyote Peak	No	New site with existing facilities	<98%			♦	Significant
N	Skyview Terrace Water Tank	No	New site, existing MMWD water tank	<80%	♦		♦	Significant
O	Muir Beach	No	New site, existing water tank	<40%			♦	Significant
P	Wolfback Ridge	No	New site with existing 100' towers	<5%				Low
Q	Mt. Burdell OTA^	No	New site with existing structure and tower	<10%				Low
R	Mill Valley Water Tank	No	New site with existing MMWD water tank	<20%			♦	Significant

Blue = New Sites. Green = Existing Sites (little change from baseline). White = Decommission.

Aesthetics Impacts: ♦ Significant Impact = Obvious change affecting protected resources or highly accessible public views and mitigation is required. Beneficial = aesthetics improved, fewer antennas or MW dishes. Low = noticeable upgrades detected by detailed comparison. Limited = noticeable to the casual observer. Moderate = obvious change.

IV. ENVIRONMENTAL IMPACT ANALYSIS
B. CULTURAL AND TRIBAL CULTURAL RESOURCES

A. INTRODUCTION

This section of the SEIR evaluates potential impacts to cultural and tribal cultural resources that may result from implementation of MERA's proposed Next Generation Radio Communication System (the proposed project, the "Next Gen System"). The information and analysis in this section is the result of the cultural resources report prepared for the proposed project by Garcia and Associates (GANDA), as well as formal consultation between MERA and the Federated Indians of Graton Rancheria (FIGR). The consultation steps are summarized below. Supporting documentation in the form of a confidential report may be provided to qualified individuals upon request.

- June 5, 2018 - FIGR Request for Consultation
- July 31, 2018 - MERA Consultation with FIGR at FIGR offices
- Aug. 6, 2018 - MERA sent kmz computer file to FIGR showing three-dimensional mapping for all sites
- November 8, 2018 – MERA forwarded *Draft Cultural Resources Inventory Report for the Marin Emergency Radio Authority Next Generation Radio Communication System*, *Sonoma and Marin Counties, California*. (GANDA, October 2018)
- February 1, 2019 - FIGR email to MERA describing a potential for impacts to Tribal Cultural Resources at 13 sites
- February 7, 2019 - FIGR email confirmation that consultation is complete conditioned upon a commitment from MERA to provide for tribal cultural monitoring when excavation is necessary at any of the thirteen sites identified

Summary

Based on the results of GANDA's background research and survey, no archaeological resources were identified within the Area of Direct Impacts (ADI). There are historic resources within close proximity to the ADI at three MERA sites: 1) a historic-era road that passes near the existing Mt. Barnabe site (P-21-000482/CA-MRN-551H), 2) the Burdell rock wall (associated with Rancho Olompali) adjacent to the proposed Mount Burdell OTA Site, and 3) the Marin County Civic Center (listed on the National Register of Historic Places), all of which have been previously documented.

In the Tribal consultation meeting in July 2018, FIGR requested the opportunity to review the Cultural Resources Inventory Report prepared by GANDA in order to provide input on the project. During this review, FIGR identified the potential for tribal cultural resources to be unearthed during excavation at 13 sites. As a result, FIGR requested that a tribal monitor be present during any subsurface excavations. That mitigation is incorporated into the impact discussions that follow.

The results of the tribal consultation and the findings of the cultural and tribal cultural resources report are combined and presented together in this chapter. Chapter V includes a site-by-site discussion of the findings and monitoring obligations resulting from tribal consultation and the cultural resources report. Details are provided insofar as MERA's confidentiality obligations under Public Resources Code 21082.3 (requiring any information submitted by the tribe to be kept confidential) allows.

B. REGIONAL SETTING

Regional Prehistoric Setting

Evidence of early human occupation of Northern California has been identified from more than 5,500 years ago, but evidence of human activity in Marin County during this period has not been found. Still, it is unlikely that early Holocene-age people would be present throughout other regions in California but be absent from Marin County. There is historic evidence of significant sea level rise inundating portions of the coastline and it is quite likely that the rising waters buried numerous sites from this period under alluvial fans and floodplain deposits.

The earliest evidence of human occupation found in Marin County is from the Early Period (cal. 5450 to 2450 years before present or BP). Radiocarbon dating of artifacts confirms native occupation from 3,000 to 5,000 years ago. A recently excavated prehistoric site in Marin County contains a well-defined early component dating back 5,000 years. The unearthing of this site resulted in the recovery of artifacts which indicate that social complexity and well-established trade networks were present in the area during this period.

During the Middle Period (cal. 2450 BP to 900 BP), economic strategies developed around the extensive and rich resources of the Bay Area. There were numerous marshes, tidal wetlands, and inland areas that offered an abundant resource base due to the slightly wetter environmental pattern during the late Holocene. Additionally, artifacts excavated from this period indicate that hunting was important, but native people were beginning to rely on acorn foraging as an important food source. Recent excavation sites in Marin County indicate the presence of a socially stratified system during this period.

The transition to the Late Period (cal. 900 BP to 400 BP) in the North Bay Area is characterized by evidence of an increase in ceremonialism, social organization, and stratification. Many small groups maintained an economic relationship, and trade was frequent between the coastal groups and the valley and bayshore groups. A widespread series of droughts from AD 800 to 1300, known as the Medieval Climatic Anomaly, likely had significant effects on the environment and, subsequently, the resources that the native populations relied upon.

Regional Tribal Resources Setting

The Coast Miwok historically inhabited lands that are today Marin and southern Sonoma counties. Coast Miwok territory in this region encompassed the areas along the coast and inland between Duncan's Point southward to San Pablo Bay. Coast Miwok villages were mainly situated near watercourses and not necessarily near the Pacific coast. Villages were composed of various structures, including residential dwellings, sweathouses, and secret society dance houses. Coast

Miwok political organization revolved around village life. The Coast Miwok village of Olompali (CA-MRN-193) is the largest known Coast Miwok village found to date and was occupied from the Late Period through European contact. A broad range of prehistoric and protohistoric cultural material has been recovered from this site.

Although European colonists first visited the Bay Area centuries prior, it was not until the Spanish established missions in the late 1700s and early 1800s that Coast Miwok people and their lifestyle changed significantly. By 1817, Mission San Rafael was established, and many Native American people were moved to this mission until it was subsequently closed and abandoned by 1844. . During this period, much of Coast Miwok territory was left depopulated, except for a few groups of unbaptized Coast Miwok people who were able to travel northeast to Tomales or Bodega Bay or those who decided to join other communities outside of Coast Miwok territory. Many Coast Miwok people in the missions created new relationships with one another and with people from Ohlone, Pomo, Patwin, and Wappo tribes.

Today, the Coast Miwok and Southern Pomo communities make up the federally recognized Federated Indians of the Graton Rancheria. Members of FIGR are active in preserving native plant landscapes, important viewsheds, plant and animal resources, archaeological resources, and places of important tribal cultural significance associated with their heritage throughout Marin County and southern Sonoma County.

Regional Historic Setting

In 1776, Spanish missionaries established Mission San Francisco de Asís (now known as Mission Dolores) on the San Francisco Peninsula, and the Marin peninsula came under its jurisdiction. In the early 1800s the Mission began drawing its population from the surrounding area, including the Marin Peninsula, which was inhabited by Coast Miwok at the time. Spanish missionaries subsequently established Mission San Rafael in Marin in 1817.

The secularization of the missions following 1821 allowed the Mexican government to award land to various individuals as ranchos. Native Americans continued to provide labor as they manufactured goods in adobe workshops alongside immigrant laborers. Another consequence of secularization was the spread of ranching throughout the area and the division of the region into land grants.

In 1848, California was ceded to the United States as part of the treaty ending the Mexican-American War. Around the same time, gold was discovered in the American River, and the Gold Rush followed shortly thereafter. The state's population grew rapidly from 15,000 people in 1848 to 93,000 people in 1850, such that it could apply for statehood that year. After California joined the United States in 1850, rancho owners continued to work their land and raise cattle to feed the hordes of gold miners, often making large profits, until the severe droughts in the 1860s depleted the cattle supply. These circumstances forced many rancho owners to sell their lands, which led to more diversified land ownership of smaller tracts and ranches throughout Marin and Sonoma counties.

C. FEDERAL AND STATE REGULATORY SETTING

Definitions

Historical Architectural Resources

Pursuant to Section 15064.5 of the CEQA Guidelines, a historical resource (including both built environment and prehistoric archaeological resources) is presumed significant if the structure is listed on the CRHR or has been determined to be eligible for listing by the State Historical Resources Commission. An historical resource may also be considered significant if the lead agency determines, based on substantial evidence, that the resource meets the criteria for inclusion in the CRHR. The criteria are as follows:

Archaeological Resources

Pursuant to Section 15064.5 of the CEQA Guidelines, archaeological resources, not otherwise determined to be historical resources, may be significant if they are unique. Pursuant to Public Resources Code Section 21083.2, a unique archaeological resource is defined as an archaeological artifact, object, or site about which it can be clearly demonstrated, that without merely adding to the current body of knowledge, there is a high probability that it meets one of the following criteria:

1. The resource contains information needed to answer important scientific questions and there is a demonstrable public interest in that information;
2. The resource as a special and particular quality, such as being the oldest of its type or the best available example of its type; or
3. The resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archaeological resource means an archaeological artifact, object, or site that does not meet the above criteria. Non-unique archaeological resources receive no further consideration under CEQA.

Human Remains

According to Section 15064.5 of the CEQA Guidelines, all human remains are a significant resource. This section also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are stipulated in Public Resources Code Section 5097.98, described further below.

Tribal Cultural Resources

Tribal cultural resources are defined in Public Resources Code Section 21074 as either of the following:

1. A site, feature, place, cultural landscape that is geographically defined in terms of the size and scope, sacred place, or object with cultural value to a California Native American tribe, and also is listed or eligible for listing in the California Register of Historical Resources, or is included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or

2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c). In applying the criteria set forth in Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.

Federal Laws

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA), as amended, established the National Register of Historic Places (NRHP), which contains an inventory of prehistoric and historic properties that are significant at the national, state, and local levels. As stated by 36 CFR 60.4, a district, site, building, structure, or object is potentially significant and may be eligible for inclusion on the NRHP if it is at least 50 years old and meets at least one of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of our history.
- Is associated with the lives of persons significant in our past.
- Embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- Has yielded, or may be likely to yield, information important in history or prehistory.

In addition, a property must have integrity of location, design, setting, materials, workmanship, feeling, or association. Integrity is considered to be "the ability of a property to convey its significance[1]."

Cemeteries, birthplaces, graves of historic figures, religious sites, structures that have been reconstructed or moved from their original location, properties that are primarily commemorative in nature, and properties that have achieved significance within the past 50 years are typically excluded from consideration for listing in the NRHP; however, they can be considered if they meet special requirements.

State Laws

California Register of Historic Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CRHR). The State Historic Preservation Office (SHPO) maintains the CRHR. Properties that are listed on the NRHP are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties

[1] *U.S. Department of the Interior, National Park Service, National Register Bulletin: How to Apply the National Register Criteria for Evaluation (Washington, DC: National Park Service, 1995), https://www.nps.gov/nr/publications/bulletins/nrb15/nrb15_8.htm*

designated under local ordinances or identified through local historical resource surveys. To be eligible for listing on the CRHR, a resource must meet one or more of the following criteria.

- The resource is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- The resource is associated with lives of persons important in our past;
- The resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- The resource has yielded, or may be likely to yield, information important in prehistory or history.

SB-18 Tribal Consultation

Government Code Section 65352.3, enacted by Senate Bill (SB) 18, requires local governments to consult with California Native American Tribes identified by the California Native American Heritage Commission (NAHC) prior to the adoption or amendment of a general plan or specific plan. The purpose of this consultation is to preserve, or mitigate impacts to, cultural places, features, and objects.

AB-52 Tribal Cultural Resources

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which requires lead agencies to evaluate the impacts of projects on tribal cultural resources during CEQA review, and to consult with California Native American tribes early in the review process. AB 52 is applicable to projects for which a Notice of Preparation is filed after July 1, 2015.

AB 52 requires lead agencies to provide notice to California Native American tribes who are traditionally and culturally affiliated with the geographic area of the project, and who have requested such consultation in writing. If the tribe requests consultation within 30 days of receipt of the notice, the lead agency must consult with the tribe. Consultation may include discussing the type of environmental review necessary, the significance of tribal cultural resources, and the significance of the project's impacts on tribal cultural resources, as well as alternatives and mitigation measures (PRC Sections 21080.3.1, 21080.3.2, 21082.3).

If a project may have a significant impact on tribal cultural resources, the lead agency's environmental document must discuss (1) whether the proposed project has a significant impact on an identified tribal cultural resource and (2) whether feasible alternatives or mitigation measures avoid or substantially lessen the impact on the identified tribal cultural resource (PRC Section 21082.3(b)). As a result of AB 52, Appendix G of the CEQA Guidelines was updated with sample questions regarding impacts to tribal cultural resources (PRC Section 21083.09).

State Laws Pertaining to Human Remains

Section 7050.5 of the California Health and Safety Code states that if human remains are encountered in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area until the county coroner has been notified and has determined whether or not the remains are subject to the coroner's authority. If human remains

are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification. Pursuant to Public Resources Code Section 5097.98, the NAHC must contact those persons it believes are most likely descendants to inspect the remains and recommend means for proper treatment of the remains. These procedures are also described in CEQA Guidelines Section 15064.5(e).

D. APPROACH TO EVALUATING CULTURAL AND TRIBAL CULTURAL RESOURCES AT MERA FACILITIES

In accordance with Section 15064.5 of the CEQA Guidelines, GANDA conducted a cultural and tribal cultural resources investigation to identify historical resources that included prehistoric and historic-era archaeological resources and architectural resources more than 45 years of age. The resulting Cultural Resources Inventory Report identifies all cultural resources located within the MERA Next Gen System's Area of Direct Impacts (ADI). The ADI includes all construction staging, equipment laydown, vegetation clearance, and ground disturbance areas at the sites. Findings of the report may be viewed upon request by qualified individuals and are based on the following research:

- A records search at the Northwest Information Center (NWIC) of the California Historic Resource Inventory System at California State University, Sonoma;
- Archival research and historic map review conducted at local, regional, and online repositories;
- Consultation with Native American groups and individuals identified by the Native American Heritage Commission;
- A field survey of the Area of Direct Impacts;
- Recommendations for compliance with the California Environmental Quality Act;
- Tribal consultation and incorporation of impacts defined by FIGR;
- The FIGR-requested mitigation measures to limit potential impacts to Tribal Cultural Resources at 13 sites.

E. THRESHOLDS OF SIGNIFICANCE

Cultural Resources Thresholds

Appendix G of the CEQA Guidelines suggests the following questions be considered in determining whether a proposed project will result in a significant adverse effect to cultural resources. The same thresholds were used in the 2000 Final EIR analysis, which examine whether the project would:

a) *Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

b) *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

c) *Disturb any human remains, including those interred outside of dedicated cemeteries?*

Tribal Cultural Resources Thresholds

Appendix G of the CEQA Guidelines suggests an analysis of impacts to tribal cultural resources that involves the following question:

a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe whether a project would cause a substantial adverse change in the significance of such a resource, and that is either:*
   i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*
   ii) *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

F. REGIONAL IMPACTS ANALYSIS AND MITIGATION MEASURES

Cultural Resources Impacts and Mitigation Measures

This section describes the cultural resources impacts and the associated mitigation measures for each of the three threshold scenarios outlined previously. The 2000 Final EIR found impacts related to cultural resources to be less than significant for the existing MERA sites; however, further site-by-site analysis for threshold a) is provided in Chapter V (Existing Conditions and Impacts at Each Site) for both existing and new MERA Next Gen sites. Analysis for thresholds b) and c) is consistent across the MERA sites and is therefore discussed only here on a project-wide level.

a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

A “substantial adverse change” to the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be “materially impaired.”

The proposed Next Gen communication sites were evaluated for the presence of historical resources by conducting records searches for all sites. Field surveys were also conducted for all sites except Big Rock Ridge, Mt. Barnabe, and Wolfback Ridge, which were subject to property access restrictions. Based on the findings of the records search and site surveys, there are three historic resources within close proximity to the proposed project: 1) a historic-era road atop Mt. Barnabe (P-21-000482/CA-MRN-551H), 2) the Burdell Rock Wall associated with Rancho Olompali, and 3) the Marin County Civic Center (which is listed on the National Register of Historic Places). Each of these historic sites has been previously documented.

The effects of the proposed project would be minimal. At the Mt. Burdell OTA Site a chain link fence separates the Burdell Rock Wall from the ADI by ten feet and the work area has been

established to stay within the fence and to avoid the wall. The historic road atop Mt. Barnabe passes by the proposed project area and is the primary access to the site, but no grading or other significant changes are proposed for the actively used access road. At the Marin Civic Center, the project would add one new three-foot diameter microwave dish to the roof of the historic building, but it would be generally out of sight, not within any designated view corridors described in the design guidelines, and installed among other rooftop communications and ventilation equipment. Further analysis and protective measures at these sites are discussed at greater length in Chapter V. As the project would not cause a substantial adverse change in the significance of historical resources, the impacts would be ***less than significant***.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

GANDA conducted a records search at the NWIC and examined cultural resources site records, previously-conducted cultural resources investigations, and historic information. Upon review of this information, GANDA determined that no documented archaeological resources exist within the project's ADI or a 0.25-mile buffer around the ADI. In addition, the ADI's soils and geology indicate that there is an overall low sensitivity for sub-surface prehistoric archaeological deposits.

As there are no known archaeological resources within the project's disturbance area, and soil types indicate that accidental discovery of archaeological resources is unlikely, the overall likelihood of the project causing a substantial adverse change in the significance of an archaeological resource is low. In the unlikely event of an accidental discovery, California law and Mitigation Measure CULT-1 outline the requisite procedures to stop work in the vicinity of the discovered item until a qualified archaeologist may assess the quality of the find.

By implementing the stop work procedures defined in Mitigation Measure CULT-1, the already minimal possibility of adversely affecting the significance of archaeological resources becomes negligible; thus, the project would not cause a substantial adverse change in the significance of archaeological resources, and impacts would be ***less than significant with mitigation incorporated***. This finding applies uniformly across sites, and this issue is not discussed further.

Impact CULT-1

The project has the potential to cause a substantial adverse change in the significance of archaeological resources pursuant to Section 15064.5 in the event of an accidental find during the course of ground-disturbing activity. Implementation of Mitigation Measure CULT-1 will ensure that impacts are ***less than significant with mitigation incorporated***.

Mitigation Measure CULT-1

During construction, if buried archaeological or tribal resources are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until the designated tribal monitor or a Registered Professional Archaeologist (RPA) can assess the significance of the find, and, if necessary, develop appropriate treatment measures in consultation with FIGR and/or the State Office of Historic Preservation (SHPO).

These archaeological resources could include buried prehistoric or historic features such as artifact-filled privies, wells, and refuse pits, and artifact deposits, along with concentrations of adobe, stone, or concrete walls or foundations, and concentrations of ceramic, glass, or metal materials. Native American archaeological materials could include obsidian and chert flaked stone tools (such as projectile points and knives), midden (darkened soil created culturally from use and containing heat-affected rock, artifacts, animal bones, or shellfish remains), and/or groundstone implements (such as mortars and pestles).

c) *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

According to FIGR there are no known Native American burial sites within or near the ADI. Given the soil types underlying the ADI, the steep topography surrounding most sites, and the low degree of ground disturbance that would occur, the likelihood of discovering human remains is low. Additionally, the project would comply with California law, which outlines procedures for the accidental discovery of human remains during ground-disturbing activities.

Given the lack of known human remains within or near the ADI, the low likelihood of accidental discovery, and implementation of appropriate procedures upon accidental discovery (see Mitigation Measure CULT-2), it is improbable that the project would disturb any human remains, including those interred outside of formal cemeteries. Impacts would be ***less than significant with mitigation incorporated***. This finding applies uniformly across sites, and this issue is not discussed further.

Impact CULT-2

The proposed project has the potential to disturb human remains outside of dedicated cemeteries. In the event of accidental discovery, implementation of Mitigation Measure CULT-2 below would ensure impacts are ***less than significant with mitigation incorporated***.

Mitigation Measure CULT-2

Upon accidental discovery of human remains, any disturbance shall stop within the site and within other areas reasonably suspected to contain additional human remains. The Sonoma or Marin County coroner shall be contacted immediately, depending on the location of the site. If the coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours. The NAHC shall subsequently identify the most likely living descendent, who may make recommendations to the landowner or the person responsible for excavation regarding acceptable means of treating or disposing of the remains and any associated grave items.

If the NAHC is unable to identify the most likely descendent, the descendent fails to make a recommendation within 24 hours of notification, the landowner rejects the recommendation, or mediation by NAHC fails to yield a mutually agreeable recommendation, the landowner or representative shall rebury the remains and associated items with appropriate dignity on the same property in a location not subject to further subsurface disturbance.

Tribal Cultural Resources Impacts and Mitigation Measures

Impacts to tribal cultural resources were not separately analyzed in the 2000 Final EIR. This SEIR addresses the Project's potential impacts to tribal cultural resources, as defined in Public Resources Code Section 21074, and the associated mitigation measures for any impacts, based on the following:

a-i) Would the project cause an adverse change in the significance of a tribal cultural resource, defined as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As discussed in greater detail above, three Next Gen Sites were identified as having historic resources listed or eligible for listing in the California Register of Historical Resources or a local register within or near their ADI. These sites include Mt. Burdell OTA, Mt. Barnabe, and the Marin County Civic Center. A copy of the Cultural Resources Report documenting the historical significance of these and other sites was provided to the Federated Indians of Graton Rancheria during the tribal consultation process. FIGR did not identify any of the eligible or listed resources discussed above as being potentially impacted by the project.

During the formal consultation process with FIGR, no tribal cultural resources were identified that were listed or eligible for listing in the California Register of Historical Resources or a local register. However, the proposed project will still comply with California laws governing stop work procedures in the event of any accidental finds. Such laws apply uniformly across Next Gen Sites.

By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of tribal cultural resources listed or eligible for listing as a historical resource pursuant to Public Resources Code Section 5020.1(k). Potential project impacts would be ***less than significant with mitigation incorporated***. Because this is true across all Next Gen Sites, and the consultation process did not identify any sites with eligible or listed tribal cultural historical resources, this issue is not discussed further in Chapter V (Existing Conditions and Impacts at Each Site).

Impact TRIBE-1

The proposed project has the potential to impact tribal cultural resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). Implementation of Mitigation Measure CULT-1 above would ensure potential impacts are ***less than significant with mitigation incorporated***.

Mitigation Measure CULT-1

See full text of Mitigation Measure CULT-1 above on page IV.B-10.

a-ii) *Would the project cause an adverse change in the significance of a tribal cultural resource, defined as a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

Based on the formal consultation process with FIGR, the project has the potential to unearth tribal cultural resources at 13 Next Gen Sites. FIGR requested that tribal cultural monitors be present at these sites during construction. FIGR also requested ongoing consultation with MERA in the event of substantial changes to the project's design in order to better understand project specifics that may result in modification to the list of sites which may need cultural monitors. FIGR indicated to MERA that consultation could be considered complete upon MERA's commitment to these measures and contingent upon any modifications to the project's design.

By implementing Mitigation Measures TRIBE-1, TRIBE-2, TRIBE-3, and CULT-1, the project would not adversely impact the significance of tribal cultural resources determined by MERA to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. Consequently, impacts would be ***less than significant with mitigation incorporated***. Additional details regarding individual sites identified as potentially containing tribal cultural resources can be found in Chapter V (Existing Conditions and Impacts at Each Site).

Impact TRIBE-2

The proposed project has the potential to impact tribal cultural resources determined by the lead agency to be significant pursuant to Section 5024.1. Implementation of Mitigation Measures CULT-1 and TRIBE-1, TRIBE-2, and TRIBE-3 below would ensure potential impacts are ***less than significant with mitigation incorporated***.

Mitigation Measure TRIBE-1

If the design of the proposed project is substantially altered after the conclusion of formal consultation with FIGR, final plans and specifications shall be submitted to FIGR's Tribal Heritage Preservation Officer, or designated representative, prior to construction. FIGR shall be provided reasonable opportunity to review the plans and specifications for potential tribal cultural impacts resulting from project excavation, grading, or mobilization. Based on the outcome of this review, FIGR may amend the list of sites requiring a tribal cultural monitor.

Mitigation Measure TRIBE-2

A tribal monitor with stop work authority shall be present during project excavation and grading to watch for the appearance of tribal cultural resources at the sites designated by FIGR. Unless modified by an updated list from FIGR, monitors will be present at the following 13 sites, which were preliminarily identified as having potential for disturbance of tribal cultural resources: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, Stewart Point, Tomales, Coyote Peak, Skyview Terrace Water Tank, and Muir Beach.

Mitigation Measure TRIBE-3

Contractors and construction personnel involved with any form of ground disturbance at the sites designated as culturally sensitive by FIGR shall be advised of the possibility of encountering subsurface tribal cultural resources. If any such resources are encountered or suspected to have been encountered, work shall be halted within 100 feet of the find until FIGR has been notified and given the opportunity to assess the significance of the find. If FIGR determines that the find is a significant tribal cultural resource, MERA shall consult with FIGR to develop a plan to preserve the resource's significance to the extent feasible.

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IV. ENVIRONMENTAL IMPACT ANALYSIS
C. BIOLOGICAL RESOURCES

A. INTRODUCTION

This section of the Draft SEIR introduces the methods used to evaluate impacts associated with biological resources as they relate to the implementation of the proposed MERA Next Generation Communications System ("proposed project" or "Next Gen"). The information in this section presents the methodology and incorporates the countywide regional results of the biological resources assessment (BRA) prepared by WRA, Inc. (WRA).

The BRA is based on database searches and site visits conducted during 2018. Early database searches were performed to identify the potential for species to be present at each site, with the results provided in the species lists in Appendix B. Site-by-site reporting on potentially significant environmental resource impacts, including biological impacts, is provided in Chapter V (Existing Conditions and Impacts at Each Site).

The purpose of the BRA was to determine three things: whether any newly recognized sensitive habitats or special-status species have potential to occur in the project's vicinity; to identify any new or significant impacts to biological resources; and to implement mitigation measures from the original project EIR (MERA 2000) calling for pre-construction surveys for sensitive resources. Two considerations affected the analysis of whether new impacts might occur: have there been any subsequent changes to the regulatory environment regarding biological resources; and are there new species given special consideration under CEQA that could be present. These changes include a broadened definition of what constitutes a special-status plant species since certification of the original project EIR.

Each of the 10 existing and eight proposed Next Gen Sites were first assessed separately for their potential to support special-status plant and wildlife species and sensitive biological communities—and they were then evaluated for the potential for project impacts. Where potentially significant impacts to biological resources were identified, mitigation measures were provided to reduce impacts to less-than-significant levels. Where relevant, mitigation measures from the original project EIR were implemented.

The following sections describe the methodology used to evaluate biological resources, the regional and regulatory context, and the relevant CEQA thresholds of significance, and they provide a discussion of biological resources topics requiring a general regional impact analysis. A description of local setting, as well as a discussion of specific impacts and mitigation measures on a site-by-site basis, is provided in Chapter V (Existing Conditions and Impacts at Each Site).

B. REGIONAL SETTING

Climate and Weather

The MERA sites are located atop various mountain peaks and ridgelines along the coast of the Pacific Ocean in the outer Coast Ranges in western Marin County, and along the margin of the San Francisco Bay in the Marin Hills in eastern Marin County. The local climate features mild, wet, nearly frostless winters and cool summers with frequent fog and wind. During the summer, fog rolls into this climactic zone high and fast, creating a cooling and humidifying layer that regulates the intensity of light and heat.

The average daily maximum temperature at the National Climate Data Center's (NCDC) weather station in Kentfield, southcentral Marin County (NCDC Station 44500), is 69.8 degrees Fahrenheit; and the average daily minimum temperature is 47.6 degrees Fahrenheit. The warmest months are May through October, with daily maximum temperatures during these months averaging between 73.5 and 82.7 degrees Fahrenheit. The coolest months are November through March, with daily minimum temperatures averaging between 41.3 and 45.3 degrees Fahrenheit. Precipitation occurs exclusively as rainfall and fog drip, with long-term average annual precipitation of approximately 50 inches with higher amounts at higher elevations, particularly near Mount Tamalpais. Rain-bearing weather systems come predominantly from the west.

Topography and Soils

The Next Gen System relies on selected high-elevation sites, mostly on mountaintops or ridgelines, to provide communications among Marin County's coastal mountains and bayside communities. The MERA sites are typically on convex slopes along ridgelines at elevations ranging from approximately 25 feet above mean sea level (AMSL) at the EOF to approximately 2,520 feet AMSL at Mt. Tamalpais.

The Soil Survey of Marin County and SoilWeb indicate that the project sites contain 13 soil map units. These include: Olompali loam, 9 to 15 percent slopes; Saurin-Bonnydoon complex, 30 to 50 percent slopes; Saurin-Bonnydoon complex, 50 to 75 percent slopes; Kehoe variant coarse sandy loam, 9 to 15 percent slopes; Goulding cobbly clay loam, 5 to 15 percent slopes; Tocaloma-McMullin complex, 30 to 50 percent slopes; Los Osos-Bonnydoon complex, 30 to 50 percent slopes; Maymen-Maymen variant gravelly loams, 30 to 75 percent slopes; Tocaloma-McMullin-Urban land complex, 15 to 30 percent slopes; Tamalpais-Barnabe variant very gravelly loams, 30 to 50 percent slopes; Cronkhite-Barnabe complex, 15 to 30 percent slopes; and Xerorthents-Urban land complex, 0 to 9 percent slopes. These soil-mapping units are typically loamy soils derived from a variety of parent materials, most often sandstone or shale. The soil-mapping units within the project sites are not considered hydric soils, which are associated with wetland areas and therefore would potentially be State or federally protected. Unique, ultramafic soil types, such as serpentine or volcanic-derived substrates, which support many special status species, are also not present.

C. FEDERAL AND STATE REGULATORY SETTING

Federal Endangered Species Act of 1973

The Federal Endangered Species Act (ESA) and implementing regulations are codified in the United States Code (16 USC §§ 1531 et. seq.) and the Code of Federal Regulations (CFR) (50 CFR Section 17.1 et. seq.), respectively. These regulations include provisions for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the ESA. The ESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take".

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et. seq.), and implementing regulations, title 50 CFR Parts 20 and 21, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. In the absence of a permit, disturbances that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend may violate the MBTA.

Clean Water Act Section 404 and 401

The Army Corps of Engineers (Corps) and the US Environmental Protection Agency (US EPA) regulate the discharge of dredged or fill material into waters of the U.S., including wetlands, under Section 404 of the Clean Water Act (CWA) (33 USC 1344). Waters of the U.S. are defined in Title 33 CFR Part 328.3(a) and include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. Section 404 of the CWA requires a federal permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Section 401 of the CWA (33 USC 1341) requires an applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a water quality certification from the state in which the discharge originates and the discharge is required to comply with the applicable water quality standards. A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Quality Control Board (SWQCB) and its nine Regional Water Quality Control Boards (RWQCBs).

California Endangered Species Act

California enacted the California Native Plant Protection Act (NPPA) in 1977 and the California Endangered Species Act (CESA) in 1984. To align with the ESA, CESA created the categories of "threatened" and "endangered" species. It converted the classification of all "rare" animals into the CESA as threatened species but did not do so for rare plants. These laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The California Department of Fish and Wildlife (CDFW) implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural Diversity Database (CNDDB), a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities.

California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the California Fish and Game Code (CFGC) it is generally unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFW.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (also known as the California Water Code, Section 7) was created in 1969 and governs water quality regulation in California. Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWQCB and the nine RWQCBs protect all state and federal waters. For projects that require a Corps (§ 404) permit for a proposed discharge of dredged or fill material, the applicable RWQCB is required to issue a certification under the Section 401 of the CWA stating that the discharge will not violate state water quality standards.

Marin County Local Coastal Program

The California Legislature enacted the California Coastal Act in 1976, mandating that coastal counties manage the conservation and development of their coastal resources through comprehensive planning and regulatory documents under the Local Coastal Program (LCP). Each county's LCP, which identifies the location, type, densities, and other rules for future development in the coastal zone, must gain approval from the California Coastal Commission. Each LCP includes a land use plan and its implementing measures. These programs govern decisions that determine the short and long-term conservation and use of coastal land, water, and other resources. The Act's goals are to protect and conserve the state's coastal resources and to maximize public use and enjoyment of them. While administered at the county level, the LCP is a state program pursuant to the California Coastal Act (Public Resources Code Section 3000-30900).

The Marin County LCP is broken up into two units (Unit I covers the southern portion of the County and Unit II covers the northern portion). MERA is subject to the requirements of the Marin County

LCP Units I and II for those sites within LCP jurisdiction. The Muir Beach and Stewart Point Sites are located within the jurisdiction of LCP Unit I and the Tomales and Point Reyes Hill Sites are within the LCP Unit II. Relevant provisions in Unit I are related to habitat protection, shoreline protection and hazards, and new development and land use. Relevant provisions in Unit II are related to the protection of agriculture and appropriate siting for new development. Further information regarding the policies contained in the Marin County LCP can be found in Chapter IV.D, Land Use Consistency.

Point Reyes National Seashore General Management Plan

The Point Reyes National Seashore General Management Plan (GMP) was adopted by the US National Park Service (NPS) in 1980. The GMP describes the "Radio Range Station" as one of four Special Use Zones over which the park service does not have complete jurisdiction. Otherwise, the GMP provides general guidance for land use decisions on NPS land in Point Reyes National Seashore and the northern reaches of Golden Gate National Recreation Area (GGNRA). The 27-page GMP provides general goals for Park Service management, and asserts that the variety of biotic communities within Point Reyes National Seashore will be aggressively maintained, stating that the Seashore contains important habitat for several threatened or endangered species—including salmon spawning streams, tide pools, and bird habitat. Additional management strategies for perpetuating the biotic diversity and scenic quality of the Seashore are contained in a separate, but not available natural resource management plan, that was approved in 1976. The NPS is now in the process of amending the GMP. The project's conformity with the Point Reyes National Seashore GMP is located in Chapter IV.D, Land Use Consistency.

Olompali State Historic Park General Plan

The Olompali State Historic Park (OSHP) General Plan was adopted by the California State Park and Recreation Commission in 1989. The plan outlines management policies for the preservation of aesthetic, natural, cultural, and recreational resources as well as delineating land use goals and policies. The biologically relevant policies address the protection and perpetuation of native oaks, improvement of native grassland diversity, removal of invasive species, protection of rare and endangered plants, restoration of altered natural habitats, and protection and monitoring of a 1984 golden eagle nesting site. The projects conformity with the OSHP General Plan is located in Chapter IV.D, Land Use Consistency.

D. APPROACH TO EVALUATING BIOLOGICAL RESOURCES AT MERA FACILITIES

The 18 sites analyzed in the BRA include: nine existing sites analyzed as part of the original EIR (Civic Center, Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain), one site which was analyzed in the 2004 addendum to the EIR (Stewart Point), one site which was approved per a Categorical Exemption in 2012 (Tomales), and seven sites which were not evaluated in the previous reports EOF, Coyote Peak, Skyview Terrace Water Tank, Muir Beach, Wolfback Ridge, Mt. Burdell OTA, Mill Valley Water Tank).

Biologists completed surveys at all locations where temporary and permanent construction-related activities are proposed. Areas surveyed at specific locations are referred to herein as the project site or sites. The study area referred to in this report includes each project site (with all temporary and permanent impacts) and an approximate 100-foot radius surrounding the project site which was analyzed for the potential to support special-status species, sensitive biological communities, and wildlife movement corridors. In some cases, this 100-foot radius was modified to exclude private properties not under the control of MERA. In other cases the study area was expanded to consider additional areas of proposed temporary disturbance and/or nearby areas where sensitive species or special-status species were observed or a potential habitat was detected. Maps of the study area are provided in Chapter V (Existing Conditions and Impacts at Each Site).

Literature Review

WRA conducted reviews of previous CEQA documents including: the Original EIR certified in 2000, the EIR addendum for the Stewart Point Site and the Categorical Exemption for the Tomales Site. The literature review was also expanded to include the USDA *Soil Survey of Marin County*; online soil data; U.S. Geological Survey (USGS) 7.5-minute quadrangle maps for the Valley Ford, Glen Ellen, Petaluma River, Novato, San Rafael, San Quentin, San Francisco North, Point Bonita, Bolinas, San Geronimo, and Inverness quadrangles; and current and historic aerial photographs of the study area.

A review of the following sources determined which special-status plant and wildlife species and sensitive habitats have been documented near the study area:

- California Natural Diversity Database (CNDDB) records (California Department of Fish and Wildlife [CDFW] 2018);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2018a);
- USFWS National Wetlands Inventory (NWI) Database (USFWS 2018a);
- USFWS Information for Planning and Conservation (IPaC) species lists (2018b);
- *A Manual of California Vegetation, Online Edition* (CNPS 2018a);
- CDFW Natural Communities List (California Department of Fish and Game [CDFG] 2010)
- *Marin Flora* (Howell et. al., 2007)
- Jepson eFlora (2018)
- CDFW publication “California’s Wildlife, Volumes I-III” (Zeiner et al. 1990)
- CDFW and Western Field Ornithologists publication “California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California”
- (Shuford and Gardali 2008)
- CDFW publication “Amphibians and Reptile Species of Special Concern in California” (Jennings and Hayes 1994)
- “A Field Guide to Western Reptiles and Amphibians” (Stebbins 2003)

These materials provided information used to determine whether any unique soil types or other features capable of supporting special-status plant species, sensitive plant communities, and/or aquatic features were present within the study area. Database searches conducted for known occurrences of special-status plant and wildlife species focused on the Valley Ford, Glen Ellen, Petaluma River, Novato, San Rafael, San Quentin, San Francisco North, Point Bonita, Bolinas, San Geronimo, and Inverness USGS 7.5-minute quadrangles. Other literature sources (including internet websites) containing biological and distributional information for individual special-status species are cited in subsequent sections.

Fieldwork

Prior to all field studies, WRA performed a desktop review of each of the 18 Next Gen Sites to determine the necessity of field visits according to the following criteria:

(1) If the site had not undergone CEQA review and if project improvements would have the potential to impact sensitive biological resources, then a site visit would be needed;
(2) If the site had not undergone CEQA review, but the proposed project improvements would occur in previously developed areas that would not impact sensitive biological resources, then a site visit was not needed;
(3) If the existing CEQA document (e.g. EIR, EIR Addendum, or Categorical Exemption) was sufficient in its analysis, and proposed project improvements would occur in previously developed areas that would have no impact on sensitive biological resources, then a site visit was not needed;
(4) If the site conditions, project footprint, or pertinent regulatory statutes had changed since the initial CEQA review (e.g. EIR, EIR Addendum, or Categorical Exemption) which could potentially result in impacts to sensitive biological resources not accounted for in the initial CEQA review, then a site visit and update would be needed; or
(5) If the initial CEQA review called for a preconstruction survey as a mitigation measure, in which case a follow-up site visit would be needed.

Table IV.C-1 below summarizes the criteria that were used to determine what level of biological resources review was needed at each of the MERA sites. Sensitive biological resources identified as potentially occurring are described on a site-by-site basis in Chapter V.

Table IV.C-1. Summary of Sites, Project Actions, and Biological Review Conducted

Site Name and Number	Was a previous CEQA Review Performed?	Project Actions	Potential to Impact Sensitive Biological Resources	Type of Review Conducted
A. Prime Site EOF (Site 1)	No	New at Existing EOF Building	No	Desktop Review
B. Civic Center (Site 2)	Yes	Upgrades	No	Desktop Review

Site Name and Number	Was a previous CEQA Review Performed?	Project Actions	Potential to Impact Sensitive Biological Resources	Type of Review Conducted
C. Big Rock Ridge (Site 3)	Yes	Upgrades	No	Desktop Review
D. Mt. Tamalpais (Site 4)	Yes	Upgrades	Yes	Site Visit(s)
E. Mt. Barnabe (Site 5)	Yes	Upgrades	No	Desktop Review
F. Point Reyes Hill (Site 6)	Yes	Upgrades	Yes	Site Visit(s)
G. Dollar Hill (Site 10)	Yes	Upgrades	No	Desktop Review
H. San Pedro Ridge (Site 11)	Yes	Upgrades	No	Desktop Review
I. Mt. Tiburon (Site 14)	Yes	Upgrades	Yes	Site Visit(s)
J. Sonoma Mountain (Site 18)	Yes	Upgrades	No	Desktop Review
K. Stewart Point (Site 19)	Yes (Addendum)	Upgrades	Yes	Site Visit(s)
L. Tomales (Site 20)	Yes (CE)	New site with cell tower equipment	Yes	Site Visit(s)
M. Coyote Peak (Site 21)	No	New site with existing water wellheads	Yes	Site Visit(s)
N. Skyview Terrace Water Tank (Site 22)	No	New site with MMWD water tank	Yes	Site Visit(s)
O. Muir Beach (Site 23)	No	New site with local water tank	Yes	Site Visit(s)
P. Wolfback Ridge (Site 24)	No	New site with existing 100’ tower	No	Desktop Review
Q. Mt. Burdell OTA (Site 25)	No	New site with existing structure and tower	No	Desktop Review
R. Mill Valley Water Tank (Site 26)	No	New site with existing MMWD water tank	Yes	Site Visit(s)

Surveying for Biological Communities

WRA biologists surveyed the study area on foot during 2018, including on March 30, April 4, April 30, May 8, May 9, June 12, and June 19 to document biological communities found in the study area. These biological communities were assessed in the field for their conditions and their suitability for hosting special-status species.

Biological communities were divided into sensitive and non-sensitive communities. Sensitive biological communities were those communities with 1) special consideration under CEQA, 2) all vegetation alliances with a State ("S") ranking of S1 through S3, 3) communities designated with an asterisk (*) by Holland (1986) or 4) on the CDFW natural communities list. Sensitive biological communities are also those communities considered jurisdictional under Sections 404 or 401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, and/or Section 1600 of the California Fish and Game Code. Non-sensitive biological communities were those not afforded special consideration under CEQA or other federal, state, or local laws, regulations, or ordinances.

Surveying for Wetlands and Waters

The study area was surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the Army Corps of Engineers, the Regional Water Quality Control Board (RWQCB), or the CDFW were present. The preliminary assessment of wetlands was based on the presence of wetland plant indicators, wetland hydrology, and/or wetland soils. Any potential wetland areas were then identified as areas dominated by plant species with a wetland indicator status of OBL (Obligate), FACW (Facultative Wetland), or FAC (Facultative) as given on the current National Wetlands Plant List. Evidence of wetland hydrology may include direct evidence (i.e., primary indicators) such as visible inundation or saturation, algal mats, or oxidized root channels, or it may include indirect evidence (i.e., secondary indicators) such as saturation visible on aerial imagery. Indicators of wetland soils may include dark colored soils, soils with a sulfidic odor, or soils that contain redoximorphic features, as defined by the Natural Resources Conservation Service (NRCS) publication *Field Indicators of Hydric Soils in the United States*.

Surveying for Special-Status Species

Biologists surveyed all MERA sites that were determined to have potential impacts on biological resources. The purpose of these surveys was to search for suitable habitats for special-status species.

After observing habitat conditions at the MERA sites, the biologists then evaluated the potential for presence of special-status species based on the conditions found and the professional expertise of the investigating biologists. The potential for each special-status species to be present in the study area was then assessed according to the following criteria:

- **No Potential**: Habitat within the study area was clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime)

- **Unlikely**: Few of the habitat components meeting the species requirements were observed within the study area, and/or the majority of habitat within the study area was unsuitable or of very poor quality. The species was not likely to be found on the site.
- **Moderate Potential**: Some of the habitat components meeting the species requirements were observed, and/or only some of the habitat within the study area was unsuitable. The species had a moderate probability of being found on the site.
- **High Potential:** All of the habitat components meeting the species requirements were observed and/or most of the habitat within the study area was highly suitable. The species had a high probability of being found on the site.
- **Present**: A special species was observed within the study area or had been recorded (i.e., CNDDB, other reports) on the site recently.
- **Not Observed:** No special species were observed during a protocol-level special-status plant survey conducted during the species' documented bloom period or at an appropriate time when the species would have been identifiable. The species was not observed in the study area and was presumed absent.

The site visits included protocol-level surveys for special-status plant species but not for special-status wildlife species; therefore, they were not intended to determine the actual presence or absence of special-status wildlife species. However, if a special-status species was observed during a site visit, its presence was recorded.

Where little information was known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of WRA biologists drawing upon their experience working with the species and habitats. If necessary, recognized experts on individual species were contacted to obtain the most up to date information on species biology and ecology.

Plant Species

CEQA requires an assessment of the potential for special-status plant species to occur within a project site. A full plant species list is included in Appendix B. The original project EIR defined special-status plants as those species that are designated as Endangered, Threatened, or Rare under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA), in addition to plant species included within the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (Rank) 1 only. However, the currently accepted standard practice is that CNPS Ranks 1 and 2 are considered special-status plant species and must be considered under CEQA. Table IV.C-2 below summarized these ranks and threat codes.

Very few Rank 3 or Rank 4 plant species meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act or Sections 2062 and 2067 of the CDFW Code that outlines CESA. However, CNPS and CDFW strongly recommend that these species be fully considered during the preparation of environmental documentation relating to CEQA. This may be particularly

appropriate for the type locality of a Rank 4 plant, for populations at the periphery of a species range or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology or occurring on unusual substrates. For this reason, *all* CNPS-ranked plant species were taken into consideration during this assessment.

Table IV.C-2. Description of CNPS Ranks and Threat Codes

California Rare Plant Ranks (formerly known as CNPS Lists)	
Rank 1A	Presumed extirpated in California and either rare or extinct elsewhere
Rank 1B	Rare, threatened, or endangered in California and elsewhere
Rank 2A	Presumed extirpated in California, but more common elsewhere
Rank 2B	Rare, threatened, or endangered in California, but more common elsewhere
Rank 3	Plants about which more information is needed - A review list
Rank 4	Plants of limited distribution - A watch list
Threat Ranks	
0.1	Seriously threatened in California
0.2	Moderately threatened in California
0.3	Not very threatened in California

Wildlife Species

CEQA requires an assessment of the potential for special-status wildlife species to occur within a project site. A full wildlife species list is included in Appendix B. Special-status wildlife species include species that have been formally listed, are proposed as endangered or threatened, or are candidates for listing under the federal and/or California Endangered Species Acts. Additionally, CDFW Species of Special Concern, and US Fish and Wildlife Service (USFWS) Birds of Conservation Concern, are considered special-status species. Although the latter two categories generally have no special legal status, they are given special consideration under CEQA. Bat species are evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity. Bats named as a “High Priority” or “Medium Priority” species for conservation by the WBWG are typically considered special-status.

In addition to regulations for special-status species, most birds in the United States, including non-special-status native species, are protected by the Migratory Bird Treaty Act of 1918 (MBTA) and the California Fish and Game Code (CFGC). Under these laws/codes, the intentional killing, collecting, or trapping of covered species, including their active nests (those with eggs or young),

is prohibited. Although ambiguity remains on what constitutes a violation under these regulations, it is typically best practice to implement measures to reduce potential impacts to native nesting birds.

In assessing the potential for special-status wildlife species to occur, CEQA asks whether the species will be adversely effected, either directly or through habitat modification. In addition to classifying species for listing as endangered or threatened, the ESA identifies critical habitat as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. Federal agencies must also ensure that their activities or projects do not adversely modify critical habitat to the point that it will no longer aid in species recovery. In many cases, this level of protection is similar to that already provided to species by the ESA jeopardy standard. However, areas that are currently unoccupied by the species, but which are needed for the species' recovery, are protected by the prohibition against adverse modification of critical habitat.

E. THRESHOLDS OF SIGNIFICANCE

This section introduces the criteria, or CEQA Thresholds of Significance, for the biological impact evaluation. This evaluation identifies impacts to biological resources that would result from the construction and/or operation of the proposed project. CEQA and the CEQA Guidelines provide guidance in evaluating project impacts and determining which impacts will be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project."

Six of the seven criteria below require a site-by-site evaluation, which is found in Chapter V (Existing Conditions and Impacts at Each Site). The last criterion, threshold f), implicitly requires a regional approach and therefore that analysis is contained below.

Under CEQA Guidelines section 15065, a project's effects on biotic resources are deemed significant where the project would:

- "substantially reduce the habitat of a fish or wildlife species"
- "cause a fish or wildlife population to drop below self-sustaining levels"
- "threaten to eliminate a plant or animal community"
- "reduce the number or restrict the range of a rare or endangered plant or animal"

In addition to the section 15065 criteria that trigger mandatory findings of significance, Appendix G of the CEQA Guidelines provides a checklist of other potential impacts to consider when analyzing the significance of project effects. For biological resources, these impacts include whether the project would:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?*

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? or*

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

Two primary assumptions affect the evaluation of the project's impacts on biological resources relative to the above-stated thresholds of significance:

1. Direct impacts to plant and wildlife species are assumed to be correlated with the loss of habitats with which these species are associated. Habitat loss could result from site excavation, grading, filling, infrastructure construction, or other damage to habitats. These activities can damage habitat such that it can no longer sustain a species, or so that the number of individuals that it sustains is reduced, or so that direct loss due to death or injury or disturbance by construction activities and human uses means the species cannot continue its lifecycle activities. Removal of a sensitive habitat that is replaced by development would be a permanent, direct impact. Direct impacts may also be temporary if they disturb a habitat that is subsequently restored or displace a species that later returns.
2. Indirect impacts could also occur. If remaining fragments of undeveloped habitat are isolated from larger areas of contiguous habitat, the remaining habitats are expected to have lower biological values than those prevailing before development. Some species can no longer subsist in these smaller fragments, the fragments may be heavily influenced by surrounding stressors, or species may not reproduce successfully without exchange with other populations. Indirect impacts can occur in portions of the site not directly impacted or to off-site habitats and species due to degraded water quality, changes in hydrology, etc.

F. REGIONAL IMPACTS ANALYSIS AND MITIGATION MEASURES

Due to the localized nature of the project's potential effects on biological resources, most impacts are discussed on a site-by-site basis in Chapter V (Existing Conditions and Impacts at Each Site). However, the project as a whole was determined to have a less-than-significant impact with regard to a conservation plan. It is therefore discussed here in general terms and will not be discussed further in Chapter V:

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

According to the most recently available CDFW map of California HCPs and NCCPs (CDFW 2017), no Marin County or North San Francisco Bay Area-specific HCP or NCCP currently exists. However, Pacific Gas and Electric (PG&E), adopted a Bay Area HCP in November 2017. The project is situated within the Bay Area and two project sites (Tomales and Coyote Peak) would require the construction of new electrical distribution lines, making the PG&E HCP applicable.

Covered activities in the PG&E HCP relevant to the project include installation of above and belowground electrical distribution lines, which are classified by the plan as minor new construction. In suitable habitat for covered species, construction of new electric line is limited to 2.0 miles or less to make the connection to existing electrical infrastructure. PG&E will be required to pursue the objectives of the HCP or obtain appropriate biological resources support and permits, based on their project design for these features.

PG&E will be a subcontractor to MERA for project sites requiring utility work, and installation of the power lines proposed for the Tomales, Coyote Peak, Muir Beach, Skyview Terrace Water Tank, and Mill Valley Water Tank sites is a part of the project. The analysis conducted for these sites found no conflict with the policies and objectives of the PG&E HCP. Impacts related to conflict with any applicable HCP are therefore ***less than significant*** and are not be discussed further.

Site-by-site evaluations of criteria *a)* through *e)* are located in Chapter V (Existing Conditions and Impacts at Each Site).

IV. ENVIRONMENTAL IMPACT ANALYSIS
D. LAND USE CONSISTENCY

A. INTRODUCTION

MERA is a countywide joint powers authority (JPA) made up of 25 public safety and public service member agencies based in Marin County, California. MERA was formed to construct and operate a public safety radio system. Since 1999, MERA has investigated 26 separate communications sites within seven different local jurisdictions. Nineteen of the 26 sites were analyzed in the previously adopted CEQA documents; namely, the 1999 Draft EIR, the Final EIR (certified in 2000), the 2006 Addendum (for the Stewart Point Site), and the 2012 Categorical Exemption (for the Tomales Site). Three of those 19 previously analyzed sites were dropped from the original system and never developed and five additional sites would be decommissioned as a result of the proposed Next Gen System.

Since the 2000 Final EIR, land use regulations applicable to MERA have been clarified.[2] Under Government Code Section 6509, a joint exercise of powers agreement must designate a member agency to which the JPA will look for authorities upon its exercise of power. The designated agency in MERA's joint exercise of powers agreement is the County of Marin. Under state law, MERA enjoys the same intergovernmental immunity applicable to the County. MERA is therefore not subject to the local codes and ordinances of cities, towns, counties, and special districts in which its facilities are located, except where its immunity has been waived by the State Legislature. An example of a waiver of immunity is included in the California Coastal Act, which delegates authority to cities and counties to adopt a Local Coastal Program and requires all developers, including cities and counties, to obtain a Coastal Development Permit from that local agency.[3] MERA is required to comply with all state and federal land use regulations.

Therefore, the following state and federal land use plans are evaluated in this chapter:

- Marin County Local Coastal Program (LCP) - Units 1 and 2
- California Streets and Highways Code Section 660 *et seq.*
- Federal Aviation Administration (FAA) Height Requirements
- Golden Gate National Recreation Area (GGNRA) General Management Plan (GMP)
- Point Reyes National Seashore GMP
- Olompali State Historic Park (OSHP) General Plan

Table IV.D-1 below provides an overview of the applicable land use documents for each of the 26 previous, current, and proposed MERA sites.

[2] Zack v. Marin Emergency Radio Authority *(2004) 118 Cal. App. 4th 617.*

[3] 5 Ops. Cal. Atty. Gen. 88 (1992).

Table IV.D-1. Site Jurisdiction and Applicable Land Use Documents

Note: Sites new to MERA for the Next Gen System are displayed in blue, current MERA sites proposed for the Next Gen System are shown in green, and sites with no color are not part of the proposed Next Gen project.

Site	Site Name	Jurisdiction(s)	Applicable Land Use Document(s)
A	1. Prime Site EOF	City of San Rafael	Not applicable to MERA
B	2. Civic Center	City of San Rafael	Not applicable to MERA
C	3. Big Rock Ridge	County of Marin	Not applicable to MERA
D	4. Mt. Tamalpais	County of Marin	Not applicable to MERA
E	5. Mt. Barnabe	County of Marin	Not applicable to MERA
	6. Bolinas Fire Station	County of Marin	N/A (dropped from original system)
	7. Bolinas Ridge	County of Marin	N/A (dropped from original system)
F	8. Pt. Reyes Hill	County of Marin	Not applicable to MERA
		Coastal Zone	Marin LCP Unit II
		Point Reyes National Seashore (NPS)	Point Reyes National Seashore GMP
		FAA	FAA Height Requirements
	9. Forbes Hill	City of San Rafael	N/A (decommissioned)
G	10. Dollar Hill	City of San Rafael	Not applicable to MERA
H	11. San Pedro Ridge	City of San Rafael	Not applicable to MERA
	12. Mt. Burdell	City of Novato	N/A (decommissioned)
	13. Novato PD	City of Novato	N/A (dropped from original system)
I	14. Mt. Tiburon	Town of Tiburon	Not applicable to MERA
	15. Mill Valley City Hall	City of Mill Valley	N/A (decommissioned)
	16. Mill Valley PD	City of Mill Valley	N/A (decommissioned)
	17. Bay Hill Road	County of Sonoma	N/A (decommissioned)
J	18. Sonoma Mountain	County of Sonoma	Not applicable to MERA
K	19. Stewart Point	County of Marin	Not applicable to MERA
		Coastal Zone	Marin LCP Unit I

Site	Site Name	Jurisdiction(s)	Applicable Land Use Document(s)
		Community of Bolinas	Not applicable to MERA
L	20. Tomales	County of Marin	Not applicable to MERA
		Coastal Zone	Marin LCP Unit II
		Caltrans	California Streets and Highways Code
M	21. Coyote Peak	County of Marin	Not applicable to MERA
N	22. Skyview Terrace Water Tank	City of San Rafael	Not applicable to MERA
O	23. Muir Beach	County of Marin	Not applicable to MERA
		Coastal Zone	Marin LCP Unit I
		GGNRA (NPS)	GGNRA GMP
P	24. Wolfback Ridge	County of Marin	Not applicable to MERA
		GGNRA (NPS)	GGNRA GMP
Q	25. Mt. Burdell OTA	County of Marin	Not applicable to MERA
		OSHP	OSHP General Plan
R	26. Mill Valley Water Tank	City of Mill Valley	Not applicable to MERA

The following consistency analysis of the applicable planning documents is provided for environmental review purposes only. MERA, as the lead agency, will ultimately determine the proposed project's consistency under CEQA with the applicable state and federal policies. Certain sites in the coastal zone, for example would still require Coastal Development Permits. The applicable plans and policies and the site locations they regulate are described below.

B. FEDERAL AND STATE REGULATORY SETTING

Marin County Local Coastal Program

The California Legislature enacted the California Coastal Act in 1976, mandating that coastal counties manage the conservation and development of their coastal resources through comprehensive planning and regulatory documents under the Local Coastal Program (LCP). Each county's LCP, which identifies the location, type, densities, and other rules for future development in the coastal zone, must gain approval from the California Coastal Commission. Each LCP includes a land use plan and its implementing measures. These programs govern decisions that determine the short and long-term conservation and use of coastal land, water, and other resources. While administered at the county level, the LCP is a state program pursuant to the Coastal Act (Public Resources Code (PRC) Section 3000-30900). MERA is therefore subject to the requirements of the Marin County LCP at sites within the LCP's jurisdiction.

Marin County's LCP is divided into two units: Units I and II. The LCP is intended to ensure that the local government's development plans, policies, and ordinances conform to the California Coastal Act of 1976. The Act's policies are to protect and conserve the state's coastal resources and to maximize public use and their enjoyment. The California Coastal Commission certified Unit I in 1981, and Unit II in 1982. Several amendments were adopted between 1982 and 2010. Marin County has also been working since 2008 on comprehensive amendments to the LCP, but those are not yet in effect, and the County continues to review projects for consistency with the policies and regulations set forth in Units I and II. Relevant provisions of each unit are discussed below.

Local Coastal Program - Unit I

The boundaries of the LCP Unit 1 Coastal Zone generally consist of the southern portion of Marin County's coastline including the communities of Bolinas, Stinson Beach, and Muir Beach**.**

The Stewart Point and Muir Beach Sites are located within Unit I. The policies and objectives of the LCP sections relevant to the proposed project are summarized below, while the full policy language can be found in Appendix C.

Habitat Protection

The Habitat Protection section of the LCP sets forth requirements relating to development and wildlife habitat, requiring that nesting and roosting areas and upland grassland feeding areas be protected and that structures must avoid inhibiting wildlife movement.

Shoreline Protection and Hazard Areas

Safety standards relating to seismic activity and shoreline retreat are addressed in this section of the LCP. Relevant policies require the use of scientifically-determined setback distance formulas for development near the Bolinas and Muir Beach bluffs and require all development to meet the seismic safety standards including those set forth in the Alquist-Priolo Act.

New Development and Land Use

The New Development and Land Use section addresses new development design and siting. Policies include "historic area" boundaries, within which new construction must conform to certain design standards, and a requirement for archaeological surveys prior to approval of proposed development. This section also provides maximum height requirements in specified areas, grading guidelines, and a requirement for development plans to include control measures for runoff, sedimentation, and erosion, and to provide revegetation.

Local Coastal Program - Unit II

The boundaries of the LCP Unit II Coastal Zone cover the coastal area from Olema north to the Sonoma/Marin County border, including the communities of Olema, Point Reyes Station, Inverness, Marshall, Tomales, and Dillon Beach.

The Point Reyes Hill and Tomales Sites are located within Unit II. A Coastal Development Permit was approved for the proposed Tomales Site based on a CEQA exemption in 2012, but the permit was allowed to expire in anticipation of the site being included in the Next Gen Project and this Draft SEIR.

The policies and objectives of the LCP sections relevant to the proposed project are summarized below, while the full policy language can be found in Appendix C.

Agriculture

This section of the LCP Unit II discusses the importance of protecting the existing and future viability of agricultural lands in the Coastal Zone. The policies contained under this topic area are intended to permanently preserve productive agriculture and lands with the potential for agricultural use, to ensure that non-agricultural development does not conflict with agricultural uses, and to protect coastal wildlife and scenic resources. This LCP section defines the Agricultural Production Zone, and it outlines the Zone's intent, the permitted and conditional uses, and the required development standards and review process.

Natural Resources

Policy 5.b of this section of the LCP discusses habitats of rare or endangered species and unique plant communities. The policy requires that development in such areas depend upon the resources of the habitat area and that adjacent development be set back to minimize impacts on the habitat area. The policy also states that structures involved in such development should be avoided if they inhibit wildlife movement.

New Development and Land Use

Policies in this section of the LCP focus on appropriate siting and design for new development projects, so as to protect views and avoid potentially hazardous conditions due to earthquakes and fire. Policies include requirements related to height, scale, design, bluff setbacks and landscaping, as well as the need to demonstrate appropriate geologic conditions for development stability.

California Streets and Highways Code

The California Department of Transportation (Caltrans) is granted authority by Division 1, Chapter 3, Articles 1 and 2 (Sections 660-695) of the California Streets and Highways Code (SHC) to require and administer encroachment permits in the State Highway right-of-way (ROW). The SHC defines an encroachment as "any tower, pole, pole line, pipe, pipeline, fence, billboard, stand or building, or any structure, object of any kind or character not particularly mentioned in the section, or special event, which is in, under, or over any portion of the [State] highway right-of-way". By issuing an encroachment permit, Caltrans grants the permittee non-transferrable permission to enter the State Highway ROW to construct, alter, repair, or improve facilities. All entities not working directly under Caltrans, including JPAs such as MERA, are required to obtain encroachment permits to enter and work within the State Highway ROW. The Tomales Site is the only site with utility improvements (underground power and phone lines) that could occur within the Caltrans ROW.

Federal Aviation Administration (FAA)

In administering Title 14 of the Code of Federal Regulations (14 CFR) Part 77, the prime objectives of the FAA are to promote air safety and the efficient use of the navigable airspace. In

Advisory Circular 70/7460-1L Change 2, the FAA describes the standards for marking and lighting structures such as buildings, chimneys, antenna towers, cooling towers, storage tanks, supporting structures of overhead wires, etc. that could affect the safety of the navigable airspace. To accomplish their mission of maintaining safe airspace, the FAA conducts aeronautical studies on certain new construction and alterations to existing structures, based on information provided by proponents on an FAA Form 7460-1 (Notice of Proposed Construction or Alteration). A variety of factors influence whether a proposed structure must be filed with the FAA for study, including height, proximity to an airport, and location. Federal law requires that the FAA determine whether any structure that is proposed to be built or altered 200 feet above ground level or higher, within three miles of an airport, poses a hazard to the airspace. Further, according to 14 CFR Part 77.17, any structure exceeding a height of 499 feet is considered an obstruction, along with other height criteria. Based upon the proposed MERA structures' limited heights of 75-feet or less, and their locations and distances from an airport, no FAA determination is required.

Golden Gate National Recreation Area (GGNRA) General Management Plan

Adopted in 2014, the GGNRA General Management Plan (GMP) is a land use management document covering National Park Service (NPS) lands in GGNRA and Muir Woods National Monument. The GMP provides guidance on land use decisions within GGNRA but stipulates that future decisions will be made using a number of criteria for maximizing the life and value of public resources. The GMP addresses planning issues such as conflicts with recreational opportunities, sustainable resource management, and scenic beauty and natural character, among others. The Plan divides GGNRA into regions and discusses resources, opportunities, and other key planning considerations for each section of the park. No MERA facilities are directly within GGNRA, but the Muir Beach Site is adjacent to the National Monument boundary.

Point Reyes National Seashore General Management Plan

The Point Reyes National Seashore GMP was adopted by the NPS in 1980. The GMP guides land use decisions for NPS lands in Point Reyes National Seashore and the northern reaches of GGNRA. The Plan outlines management objectives pertaining to park access, natural and ecological resource conservation, and non-recreational land uses monitoring to ensure compatibility with nearby recreational and conservation activity. The NPS began the process of amending the GMP in 2017. Until the amendment is adopted, which is anticipated in early 2020, the 1980 GMP remains the governing GMP for Point Reyes National Seashore. The Point Reyes Hill Site is within Point Reyes National Seashore.

Olompali State Historic Park General Plan

The Olompali State Historic Park (OSHP) General Plan was adopted by the California State Park and Recreation Commission in 1989. The plan outlines management policies for the preservation of aesthetic, natural, cultural, and recreational resources as well as delineating land use goals and policies. The Mt. Burdell OTA Site is surrounded on three sides by the Olompali State Historic Park.

C. APPROACH TO EVALUATING LAND USE CONSISTENCY AT MERA FACILITIES

CEQA requires that an EIR consider whether a proposed project may conflict with "*any applicable land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental impact"*. This environmental determination differs from the broader policy determination of whether a proposed project is consistent with a jurisdiction's planning documents. The environmental determination (that is intended for consideration under CEQA thresholds of significance) is based on, and limited to, a review and analysis of environmental effects. The latter determination, by comparison, is made by the decision-making body of the jurisdiction and is based on the jurisdiction's broad discretion to assess whether a proposed project would conform to the policies and objectives of applicable land use plans as a whole.

This Draft SEIR analyzes the environmental impacts of land use consistency for the proposed project qualitatively, focusing on consistency between proposed and permitted uses under applicable state and federal land use regulations. For each site, a determination was made as to whether any state or federal jurisdiction's land use policies and plans apply to MERA facilities. As the CEQA guidelines only require analysis of applicable plans, policies, and regulations, there are sites where no plans or policies apply, and in those cases no further discussion is included. Where applicable, land use designations and rules from the relevant planning document are presented, along with relevant maximum height regulations. This information is then used to make a statement on whether a conflict may exist between the proposed MERA facility and the applicable jurisdiction's land use policies. MERA, as the lead agency, will be responsible for using the information provided here to determine project consistency, although other agencies (Marin County and the California Coastal Commission) will make a final determination with respect to the issuance of Coastal Development Permits for sites within the Coastal Zone.

D. THRESHOLDS OF SIGNIFICANCE

The potential for the project to result in significant environmental effects was analyzed using standards provided in the State CEQA Guidelines. Appendix G of the Guidelines also suggests the following questions be considered in determining whether a proposed project will result in a significant adverse effect to land use and planning. These thresholds of significance ask whether the project would:

(a) Physically divide an established community?

(b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

E. REGIONAL IMPACTS ANALYSIS AND MITIGATION MEASURES

The original 2000 Final EIR determined that the project would result in less-than-significant impacts related to items (a) and (c) for the original MERA sites. These items are discussed in general terms below for the proposed project as a whole and will not be discussed further in this

SEIR. For item (b), more detailed site-by-site evaluations for the Next Gen sites are located in Chapter V (Existing Conditions and Impacts at Each Site).

a) Physically divide an established community?

This threshold was developed to assess impacts of large public works projects like highways, roads, and very large development projects. The proposed project includes improvements to ten existing MERA telecommunications facilities; the introduction of eight new facilities to the system, and the decommissioning of five facilities, which will either: remain operational for some other entity, continue to be maintained as a non-operational facility by MERA, or be completely removed with all equipment being disposed of in an appropriate manner in accordance with state law. In all cases (existing or new), MERA facilities occupy a very small footprint and are not large enough to affect an established community. The original EIR determined that the project would result in less-than-significant impacts related to item (a) for the original MERA sites, and that determination remains valid for the existing sites in this SEIR.

The newly proposed Next Gen sites occupy a very small footprint and are mainly located on remote ridge tops and/or in open space settings, away from existing communities. All of the proposed sites, including those that are located within established communities, are within or adjacent to the footprint of existing facilities such as water tanks, communication complexes, dispatch centers, and/or community centers. The facilities themselves are small and do not create significant barriers to travel or movement within the community.

The proposed project sites would not physically divide an established community and therefore the project as a whole would have ***no impact*** in this topic area. Consequently, this threshold is not discussed further in this SEIR.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

As discussed previously, MERA is not subject to the local codes and ordinances of cities, towns, counties, and special districts in which its facilities are located, except where its immunity has been waived by the State Legislature. One pertinent waiver of MERA's immunity is under the California Coastal Act, which applies to four MERA sites located in the Coastal Zone (Point Reyes Hill, Stewart Point, Tomales, and Muir Beach). MERA is also required to comply with all State and federal land use plans and regulations, which pertain to all four sites in the Coastal Zone as well as two additional sites (Wolfback Ridge and Mt. Burdell OTA). As consistency with applicable land use plans, policies, and regulations applies differently across MERA Next Gen sites, it is discussed in more detail in the site-by-site analysis of Chapter V (Existing Conditions and Impacts at Each Site). This analysis determined that no conflict would occur with land use consistency across the MERA Next Gen Sites and that impacts would be ***less than significant***.

IV. ENVIRONMENTAL IMPACT ANALYSIS
E. HAZARDS AND HAZARDOUS MATERIALS

A. INTRODUCTION

An important consideration in the analysis of the impacts of the MERA Next Gen Project is the risk that the project might pose to people and property. This section of the SEIR examines potential hazards that could be introduced or exacerbated as a result of project implementation. The potential impacts of certain hazards relating to the transport and use of hazardous materials (i.e. propane and diesel), the placement of project improvements on hazardous waste sites, and airport-related hazards, were found to be less than significant in this analysis as well as in the original 2000 Final EIR. As such, these items are discussed briefly in this section and in more detail in Chapter VI.E (Impacts Found to be Less Than Significant).

Wildfire is an existing potential hazard in California, and with higher recorded temperatures in the last two decades that hazard is increasing. The MERA Next Gen Project offers considerable benefit to the public in aiding emergency responses to wildfire and other regional hazards. Because risk of wildfire is a baseline condition and benefits of the project as a whole related to agency response to wildfire are consistent across the Next Gen system, these impacts and benefits are discussed in this chapter for the project as a whole, rather than in Chapter V (Existing Conditions and Impacts at Each Site).

The existing MERA system and the Next Gen Project, as a radio communications system, also generates concentrated emissions of electromagnetic radio frequency (RF) waves. RF emissions dissipate rapidly with distance and vary greatly at each site depending, in part, on the equipment required by MERA as compared to the total amount of equipment in use at a site. MERA often leases shared communications sites with other radio operators. Still the potential human exposure to RF emissions is a primary concern for MERA and the public. RF emissions are analyzed here for the project as a whole, and further considered in a site-by-site analysis in Chapter V (Existing Conditions and Impacts at Each Site).

B. REGIONAL ENVIRONMENTAL SETTING

Wildfire

While wildfires are an annual threat in California, in recent years climate change and drought have brought a continuous procession of fires of greater frequency, scale and destructive intensity. The level of wildfire activity in 2017 and 2018 underscores the importance of planning for and addressing the evolving risks to land and property. The severity of a given wildfire season in California is typically dependent on a number of factors, including weather, temperature, wind speed and direction, topography and the presence of combustible material. The highest risk typically occurs during off-shore wind events known as “Diablo Winds.” High heat and strong winds particularly create a high potential for these wind-driven fires should there be an ignition.

In the years 2017 and 2018 a number of very destructive California wildfires occurred in communities where urban and residential development abut undeveloped wildland such as forest and vegetated hillsides, including in the City of Santa Rosa and the Town of Paradise. Approximately 80% of Marin County is designated by the California Department of Forestry and Fire Protection (CAL FIRE) as having a moderate to highly severe fire hazard.

MERA sites designated by CAL FIRE as being in a moderate to very high Fire Hazard Severity Zones (FHSZ) were therefore evaluated on a site-by-site basis in Chapter V for whether the project would expose people or structures to a significant risk of loss, injury, or death from wildland fires as compared to baseline conditions.

Radio Frequency Exposure

Considerable public concern and discussion has occurred over the years about the potential health hazards resulting from exposure to radio frequency (RF) emissions. Most notably, there is concern about a possible causal linkage between RF emissions and effects on human health. The Telecommunications Act of 1996 addressed this concern at the federal level by adopting exposure limits and methods for evaluating RF emissions from Federal Communications Commission (FCC)-regulated transmitters.

MERA recognizes that the public may have concerns regarding RF emissions, and an objective of the proposed project design is to ensure compliance with adopted standards for public exposure levels. The design of the proposed project must comply with the FCC requirements for assessing exposure levels and, where exposure levels do not meet adopted standards for public exposure, reasonable mitigation must be provided to achieve compliance.

MERA has applied the FCC's adopted regulation for RF emissions, discussed in more detail below, because the MERA transmitters are regulated by the FCC.

The FCC regulations include Maximum Permissible Exposure (MPE) limits for uncontrolled and controlled environments. The uncontrolled or "general population" exposure limits apply to situations wherein the general public may be exposed, or situations in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for such exposure, or who cannot exercise control over such exposure. Under FCC guidelines, no special precautions or mitigation measures are necessary if RF emissions are within exposure limits for uncontrolled environments.

Controlled or "occupational" exposure limits apply in situations where individuals are exposed to RF emissions as a consequence of their employment, provided those individuals are fully aware of the potential for exposure and can exercise control over such exposure. Limits for controlled exposure also apply in situations wherein an individual is transient through a location where controlled limits apply, provided that person has been made aware of the potential exposure. The general public's exposure to controlled environments can effectively be mitigated to less-than-significant levels by barriers that prohibit access to the controlled environments and signs that warn the general public of the possible exposure beyond the barrier.

Exposure to RF emissions is measured by the power density (stated in milliwatts [mW] per square centimeter) for the frequency of radio waves. That exposure is compared to the limits that have been adopted by the FCC to ensure protection of humans. The limits are based on the studies of the relationship between RF emissions and observed and projected health effects. To ensure that the limits are met, the existing RF emissions were measured and projected in this document by SiteSafe, an independent engineering firm.

C. FEDERAL AND STATE REGULATORY SETTING

Wildfire

California Department of Forestry and Fire Protection (CAL FIRE)

In November 2007, CAL FIRE adopted Fire Hazard Severity Zone maps for all areas within California for which they have responsibility. The severity zones on these maps depict the fire hazard (the likelihood of an area burning and how it would burn) based on fuels, terrain, weather, and other relevant factors. These zones were classified by the CAL FIRE Director in accordance with Government Code Sections 51175 through 51189 to assist responsible local agencies identify measures to reduce the potential for losses of life, property, and resources from wildland fire. Government Code Section 51182 further specifies standards for brush clearance around buildings and structures located in, upon, or adjoining any mountainous, forest, brush, or grassland areas that are designated as very high fire hazard severity zones.

California Building Code

The California Building Code (CBC), codified in the California Code of Regulations Title 24 Part 2, applies to all buildings throughout the State of California; however, cities and/or counties may establish more restrictive building standards reasonably necessary because of local climatic, geological, or topographic conditions. New building development located within an area designated by the authority having jurisdiction to be at significant risk from wildfires must meet the intent of CBC Chapter 7A, Materials and Construction Methods for Exterior Wildfire Exposure, for a building permit to be approved. Regulations require that building products and construction methods comply with applicable codes and ordinances of the local authority having jurisdiction. MERA is a joint powers authority that is immune from city building codes but is subject to the legal limitations placed on Marin County. Marin County follows the Marin County Building and Fire Codes in developing County facilities.

Radio Frequency Exposure

Federal Communications Commission (FCC)

The FCC adopted Docket 79-144, codifying the radio frequency protection guide of the American National Standards Institute (ANSI) C95.1-1982, "*Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz"* and the 1992 ANSI-published revised standard, C95.1-1992. The revised standard defined "controlled" and "uncontrolled" environments. Uncontrolled standards (general public exposure) apply to accessible areas where workers or the general public may be exposed to low level RF emissions. Controlled standards (occupational exposure) are valid for situations where people are exposed to stronger RF

emissions as a consequence of their employment, and where they have been made aware of their potential for exposure and can exercise control over their exposure. Uncontrolled standards are generally five times more restrictive than standards for controlled environments. The C95.1-1992 controlled (i.e., occupational) limits are approximately the same as in C95.1-1982, prepared a decade earlier.

In Docket 93-62, the FCC adopted the exposure limits for field strength and power density recommended in Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields", published by the National Council on Radiation Protection and Measurements in 1986.

In 1996, the Federal Communications Commission (FCC) adopted regulations in 47 CFR § 1.1307 and 1.1310 that define Maximum Permissible Exposure (MPE) limits for radiofrequency radiation. Subsequently, in August 1997 the FCC Office of Engineering and Technology (OET) published Bulletin 65, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields, Edition 97-01. These Guidelines were prepared “to provide assistance in determining whether proposed or existing transmitting facilities, operations or devices comply with limits for human exposure to RF emissions adopted by the Federal Communications Commission (FCC).” Since issuing these guidelines, the FCC periodically reviews rules and regulations related to RF emissions per their congressional mandate. Most recently, FCC issued Addendum C to Bulletin 65 in 2011 (FCC 2011).

Guidelines for human exposure to RF emissions are derived from the Specific Absorption Rate (SAR), a measure of the rate of energy absorbed by (and dissipated in) biological tissue, which is usually expressed in watts per kilogram (W/kg). The FCC adopted a SAR threshold level of “4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur” (OET Bulletin 65).

In order to maintain human exposure within a safe SAR threshold, the FCC Rules and Regulations impose MPE limits. These MPE limits are defined in terms of power density (expressed in milliwatts per centimeter squared, [mW/cm2]) that is radiated from transmitting antennas. The limits vary depending on frequency, since the human body can react differently to RF emissions at different frequencies. The FCC’s two RF exposure environments described previously, "controlled/occupational" and "uncontrolled/general public”, each have their own exposure limit:

- Controlled/occupational situations - the exposure limit is one-tenth of the SAR threshold described above, or 0.4 W/kg.
- Uncontrolled/general public situations - the limit is one-fiftieth of the SAR threshold described above, or 0.08 W/kg.

D. APPROACH TO EVALUATING RF EXPOSURE AT MERA FACILITIES

Analysis of exposure to RF emissions at Next Gen facilities was based on a technical study for each site conducted by SiteSafe, an independent engineering firm. Their complete report, including methodology and detailed results, is provided in Appendix D of this document. SiteSafe

performed field assessments at 12 proposed project sites between August 21 and 24, 2018; these sites included active communication sites at: Prime Site EOF, Civic Center, Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Sonoma Mountain, Stewart Point, Wolfback Ridge, and Mt. Burdell OTA. For the remaining proposed sites, existing data and modeling were used to estimate RF emissions exposure. SiteSafe's report provided the following information pertinent to exposure to RF emissions at each site:

- on-site emissions measurements, where applicable, relative to MPE limits;
- an inventory of the transmitting antennas used in the computer model;
- the theoretical maximum exposures relative to MPE limits based on computer modeling;
- site diagrams showing estimated exposure under different operating scenarios; and
- a determination of compliance with FCC regulations.

RF emission measurements were taken on-site using two methods, spatial average and peak. The spatial average measurement consists of a collection of ten measurements within a ten second time interval taken from zero to six feet in height. Spatial average measurements are intended to identify the average power density over the dimensions of a typical human body. Peak measurements consist of the maximum at any one location. Meters and probes used for measurement were calibrated and used according to manufacturer's specifications.

Compliance determinations for each site were based on the theoretical modeling and/or physical measurements of on-site RF emissions relative to MPEs limits, the placement of existing, RF warning or alerting signs, proposed antenna inventory, and the extent to which access to antennas was restricted. SiteSafe validated theoretical models with physical measurements where possible.

Site-specific RF emission models were developed using procedures outlined in the FCC OET Bulletin 65 and a series of conservative assumptions about duty cycle, system implementation, and existing emissions from other nearby RF sources at the same location. In some cases, MERA currently leases space at commercial communications sites where other operators also emit RF emissions. These other operators were accounted for in the study's models.

The maximum theoretical spatially averaged emissions were modeled for three project scenarios: "Existing Antennas Only on Air", "All Antennas on Air", and "Final Configuration". "Existing Antennas Only on Air" represents the baseline theoretical maximum, where all currently installed MERA antennas are operating simultaneously, as well as the antennas of other operators (if any).[4] "All Antennas on Air" is a theoretical worst-case scenario where all existing and all proposed MERA antennas operate simultaneously, as well as the antennas of other operators (if any). This circumstance would only arise during the transition period, where the existing MERA infrastructure is left intact during testing and implementation of the new system. This configuration is anticipated to last for one to two years, after which antennas that are no longer needed will subsequently be removed. Elevation figures with the "All Antennas on Air," worst case scenario are included at the

[4] *Simultaneous operation is not common in voice activated systems, but is used to generate a conservative worst-case scenario.*

end of Chapter V. Existing Conditions and Impacts at Each Site. The "Final Configuration" model shows theoretical maximum emissions for the final configuration of the proposed system.

For each scenario, SiteSafe modeled emissions as though all on-site antennas were operating simultaneously at full power. This circumstance is very rare, but was modeled so that exposure to RF emissions could be evaluated conservatively. By conservatively modeling conditions with the most powerful RF emissions possible, SiteSafe has defined exclusion areas at each site where required. These relatively small areas are only in access-controlled spaces and are only near the transmitting antennas, where emissions are most concentrated. It is recommended that workers in these areas wear a personal monitor, work only when transmit power is reduced, or perform real-time measurements to indicate real-time exposure levels.

E. THRESHOLDS OF SIGNIFICANCE

Hazards and Hazardous Materials

The project would have a significant impact on the environment related to hazards and hazardous materials if it would result in any of the conditions below:

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

d) *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?*

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?*

f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

g) *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Wildfire

If located in or near state responsibility areas or lands classified by Cal FIRE as very high fire hazard severity zones, the project would have a significant impact on the environment if it would result in any of the conditions below:

a) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Radio Frequency Exposure

For the purposes of this SEIR, MERA has adopted the federal Maximum Permissible Exposure limits as the threshold to evaluate the significance of the project's impacts relative to potential human RF emissions exposure:

a) Would Radio Frequency exposure exceed established FCC exposure limits for workers or the general public?

As explained in the SiteSafe report (Appendix D to this SEIR), exposure limits for RF emissions are established by the FCC's Rules and Regulations for RF emissions found in 47 CFR § 1.1310, which were adopted in 1996. The Rules and Regulations were created after considering various industry standards that had been previously developed by medical researchers, engineers, and industry representatives.

Site evaluations of the project relative to safety thresholds are provided in Chapter V (Existing Conditions and Impacts at Each Site), including diagrams that depict worst-case scenarios at each site for RF emissions.

F. REGIONAL IMPACTS ANALYSIS AND MITIGATION MEASURES

Hazards and Hazardous Materials

The 2000 Final EIR found that there would be No Impact or Less Than Significant Impacts for all thresholds related to the existing CEQA Guidelines for Hazards and Hazardous Materials, with the exception of threshold b), which was found to be less than significant with mitigation (containment of hazardous and/or flammable fluids). Additional analysis of current conditions at existing sites and sites new to the system determined that all impacts excepting those related to thresholds b) and g) would continue to be ***less than significant***. Thresholds a) and c) through f) are therefore not discussed in any further detail, except to confirm their impacts were indeed found to be less than significant as required by CEQA and contained in Chapter VI (CEQA Required Analysis) Section E.

Threshold b) is discussed for the project as a whole below, and threshold g) is revisited here based on recent wildfire events and associated concerns.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As mentioned previously, the 2000 Final EIR found impacts related to threshold b) to be less than significant with mitigation. Specifically, the EIR stated: "the proposed telecommunication project will contain elements having a potential risk of hazard associated with accidental explosives or release of hazardous substances such as the diesel and propane fuels necessary for emergency generator power". Diesel and propane fuels are both commonly used for the purpose of providing emergency generator power, and the potential for significant impacts is low when the two fuels are used properly and for their intended applications.

Workers who handle hazardous materials are required to adhere to health and safety requirements enforced by the federal Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health (Cal/OSHA). State and local regulations together with industry standards and Best Management Practices (BMPs) have proven to be adequate for protection from risk of spills, and potential fire and explosion. The proposed project will provide equipment and fuel storage designed to meet and comply with all applicable requirements (applicable BMPs are set forth in Chapter III). Based on the applicable regulatory requirements, the potential for the project to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is ***less than significant***.

g) Would the project expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

The recent frequency and intensity of wildfires in California's urban-wildland interface, especially in proximity to Marin County, calls for revisiting this topic. Given the Next Gen System's critical importance for emergency communications during future wildfires in Marin County this topic is especially important.

The primary goal of the MERA Next Gen Project is to improve emergency communications and response in Marin County. A robust, reliable, and far-reaching communication system is integral to emergency response should a wildfire occur. This benefit, however, does not negate the possibility that MERA equipment and infrastructure could ignite, exacerbate, or expose people or structures to a wildfire.

People and structures associated with the project would be exposed to increased risk of fire hazards under severe dry weather and wind conditions. In addition, construction operations could also increase the risk of igniting a wildland fire at project sites.

The potential for the project to expose people or structures to a significant risk of loss, injury, or death involving wildland fires is relatively low, due to the project's use of fully grounded electronic equipment, fire proof buildings and other construction techniques, steel towers, and underground utilities, and due to the absence of other development near the project sites. Further, the project utilizes sites that are in previously disturbed, well-cleared areas. With the use of standard safety BMPs (outlined in Chapter III) during construction and operations at all project sites, and with

compliance to state law requirements in very high fire hazard severity zones, the potential to expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires is ***less than significant***.

Wildfire

As described on a site by site basis in Chapter V, portions of the project are located in or near state responsibility areas or lands classified by CAL FIRE as very high fire hazard severity zones. Therefore, this SEIR addresses whether the project would have significant impacts based on the following thresholds:

a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

The design and operation of the Next Gen System will benefit residents, businesses and industry in Marin County by improving the ability of law enforcement, fire protection and public works personnel to communicate with each other and coordinate with other agencies during an emergency. The proposed project will result in better emergency radio coverage, thereby facilitating coordinated dispatch and response of emergency responders throughout Marin County. To maintain consistent reliability during broad emergency conditions, Next Gen structures currently are, or would be, constructed with fire-resistant materials, and electric service to new proposed sites would be installed underground. Emergency backup power at all unoccupied sites would be included as part of the project design to further insure uninterrupted operations, particularly during emergency situations, including wildfire. Therefore, as the improvement in radio communications resulting from the proposed project would benefit the implementation of emergency response plans and emergency evacuation plans, the impacts of the project would be ***beneficial***.

b) *Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

During certain parts of the year, the MERA sites are likely to experience severe dry weather and wind conditions that could result in increased risk of higher pollutant concentrations or the uncontrolled spread of wildfire. However, the MERA sites are unoccupied and, for the most part, are located in remote areas that are rarely visited by the general public. Technicians monitor the sites from afar, visiting monthly for safety inspections. As mentioned in the previous Wildfire threshold a), the structures at each site are or would be constructed with fire-resistant materials, the towers are made of metal, and electric service to new proposed sites would be installed underground. Therefore, due to the site locations, design, and ability to conduct remote monitoring, the proposed project will not exacerbate wildfire risks or expose project occupants to exacerbated wildfire risks, and the impact is ***less than significant***.

c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

New power lines required by the proposed project at the Tomales and Coyote Peak Sites would be installed underground, resulting in no increase in the potential for wildfire. The Coyote Peak Site also requires improvements to an existing road for purposes of construction, but these improvements will also improve access for fire protection.

Emergency generators are required at all existing and proposed MERA sites and, like the existing MERA system, the project will utilize propane and diesel fuels to power those emergency generators. Routine delivery of fuels to on-site tanks occurs quarterly in order to maintain supplies adequate for emergency generator testing, although if generators are used then fuel requirements would increase. There is a potential risk associated with this use of diesel and propane fuels. However, both of these fuels are common for use with generators, and MERA has a record of safely handling, storing, and using propane and diesel fuels for their intended purpose without incident.

MERA will require that workers who handle these materials in project construction and operations adhere to federal and State safety regulations (in accordance with OSHA and Cal/OSHA), along with the BMPs set forth in Chapter III. Based on the safety history of MERA with the use of fuels, plus the applicable regulatory requirements, adherence to BMPs, and the ongoing monthly maintenance and monitoring site visits, the proposed project's potential to exacerbate fire risk or cause temporary or ongoing impacts to the environment due to the installation or maintenance of project infrastructure would be ***less than significant***.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The proposed Next Gen Project will utilize previously developed sites with existing access roads and drainage improvements already in place. Coyote Peak is the one site where the existing access road will undergo limited grading and drainage improvements. At the Coyote Peak Site, grading has been designed in a way that will avoid causing drainage changes or placing fill on steep slopes, and that utilizes only hard rock cut-slopes. The project will not cause or expose people or structures to significant risks of downslope or downstream landslides or flooding as a result of runoff or post-fire slope instability. Therefore, the impact is ***less than significant***.

Radio Frequency Exposure

In the 2000 Final EIR, project impacts related to RF emissions exposure were found to be less than significant. Although RF levels would potentially exceed the FCC's occupational exposure limits at certain sites, the EIR explained that MERA planned to (1) install fencing to control public access to the Pt. Reyes Hill Site; and (2) post the exposure hazard at all entry points to controlled areas and train workers at the Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Bolinas Fire Station, Pt. Reyes Hill, Forbes Hill, Dollar Hill, San Pedro Ridge, Mt. Burdell, Mt. Tiburon, Bay Hill Road, and Sonoma Mountain Sites. Therefore, the EIR concluded that the impact of RF occupational exposure would be less than significant.

This SEIR specifically addresses potential RF emissions exposure based on the MERA-adopted threshold, which considers whether the project would:

a) *Cause RF exposure to exceed established FCC exposure limits for workers or the general public?*

SiteSafe, an independent engineering firm, evaluated RF emissions at each potential Next Gen site. The SiteSafe evaluations, contained in Appendix D to this SEIR, calculate estimated power densities for various locations at each site while accounting for the multiple transmitting frequencies that may operate at each site. SiteSafe made reasonable and conservative assumptions where information was not readily available, and those assumptions are outlined in Appendix B of their report. Under these assumptions, each site has been modeled to show the maximum RF density, as shown in the figures in their report. Consequently, SiteSafe has modeled a worst-case analysis based on best available data.

The potential RF emissions and exposure levels for each site are discussed in detail in Chapter V (Existing Conditions and Impacts at Each Site). At the end of Chapter V are selected RF emission figures depicting the worst case condition with "all antennas on" as shown in an elevation view. In all cases, ***RF emissions impacts to the public would be less than significant***.

The project does have the potential to exceed the FCC's occupational exposure limits, based on SiteSafe modeling, at very specific and limited locations, all of which are inside controlled access areas that are only available to informed workers. MERA employs BMPs that include worker safety training for all employees, including use of monitoring equipment, personal protective equipment (PPE), signage, and knowledge of and avoidance of RF emissions. These BMPs are set forth in Chapter III. In addition to these BMPs, the implementation of Mitigation Measures RF-1 and RF-2 at individual sites will ensure that ***RF emissions impacts to workers would be less than significant with mitigation incorporated***.

Chapter V (Existing Conditions and Impacts at Each Site) includes Mitigation Measures RF-1 and RF-2 in the site discussions where potentially significant impacts to workers are identified.

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V. EXISTING CONDITIONS AND IMPACTS AT EACH SITE

A. INTRODUCTION

This chapter describes existing conditions and site-specific impacts at each MERA Next Generation site. The evaluation of the significance of each environmental impact is based on the *CEQA Guidelines* Appendix G thresholds that were introduced in Chapter IV. The environmental resource impacts that apply universally to the Next Gen Project are addressed in Chapter IV, and those resource impacts that are dependent on specific site conditions are addressed here in Chapter V.

The five environmental resources areas that are dependent on site-specific conditions are aesthetics, cultural and tribal cultural resources, biological resources, land use, and potential hazards. The impacts to these five environmental resources are evaluated at each of the 23 sites that comprise the Next Gen Project. Of those 23 sites, ten are used in the existing MERA system and will continue to be used, eight are new to the MERA Next Gen System, and five are sites in the existing system that will be decommissioned. For convenience, the discussion below of site conditions and impacts in this chapter follows the same order as in the original Initial Study (MERA, 1999) and Environmental Impact Report (MERA, 2000). The five resource areas addressed in this chapter are:

Aesthetics – The evaluation of Aesthetics impacts is based on four aesthetics thresholds introduced in Chapter IV.A. Thresholds (a) – (c) are considered in this chapter, and threshold (d) (potential for light and glare impact) was addressed system-wide in Chapter IV.A. The site-by-site aesthetic impact evaluation was based on site visits, visual simulations, and the proximity of a site to public open space. The visual simulations show before and after view of each site from both near and distant perspectives.

Threshold (a) requires an evaluation of the proposed project's impact on a [publicly accessible] scenic vista. Five sites in the Next Gen Project could be classified as a publicly accessible scenic vista: Mt. Barnabe, Dollar Hill, Mt. Tiburon, and Skyview Terrace, which are all existing sites, and Muir Beach, which is a new site. Thresholds (a) through (c) are evaluated in this chapter, based upon site evaluations. Threshold (d) (added potential for light and glare) is addressed system-wide in Chapter IV.A, where Mitigation Measure AES-1, which applies to all sites, is defined. Overall the analysis found the impact to aesthetic resources to be significant and unavoidable at five sites: Tomales, Coyote Peak, Skyview Terrace, Mill Valley and Muir Beach.

Cultural and Tribal Cultural Resources – Given the close relationship between tribal and cultural resources, the two are discussed concurrently in this SEIR. No Next Gen sites were determined to have archaeological resources or human remains present. As such, these impacts (Cultural Resource thresholds b and c) are discussed globally for all sites in Chapter IV.B. While no historical resources were identified within any sites, three sites were identified as having historical resources within 0.25 miles of the area of direct impact (ADI). Accordingly, potential impacts on historical resources are analyzed on a site-by-site basis here. To determine the

potential for significant impacts on tribal cultural resources, MERA consulted with the Federated Indians of Graton Rancheria (FIGR). FIGR identified the potential for significant impacts at 13 sites. The potential impacts and mitigation measures for each site are analyzed here.

Biological Resources –The Biological Resources thresholds of significance designated (a) through (f) were introduced in Chapter IV.C. Thresholds (a) through (e) could not be discussed on a project-wide level, given the diversity of biological settings across the MERA sites, and are discussed here on a site-by-site basis. Analysis of threshold (f) in Chapter IV.C showed less-than-significant impacts for all sites and is, therefore, not discussed further in this chapter.

Land Use Consistency – Chapter IV.D introduces thresholds (a) through (c) for Land Use impacts. Analysis of thresholds (a) and (c) in Chapter IV.D found no impacts or less-than-significant impacts, respectively, across all sites. As a result, these two thresholds are not discussed further in this chapter. Potential impacts associated with threshold (b) are discussed below on a site-by-site basis.

Potential Hazards – Chapter IV.E contains a discussion and analysis of thresholds (a) through (h) for Potential Hazards. The analysis found that the proposed project would result in less-than-significant impacts across all sites.

MERA adopted threshold (a) that relates specifically to compliance with Federal Communications Commission (FCC) regulations for exposure to Radio Frequency (RF) emissions. Due to the current relevance of RF exposure in public discussions, this topic is evaluated in detail here on a site-by-site basis, and graphics depicting worst case RF emissions are included. MERA adopted threshold (a), which requires an analysis of the proposed project's compliance with FCC regulations regarding RF exposure. The analysis of RF exposure found that all publicly accessible spaces around all MERA sites are within radio frequency exposure limits established by the Federal Communications Commission (FCC).

The following site-by-site analysis addresses only those environmental resources that could not be fully discussed for the project as a whole in Chapters IV.A through IV.E but are dependent on existing site-specific conditions. The mitigation measures contained in this Chapter are in addition to the system-wide mitigation measures called for in Chapters IV.A through IV.E.

B. SITE-BY-SITE ANALYSIS

A. Prime Site EOF (Site 1)

The Prime Site EOF is located at the existing Marin County Emergency Operations Facility (EOF) at the southwest corner of the intersection of Lucas Valley Road and Highway 101 in San Rafael. The EOF is a three-story office building in northern San Rafael as shown in Photo III-1 (Chapter III, Project Description). To the east is State Highway 101 and Smith Ranch Road, which is lined with similar institutional and commercial office buildings surrounded by parking lots. To the west is Lucas Valley Road and a grassy hillside that forms a backdrop to the EOF and three other commercial facilities west of Highway 101.

The proposed work at the Prime Site EOF is detailed in Chapter III Project Description, and a summary is provided below in Table V-1. The proposed project improvements include minor modifications of existing communications equipment on the lattice structure above the rooftop of the EOF and installation of equipment inside the building. There is no existing lighting on the structure and no additional lighting is proposed.

At the Prime Site EOF, an estimated 10% of the visible components would be owned by MERA after project completion. This site is owned by Marin County and was not a MERA site previously. The Marin County Sheriff owns most of the existing communications equipment at the site, but some of the antennas are for emergency use by local amateur radio operators.

Table V–1. Prime Site EOF, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Prime Site EOF (Emergency Operations Facility)	Existing rooftop communications equipment at EOF with 19 existing antennas on lattice structure supporting existing dispatch systems.	New Prime Site for MERA Next Gen System. 12 Yagi-type (small horizontal) antennas would be removed and replaced with 19 vertical pole antennas. New 3' diameter and one new 6' diameter microwave dish would be placed above lattice structure.

1. Aesthetics

The primary aesthetic resource in the area is the grassy hillside just to the west of the EOF, which is part of a City of San Rafael Open Space. There are no scenic vistas available from the Prime Site EOF, and, there would be ***no impact*** under threshold (a). The hillside to the west provides a natural backdrop to the EOF and other buildings in the area when viewed from Highway 101 or Smith Ranch Road, the most accessible vantage points. Since neither of these points are designated or eligible as scenic highways, there would be ***no impact*** under threshold (b).

With these key points in mind, the primary aesthetics threshold to consider at the Prime Site EOF, given that it is in an urbanized area along State Highway 101 in the City of San Rafael, is:

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

MERA is not subject to the City of San Rafael's land use regulations. Accordingly, instead of analyzing the project's potential to conflict with land use regulations governing scenic quality, the following discussion of aesthetics impacts assesses whether the project would degrade the existing visual character or quality of public views of the site and its surroundings.

Figure III-23, Existing and Proposed Elevations, shows the physical changes at the site resulting from the proposed project. The existing approximately 20-foot wide lattice structure on which all antennas are mounted rises approximately 20 feet above a mechanical penthouse on the three-story building's rooftop to which numerous vertically oriented antennas are attached in an orderly fashion. The lattice structure, with one small microwave dish, and to a lesser degree the antennas, are currently visible from nearly all vantage points. A three-foot diameter microwave dish is also visible above the lattice structure. The Next Gen System would slightly modify the positon of the three-foot diameter dish, and it would add a second six-foot diameter dish that would also be visible above the lattice structure.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site can be seen. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.A-1. Subsequent Figures V.A-2 through V.A-7 show the anticipated before and after conditions at the Prime Site EOF from the three selected KOPs.

Smith Ranch Road is on the east side of Highway 101, and it is aligned so that individuals approaching from the east (including those driving from McInnis Park, a Marin County regional park that is further east and out of sight) face the Prime Site EOF, although it is relatively distant. The lattice structure on the roof is visible, but the changes to individual antennas resulting from the proposed project would not be obvious. There are no other park areas, scenic highways, or notable visual resources in the area.

The additions of new antennas and a new larger microwave dish on the existing lattice structure would not be obvious on the existing tower designed for such features, but would be detectable upon closer inspection. Figures V.A-2 through V.A-7 show the antenna changes and particularly the addition of the larger microwave dish. These visual changes would be slightly adverse as the new dish would be the highest, largest, and most visible component of the structure. However, the addition of the two new microwave dishes on the existing antenna lattice structure would not substantially degrade the visual character or quality of the site or the surroundings.

Using the simulated views from the KOPs in conjunction with proximate protected scenic resources, such as parks, and scenic highways, impact determinations are made, and, in the case of the Prime Site EOF, the impact would be ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project incorporated records searches and site visits. The report found no known historical resources pursuant to Section 15064.5 within or near the Prime Site EOF. Improvements proposed for this site mostly include minor modifications to existing infrastructure, such as removal and replacement of antennas and microwave dishes, as well as the replacement of equipment inside the EOF building. As shown in Figure V.A-8, which depicts the Area of Direct Impact and a surrounding 100-foot buffer, this site is located on the roof of or within the EOF building. Accordingly, no ground disturbance would occur and there is no chance of accidentally discovering historical resources. Because there are no known historical resources present, and accidental discovery is not a possibility, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Prime Site EOF, and ***no impact*** would occur.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites. Since the Prime Site EOF was not among these 13 sites, it is assumed that there are no significant tribal cultural resources present. Further, no ground disturbance would occur at this site, so there is no possibility of accidentally discovering tribal resources. Thus, ***no impact*** would occur.

3. Biological Resources

a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?*

The EOF property is completely developed and landscaped and does not contain habitat that could support candidate, sensitive, or special-status species. Thus, the proposed improvements would have ***no impact*** on candidate, sensitive, or special-status plant or wildlife species.

b,c) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The Prime Site EOF is located within a completely developed and landscaped area. No sensitive biological communities are present, including riparian habitat or federally protected wetlands, and the proposed improvements would have ***no impact*** on sensitive biological communities.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

As previously discussed, the Prime Site EOF does not contain habitat that could support special-status species. It is not part of a migratory wildlife corridor or a native wildlife nursery site, and improvements at the Prime Site EOF would not impede the use by native wildlife of any such sites. As the Prime Site EOF is developed and is not a migratory corridor or nursery site, therefore, the project would not impede the use of any such corridors or sites, and there would be ***no impact***.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As noted, the Prime Site EOF is located entirely within a developed area, and proposed changes include modifications to a pre-existing communications complex. As the area is already developed for communication purposes, and proposed changes are minor, the Next Gen Project at the Prime Site EOF would have no impact on biological resources and, consequently, would not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that may be under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) *Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?*

The Next Gen EOF Site is located in the City of San Rafael, and does not lie within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. MERA is not subject to San Rafael land use regulations and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold of significance (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for or the general public?

Evaluation of exposure limits for radio frequency (RF) emissions at the Prime Site EOF is based on an analysis conducted by SiteSafe, LLC, an independent RF exposure and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 21, 2018, SiteSafe surveyed the Prime Site EOF to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 20 locations at the Prime Site EOF. The highest emissions recorded during this process were well below the FCC's MPE limits, at less than 1% of the occupational limit and less than 5% of the public limit. The maximum recorded level at all 20 locations was below 1% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but used the public MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit. Their findings are discussed below:

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing conditions at the Prime Site EOF is 553.6% of the public MPE limit.

b) Figure V.A-9 depicts modeled exposures relative to applicable MPE limits during the worst case scenario during the transition period, the "all systems on" scenario, when all currently existing and the new transmitting devices could function simultaneously as the new system is being tested.

   Within the controlled area of the Prime Site, the EOF rooftop (which is locked and not accessible to the public), there would be 53 antennas capable of operating during the transition period (for a full inventory, see Page 24 of Appendix D), although this condition would be rare based upon the intermittent nature of voice communications. In one specific

area of the controlled-access rooftop environment, surrounding the antenna mount, these antennas have the capacity to cumulatively create a theoretical maximum exposure of 577.1% of the public MPE limit. The transition period is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

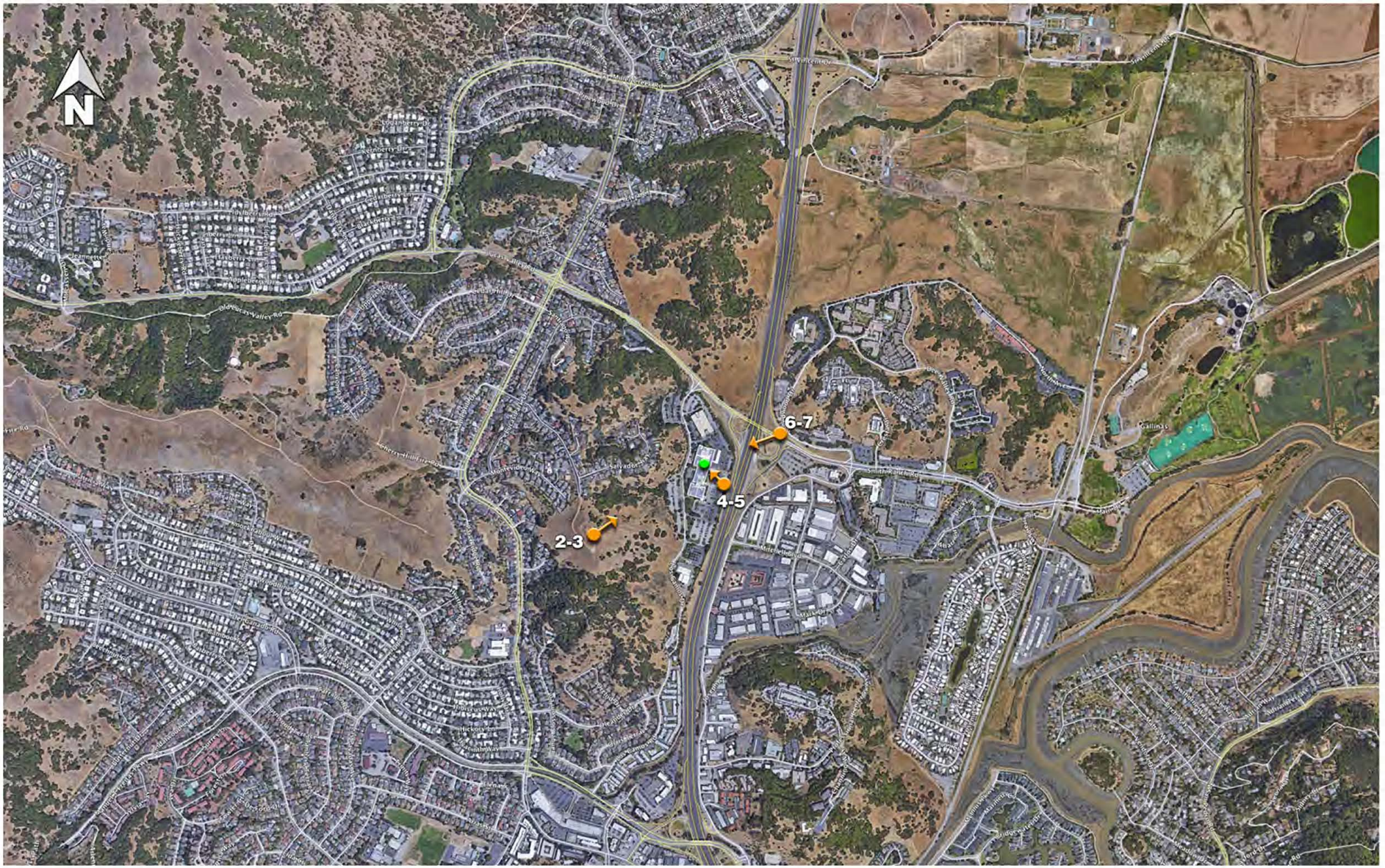
c) Looking to the long term "proposed condition" with the new system fully in place and the project complete, maximum controlled-area rooftop-level exposure would decline only slightly (due to the number of non-MERA antennas on site) to 553.2% of the public MPE limit. This represents a negligible change from the existing baseline theoretical maximum emission values, which are currently 553.6% of the public MPE limit. Uncontrolled areas that are accessible to the public, however, would remain at less than 5% of the public MPE limit, as there are no publicly accessible spaces in close proximity to the roof-top antennas.

Based on SiteSafe's measurements and models, SiteSafe concluded that all uncontrolled areas with public access were well within the public MPE limit, but that a notice sign to workers should be posted at the main access point to the area, at the northeast corner of the rooftop penthouse. Recommended signage locations can be seen in Appendix D (SiteSafe Report) pages 19-20, and examples of signs meeting FCC Guidelines can be viewed in Chapter III (Project Description), Section G.

MERA's proposed operations at the Prime Site EOF would comply with FCC public exposure regulations, as all publically accessible spaces would be subject to less than five percent of the MPE limit for public exposure. The SiteSafe Report found that existing ground level RF emissions at the Prime Site EOF are less than 5% of the FCC's MPE limits for uncontrolled/general public environments, and that ground level RF exposure will remain at less than 5% of the MPE limits during the transition phase and upon completion of the proposed MERA Next Gen Project. Consequently, the impacts to the public from RF emissions at the Prime Site EOF would be ***less than significant***. However, within the controlled/occupational rooftop area of the Prime Site EOF, current RF emissions exceed 100% of the MPE limits at specific points, and they will continue to exceed 100% of the MPE during the transition phase and upon completion of the proposed project. The controlled/occupational rooftop environment can be brought into compliance with applicable FCC regulations by posting warning signage at the rooftop entrance and at selected antenna mounts. Mitigation Measure RF-1 below requires the posting of such signage. As a result, controlled/occupational area RF exposure impacts at the Prime Site EOF during all stages of the project would be ***less than significant with mitigation incorporated***.

Mitigation Measure RF-1

MERA shall install exposure warning signs at rooftop entries and selected antenna mounts in the controlled access rooftop area according to SiteSafe's individual report for the Prime Site EOF (pages 10-30 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In summary, MERA shall install a NOTICE sign at antennas 11-27 and a CAUTION sign at antennas 28-32. Signage location details can be viewed on pages 19-20 of Appendix D to the SEIR.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.A - 1 Prime Site EOF Aerial with Photo Locations

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Current photograph of the view looking northeast from the Skyview Terrace water tank.

Source: Previsualists Inc.

Figure V.A - 2 Existing Prime Site EOF from Skyview Terrace

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Photosimulation of the view looking northeast from the Skyview Terrace water tank.

Source: Previsualists Inc.

Figure V.A - 3 Proposed Prime Site EOF from Skyview Terrace Water Tank

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Current photograph of an up close view from the parking lot in front of the Sheriff's Office.

Source: Previsualists Inc.

Figure V.A - 4 Existing View from Prime Site EOF Parking Lot

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Photosimulation of an up close view from the parking lot in front of the Sheriff's Office.

Source: Previsualists Inc.

Figure V.A - 5 Proposed View from Prime Site EOF Parking Lot

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Current photograph of the view looking west from Smith Ranch Road across Hwy 101.

Source: Previsualists Inc.

Figure V.A - 6 Existing Prime Site EOF from Smith Ranch Road

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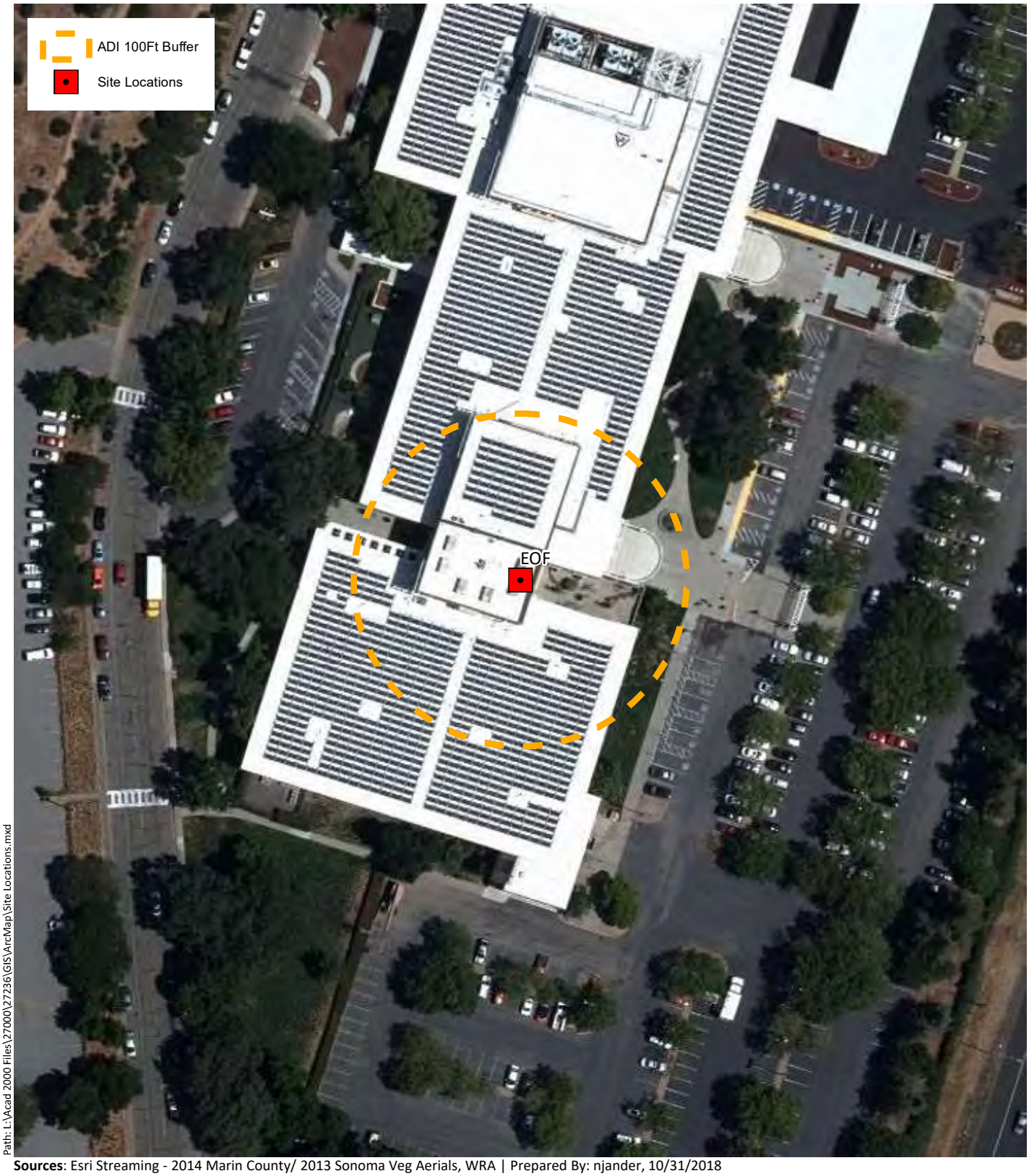


Photosimulation of the view looking west from Smith Ranch Road across Hwy 101.

Source: Previsualists Inc.

Figure V.A - 7 Proposed Prime Site EOF from Smith Ranch Road

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.A - 8 Prime Site EOF

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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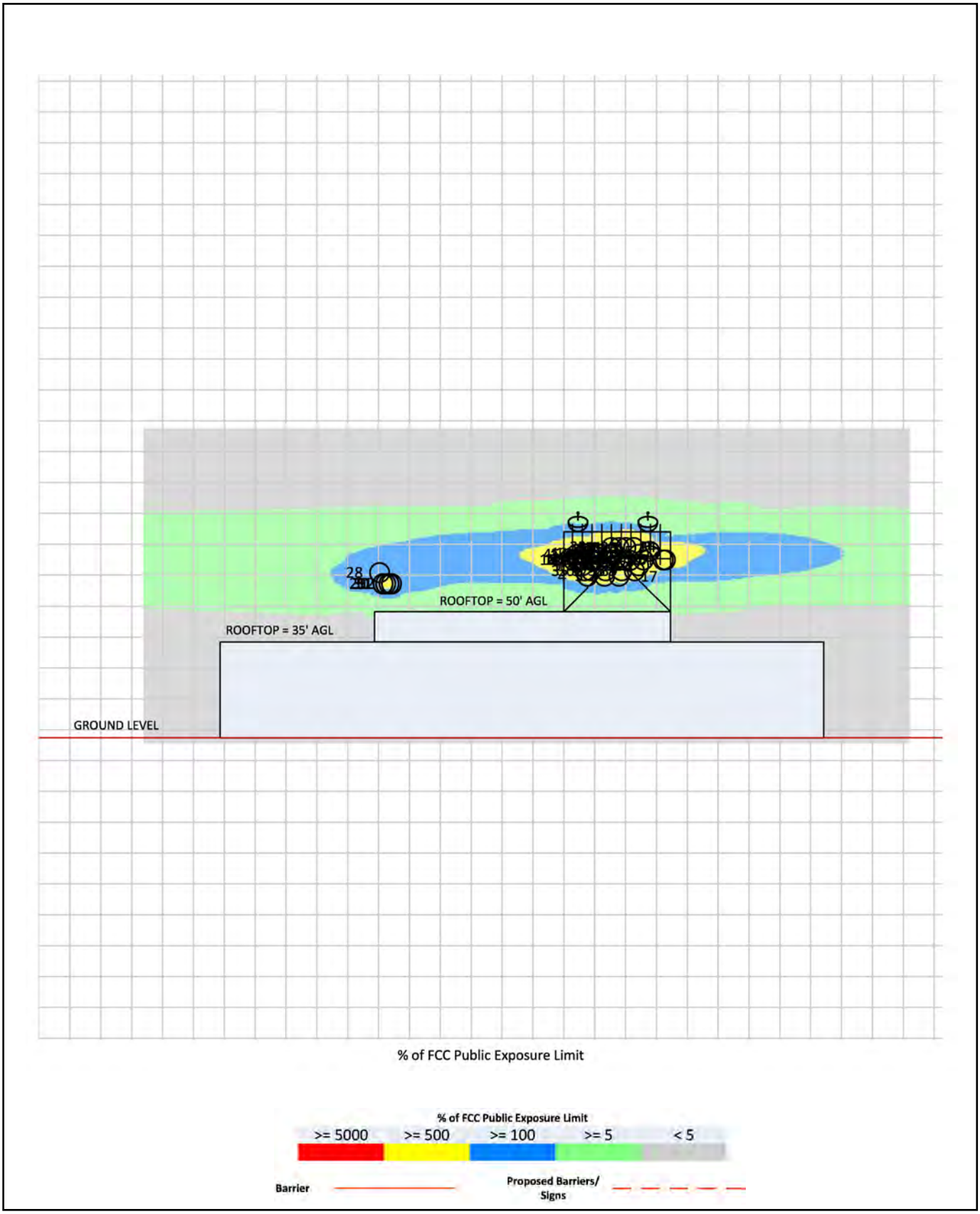


Figure V.A - 9 Prime Site EOF Simulated All-On RF Exposure - Elevation View

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B. Civic Center (Site 2)

Details of the proposed work for the Next Gen System at the Civic Center Site are outlined in Chapter III, the Project Description. In summary, the proposed work includes the addition of one new dish to existing communications equipment on the rooftop of the Marin County Civic Center, located at 3501 Civic Center Drive in San Rafael, as well as replacing equipment within the building interior. As the Civic Center is listed on the Federal Register of Historic Places, external modifications to the building must comply with a set of design guidelines, which are described in further detail in Section V.B-2 (Civic Center – Cultural Resources). There is no existing lighting as part of the telecommunications infrastructure atop the Civic Center, and none is proposed.

The Civic Center consists of the three-story, 580-foot long Administration Building, the four-story 880-foot long Hall of Justice, and the County Library as shown in Photo III-2 (Chapter III, Project Description). Additional land uses within the Civic Center Complex include a parking lot, a post office, an auditorium, a 20-acre park, and an 11-acre lagoon. Surrounding land uses outside the Civic Center Complex are mostly residential, but also include schools, hotels, and a Sonoma-Marin Area Rail Transit (SMART) station. The area is zoned as public/quasi-public (P/QP).

The proposed exterior modifications, summarized below in Table V-2, would take place on the roof of the Civic Center's main structure. Less than 5% of the visible components on the Civic Center roof, after proposed project modifications, would be owned by MERA, which will own one new microwave dish; the other 34 rooftop antennas are owned by Marin County or the State of California.

Table V–2. Civic Center Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Civic Center	Existing antennas on roof, no tower. Building is on Federal Register of Historic Places and has design guidelines to be considered.	Add one new 3' diameter microwave dish on roof, no tower.

1. Aesthetics

There are several aesthetic resources within the viewshed of the Civic Center Site, including the Civic Center itself. The Civic Center is listed on the National Register of Historic Places due to its unique design elements conceived by the acclaimed architect Frank Lloyd Wright. Distinctive design elements include pink stucco walls, scalloped balconies, a blue roof, and a golden tower. The grounds of the Civic Center are a public open space with gardens and a large lagoon. Views of the center are available from Highway 101 to the west and from adjacent residential neighborhoods and roadways to the north, south, and east. Additional aesthetic resources near the Civic Center Site include the wooded hillsides to the south of the center and the grassy, partially wooded hillsides to the north. Although the San Rafael General Plan calls for the protection of hillside views in general, these hillsides are not specifically designated scenic resources.

Key Observation Points (KOPs) were selected to represent the array of viewpoints from which the site can be seen. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.B-1. Subsequent Figures V.B-2 through V.B-5 show the anticipated before and after conditions at the Civic Center Site from the three selected KOPs.

An impact determination is made using the views from the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) *Would the project have a substantial adverse effect on a scenic vista;*

The Civic Center Master Design Guidelines (Design Guidelines, RHAA 2005) limit modifications to the Civic Center Structure. The *Design Guidelines* identify ten different view corridors (section 3.2), looking to and from the Civic Center. The proposed microwave dish is only visible from the elevated southwestern parking lot, and the rooftop site at the Civic Center has no public access to a scenic vista. The proposed microwave dish would not be visible from any of the view corridors identified in the *Design Guidelines* and would not have a substantial adverse effect on a scenic vista, therefore, the impact is ***less than significant***.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;*

The Civic Center Site is near State Highway 101, but this segment of the highway is not eligible for designation as a state scenic highway. The single microwave dish to be installed is relatively small and would generally not be visible from Highway 101. There is no potential to substantially damage scenic resources, including an historic building such as the Civic Center, near a state scenic highway and, as a result, there is ***no impact***.

c) *Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

MERA is not subject to the City of San Rafael's land use regulations. Accordingly, instead of analyzing the project's potential to conflict with land use regulations governing scenic quality, the following discussion of aesthetic impacts assesses whether the project would degrade the existing visual character or quality of public views of the site and its surroundings.

Figure III-24, Existing and Proposed Elevations, shows the proposed physical changes at the site as described below. Existing telecommunications structures on the roof of the Marin County Civic Center include nine omni antennas, one tripod mount, one satellite dish, and one microwave dish, none of which are owned or operated by MERA. Several of these antennas are visible from various vantage points, including the Civic Center parking lot and Highway 101.

As part of the project, one three-foot diameter, grey-colored microwave dish would be mounted on an existing tripod. This new dish would be visible from elevated viewpoints in the southwest parking lot, and would be among other rooftop communications and ventilation equipment currently visible on the roof.

One specific visual impact guideline found in Section 4.3 of the *Civic Center Master Design Guidelines* addresses the desire to limit rooftop equipment.

- Incorporate the need for mechanical and electrical equipment into the building design to avoid placing such items onto the roof.

While the addition of another piece of communications equipment is clearly not a part of the design intent of the Civic Center and not in keeping with the visual impact guideline to avoid placing equipment on the roof, the microwave dish is small, does not include any outdoor lighting, is typically not visible (particularly in designated view corridors), and, relative to the other non-compliant equipment already installed, represents a minor adverse change. Therefore, its environmental impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Marin County Civic Center is an American cultural resource and is listed in the National Register of Historic Places (NR #91002055). It is also a National and State Historic Landmark (CA Historical Landmark 999), making it a significant historical resource pursuant to Section 15064.5 of the *CEQA Guidelines*.

The *Civic Center Master Design Guidelines* prepared in 2005 outline specific architectural policies for the Civic Center, and define the boundary of the 81-acre historic property. Proposed work at the Civic Center Site includes a single new microwave dish to be installed among other existing communications equipment. Figure V.B-6 shows the Area of Direct Impact and a surrounding 100-foot buffer. Although the *Design Guidelines* state that equipment should be incorporated into the building design to avoid placing such items on the roof of the Civic Center building, the proposed modifications are consistent with existing communications infrastructure that is already present on the roof, and will not adversely affect the aesthetic appearance of the Civic Center as a historical resource; thus, a ***less-than-significant*** impact would occur.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites. Since the Civic Center Site was not among these 13 sites, no significant tribal cultural resources are present. Further, no ground disturbance would occur at this site, so there is no possibility of accidentally unearthing tribal cultural resources or Native American remains. Consequently, ***no impact*** would occur.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Civic Center Site is located within a completely developed and landscaped setting and does not contain habitat that could support candidate, sensitive, or special-status plant or animal species. Thus, the proposed improvements would have ***no impact*** on candidate, sensitive, or special-status plant or wildlife species.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The Civic Center Site is located within the completely developed and landscaped setting of the Marin County Civic Center. Potential impacts to biological resources associated with the Civic Center Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The EIR determined that no sensitive biological communities were present, and the proposed improvements would have no impact on sensitive biological communities. Conditions have not changed since the site was analyzed in the EIR, so the proposed project work would have ***no impact*** on sensitive biological communities, including federally protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As previously discussed, the Civic Center Site does not contain habitat that could support special-status species. It is not part of a migratory wildlife corridor or a native wildlife nursery site; and improvements at the Civic Center Site would not impede the use by native wildlife of any such sites. Therefore, there would be ***no impact***.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Civic Center Site is located at the developed Marin County Civic Center, which does not support any biological resources protected by local policies or ordinances. Proposed modifications at this site are minor and would have no impact on locally-protected biological resources. Proposed changes at the Civic Center Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Civic Center Site is located at the Marin County Civic Center in the City of San Rafael. The Civic Center Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. The Civic Center building is, however, on the Federal Register of Historic Places, so any modifications required by the proposed project must be consistent with the requirements set forth under Section 106 of the National Historic Preservation Act. The Cultural Resource impact analysis found that the addition of one 3-foot diameter microwave dish to the roof of the Marin County Civic Center building is consistent with existing communications infrastructure on the roof, and, therefore, will not affect the aesthetic appearance of the Civic Center as a historical resource, thus the impact would be ***less than significant***.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Civic Center Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 21, 2018, SiteSafe surveyed the Civic Center Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 35 locations at the Civic Center Site. The highest emissions recorded during this process were well below the FCC's MPE limits, at 1% of the occupational limit and 5% of the public limit. The maximum recorded value at 34 of

35 locations was less than 1% of the occupational threshold. At the remaining location, the maximum recorded value was equal to 1% of the occupational MPE limit.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the public MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit. Their findings are discussed below:

a) Maximum rooftop level exposures with all existing equipment on were modeled above 100% of the public MPE at 2,677.3% of the public MPE. The Civic Center rooftop, however, is locked and inaccessible to the general public. Publicly accessible areas are located away from the rooftop antennas and were modeled to have a maximum emission level less than 5% of the public MPE.

b) Figure V.B-7 depicts modeled exposures relative to applicable MPE limits during the theoretical worst case scenario during the transition period, the "all systems on" scenario, when all currently existing and new transmitting devices could function simultaneously as the new system is being tested.

   Within the controlled area of the Civic Center rooftop, there would be 36 antennas capable of operating at one time during the transition period (for a full inventory, see Page 37 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. In one specific area of the controlled-access rooftop environment, surrounding the antenna mount, these antennas have the capacity to cumulatively create a theoretical maximum exposure level of 2,677.3% of the public MPE limit. This presents no change from baseline levels and is not located within an area that is accessible to the public. Maximum theoretical emissions during the transition period would remain unchanged from baseline levels (below 5% of MPE) during the transition period. The transition period is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At that point, currently installed equipment that is no longer needed will be removed.

c) Because the impact of the MERA antenna will be small compared with the other transmitters, with the new system fully in place and the project complete, maximum rooftop-level exposure would remain at 2,677.3% of the public MPE limit. This represents no change from baseline theoretical maximum emission values on the roof.

   Uncontrolled areas accessible to the public would remain at less than 5% of the public MPE limit, as there are no publically accessible spaces in close proximity to the rooftop antennas. Based on SiteSafe measurements and models, as well as the site's layout, SiteSafe concluded that all uncontrolled areas with public access were well within the

public MPE limit, but that signage should be posted for the controlled access areas on the rooftop to comply with FCC regulations after implementation of the project changes.

In summary, the SiteSafe Report found that existing ground level RF emissions at the Civic Center Site are less than 5% of the FCC's MPE limits for uncontrolled/general public environments, and that ground level RF exposure will remain at less than 5% of the MPE limits during the transition phase and upon completion of the proposed MERA Next Gen Project. Consequently, the impacts to the public from RF emissions at the Civic Center Site would be ***less than significant***.

However, within the controlled/occupational rooftop area of the Civic Center Site, current RF emissions exceed 100% of the MPE limits at specific points, and they will continue to exceed 100% of the MPE during the transition phase and upon completion of the proposed project, The controlled/occupational rooftop environment can be brought into compliance with applicable FCC regulations by posting warning signage at the rooftop entrance and at selected antenna mounts. Mitigation Measure RF-1 below requires the posting of such signage. As a result, controlled/occupational area RF exposure impacts at the Civic Center Site during all stages of the project would be ***less than significant with mitigation incorporated***.

Mitigation Measure RF-2

MERA shall install exposure warning signs at rooftop entries and at identified antenna mounts in the controlled access rooftop area according to SiteSafe's individual report for the Civic Center Site (pages 31-46 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In summary, MERA shall install a NOTICE sign at antennas 31-35 and a CAUTION sign at antennas 18-30 and 8-12. Signage location details can be viewed on page 37 of Appendix D to the SEIR.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.B - 1 Civic Center Aerial with Photo Locations

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Current photograph of the site as seen looking north from the parking lot on the Hwy 101 side of the building.

Source: Previsualists Inc.

Figure V.B - 2 Existing Civic Center from Parking Lot

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Photosimulation of the site as seen looking north from the parking lot on the Hwy 101 side of the building.

Source: Previsualists Inc.

Figure V.B - 3 Proposed Civic Center from Parking Lot

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Current photograph of the site as seen looking southwest from behind the homes on Waterside Circle.

Source: Previsualists Inc.

Figure V.B - 4 Existing Civic Center from N. Fork of Las Gallinas Creek

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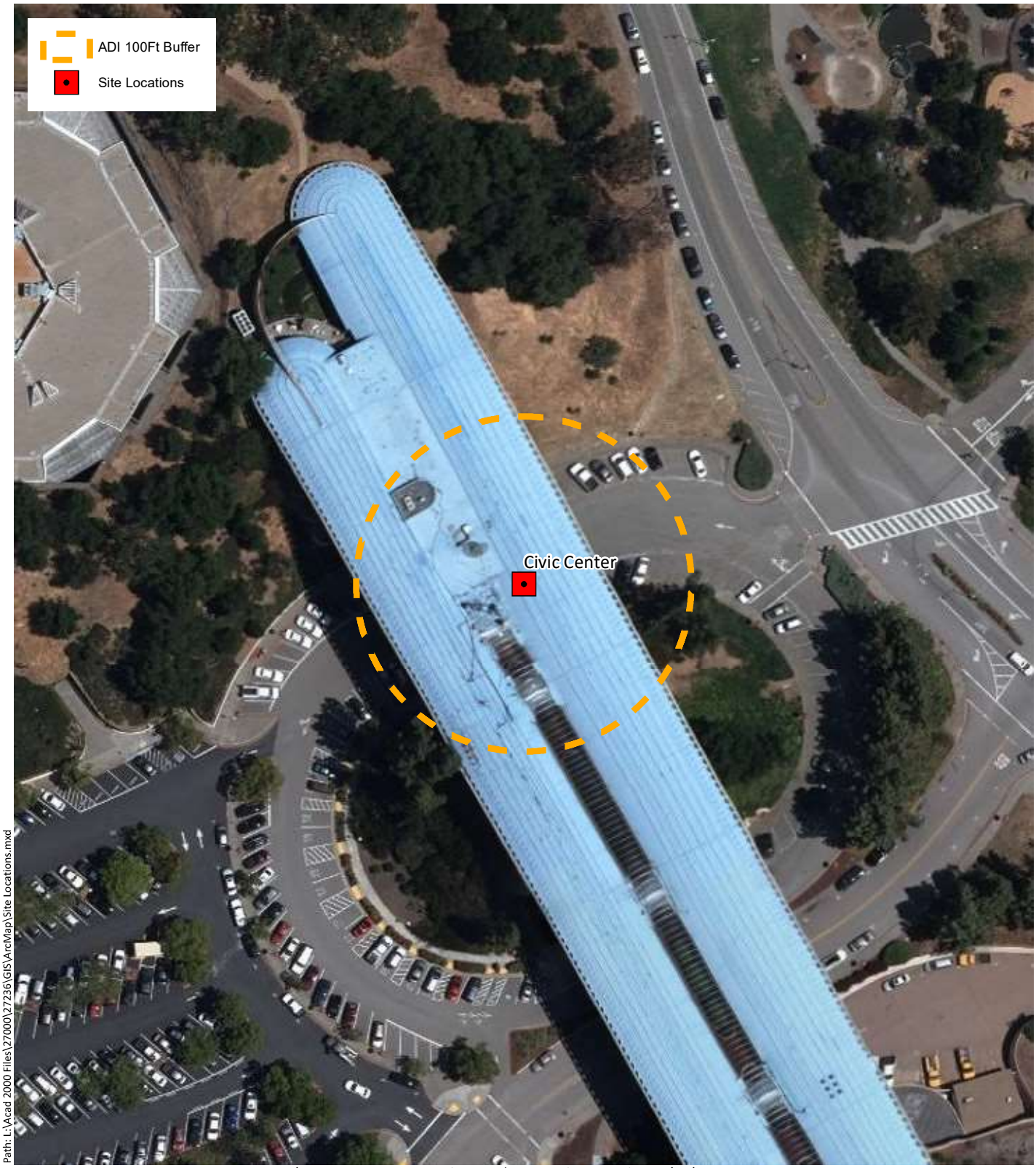


Photosimulation of the site as seen looking southwest from behind the homes on Waterside Circle.

Source: Previsualists Inc.

Figure V.B - 5 Proposed Civic Center from N. Fork of Las Gallinas Creek

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.B - 6 Civic Center

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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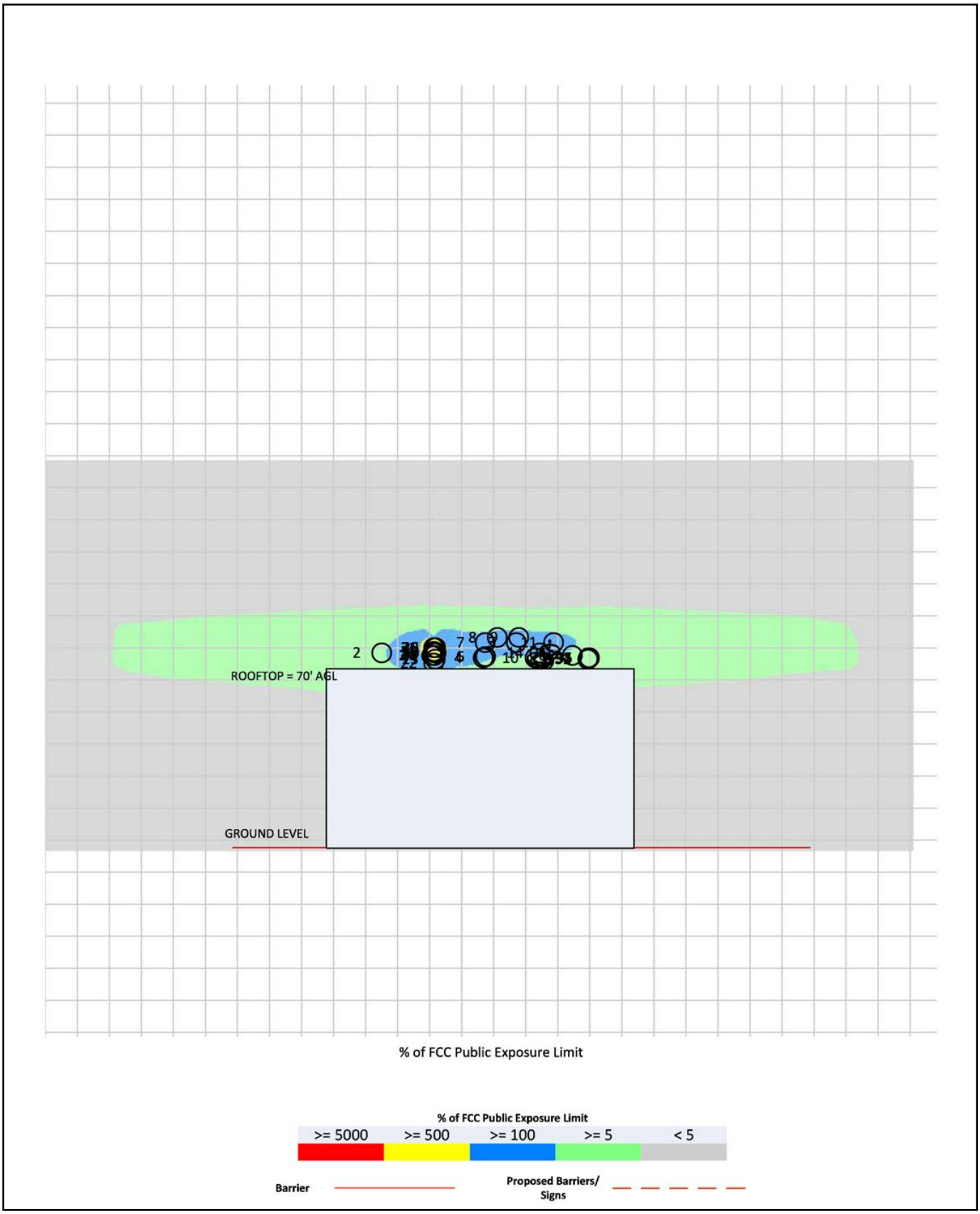


Figure V.B - 7 Civic Center Simulated All-On RF Exposure - Elevation View

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C. Big Rock Ridge (Site 3)

The proposed work for the Next Gen System at the Big Rock Ridge Site is explained in detail in Chapter III, Project Description. As summarized below in Table V-3, it includes minor modifications of the existing communications tower and reinforcement of tower foundations as well as adding equipment to the building interior. The Big Rock Ridge Site is located at the summit of Big Rock Ridge and at an elevation of 1,895 feet, it is the second highest point in Marin County. The site is adjacent to Big Rock Ridge Fire Road at APN 164-300-04, within the Big Rock Ridge Open Space located between Lucas and Indian Valleys, south of Novato, as shown in Photo III-3 (Chapter III, Project Description). Areas immediately surrounding this site are undeveloped, with cleared hilltops and a mix of grassy and forested downhill areas. There are a few residential developments in the valleys below the Big Rock Ridge Site, within approximately 1.3 miles to the southwest and to the east.

Less than 5% of the visible components at the Big Rock Ridge Site would be owned by MERA after project modifications. This is a leased site with multiple tenants. The lessor owns two buildings, two towers, and one emergency generator. MERA currently owns one additional generator and several of the 98 existing antennas on the tower. In addition, one cell carrier has recently made changes to replace their antennas, and a second cell carrier is currently seeking permits to add equipment at this site. Another communications site, approximately 450 feet away from the Big Rock Ridge Site, has its own equipment shelter, tower, and emergency generator.

Table V–3. Big Rock Ridge Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Big Rock Ridge	Existing 100' tower w 4 legs, with 12' sides. 2 existing buildings, each 20'x20'x9' high.	Existing Tower: Remove four microwave (MW) dishes. Reinforce foundation. Add four vertical pole antennas; remove one pole and two panel antennas. Add one new 20' pipe mount to the existing building with two microwave dishes, one 6' diameter and one 3' diameter, and one 6' microwave dish on the side of the existing building. Alternative Mounting Locations for three MW Dishes: 1 - Remount all dishes on existing tower (preferred); 2 - Mount one dish on the side of the existing building. Mount two dishes on a 30' tall tapered monopole near the base of the existing tower.

1. Aesthetics

The Big Rock Ridge Site is a large existing communications facility and the proposed Next Gen modifications are minor changes. Big Rock Ridge is a non-urbanized ridgeline with two separate, existing communications tower installations overlooking an open space area above Lucas Valley Road.

Figure III-26, Existing and Proposed Elevations, shows the proposed physical changes at the site as described below. Existing infrastructure at the site includes a 100-foot tower with four 12-inch

legs and two communications buildings. As part of the Next Gen System, the tower's foundation would be reinforced and minor equipment changes would be made to the tower, including removing four dishes and three antennas. A new 20' tall pipe would be fastened to the existing building with two microwave dishes, one 6' diameter and one 3' diameter, and one 6' microwave dish would be mounted on the side of the existing building. One alternative configuration allows for remounting all three of the microwave dishes back on the existing tower, which would be most similar to the existing condition. In another alternative configuration, one microwave dish would be mounted on the side of the existing equipment building, and two other new dishes would be mounted to a new 30-foot tall tapered monopole placed next to the existing 100' tower. These modifications would be minor relative to the scale of the existing Big Rock Ridge facility and would result in little visual change to the intensively used site.

Key Observation Points (KOPs) have been selected to represent the broader set of viewpoints from which the site can be seen. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.C-1. Subsequent Figures V.C-2 through V.C-5 show the anticipated before and after conditions at the Big Rock Ridge Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) *Would the project have a substantial adverse effect on a scenic vista?*

Currently, the site's surroundings are largely open space. The ridgeline is mostly devoid of vegetation while areas on the northern face of the hill are densely wooded and the southern face has a mix of grassy and wooded vegetation. Existing towers atop the ridge are visible from a variety of vantage points due to their high elevation, including roadways and residential areas on both the north and south side of the hill. The existing communications facility on the site already has a substantial adverse effect on any scenic vistas available and the proposed modifications are relatively minor in comparison. Consequently, the impacts of the project are ***less than significant***.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

The project has no potential to adversely affect scenic resources "within a state scenic highway" given that there are no scenic highways nearby, and, therefore, there is ***no impact***.

c) *Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

The visual character of Big Rock Ridge is dramatic as it is visible from much of central Marin County. The existing communications towers on Big Rock Ridge are just as visible and punctuate the highest points along the ridge. Proposed changes to the towers are minor and would be imperceptible from the distances that most viewers maintain. Hikers and mountain bikers would

be able to get closer views, but the differences between existing and proposed configurations would be nearly imperceptible. Therefore, the impact to the visual character of the site and surroundings would be ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Big Rock Ridge Site. Improvements proposed for this site include minor modifications to existing infrastructure such as removal and replacement of antennas and microwave dishes and reinforcement of the existing tower. Ground disturbance would be limited to the vicinity of the tower foundations and would extend as deep as approximately 24 inches below ground level. Figure V.C-6 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Big Rock Ridge Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures to follow in the event of an accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Big Rock Ridge Site, and impacts would be ***less than significant with mitigation incorporated***. With implementation of mitigation measure CULT-1, the impacts would be reduced to less than significant.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Big

Rock Ridge Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource identified by the lead agency, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Big Rock Ridge Site is located within a developed/disturbed compound adjacent to disturbed, grazed grassland, which provides only marginal habitat for candidate, sensitive, and special-status plant and wildlife species. The proposed improvements consist of minor modifications to an existing tower in a previously developed area and would have ***no impact*** on candidate, sensitive, and special-status plant or wildlife species.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Big Rock Ridge Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The project area is on a developed/disturbed site adjacent to disturbed grazed grassland that typically supports a low diversity of plant and wildlife species. The EIR determined that no sensitive biological communities were present, and the proposed improvements would have less than significant impacts on biological resources. There have been no substantial changes to the site since the certification of the original EIR. As a result, no sensitive biological communities are present and the proposed project work would have ***no impact*** on sensitive biological communities.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that provides core habitat areas for wildlife species, this site is located in a previously developed area with an existing communications facility. The proposed improvements are limited to upgrades of the existing facility, including removal and replacement of antennas and microwave dishes and reinforcement of the existing tower. The proposed improvements are not anticipated to significantly impede wildlife movement compared to existing conditions, and is not a nursery site. Consequently, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Big Rock Ridge Site is located within an existing communications facility. Proposed changes are minor and would have no impact on locally-protected biological resources. Proposed changes at the Big Rock Ridge Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Big Rock Ridge Site is located in unincorporated Marin County. The Big Rock Ridge Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. As a result; there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Big Rock Ridge Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 22, 2018, SiteSafe surveyed the Big Rock Ridge Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determined the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 25 locations at the Big Rock Ridge Site. The highest spatially averaged emissions recorded during this process were well below FCC MPE limits, at approximately 1% of the occupational limit and 5% of the public limit. The maximum spatially averaged value recorded at 17 of 25 locations was below 1% of the occupational threshold, with the remaining eight locations' maximum values at roughly 1% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-tern "proposed condition" in which the existing system's antennas are removed and the remaining

antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the Big Rock Ridge Site is 786.2% of the public MPE limit. This maximum theoretical emission level would occur in a gated off area that is not accessible to the public. Ground-level emissions are presently below 5% of the public MPE in publicly accessible areas near the site.

b) Figure V.C-7 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Big Rock Ridge Site, there would be 105 antennas capable of operating at one time (for a full inventory, see Page 54 of Appendix D), although this condition would be very rare given the intermittent nature of voice communications. These antennas would have the capacity to cumulatively create a theoretical maximum exposure level of 786.2% of the public MPE limit at specific heights along the communications towers. These maximum emissions mostly occur at heights over 50 feet off the ground. Ground-level exposure in the controlled, fenced off area would be under 100% of the public MPE limit. Ground-level exposure outside of the fence encompassing the equipment would be below 5% of the public MPE. Although conditions outside this fence-line are assessed to be conservative, the entire site is accessed via a gated access road, and is not accessible to the general public.

   The transition period, in which testing of the new system occurs while the other system is operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational, at which point currently installed equipment that is no longer needed will be removed.

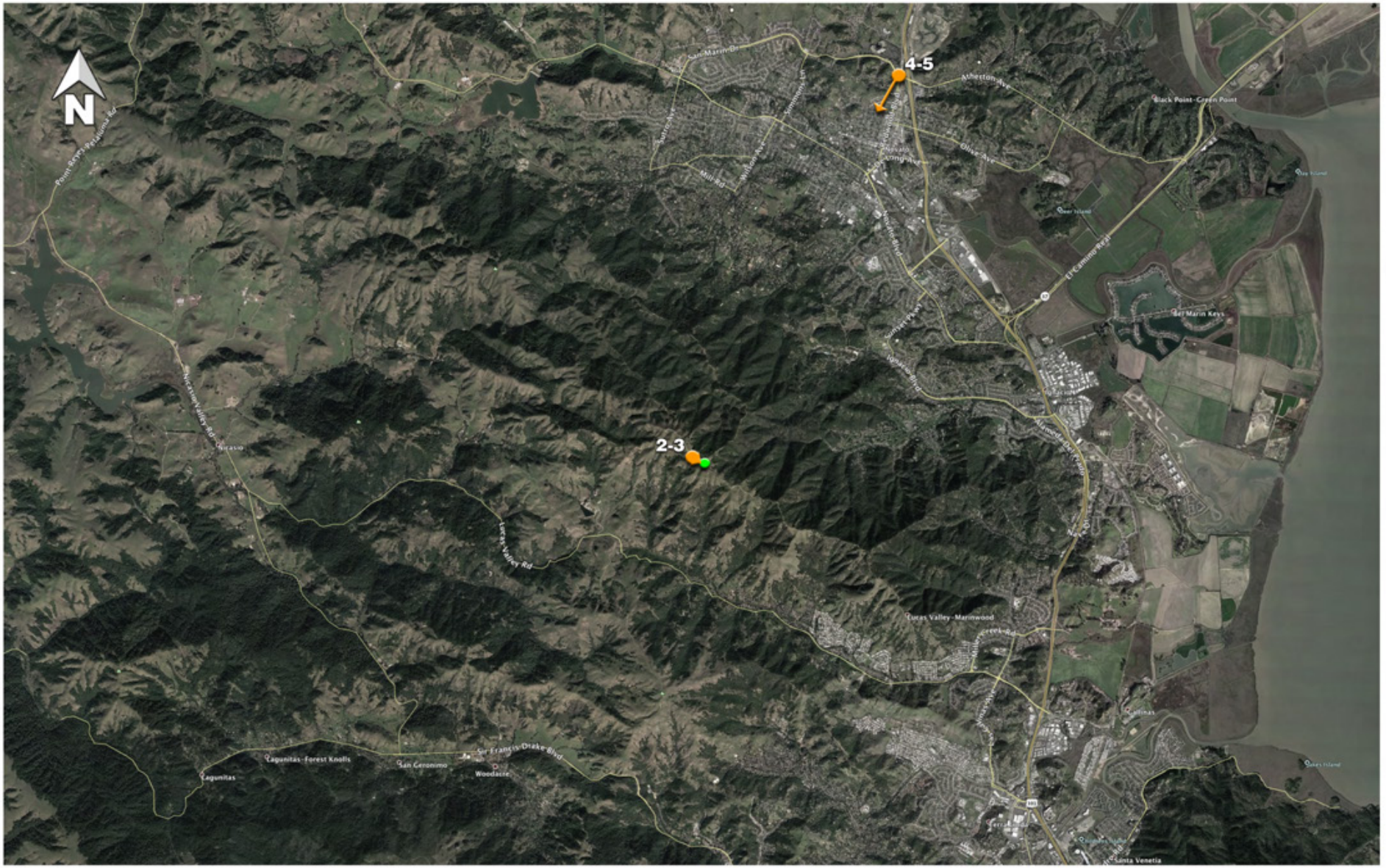
c) Because the MERA antenna is a small component in relation to the other transmitters, with the new system fully in place and the project complete, maximum exposure levels would remain consistent with existing and transition conditions at 786.2% of the public MPE limit. Ground-level exposure faced by workers would remain less than 100% and uncontrolled areas accessible to the public would produce a theoretical maximum of 8.7% of the public MPE limit.

Based on these measurements and models, as well as the site's layout and signage (depicted in Chapter III, Project Description), SiteSafe concluded that all uncontrolled areas with public access were well within the public MPE limit. Because fences around the perimeter of the communication equipment and at the beginning of the site's access road preclude public access and ground-level

exposure faced by workers at the site would be less than 100% of the MPE, no additional signage is required.

In summary, MERA's operations at the Big Rock Ridge Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments and would remain less than 100% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground level RF emissions within the fenced controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Big Rock Ridge Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.C - 1 Big Rock Ridge Aerial with Photo Locations

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Current photograph of the view looking southeast from the adjacent tower installation.

Source: Previsualists Inc.

Figure V.C - 2 Existing Big Rock Ridge Near View

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Photosimulation of the view looking southeast from the adjacent tower installation.

Source: Previsualists Inc.

Figure V.C - 3 Proposed Big Rock Ridge Near View

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Current photograph of the view looking southwest from the Atherton Ave offramp from Hwy 101.

Source: Previsualists Inc.

Figure V.C - 4 Existing Big Rock Ridge Distant View

MERA Next Generation Communications System SEIR

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Photosimulation of the view looking southwest from the Atherton Ave offramp from Hwy 101.

Source: Previsualists Inc.

Figure V.C - 5 Proposed Big Rock Ridge Distant View

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.C - 6 Big Rock Ridge

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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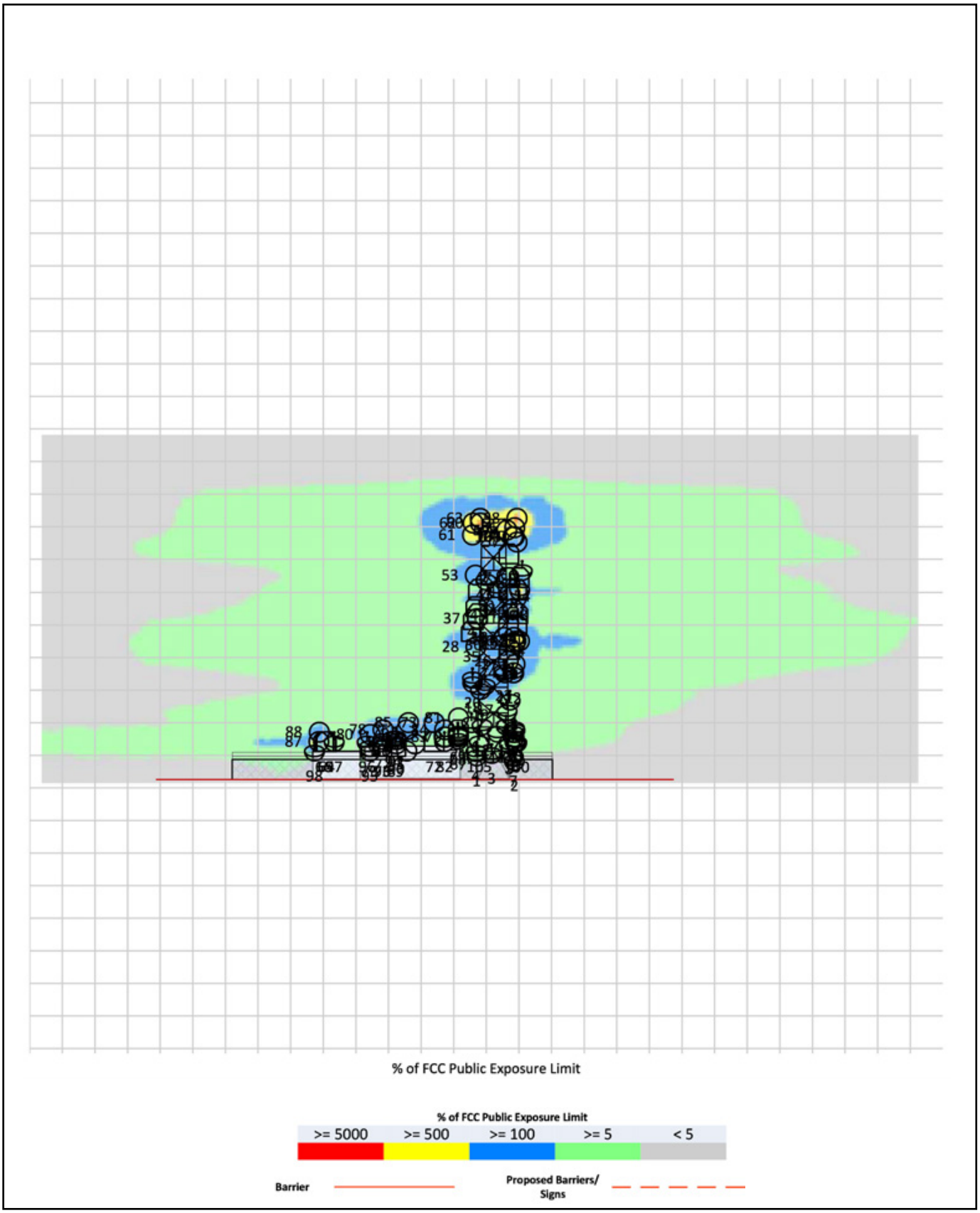


Figure V.C-7 - Big Rock Ridge Simulated All-On RF Exposure - Elevation View

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D. Mt. Tamalpais (Site 4)

The Mt. Tamalpais Site is within a highly developed communications compound on Middle Peak behind a locked gate and perimeter fence. The majority of the site contains existing structures, and vegetation management within the existing fence limits the potential for sensitive biological resources to be present on-site, as shown in Photo III-4 (Chapter III, Project Description). Existing structures include a large domed equipment shelter structure, eight 60-foot monopoles, 28 small microwave dish towers, ground-mounted air conditioning units, an emergency generator and fuel tank, and a paved driveway. The existing facilities at the Mt. Tamalpais Site and the physical changes proposed by MERA's Next Gen Project are summarized below in Table V.4.

MERA leases space for two antennas on one monopole. In total, there are 129 antennas on eight monopoles at the Mt. Tamalpais Site. There are also twenty-eight 12-foot stub towers around the perimeter, and MERA owns five microwave dishes on various stub towers. Upon project completion, MERA's ownership will increase by two microwave dishes. Ultimately, it is estimated that less than 5% of the visible components at the Mt. Tamalpais Site would be owned by MERA after project modifications.

Table V–4. Mt. Tamalpais Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Mt. Tamalpais	Existing 60' tall monopole, 12" diameter, is among eight other monopoles and numerous antennas at fully developed mountain top radio operations site surrounded by approximately 28 microwave dishes on 8-10' poles. 2 existing concrete buildings: MERA building is H9', W15', L20'. Second building is 30' diameter with dome shaped roof.	Propose minor equipment changes on existing monopole; 4 antennas added, 2 antennas removed. Reinforce existing tower foundation. New MERA generator, propane tank, replace existing HVAC in existing MERA building. Replace five 8'-10' tall lattice towers radiating around monopole with 20' tall lattice towers. 7 dishes added, 5 dishes removed.

1. Aesthetics

Mt. Tamalpais has the three highest peaks in Marin County and is an iconic symbol for the County. Most of Mt. Tamalpais is protected public land under the jurisdiction of Mount Tamalpais State Park, the Marin Municipal Water District (MMWD), and the National Park Service. Mt. Tamalpais is also the origination of the MMWD watershed lands which provide water to all of Marin County. Mt. Tamalpais and its three peaks, including that of the project site, are visible from the North Bay, San Francisco, and the East Bay, although the equipment at the Mt. Tamalpais Site is not readily discernible from such distances. The Mt. Tamalpais Site has controlled gated access, and, while the site does provide scenic vistas of the Marin watershed lands and San Pablo and San Francisco Bays, these views are not publicly accessible. Nearby roadways and trails around the East and West Peaks offer similar views to the general public.

Key Observation Points (KOPs) have been selected to represent the most visible viewpoints of the site, and a map showing the site and the representative vantage points is provided as Figure

V.D-1. Subsequent Figures V.D-2 through V.D-5 show the simulated before and after conditions at the Mt. Tamalpais Site from two selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista;

The Mt. Tamalpais Site is a large regional communications facility as seen in Figures V.D-2 and V.D-3. Proposed Next Gen modifications represent less than 5% of the visible equipment at the site, so proposed changes to existing equipment are minor. In response to criterion (a) (project's effect on scenic vistas) the existing communications facility on the site already has an adverse effect on scenic vistas available, and the proposed modifications are relatively minor in comparison. Therefore, the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

Facilities on the Mt. Tamalpais Site have no potential to adversely affect scenic resources within a state scenic highway, since the nearest state scenic highway, State Highway 1, is approximately 3 ½ miles away. Panoramic Highway and East Ridgecrest Boulevard are both closer to the site and are also known for scenic vistas of the Bay Area, the Pacific Ocean and Mt. Tamalpais, but are not state scenic highways. Figures V.D–4 and V.D–5 show the facility from the closest available vantage point on East Ridgecrest Boulevard, and from that nearby perspective it is difficult to identify the proposed project modifications. As a result, the impact to state and other local scenic highways is ***less than significant***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figures III-28 through III-30 show existing and proposed elevations and plans for the site as described below. Proposed changes include reinforcement of one existing monopole foundation, addition of four antennas and removal of two antennas from the monopole, installation of a new emergency generator and propane fuel tank, replacement of the building air conditioner, and replacement of five 8-10-foot lattice towers with 20-foot tall stub-towers. Antenna replacement includes the addition of seven microwave dishes and removal of five dishes. These changes would lead to a two-foot decrease in the height of the highest antenna on the monopole (to 69 ½ feet) and a ten-foot increase in each stub-tower's height.

The visual character of the site is one of a very active communications site with a perimeter fence, a dome-shaped building, numerous poles, antennas and microwave dishes pointed in various directions. Vegetation has been trimmed to limit interference with signals. In this setting, the MERA Next Gen Project proposes minor modifications to existing equipment, and the project would not substantially degrade the existing visual character or quality of the site or its surroundings. Consequently, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Mt. Tamalpais Site. Improvements proposed for this site include removal and replacement of antennas and microwave dishes, addition of new equipment within an existing building, tower foundation reinforcement, and replacement of five 8-10 foot lattice towers with 20 foot towers. Ground disturbance would be limited to the area around the existing tower foundation and the five towers to be replaced, and would reach a maximum depth of five feet below the surface. Figure V.D-6 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Mt. Tamalpais Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10) , which includes procedures to follow in the event of the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Mt. Tamalpais Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Mt. Tamalpais Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause

a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Structures at the Mt. Tamalpais Site are flanked on the lower south-facing slopes by a disturbed mixed chaparral community dominated by Eastwood manzanita (*Arctostaphylos glandulosa*), whereas the lower north-facing slopes are dominated by mixed hardwood forest dominated by Canyon live oak (*Quercus chrysolepis*). Vegetation within the perimeter of the site appears to be routinely disturbed by a vegetation management regime that either trims or removes trees and shrubs to maintain a relatively open tree and shrub layer and to prevent obstruction of microwave links to distant, lower elevation communications facilities.

Project improvements within the Mt. Tamalpais Site are limited to minor modifications to existing equipment in previously developed portions of the site, and are not anticipated to impact special-status species or their habitat. However, due to the presence of native vegetation communities within the site and proximity to several documented occurrences of special-status plant species within less than 0.5 mile, a focused protocol-level rare plant survey was conducted within the site on April 30, 2018, as a conservative measure. The following special-status species were assessed as having a moderate or high potential to be present within undeveloped portions of the site, although none were observed: Napa false indigo (*Amorpha californica* var. *napensis*), Brewer's calandrinia (*Calandrinia breweri*), Oakland star-tulip (*Calochortus umbellatus*), thin-lobed horkelia (*Horkelia tenuiloba*), small groundcone (*Kopsiopsis hookeri*), Mt. Diablo cottonweed (*Micropus amphibolus*), and Tamalpais oak (*Quercus parvula* var. *tamalpaisensis*).

Several reference sites were visited to confirm blooming periods for candidate, sensitive, and special-status plant species which might be present prior to surveying the Mt. Tamalpais Site, resulting in the following observations: Napa false indigo (observed April 26, 2018 at Las Posadas State Forest, Napa County), Brewer's calandrinia (observed April 8, 2018 along Rocky Ridge Trail, Mt. Tamalpais), and Oakland star-tulip (observed March 21, April 8, and May 8, 2018 at various reference sites across southern Marin County). No candidate, sensitive, or special-status plant species were observed in the study area. The study area referred to in this report includes each project site (with all temporary and permanent impacts) and an approximate 100-foot radius surrounding the project site which was analyzed for the potential to support special-status species, sensitive biological communities, and wildlife movement corridors. As no candidate, sensitive, or special-status plant species are present, the project would not adversely affect any such species; and ***no impact*** to candidate, sensitive, or special-status plant species would occur.

American badgers and nesting birds, including oak titmouse and Nuttall's woodpecker, might be present in the vicinity of the project area. Birds including Nuttall's woodpecker and oak titmouse may nest in woodland adjacent to the project area. Badgers are occasionally found within the region in drier open stages of most scrub, forest, and herbaceous habitats where friable soils and

prey populations are present. While these species may be present in the vicinity, project improvements within the Mt. Tamalpais Site are limited to minor modifications to existing equipment in previously developed portions of the site, with no planned vegetation removal. The modifications would have ***no impact*** on candidate, sensitive, or special-status wildlife species, either directly or through habitat modification.

In summary, project improvements within the Mt. Tamalpais Site are limited to minor modifications to existing equipment in previously developed portions of the site and are not anticipated to impact vegetation or wildlife. The proposed improvements would have ***no impact*** on sensitive biological communities or special-status species.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Mt. Tamalpais Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). Due to the presence of natural vegetation communities surrounding the developed portions of the site, WRA conducted an updated biological survey at the Mt. Tamalpais Site on April 30, 2018, to observe whether existing conditions had changed significantly since the project's original EIR. The site is located near Middle Peak of Mt. Tamalpais, on lands owned by the Marin Municipal Water District (MMWD).

The site is within a previously developed telecommunications facility with a locked gate and paved driveway, adjacent to relatively disturbed Eastwood manzanita (*Arctostaphylos glandulosa*) chaparral. This is not considered a sensitive biological community. Moreover, evidence of routine, recurring vegetation trimming and/or removal was observed during the site visit. The project's original EIR determined that no sensitive biological communities were present, and the then-proposed improvements would have less than significant impacts on biological resources. Conditions have not changed significantly since the site was analyzed in the EIR. No sensitive biological communities are present. As a result, the proposed project work would have ***no impact*** on sensitive biological communities, including federally protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that provides core habitat areas for wildlife species, this site is located in a previously developed area. The proposed improvements are limited to upgrades to the existing facilities, and are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a nursery site for native wildlife. Consequently, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Mt. Tamalpais Site is located within the footprint of an existing communications facility, and project improvements within the site are limited to minor modifications to existing equipment in previously developed portions of the site, with no planned vegetation removal or other activities which may adversely affect locally-protected biological resources. Proposed changes at the Mt. Tamalpais Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Mt. Tamalpais Site is located in unincorporated Marin County. The Mt. Tamalpais Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. As a result; there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold of significance (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for or the general public?

Evaluation of exposure limits for RF emissions at the Mt. Tamalpais Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 24, 2018, SiteSafe surveyed the Mt. Tamalpais Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 43 locations at the Mt. Tamalpais Site. The highest emissions recorded during this process were below FCC MPE limits, at approximately 17% of the occupational limit and 85% of the public limit. The maximum spatial average recorded at 42 of 43 locations was below 5% of the occupational threshold, with one locations' maximum value at roughly 17% of the occupational threshold. Based on these measurements and the site's layout and signage, SiteSafe recommended that two antennas on the site owned by other entities should have their centerlines raised or their power lowered to be

compliant with FCC regulations, but found that all of MERA's facilities at the Mt. Tamalpais Site are currently compliant.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe modeled the maximum ground-level emissions under the all-on condition with existing equipment only to be between 5 and 100% of the public MPE. This condition would theoretically occur immediately adjacent to existing microwave dishes. At some locations off the ground, the maximum theoretical emissions currently possible are roughly 2,418.3% of the public MPE.

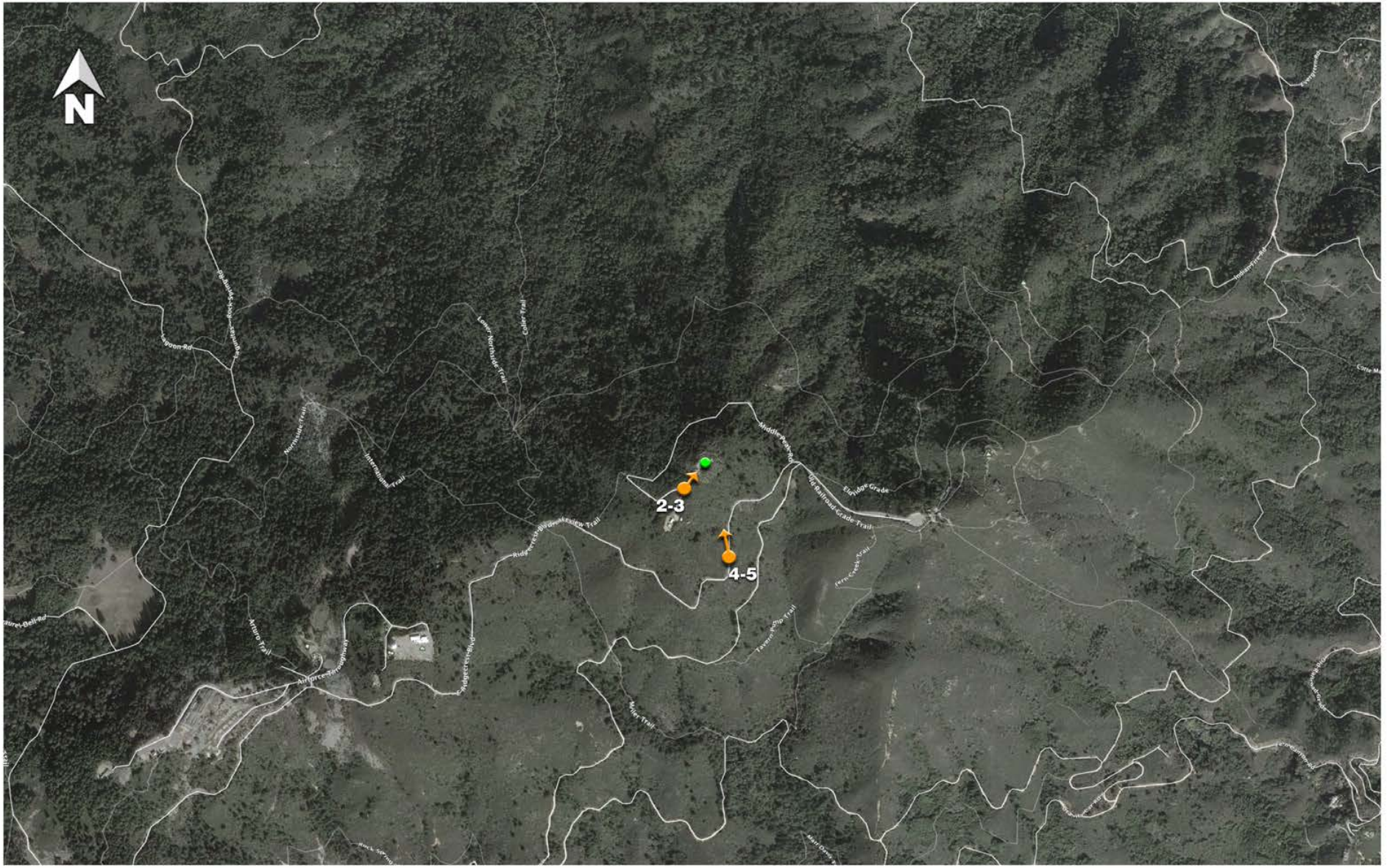
b) Figure V.D-7 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Mt. Tamalpais Site, there would be 133 antennas capable of operating at one time during the transition period (see Page 80 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum theoretical exposure level at specific heights along the communications towers of 2,418.3% of the public MPE limit; however, the ground-level exposure would be less than 100% of the public MPE limit. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed, leaving 131 antennas operational.

c) With the new system fully in place and the project complete, maximum exposure will remain at 2,418.3% of the public MPE limit at select points off the ground, which is no different from the current baseline condition. Ground-level exposure would remain less than 100% of the public MPE limit, and uncontrolled areas accessible to the public are predicted to be subject to less than 5% of the public MPE limit.

Based on these measurements and models, SiteSafe concluded that all uncontrolled areas with public access were well within the public MPE limit. Because the area is physically fenced off from the public and ground-level exposure faced by workers at the site would be less than 100% of the public MPE limit, no additional signage is required.

In summary, MERA's operations at the Mt. Tamalpais Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments and would remain less than 100% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground level RF emissions within the controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Mt. Tamalpais Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.D - 1 Mt. Tamalpais Regional Aerial with Photo Locations

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Current photograph of the view looking northeast from the dirt access road.

Source: Previsualists Inc.

Figure V.D - 2 Existing Mt. Tamalpais Middle Peak Near View

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Photosimulation of the view looking northeast from the dirt access road.

Source: Previsualists Inc.

Figure V.D - 3 Proposed Mt. Tamalpais Middle Peak Near View

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Current photograph of the view looking north from the clearest view along Ridgecrest Blvd.

Source: Previsualists Inc.

Figure V.D - 4 Existing Mt. Tamalpais Middle Peak from Ridgecrest Blvd.

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Photosimulation of the view looking north from the clearest view along Ridgecrest Blvd.

Source: Previsualists Inc.

Figure V.D - 5 Proposed Mt. Tamalpais Middle Peak from Ridgecrest Blvd.

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.D - 6 Mt. Tamalpais

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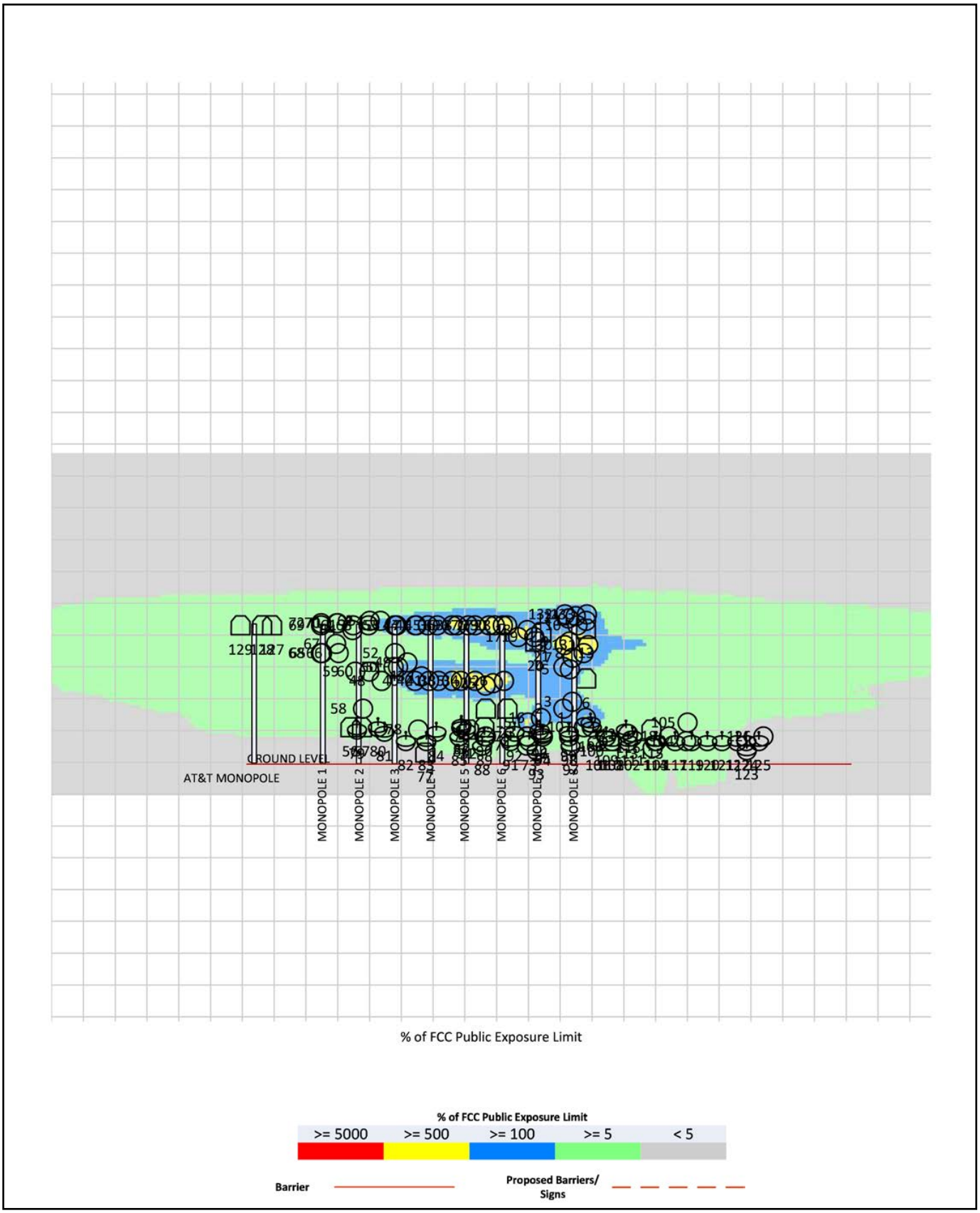


Figure V.D - 7 Mt. Tamalpais Simulated All-On RF Exposure - Elevation View

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E. Mt. Barnabe (Site 5)

The Mt. Barnabe Site is located at the Marin County Mt. Barnabe fire lookout, a one-acre parcel accessed from Sir Francis Drake Boulevard via unnamed dirt roads. MERA leases the space at the facility from Marin County, which owns the lookout tower and 70-foot lattice tower. The County facilities atop Mt. Barnabe (elevation 1,466 feet) are situated among open grassland, as shown in Photo III-5 (Chapter III, Project Description). Apart from other patches of grassland, mostly towards the top of the mountain, the area around the site is densely vegetated. The Mt. Barnabe Site is located approximately 1.75 miles from the community of Forest Knolls.

Details of the proposed work for the Next Gen System at the Mt. Barnabe Site are explained in Chapter III, Project Description and summarized below in Table V-5. Project proposals include minor modifications to existing communications equipment and reinforcement of tower and monopole foundations. An estimated 35% of the visible components at the Mt. Barnabe Site would be owned by MERA after the proposed project modifications. MERA constructed the equipment shelter, emergency generator, propane fuel tank, and a 25-foot monopole. Of the 32 existing antennas at the site, six belong to MERA, all of which will be replaced with the new project. MERA antennas constitute approximately 18% of the total antennas, but with the shelter, monopole, etc., the total percentage of visible MERA equipment is estimated at approximately 35%.

Table V–5. Mt. Barnabe Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Mt. Barnabe	Existing County fire lookout and radio tower. Existing 70' tall 3 leg tower with 12' wide sides. Antennas reach to 83' height. Existing 25' tall x 2' diameter microwave monopole. Existing equipment shelter and emergency generator.	Propose minor equipment changes on existing tower and monopole. 3 antennas added, 2 antennas removed on existing tower. 2 microwave dishes added, 3 microwave dishes removed on existing monopole. Reinforce tower/ monopole foundations, replace HVAC units in ex. building.

1. Aesthetics

The Mt. Barnabe Site is located near the top of Mt. Barnabe. The site is just outside of Samuel P. Taylor State Park and is a popular hiking destination. Visitors can take trails from the park to the fire lookout site to enjoy expansive views of rolling hills, Tomales Bay, Black Mountain, and Point Reyes Station.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.E-1. Subsequent Figures V.E-2 through V.E-7 show the anticipated before and after conditions at the Mt. Barnabe Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

Mt. Barnabe is an existing fire lookout and Marin County communications facility, and as such is highly visible due to its location on a hilltop mostly devoid of trees. Views of the site are available to recreationists at Samuel P. Taylor State Park to the southwest and at residential developments in the communities of Lagunitas-Forest Knolls and San Geronimo to the southeast. The existing communications facility on the site, however, already has an adverse effect on scenic vistas and the proposed modifications are relatively minor in comparison. Modifications to the Mt. Barnabe Site which would be visible to public onlookers include a net loss of one microwave dish, a net gain of one antenna, and minor equipment changes on an existing monopole and tower. Given the minor visual change which would be created by these changes, the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Facilities at the Mt. Barnabe Site have no potential to adversely affect scenic resources within a state scenic highway, given that the nearest state scenic highway, State Highway 1, is approximately 3 miles away and hidden by the intervening coastal ridge. Sir Francis Drake Boulevard, which is not a state scenic highway, is closer, but steep terrain and dense redwood vegetation limit most views of the site from the road. Figures V.E-4 and V.E-5 show the facility from Sir Francis Drake Boulevard at the one elevated location where the site is visible--the Bolinas Ridge trailhead (near Olema) approximately 3 ½ miles away. Proposed project modifications are not visible from that distance and, therefore, the impact to state and other local scenic highways is ***less than significant***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figures III-31 and III-32 Existing and Proposed Elevations and Site Plan, respectively, show the physical changes at the site as described below. Infrastructure at the site currently includes a two-story fire lookout tower; a 70-foot, 3-leg tower with antennas that increase the maximum height to 83 feet; and a 25-foot tall, 2-foot wide microwave monopole. Proposed changes include the addition of three antennas and removal of two antennas to the tower. Visual changes from the project are minor and would not alter the maximum height of, or add large structures to, MERA facilities at the Mt. Barnabe Site. The project would not substantially degrade the existing visual character or quality of the site and its surroundings. As a result, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

According to the Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, historical resources at the Mt. Barnabe Site include a historic road (P-21-0004821/CA-MRN-551) that once traversed the western slope of Mt. Barnabe. This road was associated with a historic logging and paper mill operation in Lagunitas and presently appears to have been modified and converted into a maintained dirt access road that passes through the Area of Direct Impact. Figure V.E-6 shows the Area of Direct Impact and a surrounding 100-foot buffer alongside the historic road.

Proposed changes at this site include minor modifications to existing infrastructure, including removal and addition of antennas and microwave dishes, reinforcement of the existing tower's foundation, and replacement of equipment within an existing equipment shelter. Ground disturbance would be limited to the area surrounding the tower foundation and would extend to a maximum depth of 24 inches below the surface. Given the limited, localized nature of disturbance, the project would not cause a substantial adverse change in the significance of the historic road. Further, the limited nature of the disturbance makes the possibility of accidental discovery of other historical resources low. Nonetheless, work at the Mt. Barnabe Site would comply with the provisions of Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures to follow in the event of accidental discoveries.

By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Mt. Barnabe Site. Consequently, impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California

Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria commenced on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Mt. Barnabe Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource designated by the lead agency, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Mt. Barnabe Site is located within a developed/disturbed area, adjacent to relatively disturbed non-native annual grasslands which provide only marginal habitat for candidate, sensitive, or special-status plant species. The proposed improvements consist of minor modifications to an existing tower in a previously developed area and would have ***no impact*** on candidate, sensitive, or special-status plant or wildlife species.

b,c)Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Mt. Barnabe Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The site is an existing previously developed/disturbed public service communications facility and fire lookout adjacent to non-native annual grassland habitat supporting a low diversity of plant and wildlife species. The EIR determined that no sensitive biological communities were present, and the proposed improvements would have less-than-significant impacts on biological resources. Conditions have not changed significantly since the site was analyzed in the EIR. Thus, no sensitive biological communities are present, and the proposed project work would have ***no impact*** on sensitive biological communities, including federally protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that represents core habitat areas for wildlife species, this site is an existing public service communications facility and lookout located in a previously developed area . The proposed improvements are limited to upgrades to the existing facilities, and are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a nursery site for native wildlife. As a result, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Mt. Barnabe Site is within the footprint of an existing communications facility. Project improvements are limited to minor modifications to existing equipment in previously developed portions of the site and would not have any adverse impact on locally-protected biological resources. Proposed changes at the Mt. Barnabe Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Mt. Barnabe Site is located in unincorporated Marin County. The Mt. Barnabe Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. Consequently, there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Mt. Barnabe Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 23, 2018, SiteSafe surveyed the Mt. Barnabe Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 30 locations at the Mt. Barnabe Site. The highest spatially averaged emissions recorded during this process were below FCC MPE limits, at approximately 11% of the occupational limit and 55% of the public limit. The maximum value recorded at 27 of 30 locations was below 5% of the occupational threshold, with the remaining three locations' maximum values ranging from 5-11% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the Mt. Barnabe Site is 889.7% of the public MPE limit. Maximum theoretical ground-level exposure produced by the existing condition is less than 5% of the public MPE.

b) Figure V.E-7 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Mt. Barnabe Site, there would be 15 antennas capable of operating at one time during the transition period (see Page 109 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum theoretical exposure level on the rooftop and outside walkway of the fire lookout tower of 967.6% of the public MPE limit; however the ground-level exposure would be less than 100% of the public MPE limit. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

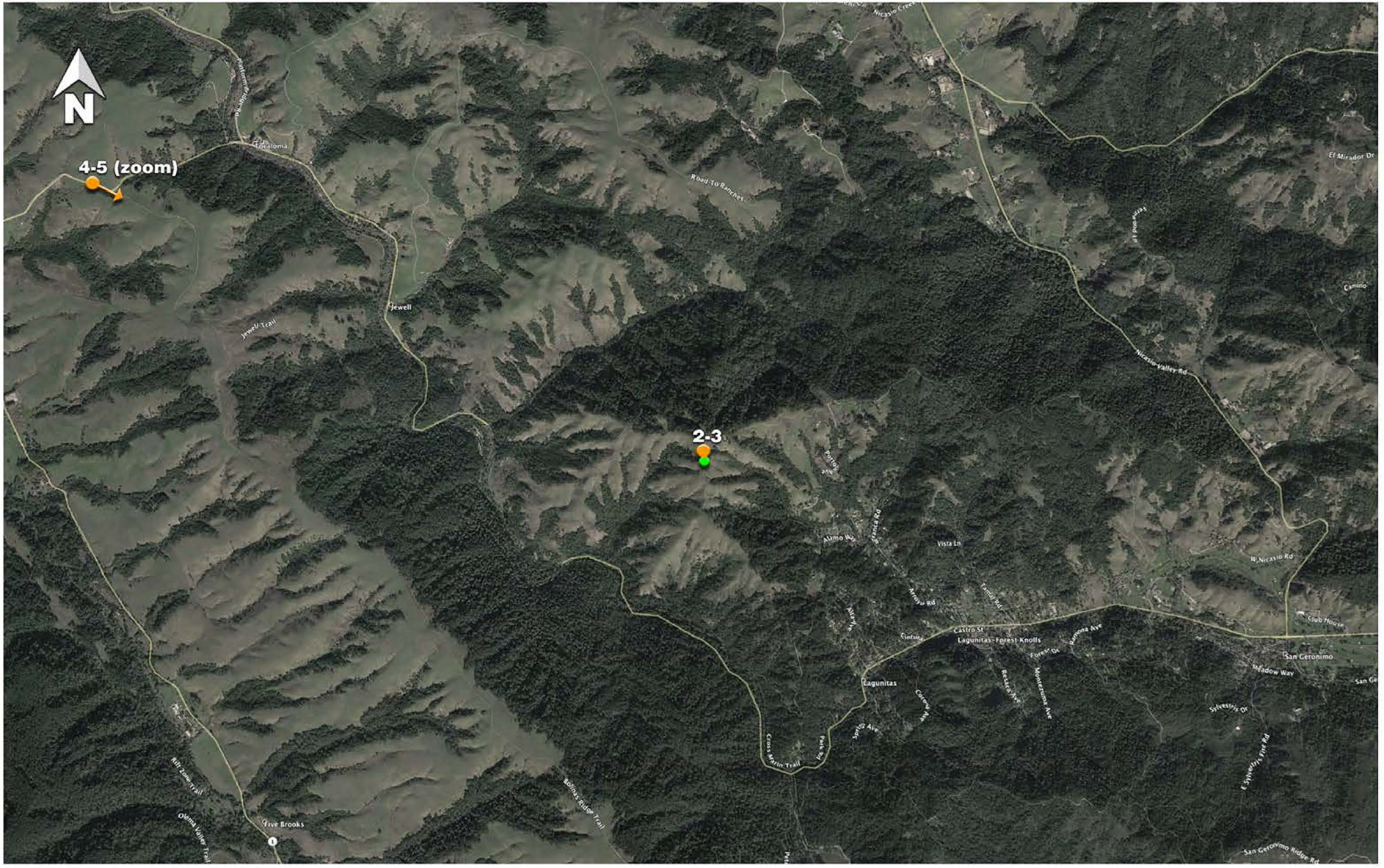
c) With the new system fully in place and the project complete, maximum exposure off the ground would be roughly 967.6% of the public MPE limit. Ground-level exposure faced by workers would remain less than 100% of the public MPE, and uncontrolled areas accessible to the public would experience a theoretical maximum of less than 5% of the public MPE.

Based on these measurements and the site's layout and signage (depicted in Chapter III, Project Description), SiteSafe recommended that the operators responsible for the high rooftop and fire lookout tower exposure levels should relocate some antennas to comply with FCC regulations, but concluded that all of MERA's facilities at the Mt. Barnabe Site are compliant. Ground-level exposure does not pose a danger to workers accessing the area. While the maximum theoretical emissions off the ground would increase from 889.7% to 967.6% of the public MPE, any exposure to these increased emissions levels would be rare due to the height at which such emissions may

occur (emissions would not exceed 100% of the public MPE until over 70 feet above ground level) and the low likelihood of occurrence of the all-on condition.

In summary, MERA's operations at the Mt. Barnabe Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during the transition phase and upon completion of the proposed project. Maximum theoretical emissions off the ground in the controlled access area would increase, but would rarely be experienced due to their high location off the ground and the low likelihood of occurrence of the all-on condition. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Mt. Barnabe Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.E - 1 Mt. Barnabe Aerial with Photo Locations

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Current photograph of the view looking south from the adjacent cell site, on a private road.

Source: Previsualists Inc.

Figure V.E - 2 Existing Mt. Barnabe Near View

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Photosimulation of the view looking south from the adjacent cell site, on a private road.

Source: Previsualists Inc.

Figure V.E - 3 Proposed Mt. Barnabe Near View

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Current photograph of the view looking southeast along Sir Francis Drake Blvd, using a 250mm telephoto lens.

Source: Previsualists Inc.

Figure V.E - 4 Existing Mt. Barnabe Distant View

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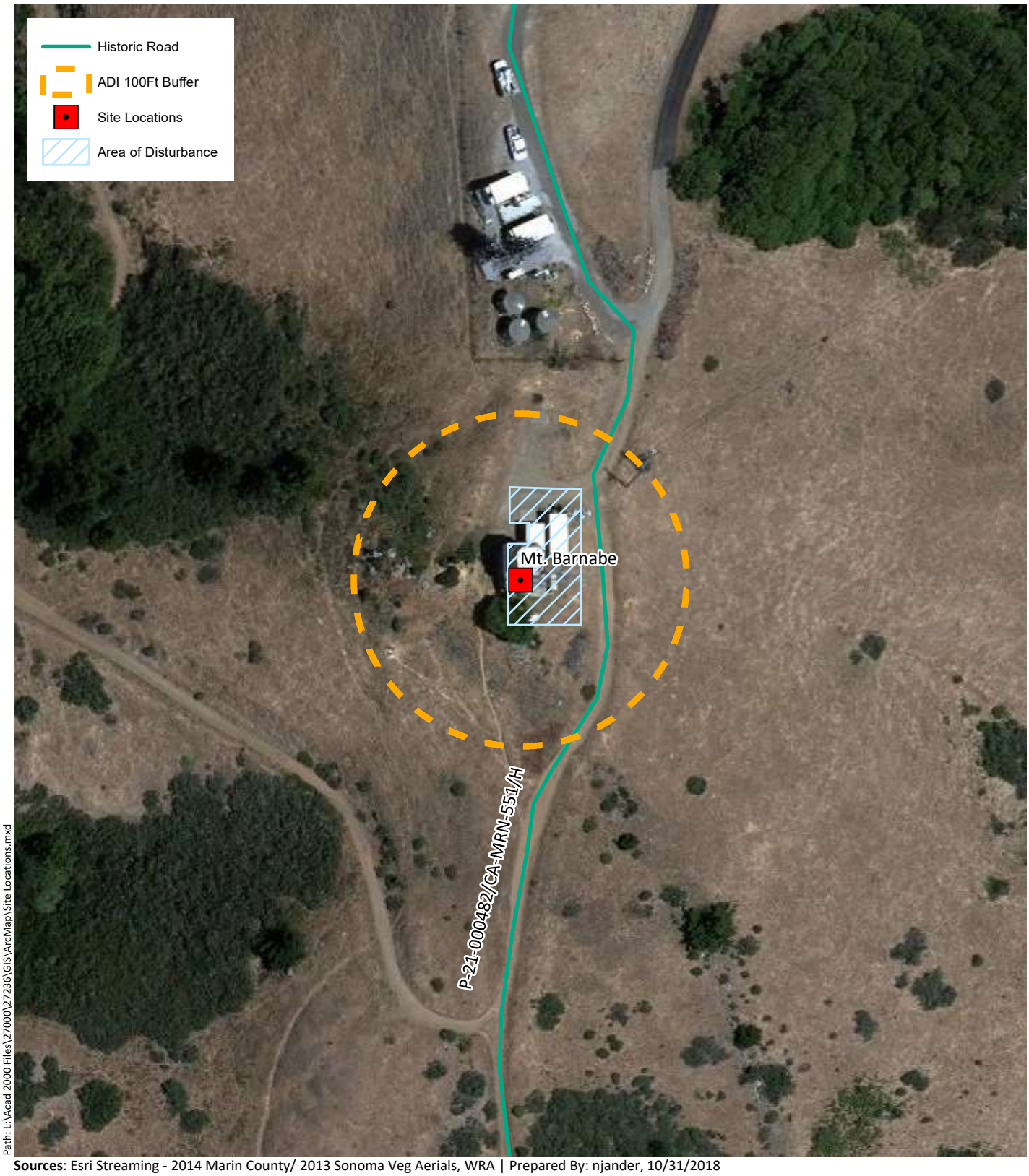


Photosimulation of the view looking southeast along Sir Francis Drake Blvd, using a 250mm telephoto lens.

Source: Previsualists Inc.

Figure V.E - 5 Proposed Mt. Barnabe Distant View

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.E - 6 Mt. Barnabe

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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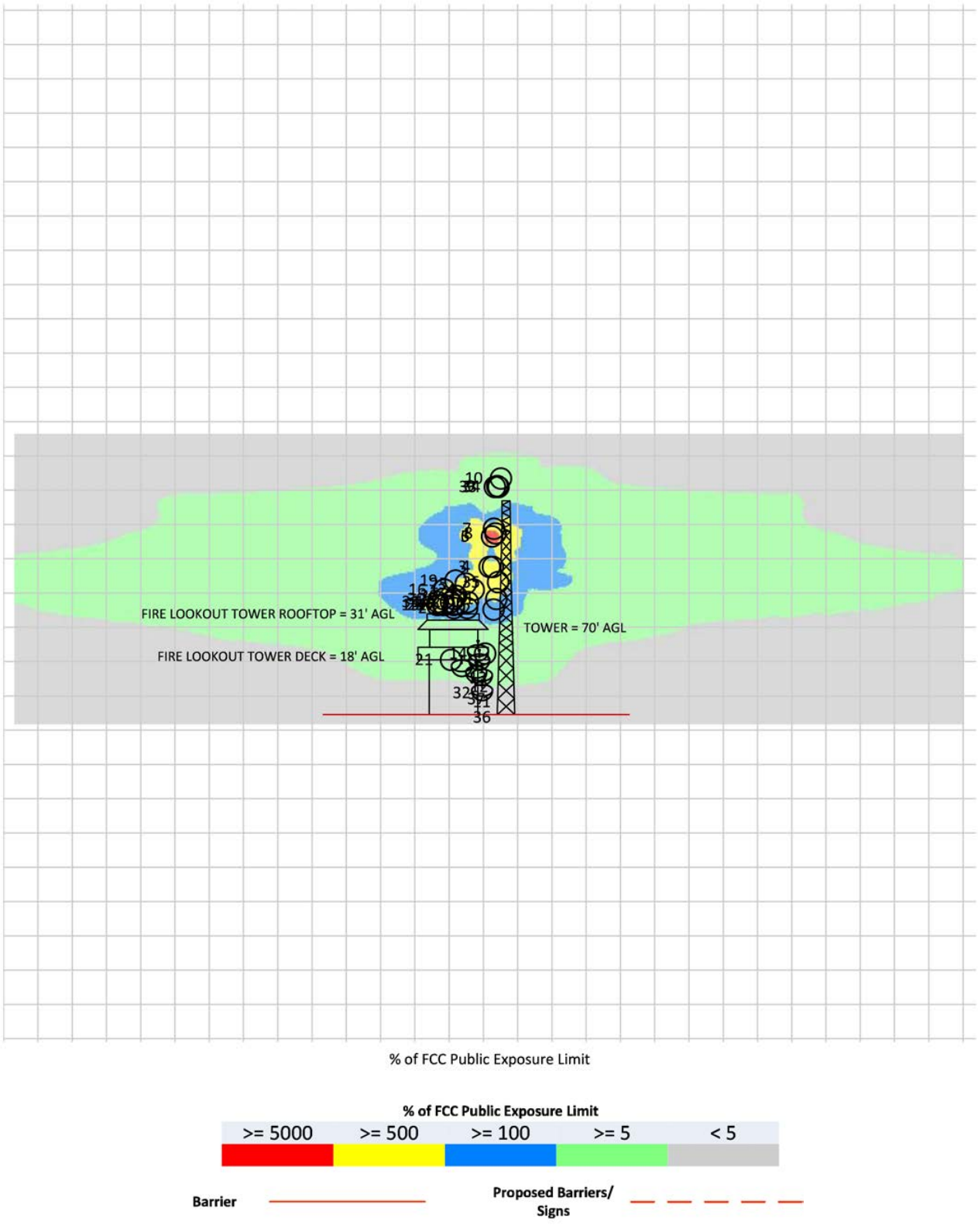


Figure V.E - 7 Mt. Barnabe Simulated All-On RF Exposure - Elevation View

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F. Point Reyes Hill (Site 8)

The Point Reyes Hill Site is located adjacent to the Federal Aviation Administration (FAA) VORTAC radio navigation site atop Point Reyes Hill, where Drake's View Drive ends and meets the Bucklin and Inverness Ridge Trails, as shown in Photo III-6 (Chapter III, Project Description). The fenced FAA site and adjacent gated and locked MERA facility are situated on a 4-acre parcel nestled within Point Reyes National Seashore. As the Point Reyes Hill Site is surrounded on all sides by National Seashore, areas around the site are largely wooded and undeveloped, except for hiking trails. MERA has a "right-of-way permit" to operate the communications facility within the Point Reyes National Seashore. The site is designated as a Coastal Open Area (C-OA) under the Marin County LCP.

Details of the proposed work for the Next Gen System at the Point Reyes Hill Site are explained in Chapter III, Project Description and are summarized below in Table V-6. The proposed work includes minor modifications to existing communications infrastructure on the towers, replacement of equipment inside the MERA equipment shelter, a new 40-foot monopole to replace a 29-foot wooden utility pole, foundation reinforcements, and construction of a new cable bridge.

An estimated 95% of the visible components at the Point Reyes Hill Site (within the MERA enclosure) would be owned by MERA after proposed project modifications. The only equipment not owned by MERA would be a single FAA antenna that is to be placed on the new MERA monopole.

Table V–6. Point Reyes Hill Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Point Reyes Hill	Existing hilltop site occupied by large, visually concealed FAA VORTAC antenna surrounded by Point Reyes National Seashore. 2 existing CBA buildings within FAA-fenced enclosure. One existing shelter in MERA enclosure. Two existing 17' tall x 12" diameter monopoles with multiple antennas, and one 29' wood utility pole with one Yagi-type antenna.	Propose to replace existing 29' wood utility pole with a new 40' monopole to support reinstalled Yagi-type antenna and two new 3' diameter microwave dishes. New cable bridge between E. building and new monopole. Replace HVAC units in existing building. 3 antennas added, and 2 antennas removed on existing monopole. Reinforce existing monopole foundations.

1. Aesthetics

The Point Reyes Hill Site is located within the Point Reyes National Seashore, a public open space popular for its natural coastal scenery. The National Seashore includes wild coastal beaches and headlands, estuaries, and uplands. It is geographically separated from most of Marin County by Tomales Bay, another important aesthetic resource, which the Point Reyes Hill Site overlooks from approximately 1.4 miles away. Views from the site include the forests and beaches of Point Reyes National Seashore, the Pacific Ocean, Tomales Bay, and rolling hills in virtually every direction. These views are easily accessible to the public, as the National Seashore has an extensive trail network, some of which pass directly by the site. For hikers on these trails, the Point Reyes Hill Site is clearly visible.

Key Observation Points (KOPs) have been selected to represent the array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.F-1. Subsequent Figures V.F-2 through V.F-5 show the anticipated before and after conditions at the Point Reyes Hill Site from the two selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

Both the existing FAA communications facility and the adjacent MERA facility are nearly invisible on the highly vegetated Point Reyes Ridge, just above Inverness. Due to the topography and vegetation of the region, the Point Reyes Hill Site is generally not visible from the west. From the east, Point Reyes Hill is visible from communities across the Tomales Bay such as Millerton and Bivalve, although from these very distant vantage points, all but the uppermost portions of the highest antenna are screened by trees. The existing MERA and FCC facilities have already impacted available scenic vistas, and the proposed modifications are relatively minor in comparison to what exists. Proposed changes which would be visible to public onlookers include replacement of a wood utility pole with a new monopole, installation of two new microwave dishes, net addition of one antenna, minor equipment changes on an existing monopole, and installation of a new cable bridge between an existing building and new monopole. Given the minor nature of these changes, the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Facilities at the Point Reyes Hill Site have very little potential to adversely affect scenic resources within a state scenic highway, given that the nearest state scenic highway, State Highway 1, is 1.4 miles away and below the site by nearly 1,000 feet. Figures V.F- 4 and V.F-5 show the facility from State Highway 1, and the facility is barely discernable from such a distance. Consequently, the impact to state scenic highways is ***less than significant***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figure III-31 Existing and Proposed Elevations shows the physical changes at the site as described below. Infrastructure at the site currently includes a visually concealed FAA antenna, two 20-foot by 10-foot buildings, two 17-foot tall monopoles with antennas, and one 29-foot wood utility pole with one Yagi (small horizontal) antenna. The wood pole holding the Yagi antenna would be replaced with a 40-foot monopole, yielding an 11-foot height increase to the tallest structure on site. Additional changes that may alter the aesthetics of the site include a new cable bridge between the MERA equipment shelter and the monopole. Due to dense vegetation and hillside configuration as shown in Figures V.F-3 and V.F-4., near views of the site are only available to the few recreationists that hike within the immediate proximity of the site. While the project does raise the height of one antenna by 11-feet, this change does not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Therefore, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Point Reyes Hill Site. Improvements proposed for this site include replacement of an existing pole, reinforcement of monopole foundations, a new cable bridge, and minor equipment changes. Ground disturbance would be limited to the vicinity of the tower foundations and utility pole and would extend as deep as approximately 24 inches below ground level. Figure V.F-6 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Point Reyes Hill Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures to follow in the event of an accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Point Reyes Hill Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local

register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Point Reyes Hill Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource designated by the lead agency, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Point Reyes Hill Site are limited to minor modifications to existing equipment in previously developed portions of the site, as seen in Figure V.F-6, and are not anticipated to impact vegetation within the site. However, the project's original EIR (MERA, 2000) previously determined that two special-status plant species, Mt. Vision ceanothus (*Ceanothus gloriosus* var. *porrectus*) and western leatherwood (*Dirca occidentalis*), might be present in the Point Reyes Hill Site due to the existence of potentially suitable coastal scrub habitat and relatively close proximity to documented occurrences of these species. In compliance with the original EIR's Mitigation Measure Point Reyes Hill Site BIO-3 (see below), WRA conducted a focused protocol-level rare plant survey for Mt. Vision ceanothus and western leatherwood within the Point Reyes Hill Site on March 30 and May 9, 2018.

In addition to the aforementioned target species, WRA also determined that the following additional special-status plant species have a moderate or high potential to be present at the Point Reyes Hill Site due to the existence of potentially suitable coastal scrub habitat underlain by thin, rocky, sandstone-derived soils, and proximity to documented occurrences: Blasdale's bent grass (*Agrostis blasdalei*), Marin manzanita (*Arctostaphylos virgata*), Brewer's calandrinia, coastal bluff morning-glory (*Calystegia purpurata* ssp. *saxicola*), Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*), Marin checker lily (*Fritillaria lanceolata* var. *tristulis*), Point Reyes horkelia (*Horkelia marinensis*), Baker's goldfields (*Lasthenia californica* ssp. *bakeri*), perennial goldfields (*Lasthenia californica* ssp. *macrantha*), marsh microseris (*Microseris paludosa*), Michael's rein

orchid (*Piperia michaelii*), San Francisco owl's-clover (*Triphysaria floribunda*), and coastal triquetrella (*Triquetrella californica*).

Several reference sites for special-status plant species were visited by WRA botanists prior to surveying the Point Reyes Hill Site, resulting in the following observations: Mt. Vision ceanothus (observed May 6, 2018 in bud and bloom at North Beach, Point Reyes), Point Reyes horkelia (observed May 6, 2018 in bud and bloom at North Beach, Point Reyes), marsh microseris (observed May 6, 2018 in bud and bloom at Abbotts Lagoon, Point Reyes), San Francisco owl's-clover (observed May 6, 2018 in bud and bloom at Abbotts Lagoon, Point Reyes), and Brewer's calandrinia (observed April 8, 2018 along Rocky Ridge Trail, Mt. Tamalpais). However, no special-status plant species were observed at the Point Reyes Hill Site, and the proposed project work would have no impact on candidate, sensitive, or special-status plant species.

The project's original EIR (MERA, 2000) previously determined that nesting raptors might be present in the study area due to the existence of potentially suitable nesting structures. The EIR identified disturbance to nesting raptors as a potentially significant impact to biological resources and provided the following mitigation measures to reduce impacts to less-than-significant levels:

Previous Mitigation Measure Point Reyes Hill BIO-4

a. Prior to project activity, it will be determined whether any construction or tree removal is proposed during the raptor nesting season (February 15 to July 15).
b. If no construction or tree removal will occur during the raptor nesting season, no further mitigation will be necessary.
c. If construction or tree removal is proposed during the raptor nesting season, a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests in the project area. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction or tree removal.
d. If nesting raptors are found during the focused survey, no construction or tree removal will occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist).

In addition to nesting raptors, WRA also determined that the following special-status wildlife species have a moderate or high potential to be present in the vicinity of the Point Reyes Hill Site: American badger and nesting birds, including oak titmouse, Nuttall's woodpecker, and Allen's hummingbird. Project improvements within the Point Reyes Hill Site are limited to minor modifications to existing equipment in previously developed portions of the site and no tree removal will occur. Even so, due to the presence of tree cover in close proximity to the site, there is some potential for impacts to nesting birds. Implementation of Mitigation Measure BIO-2 would ensure these impacts are less than significant. No other activities are planned with the potential to harm other candidate, sensitive, or special-status wildlife species.

In summary, improvements within the Point Reyes Hill Site are limited to minor modifications to existing equipment in previously developed portions of the site with very low likelihood to impact special-status wildlife species. No candidate, sensitive, or special-status plant species are

present. With implementation of Mitigation Measure BIO-2, impacts to all candidate, sensitive, or special-status species would be ***less than significant with mitigation incorporated***.

Mitigation Measure BIO-2[1]

Project activities shall, to the extent feasible, occur outside of the nesting season from September 1 – January 31. Where this is infeasible and project activities occur during the nesting season (February 1 through August 31), a nesting bird survey shall be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities. If nests are identified, a no-disturbance buffer shall be implemented to avoid impacts to nesting birds. The radius of a surrounding buffer will be determined by a qualified biologist and shall range from 25 feet to 500 feet depending on the species and protection status of that species.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Point Reyes Hill Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The majority of the site is developed and consists of an existing communications facility within a small fenced site adjacent to a Federal Aviation Administration (FAA) VORTAC antenna site.

Due to the presence of natural vegetation communities surrounding the developed portions of the site, WRA conducted an updated biological survey and focused special-status plant survey as required per previous Mitigation Measure Point Reyes Hill BIO-3 from the original EIR, which states that:

Previous Mitigation Measure Point Reyes Hill BIO-3

a. Prior to project activity, a biologist will conduct a focused survey to determine if any Mt. Vision ceanothus or western leatherwood shrubs have established themselves since the Initial Study investigations at the Point Reyes Hill Site and, if present, whether they will be affected by construction activities.
b. If Mt. Vision ceanothus or western leatherwood shrubs are found within the construction impact area, they shall be fenced and flagged by a qualified biologist before construction activity, and the project will be shifted, if necessary, to avoid impacts to the shrubs. If all shrubs are fenced and avoided, impacts to Mt. Vision ceanothus and western leatherwood will be less than significant and no further mitigation is necessary.

Surveys were conducted at the Point Reyes Hill Site on March 30 and May 9, 2018 to observe whether existing conditions had changed significantly since the project's original EIR (MERA,

[1] Mitigation Measure BIO-1 is listed under Site 19, Stewart Point.

2000) and to survey for special-status plant species. In keeping with Mitigation Measure BIO-3, a protocol-level rare plant survey was carried out that verified that there are no special-status plant species present at the Point Reyes Hill Site.

The developed portions of the site are surrounded by coyote brush (*Baccharis pilularis* ssp. *consanguinea*) scrub habitat with occasional Bishop pine (*Pinus muricata*) individuals present. Coyote brush scrub is not considered a sensitive biological community. Moreover, the proposed improvements would be limited to minor modifications to existing equipment and structures within previously developed portions of the site. No sensitive biological communities or federally protected wetlands are present, and the proposed project work would have ***no impact*** on sensitive biological communities.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that provides core habitat areas for wildlife species, this site is located in a previously developed area. The proposed improvements are limited to upgrades to existing facilities and are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a nursery site for native wildlife. Consequently, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Point Reyes Hill Site is located within Point Reyes National Seashore on federal land in the coastal zone and is under the jurisdiction of the California Coastal Commission. The site is also subject to the policies of the Point Reyes National Seashore General Management Plan (GMP) adopted in September 1980. The GMP's Natural Resources Management Section generally calls for the identification, protection, and perpetuation of the diversity of existing ecosystems which are found at Point Reyes National Seashore.

The GMP's Land Management Zoning Section describes various zones within the park and their intended uses, which are designed to be appropriate for each zones' biological resources. The Point Reyes Hill Site is within the "Natural Environment" subzone. The Natural Environment subzone is managed to maintain its natural appearance while allowing compatible visitor use and providing a transition between man-made intrusions and the designated wilderness.

The Point Reyes Hill is also located within the jurisdiction of the Marin County LCP. No policies or ordinances from the LCP adopted for the purpose of protecting biological resources were identified as applicable and relevant to the Point Reyes Hill Site.

As previously discussed, proposed improvements at the Point Reyes Hill Site are confined to the existing MERA compound. No adverse impacts to biological diversity and existing ecosystems within the National Seashore would occur; and there would be no modification of natural resources. As such, proposed modifications to the Point Reyes Hill Site would not conflict with

the General Management Plan or the Marin County Local Coastal Program (LCP); and ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Point Reyes Hill Site is located on National Park Service (NPS) land within the Point Reyes National Seashore, adjacent to the FAA VORTAC Site. This site is subject to the Coastal Zone Management Act, the Point Reyes National Seashore GMP, and the NPS Natural Resources Management Plan.

Adopted in 1980, the Point Reyes National Seashore GMP is primarily concerned with the preservation of areas that have recreational, ecological, cultural, or aesthetic importance. The 1999 Initial Study did not identify any conflicts between the GMP and FAA / MERA facilities at the Point Reyes Site. This conclusion was based on three findings: 1) building height requirements imposed upon MERA by the FAA would preclude any significant visual impacts, 2) the site's location in the footprint of an already developed FAA facility would prevent significant impacts to ecological resources, 3) the site's location in the footprint of an already developed FAA facility would result in a low probability of impacts to archaeological/cultural resources.

Changes proposed as part of the Next Gen System would take place within the existing spatial footprint of the Point Reyes Hill Site, with minor modifications to existing facilities, a pole replacement, and foundation reinforcements proposed. The location is adjacent to the 4-acre FAA VORTAC facility that is designated a Special Use Zone, Radio Range Station in the GMP. As the current project proposes minor modifications within the footprint of the existing facility, the Initial Study's conclusions still apply. The project would, therefore, not significantly conflict with the GMP's goals and policies related to visual, ecological and cultural resources. Further, as the project would be located in a fenced compound that has long been inaccessible to the general public, there would be no conflict with the plan's recreational goals and policies. An existing FAA antenna would be placed atop a new MERA monopole as part of the project, bringing its height to 40 feet and resulting in an 11-foot increase in height from the existing pole at the Point Reyes Site. While the new monopole is taller, it does not produce any new significant visual impacts and therefore would remain consistent with the intent of the GMP policies.

Potential conflicts with the LCP at the Point Reyes Site were not examined at the time of the 1999 IS/EIR; however, Coastal Commission staff have determined that the site is within the Coastal Zone of Marin County and is therefore subject to the Marin County LCP and Chapter 22I of the

Marin County Code, which includes Coastal Zone land use requirements. Because the land is under federal jurisdiction, a federal consistency determination with the Coastal Zone Management Act would be required, which would be satisfied by gaining approval directly from the North Central Coastal Commission office for a Coastal Development Permit for the proposed activity[2].

The Point Reyes Hill Site is located in Unit II of the Marin County Coastal Zone. The site is currently designated for Public and Quasi-Public land use and zoned Coastal Open Area (C-OA) under Marin County's LCP. The C-OA zoning designation is aimed at providing open space, outdoor recreation, and other undeveloped lands. Public utility and public service uses are permitted within the C-OA district with a conditional use permit, provided that such uses are within the purposes and powers of the applying agency; however, MERA is not subject to this County-level permit as a Joint Powers Authority, and they will work directly with the Coastal Commission due to the site's location on federal land in pursuit of a Coastal Development Permit. Excavation and filling are prohibited within the C-OA district, except where the County (as an agent of the State) approves such activities upon the finding that they are necessary in the pursuit of a permitted use.

Additional policies from Unit II of the Marin County LCP that are applicable to the Point Reyes Site include:

- New Development and Land Use
    3. Visual Resources.
        a. The height, scale, and design of new structures shall be compatible with the character of the surrounding natural or built environment. Structures shall be designed to follow the natural contours of the landscape and sited so as not to obstruct significant views as seen from public viewing places.
        b. Development shall be screened with appropriate landscaping; however such landscaping shall not, when mature, interfere with public views to and along the coast. The use of native plant material is encouraged.
        c. Signs shall be of a size, location, and appearance so as not to detract from scenic areas or views from public roads and other viewing points and shall conform to the County's sign ordinance.
        d. Distribution utility lines shall be placed underground in new developments to protect scenic resources except where the cost of undergrounding would be so high as to deny service.

The proposed project component would not introduce a new land use or visual impact to the site, nor would land be removed from open space use. The small scale of work within the existing

[2] Delaplaine, Mark. California Coastal Commission "Re: Marin County/Point Reyes communications site." Message to MERA, [David Mortimer]. April 19, 2019.

facility footprint and use of a previously developed communications site would ensure that it does not impact sensitive resources, result in any major land use conflicts with surrounding areas, or conflict with the surrounding natural and built environment. The project component would also be designed to meet the aesthetic, design, safety, and noise standards and other relevant policies and regulations delineated by the Coastal Commission, the NPS GMP, and the FAA, which are provided in Chapter IV.D The proposed facility modifications are consistent with the site's zoning, and the process of obtaining a Coastal Development Permit from the NPS and the Coastal Commission would ensure that they do not conflict with applicable land use plans or policies at the Point Reyes Hill Site. As a result, ***less-than-significant*** impacts would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Point Reyes Hill Site 8 is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 23, 2018, SiteSafe surveyed the Point Reyes Hill Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 26 locations at the Point Reyes Hill Site. The highest emissions recorded during this process were below FCC MPE limits, at approximately 7% of the occupational limit and 35% of the public limit. The maximum recorded value at 23 of 26 locations was below 5% of the occupational threshold, with the remaining three locations' maximum values ranging from 6-7% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) Under the existing condition, SiteSafe modeled the maximum theoretical emissions at approximately 21.3% of the public MPE. This would occur on the ground-level both within and just outside of the fenced off enclosure around the telecommunications equipment.

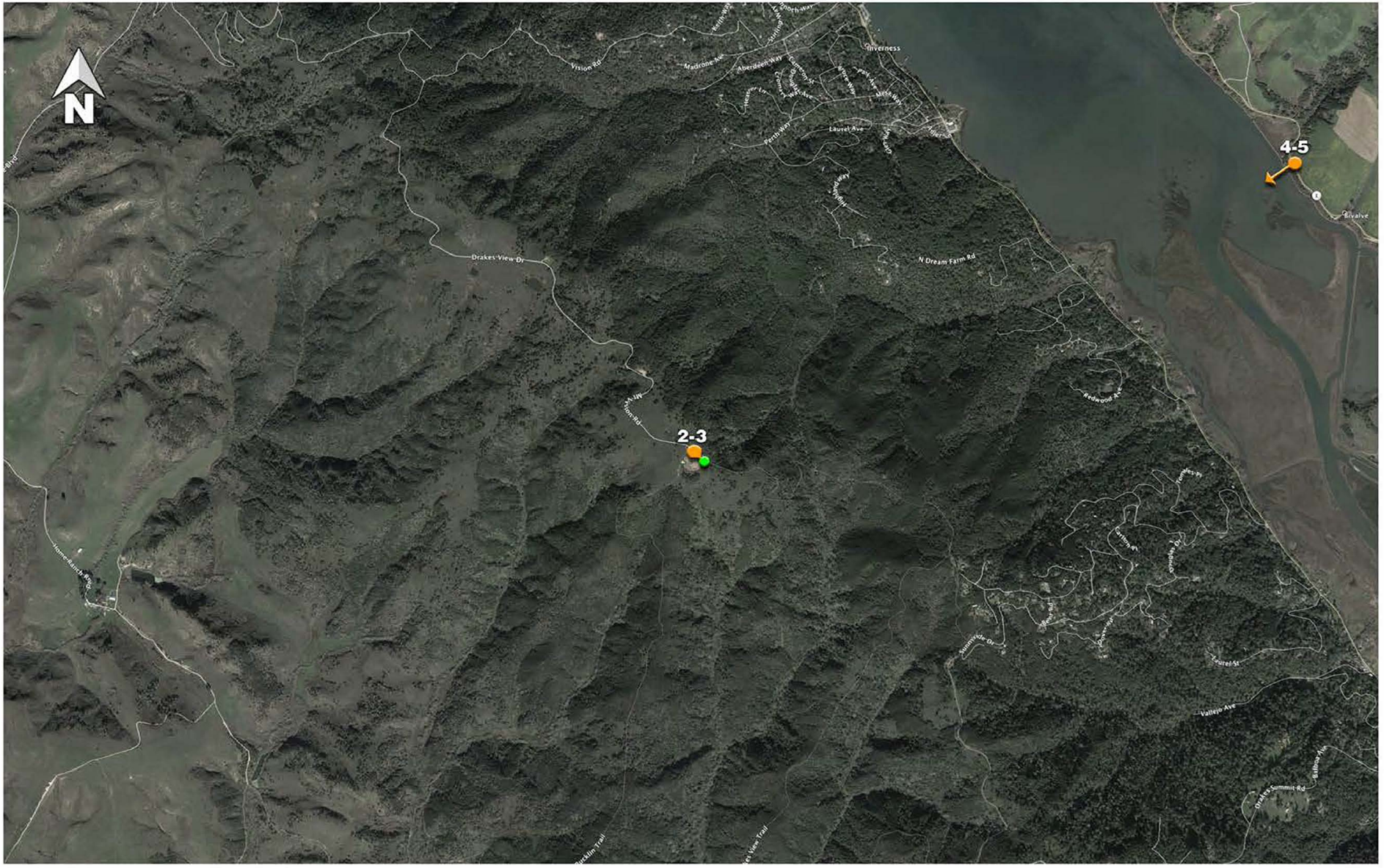
b) Figure V.F-7 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

At the Point Reyes Hill Site, there would be 35 antennas capable of operating at one time during the transition period (see Page 125 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum ground-level exposure of 21.5% of the public MPE limit in controlled areas. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum ground-level exposure in controlled-access areas would decrease to 16.2% of the public MPE limit. Uncontrolled areas accessible to the public would produce a theoretical maximum of 14.4% of the public MPE limit. Based on these measurements and the site's layout (depicted in Chapter III, Project Description), SiteSafe concluded that the Point Reyes Site is compliant with FCC regulations and that MERA need not take any corrective action.

In summary, MERA's operations at the Point Reyes Hill Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments, would remain less than 100% of the MPE limits during the transition phase, and would slightly decrease from baseline levels upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Point Reyes Hill Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.F - 1 Point Reyes Hill Aerial with Photo Locations

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Current photograph of the view looking south from the end of the access road.

Source: Previsualists Inc.

Figure V. F - 2 Existing Point Reyes Hill Near View

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Photosimulation of the view looking south from the end of the access road.

Source: Previsualists Inc.

Figure V. F - 3 Proposed Point Reyes Hill Near View

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Photosimulation of the view looking southwest from Hwy 1, across Tomales Bay.

Source: Previsualists Inc.

Figure V.F - 4 Existing Point Reyes Hill Distant View

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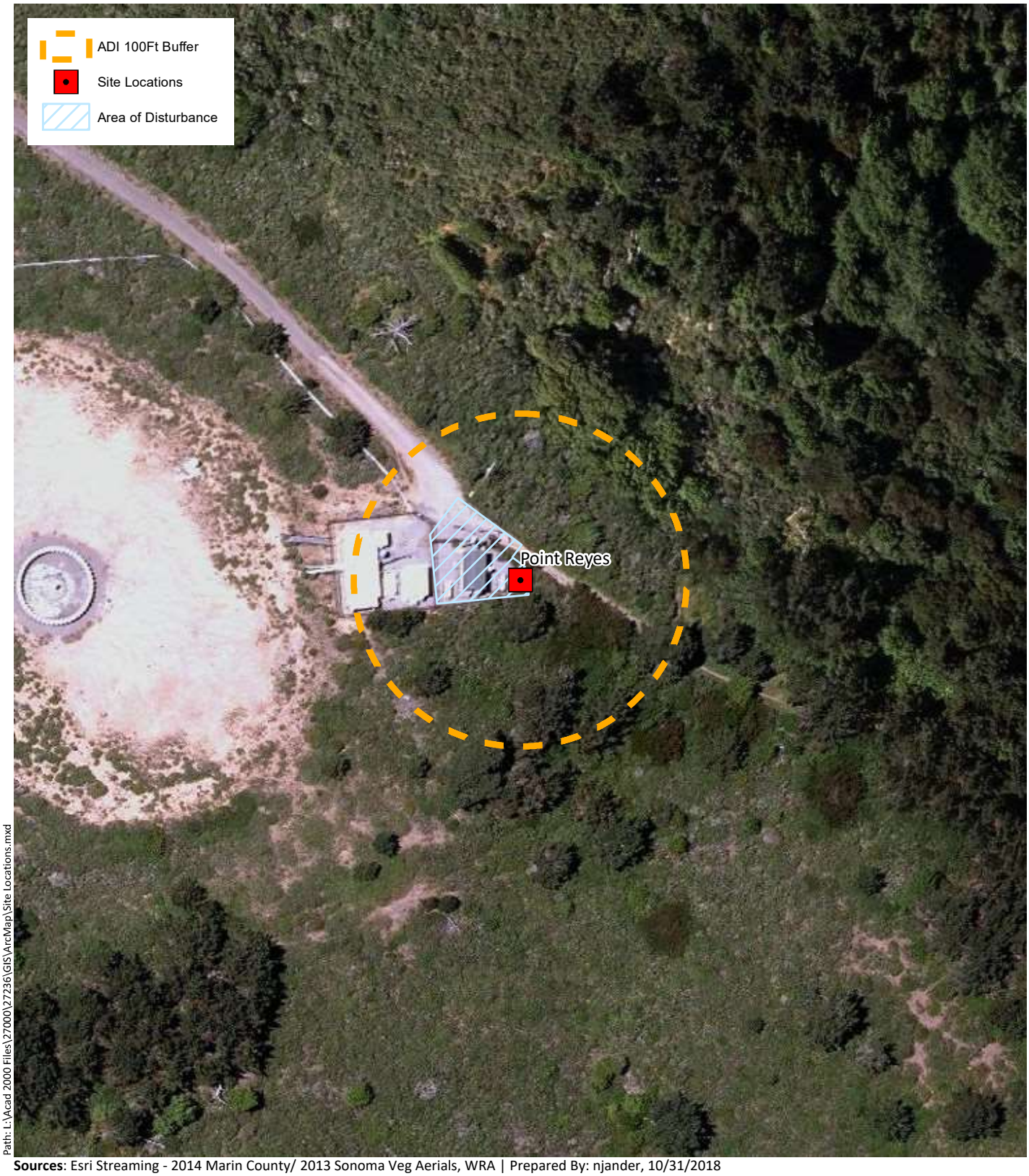


Photosimulation of the view looking southwest from Hwy 1, across Tomales Bay.

Source: Previsualists Inc.

Figure V.F - 5 Proposed Point Reyes Hill Distant View

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.F - 6 Point Reyes Hill

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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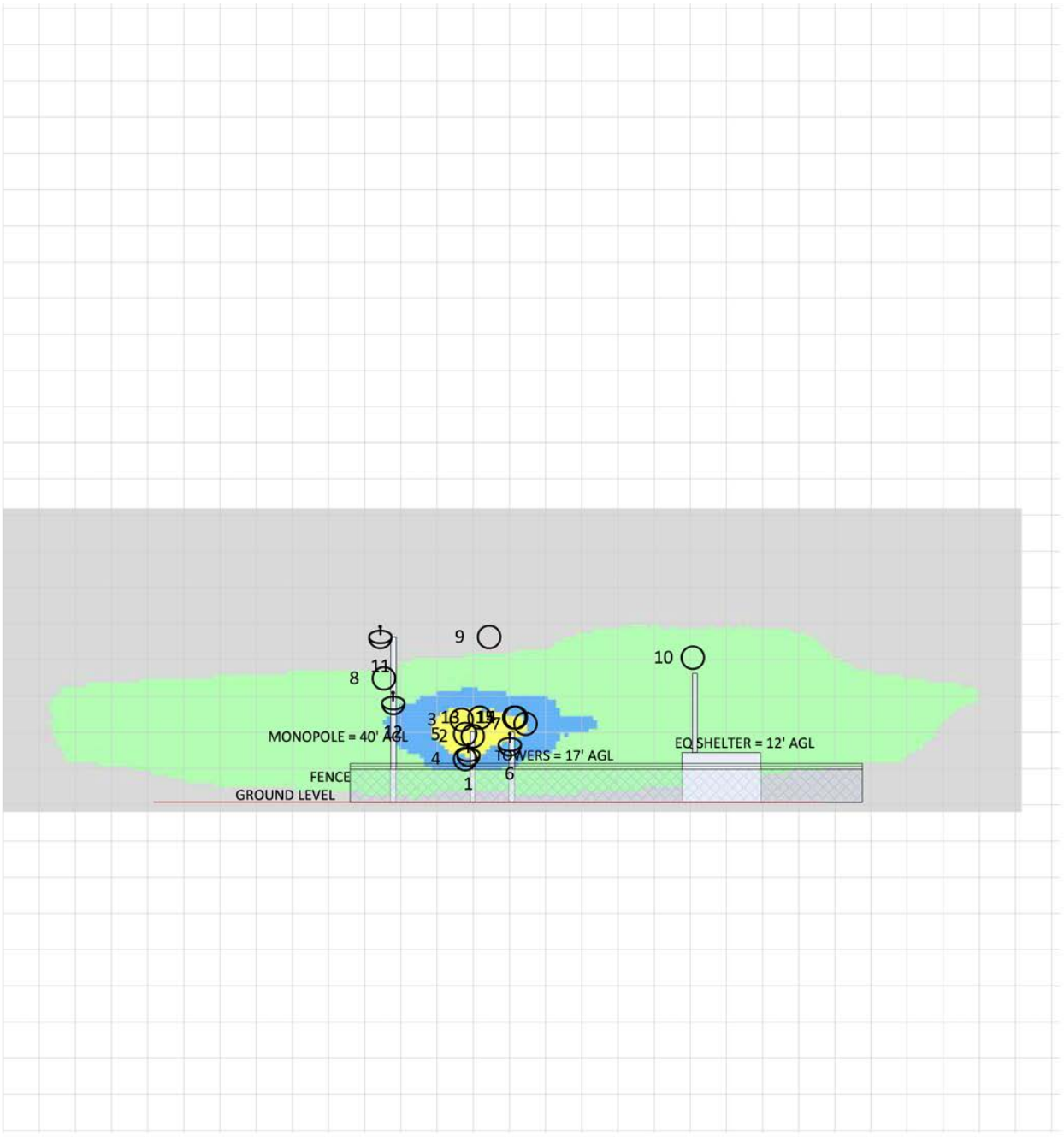


Figure V.F - 7 Pt. Reyes Hill Simulated All-On RF Exposure - Elevation View

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G. Dollar Hill (Site 10)

The Dollar Hill Site is located on a hill that forms the backdrop to Downtown San Rafael, as shown in Photo III-8 (Chapter III, Project Description). It is located off of Robert Dollar Drive, just north of downtown and next to the Highway 101 corridor. The site is adjacent to Boyd Memorial Park to the south, Mountain Park to the north, and residential developments to the east and west. The site is zoned Parks/Open Space (P/OS).

An estimated 70% of the visible components at the Dollar Hill Site would be owned by MERA after proposed project modifications. MERA leases the site from the City of San Rafael, and MERA added an equipment shelter, 60-foot tower, emergency generator, and propane fuel tank. The tower now holds additional antennas from other agencies, and there is another building and a water tank on site. There are 23 existing antennas, of which five currently belong to MERA. The Next Gen System will replace some antennas and add others, for a net gain of seven antennas. At completion, MERA will own 40% of the antennas, plus the tower, the equipment shelter, generator, and propane tank (bringing the estimate of visible components to 70%). Next Gen System proposals for the Dollar Hill Site are described further in Chapter III, the project Description. Project proposals include minor modifications of existing communications equipment and foundation reinforcements at the existing MERA facility as described below in Table V-7.

Table V–7. Dollar Hill Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Dollar Hill	60' tall, 3 Leg tower with 12' face width. 2 existing CBA buildings. Existing water tank and pump.	Minor equipment changes on existing tower. 2 microwave dishes and 10 antennas added, 2 microwave dishes and 3 antennas removed. Reinforce existing tower foundation.

1. Aesthetics

Dollar Hill is located within Boyd Memorial Park, a publicly available open space within the City of San Rafael. Boyd Memorial Park is densely vegetated with redwood and eucalyptus trees and has a playground, picnic benches, and hiking trails. The park is accessed from Downtown San Rafael, making it a popular recreational spot for residents of the city. Views from the park and the project site feature Mt. Tamalpais, the City of San Rafael, other neighboring urban communities, Highway 101, and the San Pablo and San Francisco Bays. Additionally, rolling hills are visible in virtually every direction. As it is located in a relatively urban area, the Dollar Hill Site is visible by many. The site can be viewed by park-goers within Boyd Memorial Park, motorists along Highway 101 and by residents of San Rafael at several points throughout the City.

Key Observation Points (KOPs) have been selected to represent the array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.G-1. Subsequent Figures V.G-2 through V.G-7 show the anticipated before and after conditions at the Dollar Hill Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) *Would the project have a substantial adverse effect on a scenic vista;*

The existing communications facility on the site already has substantial adverse effect on the scenic vistas available, including views of the Bay available to hikers in Boyd Memorial Park and views of the hilltop visible from nearby neighborhoods, and the proposed modifications are relatively minor in comparison. Modifications which would lead to visual change are limited to minor modifications to equipment on the existing tower and net gain of seven antennas. Presently, a tower with antennas and microwave dishes, two CBA buildings, and a water tank and pump are present. Given the limited nature of visual change relative to the quantity of infrastructure currently present on the hilltop, impacts of the project are ***less than significant***.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;*

The project has no potential to adversely affect scenic resources within a state scenic highway, given that there are no scenic highways nearby. Therefore, there is ***no impact***.

c) *Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Figure III-35 and II-36 Existing and Proposed Elevations and Proposed Site Plan respectively, show the physical changes at the site as described below. Infrastructure at the site currently includes a sixty-foot tall tower with antennas that bring it to a maximum height of 75-feet, a water tank and pump, and two 10-foot by 20-foot buildings. Visual changes to this infrastructure would come from addition and removal of antennas and microwave dishes, for a net addition of seven antennas. Also, the microwave dishes would be mounted higher on the tower. Although one of the new antennas would be added to the top of the tower, there would be no change in the maximum elevation of equipment at the site.

Figures V.G-2 and V.G-3 provide a near view of the site under current conditions and with the anticipated project conditions. It is evident that the new microwave dishes will be larger and mounted higher on the tower; this is a slight adverse effect, since it increases the amount of sky that is blocked by the equipment. This effect is particularly noticeable from near views, and it is also noticeable from more distant views. The distant views are typically from below the site, as seen when zooming into Figures V.G-5 and V.G-7. However, this effect does not substantially degrade the existing visual character or quality of public views of the site and its surroundings, as a result, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) CWould the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Dollar Hill Site. Improvements proposed for this site include minor equipment modifications on an existing tower, replacement of equipment inside the equipment shelter, and reinforcement of the tower's foundation. Ground disturbance would be limited to the vicinity of the tower foundations and would extend as deep as approximately 24 inches below ground level. Figure V.G-8 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Dollar Hill Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures to follow in the event of an accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Dollar Hill Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Dollar Hill Site was among these sites. However, by implementing Mitigation Measure TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial

adverse change in the significance of a tribal cultural resource designated by the lead agency, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Dollar Hill Site is located within a previously developed compound adjacent to non-native grassland and coast live oak woodland, which provides only marginal habitat for any special-status plant species with potential to occur in the area. The proposed improvements (Figure V.G-8) consist of minor modifications to an existing tower in a previously developed area and would have no impact on potential habitat for candidate, sensitive, or special-status plant species.

The project's original EIR (MERA, 2000) previously determined that nesting raptors might be present in the study area, due to the presence of potentially suitable nesting structures, and that disturbance of nesting raptors would constitute a potentially significant impact. The EIR provided Mitigation Measure BIO-8 to mitigate these impacts to less-than-significant levels. This mitigation measure states:

Previous Mitigation Measure Dollar Hill BIO-8:

a. Prior to project activity, it will be determined whether any construction or tree removal is proposed during the raptor nesting season (February 15 to July 15)
b. If no construction or tree removal will occur during the raptor nesting season, no further mitigation will be necessary.
c. If construction or tree removal is proposed during the raptor nesting season, a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests in the project area. The survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of construction or tree removal.
d. If nesting raptors are found during the focused survey, no construction or tree removal will occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist).

Although impacts to nesting raptors were considered potentially significant based upon the scope of work of the original project, the proposed improvements for the Next Gen Project consist of minor modifications to an existing tower in a previously developed area with baseline anthropogenic disturbance. No trees will be removed. These improvements have very low likelihood of disturbing nesting raptors or otherwise adversely affect candidate, sensitive, or special-status wildlife species. Even so, due to proximity of tree cover to the site, Mitigation Measure BIO-2 will ensure that any potential impacts to nesting raptors are reduced to less-than-significant levels. No other activities are planned with the potential to harm other candidate, sensitive, or special-status wildlife species.

In summary, improvements within the Dollar Hill Site are limited to minor modifications to existing equipment in previously developed portions of the site with very low likelihood to impact special-

status wildlife species. No candidate, sensitive, or special-status plant species are present. With implementation of Mitigation Measure BIO-2 (see Site 8, Point Reyes Hill), impacts to candidate, sensitive, or special-status wildlife species will be ***less than significant with mitigation incorporated***.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Dollar Hill Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The majority of the site is developed as approved in the project's EIR, and consists of an existing MERA facility with two buildings with existing communications equipment and a gravel access road. The site is flanked on both sides by non-native annual grassland and coast live oak (*Quercus agrifolia*) woodland. Coast live oak woodland is reported by the CDFW with a rarity ranking of G5, S4 (CNPS 2018a), indicating that it is globally secure, and apparently secure in California. However, certain statewide policies such as the Oak Woodlands Conservation Act consider all native oak woodlands as sensitive regardless of rarity; consequently, for consistency, coast live oak woodland is considered a sensitive natural community in this analysis.

The original EIR had previously determined that initial project construction may have an adverse impact on biological resources, which included the potential to damage surrounding oak woodland habitat. However, these potential impacts were mitigated to less-than-significant levels during project construction by the implementation of Mitigation Measure – Dollar Hill Site BIO-7, which is described below:

<u>Previous Mitigation Measure Dollar Hill BIO-7</u>

a. Prior to project activity, temporary fencing shall be placed around the dripline of mature oaks in the immediate vicinity of the Dollar Hill Site. No vehicles or materials shall be stored or parked inside this fencing. Silt-fencing shall be installed if any excavation or soil disturbance that could impact the oaks results from construction.

Although the original project required mitigation for potential impacts to coast live oak woodland, Next Gen Project upgrades are limited to minor modifications to the existing equipment and structures located within previously developed areas. No vegetation removal is proposed, and the proposed improvements would have ***no impact*** on coast live oak woodland or other sensitive biological communities, including federally protected wetlands.

d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?*

This site is located in a previously developed area within a broad expanse of open space which represent core habitat areas for wildlife species. The proposed improvements are limited to upgrades to existing facilities, and are not anticipated to significantly impede wildlife movement

compared to existing conditions. In addition, the site is not a nursery site for native wildlife. Consequently, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Dollar Hill Site is located within the footprint of an existing MERA facility. Project improvements are limited to minor modifications to existing equipment in previously developed portions of the site and would not have any adverse impact on locally-protected biological resources. Proposed changes at the Dollar Hill Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Dollar Hill Site is located in the City of San Rafael, and not within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, nor the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect; As a result, there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Dollar Hill (Site 10) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 21, 2018, SiteSafe surveyed the Dollar Hill Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 17 locations at the Dollar Hill Site. The highest emissions recorded during this process were below FCC MPE limits, at approximately 2% of the occupational limit and 10% of the public limit. The maximum recorded value at 15 of 17 locations was below 2% of the occupational threshold, with the remaining two locations' maximum values at 2% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the Dollar Hill Site is 71.7% of the public MPE limit.

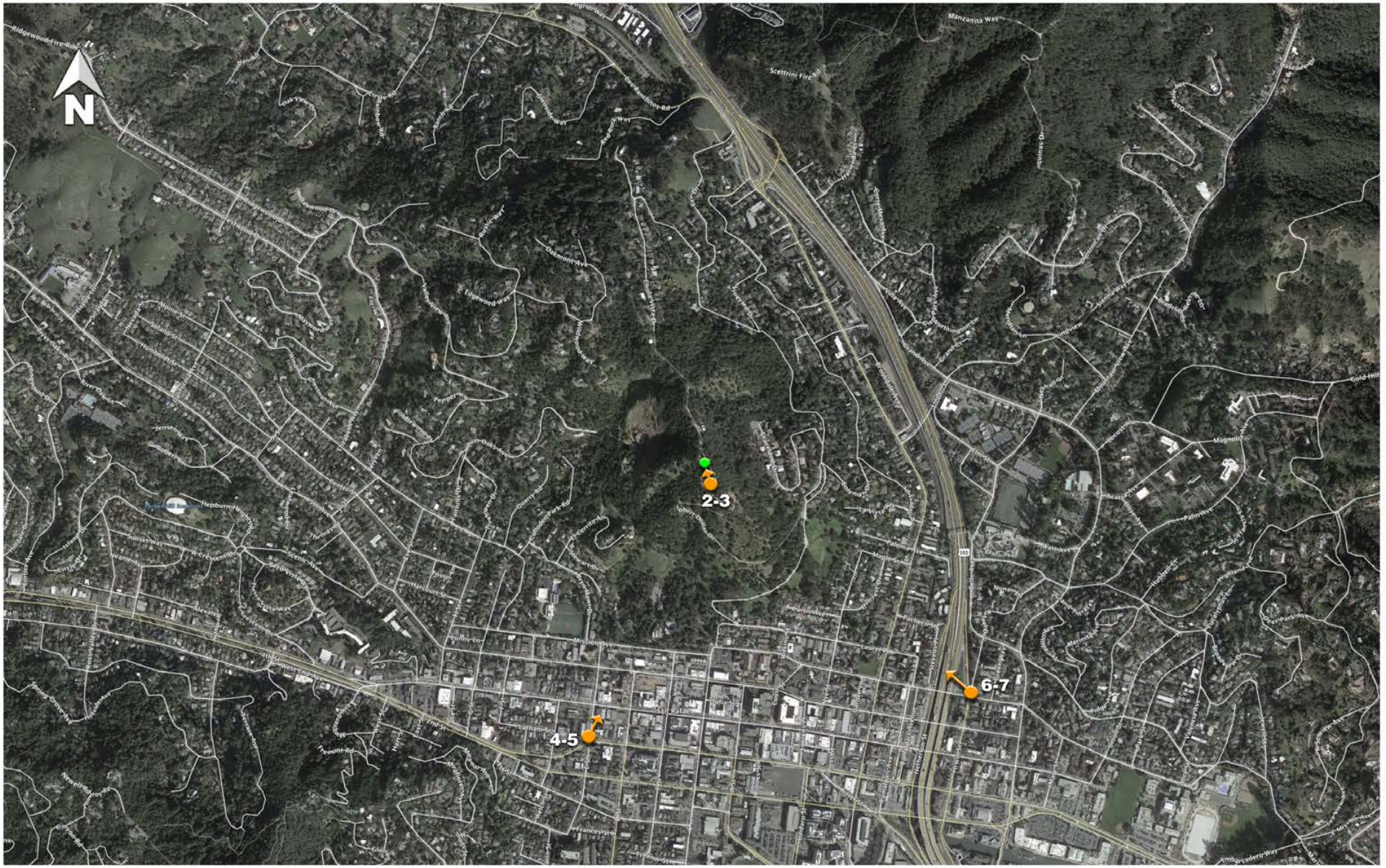
b) Figure V.G-9 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Dollar Hill Site, there would be 35 antennas capable of operating at one time during the transition period (for a full inventory, see Page 144 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum ground-level exposure of 73.7% of the public MPE limit in controlled areas. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum ground-level exposure in controlled-access areas, which are contained behind a fence which precludes public access, would remain at 73.7% of the public MPE limit. Uncontrolled areas accessible to the public, however, would produce a theoretical maximum of 35.1% of the public MPE limit. Based on these measurements and the site's layout and signage (depicted in Chapter III, Project Description), SiteSafe concluded that all facilities at the Dollar Hill Site are compliant with FCC regulations.

In summary, MERA's operations at the Dollar Hill Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments and would remain less than 100% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Dollar Hill Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.G - 1 Dollar Hill Aerial with Photo Locations

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Current photograph of the view looking north from the access road along the hilltop.

Source: Previsualists Inc.

Figure V.G - 2 Existing Dollar Hill Near View

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Photosimulation of the view looking north from the access road along the hilltop.

Source: Previsualists Inc.

Figure V.G - 3 Proposed Dollar Hill Near View

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Current photograph of the view looking north from downtown San Rafael.

Source: Previsualists Inc.

Figure V.G - 4 Existing Dollar Hill from Downtown San Rafael

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Photosimulation of the view looking north from downtown San Rafael.

Source: Previsualists Inc.

Figure V.G - 5 Proposed Dollar Hill from Downtown San Rafael

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Current photograph of the view looking northwest from the onramp to Hwy 101 at Mission Ave. (to match 1999 EIR viewpoint)

Source: Previsualists Inc.

Figure V.G - 6 Existing Dollar Hill from the Hwy 101 onramp.

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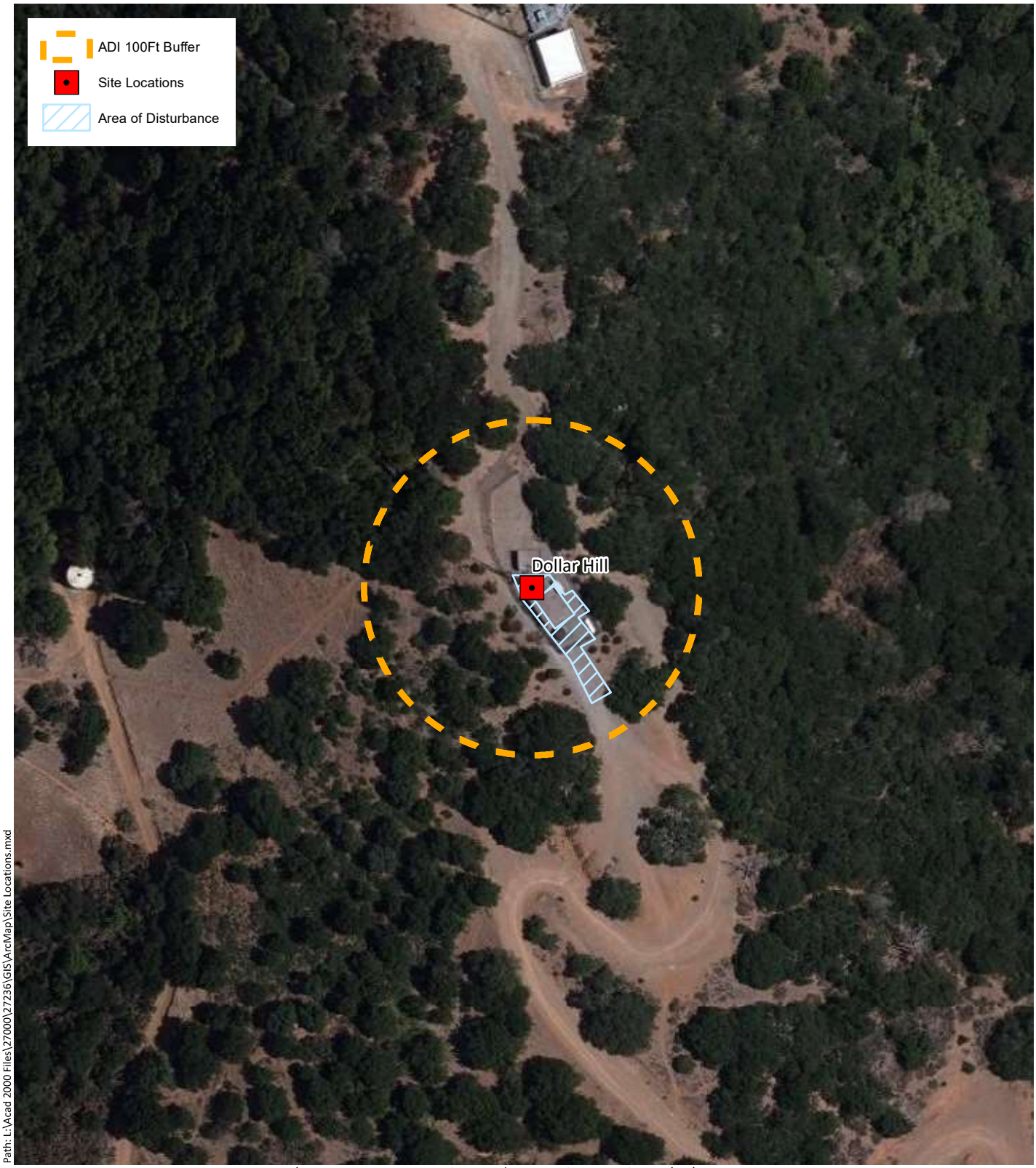


Photosimulation of the view looking northwest from the onramp to Hwy 101 at Mission Ave. (to match 1999 EIR viewpoint)

Source: Previsualists Inc.

Figure V.G - 7 Proposed Dollar Hill from the Hwy 101 onramp.

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.G - 8 Dollar Hill

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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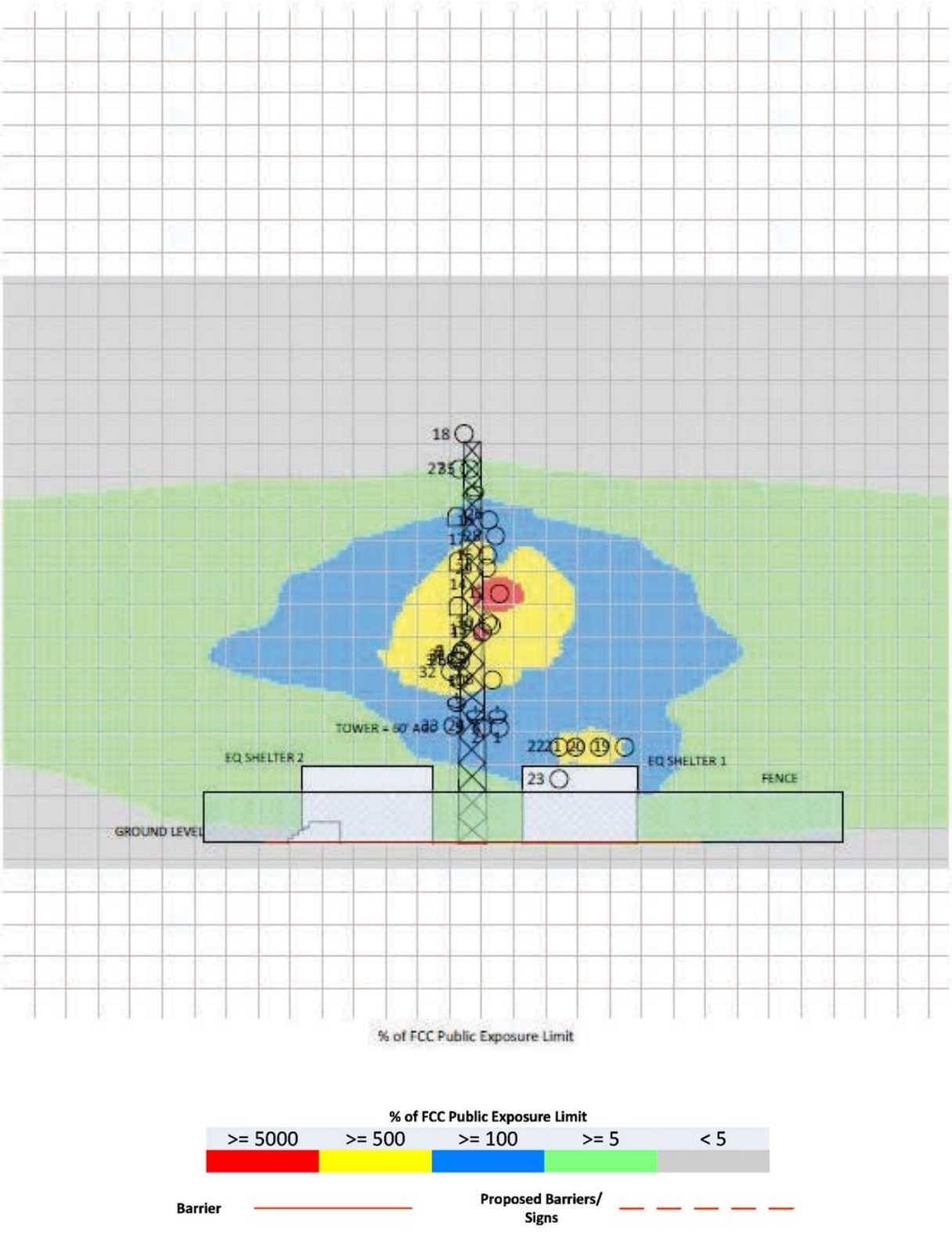


Figure V.G - 9 Dollar Hill Simulated All-On RF Exposure - Elevation View

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H. San Pedro Ridge (Site 11)

Details of the proposed work for the Next Gen System at the San Pedro Ridge Site are explained in Chapter III, the Project Description. In summary, the project proposals include minor modifications of existing communications equipment and tower foundation reinforcement within a pre-existing telecommunications complex. San Pedro Ridge is situated on an otherwise undeveloped hillside that houses several private telecommunications facilities in addition to MERA facilities, as shown in Photo III-9 (Chapter III, Project Description). The site is located at 3000 Bay Hills Drive in San Rafael, near the intersection of Gold Hill Fire Road and Bayhills Drive.

MERA facilities at the San Pedro Ridge Site are bordered by Harry Barbier Memorial Park to the south, the Nike Middle Control Area SF-93C to the north, China Camp State Park to the east, and a small residential neighborhood to the west. The site is surrounded by dense vegetation on all sides, which provides a buffer between the San Pedro Ridge Site and adjacent land uses.

An estimated 15% of the visible components at the San Pedro Ridge Site would be owned by MERA after proposed project modifications. The site is privately owned. MERA leases space on the tower but owns its own emergency generator and propane fuel tank. Of the 52 existing antennas, three currently belong to MERA. Four additional antennas will be added, while three will be removed as described below in Table V-8. The proposed Next Gen modifications would result in 10% of the antennas being owned by MERA, and the generator and propane tank would bring the percentage of visual components owned by MERA to approximately 15%.

Table V–8. San Pedro Ridge Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
San Pedro Ridge	100' tall, 3 leg tower each with 12' face width. Existing concrete building 9' x 15' x 9'.	Propose minor equipment changes on existing tower. 2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed from existing tower. Reinforce existing tower foundation.

1. Aesthetics

There are several aesthetic resources present in the vicinity of the San Pedro Ridge Site. The site is located in the San Pedro Mountain Ridge and Upland Greenbelt Area (RUGA) and is an important aesthetic resource where ridgelines are typically protected. The site is surrounded on all sides by Harry A. Barbier Memorial Park, a City of San Rafael open space. San Pedro Mountain Open Space Preserve is adjacent to Harry A. Barbier to the northwest, and China Camp State Park is to the north and east.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided

as Figure V.H-1. Subsequent Figures V.H-2 through V.H-7 show the before and after conditions at the Point Reyes Hill Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista;

When viewed from southbound Highway 101, the forested slopes of San Pedro Ridge form an impressive backdrop to the Marin County Civic Center. The north-facing slopes of this preserve are heavily forested. Near the top are open patches of grasslands that are dotted with wildflowers each spring. The top of the ridge offers panoramic views of the San Pablo and San Francisco Bays, neighboring urban areas, rolling hills, and Highway 101. The ridgetop is publicly accessible but requires steep uphill climbs. Trails and fire roads throughout the area connect the three adjacent parks, making the ridgeline and its vistas accessible to recreationists visiting all three.

The existing communications facility on the site already has a substantial adverse effect on the scenic vistas available, and the proposed modifications are relatively minor in comparison. Proposed changes which would be visible to public onlookers are limited to minor equipment changes on the existing tower and net addition of one antenna. Given the minor nature of these changes, their visual impact on scenic vistas would be minimal, and the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

The San Pedro Ridge Site is near State Highway 101, which in this section is not eligible for designation as a state scenic highway. There is no potential to substantially damage scenic resources, including an historic building such as the Civic Center, near a state scenic highway and, therefore, there is ***no impact***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figure III-37 and III-38 Existing and Proposed Elevations and Site Plan respectively, show the physical changes at the site. San Pedro Mountain is relatively forested, limiting views of the project site. However, the existing 100- foot tower extends above the tree line, and is visible to San Rafael residents near the project site and visitors to Barbier Park. Other infrastructure on-site includes a perimeter fence and a 9-foot by 15-foot concrete building, but these are not visible from a distance. Only minor visual changes would result from the equipment changes on the tower. These changes would result in a net increase of one antenna and a four-foot increase in the tower's highest point, but these changes would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Consequently, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the San Pedro Ridge Site. Improvements proposed for this site include minor equipment changes on an existing tower and reinforcement of tower foundations. Ground disturbance would be limited to the vicinity of the tower foundations and would extend as deep as approximately 24 inches below ground level. Figure V.H-8 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the San Pedro Ridge Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures to follow in the event of the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the San Pedro Ridge Site, and impacts would ***be less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the San Pedro Ridge Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The San Pedro Ridge Site is a previously developed communications facility adjacent to coast live oak woodland. The proposed improvements consist of minor modifications to an existing tower in a previously developed area. Disturbance would be entirely limited to the already developed project site, which does not contain any suitable habitat for candidate, sensitive, and special-status species. Thus, these improvements would have ***no impact*** on candidate, sensitive, or special-status plant or wildlife species, either directly or through habitat modifications.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the San Pedro Ridge Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The site contains one existing concrete building in a fenced enclosure with existing communications equipment. There are no federally protected wetlands present at the San Pedro Ridge Site. Coast live oak woodland and forest is considered a sensitive natural community. Although the site is surrounded on all sides by coast live oak forest, the proposed site upgrades consist of minor modifications to existing facilities in a previously developed area. No vegetation removal is proposed, and the project would have ***no impact*** on sensitive biological communities, including federally protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that provides core habitat for wildlife species, this site is located in a previously developed area. The proposed improvements are limited to upgrades to existing facilities, and are not anticipated to significantly impede wildlife movement or impede the use of nursery sites compared to existing conditions. Therefore, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The San Pedro Ridge Site is located within an existing communications facility. Project improvements are limited to minor modifications to existing equipment in previously developed portions of the site and would not have any adverse impact on locally-protected biological resources. As a result, proposed changes at the San Pedro Ridge Site would not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The San Pedro Ridge Site is located in unincorporated Marin County. The San Pedro Ridge Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Consequently, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. Thus, there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the San Pedro Ridge Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 21, 2018, SiteSafe surveyed the San Pedro Ridge Site to inventory all transmitting antennas on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 22 locations at the San Pedro Ridge Site. The highest spatially averaged emissions recorded during this process were well below FCC MPE limits, at less than 1% of the occupational limit and less than 5% of the public limit. The maximum recorded value at all 22 locations was below 1% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

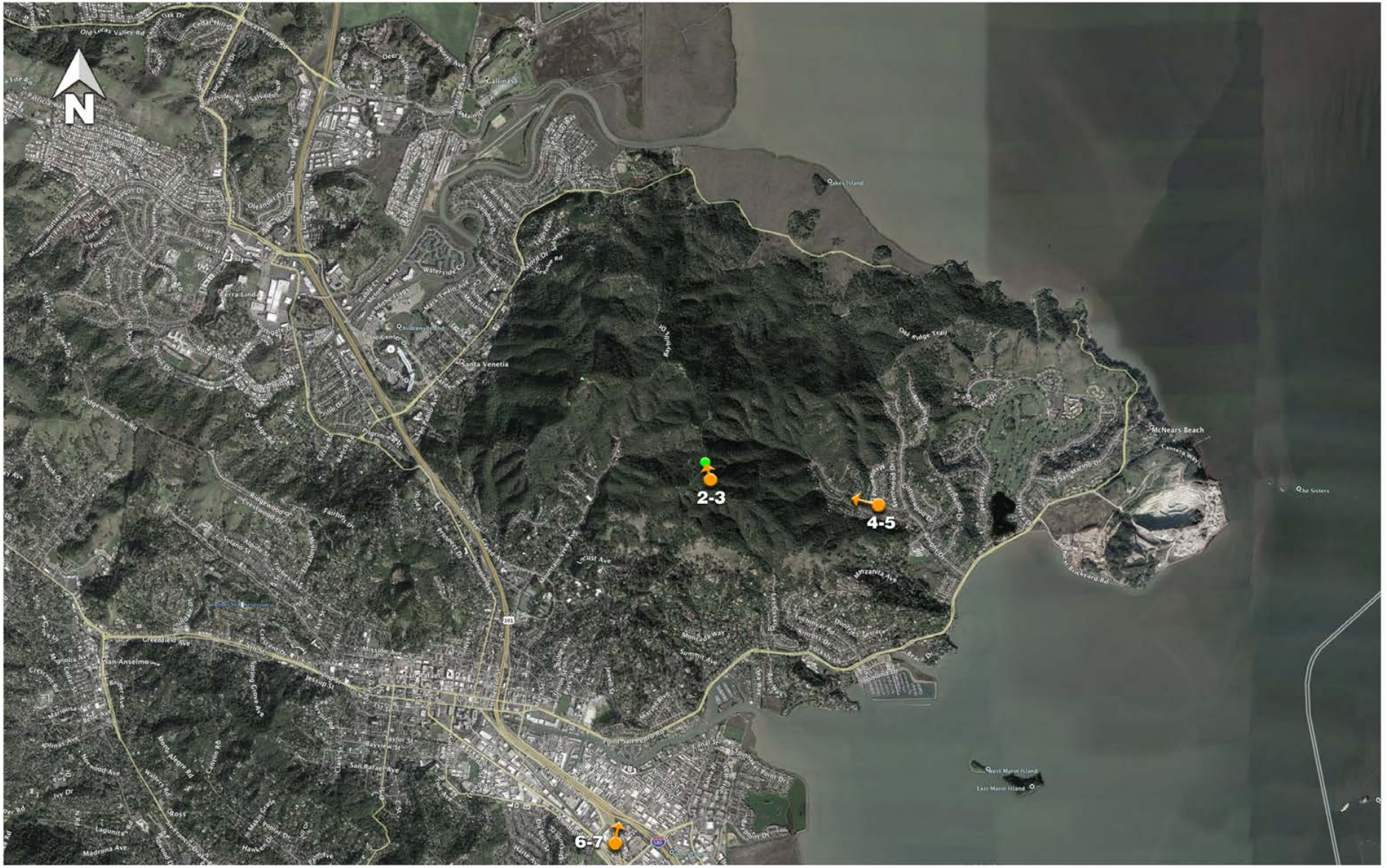
a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the San Pedro Ridge Site is 192.9% of the public MPE limit. This would occur at levels roughly ten feet or higher off the ground. Maximum theoretical ground-level exposures were modeled at less than 5% of the public MPE both within and outside of the controlled access, fenced off area.

b) Figure V.H-9 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the San Pedro Ridge Site, there would be 58 antennas capable of operating at one time during the transition period (for a full inventory, see Page 162 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum ground-level exposure of 192.9% of the public MPE limit in controlled-access areas, the same theoretical exposure level produced by existing conditions. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum exposure in controlled-access areas would remain at 192.9% of the public MPE limit. This would mostly occur at heights about 10 feet or higher off the ground – and maximum ground-level exposure within the controlled access area would be below 5% of the public MPE. Uncontrolled areas accessible to the public would also experience a theoretical maximum of less than 5% of the public MPE limit. Based on these measurements and the site's layout and signage (depicted in Chapter III, Project Description), SiteSafe concluded that all facilities at the San Pedro Site are compliant with FCC regulations, and that MERA need not take any corrective action or adopt additional mitigations.

In summary, MERA's operations at the San Pedro Ridge currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 5% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the San Pedro Ridge Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.H - 1 San Pedro Ridge Aerial with Photo Locations

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Current photograph of an elevated view looking north along the ridge.

Source: Previsualists Inc.

Figure V.H - 2 Existing San Pedro Ridge Near View

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Photosimulation of an elevated view looking north along the ridge.

Source: Previsualists Inc.

Figure V.H - 3 Proposed San Pedro Ridge Near View

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Current photograph of the view looking west from Robinhood Drive.

Source: Previsualists Inc.

Figure V.H - 4 Existing San Pedro Ridge from Peacock Gap

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Photosimulation of the view looking west from Robinhood Drive.

Source: Previsualists Inc.

Figure V.H - 5 Proposed San Pedro Ridge from Peacock Gap

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Current photograph of the view looking north from Hwy 101 near the 580 interchange. (to match 1999 EIR viewpoint)

Source: Previsualists Inc.

Figure V.H - 6 Existing San Pedro Ridge from Northbound 101

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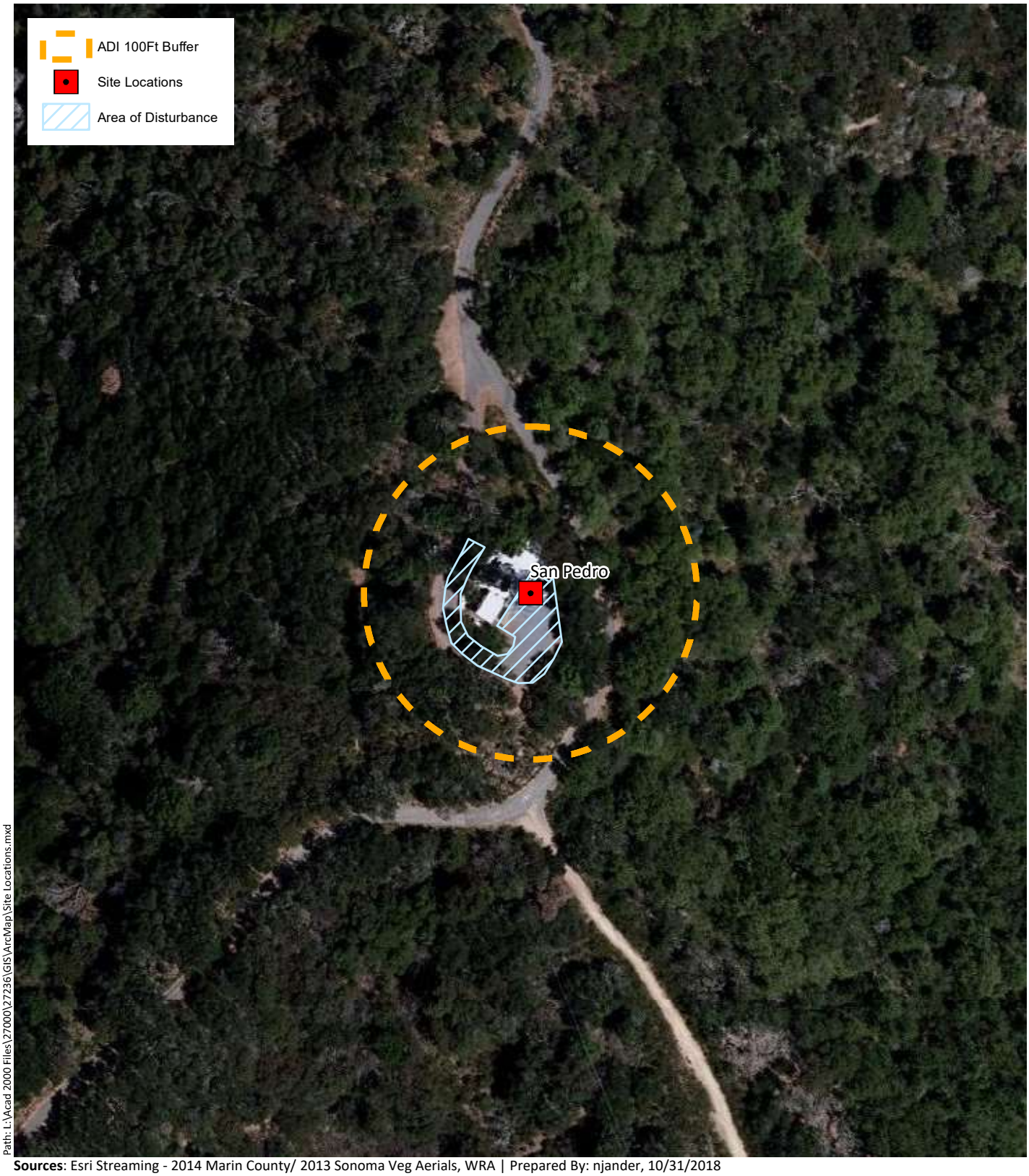


Photosimulation of the view looking north from Hwy 101 near the 580 interchange. (to match 1999 EIR viewpoint)

Source: Previsualists Inc.

Figure V.H - 7 Proposed San Pedro Ridge from Northbound 101

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.H - 8 San Pedro Ridge

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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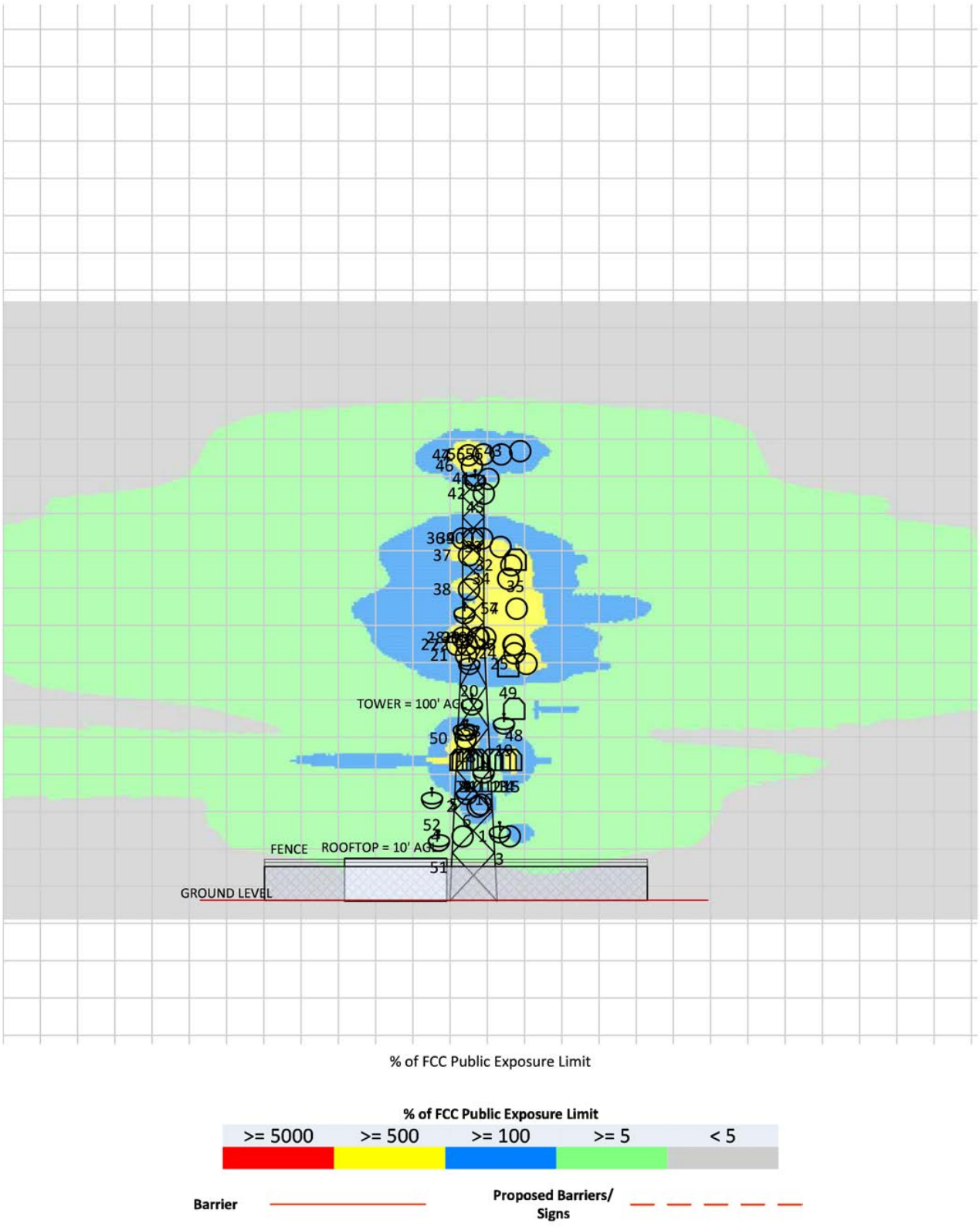


Figure V.H - 9 San Pedro Ridge Simulated All-On RF Exposure - Elevation View

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I. Mt. Tiburon (Site 14)

The Mt. Tiburon Site is within a Marin Municipal Water District (MMWD) compound at the end of a cul-de-sac on Mt. Tiburon Road, as shown in Photo III-10 (Chapter III, Project Description). The existing communications site is located within a large-lot, single-family residential development, and is separated from homes on the west by a row of trees and in all other directions by open space. The Mt. Tiburon Site is located in the Town of Tiburon.

Details of the proposed Next Gen System at the Mt. Tiburon Site are explained in Chapter III, the Project Description. In summary, the proposed work includes minor modifications to existing communications equipment and tower foundation reinforcements as described below in Table V-9. At the Mt. Tiburon Site, 100% of the communications equipment is currently owned by MERA, while the two large water tanks are owned by MMWD.

Table V–9. Mt. Tiburon Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Mt. Tiburon	Existing 60' tall monopole and another 22' tall monopole. Existing equipment shelter and generator. Two 50’ diameter water tanks and MMWD equipment shelter	Propose minor equipment changes on existing towers. 2 microwave dishes and 4 antennas added, 2 microwave dishes and 3 antennas removed. Reinforce existing tower foundations and replace existing HVAC in existing shelter.

1. Aesthetics

The Mt. Tiburon Site is located in a residential neighborhood in the Town of Tiburon, immediately adjacent to the Mt. Tiburon Subdivision Open Space. Within one-half mile of the Mt. Tiburon Site, there are eight other open spaces, as well as Paradise Beach Park and Tiburon Uplands Nature Preserve. The site is located just outside the Marin County-designated Tiburon Ridge and Upland Greenbelt Area (RUGA), which is a densely vegetated and largely undeveloped ridge.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.I-1. Subsequent Figures V.I-2 through V.I-7 show the anticipated before and after conditions at the Mt. Tiburon Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista;

The existing Mt. Tiburon Site has two large water tanks, two existing MERA monopoles and an equipment shelter. It is located near public open spaces and private single-family residences, although its visibility to recreationists and area residents is limited by a thick buffer of conifer trees

surrounding the site. In addition, all facilities are painted green to blend with the conifer trees. Few views are available from the site, although the nearby open space does provide views of neighboring residential communities, rolling hills, and Richardson Bay.

The existing communications facility and the MMWD water tank already on the site have an adverse effect on any scenic vistas that may have been available prior to their presence. The proposed modifications are minor in comparison to the existing facilities, and, consequently, the potential for the project to have a substantial adverse effect on a scenic vista is ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

The project has no potential to adversely affect scenic resources within a state scenic highway given that there are no scenic highways nearby and, therefore, there is ***no impact***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figures III-39 and III-40, Existing and Proposed Elevations and Site Plan respectively, show the physical changes at the site. Current features include a large water tank, a 22-foot monopole, an emergency generator, a fuel tank, and an equipment shelter, which are not visible above the tree line. Additionally, a 60-foot monopole reaches a maximum height of 70 feet with antennas, and extends above the tree line. The monopole is painted green to blend in with the surrounding tree canopy. Proposed changes resulting from minor equipment changes on the tower would result in a net increase of one antenna at the top of the tower and an overall height decrease of the tower's maximum height by roughly one-and-a-half feet. As a result, the project's potential to substantially degrade the existing visual character or quality of public views of the site and its surroundings is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Mt. Tiburon Site. Improvements proposed for this site include minor equipment modifications on an existing tower, reinforcement of the tower's foundation, and equipment replacement within an existing equipment shelter. Ground disturbance would be limited to the vicinity of the tower foundations and would extend as deep as approximately 24 inches below ground level. Figure V.I-8 shows the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Mt. Tiburon Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Mt. Tiburon Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Mt. Tiburon Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource designated by the lead agency, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Mt. Tiburon Site is a previously developed facility surrounded on its perimeter by a stand of non-native Monterey pine trees and ruderal herbaceous vegetation. Although the site is completely developed and previously disturbed, the Mt. Tiburon Site is in close proximity to four special-status plant species including Tiburon paintbrush (*Castilleja affinis* var. *neglecta*), Tiburon buckwheat (*Eriogonum luteolum* var. *caninum*), Tiburon jewelflower (*Streptanthus glandulosus* ssp. *niger*), and Marin western flax (*Hesperolinon congestum*). These species are all closely associated with serpentine substrates not present within the Mt. Tiburon Site and were all initially assessed as unlikely to occur. However, due to the close proximity of these species (within

approximately 0.3 miles of the site), a focused protocol-level rare plant survey was conducted for these species within the site on June 12, 2018, as a conservative measure.

All the aforementioned target species were observed in full bloom at a documented reference site on Gilmartin Drive, approximately 0.3 mile west of the study area. However, these species were not observed within the study area, nor were any other candidate, sensitive, or special-status plant species observed within the study area. Consequently, proposed improvements that consist of minor modifications to existing equipment and structures in a previously developed area would have ***no impact*** on candidate, sensitive, or special-status plant species.

The stand of non-native Monterey pine trees that surround the site may support native nesting birds, including raptors and Allen's hummingbird. Although proposed improvements consist of only minor modifications to existing equipment and structures in a previously developed area, due to the close proximity of tree cover there is some potential for construction activities to disturb nesting birds. Implementation of Mitigation Measure BIO-2 will ensure these impacts are less than significant. No other activities are planned with the potential to harm other candidate, sensitive, or special-status wildlife species.

In summary, improvements within the Mt. Tiburon Site are limited to minor modifications to existing equipment in previously developed portions of the site with very low likelihood to impact special-status wildlife species. No candidate, sensitive, or special-status plant species are present. With implementation of Mitigation Measure BIO-2 (see Site 8, Point Reyes Hill), impacts to all candidate, sensitive, or special-status species will be ***less than significant with mitigation incorporated***.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The Mt. Tiburon Site is an existing MERA facility analyzed in the original EIR, and the EIR determined that no sensitive biological communities were present, such that the proposed improvements would have no impact on biological resources. Conditions have not changed significantly since the site was analyzed in the EIR with respect to sensitive biological resources, with the exception of the growth of established Monterey pine trees surrounding the site. No sensitive biological communities are present, including federally protected wetlands, and site upgrades consist of minor modifications to existing facilities in a previously developed area. Consequently, the project would have ***no impact*** on sensitive biological communities or federally protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This site is located in a previously developed area surrounded on one or more sides by suburban residential development, and associated roads and hardscapes which do not represent core habitat areas nor vital habitat corridors for wildlife species. The proposed improvements are

limited to upgrades to existing facilities and are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a nursery site for native wildlife. Therefore, the project will have ***no impact*** on wildlife movement corridors and nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Mt. Tiburon Site is located within an existing developed facility. Project improvements are limited to minor modifications to existing equipment in previously developed portions of the site and would not have any adverse impact on locally-protected biological resources. As a result, proposed changes at the Mt. Tiburon Site would not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of these questions are addressed for the MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies is provided to address:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Mt. Tiburon Site is located in unincorporated Marin County. The Mt. Tiburon Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect; there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Mt. Tiburon Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. SiteSafe used an inventory and diagrams of existing and proposed infrastructure at the site to calculate existing electromagnetic emissions levels relative to Maximum Permissible Exposure (MPE) limits and make a determination regarding the site's current compliance with applicable RF regulations.

SiteSafe modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical

worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) Modeled RF emissions at the Mt. Tiburon Site predict that the highest emissions of the site are on the tops of water tanks, which are not accessible to the public. The theoretical maximum exposure produced by the existing condition at the Mt. Tiburon Site is 9.3% of the public MPE limit.

b) Figure V.I-9 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Mt. Tiburon Site, there would be 11 antennas capable of operating at one time during the transition period (for a full inventory, see Page 179 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a theoretical maximum exposure of 10.1% of the public MPE limit in controlled-access areas. Such emissions would occur high off the ground. Maximum ground-level exposure would be less than 5% of the public MPE both within and outside of the controlled-access, fenced off area. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum ground-level exposure in controlled areas would decline to 2.2% of the public MPE limit. Uncontrolled areas accessible to the public would produce a theoretical maximum of less than 5% of the public MPE limit. Based on these models and the site's layout and signage (depicted in Chapter III, Project Description), SiteSafe concluded that all facilities at the Mt. Tiburon Site are compliant with FCC regulations and that MERA need not take any corrective action.

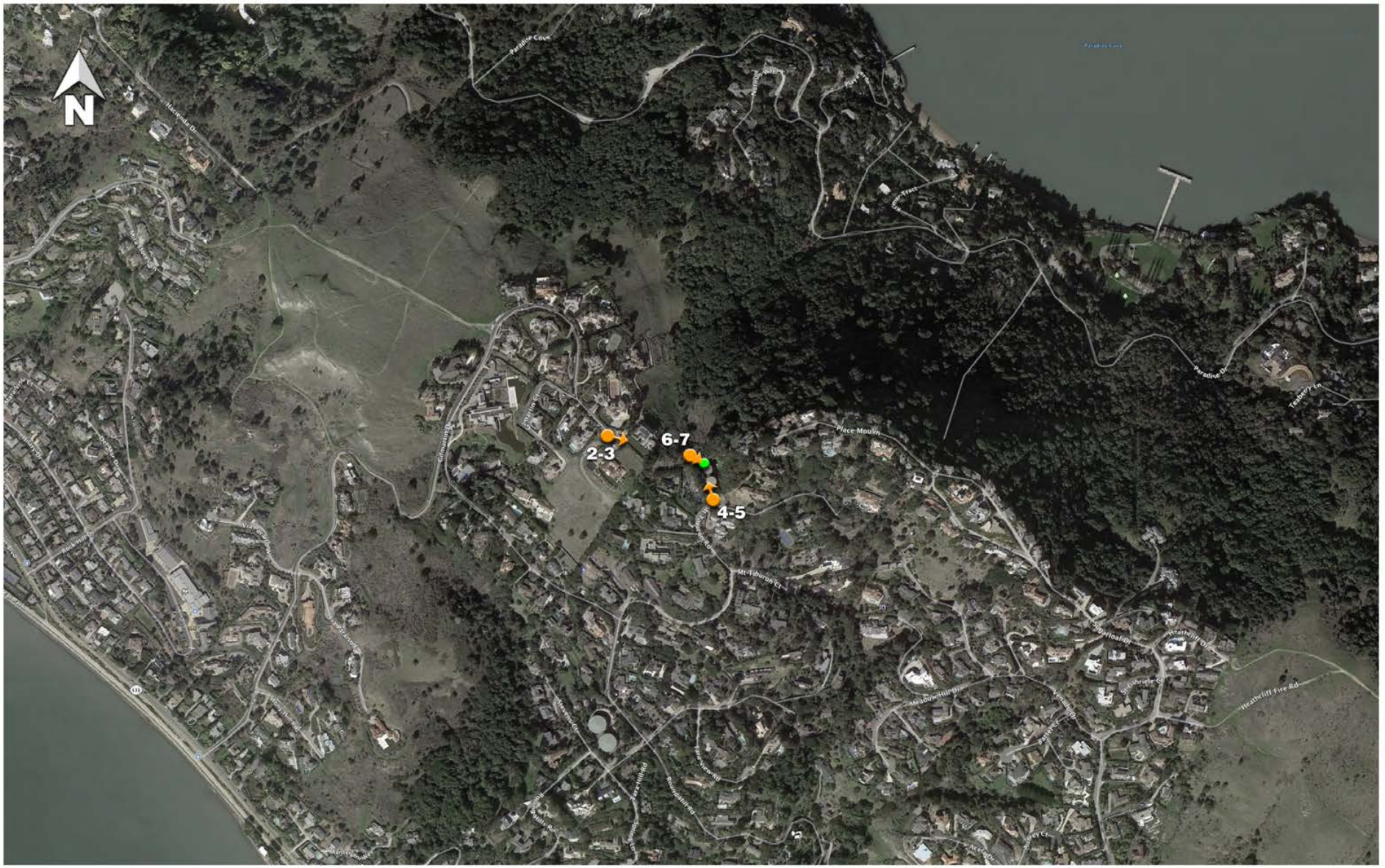
In summary, MERA's operations at the Mt. Tiburon Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 5% of the MPE limit.

However, Based on SiteSafe measurements and models, as well as the site's layout and signage, SiteSafe concluded that controlled access areas on top of the water tank near the monopole should be noticed. This is because within specific controlled access areas on top of the water tank nearest the monopole, RF emissions could exceed 100% of the MPE limits during the transition phase and upon completion of the proposed project. The controlled access top of the water tank area would be brought into compliance with applicable FCC regulations by posting warning signage at the base of the tank ladder and at selected antenna mounts. Mitigation Measure RF-3 below requires the posting of such signage. As a result, controlled/ occupational area RF exposure impacts at the Tiburon Water Tank site during all stages of the project would be less than significant with mitigation incorporated.

Mitigation Measure RF-3

MERA shall install an exposure warning sign at selected locations in the controlled access rooftop area according to SiteSafe's individual report for the Mt. Tiburon Site (pages 172-183 of the SiteSafe Report, which is Appendix D to the SEIR) and the SiteSafe Report's General Safety Recommendations (pages 313-315 of Appendix D to the SEIR). In Summary, MERA shall install a NOTICE sign at the access of the water tank. Signage location details can be viewed on page 178 of Appendix D to the SEIR.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.I - 1 Mt. Tiburon Aerial with Photo Locations

MERA Next Generation Communications System SEIR

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Current photograph of the view looking southeast from the terminus of Gilmartin Drive.

Source: Previsualists Inc.

Figure V.I - 2 Existing Mt. Tiburon Neighborhood View

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Photosimulation of the view looking southeast from the terminus of Gilmartin Drive.

Source: Previsualists Inc.

Figure V.I - 3 Proposed Mt. Tiburon Neighborhood View

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Current photograph of the view looking north from Mt Tiburon Road.

Source: Previsualists Inc.

Figure V.I - 4 Existing Mt. Tiburon Road View

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Photosimulation of the view looking north from Mt Tiburon Road.

Source: Previsualists Inc.

Figure V.I - 5 Proposed Mt. Tiburon Road View

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Current photograph of the view looking east from the adjacent parcel, near the public hiking trail.

Source: Previsualists Inc.

Figure V.I - 6 Existing View from Mt. Tiburon Ridge Trail

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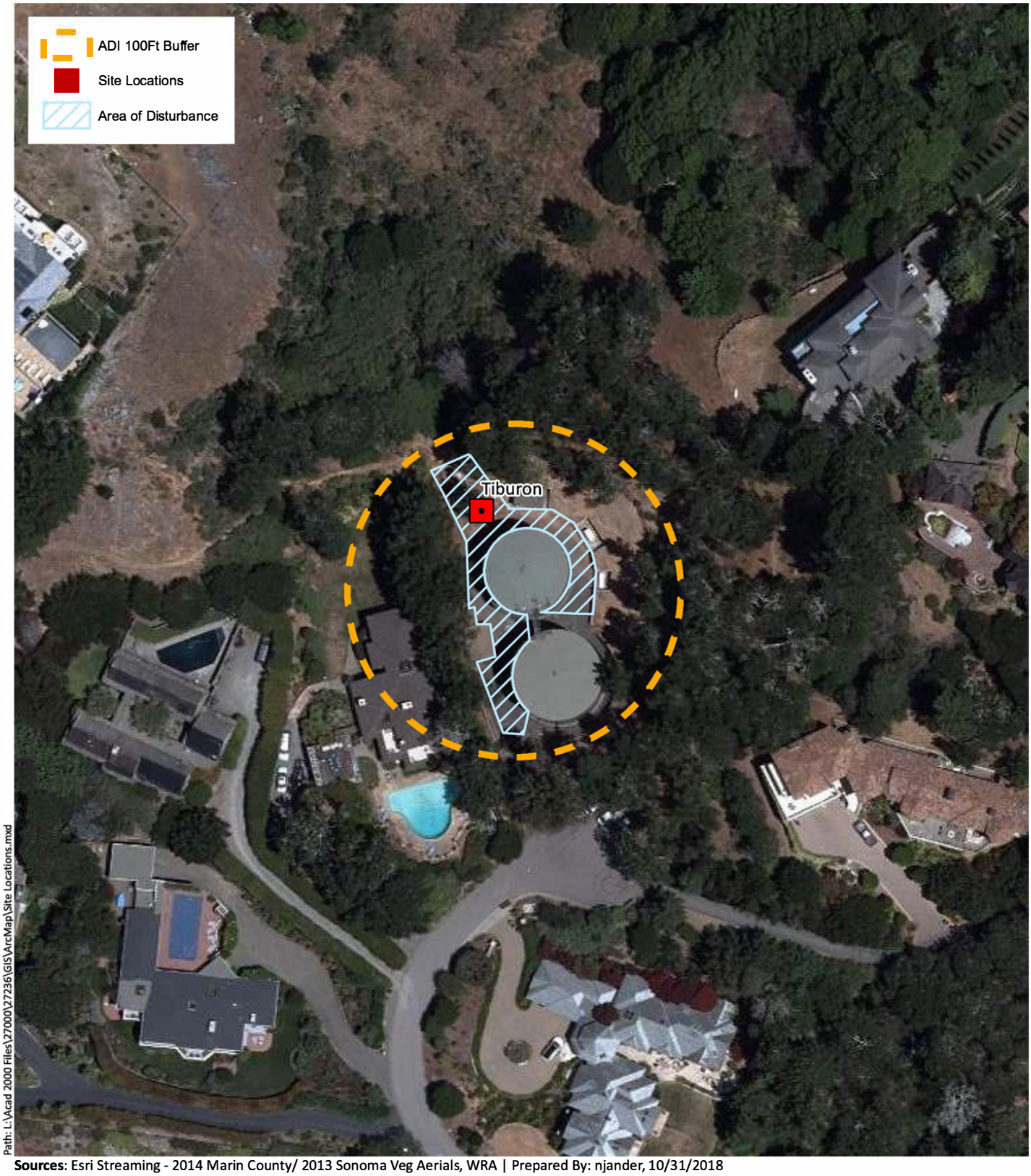


Photosimulation of the view looking east from the adjacent parcel, near the public hiking trail.

Source: Previsualists Inc.

Figure V.I - 7 Proposed View from Mt. Tiburon Ridge Trail

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.I - 8 Mt. Tiburon

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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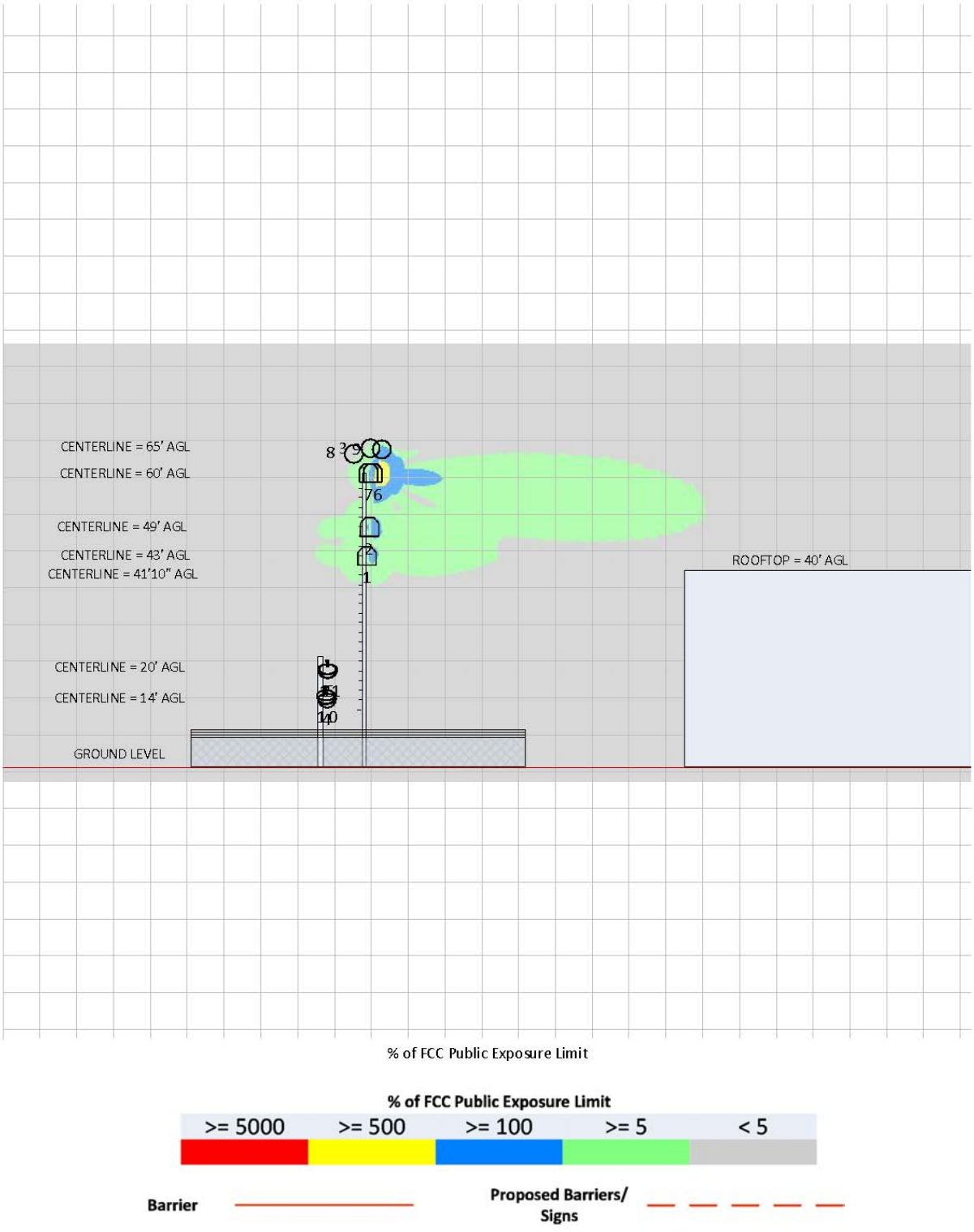


Figure V.I - 9 Mt. Tiburon Simulated All-On RF Exposure - Elevation View

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J. Sonoma Mountain (Site 18)

The Sonoma Mountain Site is an existing communications complex just northwest of the Sonoma Mountain Peak on a grassy, elevated area. The site houses extensive communications infrastructure for Sonoma County and several private entities. Consequently, it is estimated that less than 5% of the visible components at the site would be owned by MERA after proposed project modifications. The prominent feature of the site is a 185-foot lattice tower. The land is owned by Sonoma County, and MERA previously added a 40-foot tower, equipment shelter, emergency generator, and propane fuel tank.

The Next Gen System would add two dishes to the existing 40-foot microwave tower, which already has 32 antennas. The 185-foot tower has 39 antennas, none of which belong to MERA. The Sonoma Mountain Site also includes three other towers ranging in height from approximately 40 feet to 185 feet; each of these towers also include dishes, a shelter, and a propane tank. All of the towers and ancillary facilities at this site are surrounded by chain link fences, and the two 185-foot towers are clearly visible from various off-site locations (Figures V.J-2, V.J-4, and V.J-6). Details of the proposed work for the Next Gen System at the Sonoma Mountain Site are summarized in Table V-10 below and detailed in Chapter III, Project Description. A photo of the existing site is shown in Photo III-11.

The area surrounding this site is rural, with large-lot single-family homes scattered throughout a vegetated landscape. Jack London State Historic Park borders the Sonoma Mountain Site to the east, and its extensive series of hiking trails provide access to the fence line of the site.

Table V–10. Sonoma Mountain Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Sonoma Mountain	Hill top site with 3 buildings and two towers. 185' tower is 3-legged guyed lattice with 20" face. 40' microwave tower has 3 legs, w/ face width of 12'.	Propose minor additions to equipment on existing 40’ microwave tower. 2 microwave dishes added.

1. Aesthetics

Aesthetic resources in the vicinity of the Sonoma Mountain Site include the various parks and preserves in the region. The site is located within a planned expansion of North Sonoma Mountain Regional Park, which is adjacent to Fairfield Osborn Preserve and Jack London Ranch State Park. These parks contain portions of the Bay Area Ridge Trail, in addition to other recreational, public access trails. Popular vista points within the parks include the Bennett Valley Overlook and the State Park Summit. The project site is not visible from either of these vistas due to the region’s topography and the parks’ vegetation.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.J-1. Subsequent Figures V.J-2 through V.J-7 show the anticipated before and after conditions at the Sonoma Mountain Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista;

Views from the Sonoma Mountain Site are extensive and include hills, mountains, San Pablo Bay, and broad agricultural areas. The Sonoma Mountain Site, however, is an existing large regional communications facility as seen in Figures V.J-2 and V.J-3. Next Gen modifications represent less than 5% of the visible equipment at the site, including minor modifications to equipment on an existing tower and addition to two microwave dishes, so proposed changes to the existing equipment are minor. The facility already has an adverse effect on scenic vistas available, and the proposed modifications are relatively minor in comparison and would not be easily perceptible to a casual onlooker. Therefore, the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

Facilities on the Sonoma Mountain Site are visible, though indistinct, from both the Sonoma and Petaluma Valleys. Highway 12 in Sonoma Valley is a designated state scenic highway, and the closest view of the site is from approximately 3 ½ miles away. Figures V.J-6 and V.J-7 show the anticipated views before and after the project, and no changes are visible from that distance. Highway 101 in Sonoma County is also eligible as a state scenic highway, and the closest views of the site is from approximately 7 ½ miles away. Bennett Valley Road to the north is locally acknowledged as a scenic drive, and the taller towers are plainly visible from approximately 3 miles away, as seen in Figures V.J-4 and V.J-5. However, the changes proposed by the project are not visible from this perspective. Since it is difficult to discern the proposed project modifications from any nearby scenic highway, the project's potential to substantially damage scenic resources within a state scenic highway are ***less than significant***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Views of equipment at the project site are mostly limited to the immediate surroundings and nearby open or clear-cut areas of Sonoma Mountain. The site itself is not currently publicly accessible as all of the towers and ancillary facilities at this site are surrounded by chain link fences, but the nearby open space is planned for annexation into Sonoma Mountain Regional Park. Annexation would make public views near the fence potentially available to future park-goers.

Figure III-41 and III-42, Existing and Proposed Elevations and Site Plan respectively, show the physical changes at the site. The overall changes are minor and include the addition of two microwave dishes to the 40-foot tower. As a result, the project's potential to substantially degrade the existing visual character or quality of public views of the site and its surroundings is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Sonoma Mountain Site. Improvements proposed for this site include minor equipment additions on an existing tower (see Figure V.J-8 for the Area of Direct Impact and a surrounding 100-foot buffer). No sub-surface ground disturbance would occur, so no new historical resources would be accidentally unearthed during ground disturbing activities. As there are no known historical resources present and there is no possibility of accidental discovery, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Sonoma Mountain Site, and ***no impact*** would occur.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018, and concluded on February 8, 2019. FIGR identified potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Sonoma Mountain Site was among these sites. However, as noted above, no ground disturbance is required to add MERA facilities to this site. By implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Sonoma Mountain Site is located within a developed area adjacent to relatively disturbed grassland which provides only marginal habitat for candidate, sensitive, or special-status plant and wildlife species. The proposed improvements consist of minor modifications to an existing tower in a previously developed area and would have ***no impact*** on candidate, sensitive, or special-status species.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Sonoma Mountain Site were analyzed in Chapter V of the project's original EIR (MERA, 2000). The site is a previously developed communications facility adjacent to disturbed, grazed, non-native annual grassland habitat that supports a low diversity of plant and wildlife species. The EIR determined that no sensitive biological communities were present, and the proposed improvements would have less-than-significant impacts on biological resources. Conditions have not changed significantly since the site was analyzed in the EIR. No sensitive biological communities or federally protected wetlands are present, and the proposed project work would have ***no impact*** on sensitive biological communities and wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

Although within a broad expanse of open space that provides core habitat for wildlife species, this site is located in a previously developed area. The proposed improvements are limited to upgrades to existing facilities and are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a native wildlife nursery site. Consequently, the project will have ***no impact*** on wildlife movement corridors and nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Sonoma Mountain Site is located within an existing communications facility. Project improvements are limited to minor modifications to existing equipment in previously developed portions of the site and would not have any adverse impact on locally-protected biological resources. Proposed changes at the Sonoma Mountain Site would, therefore, not conflict with any local policies or ordinances protecting biological resources; thus, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of all three questions are addressed for the entire MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Sonoma Mountain Site is located in unincorporated Sonoma County. It is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect; there would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Sonoma Mountain Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 21, 2018, SiteSafe surveyed the Sonoma Mountain Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 26 locations at the Sonoma Mountain Site. The highest emissions recorded during this process were below FCC MPE limits, at less than 1% of the occupational limit and less than 5% of the public limit. The maximum recorded value at all 26 locations was below 1% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the Sonoma Mountain Site is 9,765.9% of the public MPE limit. Such a condition could theoretically occur over 10 feet off the ground within the fenced-off,

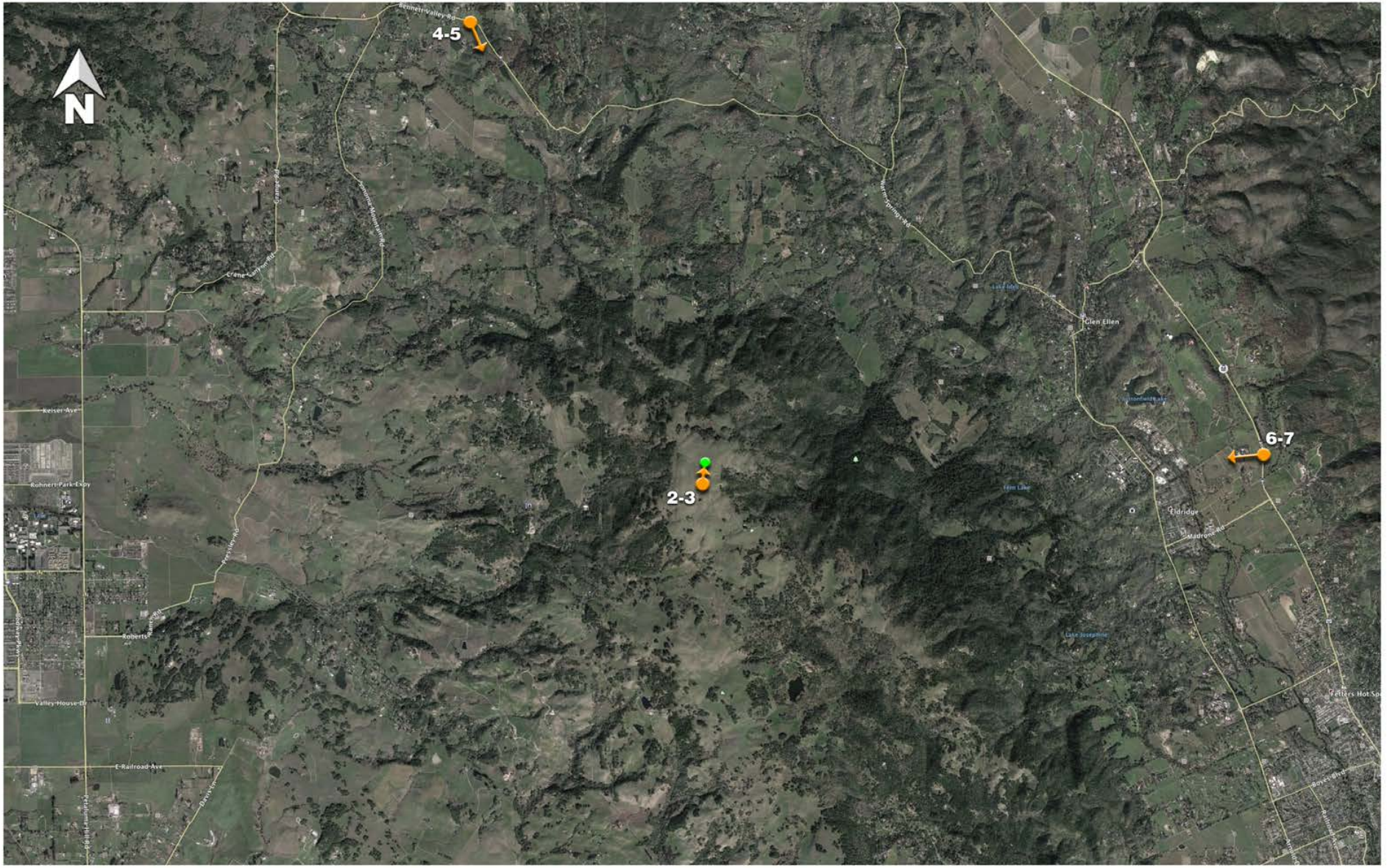
controlled access area encompassing the equipment and its surroundings. Maximum ground level exposure within the fenced off enclosure is currently less than 100% of the public MPE. Outside of the fenced off area, maximum ground-level exposure is less than 5% of the public MPE.

b) Figure V.J-9 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Sonoma Mountain Site, there would be 73 antennas capable of operating at one time during the transition period (for a full inventory, see Page 192 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would cumulatively create a maximum rooftop-level exposure of 9,765.9% of the public MPE limit in a very small and well-defined controlled-access areas. The locations on the rooftop of the three buildings present are inaccessible to the public, and ground-level exposures are all below 100% of the public MPE limit. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, currently installed equipment that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum controlled-area rooftop-level exposure would remain at 9,765.9% of the public MPE limit. Ground-level exposure faced by workers would remain less than 100% of the public MPE, and uncontrolled areas outside of the fenced-off enclosure that are accessible to the public would experience a theoretical maximum ground-level exposure of less than 5% of the public MPE limit. Based on these measurements and the site's layout and signage, SiteSafe found that all facilities at the Sonoma Mountain Site are in compliance with FCC regulations and that MERA need not take any corrective action.

In summary, MERA's operations at the Sonoma Mountain Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during the transition phase and upon completion of the proposed project. The ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Sonoma Mountain Site would be ***less than significant***. No mitigation is required.



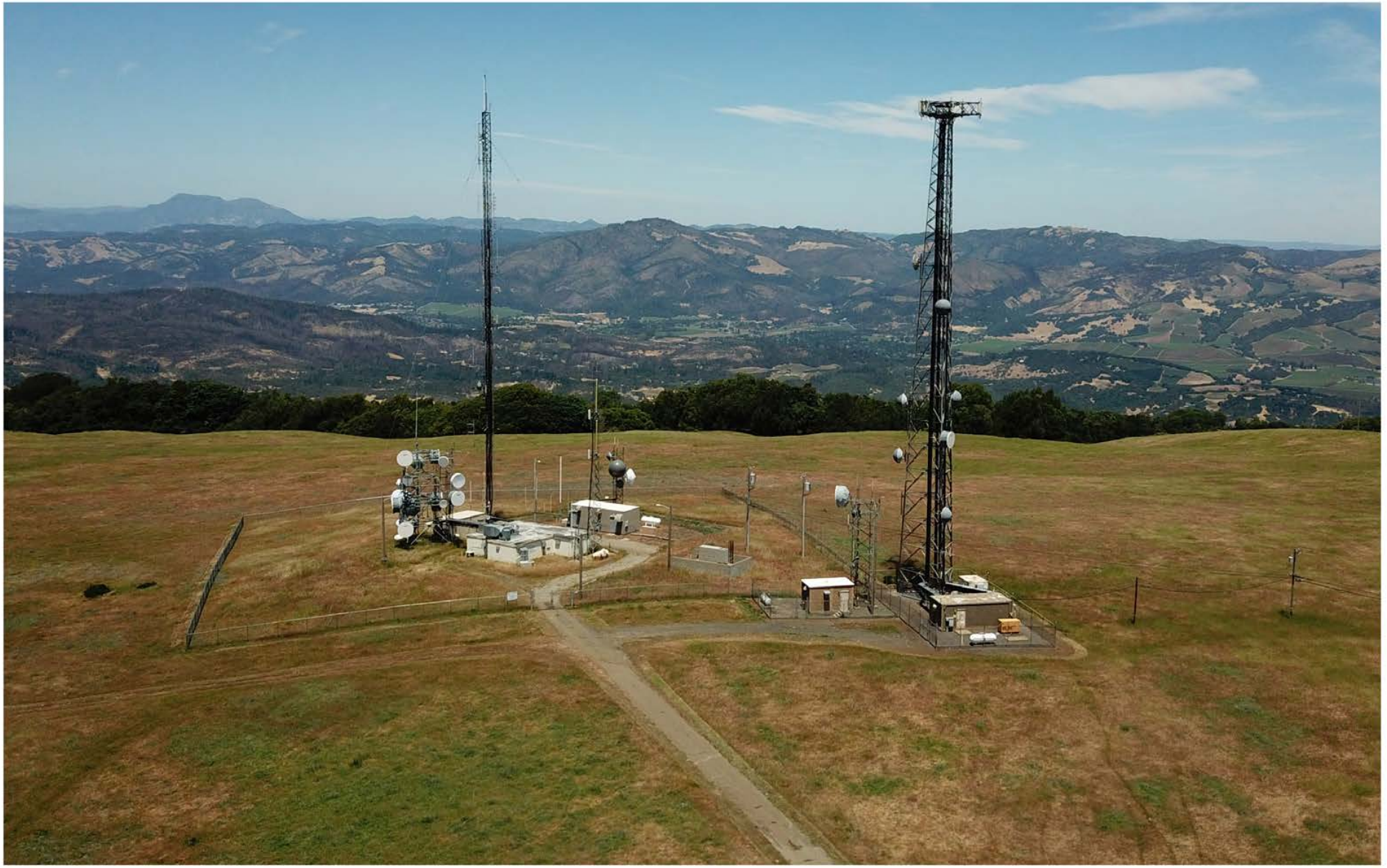
Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.J - 1 Sonoma Mountain Aerial with Photo Locations

MERA Next Generation Communications System SEIR

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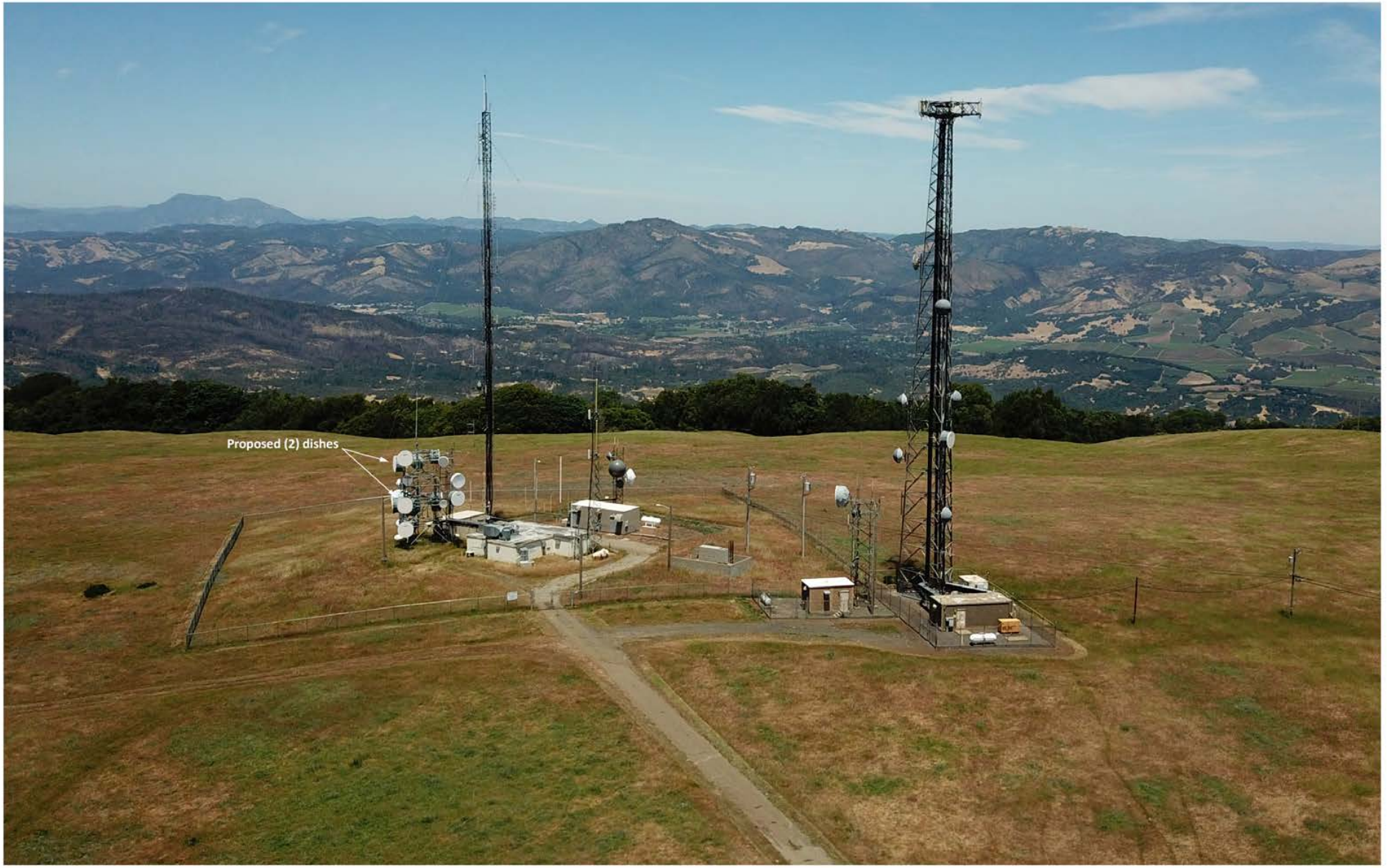


Current photograph of an elevated view looking north from above the private and gated access road. Not a public viewpoint.

Source: Previsualists Inc.

Figure V.J - 2 Existing Near View of Sonoma Mountain Site

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Photosimulation of an elevated view looking north from above the private and gated access road. Not a public viewpoint.

Source: Previsualists Inc.

Figure V.J - 3 Photosimulation Near View of Sonoma Mountain Site

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Current photograph of the view looking southeast from Bennett Valley Road.

Source: Previsualists Inc.

Figure V.J - 4 Existing Sonoma Mountain Site from Bennett Valley Road

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Photosimulation of the view looking southeast from Bennett Valley Road. (No visible change)

Source: Previsualists Inc.

Figure V.J - 5 Proposed Sonoma Mountain Site from Bennett Valley Road

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Current photograph of the view looking west from Hwy 12, just north of Madrone Road.

Source: Previsualists Inc.

Figure V.J - 6 Existing View of Sonoma Mountain from Sonoma Valley

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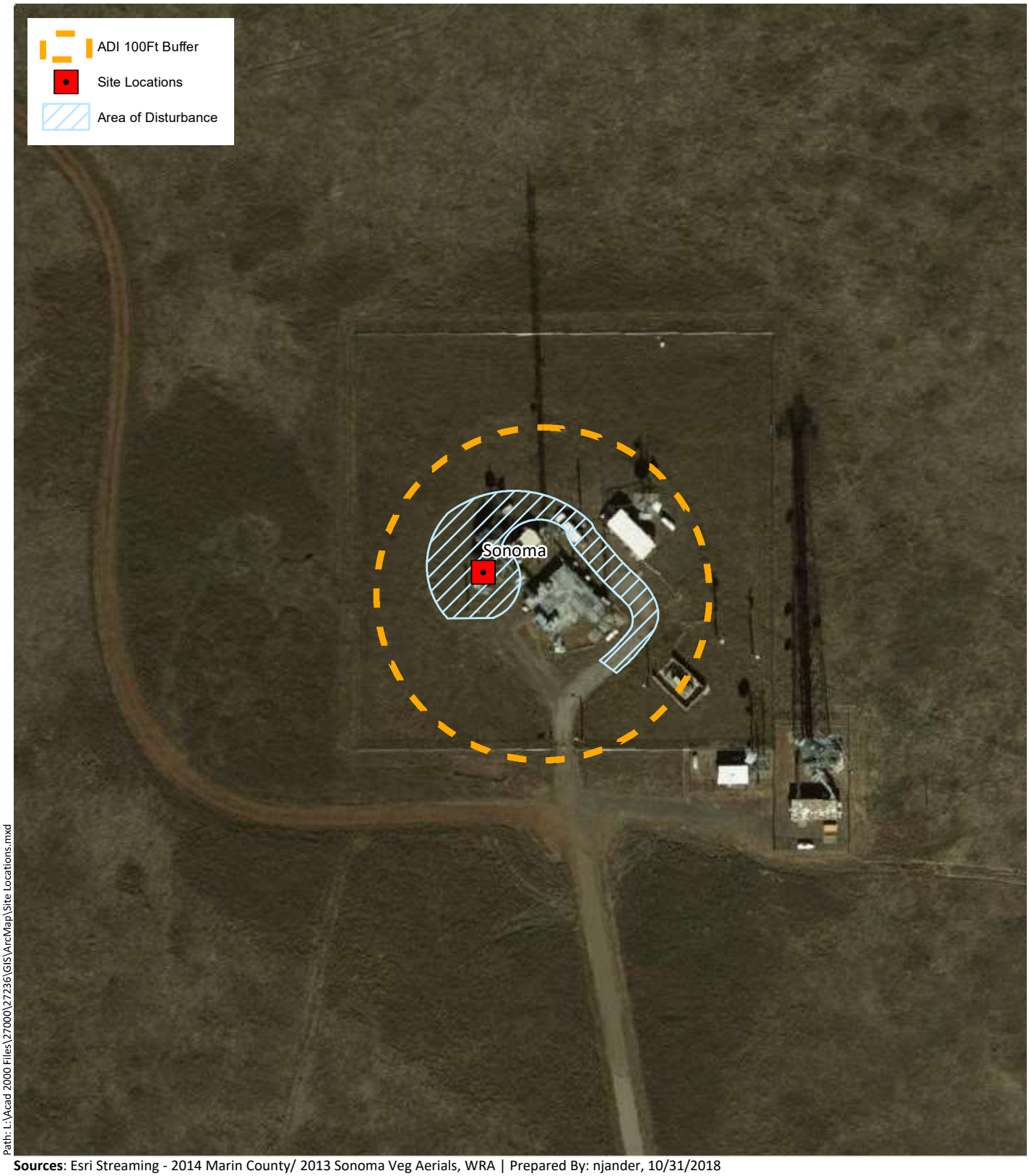


Photosimulation of the view looking west from Hwy 12, just north of Madrone Road. (No visible change)

Source: Previsualists Inc.

Figure V.J - 7 Proposed view from Sonoma Mountain from Sonoma Valley

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.J - 8 Sonoma Mountain

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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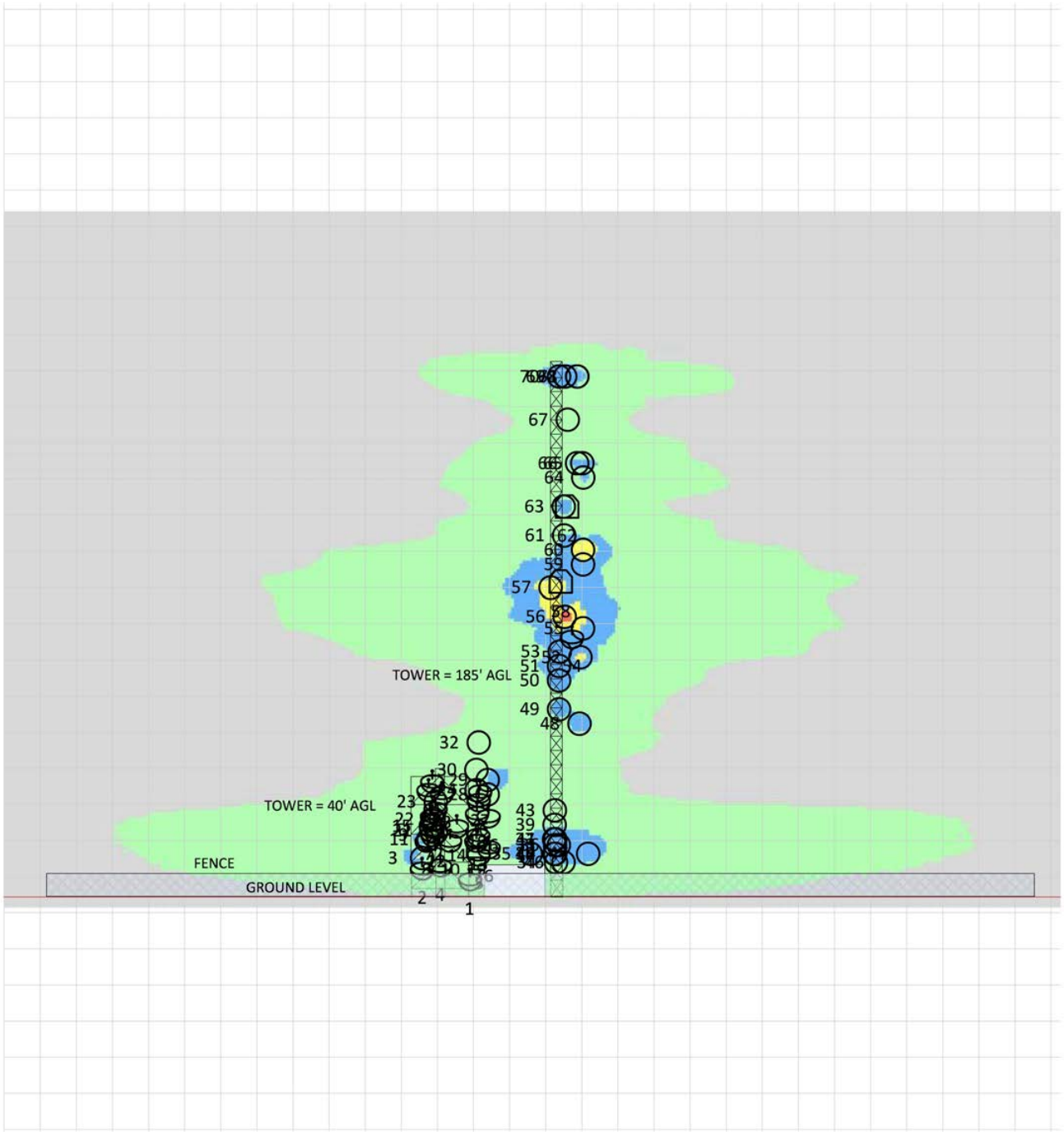


Figure V.J - 9 Sonoma Mountain All-On RF Exposure - Elevation View

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K. Stewart Point (Site 19)

Details of the proposed work for the Next Gen System at the Stewart Point Site are explained in Chapter III, the Project Description. In summary, the project proposals include minor modifications to existing communications facilities and tower reinforcement. The site is accessed via a graded fire road off of Mesa Road in unincorporated Marin County. The site is leased from a local landowner and currently 100% of the communications equipment is owned by MERA. Under proposed project modifications, MERA would maintain this ownership.

The Stewart Point Site is located west of State Highway 1 and the Bolinas Lagoon on the Bolinas Peninsula. It is just south of the Point Reyes National Seashore, and the immediate vicinity of the site in all directions is heavily vegetated, as shown in Photo III-12 (Chapter III, Project Description). To the south, beyond this vegetative buffer, is the Bolinas Mesa and the Town of Bolinas. The steep area to the east is forested, and a cluster of farms are below the site near State Highway 1. To the west, slopes continue upward before dropping down to RCA Beach. The Stewart Point Site is within the Coastal Zone.

Table V–11. Stewart Point Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Stewart Point	Existing 35' tall x 12" diameter monopole. Existing equipment shelter is 10' x 15' x 9'H with generator.	Propose minor additions to equipment on existing monopole. 1 microwave dish and 3 antennas added, 1 microwave dish and 2 antennas removed. Reinforce existing tower foundation and replace existing HVAC in existing bldg.

1. Aesthetics

Key aesthetic resources near the Stewart Point Site include Bolinas Lagoon, the north unit of Golden Gate National Recreation Area (GGNRA), Point Reyes National Seashore. GGNRA and Point Reyes National Seashore are only distantly visible from the site, meaning that views from the site generally consist of forest, hills and mountains, and the Pacific Ocean. Although these public open spaces and parks are located near the site, the site itself is not particularly visible nor is it located within a public open space. The adjacent parks have extensive trail networks, but the area is largely forested, generally limiting views of the project site to nearby ridgetops. When the CEQA Addendum (MERA, 2006) for this site was prepared the site was more visible from nearby trails, but the site is less visible today due to forest growth and the planting that was done to mitigate previous aesthetic impacts.

Key Observation Points (KOPs) have been selected to represent the array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.K-1. Subsequent Figures V.K-2 through V.K-7 show the before and after conditions at the Stewart Point Site from the three selected KOPs. Figures V.K-2 and V.K-3 show before and after the project images from a close perspective.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista;

Scenic vistas of the site from Ridgecrest Boulevard, as seen in Figures V.K-4 and V.K-5, show a distant view of the site with relation to Bolinas Lagoon and the Pacific Ocean, but the site is not directly visible due to the surrounding vegetation near the site. The same is true from Poplar Road, a closer perspective from the Bolinas Mesa, as seen in Figures V.K-6 and V.K-7. The existing communications facility on the site already has an adverse effect on the few scenic vistas immediately available near the site, and the proposed modifications are relatively minor in comparison to the existing condition. Proposed changes include minor additions to an existing monopole, including the net addition of one microwave dish, which would be relatively inconspicuous to the casual onlooker. Consequently, the impacts of the project are ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

Facilities at the Stewart Point Site have no potential to adversely affect scenic resources within a state scenic highway, given that the nearest state scenic highway, State Highway 1, is more than a mile away, behind dense vegetation and below the site by nearly 800 feet. As a result, the project will have ***no impact***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figure III-43 and III-44, Existing and Proposed Elevations and Site Plan respectively, show the physical changes at the site. Existing infrastructure at the Stewart Point Site includes a 10-foot by 15-foot equipment shelter, an emergency generator, a perimeter fence, and a 35-foot tall monopole with antennas that reach to 45 feet tall. Minor equipment modifications on the existing monopole would yield a net increase of one antenna on top of the tower, but would not yield any change in the facility's height. These proposed changes would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. Consequently, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Stewart Point Site. Improvements proposed for this site include minor equipment modifications on an existing tower, reinforcement of the tower's foundation, and equipment replacement within an existing equipment shelter. Ground disturbance would be limited to the vicinity of the tower foundations and would extend as deep as approximately 24 inches below ground level. See Figure V.K-8 for the Area of Direct Impact and a surrounding 100-foot buffer.

Given the limited nature of the proposed ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Stewart Point Site would comply with Mitigation Measure CULT-1 (please see Page IV.B-10), which includes procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Stewart Point Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in RPC Section 5020.1(k) or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria began on June 5, 2018 and concluded on February 8, 2019. FIGR identified potential for adverse effects to the significance of tribal cultural resources at 13 Next Gen Sites, and the Stewart Point Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see Pages IV.B-12 and IV.B-13), the project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Stewart Point Site are limited to minor modifications to existing equipment and are not anticipated to impact vegetation within the site. However, native vegetation communities including coyote brush scrub are present at the site, Douglas fir forest is directly adjacent to the site, and several documented occurrences of special-status plant species are within less than 0.5 mile from the site. Therefore, focused protocol-level rare plant surveys were conducted within the site on March 30 and June 20, 2018, as a conservative measure.

The following candidate, sensitive, and special-status species were identified as having a moderate or high potential to be present within undeveloped portions of the site: Blasdale's bent grass, w, Brewer's calandrinia, coastal bluff morning-glory, California bottle-brush grass (*Elymus californicus*), Marin checker lily, Baker's goldfields, marsh microseris, Michael's rein orchid, and coastal triquetrella.

Several reference sites for special-status plant species were visited by WRA botanists prior to surveying the Stewart Point Site, resulting in the following observations: Marin manzanita (observed March 30, 2018 along Mount Vision Road, Point Reyes), Brewer's calandrinia (observed April 8, 2018 along Rocky Ridge Trail, Mt. Tamalpais), California bottle-brush grass (observed May 8, 2018 at Muir Woods), and marsh microseris (observed May 6, 2018 in bud and bloom at Abbotts Lagoon, Point Reyes).

One Marin manzanita individual was observed along the road to the Stewart Point Site, approximately 150 feet southeast of the site along the south side of the gravel road. This individual is located outside of the project site will not be impacted by the project. No additional special-status plant species were observed within or adjacent to the Stewart Point Site. The proposed project work would have less-than-significant impacts on candidate, sensitive, or special-status plant species with implementation of a recommended avoidance measure described below, making impacts to candidate, sensitive, and special-status plant species ***less than significant with mitigation incorporated***.

The following candidate, sensitive, or special-status wildlife species were identified as having a moderate or high potential to be present within undeveloped portions of the site: American badger and California red-legged frog. Project improvements within the Stewart Point Site are limited to minor modifications to existing equipment and are not anticipated to impact wildlife habitat within the site. The proposed project would have ***no impact*** on candidate, sensitive, or special-status wildlife species.

In summary, improvements to the Stewart Point Site would have no direct or indirect adverse impact on special-status wildlife species. Although adverse impacts on candidate, sensitive, or special-status plant species are unlikely, Mitigation Measure BIO-1 further reduces this possibility. Thus, impacts to candidate, sensitive, and special-status species would be ***less than significant with mitigation incorporated***.

Mitigation Measure BIO-1

Within one month prior to commencement of construction, a qualified biologist shall flag the Marin manzanita individual within the Study Area. The qualified biologist shall notify the construction foreman as to the location of the special-status plant and identify the type of flagging used to ensure that contact with this species is avoided by construction crews. Just before construction, orange avoidance fencing shall be temporarily erected around the individual manzanita to keep construction equipment and crews away.

b,c)Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Existing conditions and potential impacts to biological resources associated with the Stewart Point Site were analyzed in the *Addendum to the Marin Public Safety and Emergency Communications System Certified Final Environmental Impact Report*. The Stewart Point Site is an existing MERA facility which contains one existing equipment shelter, and communications equipment within a fenced compound. Access to the site is from an existing gravel road. The site is predominantly developed, but is surrounded by natural vegetation communities including coyote brush scrub to the south and Douglas fir (*Pseudotsuga menziesii*) forest to the north, neither of which are considered sensitive vegetation communities. The EIR determined that no sensitive biological communities were present, and the proposed improvements would have a less-than-significant impact on biological resources.

Conditions have not changed significantly since the site was developed. Project improvements within the Stewart Point Site are limited to minor modifications to existing equipment in previously developed portions of the site and are not anticipated to impact vegetation within the site. A staging area will be in temporary use during construction and will be located on previously disturbed ground so that vegetative disturbance would be avoided. No sensitive biological communities are present, and site upgrades consist of minor modifications to existing facilities in a previously developed area and would have ***no impact*** on sensitive biological communities.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This site is located in a previously developed area within a broad expanse of open space which represent core habitat areas for wildlife species. The proposed improvements are limited to upgrades to existing facilities and the proposed improvements are not anticipated to significantly impede wildlife movement compared to existing conditions. In addition, the site is not a native wildlife nursery site. As a result, the project will have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

As discussed above, wildlife with moderate to high potential to be present in the project site includes American badger and California red-legged frog. No special-status avian species with moderate or high potential to be present were identified; nor were any nesting or roosting areas. As modifications to the Stewart Point Site are confined to a previously developed area, no impacts on nesting or roosting species would occur. Further, there are no landscaping components to modifications at this site, so any requirements for native vegetation in landscaping efforts are not applicable. The Stewart Point Site is within the coastal zone and is subject to the Marin County LCP's policies protecting biological resources. These are discussed in greater detail under Item 4b below. In summary, these policies call for habitat and shoreline protection, and no conflict was identified between the project and these policies.

Given the minor modifications proposed at the Stewart Point Site and the fact that improvements would occur in the footprint of an existing MERA facility, the project would not conflict with local policies or ordinances governing the protection of biological resources; and impacts would be ***less than significant***.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use, and most elements of all three questions are addressed for the entire MERA Next Gen Project as a whole in the preceding chapter, Chapter IV.D Land Use Consistency. However, for sites that are under state or federal jurisdiction, the following additional consistency analysis of applicable state and federal land use policies must be addressed:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Stewart Point Site is within the Coastal Zone of Marin County, and is therefore subject to the requirements of the Coastal Act, the Marin County LCP, and Chapter 22I of the Marin County zoning ordinance, which includes Coastal Zone land use requirements. The site is located within Unit I of the Marin County LCP.

At the time the 2006 EIR Addendum was certified, adding the Stewart Point Site to the system, the site was designated as Agriculture Coastal Zone, one unit per 1-60 acres (C-AG1), and was zoned as Agricultural Production Zone, Coastal (C-APZ). In the certified 2006 Addendum, the MERA facility at this site was deemed consistent with applicable land use policies. It was determined that the project would result in less-than-significant impacts because permitting practices were in place and the work could be approved with either a master plan or use permit along with a coastal permit. The Addendum also determined that the project was consistent with the conservation policies of the LCP, as related to conservation and habitat protection.

The site remains designated as C-AG1 and zoned as C-APZ. In the C-APZ district, any development requires a coastal project permit. The LCP Unit I requires certain habitat, height, scale, design, and hazard considerations. The maximum height at this location is 25 feet for a main building, but utility towers are permitted as tall as 150 feet.

Relevant policies from the LCP Unit I A that are applicable to the Stewart Point Site include:

- Habitat Protection
  23. Development adjacent to wildlife nesting and roosting areas shall be set back a sufficient distance to minimize impacts on the habitat areas. Such development activities shall be timed so that disturbance to nesting and breeding wildlife is minimized and shall, to the extent practical, use native vegetation for landscaping.
- Shoreline Protection and Hazard Areas
  2. Development shall continue to be required to meet the seismic safety standards of the Alquist-Priolo Act as it has been implemented by the County…
- New Development and Land Use:
  21. Existing development standards and the design review ordinance (Chapter 22.52) shall continue to be enforced.

Changes proposed as part of the Next Gen System would take place within the existing footprint of the Stewart Point Site, with minor modifications to existing facilities and foundations. The proposed project component would not introduce a new land use or visual impact to the site, nor would land be removed from agricultural use. The small scale of work within the existing facility footprint and use of a previously developed communications site would ensure that it does not impact sensitive resources or result in any major land use conflicts with surrounding areas.

Project elements would also be designed to meet the aesthetic, design, safety, and noise standards and other relevant policies and regulations in the LCP. This would be achieved by designing to meet seismic requirements and including proper measures to minimize erosion during tower reinforcement. The proposed facility modifications are consistent with the site's coastal zoning, and would not conflict with applicable coastal land use plans or policies at the Stewart Point Site; and, consequently, ***no impact*** to applicable land use polices would occur.

5. Radio Frequency Exposure

MERA-adopted threshold a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Stewart Point Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 23, 2018, SiteSafe surveyed the Stewart Point Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 29 locations at the Stewart Point Site. The highest emissions recorded during this process were below FCC MPE limits, at approximately 4% of the occupational limit and 20% of the public limit. The maximum recorded value at 25 of 29 locations was below 1% of the occupational threshold, with the remaining four locations' maximum values ranging from 1-4% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the General Population MPE limit when calculating the percentage of exposure, as this is a more conservative limit than the occupational limit.

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing condition at the Stewart Point Site is 144.2% of the public MPE limit. This would occur at select locations along the monopole, off the ground within the fenced off, controlled access area. Maximum theoretical ground-level emissions both within and outside of the fenced off area are below 100% of the public MPE.

b) Figure V.K-9 depicts modeled exposures relative to applicable MPE limits during the transition period, when currently installed and new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

   At the Stewart Point Site, there would be 15 antennas capable of operating at one time during the transition period (for a full inventory, see Page 213 of Appendix D), although this condition would be rare given the intermittent nature of voice communications. These antennas would create cumulative theoretical maximum exposure levels of 165.9% of the public MPE limit in a controlled-access rooftop area; ground-level exposure however would be less than 100% of the MPE limit. The transition period, in which testing of the new system occurs while the old system remains operational, is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational. At this point, pre-existing infrastructure that is no longer needed will be removed.

c) With the new system fully in place and the project complete, maximum rooftop-level exposure in controlled-access areas would decrease closer to existing conditions, to 150.9% of the public MPE limit. Theoretical maximum exposures faced by workers would remain less than 100% and uncontrolled areas outside of the controlled-access fence line that are accessible to the public would experience a theoretical maximum of 16.1% of the public MPE limit. Based on these measurements and the site's layout and signage, SiteSafe concluded that all facilities at the site are compliant with FCC regulations and that MERA need not take any corrective action.

In summary, MERA's operations at the Stewart Point Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments and would remain less than 100% of the MPE limits during the transition phase and

upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 100% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Stewart Point Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.K - 1 Stewart Point Aerial with Photo Locations

MERA Next Generation Communications System SEIR

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Current photograph of the site as seen from private property. Closer view than the public Ridge Trail, 0.4 miles to the west.

Source: Previsualists Inc.

Figure V.K - 2 Existing Stewart Point Near View

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Photosimulation of the site as seen from private property. Closer view than the public Ridge Trail, 0.4 miles to the west.

Source: Previsualists Inc.

Figure V.K - 3 Proposed Stewart Point Near View

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Current photograph of the view looking west-northwest from Ridgeline Blvd. Site is not visible, but location is circled.

Source: Previsualists Inc.

Figure V.K - 4 Existing Stewart Point Distant View

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Photosimulation of the view looking west-northwest from Ridgeline Blvd. Site is not visible, but location is circled.

Source: Previsualists Inc.

Figure V.K - 5 Proposed Stewart Point Distant View

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Current photograph of the view looking north-northwest from Poplar Road, along the north side of Bolinas.

Source: Previsualists Inc.

Figure V.K - 6 Existing View of Stewart Point from Bolinas Mesa

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Photosimulation of the view looking north-northwest from Poplar Road, along the north side of Bolinas. No visible changes.

Source: Previsualists Inc.

Figure V.K - 7 Proposed View of Stewart Point from Bolinas Mesa

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.K - 8 Stewart Point

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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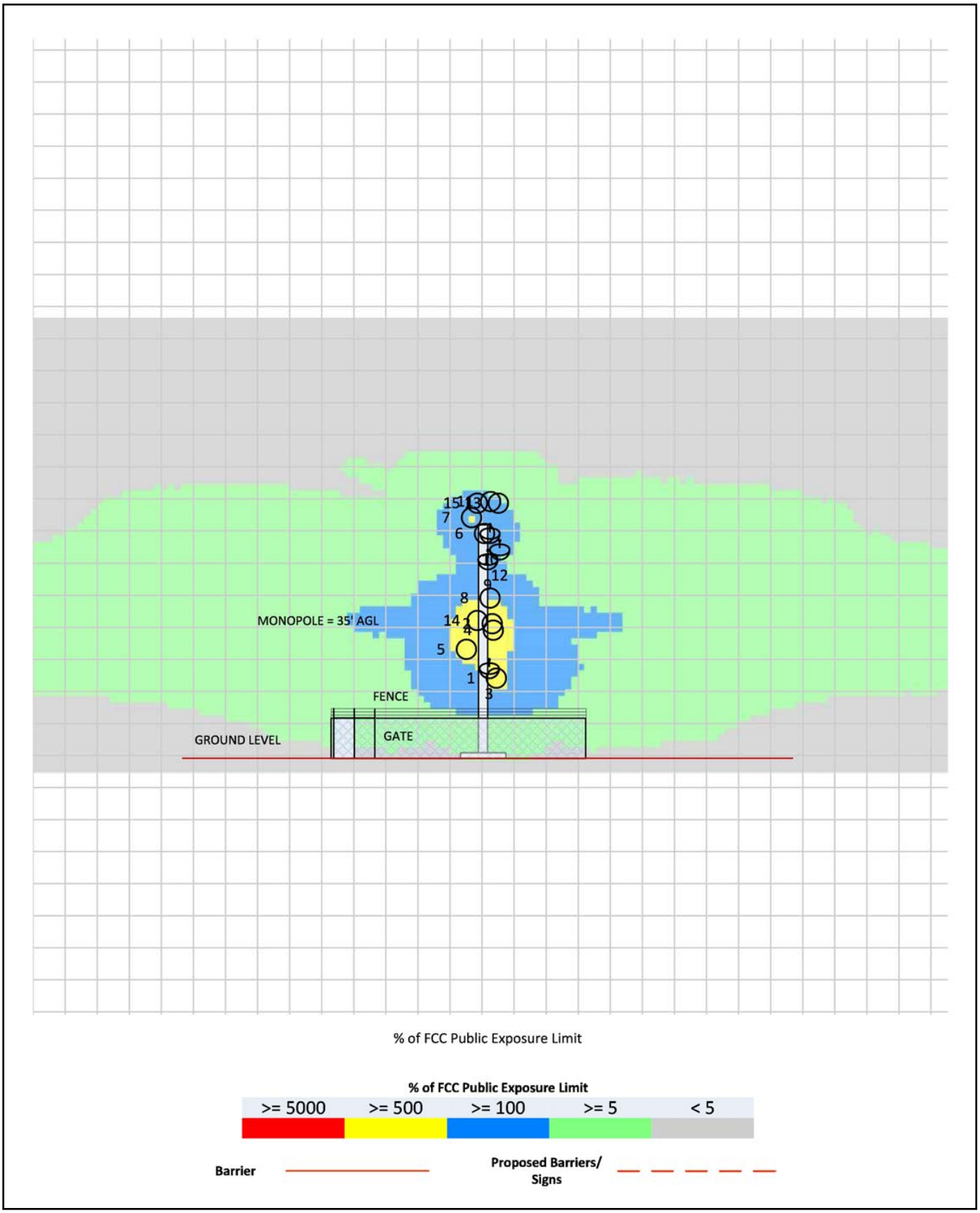


Figure V.K - 9 Stewart Point All-On RF Exposure - Elevation View

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L. Tomales (Site 20)

The Tomales Site is situated approximately one mile north of the Town of Tomales on a small hilltop that currently contains a cellular facility. The surrounding agricultural land is characterized by grassy, rolling hills, fencing, and open space, as shown in Photo III-13 (Chapter III, Project Description). Development in the area is sparse, with occasional residences punctuating the otherwise open landscape. Much of the area is actively used for grazing, and the site is zoned Costal Agricultural Production Zone (C-APZ).

Details of the proposed work for the Next Gen System at the Tomales Site are explained in Chapter III, Project Description. In summary, proposed project improvements include a new 75-foot monopole, small equipment shelter, emergency generator and fuel tank, and fencing as describe below in Table V-12. The site is accessed via an existing graded road that connects the cellular site with State Route 1.

MERA will lease the land for the radio site from the property owner and will use the existing graded road for access. After project completion, an estimated 70% of the visible components at the hilltop site would be owned by MERA.

Table V–12. Tomales Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Tomales	Existing cell tower and equipment shelter sited to minimize visual impacts.	Propose new 75' tall monopole, new shelter, fence, generator, and fuel tank. 2 microwave dishes and 3 antennas added. New below-ground power cable from SE corner of site to follow same path as existing underground line.

1. Aesthetics

Although the proposed Tomales Site is new to the MERA radio system, the hilltop is already developed with a cellular communications facility. This existing facility consists of a 240 square foot equipment shelter and a 60-kilowatt diesel emergency generator inside of a fenced compound. The antennas for the facility are mounted on two separate monopole towers away from the main compound. One 18-foot high, 6-inch diameter monopole supporting two 4-foot long panel antennas is approximately 300 feet west of the shelter, and one 25-foot high, 6-inch diameter monopole supporting four 4-foot long panel antennas is approximately 300 feet southwest of the shelter. Each monopole is enclosed in 4-foot high cattle fencing. The monopoles are located a minimum of 400 feet west of State Route 1. The existing cellular equipment enclosure is visible from a distance but has limited near distance visibility, since the highway is approximately 300 feet below the peak of the rounded knoll.

Similarly, visibility of MERA's proposed facilities is limited at close distances but would be visible from several distant points along State Route 1. MERA's proposed equipment would include a new equipment shelter, emergency generator, fuel tank, 75-foot monopole, a perimeter fence, and underground power cables. The highest antenna on the proposed monopole would increase

the maximum height to nearly 80 feet. Figures III-45 through III-48 show the proposed physical changes at the project site.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the Tomales Site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.L-1. Subsequent Figures V.L-2 through V.L-9 show the anticipated before and after conditions at the Tomales Site from the four selected KOPs.

Aesthetic resources in the vicinity of the Tomales Site include State Route 1 and the agricultural character of the surrounding landscape. Views from State Route 1 in this area are of the interior coast range, featuring verdant green or golden (depending on the season) grassy hillsides. From other surrounding roads, motorists enjoy scenic views of surrounding agriculture, open space and rolling hills. Occasionally there are broader vistas from elevated roadways overlooking the coastal valleys.

State Route 1 curves around the lower eastern edge of the Tomales Site, and the site's rounded knoll and existing eucalyptus trees prevent close-up views of the existing cellular facility from most of this segment of the highway, although the site is briefly visible to motorists traveling southbound. Other publicly accessible scenic views of the Tomales Site exist further to the north from State Route 1 and from Whittaker Bluff Road, approximately one mile away.

Impact determinations are made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is defined as an aesthetically pleasing overview of a broad landscape. Figures V.L-1 through V.L-9 depict the site's present visual character and simulated visual conditions upon project completion. The Tomales Site appears as a grassy knoll in an agricultural setting with a small structure visible from distant vantage points.

There are no designated scenic vistas in the area, although there is a brief vista from State Route 1, with an overview of the agricultural valley to the northeast looking towards Two Rock and Sonoma Mountain. This view would be unaffected by the project because it is behind the viewer and because the topography limits views toward the project from Two Rock Road. Upon project completion, the new 75-foot monopole would be visible from distant public vantage points, but none of these could be characterized as scenic vistas. Consequently, there is ***no impact***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

State Route 1 is not an officially designated state scenic highway, but it is eligible for designation. Accordingly, this analysis considers State Route 1 (Highway 1) as a scenic roadway due to its quality views of coastal California. Presently, views of the Tomales Site from Highway 1 include the grassy knoll with a backdrop of eucalyptus trees. Development within this viewscape is generally limited to ranch facilities and equipment, barbed wire cattle fencing, power lines, and

the paved roadway. Upon project completion the 75-foot monopole would be visible from State Route 1, particularly to southbound motorists, where the monopole would briefly feature prominently behind the power lines that parallel the highway (Figures V.L-4 and V.L-5). To northbound motorists leaving the Town of Tomales, the very top of the monopole briefly appears above the ridgeline (Figures V.L-6 and V.L-7).

The project would not directly damage any scenic resources such as trees, rock outcroppings, or historic buildings at the Tomales Site. However, the brief view of the coastal agricultural setting as motorists drive south on State Route 1 is a scenic resource that would be altered by the project. Despite the implementation of Mitigation Measure AES-2 calling for screening and color blending design features, the addition of a 75-foot tall monopole and equipment shelter to the grassy knoll, and the visual impact on the landscape is ***significant and unavoidable***.

Mitigation Measure AES-2[3]

A six-foot tall, dark or earth-tone colored, opaque fence shall be incorporated into the perimeter fence on the north and west sides of the MERA facility to screen views of the equipment shelter from State Route 1 and from Whitaker Road. The fence shall also screen the same views of the existing cellular equipment structure, with permission from the owner/operator of that facility. Painted wood, permanently colored composite material (Trex or similar), or black vinyl chain-link with dark vinyl slats are material options suitable to screen views of the equipment structures.

MERA shall maintain the proposed galvanized grey color of the 75-foot monopole because it will result in minimal contrast with the sky on the hilltop location.

Implementation of the described mitigation measures will lessen the visual impacts to a state scenic highway and other scenic roads in the area but the impacts would still remain ***significant and unavoidable***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The visual character of the Tomales area is defined by rolling coastal hills and mostly undeveloped grazing land. The introduction of the 75-foot monopole tower, a prominent structure on top of the knoll (Figures V.L-2 and 3), in an otherwise minimally developed, non-urbanized area would adversely affect the agricultural setting and would substantially affect the visual character and quality of the site and its surroundings as viewed from publicly accessible areas, such as Whitaker Road and State Route 1. Therefore, the impact is ***significant and unavoidable***.

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[3] *Impact AES-1 (new nighttime source of light) is a potential regional impact, because a 'porch' light is specified at nearly all sites. Mitigation Measure AES-1 previously described in Chapter IV.A requires shielding of any potential upward glare and use of timers to automatically turn off lights.*

Mitigation Measure AES-3

Upon completion of tower and structure construction, MERA shall remove all debris from the site, define all vehicular access points and turnarounds, and complete finish grading including road surfacing where needed and soil preparation for planting. Vehicular areas shall be graded to drain and clay soils surfaced with gravel. Areas outside of vehicular zones shall be loosened or scarified if compacted, amended as needed and prepared to facilitate native seed germination. Hydroseed/mulch or hand-broadcast seeding and mulch shall complete site restoration. For sites steeper than 3:1 restored areas shall also include installation of straw waddles perpendicular to the slope at 20-foot intervals.

The equipment shelter, fuel tank, and emergency generator shall be painted dark earth tone colors to minimize contrast in the landscape and chain link fencing shall be black vinyl-coated.

With implementation of the described visual mitigation measures the impact would remain ***significant and unavoidable***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Tomales Site. Ground disturbance would reach depths of approximately five feet below ground level in order to install the foundation of the proposed monopole, the new fence, shelter foundation, fuel tank foundation, and the underground power line. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figures V.L-10 and V.L-11.

Despite the extensive nature of proposed disturbance at this location relative to other Next Gen Sites, accidental discovery of historical resources remains unlikely due to the soil types underlying the site. Nonetheless, work at the Tomales Site would comply with Mitigation Measure CULT-1 (please see page IV.B–10) and California law governing procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Tomales Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public

Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, and the Tomales Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see page IV.B-12 and IV.B-13), the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Tomales Site is surrounded by heavily grazed, disturbed, non-native annual grassland, which provides limited habitat for special-status plant species. However, because of the close proximity (within 5 miles) of numerous documented special-status plant species, and due to the proposed ground disturbance work within previously undeveloped grassland habitat, focused, protocol-level special-status plant surveys were conducted within the site on March 30, May 9, and June 20, 2018.

The following special-status plant species were identified as having a moderate or high potential to be present within undeveloped non-native annual grassland portions of the site: bent-flowered fiddleneck (*Amsinckia lunaris*), fragrant fritillary (*Fritillaria liliacea*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), bristly leptosiphon (*Leptosiphon acicularis*), large-flowered leptosiphon (*Leptosiphon grandiflorus*), marsh Microseris, and two-fork clover (*Trifolium amoenum*). Several special-status plant species with potential to occur at the Tomales Site were observed at other locations, including: bent-flowered fiddleneck (observed March 30, 2018 along Highway 1, south of Tomales), fragrant fritillary (observed April 1, 2018 at Nicasio Reservoir), congested-headed hayfield tarplant (observed June 6, 2018 along Bodega Avenue in Petaluma), and bristly leptosiphon (observed April 8, 2018 at Taylor Mountain Regional Park in Santa Rosa). However, no special-status plant species were observed in the biological study area (the project site plus an approximate 100-foot radius), and the proposed project would have no impact on special-status plant species.

The following special-status wildlife species were assessed as having a moderate or high potential to be present at this site: American badger, burrowing owl, grasshopper sparrow, Bryant's savannah sparrow, northern harrier, and California red-legged frog. Burrowing owls inhabit open grassland with sparse or non-existent tree or shrub canopies. Burrowing owl

individuals have been observed in the vicinity as recently as January 2018. Burrows and friable soils were observed during the site visit, including a potential badger burrow. The open grassland can also support nesting and foraging for grasshopper sparrow, white-tailed kite, northern harrier, and Bryant's savannah sparrow. California red-legged frog has been documented within one mile of the study area at Stemple Creek. California red-legged frog may be present in the study area after rain during dispersal events. Unmitigated, the proposed project could adversely affect candidate, sensitive, or special-status species at the Tomales Site, but by implementing Mitigation Measures BIO-2 (see Site 8, Point Reyes Hill) and BIO-3 through BIO-5 (below), impacts would be reduced to less-than-significant levels, and impacts to these species would be ***less than significant with mitigation incorporated.***

Mitigation Measure BIO-3

No more than 14 days before the start of ground disturbance activities at the Tomales Site, a biologist shall conduct pre-construction surveys of the project site and a surrounding 50-foot buffer to determine if American badger dens are present. If a den is determined to be active and occupied by a female with young, ground disturbance and construction activity shall be avoided within 50 feet of the den until the young have matured and dispersed. If a den is determined to be active, but a female with young are not present, burrow exclusion using passive measures such as one-way doors or equivalent shall be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens shall be excavated by hand to prevent them from being re-occupied during construction.

Mitigation Measure BIO-4

Work at the Tomales Site shall be avoided during night hours (half an hour before sunrise to half an hour before sunset) when California red-legged frog may be dispersing across the site. In addition, no ground disturbing work shall occur within 24 hours of rain events that generate greater than 0.25 inch of accumulated precipitation or during rain events predicted to accumulate 0.25 inch of precipitation.

Mitigation Measure BIO-5

A pre-construction burrowing owl survey shall be performed prior to start of ground disturbance activities at the Tomales Site, regardless of the time of year, as burrowing owls may use the project site during the non-nesting season. The survey shall be performed according to the standards set forth by the 2012 CDFW Staff report for Burrowing Owl Mitigation. Occupied burrows shall not be disturbed during the nesting season (February 1 through August 31) unless, after consultation with the CDFW, a qualified biologist verifies that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and capable of independent survival.

b-c) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The surrounding habitat consists of heavily grazed, disturbed, non-native annual grassland dominated by slim oat, soft chess, and common velvet grass (*Holcus lanatus*), with other predominantly non-native grass and forb species present including ripgut brome, foxtail barley, milk thistle (*Silybum marianum*), hairy cats ear (*Hypochaeris radicata*), and Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*). Non-native annual grassland is not considered a sensitive biological community. No sensitive biological communities are present, including federally protected wetlands, so that site proposed project work would have ***no impact*** on sensitive biological communities or federally protected wetlands.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

The Tomales Site is adjacent to an existing cellular communications site in an otherwise undeveloped portion of Marin County and is new to the MERA Radio System. Proposed improvements include a new monopole, equipment shelter, fence, emergency generator, fuel tank, and underground power line. Of these, the fence would have the most potential to interfere with wildlife movement. The proposed fence would be six feet tall, and the fenced compound would be 35 by 39 feet wide, enclosing a total area of 1,365 square feet. Outside of the fence, the area would remain as undeveloped, open grassland. As the proposed fence would be relatively short and is surrounded by otherwise undeveloped land, it would not present a substantial impediment to wildlife movement. The Project would not substantially interfere with the movement of native residence or migratory wildlife species or with established native resident or wildlife corridors or nursery sites; thus, impacts would be ***less than significant***.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Tomales Site is located within the jurisdiction of Unit 1 of the Marin LCP, a state-wide program with local implementation at the county scale. LCP Unit 1 policies and regulations protecting biological resources potentially relevant to the Tomales Site include Policies Habitat Protection 23, 25, and 26. Policy 23 requires that disturbance to nesting and breeding wildlife be minimized, Policy 25 requires that impediments to wildlife movement be avoided, and Policy 26 requires that upland grassland feeding areas be protected against significant disruption of habitat values.

Mitigation Measures BIO-2, BIO-3, and BIO-5 require pre-construction surveys for breeding and nesting wildlife that may use the project site and buffers around disturbance areas should any active nests or burrows be identified. With implementation of these measures, the Project would not conflict with Policy 23. The new fence proposed for the Tomales Site would enclose a small area and would be surrounded by otherwise open space. The proposed fence is not sufficiently large as to preclude wildlife movement and dispersal throughout the area. As such, there would be no conflict with Policy 25. The non-native grassland present within the site is of limited habitat value and is predominately used for cattle grazing. The area of permanent vegetation removal would not be sufficiently large to degrade the quality of the adjacent grassland. Consequently, there would be no conflict with Policy 26.

In conclusion, with incorporation of Mitigation Measures BIO-2, BIO-3, BIO-4, and BIO-5 to reduce impacts to breeding wildlife, there would be no conflict with the Marin County LCP's policies protecting biological resources, and impacts would be ***less than significant with mitigation incorporated.***

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed, as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Tomales Site is located within the jurisdiction of Unit II of the LCP. It is designated as C-AG-1 (Agriculture Coastal Zone) and zoned C-APZ-60 (Agriculture Production Zone Coastal). Within LCP Unit II, an emergency radio facility is a permitted use in the C-APZ zone, subject to a Coastal Development Permit. The emergency radio facility also meets the definition of a 'Project' under the Coastal Zone regulations that also makes it subject to a Coastal Development Permit. The C-APZ zone is a master planning district, typically requiring the approval of a master plan evaluated against a set of agricultural-related criteria, but the Marin CDA Director can waive the master plan requirement. The County Development Code for the Coastal Zone in this area allows for a building height up to 25 feet and a tower height up to 150 feet on the property. The Development Code grants the Zoning Administrator the authority to approve a use permit and coastal permit for a public utility or service; however, MERA is not subject to this County-level permit and will be working with the County (as an agent of the State) to acquire a Coastal Development Permit. Furthermore, Section 22.57.0331(17) allows "Construction or alteration of gas, electric, water, communication or flood control facility unrelated to an agricultural use, as approved by the appropriate government agency". As a result, the emergency radio facility is a permitted use in the C-APZ-60 zone.

Section 22.70.040I exempts towers from the zoning district height limit provided the tower does not cover more than 15% in area of the lot nor has a base greater than 1,600 square feet. The maximum tower height is limited to 150 feet. The proposed emergency radio monopole has a base diameter of 32 inches and a height of 75 feet, well within the base and height limits of the exemption provisions. The proposed project is therefore consistent with the site's coastal zoning policies.

As discussed in Chapter IV.D (Land Use Consistency), the Marin LCP Unit II Land Use Plan sets certain development and land use guidelines to minimize aesthetic, noise, and biological effects. In compliance with these design considerations, the proposed project would cluster new improvements with existing communications infrastructure on site, construct underground utility lines (to reduce visual impacts and reduce exposure to possible wildfire), and include measures

to avoid impacts to streams and riparian habitat. Implementation of biological resources Mitigation Measures BIO-1 through BIO-5 will protect habitat and sensitive flora and fauna. The proposed project is therefore consistent with the site's coastal land use policies.

The underground power line at the Tomales Site would be located partially within the State Route 1 right-of-way (ROW). Installation of an underground power line, which starts within the ROW but leads away from the road and out of the ROW, would require an encroachment permit from the California Department of Transportation (Caltrans). The encroachment in the Caltrans ROW would not create a public hazard, disrupt highway operations, pose a maintenance problem, restrict pedestrian facilities, or interfere with future highway construction,[4] and therefore, by conditions of the permit, and the requirements of the proposed project, the power line installation would not pose a disruption or hazard within the Caltrans ROW.

Given that the project would be designed to comply with the requirements of the LCP Unit II and would not pose a disruption or hazard within the State Route 1 ROW there would be no conflict with applicable land use plans, policies, and regulations adopted for the purposes of avoiding or mitigating an environmental impact. Consequently, ***less-than-significant*** impacts would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Tomales Site (Site 20) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. Existing communications infrastructure at the site is minimal, so rather than measuring baseline RF emissions during a site visit, SiteSafe used an inventory and diagrams of proposed infrastructure at the site to model RF emissions levels relative to Maximum Permissible Exposure (MPE) limits from the proposed communications system improvements and determine the site's current compliance with applicable FCC RF regulations.

SiteSafe modeled these conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the general public MPE limit when calculating the percentage of exposure, which is five times more stringent than the limit set for workers in controlled areas.

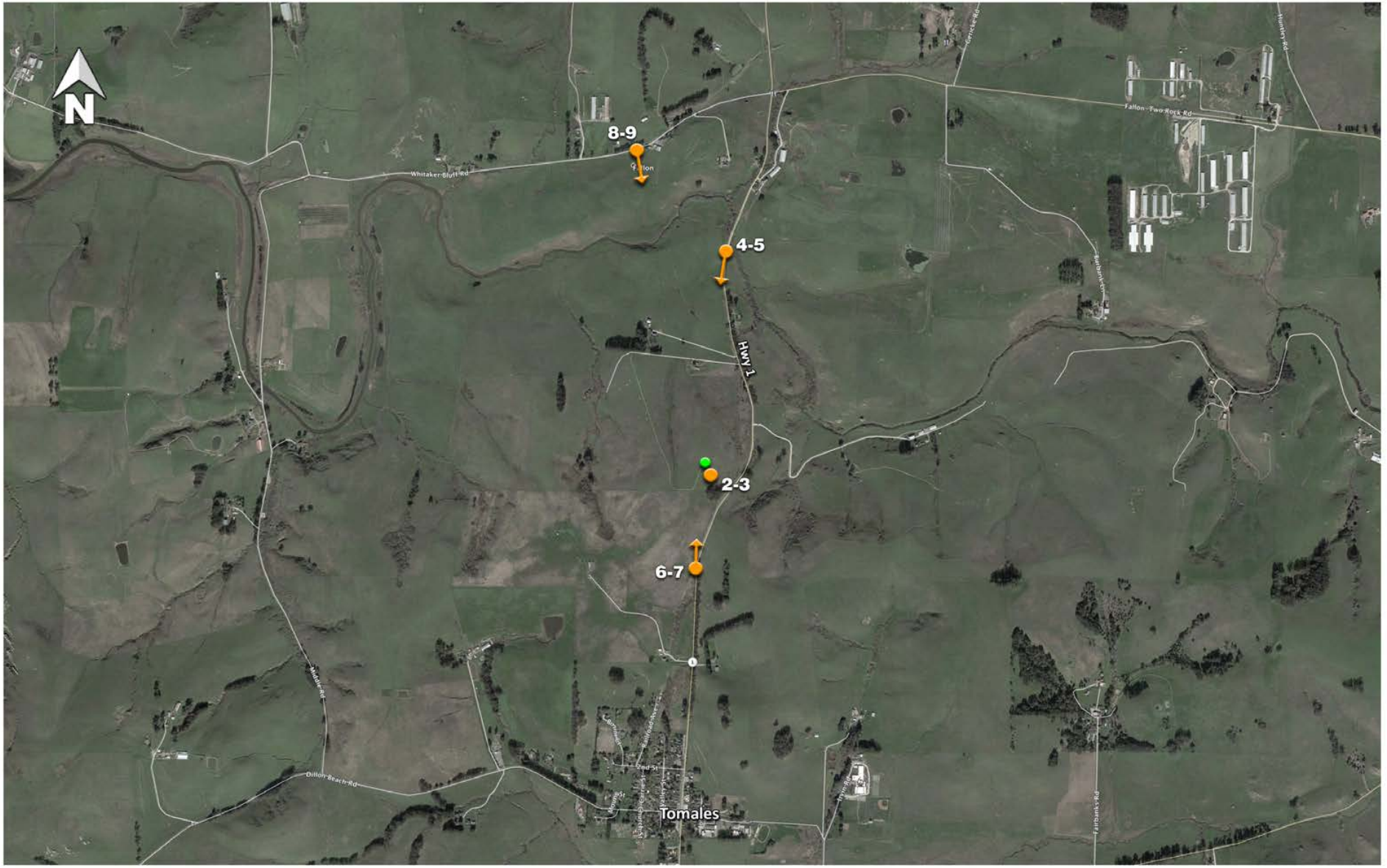
At the Tomales Site, there would be 10 antennas capable of operating at one time (for a full inventory, see Page 227 of Appendix D). These antennas would cumulatively create a maximum rooftop exposure level in a controlled area of 196.8% of the public MPE limit. This controlled area

[4] California Department of Transportation, "Encroachment Permits Manual," April 2018, http://www.dot.ca.gov/trafficops/ep/docs/entire_manual.pdf. Accessed September 11, 2018.

is on a locked rooftop that is not accessible to the public due to its location and a 6-foot fence surrounding the site. It also is not typically accessed in the course of normal work, so worker exposure to this spot would be irregular.

Ground-level exposures, however, would be less than 5% of the public MPE limit, both inside and outside the security fence, due to the tower's height. SiteSafe's modeling of RF exposures in an elevation view can be viewed in Figure V.L-12, at the end of this section. The figure shows that uncontrolled areas (accessible to the public) would experience a maximum (worst-case modeling scenario) of less than 5% of the MPE public limit. SiteSafe therefore concluded that all MERA facilities at the Tomales Site would comply with FCC regulations.

In summary, MERA's operations at the Tomales Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during each phase of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 5% of the MPE limit and therefore do not pose a danger to personnel in the area. As the project would not result in RF emissions in excess of the FCC's MPE limits, the impacts from RF emissions at the Tomales Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.L - 1 Tomales Aerial with Photo Locations

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Current photograph of the site as seen looking north from the hilltop, on private property. Not a public viewpoint.

Source: Previsualists Inc.

Figure V.L - 2 Existing Tomales Near View

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Photosimulation of the new MERA Next Gen 75-foot tall monopole and equipment structure on the site as seen looking north from the hilltop, on private property. Not a public viewpoint. Source: Previsualists Inc.

Figure V.L - 3 Proposed Tomales Near View

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Current photograph of the view looking south from southbound Hwy 1 approaching the site.

Source: Previsualists Inc.

Figure V.L - 4 Existing Tomales View from Highway 1 Looking South

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Photosimulation of the view with the 75-foot tall monopole looking south from southbound Hwy 1 approaching the site.

Source: Previsualists Inc.

Figure V.L - 5 Proposed Tomales View from Highway 1 Looking South

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Current photograph of the view looking north from northbound Hwy 1, approaching the site.

Source: Previsualists Inc.

Figure V.L - 6 Existing Tomales View from Highway 1 Looking North

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ENVIRONMENTAL CONSULTANTS



Photosimulation of the view looking north from northbound Hwy 1, approaching the site.

Source: Previsualists Inc.

Figure V.L - 7 Proposed Tomales View from Highway 1 Looking North

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Current photograph of the view looking south from Whittaker Bluff Road, approximately 5,000 feet to the site.

Source: Previsualists Inc.

Figure V.L - 8 Existing Tomales View from Whittaker Bluff Road.

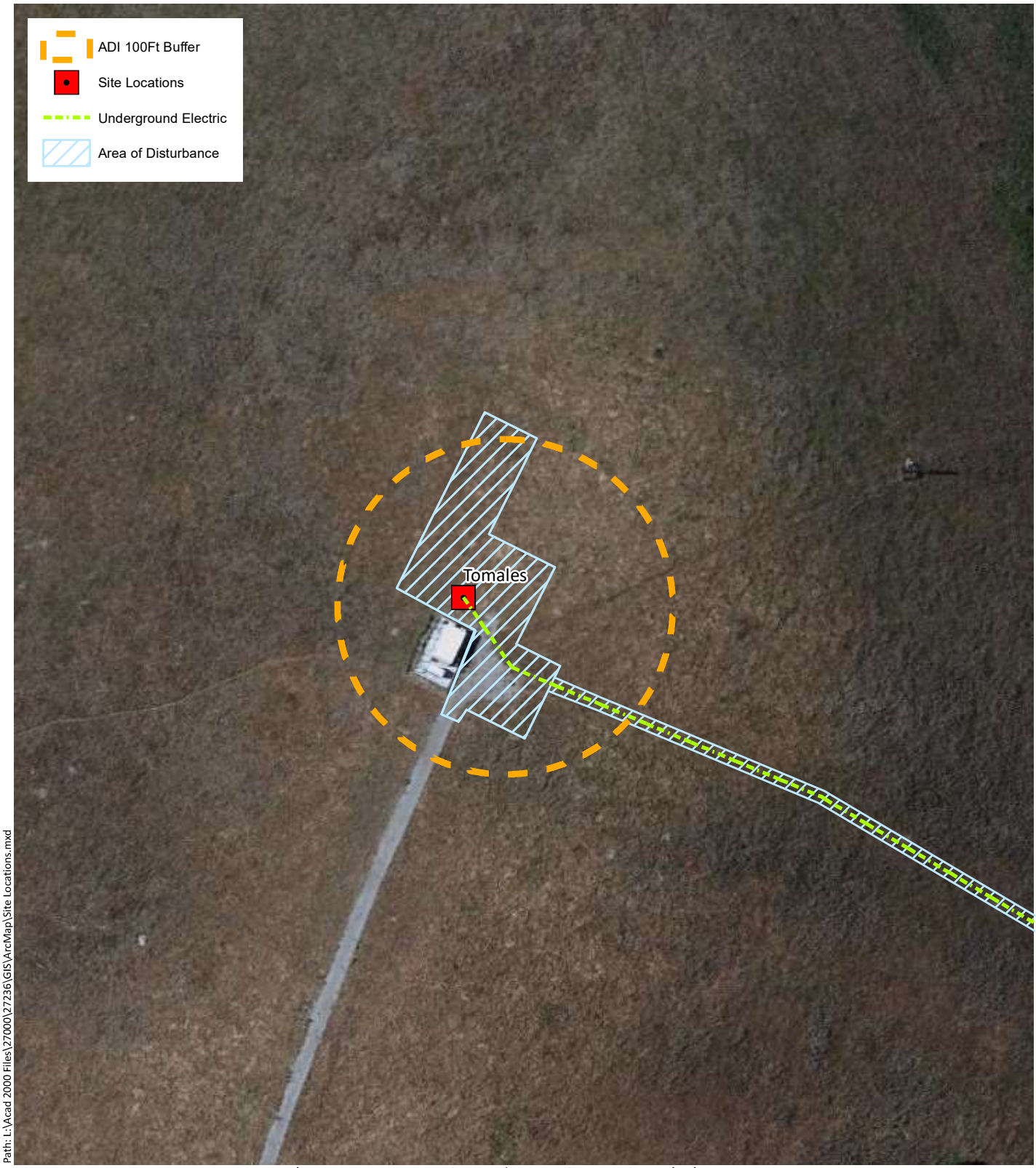
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Photosimulation of the view with the proposed 75-foot tall monopole and equipment building looking south from Whittaker Bluff Road, approximately 5,000 feet to the site. Source: Previsualists Inc.

Figure V.L - 9 Proposed Tomales View from Whittaker Bluff Road.

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

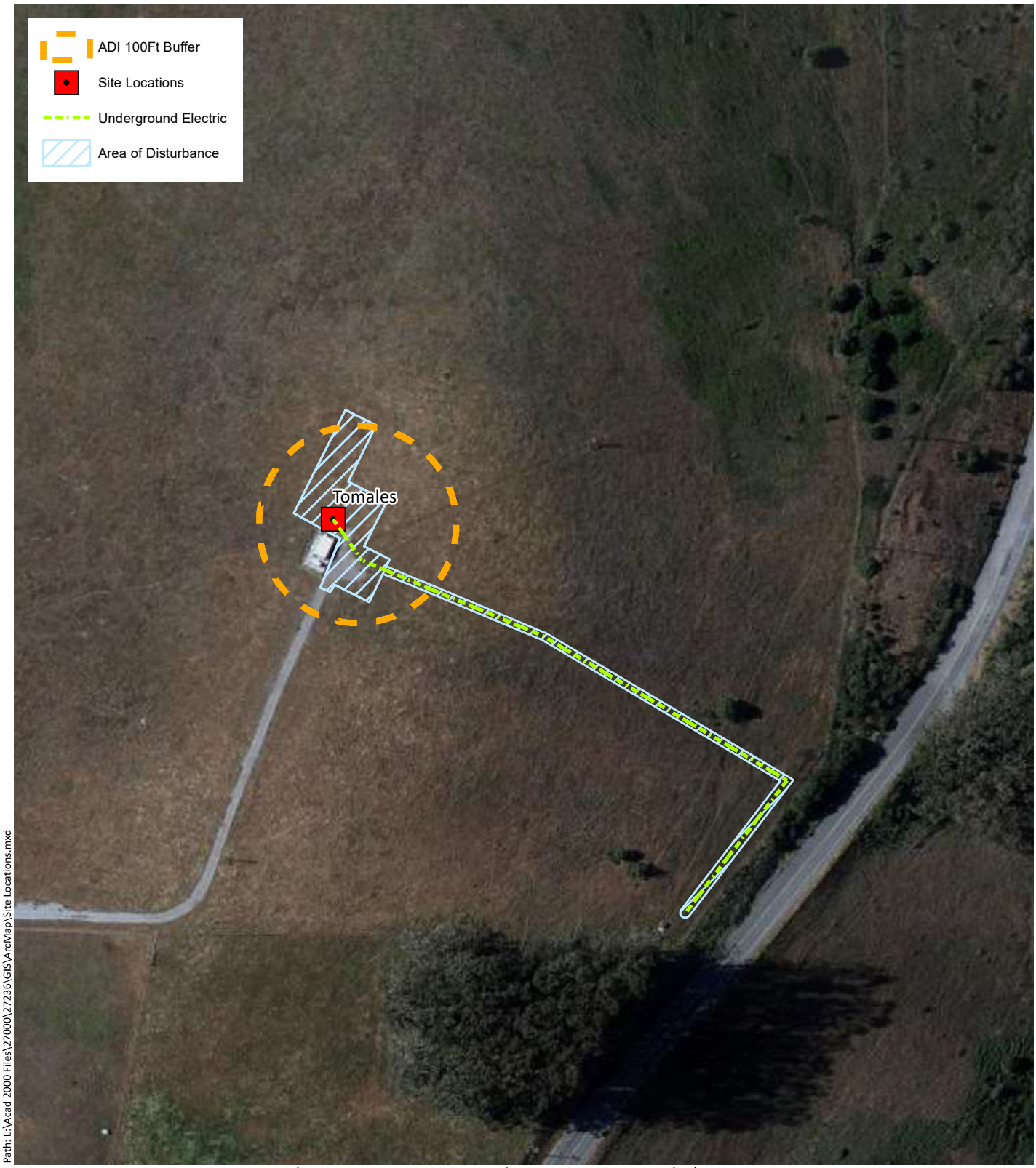
Figure V.L - 10 - Tomales

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.L - 11 Tomales

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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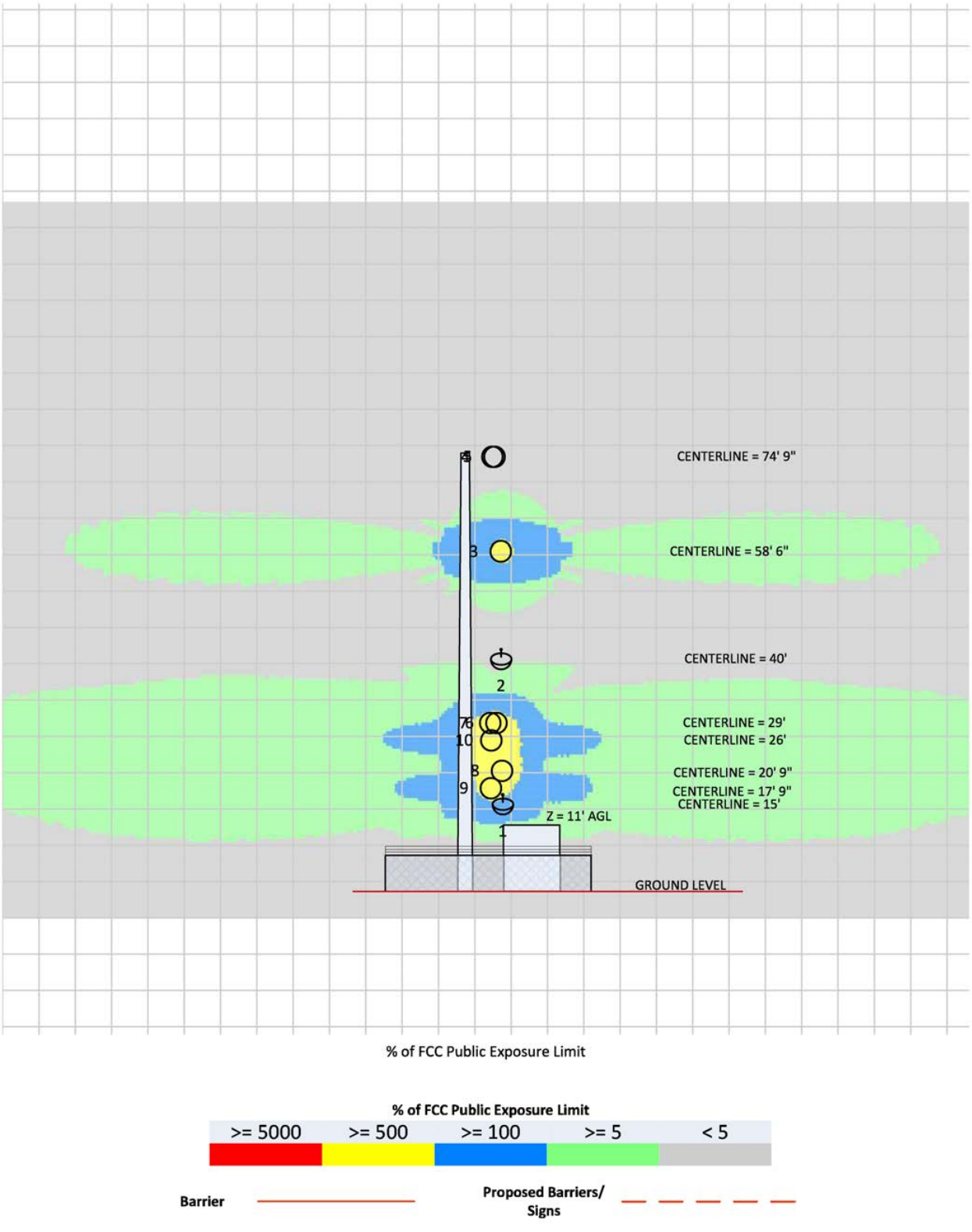


Figure V.L - 12 Tomales Simulated All-On RF Exposure - Elevation View

M. Coyote Peak (Site 21)

The Coyote Peak Site is located just north of Marshall Petaluma Road in northwest unincorporated Marin County in a primarily agricultural and open space region (Figure V.M-1). The site is situated within Walker Creek Ranch, a public-owned property and home of the Marin County Outdoor School, which hosts private retreats as well as outdoor education programs for youth. Aesthetic resources in the area include the rolling green or golden hills (depending on the season) that dominate the region.

The site is accessed via Walker Creek Ranch, as shown in Photo III-14 (Chapter III, Project Description). Coyote Peak sits on a ridgetop with a vegetated northern face and a grass covered open slope facing the ranch.

Details of the proposed work for the Coyote Peak Site are described in Chapter III, Project Description and summarized in Table V-13 below. In short, proposed improvements include a 60-foot monopole, equipment shelter, emergency generator and fuel tank, enclosure fencing, and underground power cable. The existing 1.5-mile graded dirt access road would undergo improvements to facilitate construction and improve drainage (Figures V.M-2 and V.M-3).

An estimated 98% of the visible components at the Coyote Peak Site would be owned by MERA after proposed project modifications. Also located at the site are two existing water wellheads, each with solar panels and a small shed enclosed by a fence, all owned by others. The new tower, equipment shelter, emergency generator, and fuel tank would be 100% owned by MERA.

Table V–13. Coyote Peak Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Coyote Peak	Two water well pump heads on ridgetop within actively grazed range lands. Controlled access through Walker Creek Ranch, a Marin County Outdoor Education Facility.	Propose new 60' tall monopole, shelter, fence, generator, and fuel tank. New antennas include 2 microwave dishes and 3 antennas. 1.5 Mile road requires regrading with cuts 3-8 feet deep in short areas, and widening of three turns. Underground power line, from valley floor to ridge, to be under the road.

1. Aesthetics

KOPs (key observation points) have been selected to represent the array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided. Figures V.M-2 through V.M-9 show the anticipated before and after conditions at the Coyote Peak Site from four selected KOPs.

Impact determinations are made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

Ridgelines and mountain tops are among Marin County's important scenic resources, and the Coyote Peak Site is located on a prominent ridge. This ridgeline is not accessible to the general public, so public views of the site are limited to distant views from below, such as the Walker Creek Ranch entrance from the Marshall Petaluma Road (Figures V.M-4 and V.M-5), or the closer Ranch parking lot (V.M-6 and V.M-7).

Reworked segments of the site access road will be temporarily more visible due to earth disturbance along the roadway, but restoration plantings and time will diminish access road visibility. Overall, the 75-foot monopole would be the most visible feature on the ridgeline from nearby and distant ridges and hillsides. The new monopole would have a limited effect on these scenic vistas however, because publicly available views of the project site are quite distant. The simulated view from Chileno Valley Road (Figures V.M-8 and V.M-9) shows the barely visible monopole absorbed into the broad surrounding landscape. More proximate views are either screened by topography or access is limited by private property. As a result, proposed project improvements at Coyote Peak would not have a substantial adverse effect on available scenic vistas and the visual impact is ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated or eligible state scenic highways within or near the Coyote Peak Site. State Route 1 is eligible for state scenic highway designation, but it is approximately five miles west of the site. Construction at the Coyote Peak Site would, therefore, not affect any scenic resources within a state scenic highway, and ***no impact*** would occur.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Coyote Peak Site sits on a hilltop at an elevation of roughly 970 feet. Figures III-48 through III-50 simulate the proposed physical changes at the site, including the new 75-foot monopole, equipment shelter, emergency generator and fuel tank, and perimeter fencing (Figures V.M–2 and V.M-3). These facilities would exist within an outdoor education center that, in part, relies on visual quality of the setting to convey the value of nature to students. Mitigation Measures AES-3 (see Site 20, Tomales) and AES-4 (below) would reduce impacts, but since the project would add significant new infrastructure and substantially affect the visual character of the site, the impact would be ***significant and unavoidable***.

Mitigation Measure AES-4

MERA shall screen close up views of the Coyote Peak Site by including opaque fencing in the perimeter fence around the project site to screen the generator and fuel tank. The fence shall be at least ten feet away from any structure.

However, even with implementation of Mitigation Measures AES-3 and AES-4 the impacts to the site will continue to be ***significant and unavoidable***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Coyote Peak Site. Improvements proposed for this site include installation of a new monopole, equipment shelter, fence, emergency generator, fuel tank, and underground power line. Additionally, the 1.5-mile access road would be improved in some sections. Ground disturbance would occur in each of these areas and would reach maximum depths of approximately eight feet below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figures V.M-10 and V.M-11.

Although ground disturbance would be extensive relative to other Next Gen Sites, the possibility of accidental discovery of historical resources remains unlikely due to the soil types underlying the site. Nonetheless, work at the Coyote Peak Site would comply with Mitigation Measure CULT-1 (please see page IV.B-10), which provides procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Coyote Peak Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, and the Coyote Peak Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (please see page IV.B-12 and IV.B-13), the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

The Coyote Peak Site contains non-native annual grassland, coyote brush scrub, and seasonal wetlands that could potentially support several special-status plant species documented within the vicinity of the proposed project. The following special-status species were assessed as having a moderate or high potential to be present within undeveloped non-native annual grassland and coyote brush scrub portions of the site: bent-flowered fiddleneck, Baker's larkspur (*Delphinium bakeri*), fragrant fritillary (*Fritillaria liliacea*), and congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*).

Due to the proposed ground disturbance work within previously undeveloped grassland habitat, focused, protocol-level special-status plant surveys were conducted within the site on March 30, May 9, and June 20, 2018. Several reference sites for all special-status plant species with potential to occur at the Coyote Peak Site were visited, resulting in the following observations: bent-flowered fiddleneck (observed March 30, 2018 along Highway 1 south of Tomales), Baker's larkspur (observed May 9, 2018 along Marshall-Petaluma Road), fragrant fritillary (observed April 1, 2018 at Nicasio Reservoir), and congested-headed hayfield tarplant (observed June 6, 2018 along Bodega Avenue in Petaluma). However, no special-status plant species were observed in the biological study area (the project site plus an approximate 100-foot radius), and the proposed project would have no impact on special-status plant species.

The following special-status species were assessed as having a moderate or high potential to be present at this site: American badger, golden eagle, grasshopper sparrow, white-tailed kite, Bryant's savannah sparrow, and California red-legged frog. The study area contains grasslands, woodland and rolling hills that may support foraging and nesting by special-status birds. Additionally, the open herbaceous habitat may support badger and grasshopper sparrow. California red-legged frog has been documented to occur near the study area at Walker Creek. The study area does not contain breeding habitat to support California red-legged frog; however, the species may disperse across the study area during rain events.

The project site is within designated California red-legged frog critical habitat (unit MRN-2), but Project construction and operation activities are not anticipated to alter the use of the land by California red-legged frog. Grading and road improvements would occur on an existing graded road and would not impede movement of frogs across the landscape. Project activities would not remove habitat essential for the conservation of California red-legged frog, and Mitigation Measure BIO-7 would ensure that construction activities do not adversely affect the California red-legged frog, if one were to be found.

Because no impacts to candidate, sensitive, or special-status plants would occur and impacts to special-status wildlife would be mitigated to less-than-significant levels by implementation of Mitigation Measures BIO-6 through BIO-8, impacts would be ***less than significant with mitigation incorporated***.

Mitigation Measure BIO-6

No more than 14 days before the start of ground disturbance activities at the Coyote Peak Site, a biologist shall conduct pre-construction surveys within 50 feet of the project site to determine if American badger dens are present. If a den is determined to be active and occupied by a female with young, ground disturbance and construction activity shall be avoided within 50 feet of the den until the young have matured and dispersed. If the den is determined to be active, but a female with young is not present, burrow exclusion using passive measures such as one-way doors or equivalent shall be attempted for a minimum of three days to discourage their use prior to any project-related ground disturbance. If the biologist determines that the dens have become inactive as a result of the exclusion methods, the dens shall be excavated by hand to prevent them from being re-occupied during construction.

Mitigation Measure BIO-7

Work at the Coyote Peak Site shall be avoided during night hours (half an hour before sunrise to half an hour before sunset) when California red-legged-frog individuals may be dispersing across the project site. In addition, no ground disturbing work may occur within 24 hours of rain events that generate greater than 0.25 inch of accumulated precipitation or during rain events predicted to accumulate 0.25 inch of precipitation.

Within 48 hours prior to installation of temporary steel grates spanning the top of bank of the ephemeral streams, a qualified biologist shall survey intermittent streams within the project site. If California red-legged frog are observed during the survey, work shall not proceed in that area until the qualified biologist verifies that the frogs have left the area on their own and there is no potential for the proposed work activities to result in injury or mortality. In addition, if California red-legged frog are observed in the study area during the preconstruction survey, a biological monitor shall be present for the remainder of ground disturbing activities.

Mitigation Measure BIO-8

Project activities at the Coyote Peak Site shall occur, to the extent feasible, outside of the nesting season from September 1 – January 31. If this is not possible, and project activities are initiated during the nesting season, then a nesting bird survey shall be conducted by a qualified wildlife biologist no more than 14 days prior to the start of project activities. If nests are identified, a no-disturbance buffer shall be implemented to avoid impacts to nesting birds. The radius of a surrounding buffer will be determined by a qualified biologist and shall range from 25 feet to 500 feet depending on the species and protection status of that species.

b-c) Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The Coyote Peak Site consists primarily of non-native annual grasslands and developed areas including the existing access road. The grazed non-native grasslands that overlay the proposed ridge top construction site are not considered a sensitive natural community. Non-native annual

grasslands within the study area are dominated by slim oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*), with other native and non-native grasses and forbs present including laciniate checker bloom (*Sidalcea malviflora* ssp. *laciniata*), sun cup (*Taraxia ovata*), flax (*Linum bienne*), hairy cats ear, and hayfield tarweed (*Hemizonia congesta* ssp. *lutescens*).

However, the access road environs contain several potential wetland and non-wetland waters features which parallel or intersect the existing road through underground culverts. Aquatic features observed include ephemeral streams, drainage ditches, ditch wetlands, and seasonal wetland seep. All of these features are likely to be considered jurisdictional under Section 404 and 401 of the Clean Water Act (CWA). Ephemeral streams present within the study area are also likely to be considered jurisdictional features under Section 1600-1616 of the California Fish and Game Code (CFGC).

Three ephemeral streams intersect the existing dirt access road through underground culverts. Two of the ephemeral streams are located in the southeastern portion of the project site at the first hairpin turn. These two streams are both approximately three feet wide between ordinary high water marks, and approximately six feet wide between tops of bank, and they flow in a southeasterly direction into culverts underneath the existing road, converging into one stream to the south of the road. The other ephemeral stream is similar in dimensions and is located in the north-central portion of the study area along the road, where road widening is proposed.

Drainage ditches and ditch wetlands are also present, paralleling the existing road in the southeastern portion of the project site, and a seasonal wetland seep is present bordering the west side of the road at approximately the middle point between the bottom of the road and the ridgeline. The seasonal wetland seep and wetland ditches are dominated by hydrophytic rushes and forbs including brownhead rush (*Juncus phaeocephalus*), common bog rush (*Juncus effusus*), and pennyroyal (*Mentha pulegium*). The area mapped as seasonal wetland seep and wetland ditch likely contain a prevalence or dominance of hydrophytic vegetation, hydric soils, and wetland hydrology sufficient to meet the requirements as jurisdictional features under Section 404 of the Clean Water Act.

No other sensitive natural communities are present within or would be impacted by the Project. Impacts to observed wetlands would be avoided through Mitigation Measure BIO-8, so overall impacts would be ***less than significant with mitigation incorporated***.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

The proposed road grading and underground power line work would not impede the movement of terrestrial or avian wildlife species. Other planned improvements at the top of the hill would be confined within the area enclosed by the proposed fence. The fence would be six feet tall, and the compound would be 35 by 40 feet wide, covering a total area of 1,400 square feet. As the area around the fence would remain undeveloped, wildlife would still be able to freely move throughout the area. Additionally, Mitigation Measure BIO-7 would ensure that the project would

not interfere with the movement of California red-legged frog. The Project would, as a result, not interfere substantially with the movement of any native resident migratory wildlife species, and impacts would be ***less than significant with mitigation incorporated***.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No local policies or ordinances governing the protection of biological resources applicable to the Coyote Peak Site were identified. Further, all potential impacts to biological resources at the Coyote Peak Site would be mitigated to less than significant levels. Therefore, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Coyote Peak Site is located in unincorporated Marin County. The Coyote Peak Site is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. Since there would be no conflict with any such policies, ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

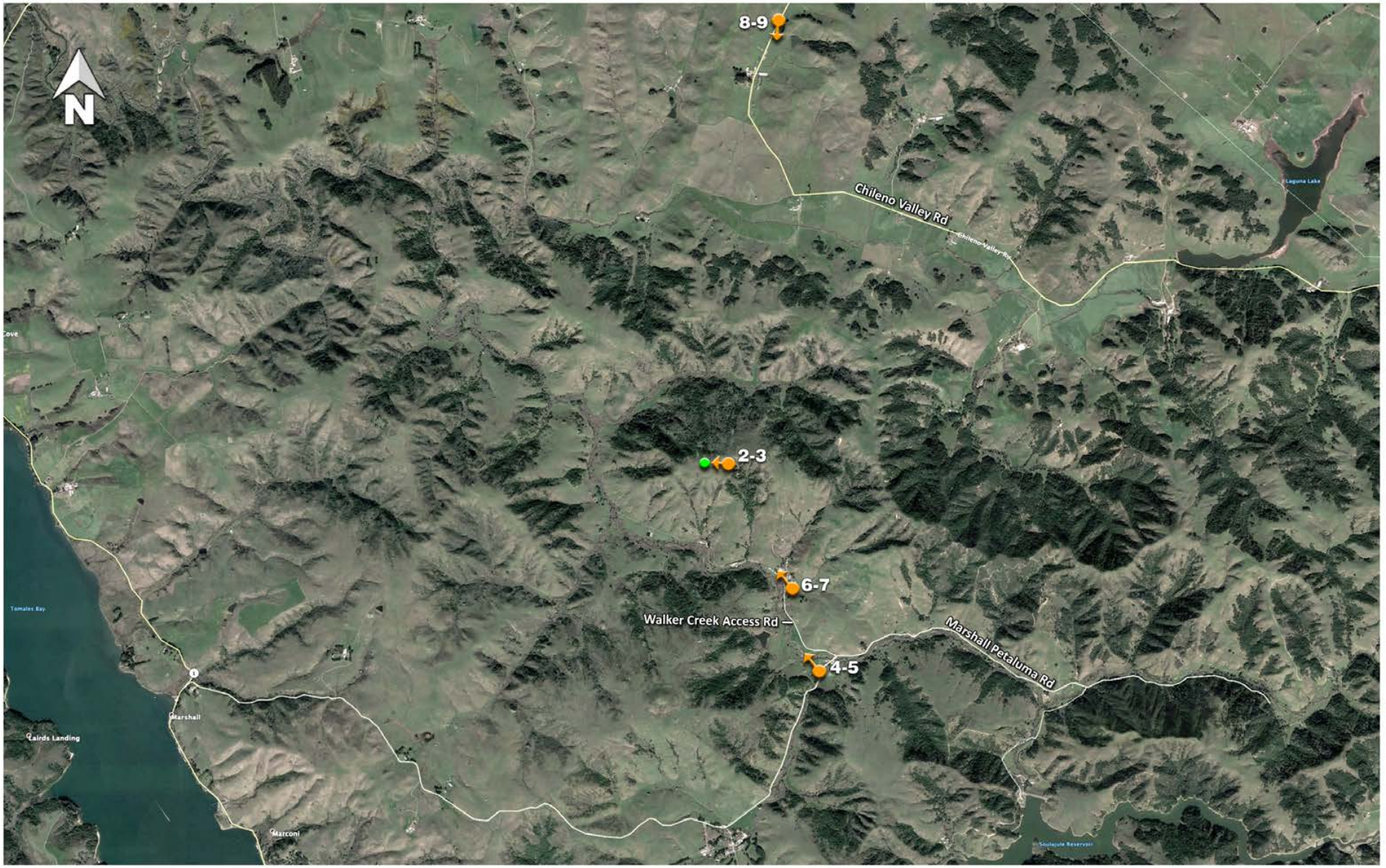
Evaluation of exposure limits for RF emissions at the Coyote Peak Site (Site 21) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. Existing communications infrastructure at the site is minimal, so rather than measuring baseline RF emissions during a site visit, SiteSafe used an inventory and diagrams of proposed infrastructure at the site to model electromagnetic emissions levels relative to Maximum Permissible Exposure (MPE) limits from the proposed communications system improvements and determine the site's current compliance with applicable FCC RF regulations.

SiteSafe modeled these conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the general public MPE limit when calculating the

percentage of exposure, which is five times more stringent than the limit set for workers in controlled areas.

At the Coyote Peak Site, there would be five antennas capable of operating at one time (for a full inventory, see page 235 of Appendix D). These antennas would cumulatively create a maximum ground-level exposure of less than 1% of the public MPE limit. RF emission models at the Coyote Peak Site predict that any RF emissions in excess of public MPE limits would only occur between 45 and 50 feet above the ground where neither the public nor workers would be exposed. SiteSafe's modeling of RF exposures in an elevation view can be viewed in Figure V.M-12, at the end of this section. The figure shows that uncontrolled areas (accessible to the public) would experience a maximum (worst-case modeling scenario) of less than 5% of the MPE public limit and therefore SiteSafe concluded that all MERA facilities at the Coyote Peak Site would comply with FCC regulations.

In summary, MERA's operations at the Coyote Peak Site currently comply with the FCC's controlled/occupational and uncontrolled/public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 1% of the public MPE limits for uncontrolled/general public environments and would remain less than 1% of the MPE limits during each phase of the proposed project. A fence will surround the perimeter of the site, but MPE levels inside the fence would not expose workers to more than 1% of the public MPE limit at ground level. As the project would not result in RF emissions in excess of the FCC's MPE limits, the impacts from RF emissions at the Coyote Peak Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.M - 1 Coyote Peak Aerial with Photo Locations

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Current photograph of an up close view of the existing water well-head at Coyote Peak, a restricted area with no public access.

Source: Previsualists Inc.

Figure V.M - 2 Existing Coyote Peak Near View

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Photosimulation of the view with the proposed 75-foot tall monopole and equipment building in front of the existing water well-head at Coyote Peak, a restricted area with no public access.

Figure V.M - 3 Proposed Coyote Peak Near View

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Current photograph of a telephoto zoom view looking north from Marshall Petaluma Road near the gate to the property.

Source: Previsualists Inc.

Figure V.M - 4 Existing View of Coyote Peak from Marshall Petaluma Road

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Photosimulation of the proposed 75-foot tall monopole in a telephoto lens view looking north from Marshall Petaluma Road near the gate to the property.

Source: Previsualists Inc.

Figure V.M - 5 Proposed View of Coyote Peak from Marshall Petaluma Road

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Current photograph of the view looking northwest from the porch of the admin office.

Source: Previsualists Inc.

Figure V.M - 6 Existing View of Coyote Peak from Walker Creek Ranch

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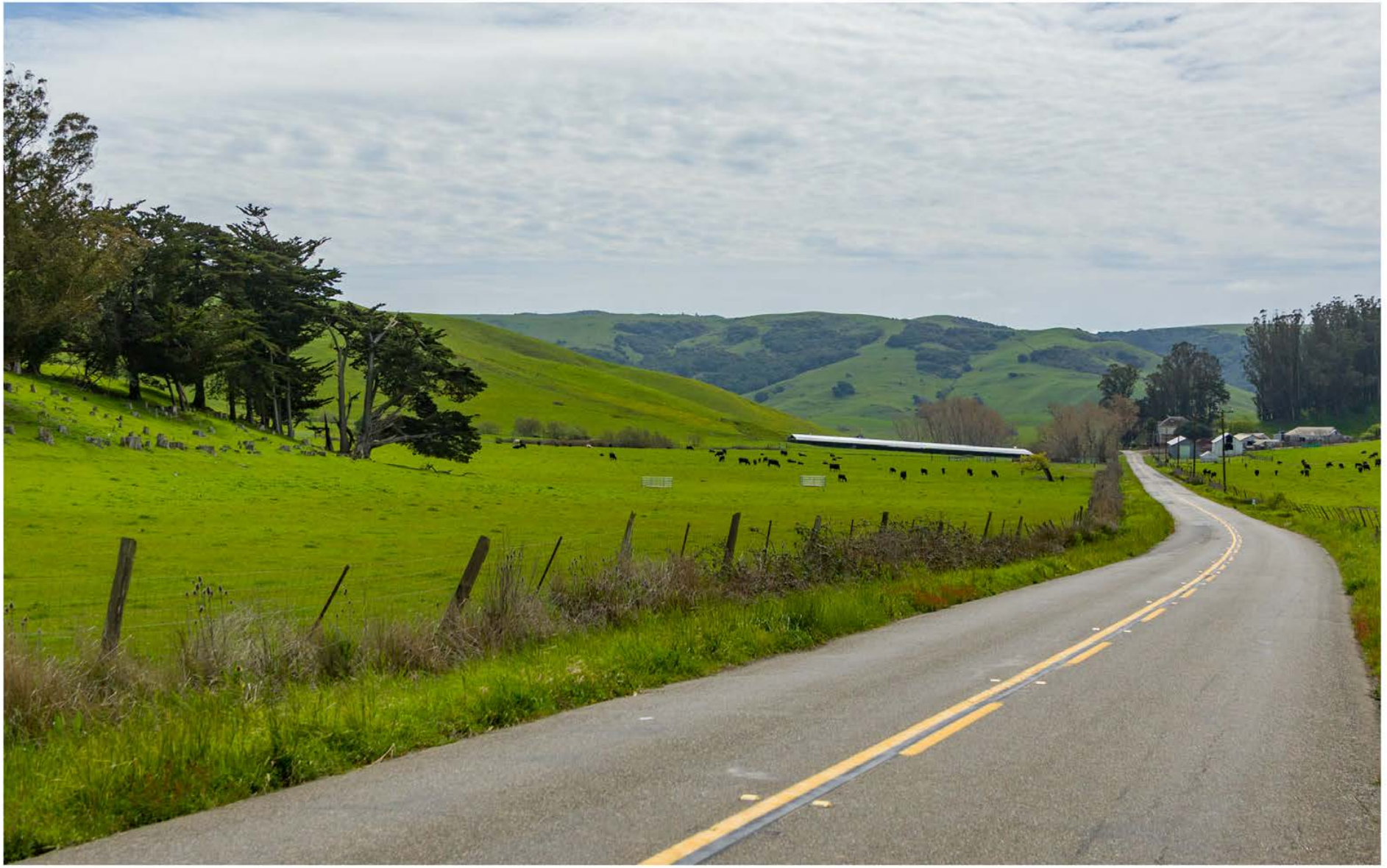


Photosimulation of the view with the proposed 75-foot tall monopole looking northwest from the porch of the administrative office. Tower not visible from Walker Creek Ranch Buildings, but the reconstructed access road (to the right) is visible on the ridge.

Source: Previsualists Inc.

Figure V.M - 7 Proposed View of Coyote Peak from Walker Creek Ranch

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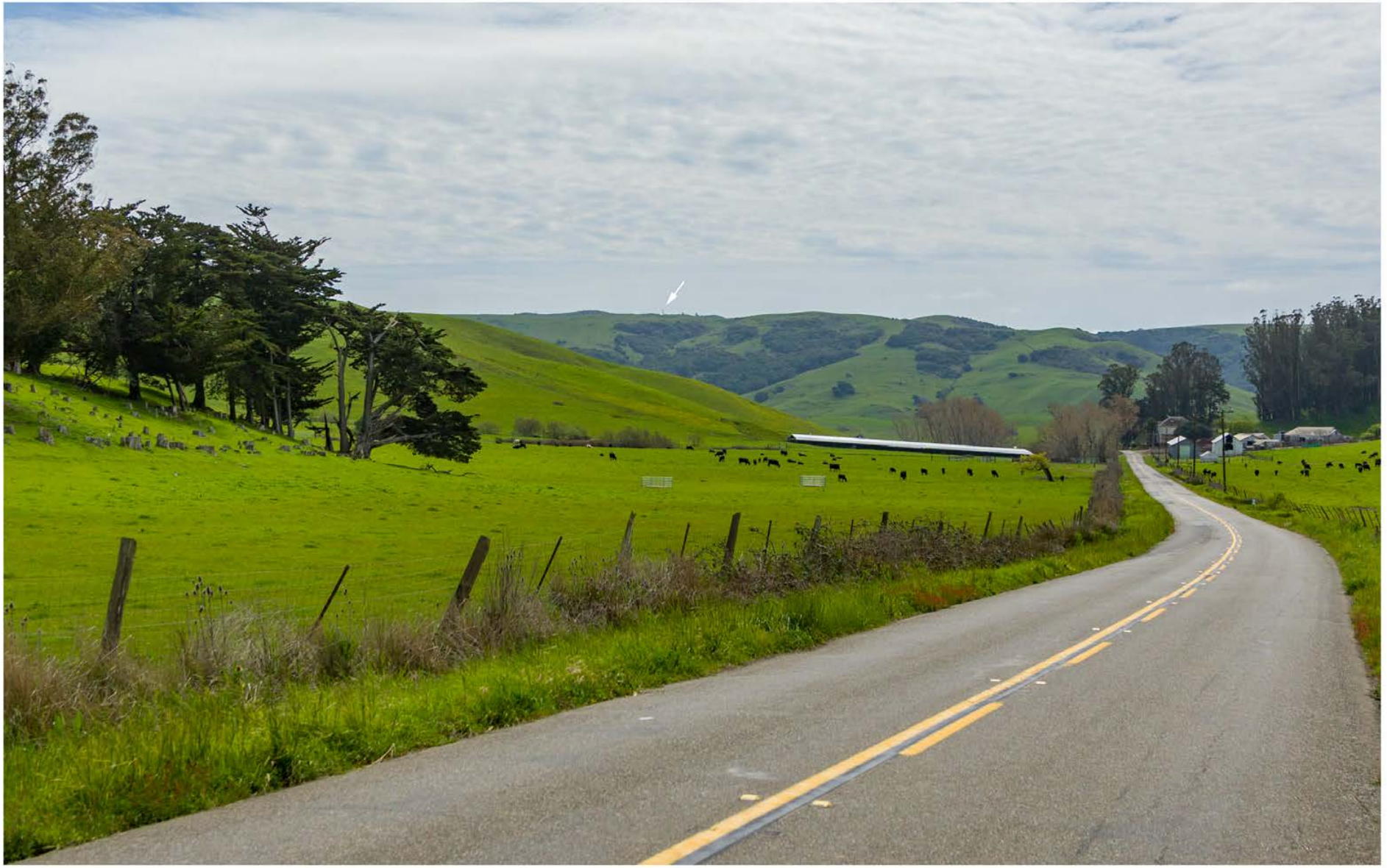


Current photograph of the view looking south from Chileno Valley Road.

Source: Previsualists Inc.

Figure V.M - 8 Existing View of Coyote Peak from Chileno Valley Road.

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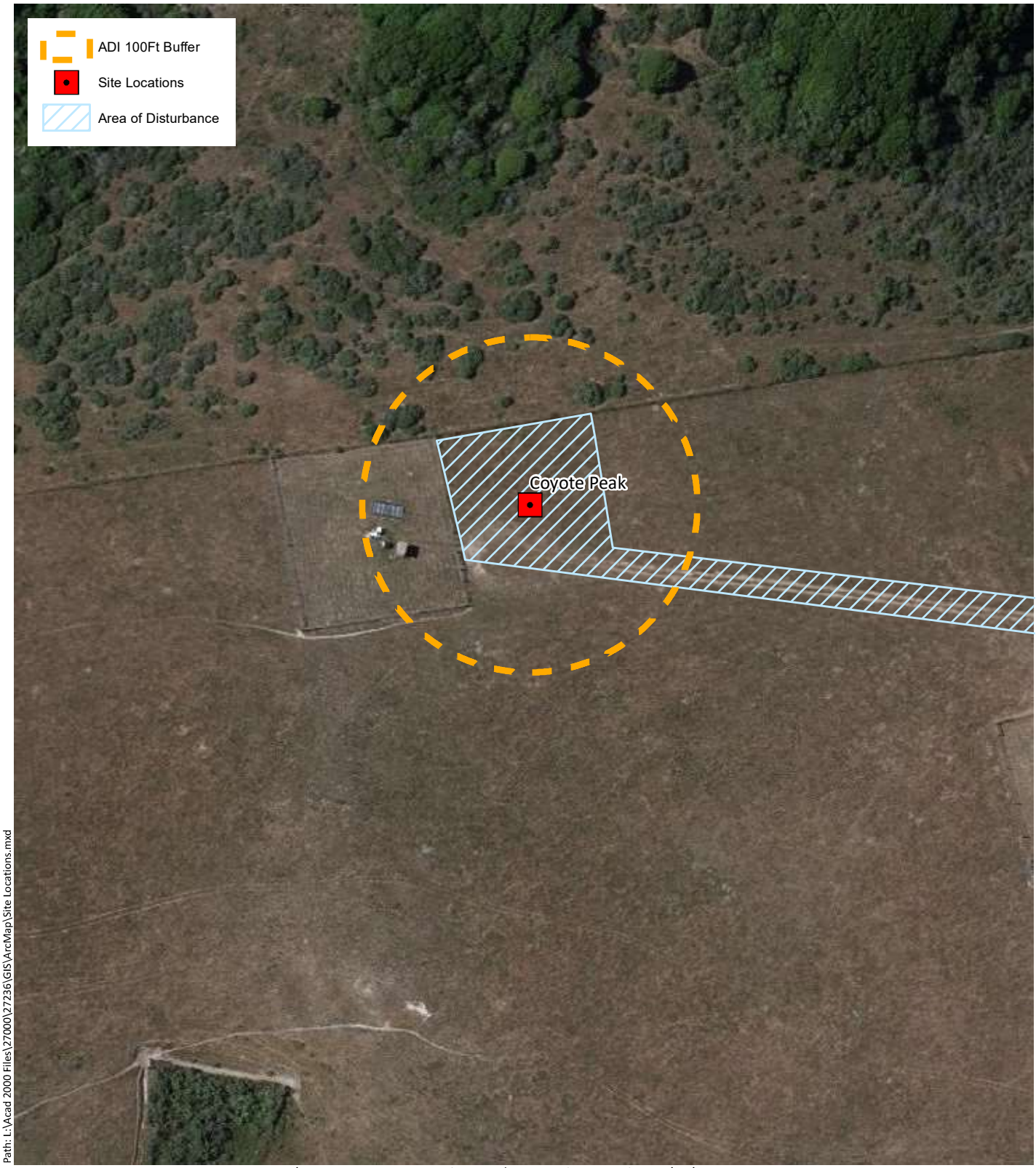


Photosimulation of the view looking south from Chileno Vallley Road.

Source: Previsualists Inc.

Figure V.M - 9 Proposed View of Coyote Peak from Chileno Valley Road.

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

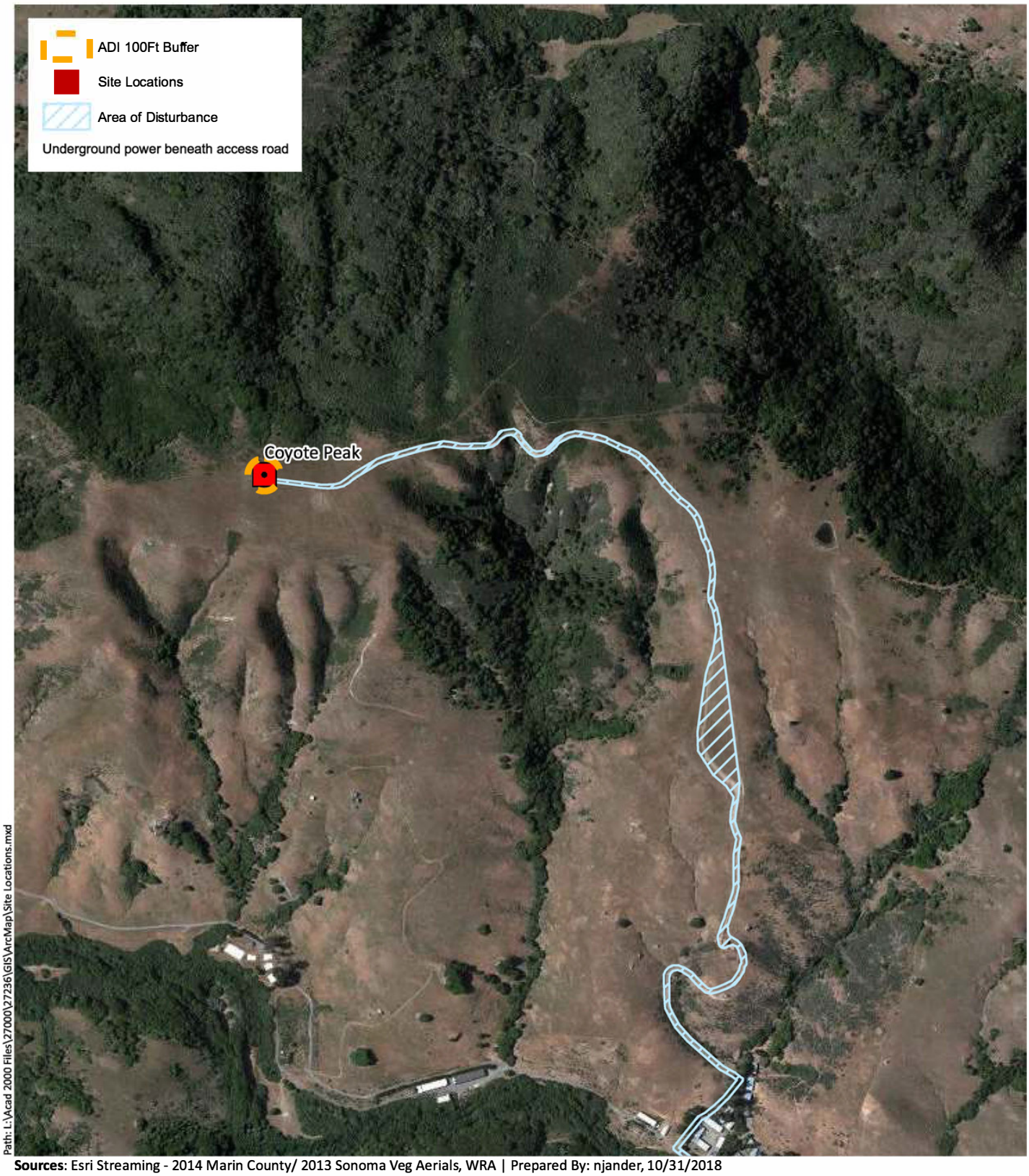
Figure V.M - 10 Coyote Peak

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

N

wra ENVIRONMENTAL CONSULTANTS



Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

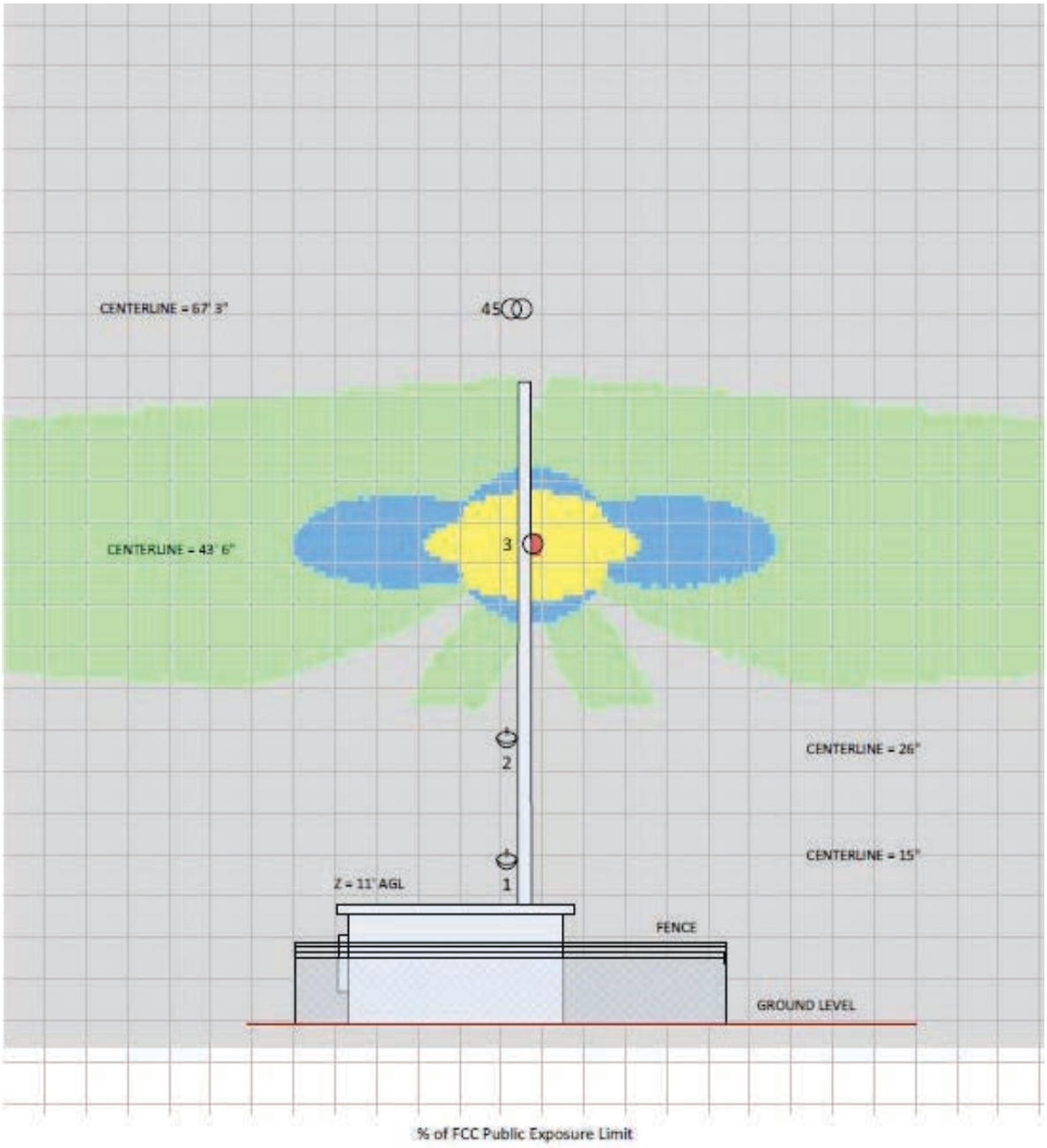
Figure V.M - 11 Coyote Peak Access Road

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 250 500 Feet

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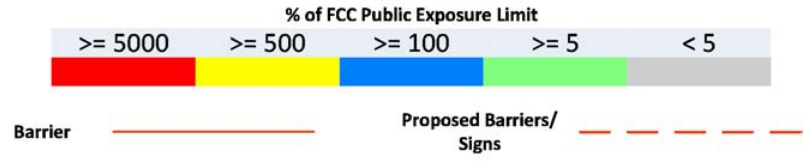


Figure V.M - 12 Coyote Peak Simulated All-On RF Exposure - Elevation View

N. Skyview Terrace Water Tank Water Tank (Site 22)

The Skyview Terrace Water Tank Site is located on a ridge next to an existing Marin Municipal Water District water tank. The site is near Lucas Valley Road off of Highway 101 and is accessed via a paved residential road that terminates at the existing unpaved road to the water tank.

Details of the proposed work for the Next Gen System as the Skyview Terrace Water Tank Site are summarized in Section III, Project Description. The proposed changes include the introduction of a new equipment shelter, a new 35-foot monopole with two microwave dishes, a fence, an emergency generator, and a fuel tank, as summarized below in Table V-14.

The site is located on a hilltop in the City of San Rafael. The north and south faces of the ridge are vegetated with trees and brush, and the west and east faces of the ridge are open and grassy, as shown in Photo III-15 (Chapter III, Project Description). The site is bordered to the north, south, and west by residential development. Highway 101 and commercial development are located to the east. Additionally, there are parking areas to the west of the site at the bottom of the ridge, which provide access to a pedestrian trail. This trail is part of a trail network through the area, which provides access to the site from adjacent residential and commercial areas.

The proposed project would comprise an estimated 80% of the visible components on the ridge. The existing water tank site is shielded by a berm and is not particularly visible.

Table V–14. Skyview Terrace Water Tank Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Skyview Terrace Water Tank	Next to existing MMWD water tank near Lucas Valley Road. Visible from Hwy 101.	Propose new 35' tall monopole with 2 microwave dishes, shelter, fence, generator, and fuel tank.

1. Aesthetics

The Skyview Terrace Water Tank Site is located in public open space maintained by the City of San Rafael and the County of Marin. The southern half of the open space ridgeline is wooded while the northern half, where the project site is located, is relatively open and grassy. The existing water tank is located just above the project site and is screened by a berm that surrounds the tank. These are partially to directly visible, depending on elevation and distance from nearby residential neighborhoods, State Highway 101, and Smith Ranch Road.

Foreground views from the project site are toward the developed areas of San Rafael, although the site's elevation offers distant views of Big Rock Ridge to the west and views of San Pablo Bay to the east. These distant natural features provide scenic backdrops to nearby suburban development and roads.

a) Would the project have a substantial adverse effect on a scenic vista?

The Skyview Terrace Water Tank Site is located atop a ridgeline (Figure V.N-1), and the site and the access road offer public vistas of Big Rock Ridge, San Pablo Bay, Mount Tamalpais and the City of San Rafael (Figures V.N-2 through V.N-7). The proposed 35-foot tall MERA facility would

be located adjacent to the access road and would obstruct the scenic vista available from the ridgeline site (Figures V.N-4 and 5) such that the project would have a substantial adverse effect on a scenic vista from a public open space, creating an impact that is ***significant and unavoidable***.

Mitigation Measure AES-5

The public trail that extends southward from the access road shall be reconstructed to allow pedestrians to access the open space area south of the MERA site where views to Mt. Tamalpais and Big Rock Ridge would be unobstructed by the project. After implementation of mitigation the impact would remain **significant and unavoidable**.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Since the nearest portion of Highway 101 that is eligible for designation as a state scenic highway is approximately four miles north of the site, project work at this site would not damage any scenic resources or views within a state scenic highway, and ***no impact*** would occur.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The Skyview Terrace Water Tank Site is located in an open area that contains patches of dense vegetation which limit views of the site from the south. In portions of the open space devoid of tree cover, the site is visible just downhill from the existing water tank. The construction of a 35-foot monopole and equipment shelter on a currently undeveloped hilltop would bring a significant visual change to the open area, and the change would be visible from distant residential neighborhoods, Highway 101, and from trails within the open space. The 35-foot monopole would be prominent from several vantage points, and the fenced equipment structure and monopole would affect existing visual character and quality of the hilltop open space. Consequently, the project impact is ***significant and unavoidable***.

Mitigation Measure AES-6

A combination of berms, opaque fencing and native grassland hydroseeding shall be installed to screen views of the equipment shelter from points east and west of the ridgeline. Equipment on the site shall be aligned to maximize space for the berm construction and the trail (Mitigation Measure AES-5). The top of the berm and the six-foot tall fence shall be contoured to mimic the broad naturalized landform of the ridgeline and shall be high enough to screen the shelter (but not the monopole) from lower elevation views such as Highway 101 to the east and Park Ridge Road to the west. Berms shall be mulched and hydroseeded to minimize erosion potential and to allow for germination during winter rains. Any erosion of the berm shall be immediately repaired.

After implementation of mitigation the 35-foot tall monopole and microwave dishes would still be visible and therefore the impact would remain ***significant and unavoidable***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Skyview Terrace Water Tank Site. Ground disturbance would be limited to the vicinity of the proposed infrastructure and would reach a maximum depth of five feet below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figure V.N-8.

Given the limited nature of ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Skyview Terrace Water Tank Site would comply with Mitigation Measure CULT-1 (see page IV.B-10), which provides procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Skyview Terrace Water Tank Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, and the Skyview Terrace Water Tank Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (see page IV.B-12 and IV.B-13), the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Proposed project improvements would be located within a previously developed and disturbed portion of the ridgeline that has little vegetation cover. However the open grassland habitat surrounding the project site could potentially support special-status plant species. As a result, focused protocol-level rare plant surveys were conducted within the site area on April 4, May 8, and June 12, 2018.

The following special-status species have a moderate or high potential to be present within undeveloped non-native annual grassland portions of the site: bent-flowered fiddleneck, congested-headed hayfield tarplant, bristly leptosiphon, and marsh microseris. Reference site visits for all aforementioned special-status plant species were performed with the following results: bent-flowered fiddleneck (observed March 30, 2018 along Highway 1 south of Tomales), congested-headed hayfield tarplant (observed June 6, 2018 along Bodega Avenue in Petaluma), bristly leptosiphon (observed April 8, 2018 at Taylor Mountain Regional Park in Santa Rosa), and marsh microseris (observed May 6, 2018 in bud and bloom at Abbotts Lagoon, Point Reyes). However, no special-status plant species were observed in the biological study area (the project site plus an approximate 100-foot radius), meaning that the proposed project improvements would not have an impact on special-status plant species.

Grasshopper sparrow has a moderate potential to be present in the vicinity, given the previously disturbed project site. Improvements within the Skyview Terrace Water Tank Site are limited, including a new 35-foot tower and an associated 1,050 square foot fenced area, shelter, generator, and fuel tank, and are not anticipated to impact vegetation or nesting habitat for this species. Accordingly, proposed improvements would have no impact on special-status wildlife species. Since the proposed project would not adversely affect candidate, sensitive, or special-status plant or wildlife species, ***no impact*** would occur.

b-c) Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The location of the proposed new radio communications facility is a previously disturbed pullout along the gravel access road serving the existing water tank. The surrounding habitat within the study area consists of non-native annual grassland dominated by slim oat, with other predominantly non-native grass and forb species present including ripgut brome, purple false brome (*Brachypodium distachyon*), soft chess, purple needle grass (*Stipa pulchra*), fennel (*Foeniculum vulgare*), yellow star thistle (*Centaurea solstitialis*), common fiddleneck (*Amsinckia intermedia*), and hairy cats ear. Non-native annual grassland is not considered a sensitive biological community, and no sensitive biological communities, including protected wetlands, are present. Site upgrades would be confined to previously developed or disturbed areas.

Consequently, the Project would have ***no impact*** on sensitive biological communities, including protected wetlands.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

The Skyview Terrace Water Tank Site is bordered by existing residential and commercial development, and the ridge on which improvements are proposed has limited utility as a wildlife movement corridor. Further, the area of proposed improvements would have a small footprint (1,050 square feet, within the 30-foot by 35-foot fenced area) and would not present a substantial barrier to wildlife movement. Thus, the Project would not substantially interfere with the movement of any native resident or migratory wildlife species; and ***no impact*** would occur.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No potential impacts to biological resources at the Skyview Terrace Water Tank Site were identified, and proposed improvements would not adversely impact biological resources, meaning that ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Skyview Terrace Water Tank Site is not located on or within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. There would be no conflict with any such policies, and ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

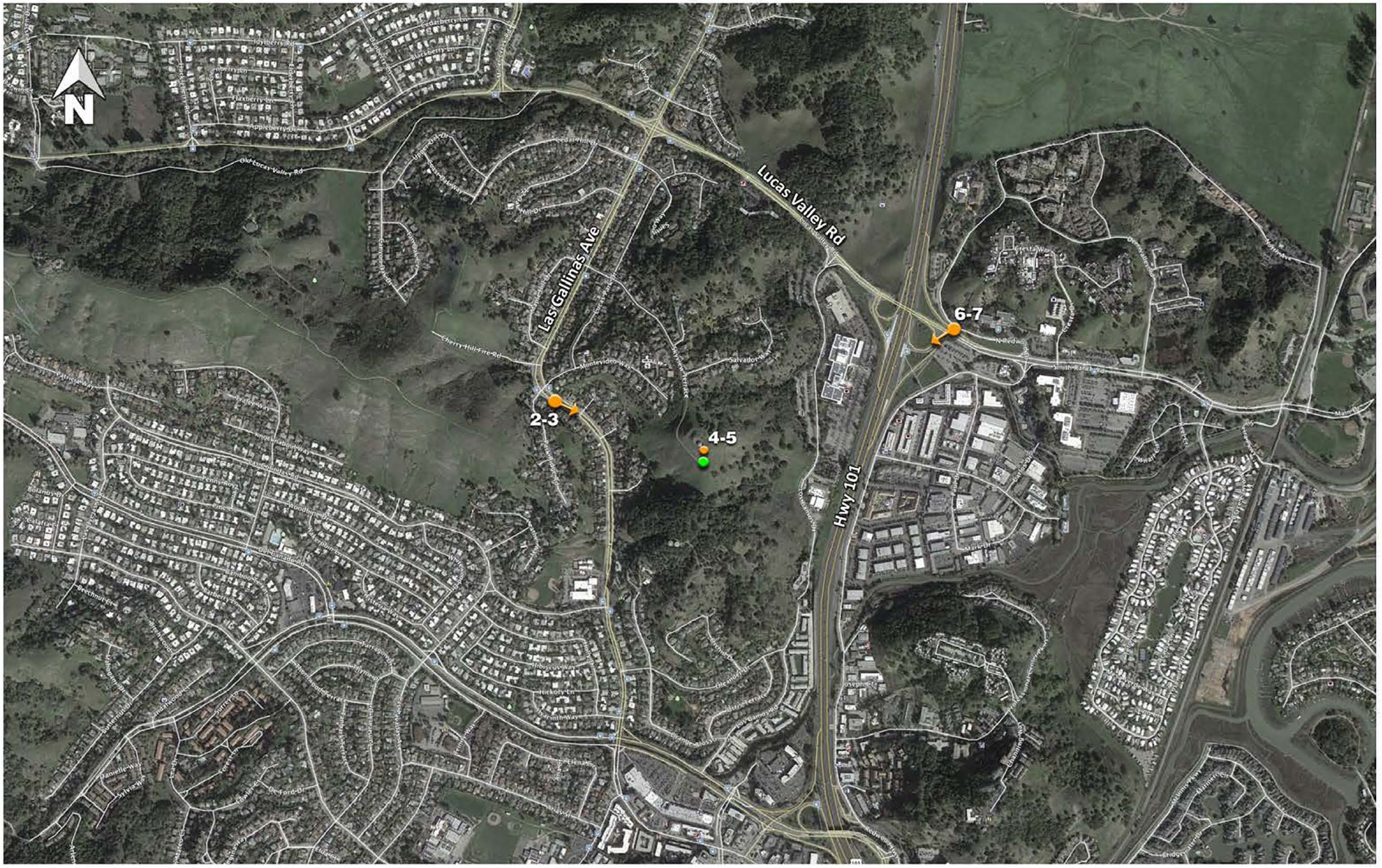
Evaluation of exposure limits for RF emissions at the Skyview Terrace Water Tank Water Tank Site (Site 22) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. Existing communications infrastructure at the site is minimal, so rather than measuring baseline RF emissions during a site visit, SiteSafe used an inventory and diagrams of

proposed infrastructure at the site to model electromagnetic emissions levels relative to Maximum Permissible Exposure (MPE) limits from the proposed communications system improvements and determine the site's current compliance with applicable FCC RF regulations.

SiteSafe modeled these conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the general public MPE limit when calculating the percentage of exposure, which is five times more stringent than the limit set for workers in controlled areas.

At the Skyview Terrace Water Tank Water Tank Site, there would be two antennas capable of operating at one time (for a full inventory, see Page 243 of Appendix D). These antennas would cumulatively create a maximum ground-level exposure of less than 1% of the public MPE limit. SiteSafe's modeling of RF exposures in an elevation view can be viewed in Figure V.N-9, at the end of this section. The figure shows that both controlled and uncontrolled areas (accessible to the public) would experience a maximum (worst-case modeling scenario) of less than 5% of the MPE public limit and therefore SiteSafe concluded that all MERA facilities at the Skyview Terrace Water Tank Water Tank Site would comply with FCC regulations.

In summary, MERA's operations at the Skyview Terrace Water Tank Water Tank Site currently comply with the FCC's controlled/occupational and uncontrolled/public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 1% of the public MPE limits for uncontrolled/general public environments and would remain less than 1% of the MPE limits during each phase of the proposed project. A fence will surround the perimeter of the site, but MPE levels inside the fence would not expose workers to more than 1% of the public MPE limit at ground level. As the project would not result in RF emissions in excess of the FCC's MPE limits, the impacts from RF emissions at the Skyview Terrace Water Tank Water Tank Site would be ***less than significant***. No mitigation is required.

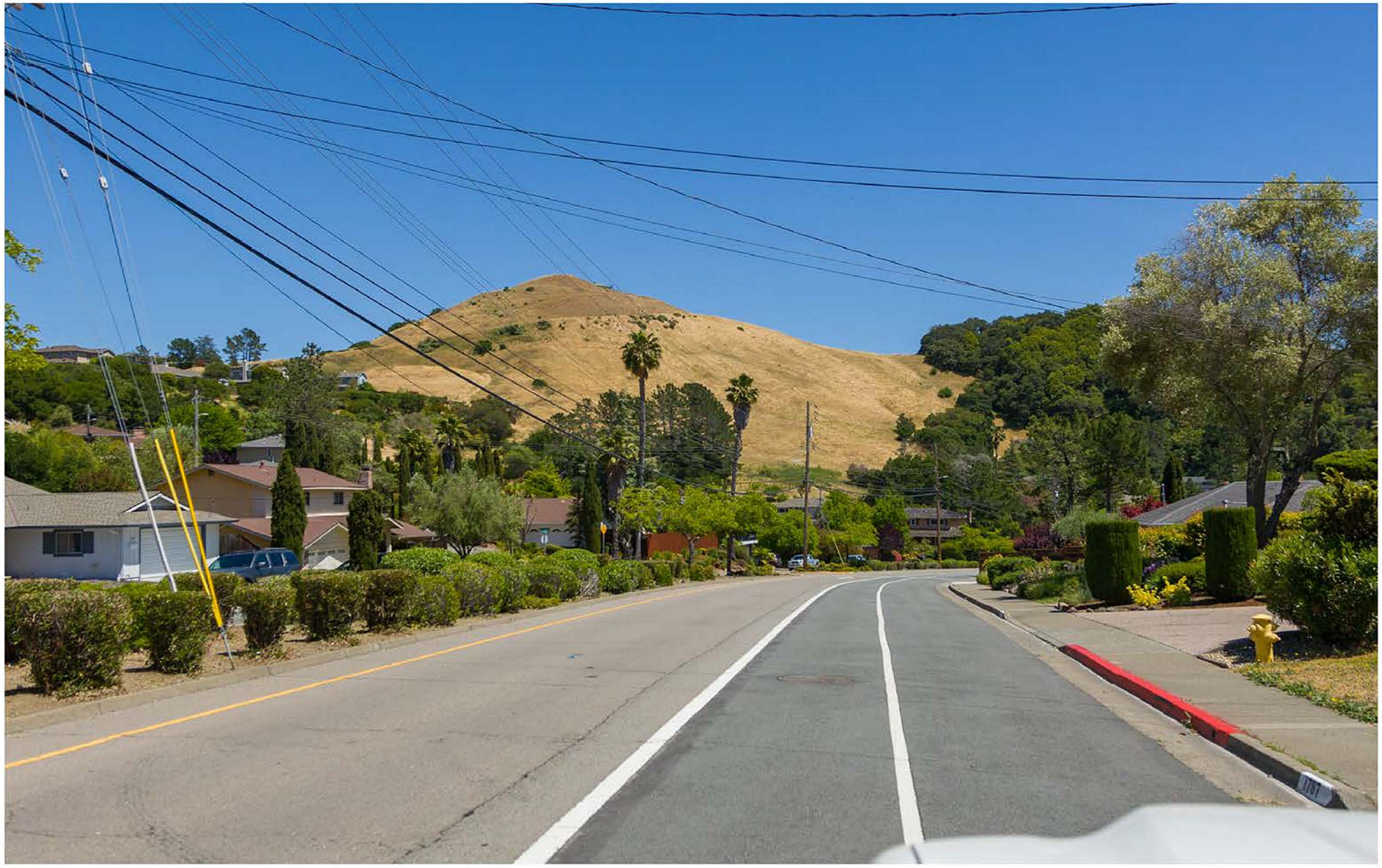


Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.N - 1 Skyview Terrace Water Tank Aerial with Photo Locations

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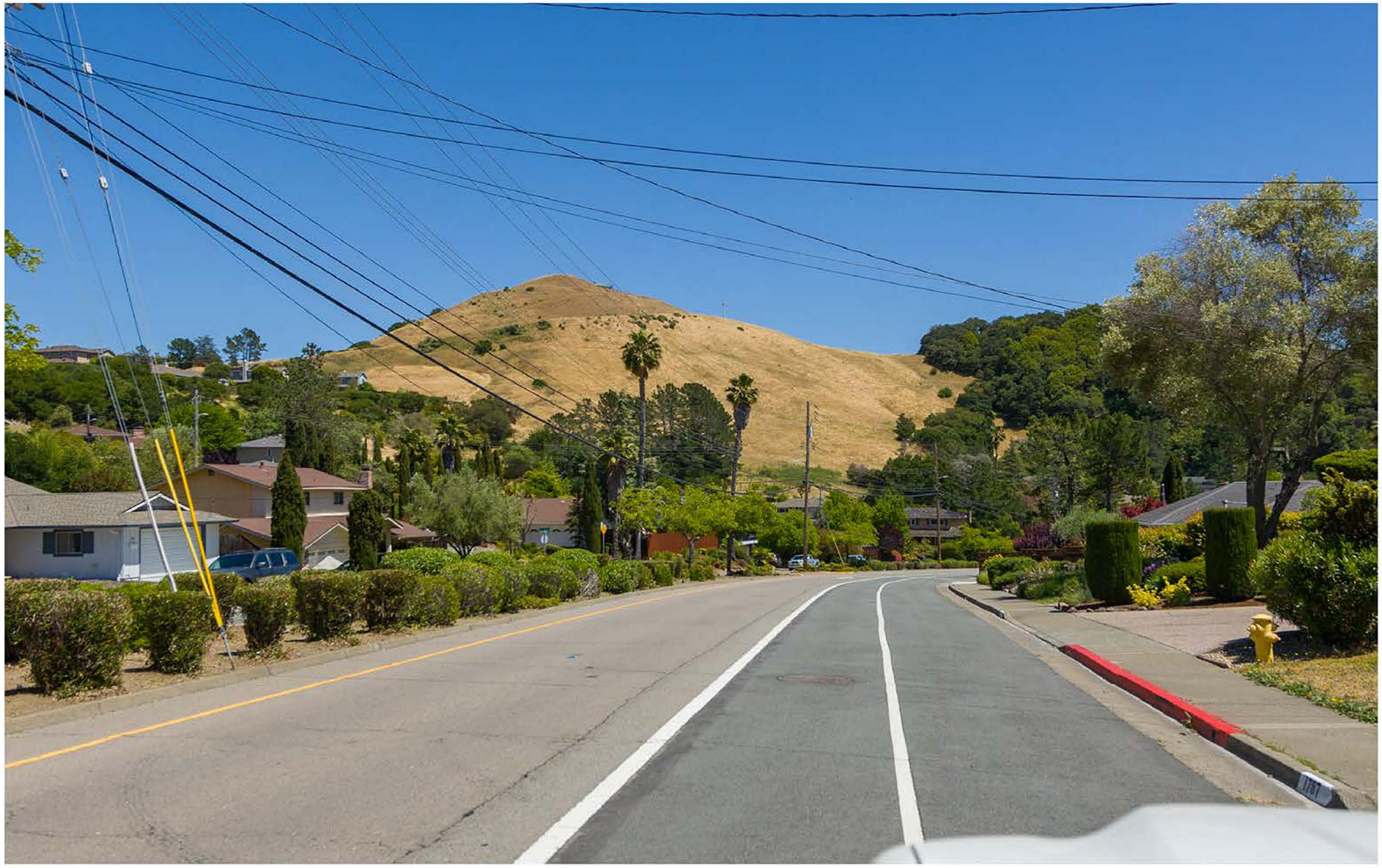


Current photograph of the view looking southeast from Las Gallinas Avenue.

Source: Previsualists Inc.

Figure V.N - 2 Existing Skyview Terrace Water Tank from Las Gallinas Avenue

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Photosimulation with the 35-foot monopole in the view looking southeast from Las Gallinas Avenue.

Source: Previsualists Inc.

Figure V.N - 3 Proposed Skyview Terrace Water Tank from Las Gallinas Avenue

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Current photograph of the view looking south on the hilltop by the water tank, showing an up close view of the site.

Source: Previsualists Inc.

Figure V.N - 4 Existing Skyview Terrace Water Tank Near View

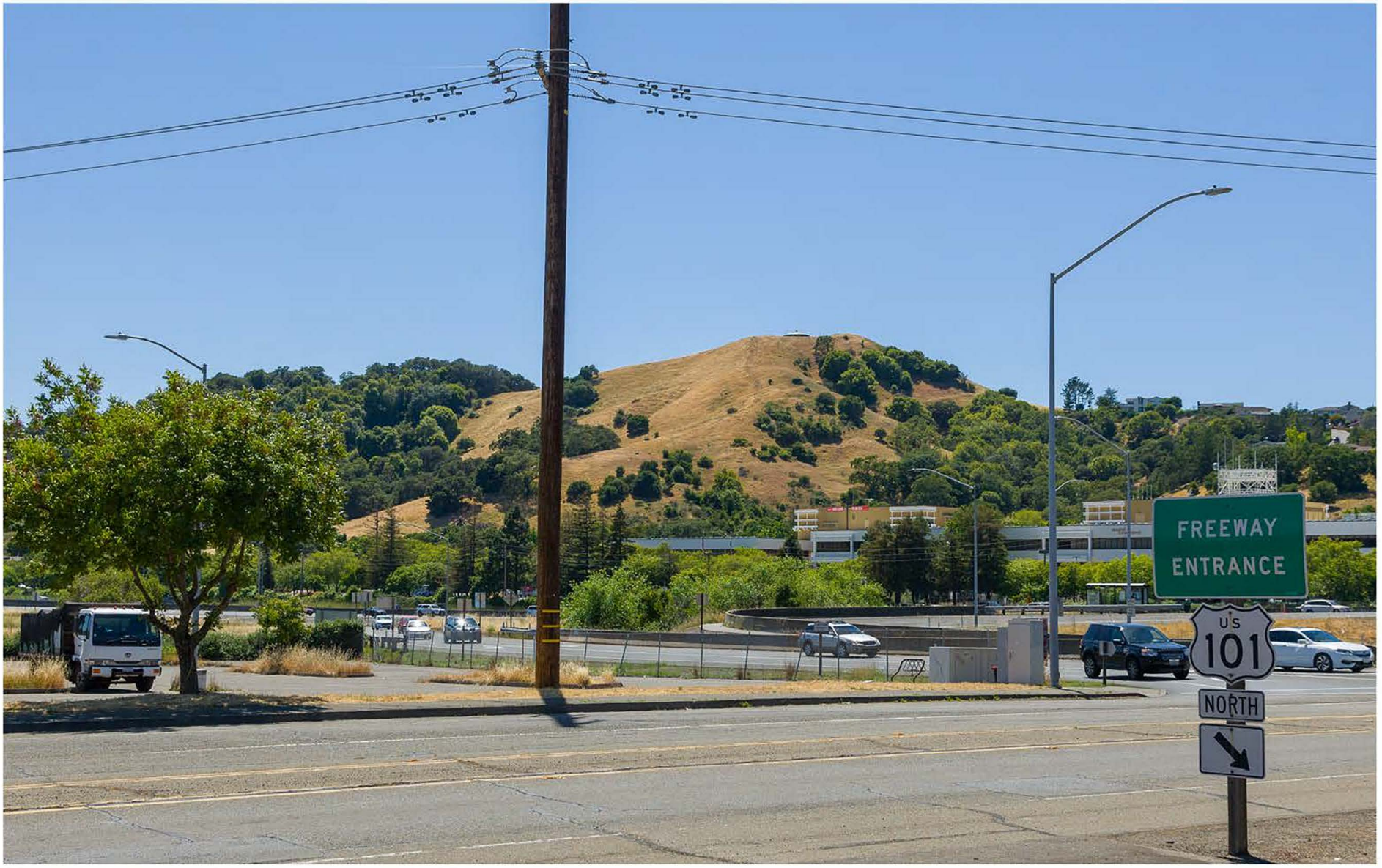
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Photosimulation of the 35-foot monopole and equipment structure in the view looking south from the hilltop by the water tank, showing an up close view of the site. Source: Previsualists Inc.

Figure V.N - 5 Proposed Skyview Terrace Water Tank Near View

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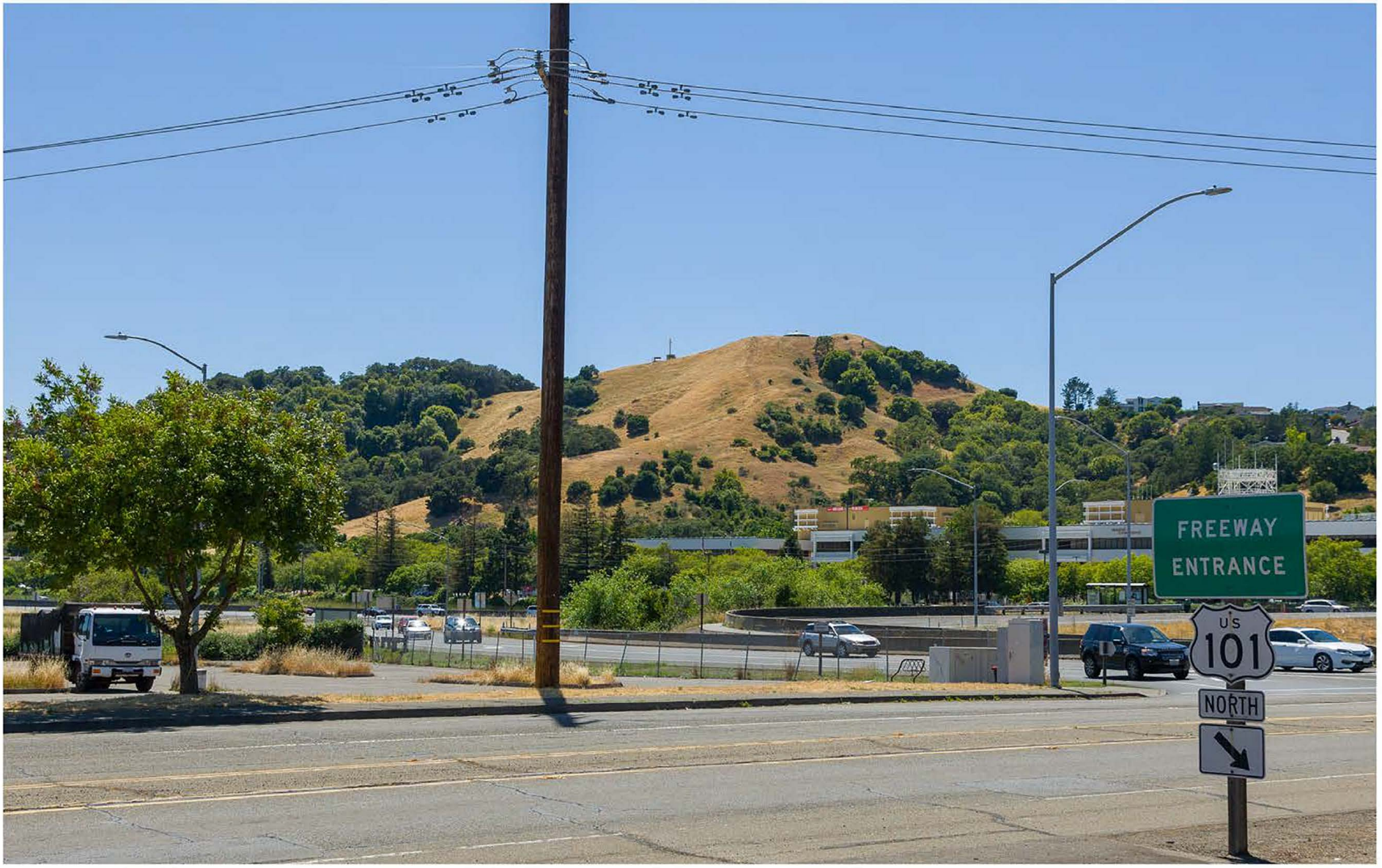


Current photograph of the view looking southwest from Smith Ranch Road at Hwy 101.

Source: Previsualists Inc.

Figure V.N - 6 Existing Skyview Terrace Water Tank from Smith Ranch Road

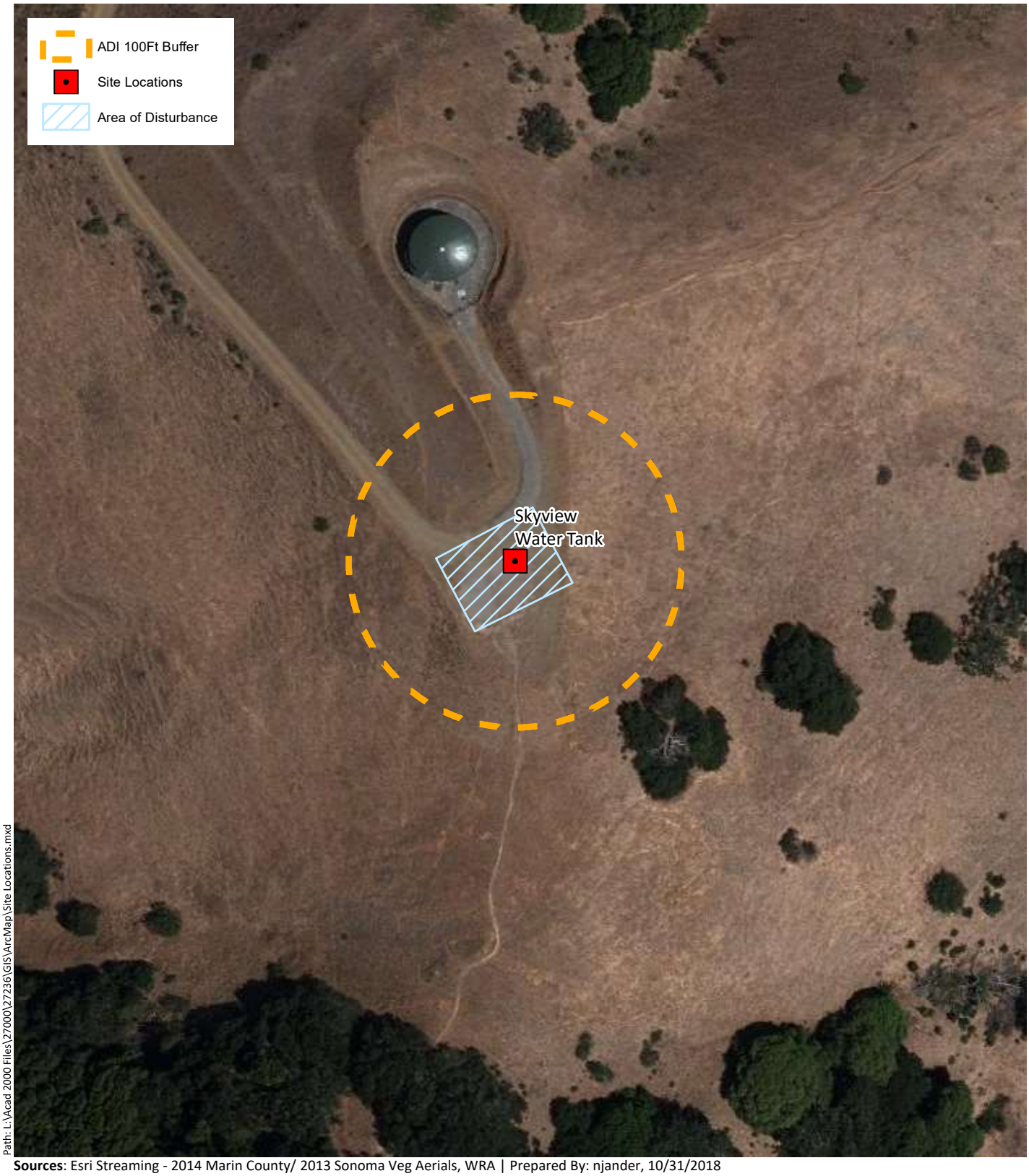
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Photosimulation of the 35-foot monopole and equipment structure in the view looking southwest from Smith Ranch Road at Hwy 101. Source: Previsualists Inc.

Figure V.N - 7 Proposed Skyview Terrace Water Tank from Smith Ranch Road

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.N - 8 Skyview Terrace Water Tank

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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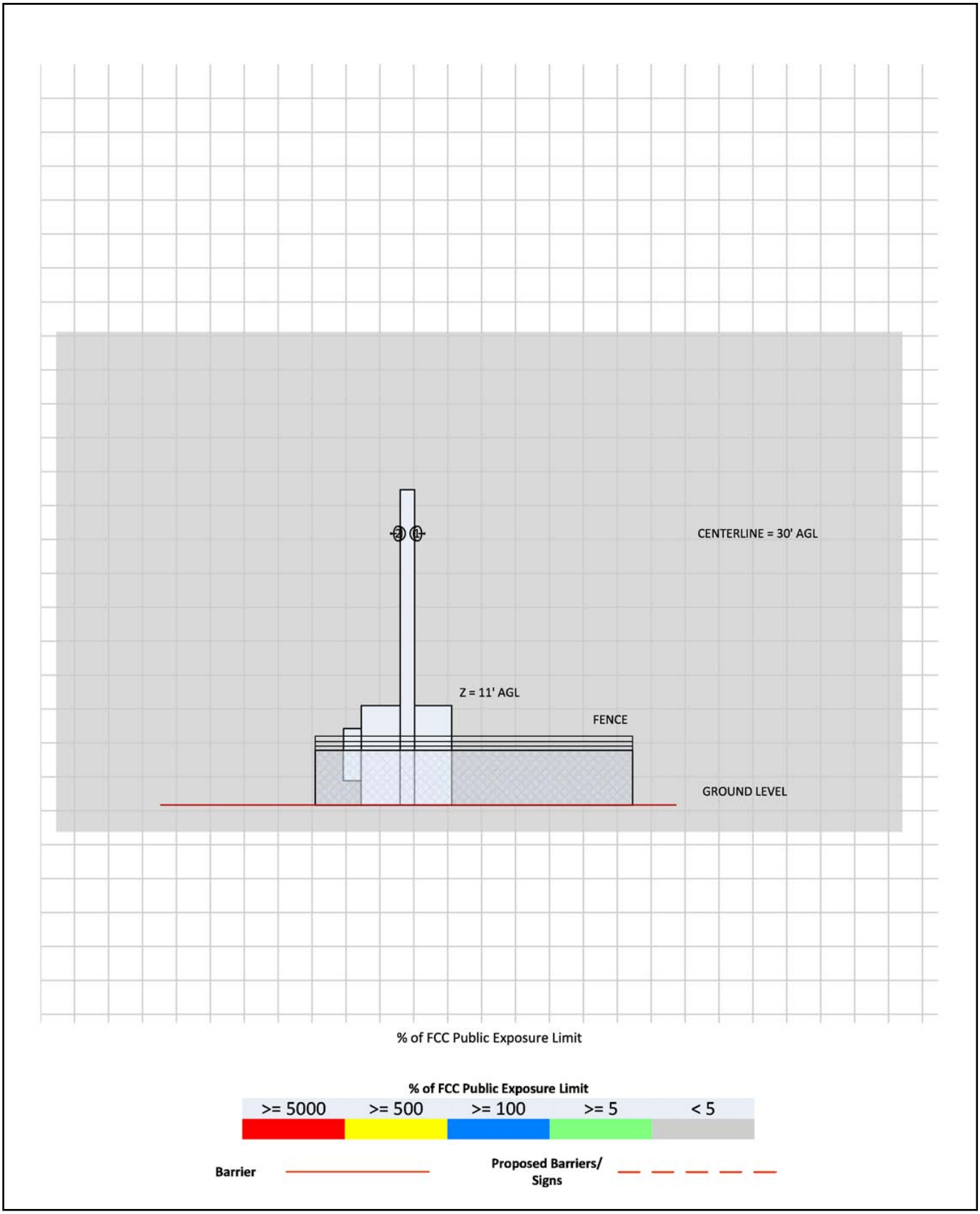


Figure V.N - 9 Skyview Terrace Water Tank
Simulated All-On RF Exposure - Elevation View

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O. Muir Beach (Site 23)

This proposed MERA site is in Muir Beach and would be located within an already disturbed and developed parcel of land adjacent to the parking lot for the Golden Gate National Recreation Area's (GGNRA) Muir Beach Scenic Overlook. The proposed improvements would be located next to an existing water tank, which is highly visible from both nearby homes and the scenic overlook. Proposed MERA improvements include the introduction of a new 60-foot high monopole that will reach 70 feet in height with antennas, plus an equipment shelter, emergency generator, fuel tank, one microwave dish on top of the existing water tank, a wooden fence, and landscaping. A new fire station unaffiliated with MERA is being considered on the same site. Details of the proposed work for the Muir Beach Site are described in Chapter III, Project Description and summarized below in Table V-15.

To the west, the Scenic Overlook provides views of the Pacific Ocean and coastal cliffs. Overlook features also include a pedestrian path and picnic area as shown in Photo III-16 (Chapter III, Project Description). The scenic overlook's restroom is next to the MERA's proposed enclosure.

Table V–15. Muir Beach Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Muir Beach	Existing Muir Beach Community Services District Water Tank. Next to existing GGNRA scenic overlook parking lot and public restrooms.	Propose new 60' tall monopole, with 3 antennas, a shelter, fence, generator and fuel tank, plus one new microwave dish on existing water tank.

1. Aesthetics

The Muir Beach Site is located adjacent to the Muir Beach Scenic Overlook within the GGNRA. As previously mentioned, the overlook features picnic tables and rest facilities as well as sweeping views of Muir Beach, coastal cliffs, and the Pacific Ocean. Hiking trails through GGNRA and a short access road off of State Route 1 provide access to the overlook. The Marin County portion of State Route 1 is eligible, although not officially designated, as a state scenic highway.

KOPs have been selected to represent the array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.O-1. Subsequent Figures V.O-2 through V.O-7 show the anticipated before and after conditions at the Muir Beach Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

The proposed project improvements would be set back from the scenic overlook parking lot and rest area. As the proposed radio site is located east of the scenic overlook, the views of the Pacific

Ocean to the west, and existing vistas of the ocean and coastal bluffs to the north and south would not be affected.

Existing tree cover hides the proposed site when viewed from ridgelines and the Coastal Trail to the north, so that the views of the ocean from these vantage points are not altered. (Figures V.O-2 and 3). As a result, the project would not adversely affect a scenic vista; and impacts would be ***less than significant***.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Muir Beach Water Tank site is just west of State Route 1. While not officially designated, State Route 1 is an eligible state scenic highway with outstanding views of the Pacific Ocean. The Muir Beach Site is not visible from State Route 1, as views are obstructed by topography and tree canopy, meaning that there is ***no impact*** from the project to scenic resources within the highway.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The construction of a monopole with antennas reaching 70 feet in height would affect the visual character of the Muir Beach scenic overlook, even though the existing parking lot and water tank already do so. Views to the east towards Mt. Tamalpais are most affected, as the new monopole would dominate the vista of the mountains (Figures V.O-6 and 7). As such, the project's impact is on existing visual character is ***significant and unavoidable***.

Mitigation Measure AES -7

The monopole shall be painted the same rusty-brown color as the restroom and shall blend with the adjacent water tank, as shown in Figure V.O-7. The back side of microwave dishes, and other equipment on the top of the water tank (to the extent feasible) shall be painted to match the tower. Front surfaces of microwave dishes cannot be painted and shall remain grey. Landscaping and opaque fencing are provided as part of the project to screen views of the equipment structure.

Other feasible mitigation opportunities are limited at this site given the height requirements of the monopole, and the impact would remain ***significant and unavoidable*** after mitigation.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Muir Beach Site. Ground disturbance would be limited to the vicinity of the proposed monopole, shelter, fence, generator, and fuel tank, and would reach a maximum depth of five feet below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figure V.O-8.

Given the limited nature of ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Muir Beach Site would comply with Mitigation Measure CULT-1 (see page IV.B-10), which includes procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Muir Beach Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, and the Muir Beach Site was among these sites. However, by implementing Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 (see page IV.B-12 and IV.B-13), the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource, and impacts would be ***less than significant with mitigation incorporated***.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Muir Beach Site are not anticipated to impact vegetation within the site. The project site does not contain suitable habitat for special-status plant species. However, due to the presence of a documented occurrence of Point Reyes horkelia, a special-status species plant, from 1972 at approximately 0.7 miles south of the site, a focused protocol-level survey was conducted for this species on June 6, 2018. However, no special-status plant species were observed in the biological study area (the project site plus an approximate 100-foot radius), so that proposed site improvements would not impact special-status plant species.

Nesting birds including oak titmouse, a special status species, have a moderate potential to be present in the vicinity of the project site. While improvements within the Muir Beach Site would not impact vegetation, due to the proximity of dense tree cover, there is some potential for project construction activities to disturb nesting birds. Implementation of Mitigation Measure BIO-2 would ensure these impacts are less than significant. No other activities are planned with the potential to harm other candidate, sensitive, or special-status wildlife species.

In summary, improvements within the Muir Beach Site are not likely to impact special-status wildlife species. No candidate, sensitive, or special-status plant species are present. With implementation of Mitigation Measure BIO-2 (see Site 8, Point Reyes Hill), impacts to all candidate, sensitive, or special-status species would be ***less than significant with mitigation incorporated***.

b-c) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Recent aerial imagery shows that the property on which the MERA facilities would be located was disturbed as recently as 2010 when the current water tank was built and a former water tank was decommissioned.

The surrounding habitat consists of landscaped ornamental trees and shrubs including Monterey cypress (*Hesperocyparis macrocarpa*), prickly Moses (*Acacia verticillata*), and California wax myrtle (*Morella californica*), with ruderal herbaceous vegetation and occasional remnant native shrubs present including coyote brush and California sagebrush (*Artemisia californica*). Landscaped/ornamental areas are not considered a sensitive community. No sensitive biological communities are present, including protected wetlands, and site upgrades consist of minor modifications to existing facilities in a previously developed area; thus, the Project would have ***no impact*** on sensitive biological communities and protected wetlands.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This project site is located within an existing developed property surrounded on one or more sides by residential development, a parking lot, and associated roads and hardscapes that are not core or vital habitat areas or corridors for wildlife species. The proposed MERA improvements will not significantly impede wildlife movement relative to existing site conditions. Consequently, the project would have ***no impact*** on wildlife movement corridors or nursery sites.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Muir Beach Site is located in GGNRA and is within the California Coastal Zone, so that it is subject to the policies of the GGNRA General Management Plan (GMP) and the Marin County Local Coastal Plan (LCP). The GMP sets forth general goals for the management of the Park but does not establish any policies or ordinances applicable to the proposed project. The LCP's Habitat Protection Policies 23, 35, and 26 govern the protection of nesting and breeding wildlife, wildlife movement, and minimization of disturbance to grassland feeding areas, respectively.

Since proposed project improvements are in previously developed or disturbed areas, and the improvements largely occur on existing facilities. Therefore, the Project would not impede wildlife movement, interfere with nesting or breeding, or degrade the quality of grassland for feeding. There would therefore be ***no impact*** regarding conflict with local policies or ordinances protecting biological resources.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The site property, owned by the Muir Beach Community Services District, was previously improved with two water tanks, although one was recently demolished. There is some existing communications equipment affixed to the top of the remaining tank. A new fire station unaffiliated with MERA is also being considered at the property. The proposed MERA facilities will be built in an already developed portion of the CSD site near the remaining water tank, and existing trees and proposed planting would create a buffer between the proposed development and the scenic overlook, the overlook parking lot, and restrooms.

The Muir Beach Site is within the jurisdiction of Unit 1 of the Marin County LCP and adjacent to the GGNRA under the jurisdiction of the GGNRA GMP. The site is designated as C-SF3

(Rural/Residential Coastal Zone) and zoned as C-R-A-B4 (Residential, Agricultural 1 acre lot Coastal Zone). Per Marin County's Coastal Zone regulations, the C-R-A district permits residential use, combined with small-scale agricultural activities. Public utilities are conditionally permitted per section 22.88.010.2 of Marin County's interim coastal zone regulations; however, MERA is not subject to this County-level permit and will be working with the County (as an agent of the State) to acquire a Coastal Development Permit, as required per Chapter 22.56.040, for a state or local public agency project that is not exempted or otherwise requiring a coastal project permit.

LCP policies require new development to be adequately set back from the Muir Beach Bluffs and limit impacts on wildlife habitat and movement corridors. The GGNRA GMP does not set forth any substantive land use requirements but does state that the NPS will work to improve beach and trail access and preserve Muir Beach's natural setting, among other goals for the site.

The proposed project is consistent with the land development and preservation policies contained in the LCP Unit 1. The biological surveys and analysis completed for the Muir Beach Site determined that the project site does not contain suitable habitat for special status plant species. Although nesting birds have a moderate potential to occur in the vicinity of the subject property, the biological analysis found that proposed improvements would not impact special status wildlife species and would not disrupt wildlife movement.

Proposed MERA improvements are well set back from the coastal bluffs, being located inland of the GGNRA parking lot, picnic area, and scenic overlook, and sited on an existing developed site. MERA improvements will be structurally engineered to withstand seismic events and are not located on any known fault traces.

The proposed MERA equipment shelter is less than 15 feet in height and the proposed 60-foot monopole is the minimum height needed to connect with the overall emergency radio network. Furthermore, the proposed shelter, monopole, and antennas will not obstruct or degrade existing views toward the ocean and coastline from the scenic overlook.

The proposed project will require minimal grading and will be designed to connect with the property's current drainage system. Project design features include additional landscaping bordering the GGNRA parking lot, and facilities are sited to take advantage of existing vegetation screening. While the proposed 60-foot monopole will be a highly visible feature on the CSD's property, so is the existing water tank by which it would be located. MERA proposals at this site are conditionally permitted under the Marin County Zoning Ordinance and do not otherwise conflict with Marin County LCP land use plans, policies, or regulations. Therefore impacts would be ***less than significant***.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Muir Beach Site (Site 23) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm.

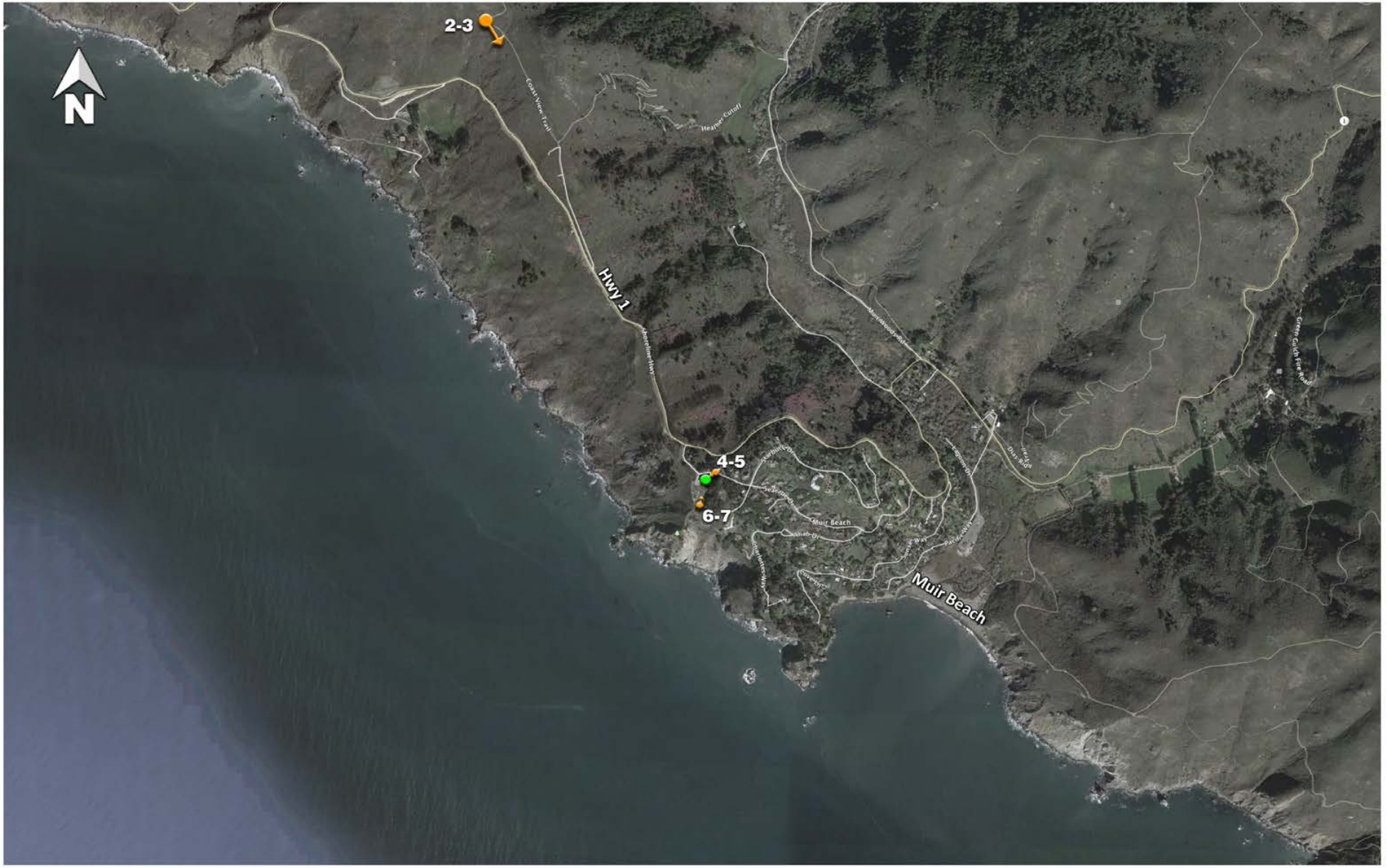
SiteSafe's complete methodology and findings are detailed in Appendix D. Existing communications infrastructure at the site is minimal, so rather than measuring baseline RF emissions during a site visit, SiteSafe used an inventory and diagrams of proposed infrastructure at the site to model RF emissions levels relative to Maximum Permissible Exposure (MPE) limits from the proposed communications system improvements and determine the site's current compliance with applicable FCC RF regulations.

SiteSafe modeled these conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the general public MPE limit when calculating the percentage of exposure, which is five times more stringent than the limit set for workers in controlled areas.

At the Muir Beach Site, there would be 11 antennas capable of operating at one time (for a full inventory, see Page 253 of Appendix D). These antennas would cumulatively create a maximum ground-level exposure of less than 1% of the public MPE limit. SiteSafe's modeling of RF exposures in an elevation view can be viewed in Figure V.O-9, at the end of this section. The figure shows that uncontrolled areas (accessible to the public) would experience a maximum (worst-case modeling scenario) of less than 5% of the MPE public limit and therefore SiteSafe concluded that all MERA facilities at the Muir Beach Site would comply with FCC regulations.

In summary, MERA's operations at the Muir Beach Site currently comply with the FCC's controlled/occupational and uncontrolled/public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 1% of the public MPE limits for uncontrolled/general public environments and would remain less than 1% of the MPE limits during each phase of the proposed project. A fence will surround the perimeter of the site, but MPE levels inside the fence would not expose workers to more than 1% of the public MPE limit at ground level. As the project would not result in RF emissions in excess of the FCC's MPE limits, the impacts from RF emissions at the Muir Beach Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.O - 1 Muir Beach Aerial with Photo Locations

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Current photograph of the view looking south from the California Coastal Trail overlooking Hwy 1.

Source: Previsualists Inc.

Figure V.O - 2 Existing Muir Beach from California Coastal Trail

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Photosimulation of the view looking south from the California Coastal Trail overlooking Hwy 1.

Source: Previsualists Inc.

Figure V.O - 3 Proposed Muir Beach from California Coastal Trail

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Current photograph of the view looking southwest from Seacape Drive.

Source: Previsualists Inc.

Figure V.O - 4 Existing Muir Beach Neighborhood View

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Photosimulation with the new 60-foot tall monopole and microwave dish in the view looking southwest from Seacape Drive.

Source: Previsualists Inc.

Figure V.O - 5 Proposed Muir Beach Neighborhood View

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Current photograph of the view looking northeast from the Muir Beach Overlook.

Source: Previsualists Inc.

Figure V.O - 6 Existing Muir Beach from GGNRA Scenic Overlook

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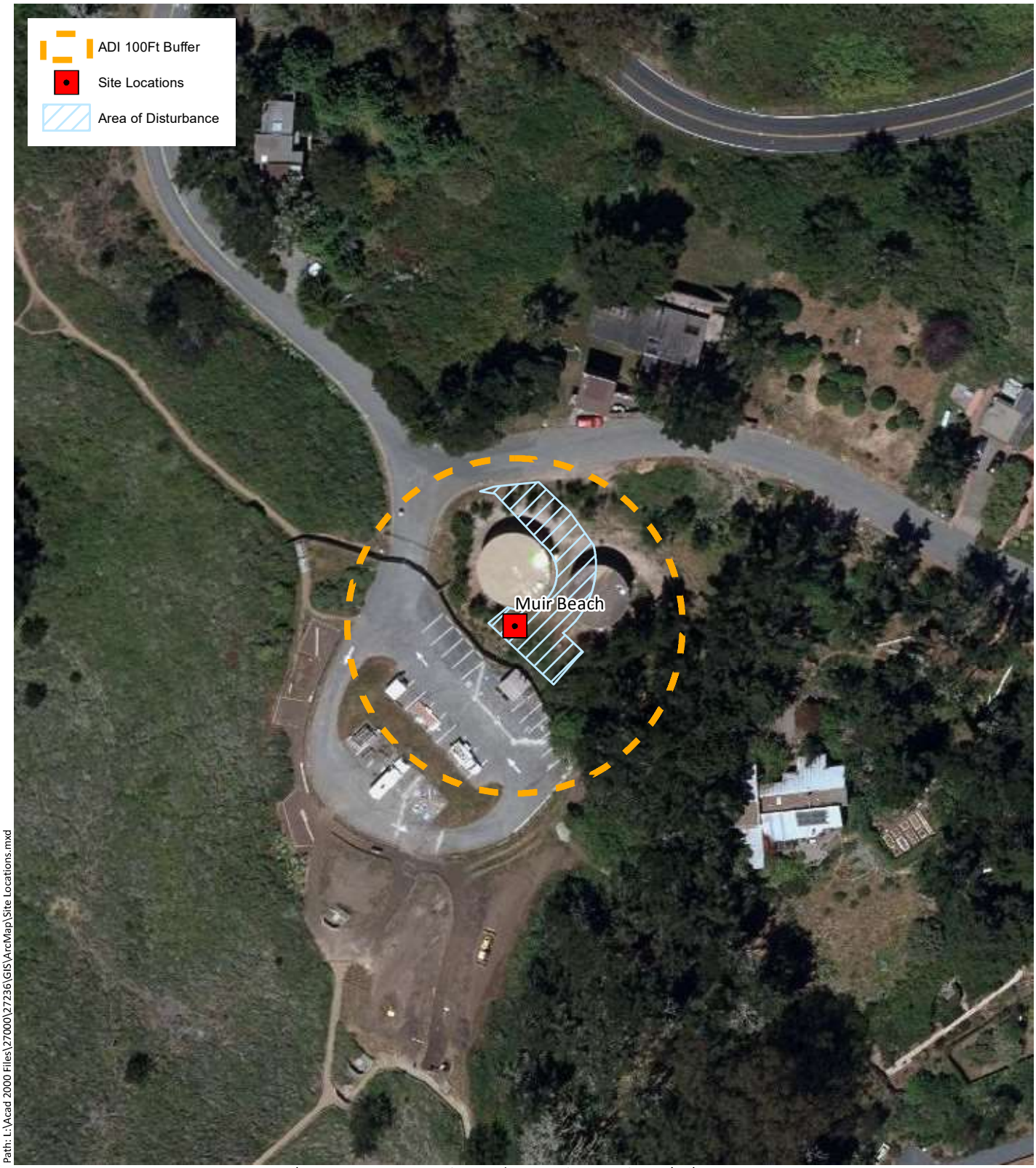


Photosimulation with the new 60-foot tall monopole and microwave dish in the view of Mt Tamalpais looking northeast from the Muir Beach Overlook.

Source: Previsualists Inc.

Figure V.O - 7 Proposed Muir Beach from GGNRA Scenic Overlook

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.O - 8 Muir Beach

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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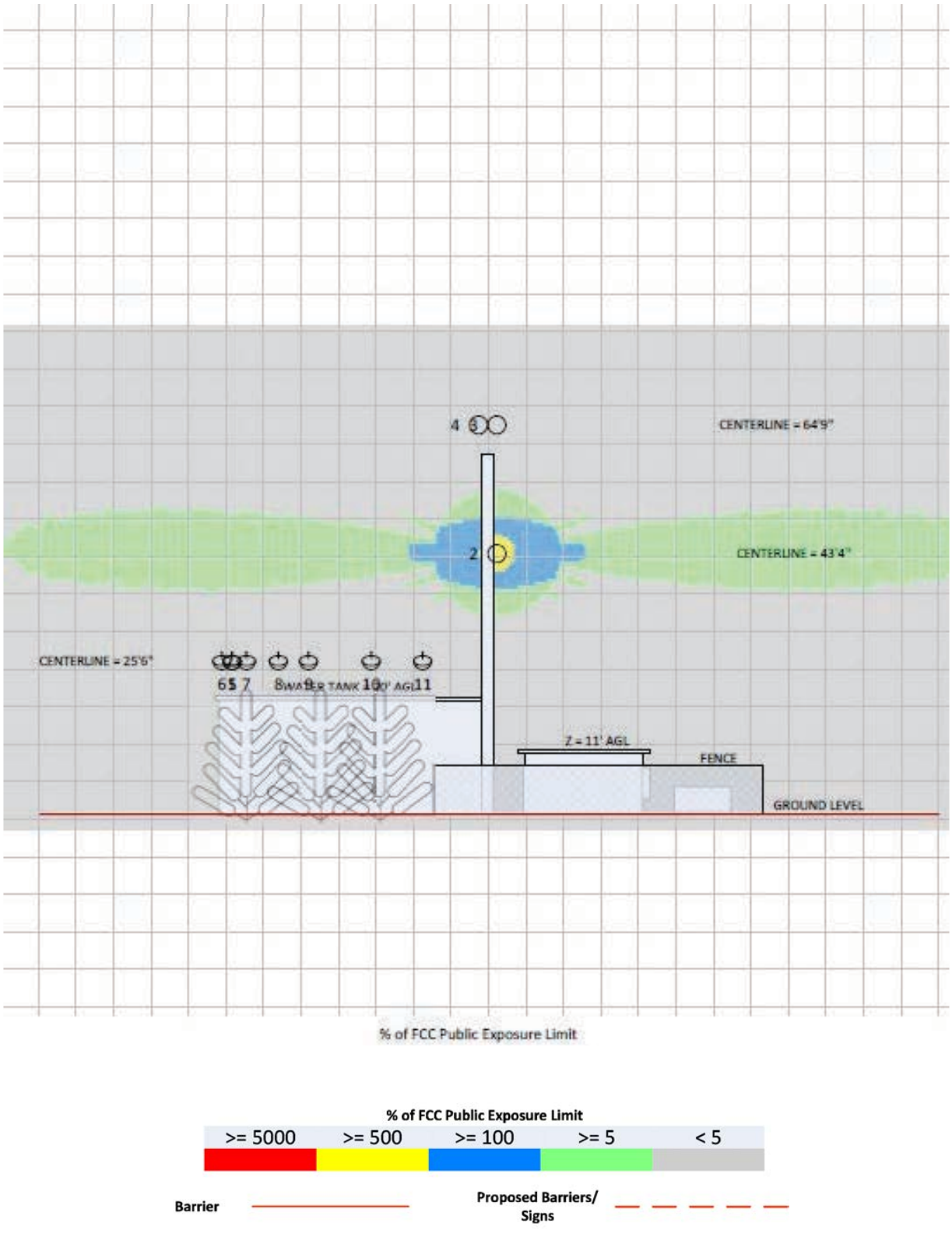


Figure V.O-9 - Muir Beach Simulated All-On RF Exposure - Elevation View

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P. Wolfback Ridge (Site 24)

The Wolfback Ridge improvements will be located within a large privately-owned active communications complex situated on a grassy hilltop surrounded by the GGNRA. Site access exists via State Highways 101/1 to Wolfback Ridge Road, which joins an unpaved graded road terminating at the gated site. The existing site has multiple towers over 100-feet tall with numerous FM radio station antennas. Proposed Next Gen System improvements include reinforcement of an existing tower and minor equipment modifications including two microwave dishes and four antennas on an existing tower and new equipment in the existing building, as summarized below in Table V-16. Additional information is provided in Chapter III, Project Description.

Located on an inholding just inside the boundaries of GGNRA, the Wolfback Ridge Site is near a number of popular recreational trails. The project is bordered by GGNRA open space to the north, south, and west, as shown in Photo III-17 (Chapter III, Project Description). To the east, single-family residences sit atop the neighboring ridgelines. Beneath these ridges and residences runs Highway 101/1, from which the project site cannot be viewed. More distant views from Richardson Bay and Tiburon are available.

Table V–16. Wolfback Ridge Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Wolfback Ridge	Very active antenna site with multiple tall towers on private hilltop site surrounded by GGNRA.	Propose 2 microwave dishes and 4 antennas on existing 100' tower, new generator, and fuel tank. Reinforce existing tower foundation. Propose use of existing building and fence.

1. Aesthetics

The Wolfback Ridge Site is an existing developed communications facility with multiple tall towers on a hilltop surrounded by the Marin Headlands in the GGNRA. The hilltop is above 1,100 feet in elevation and is visible from many distant vantage points, although nearby views are only available from the west within the GGNRA. Public trails popular among residents and GGNRA visitors traverse the ridgeline and are in the valleys to the west. GGNRA's "Radio Tower Trail" provides direct access to the site's fence line. The peak of the hill, where the project is situated, is currently fenced to prevent public access.

Key Observation Points (KOPs) have been selected to represent the array of public viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.P-1. Subsequent Figures V.P-2 through V.P-5 show the anticipated before and after conditions at the Wolfback Ridge Site from the three selected KOPs.

The impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

c) Would the project have a substantial adverse effect on a scenic vista?

The existing communications facility already has a substantial adverse effect on the scenic vistas available from and around the site, and the proposed modifications are relatively minor, and will not worsen any impacts. Consequently, the impacts of the project are ***less than significant***.

d) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The site is in the Marin Headlands, west of the Waldo Grade above State Highways 101/1. Waldo Grade is not an officially designated state scenic highway, but is eligible for designation, and it is the primary route for motorists crossing the Golden Gate Bridge, an important aesthetic and cultural resource of Marin County. The steep topography and dense vegetation along the highway, however, block the project site from view from all nearby vantage points along the highway so that the project has no potential to adversely affect scenic resources within a state scenic highway. Therefore, the impact is ***less than significant***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figures III-56 and III-57 show the relatively minor physical changes at the site. The fenced off hilltop already contains several 100-foot towers. An estimated 5% of the visible components at the Wolfback Ridge Site would be owned by MERA after proposed project modifications are installed. There are 60 antennas on seven towers at the site, and MERA would add six antennas on one tower. However, these modifications would not alter the maximum height of the existing tower. Proposed changes would not affect the overall visual character of the site, and, as a result, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

According to the Cultural Resources Report authored by GANDA, which incorporated records searches and site visits, there are no known historical resources pursuant to Section 15064.5 within or near the Wolfback Ridge Site. Ground disturbance would be limited to the vicinity of the proposed tower foundations and would extend approximately 24 inches below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figure V.P-6.

Given the limited nature of ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Wolfback Ridge Site would comply with Mitigation Measure CULT-1 (see page IV.B-10), which provides procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a

substantial adverse change in the significance of a historical resource in or near the Wolfback Ridge Site, and impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, but the Wolfback Ridge Site was not among these sites. As this site was not determined during the tribal consultation process to have potential for a substantial adverse change in the significance of tribal cultural resources, ***no impact*** would occur.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Wolfback Ridge Site are limited to minor modifications to existing equipment and are not anticipated to impact vegetation within the site. The surrounding coastal scrub habitat is unlikely to support special-status plant species known to occur in the vicinity of the site. Franciscan thistle (*Cirsium andrewsii*), a special-status plant species which is historically known to occur in the Marin Headlands, is restricted to drainage and seep areas (sometimes serpentine seeps), not present at the Woflback Ridge site. No candidate, sensitive, or special-status plant or wildlife species are likely to occur in the study area (the project site plus an approximate 100-foot radius), and therefore site upgrades would have ***no impact*** on these species.

b-c) Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The habitat surrounding the Wolfback Ridge Site consists of coastal scrub dominated by coyote brush, which is not considered a sensitive biological community. No sensitive biological communities or protected wetlands are present, and site upgrades consist of minor modifications to existing facilities in a previously developed area; thus, the Project would have ***no impact*** on sensitive biological communities or federally protected wetlands.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This site is located at a previously developed location within a broad expanse of open space. The proposed improvements are limited to upgrades to existing facilities, and the proposed improvements are not anticipated to significantly impede wildlife movement compared to existing conditions. Consequently, the Project would have ***no impact*** on wildlife movement corridors.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No local policies or ordinances applicable to the Wolfback Ridge Site were identified. Further, the site is highly developed, and proposed modifications are comprised of small alterations to existing infrastructure. As a result, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Wolfback Ridge Site is located within a pre-existing, active telecommunications complex surrounded by GGNRA. The site is subject to the requirements of the GGNRA GMP. The GMP aims to preserve natural resources and enhance recreational opportunities within GGNRA, but it does not outline any substantive requirements that might apply to the Wolfback Ridge Site.

Proposed modifications at the Wolfback Ridge Site are minor and would occur entirely within the footprint of a pre-existing telecommunications site. An existing building, tower, and fence would be used, but tower foundations would be reinforced, a new emergency generator and fuel tank would be constructed, and new equipment would be installed on the tower. Given that this site is already developed for telecommunications use and is fenced off from the rest of GGNRA, the small modifications proposed at the site would not interfere with any of the goals of the GMP pertaining to resource management or recreational opportunity. Given that there are no other applicable land use plans or policies with which MERA must comply, the proposed modifications at the Wolfback Ridge Site would not conflict with any applicable land use plan, policy, or

regulation adopted for the purposes of avoiding or mitigating an environmental impact. Thus, there would be ***less-than-significant*** impacts

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

The Wolfback Ridge Site is a very active communications site with powerful FM radio station antennas. MERA proposes to lease space on an existing radio tower.

Evaluation of exposure limits for RF emissions at the Wolfback Ridge Site is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 24, 2018, SiteSafe surveyed the Wolfback Ridge Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured existing baseline RF emissions at 29 controlled locations (not accessible to the public) at the Wolfback Ridge Site. The highest emissions recorded during this process were below FCC occupational MPE limits, at approximately 28%. The maximum recorded level at 12 of the 29 locations was below 5% of the occupational threshold, while the maximum recorded levels at the remaining 17 locations ranged from 5-28% of the occupational threshold.

SiteSafe subsequently modeled theoretical maximum cumulative RF levels under three conditions of RF exposure: a) the "existing condition", b) the "all systems on" condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-tern "proposed condition" in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the public MPE limit when calculating the percentage of exposure, as this is five times more stringent than the occupational limit, and therefore more conservative. Their findings are discussed below:

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing conditions at the Wolfback Ridge Site is currently 50,141.5% of the public MPE limit. This maximum theoretical emissions level would occur in a gated area more than 13 feet above ground level, blocked from the public by a 6-foot fence. Ground-level emissions are presently under 100% of the public MPE in publicly accessible areas near the site.

b) Figure V.P-7 depicts modeled exposures relative to applicable MPE limits during the transition period, when the currently installed and the new transmitting devices will function simultaneously as the new system is being tested. The highest emissions associated with the project are anticipated to occur during the transition period, as this is when the highest

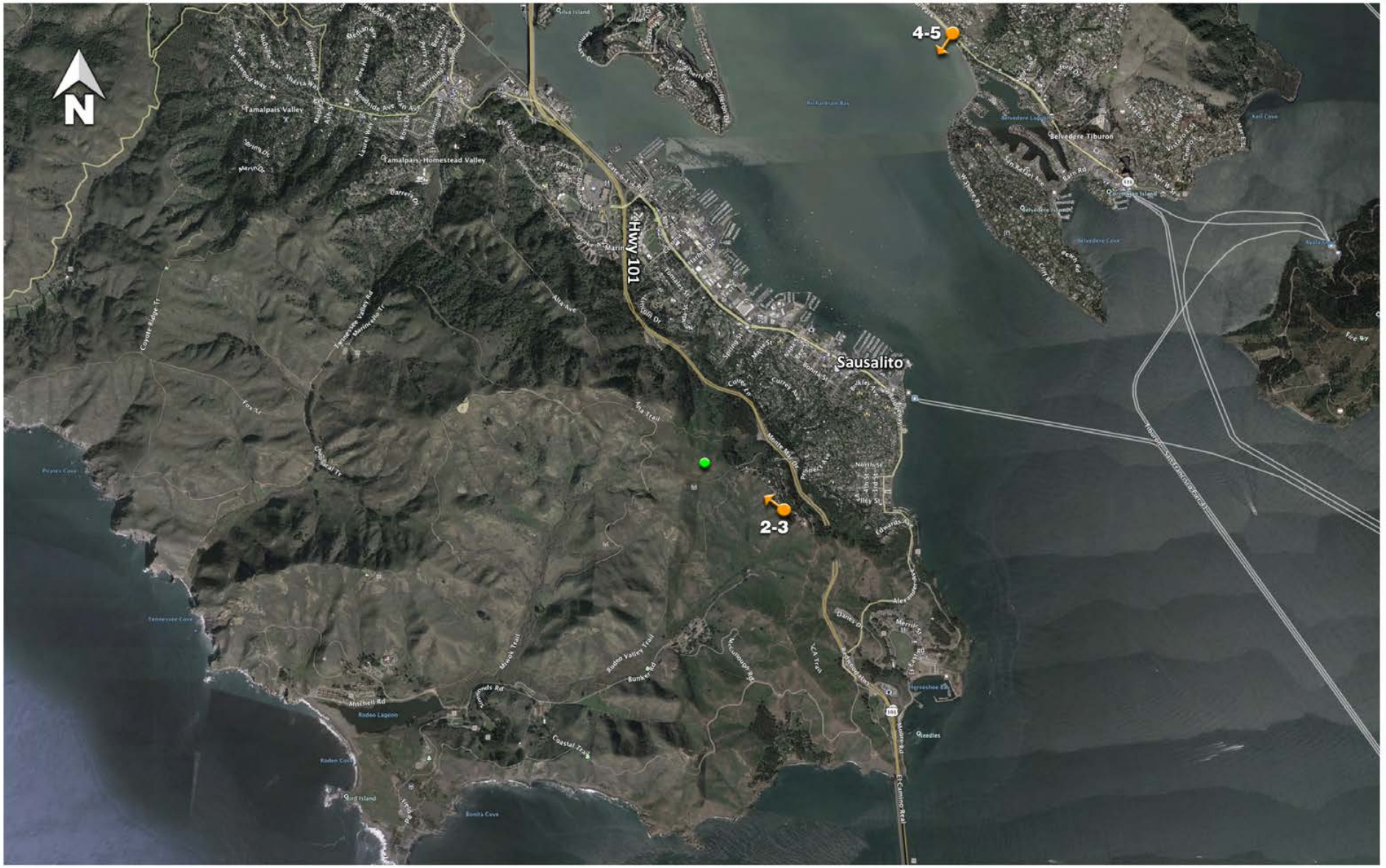
number of transmitting devices, both existing and proposed, could feasibly operate simultaneously.

At the Wolfback Ridge Site, there would be 62 antennas capable of operating at one time (for a full inventory, see page 266 of Appendix D), although this condition would be very rare given the intermittent nature of voice communications. These antennas would have the capacity to cumulatively create a theoretical maximum exposure level of 50,141.5% (no change from the theoretical maximum of the existing antennas) of the public MPE limit at heights of 13 feet and greater along the communications towers. Ground-level exposure in the controlled, fenced-off area would be more than 100% of the public MPE limit. Ground-level exposure outside of the fence encompassing the equipment would remain at less than 100% of the public MPE. The transition period is temporary and anticipated to last for up to two years until the Next Gen System is fully tested and operational, at which point currently installed equipment that is no longer needed will be removed.

c) Because the MERA antenna is a small component in relation to the other transmitters, with the new system fully in place and the project complete, maximum exposure levels would remain consistent with existing and transition conditions at 50,141.5% of the public MPE limit. Ground-level exposure faced by workers in fenced-off areas would remain greater than 100% and uncontrolled areas accessible to the public would create ground-level exposure of less than 100% of the public MPE limit.

Based on these measurements and models, SiteSafe found that other operators at the site are exceeding RF emissions in certain controlled areas of the site that could pose a risk to workers in the area without safety training, but that the proposed MERA antenna will not make a significant difference in RF emissions at the site. SiteSafe recommended that these other operators should lower the power of the FM antennas or implement an RF Safety Plan, but stated clearly that MERA is not responsible for these actions. Due to the site's layout and 6-foot barrier to public access, SiteSafe concluded that all uncontrolled areas with public access were below 100% of the public MPE limit and that no additional signage is required.

In summary, MERA's operations at the Wolfback Ridge Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 100% of the MPE limits for uncontrolled/general public environments and would remain less than 100% of the MPE limits during the transition phase and upon completion of the proposed project. While emissions at the Wolfback Ridge Site may exceed FCC's safety-based MPE limits inside of the fenced compound, where the general public will not be able to gain access, the Next Gen System would not exacerbate this possibility or change baseline maximum emissions levels. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Big Rock Ridge Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.P - 1 Wolfback Ridge Aerial with Photo Locations

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Current photograph of the view looking northwest from Wolfback Ridge Road.

Source: Previsualists Inc.

Figure V. P - 2 Existing Wolfback Ridge from Access Road

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Photosimulation of the view looking northwest from Wolfback Ridge Road.

Source: Previsualists Inc.

Figure V.P - 3 Proposed Wolfback Ridge from Access Road

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Current photograph of the view looking south from Tiburon using a telephoto lens.

Source: Previsualists Inc.

Figure V. P - 4 Existing Wolfback Ridge Distant View from Tiburon

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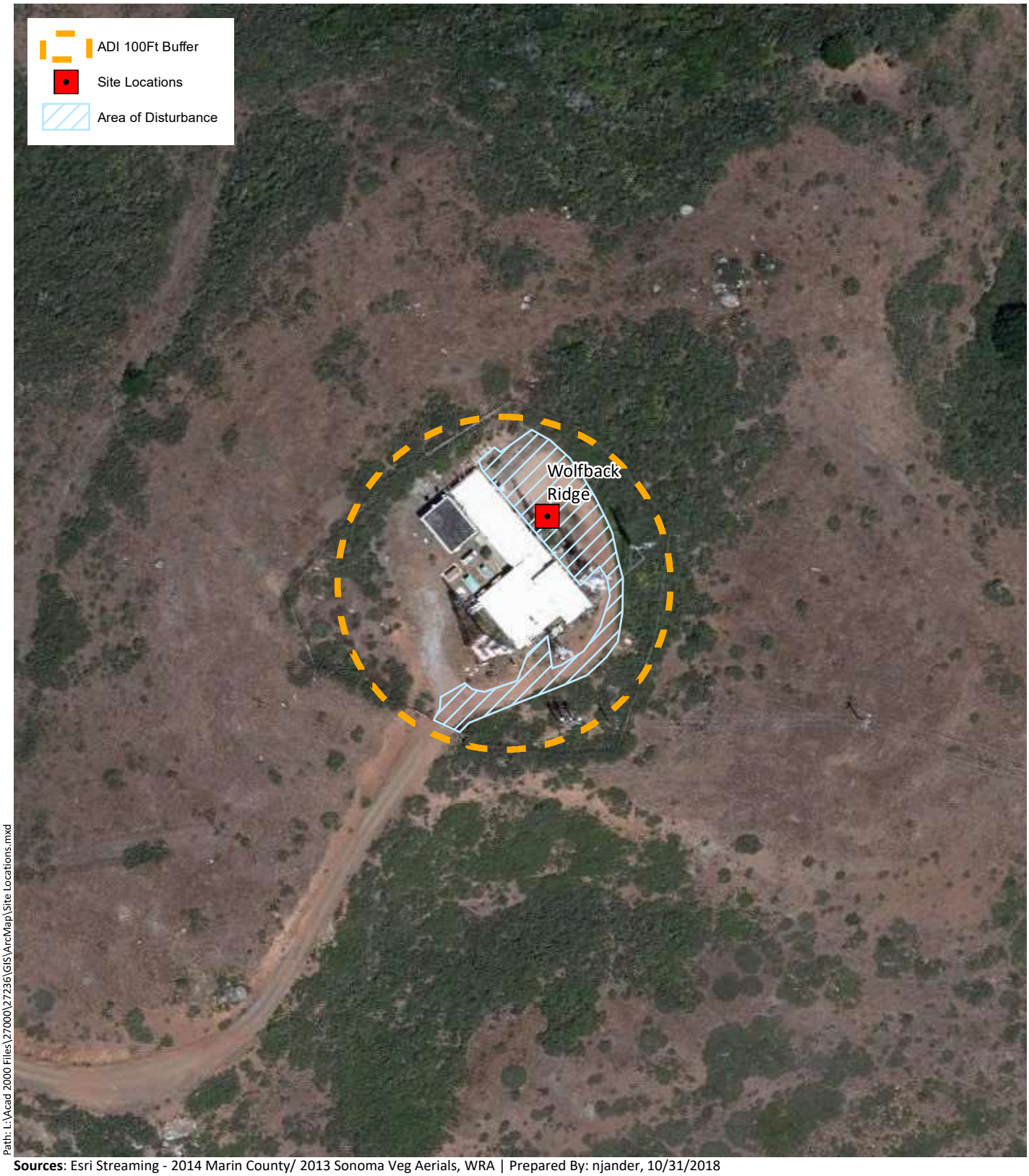


Photosimulation of the view looking south from Tiburon using a telephoto lens.

Source: Previsualists Inc.

Figure V.P - 5 Proposed Wolfback Ridge Distant View from Tiburon

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.P - 6 Wolfback Ridge

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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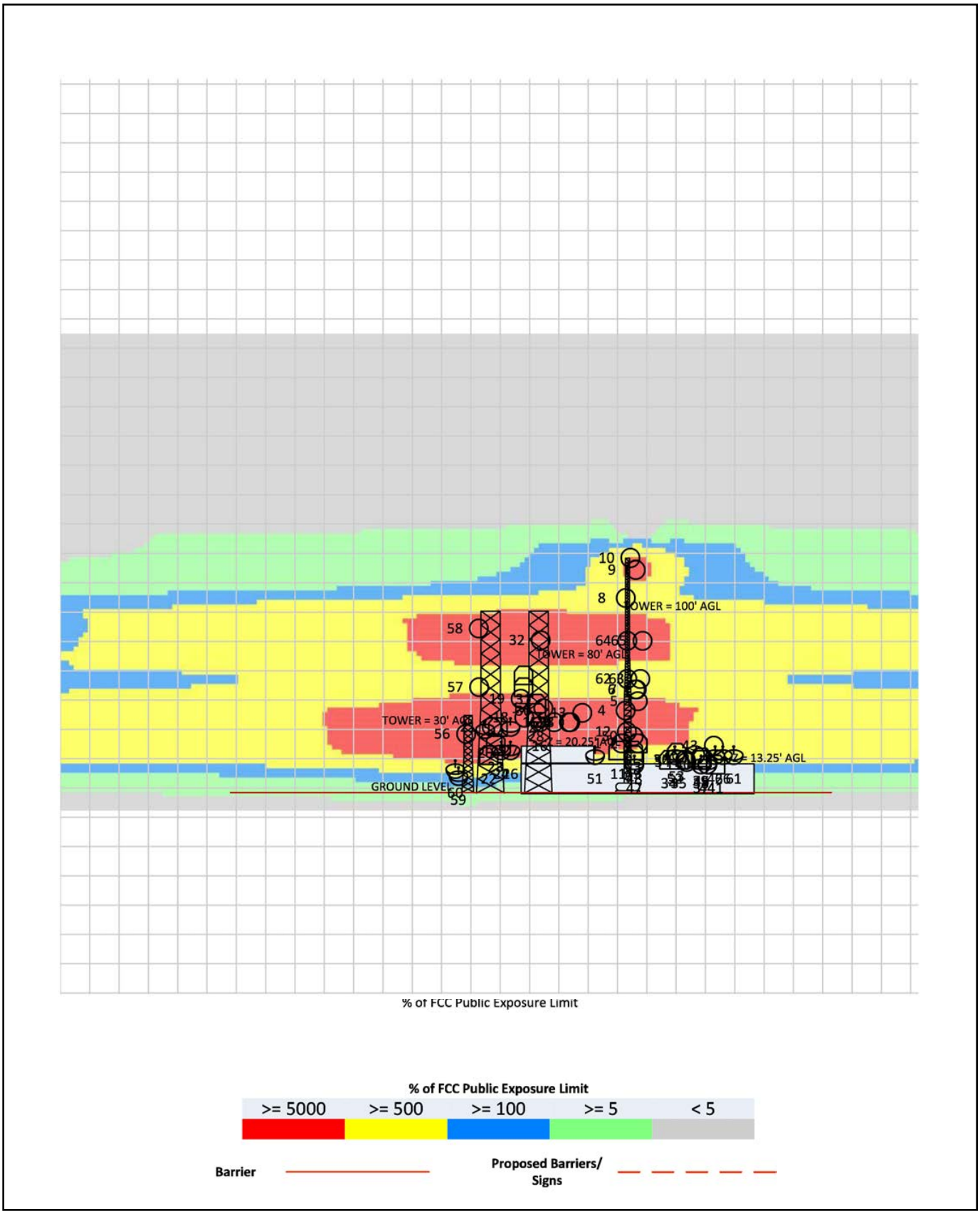


Figure V.P - 7 Wolfback Ridge Simulated All-On RF Exposure - Elevation View

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Q. Mt. Burdell OTA (Site 25)

The Mt. Burdell OTA Site is an existing communications facility located in northeastern unincorporated Marin County, north of Novato. The Mt. Burdell OTA Site is bordered to the east by Olompali State Historic Park, to the south by the Marin County Mt. Burdell Preserve, and to the west by agricultural land. Beyond the State Park, nearby land uses to the east of the site include Marin County Airport-Gnoss Field and State Highway 101. The area immediately surrounding the OTA site is mostly forested to the north and generally open to the south, as shown in Photo III-18 (Chapter III, Project Description).

MERA proposes to move its operations from its former Mt. Burdell Site to the nearby Mt. Burdell OTA Site. At the new site, MERA plans to reinforce an existing monopole foundation and make minor equipment modifications on the pre-existing monopole, as summarized below in Table V-17. The Mt. Burdell OTA Site is accessed by dirt roads through private agricultural land.

Table V–17. Mt. Burdell OTA Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Mt. Burdell OTA	Existing communications site with existing 60' tall monopole. MERA is moving from existing Mt. Burdell site (#12).	Will use existing 60' monopole, remove one antenna, and add 2 additional microwave dishes and 4 additional antennas. Reinforce existing tower foundation and replace existing HVAC in existing shelter.

1. Aesthetics

The Mt. Burdell OTA Site is just outside of the southwestern boundary of Olompali State Historic Park and just outside of a Marin County-designated Ridge and Upland Greenbelt Area (RUGA). The public park contains historic elements associated with the Miwok people who once inhabited the area, as well as popular views of the Petaluma River and San Pablo Bay from the east-facing slopes of Mount Burdell. While the project site itself is not publicly accessible, nearby hiking trails bring visitors to open spaces on Mt. Burdell to admire the area's extensive views.

The OTA site is located on a ridge at the edge of the densely vegetated north slopes of Mt. Burdell, meaning that existing communications infrastructure is relatively well-hidden from the public view. State Highway 101 runs to the east of the project site, but it is considerably lower in elevation and motorists' views of the existing 60-foot tower are distant and are very limited by the surrounding vegetation. Recreationists using the park can see only portions of the tower that rise above the tree line from select vantage points particularly to the south.

Key Observation Points (KOPs) have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure V.Q-1. Subsequent Figures V.Q-2 through V.Q-7 show the anticipated before and after conditions at the Mt. Burdell OTA Site from the two selected KOPs.

The impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Have a substantial adverse effect on a scenic vista?

The Mt. Burdell OTA Site is a relatively small existing communications facility, and Next Gen modifications to the existing equipment are minor. The existing communications facility on the site has no effect on the scenic vistas available in the surrounding open space areas and the proposed modifications are relatively minor in comparison to the existing facility, and, consequently, the impacts of the project are ***less than significant***.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The project has no potential to adversely affect scenic resources within a state scenic highway given that there are no scenic highways nearby, and, therefore, there is ***no impact***.

c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Figure III-58 and III-59 show minor physical changes at the site. Proposed changes that could alter views of the project site include the addition and removal of antennas and microwave dishes from the existing tower. These changes would yield a slight increase in the amount of equipment installed on the tower and also a 6-inch reduction of the height of the highest antenna on the tower.

The existing communications site includes a two-story building with a small tower and antennas on the roof, an existing 60-foot monopole, an emergency generator, and visible electrical equipment. MERA will add four omni antennas and two dishes to the existing monopole. Total MERA contribution to visible equipment would be approximately 10%. Proposed changes would not affect the overall visual character of the site and, as a result, the impact is ***less than significant***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found that the single cultural resource in the vicinity of the Mt. Burdell OTA Site is the Burdell Stone Wall. This wall consists of dry-stacked stone wall between three and four feet in height, running in a north-south alignment approximately 10 feet east of the chain link fence surrounding the Mt. Burdell OTA Site. This stone wall is a component of a larger collection of Burdell Stone Walls (HF-4) within Olompali State Historic Park.

Ground disturbance would be limited to the area around the tower foundations and would extend to a maximum depth of approximately two feet below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figure V.Q-8. Given the limited nature of ground disturbance, it is unlikely that the Burdell Stone Wall would be adversely affected or that any buried historic resources would be unearthed. Nonetheless, project work at this site would comply with Mitigation Measure CULT-1 (see page IV.B-10), which imposes stop work procedures in the event of accidental discoveries.

Because the project would comply with Mitigation Measure CULT-1 in the event that historic resources are discovered, the project would not cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5. Consequently, impacts would be ***less than significant with mitigation incorporated***.

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, but the Mt. Burdell OTA Site was not among these sites. As this site was not determined during the tribal

consultation process to have the potential for a substantial adverse change in the significance of tribal cultural resources, ***no impact*** would occur.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Mt. Burdell OTA Site are limited to minor modifications to existing equipment and are not anticipated to impact vegetation within the site. No candidate, sensitive, or special-status plant or wildlife species are likely to occur in the study area (the project site plus an approximate 100-foot radius). The project would therefore have ***no impact*** on these species.

b-c) Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

The habitat surrounding the site consists of coast live oak woodland, dominated by coast live oak and California bay (*Umbellaria californica*). Coast live oak woodland is secure globally and is apparently secure statewide, so it is not typically considered a sensitive biological community. However, the Marin Countywide Plan, which sets forth policies for sustainable development and protection of natural resources in unincorporated Marin County calls out oak woodlands as a sensitive community threatened by Sudden Oak Death, development, and poor land management. The proposed work at the Mt. Burdell OTA Site consists of minor modifications to existing facilities in a previously developed area with no tree or vegetation removal proposed. No Coast live oak woodlands would be adversely affected. No other sensitive communities, including protected wetlands, are present. As Coast live oak woodlands would be avoided and no other sensitive natural communities or wetlands are present, ***no impact*** would occur.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This site is located within a previously developed site within a broad expanse of open space. The proposed improvements are limited to upgrades to existing facilities, and the proposed improvements are not anticipated to significantly impede wildlife movement compared to existing conditions. Consequently, the Project will have ***no impact*** on wildlife movement corridors.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Mt. Burdell OTA Site is adjacent to Olompali State Historic Park, and all work would occur in previously developed or disturbed areas. Since the proposed improvements would not conflict with any of the Park's policies protection biological resources, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

> *b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?*

The Mt. Burdell OTA Site is located in northeastern unincorporated Marin County adjacent to the boundaries of Olompali State Historic Park. MERA is not subject to the requirements of the Marin Countywide Plan and Zoning Ordinance pursuant to the principle of intergovernmental immunity. Thus, the Marin Countywide Plan and Zoning Ordinance do not apply to the Mt. Burdell OTA Site, and impacts in this area would be ***less than significant***.

5. Radio Frequency Exposure

> *MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?*

Evaluation of exposure limits for RF emissions at the Mt. Burdell OTA Site (Site 25) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. On August 22, 2018, SiteSafe surveyed the Mt. Burdell OTA Site to inventory all transmitting antennas currently on the site, measure existing electromagnetic radiation levels relative to Maximum Permissible Exposure (MPE) limits, and determine the site's current compliance with applicable RF regulations.

During the site visit, SiteSafe measured baseline RF emissions at 18 locations at the Mt. Burdell OTA Site. The highest emissions recorded during this process were below established MPE limits, at less than 1% of the occupational limit and less than 5% of the public limit. The maximum recorded level at all 18 locations was below 1% of the occupational threshold.

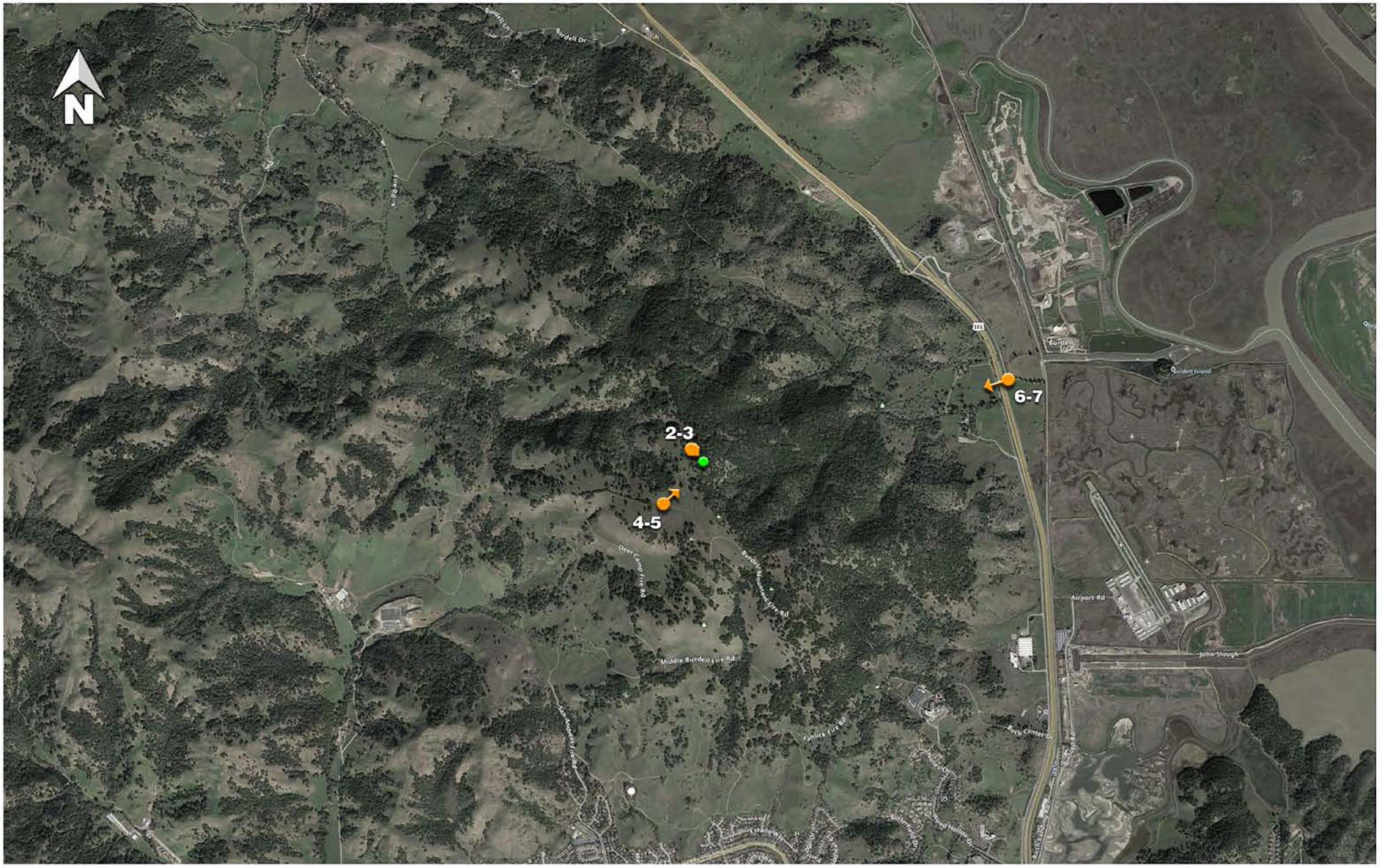
SiteSafe subsequently modeled three conditions of RF exposure: a) the existing condition, b) the 'all systems on' condition, which is the theoretical worst-case RF exposure scenario during the transition period, and c) the long-term 'proposed condition' in which the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are operating. SiteSafe modeled all three conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the public MPE limit when calculating the percentage of exposure, as this is five times more stringent than the occupational limit, and therefore more conservative. Their findings are discussed below:

a) SiteSafe's models showed that the theoretical maximum exposure produced by the existing conditions at the Mt. Burdell OTA Site is 8.7% of the public MPE limit, in an area blocked from the public by a 6-foot fence. Ground-level exposure would be less than 5% of the MPE both inside and outside the fenced area.

b) At the Mt. Burdell OTA Site, there would be 15 antennas capable of operating at one time (for a full inventory, see page 290 of Appendix D). These antennas would cumulatively create a maximum exposure of 9.1% of the public MPE limit, which would be in inaccessible areas, in a fenced area limiting public access, and would be mounted at least 25 feet above ground level. Ground-level exposure would remain less than 5% of the MPE both inside and outside the fenced perimeter of the site.

c) With the new system fully in place and the project complete, maximum exposure would remain at 9.1% of the public MPE limit at 25 feet or higher above the ground. Uncontrolled areas accessible to the public (outside the fence), however, would experience a theoretical maximum of less than 5% of the public MPE limit. An elevation view of the simulated "all antennas on" exposure can be viewed in Figure V.Q-9. Based on these measurements and the site's layout and signage (location shown on page 282 of Appendix D, and examples of signage depicted in Chapter III, Project Description), SiteSafe concluded that all equipment would comply with FCC regulations and that MERA need not take any action.

In summary, MERA's operations at the Mt. Burdell OTA Site currently comply with the FCC's uncontrolled/general public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during the transition phase and upon completion of the proposed project. Likewise, the ground-level RF emissions within the fenced controlled/occupational environment are and will remain less than 5% of the MPE limit. As the project would not result in RF emissions in excess of the FCC's Maximum Permissible Exposure limits, the impacts from RF emissions at the Point Reyes Hill Site would be ***less than significant***. No mitigation is required.



Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.Q - 1 Mt. Burdell OTA Aerial with Photo Locations

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Current photograph of the view looking southeast from the dirt access road on private property at the compound.

Source: Previsualists Inc.

Figure V. Q - 2 Existing Mt. Burdell OTA Near View

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Photosimulation of the view looking southeast from the dirt access road on private property at the compound.

Source: Previsualists Inc.

Figure V.Q - 3 Proposed Mt. Burdell OTA Near View

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Current photograph of the view looking east from near the fenceline of the Mount Burdell Open Space Preserve.

Source: Previsualists Inc.

Figure V. Q - 4 Existing Mt. Burdell OTA Distant View

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Photosimulation of the view looking east from near the fenceline of the Mount Burdell Open Space Preserve.

Source: Previsualists Inc.

Figure V.Q - 5 Proposed Mt. Burdell OTA Distant View

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Current photograph of the site as seen looking west from the nearest and most visible public road, Hwy 101 at Silviera Ranch Rd.

Source: Previsualists Inc.

Figure V.Q - 6 Existing Mt. Burdell OTA from Highway 101

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Photosimulation of the site as seen looking west from the nearest and most visible public road, Hwy 101 at Silviera Ranch Rd.

Source: Previsualists Inc.

Figure V.Q - 7 Proposed Mt. Burdell OTA from Highway 101

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Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.Q-8. Mt Burdell OTA

MERA Next Generation Communications System
Marin and Sonoma Counties, California

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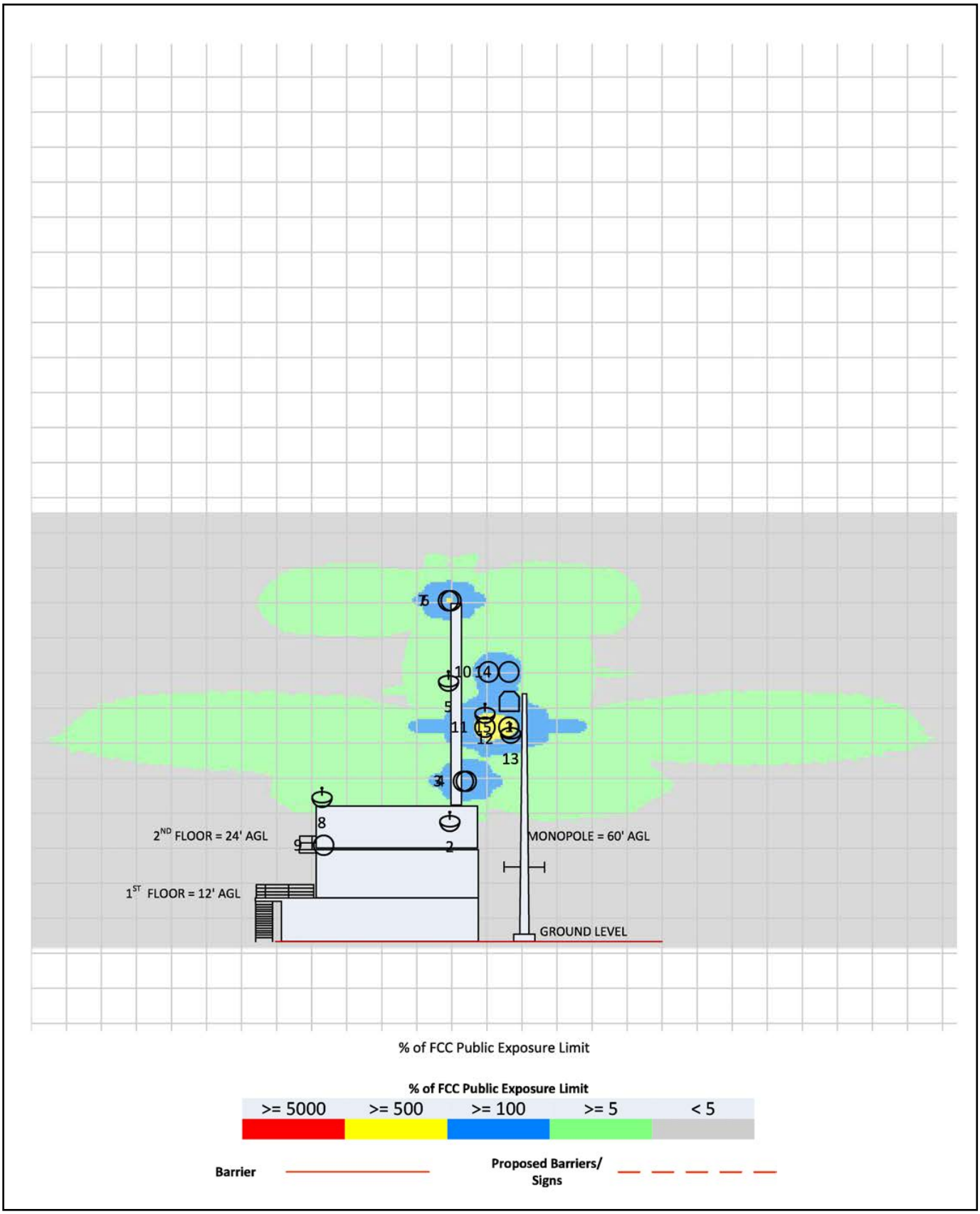


Figure V.Q-9 - Mt. Burdell OTA Simulated All-On RF Exposure - Elevation View

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R. Mill Valley Water Tank (Site 26)

The Mill Valley Water Tank Site is located in the City of Mill Valley at the intersection of Sequoia Valley Road and Edgewood Avenue. Details of the proposed work for the Next Gen System at this site are described in Chapter III, Project Description. In short, the work includes the installation of new equipment on property owned by the Marin Municipal Water District. New equipment would include a monopole, equipment shelter, fence, emergency generator, and fuel tank, as summarized below in Table V-18.

The Mill Valley Water Tank Site is located in a residential neighborhood. A buffer of tall trees surrounds the existing water tank, as shown in Photo III-19 (Chapter III, Project Description), beyond which single-family residences neighbor the project site to the north, south, and east. To the west is an open space area associated with the Mill Valley Reservoir. Other adjacent land uses include a portion of the Dipsea Trail, which runs just south of the site. The Mill Valley Water Tank Site is zoned Open Area (OA).

A large Marin Municipal Water District (MMWD) water tank exists at the site which is largely screened from view by existing trees. Proposed equipment would be 100% owned by MERA, and also be mostly screened from public view. Due to the size of the water tank, overall MERA equipment at the site would constitute approximately 20% of the total equipment potentially visible at the site (without considering shielding from vegetation). The monopole, however, would be taller than the existing treetops.

Table V–18. Mill Valley Water Tank Site, Existing and Proposed Exterior Equipment

Site Name	Existing Infrastructure at Site	Proposed Physical Changes
Mill Valley Water Tank	Existing MMWD 500,000 Gal Water Tank in trees. At Sequoia at Edgewood.	Propose new 55' tall monopole, with one microwave dish and 4 antennas on the south side of the existing water tank. . A new shelter, fence, generator, and fuel tank are proposed in the trees on the east side of existing water tank.

1. Aesthetics

The Mill Valley Water Tank Site is on a forested ridgeline on Sequoia Valley Road at Edgewood Avenue. The proposed facilities would be placed next to the existing 500,000-gallon MMWD water tank which dominates the site. The water tank is situated close to several private residences, but it is enclosed by a perimeter fence and hidden from the view by a thick band of trees. One 38-foot tall pine tree would be removed as part of the project, but all other trees would remain. The Dipsea Trail occupies the southern edge of the water tank site next to Sequoia Valley Road. Although the site is not a public park or open space, Edgewood Park, Homestead Valley Open Space, and Old Mill Park are all located close to the site.

KOPs have been selected to represent the full array of viewpoints from which the site is visible. Simulated before and after conditions are portrayed for each KOP in the figures that follow, and a map showing the site and the representative vantage points is provided as Figure

V.R-1. Subsequent Figures V.R-2 through V.R-7 show the anticipated before and after conditions at the Mill Valley Water Tank Site from the three selected KOPs.

An impact determination is made using the KOPs in conjunction with proximate protected scenic resources such as parks and scenic highways. As part of the determination, the following thresholds were considered:

a) Would the project have a substantial adverse effect on a scenic vista?

Important scenic vistas in Marin County include hillsides, ridgelines, the Pacific Ocean, San Francisco and San Pablo Bays, and protected open spaces, but the Mill Valley Water Tank Site is located in a residential neighborhood where none of these features are present. Although several parks and open spaces are nearby, these do not have views of the site, as it is tucked back from the street and hidden from view by existing tree canopy. As there are no scenic vistas in or near the Mill Valley Water Tank Site, the project would not adversely affect a scenic vista, and ***no impact*** would occur.

d) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated or eligible state scenic highways within or near the Mill Valley Water Tank Site. The nearest eligible state scenic highway is State Route 1, approximately 1.1 miles to the south. As there are no designated or eligible state scenic highways within or near the Mill Valley Water Tank Site, project work at this site would not damage any scenic resources or views within a state scenic highway, and ***no impact*** would occur.

e) *Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Figures III-60 and III-61 show the proposed physical changes to the site. The most prominent visual change proposed is the addition of a 55-foot monopole and the 2-inch diameter whip antennas that rise 11-feet above the monopole. The water tank is slightly over 30-feet tall, and the trees surrounding the site are nearly 60-feet tall; meaning that antennas would rise above the tree line by approximately ten to 15 feet and would be partially visible from various vantage points in the area.

As shown in Figures V.R-2 through V.R-7, installation of a new monopole and antennas would bring some visual change. These improvements would be minimally visible from the nearby roadways and neighborhoods, and visual change would be minor and mostly shielded by tree canopy and the water tank. Given the small degree to which views of the project site would change from public vantage points, the project would not substantially affect the existing visual character or quality of the site. However, it is possible that some local residents would consider the change to the existing visual character of the water tank site and the surrounding neighborhood as significant. Given the potential for disagreement and the inability to fully mitigate the visibility of those portions of the tower and antennas that exceed the height of the surrounding treetops, the change in the visual character of the neighborhood is ***significant and unavoidable***.

Mitigation Measure AES-8

The monopole shall be painted a dark color on the bottom to blend with the adjacent water tank and vegetation. Above the top of the tank the tower shall be galvanized steel to minimize contrast with the sky.

After implementation of mitigation the upper-most portions of the 60-foot tall monopole would still be visible and therefore the impact would remain ***significant and unavoidable***.

2. Cultural and Tribal Cultural Resources

Cultural Resources

a) Would the project cause a substantial adverse change in the significance of a historical resource as identified in Section 15064.5?

The Cultural Resources Inventory Report (GANDA, October 2018) commissioned for this project, which incorporated records searches and site visits, found no known historical resources pursuant to Section 15064.5 within or near the Mill Valley Water Tank Site. Ground disturbance in the vicinity of the proposed improvements would extend as deep as approximately 24 inches below ground level. The Area of Direct Impact and a surrounding 100-foot buffer are shown in Figure V.R-8.

Given the limited nature of ground disturbance, accidental discovery of historical resources is unlikely. Nonetheless, work at the Mill Valley Water Tank Site would comply with Mitigation Measure CULT-1 (see page IV.B-10), which provides procedures for the accidental discovery of historical resources. By implementing Mitigation Measure CULT-1, the project would not cause a substantial adverse change in the significance of a historical resource in or near the Mill Valley Water Tank Site, and impacts would be ***less than significant with mitigation incorporated.***

Tribal Cultural Resources

a,b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Public agencies are required to consult with California Native American tribes that are on the Native American Heritage Commission's (NAHC) consultation list and are traditionally and culturally affiliated with the geographic area of a proposed project that is subject to the California Environmental Quality Act (CEQA). Consultation with the Federated Indians of Graton Rancheria (FIGR) began on June 5, 2018, and concluded on February 8, 2019. FIGR identified a potential for adverse change to the significance of tribal cultural resources at 13 Next Gen Sites, but the

Mill Valley Water Tank Site was not among these sites. As this site was not determined during the tribal consultation process to have the potential for a substantial adverse change in the significance of tribal cultural resources, ***no impact*** would occur.

3. Biological Resources

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Project improvements within the Mill Valley Water Tank Site are situated on previously developed or disturbed areas inside the existing perimeter fence. However, due to the presence of open grassland and coast live oak woodland habitat that could potentially support special-status plant species, focused protocol-level rare plant surveys were conducted within the site on March 30, May 8, and June 20, 2018. The following special-status species were assessed as having a moderate or high potential to occur within undeveloped non-native annual grassland portions of the site: bent-flowered fiddleneck, Oakland star-tulip, and congested-headed hayfield tarplant.

Reference sites for all aforementioned special-status plant species were visited, resulting in the following observations: bent-flowered fiddleneck (observed March 30, 2018 along Highway 1 south of Tomales), Oakland star-tulip (observed March 21, 2018 at Ring Mountain Open Space Preserve), and congested-headed hayfield tarplant (observed June 6, 2018 along Bodega Avenue in Petaluma). Approximately 10 Oakland star-tulip individuals were observed within the biological study area (the project site plus an approximate 100-foot radius) in coast live oak woodland and non-native annual grassland to the south of the project site. This population is located outside of the project site and will not likely be impacted by the Project. Nonetheless, Mitigation Measure BIO-9 is provided to ensure that no Oakland star tulips are harmed during construction. No additional special-status plant species were observed in the study area.

Northern spotted owl and Nuttall's woodpecker have moderate potential to occur in the vicinity of the project site. The study area is subject to anthropogenic disturbance due to surrounding development and no special-status wildlife species are likely to occur in the study area. While improvements within the Mill Valley Water Tank Site would not impact vegetation, due to the proximity of dense tree cover, there is some potential for project construction activities to disturb nesting birds. Implementation of Mitigation Measure BIO-2 would ensure these impacts are less than significant. No other activities are planned with the potential to harm other candidate, sensitive, or special-status wildlife species.

In summary, improvements within the Mill Valley Water Tank Site are not likely to impact special-status wildlife species and Mitigation Measure BIO-2 would ensure this. Oakland star tulip is the only special-status plant species with potential to occur at the Mill Valley Water Tank Site, and mitigation measure BIO-9 would reduce the likelihood of adverse effects to less-than-significant levels. With implementation of Mitigation Measures BIO-2 (see Site 8, Point Reyes Hill) and BIO-9 (below), impacts to all candidate, sensitive, or special-status species would be ***less than significant with mitigation incorporated***.

Mitigation Measure BIO-9

Within two weeks prior to commencement of construction, a qualified biologist shall flag the Oakland star-tulip population within the study area. The qualified biologist shall notify the construction foreman as to the location of the special-status plant population and work with the foreman to install flagging to ensure that this population is properly avoided by construction crews.

b-c) Would the project Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS; or have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (CWA)?

Habitat surrounding the Mill Valley site consists of remnant coast live oak woodland interspersed with planted coast redwood (*Sequoia sempervirens*) trees, and non-native annual grassland. Coast live oak woodland is considered a sensitive biological community. However, site upgrades are situated on previously developed or disturbed areas inside the existing perimeter fence. No tree or vegetation removal is proposed. Coast live oak woodlands will be avoided by the Project, and the Project would have ***no impact*** on sensitive biological communities, including federally protected wetlands and riparian habitat.

d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site?

This site is located in a previously developed area surrounded on one or more sides by suburban residential development which does not represent core habitat areas nor vital habitat corridors for wildlife species. The proposed improvements are not anticipated to significantly impede wildlife movement compared to existing conditions. Consequently, the Project will have ***no impact*** on wildlife movement corridors.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No local policies or ordinances protecting biological resources applicable to the Mill Valley Water Tank Site were identified. Further, activity at this site would be confined to an existing, fenced off and developed area and would not impact biological resources. As no local policies protecting biological resources are applicable to the Mill Valley Water Tank Site and the Project has little potential to impact biological resources, ***no impact*** would occur.

4. Land Use Consistency

CEQA Guidelines Appendix G asks three questions regarding land use. Questions a) and c) are addressed in Chapter IV.D (Land Use Consistency), which looks at Land Use issues for the MERA Next Gen Project as a whole. However, for sites that are under state or federal jurisdiction, consistency with threshold b) of the Guidelines must be addressed as follows:

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan,

specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effect?

The Mill Valley Water Tank Site is located in the City of Mill Valley. It is not located within state or federal lands, including the coastal zone, NPS lands, CSP lands, FAA lands, or the Caltrans ROW. Based on the principle of intergovernmental immunity MERA is not subject to City of Mill Valley regulations. Thus, there are no applicable land use plans, policies, or regulations adopted by an agency with jurisdiction over this site for the purposes of avoiding or mitigating an environmental effect. Since there would be no conflict with any such policies, ***no impact*** would occur.

5. Radio Frequency Exposure

MERA-adopted threshold (a) Would the project cause Radio Frequency exposure to exceed established FCC exposure limits for workers or the general public?

Evaluation of exposure limits for RF emissions at the Mill Valley Water Tank Site (Site 26) is based on an analysis conducted by SiteSafe, LLC, an independent RF and engineering consulting firm. SiteSafe's complete methodology and findings are detailed in Appendix D. Existing communications infrastructure at the site is minimal, so rather than measuring baseline RF emissions during a site visit, SiteSafe used an inventory and diagrams of proposed infrastructure at the site to model RF emissions levels relative to Maximum Permissible Exposure (MPE) limits from the proposed communications system improvements and determine the site's current compliance with applicable FCC RF regulations.

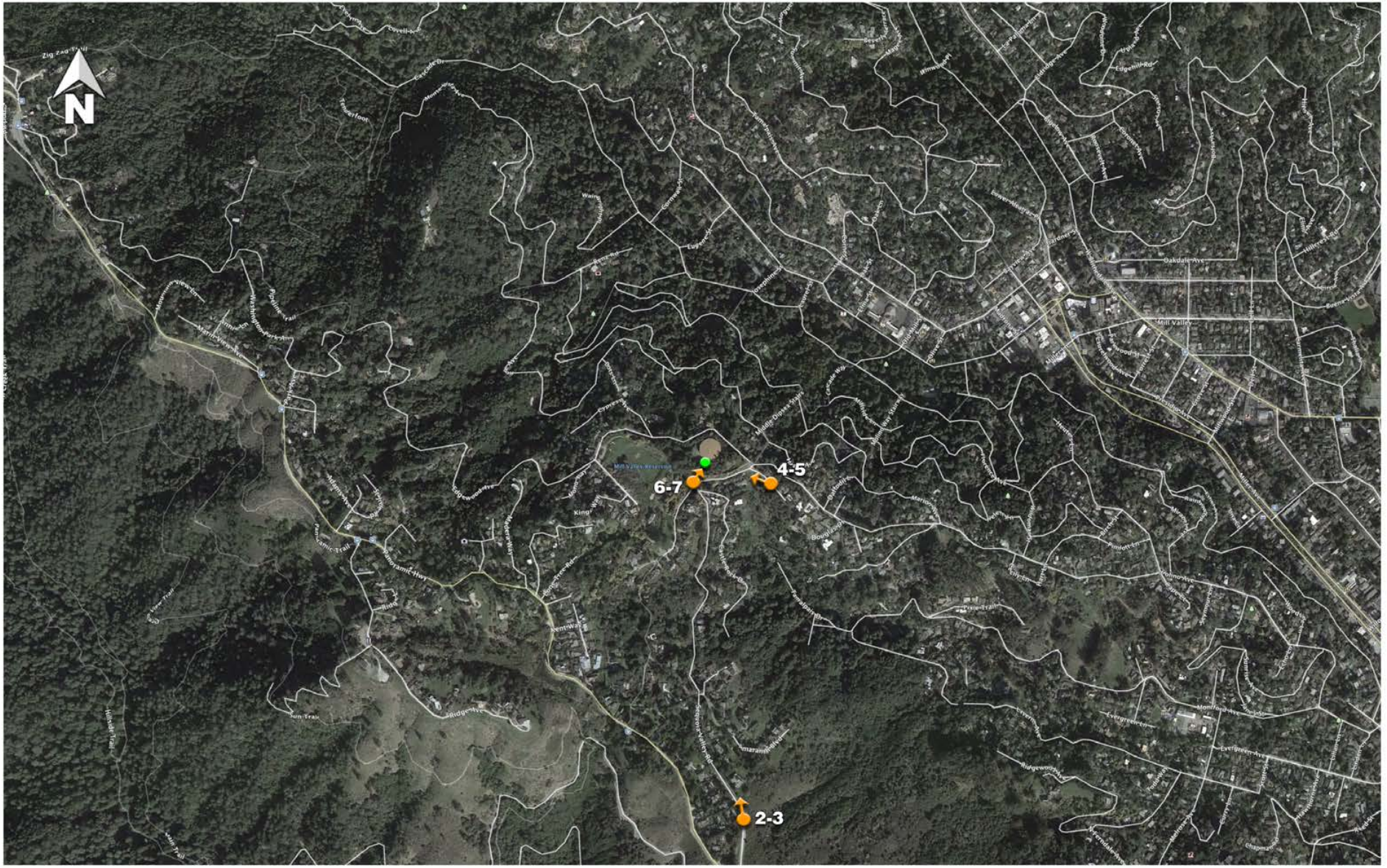
SiteSafe modeled these conditions for controlled areas (accessible only to workers meeting RF safety training criteria), but they used the general public MPE limit when calculating the percentage of exposure, which is five times more stringent than the limit set for workers in controlled areas, and therefore more conservative.

At the Mill Valley Water Tank Site, there would be five antennas capable of operating at one time (for a full inventory, see Page 303 of Appendix D). These antennas would cumulatively create a maximum ground-level exposure of 4.3% of the public MPE limit. SiteSafe's modeling of RF exposures in an elevation view can be viewed in Figure V.R-9, at the end of this section. The figure shows that uncontrolled areas (accessible to the public) would experience a maximum (worst-case modeling scenario) of less than 5% of the MPE public limit. Therefore SiteSafe concluded that all MERA facilities at the Mill Valley Water Tank Site would comply with FCC regulations.

With the new system fully in place and the project complete, maximum exposure would remain at 9.1% of the public MPE limit at 25 feet or higher above the ground. Uncontrolled areas accessible to the public (outside the fence), however, would experience a theoretical maximum of less than 5% of the public MPE limit. Based on these measurements and the site's layout and signage (location shown on page 282 of Appendix D, and examples of signage depicted in Chapter III, Project Description), SiteSafe concluded that all equipment would comply with FCC regulations and that MERA need not take any action.

In summary, MERA's operations at the Mill Valley Water Tank Site will comply with the FCC's controlled/occupational and uncontrolled/public RF exposure limits. The SiteSafe report found that the existing ground-level RF emissions were less than 5% of the public MPE limits for uncontrolled/general public environments and would remain less than 5% of the MPE limits during each phase of the proposed project. A 6-foot fence will surround the perimeter of the site, but MPE levels inside the fence would not expose workers to more than 5% of the public MPE limit at ground level. As the project would not result in RF emissions in excess of the FCC's MPE limits, the impacts from RF emissions at the Mill Valley Water Tank Site would be ***less than significant***. No mitigation is required.

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Aerial photograph showing the viewpoints for the photosimulations.

Source: Previsualists Inc.

Figure V.R - 1 Mill Valley Water Tank Aerial with Photo Locations

MERA Next Generation Communications System SEIR

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ENVIRONMENTAL CONSULTANTS



Current photograph of the view looking north from Sequoia Valley Road.

Source: Previsualists Inc.

Figure V. R - 2 Existing Mill Valley Water Tank from Sequoia Valley Road

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Photosimulation of the view looking north from Sequoia Valley Road.

Source: Previsualists Inc.

Figure V.R - 3 Proposed Mill Valley Water Tank from Sequoia Valley Road

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Current photograph of the view looking northwest from across Sequoia Valley Road.

Source: Previsualists Inc.

Figure V. R - 4 Existing Mill Valley Water Tank Neighborhood View

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Photosimulation of the view looking northwest from across Sequoia Valley Road.

Source: Previsualists Inc.

Figure V.R - 5 Proposed Mill Valley Water Tank Neighborhood View

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ENVIRONMENTAL CONSULTANTS



Current photograph from the Dipsea Trail.

Source: Previsualists Inc.

Figure V. R - 6 Existing Mill Valley Water Tank from the Dipsea Trail

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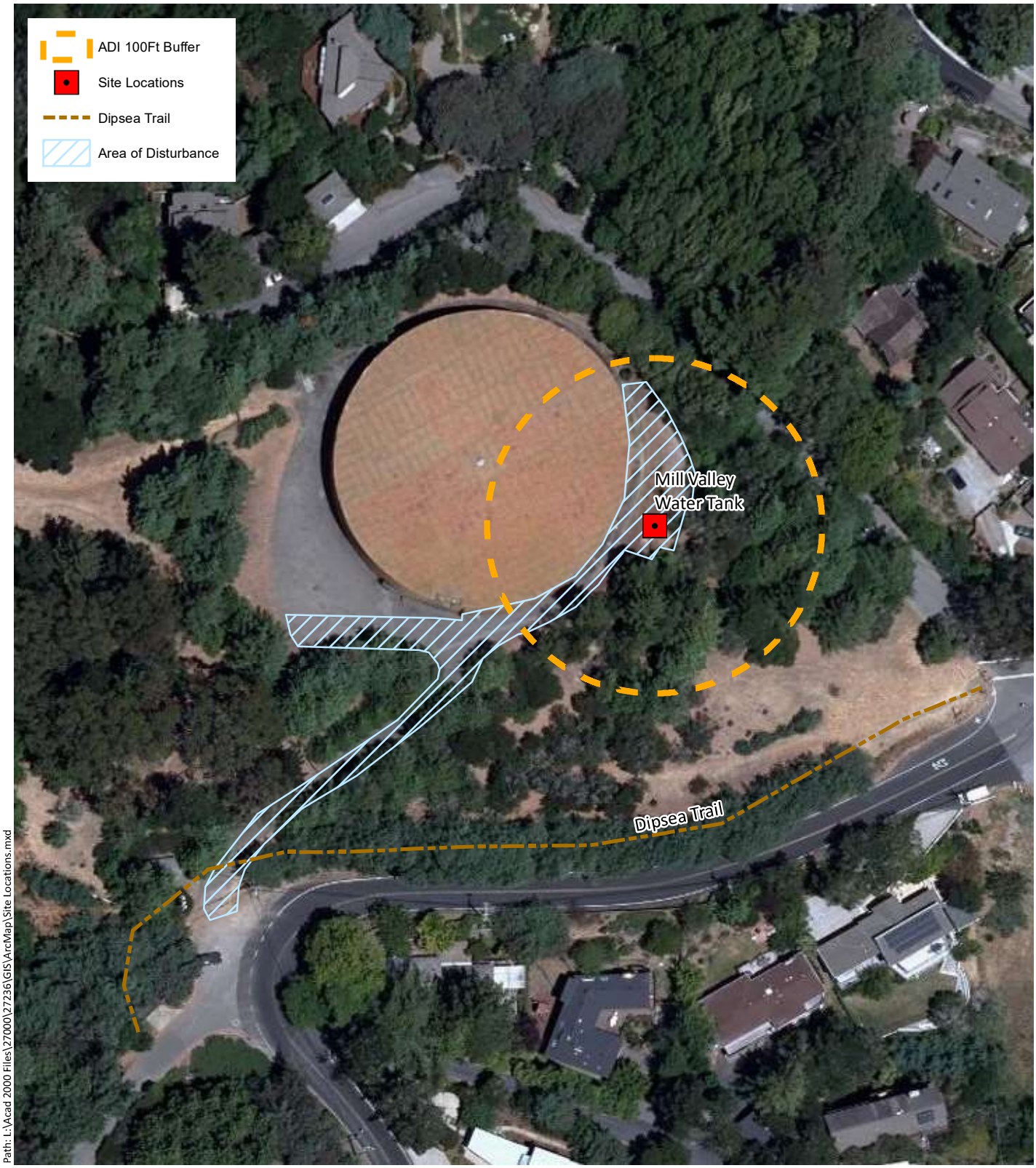


Photosimulation of the vew from the Dipsea Trail.

Source: Previsualists Inc.

Figure V.R - 7 Proposed Mill Valley Water Tank from the Dipsea Trail

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Site Locations.mxd

Sources: Esri Streaming - 2014 Marin County/ 2013 Sonoma Veg Aerials, WRA | Prepared By: njander, 10/31/2018

Figure V.R-8. Mill Valley Water Tank

MERA Next Generation Communications System
Marin and Sonoma Counties, California

0 50 100 Feet

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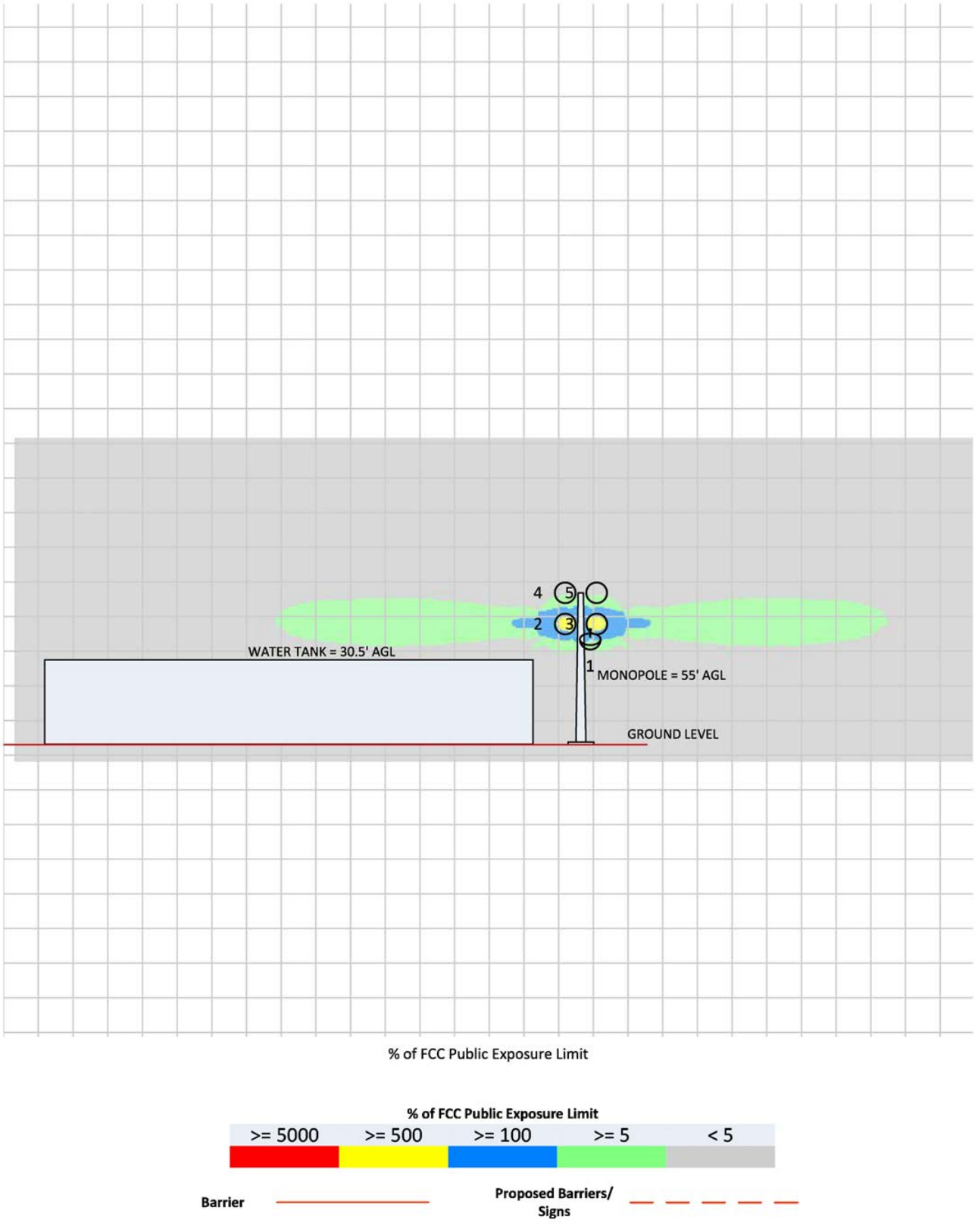


Figure V.R-9. Mill Valley Water Tank
Simulated All-On RF Exposure - Elevation View

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S. Decommissioned Sites

This section discusses the five sites to be decommissioned as part of the Next Gen Project. These sites were analyzed in the original EIR (MERA 2000) and were found to be without significant impacts in all but one case, Forbes Hill. Decommissioning would eliminate MERA's use of the sites, but in many cases the sites will remain active by other radio operators.

Forbes Hill (Site 9)

The MERA equipment at the Forbes Hill site is to be decommissioned after the Next Gen System becomes operational. Decommissioning includes removal of all MERA microwave dishes and antennas, the outdoor generator and fuel tank, and internal electronic equipment. The Forbes Hill site also includes the 60-foot tall lattice tower, the perimeter fence around the equipment structure, water and power utilities that all combine to make a fully operational communications facility. Complete decommissioning would include removal of the entire operational facility.

Mt. Burdell (Site 12)

The MERA equipment at the Mt. Burdell site is to be decommissioned and will not be operational as part of the Next Gen System. MERA will remove equipment and cease all maintenance activities, but the site will remain operational, and it will be maintained by others.

Mill Valley City Hall (Site 15)

The MERA equipment at the Mill Valley City Hall site is to be decommissioned and will not be operational as part of the Next Gen System. Decommissioning will include the removal of all MERA equipment, and MERA will cease all maintenance activities.

Mill Valley Public Safety Building (Site 16)

The MERA equipment at the Mill Valley Public Safety Building site is to be decommissioned and will not be operational as part of the Next Gen System. Decommissioning will include the removal of all MERA equipment, and MERA will cease all maintenance activities.

Bay Hill Road (Site 17)

The MERA equipment at the Bay Hill Road site is to be decommissioned and will not be operational as part of the Next Gen System. MERA will remove MERA equipment and will cease all maintenance activities, but the site will remain operational and will be maintained by others.

Summary of Impacts at Decommissioned Sites

Aesthetics

Decommissioning would have little effect on Aesthetics at four decommissioned sites (Mt. Burdell, Mill Valley City Hall, Mill Valley Public Safety Building, and the Bay Hill Site). These sites will continue to function as communications facilities for other providers after MERA leaves, so the removal of MERA equipment will have negligible impact..

The total decommissioning of the Forbes Hill facility would benefit the visual character of the site and the surrounding neighborhood by eliminating the tower that is identified as a significant and unavoidable impact in the original EIR (MERA 2000). Prescribed Mitigation Measures (tower painting, landscaping) would no longer be required. The equipment structure, fuel tank, generator, and fencing would all be removed and the site would be graded smooth and restored with hydroseeded native grasses. Removal of the Forbes Hill Site would be a beneficial impact and overall impacts of the Next Gen Project decommissioning at five sites would be ***beneficial.***

Cultural and Tribal Cultural Resources

Decommissioning would not require subsurface excavations and would not affect Cultural and Tribal Cultural Resources in any category at any decommissioned site. Therefore, there is ***no impact****.*

Biological Resources

Decommissioning would not affect any sensitive Biological Resources at any site in any category, and there is ***no impact****.*

Land Use Consistency

Decommissioning would not affect Land Use Consistency in any category at any site, and there is ***no impact****.*

Radio Frequency Exposure

Decommissioning would lower the potential RF emissions, by reducing the number of emitters at active sites. Therefore, the impact would be ***beneficial***.

VI. CEQA-REQUIRED ANALYSIS

A. CUMULATIVE IMPACTS

Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project's incremental effects are cumulatively considerable. Cumulatively considerable means that "...the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those that are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), while "[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact."

The cumulative impact analysis below is guided by the requirements of CEQA Guidelines Section 15130. Key principles established by this section include:

- A cumulative impact only occurs from impacts caused by the proposed project in combination with other projects causing related impacts. An EIR should not discuss impacts that do not result in part from the proposed project.
- When the combined cumulative impact from the incremental effect associated with the proposed project and other projects is not significant, an EIR need only briefly explain why the impact is not significant; detailed explanation is not required.
- An EIR may determine that a project's contribution to a cumulative impact would be rendered less than cumulatively considerable if a project is required to implement or fund its fair share of mitigation intended to alleviate the cumulative impact.

The following cumulative impact analysis relies on these principles as the basis for determining the significance of the Next Gen System's contribution to various impacts. As part of the analysis, the proposed project's impacts were considered in conjunction with similar proposed facilities and projects in the immediate vicinity of the Next Gen sites (Table VI-1).

Table VI-1: Additional Projects at MERA Next Gen Sites

SEIR Section	Site Name	2000 EIR	Existing Facilities	MERA Next Gen Proposals	% of Visible Components Owned by MERA (with Next Gen)	Additional Proposed Projects
A	Prime Site EOF	No	Sherriff's communications equipment on lattice structure	Limited upgrades	~ 10%	None
B	Civic Center	Yes	Communications equipment on roof	One Microwave Dish on Rooftop	< 5%	Roof replacement. Remove and replace existing antennas
C	Big Rock Ridge	Yes	State communications facility on same ridge	Upgrades	< 5%	Potential antenna additions by GGBHTD
D	Mt. Tamalpais	Yes	Eight towers and 28 microwave stub supports	Upgrades on one tower and five stubs	< 5%	None known; No response from Owner
E	Mt. Barnabe	Yes	Fire lookout, one tower, numerous antennas	Upgrades	~ 35%	None
F	Point Reyes Hill	Yes	FAA VORTAC antenna, existing MERA facility	Upgrades	~ 60%	None
G	Dollar Hill	Yes	Triangular tower with cellular equipment on same hill	Upgrades	~ 70%	None
H	San Pedro Ridge	Yes	Communications antennas on same ridge with more equipment	Upgrades	~ 15%	Potential future changes by cell carrier
I	Mt. Tiburon	Yes	Two MMWD water tanks	Upgrades	100%	None
J	Sonoma Mountain	Yes	Two 100-foot towers co-located on the same site	Upgrades	< 5%	None known; No response from Owner
K	Stewart Point	Yes	One monopole with 11 antennas reaching to 45 feet	Upgrades	100%	None
L	Tomales	No	Equipment building and two small cell towers	New shelter and 75' monopole	~ 70%	Unconfirmed new AT&T equipment
M	Coyote Peak	No	Two small water well heads with solar power	New shelter and 75' monopole, Improved access	~ 98%	Possible MCOE future communications leases
N	Skyview Terrace Water Tank	No	MMWD water tank	New shelter and 35' monopole	~ 80%	None
O	Muir Beach	No	Existing water tank; GGNRA parking lot and bathroom	New shelter and 60' monopole	~ 40%	Potential future fire station on old tank site
P	Wolfback Ridge	No	Three 100-foot towers and array of equipment	Upgrades to existing equipment	< 5%	None
Q	Mt. Burdell OTA	No	Underutilized equipment building, nearby active communications site	Upgrades to existing structure and tower	< 10%	None
R	Mill Valley Water Tank	No	Large 5MG water tank, generally concealed by trees, and nearby reservoir	New shelter and 75' monopole	< 20%	None

Projects Considered in the Cumulative Impacts Analysis

For each Next Gen project site, MERA contacted local agencies (city and county) and the owners of non-MERA infrastructure to determine if other projects were planned or proposed, and therefore were likely to be constructed, in the near future. Table VI-1 summarizes the additional proposals identified.

MERA analyzed the projects in Table VI-1 along with MERA's proposed Next Gen system to determine if any cumulative environmental impacts might exist, and if MERA's contribution to those impacts via implementation of the Next Gen project would be cumulatively considerable as defined by the CEQA Guidelines described above.

Analysis of Cumulative Impacts

As shown in Table VI-1, there are 18 sites included in the operational phase of the MERA Next Gen System, ten of which (in green) already have radio equipment installed by MERA and other operators. Of the eight sites new to MERA (in blue), all have been previously developed with other infrastructure, such as utility connections, existing communication towers, water tanks, equipment buildings, etc. Ground-disturbing activities (installation of monopoles and equipment shelters) would occur at five of the eight new Next Gen sites: Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Milly Valley Water Tank.

The impacts of the MERA Next Gen System at each site are described in Chapter V, but the following discussion focuses on whether the cumulative impact associated with the MERA Next Gen System in combination with other projects causing related impacts is significant, and whether the Next Gen's incremental contribution to any significant cumulative impact is cumulatively considerable. Cumulative impacts were analyzed in five resource areas: Aesthetics, Cultural and Tribal Cultural Resources, Biological Resources, Land Use Consistency, and Radio Frequency Exposure.

Aesthetics

The analysis of cumulative impacts to aesthetics considers the viewsheds visible from each of the 23 MERA sites listed in Chapter III (Project Description). The viewsheds include much of Marin County and southern Sonoma County. The existing conditions at each site establish the baseline for the analysis, and take into account all existing MERA facilities, other existing visible communications equipment, and other infrastructure such as water tanks and power lines that are currently visible. In Table VI-1, the column 'Visible MERA Components' describes MERA's relative contribution (shown as a percentage) to the total visible communications infrastructure at each site after completion of the Next Gen project, as some sites are leased to other operators with additional communications equipment on the towers. The 'Additional Proposals' column describes other known non-MERA projects proposed to be developed at each site in the foreseeable future. At leased sites, each site operator was contacted to prepare the list of proposals in Table VI-1. Table VI-1 reflects all currently known and related proposals for future projects at each of the Next Gen sites.

MERA's proposed project as analyzed in this SEIR was found to have significant and unavoidable aesthetic impacts at five of the eight sites new to MERA. These include Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank. Aesthetic impacts at the other 18 sites were found to be less than significant or could be mitigated to a less-than-significant level. Next Gen proposals at the Tomales site include a new equipment shelter and a new 75-foot-tall monopole, which would create a significant and unavoidable impact to aesthetics (as analyzed in Chapter IV.A and Chapter V of this SEIR). In contacting local agencies and other operators at the site, the only other facilities identified as likely to be installed at the site were some non-specified cellular provider equipment; however, it is reasonably foreseeable to assume that building a new monopole will draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. The effect on aesthetic resources from the Next Gen System proposal in combination with this additional equipment would have a significant cumulative impact at the Tomales site, and the contribution of the proposed project to this significant cumulative impact would be ***cumulatively considerable***.

Next Gen proposals at the Coyote Peak site include a new equipment shelter and a new 60-foot-tall monopole, along with an improved access road and new power line, which would create a significant and unavoidable impact to aesthetics (as analyzed in Chapter IV.A and Chapter V of this SEIR). With enhanced access and the addition of electric power, the site owner, Marin County Office of Education (MCOE), could lease space for other communications equipment on Coyote Peak. It is also reasonably foreseeable to assume that building a new monopole could draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. The effect on aesthetics from the Next Gen System proposals in combination with this additional equipment would have a significant cumulative impact at the Coyote Peak site, and the contribution of the proposed project to this significant cumulative impact would be ***cumulatively considerable***.

Next Gen proposals at the Skyview Terrace site include a new equipment shelter and a new 35-foot-tall monopole, which would create a significant and unavoidable impact to aesthetics (as analyzed in Chapter IV.A and Chapter V of this SEIR). Local agencies and other operators at the site did not identify any additional planned or proposed projects to be built at the site; however, it is reasonably foreseeable to assume that building a new monopole could draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. The effect on aesthetics from the Next Gen System proposals in combination with this additional equipment would have a significant cumulative impact at the Skyview Terrace site, and the contribution of the proposed project to this significant cumulative impact would be ***cumulatively considerable***.

Next Gen proposals at the Muir Beach site include a new equipment shelter and a new 60-foot-tall monopole, which would create a significant and unavoidable impact to aesthetics (as analyzed in Chapter IV.A and Chapter V of this SEIR). In contacting local agencies and other operators at the site, the only other project identified as proposed for construction was a new fire station, to be built in the footprint of the old water tank. Concept drawings show the fire station at a base elevation similar to the existing grade, which is six feet lower than the existing GGNRA parking

lot. The MERA tower and equipment structure are also proposed to be located at the lower elevation in the southwest corner of the property, adjacent to the existing water tank and behind the existing public restrooms. Apart from the fire station, it is reasonably foreseeable to assume that building a new monopole could draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. The effect on aesthetics from the Next Gen System proposals in combination with the fire station and this additional equipment would have a significant cumulative impact at the Muir Beach site, and the contribution of the proposed project to this significant cumulative impact would be ***cumulatively considerable***.

Next Gen proposals at the Mill Valley Water Tank site include a new equipment shelter and a new 55-foot-tall monopole, which would create a significant and unavoidable impact to aesthetics (as analyzed in Chapter IV.A and Chapter V of this SEIR). In contacting local agencies and other operators at the site, no additional planned or proposed projects were identified; however, it is reasonably foreseeable to assume that building a new monopole could draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. The effect on aesthetic resources from the Next Gen System proposals in combination with this additional equipment would have a significant cumulative impact at the Mill Valley Water Tank site, and the contribution of the proposed project to this significant cumulative impact would be ***cumulatively considerable***.

The MERA Next Gen System as a whole would contribute to a significant cumulative impact to regional aesthetics because work will take place on numerous hills or ridgelines throughout Marin County. While most sites will have only minor equipment adjustments that would be undetectable by most observers, five sites will cause significant and unavoidable impacts to local aesthetics because of the addition of new towers and equipment that are visible within a near to medium distance range. Most of the towers that MERA uses as part of the existing MERA system currently hold equipment from other entities, and numerous other towers are also visible throughout Marin County, such as airport communications towers, cell towers, and power transmission towers, which all contribute to the cumulative impact of above-ground infrastructure on aesthetics. With this in mind, aesthetics impacts from the new MERA Next Gen System as a whole, in combination with other projects causing related impacts, would result in significant cumulative aesthetics impacts and the project's contribution to such impacts would be ***cumulatively considerable***.

Cultural and Tribal Cultural Resources

The study area of the cumulative cultural resources analysis is the immediate vicinity at each work site proposed as part of the MERA Next Gen System. Typically, cultural resource impacts are localized because the integrity of any given resource depends on activity only in the immediate vicinity of the resource, such as disruption of soils during foundation improvements. Based on the results of the background research and survey, no archaeological resources were identified within the Area of Direct Impacts, although three historic resources are within close proximity to the Next Gen project; a historic road atop Mt. Barnabe (P-21-000482/CA-MRN-551H), the Burdell rock wall (associated with Rancho Olompali), and the Marin Civic Center (listed on the National Register of Historic Places). Each of these has been previously documented.

In the course of Tribal consultation the Federated Indians of Graton Rancheria (FIGR) identified the potential to unearth tribal cultural resources at 13 MERA Next Gen sites. In order to ensure avoidance of any impact to these cultural and tribal cultural resources, Mitigation Measures CULT-1, CULT-2, TRIBE-1, TRIBE-2, and TRIBE-3 were developed. These measures call for work to stop, for qualified archaeologists and Tribal monitors to be contacted when resources or remains are discovered as a result of ground disturbance, and for those experts to develop an appropriate plan for treatment in consultation with relevant agencies. With the implementation of these measures, the proposed project would have less than significant impacts to cultural and tribal cultural resources; therefore, the proposed project's contribution to cumulative impacts would be ***less than cumulatively considerable***.

Biological Resources

The study area of the cumulative biological resources analysis is the region immediately surrounding each MERA Next Gen site. Each of the 23 sites has been previously developed with existing radio and cell tower communications equipment, water towers, solar panels, etc., creating a baseline condition for biological resources impacts evaluation at which much of the habitat has been cleared or previously disturbed. Even so, proposed work at the Point Reyes Hill, Dollar Hill, Mt. Tiburon, Stewart Point, Tomales, Coyote Peak, Muir Beach, and Mill Valley Water Tank Sites was found to have the potential to impact biological resources due to the possible presence of special-status species and sensitive communities. The analysis in Chapter IV.C and Chapter V of this SEIR identified that biological resources impacts would be less than significant with mitigation at each of these eight sites, but they are briefly discussed below in combination with other projects causing related impacts.

Next Gen improvements at the Dollar Hill and Mt. Tiburon Sites include minor upgrades to equipment on existing infrastructure. The Point Reyes Hill Site would require replacement of a supporting structure via installation of a 40-foot monopole in place of an existing 29-foot wooden utility pole. The Muir Beach Site would require a new 60-foot tall monopole with an associated shelter, fence, and generator. Special-status species are not anticipated to occur at any of these sites; however, due to tree cover in the nearby vicinity of the work, there is some potential for nesting birds to be impacted. These impacts would be less than significant when mitigated by nesting bird surveys and avoidance measures in Mitigation Measure BIO-2. No additional proposals by other operators at the Point Reyes Hill, Dollar Hill, or Mt. Tiburon Sites were identified to analyze in combination with the proposed project's biological resource effects, therefore no significant cumulative impact would occur at these sites. Additional known proposals by other operators that may occur at the Muir Beach Site include a fire station located on top of the old tank site, which is not anticipated to result in significant biological resources impacts due to its previously disturbed nature. With impacts to biological resources found to be less than significant with mitigation, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Next Gen improvements at the Stewart Point Site are limited to minor modifications to existing equipment. No impacts to biological resources are anticipated, but one special-status plant individual (a Marin Manzanita) was observed along the road leading to the site. This impact would

be less than significant when mitigated by avoidance flagging required in Mitigation Measure BIO-1. No additional proposals by other operators at the Stewart Point Site were identified to analyze in combination with the proposed project's biological resource effects, therefore no significant cumulative impact was found. With impacts to biological resources found to be less than significant with mitigation, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Next Gen improvements at the Tomales Site include ground disturbing activities for installation of a new equipment shelter and monopole, which could impact American badger, burrowing owl, grasshopper sparrow, Bryant's savannah sparrow, northern harrier, and California red-legged frog. These impacts would be less than significant when mitigated by work windows, surveys, biological monitoring, and no-disturbance buffers required in Mitigation Measures BIO-2 through BIO-5. Additional known proposals by other operators that may occur at the Tomales Site include only minor equipment modifications and additions, which are not anticipated to result in significant biological resources impacts. Therefore, no significant cumulative impact would occur. With impacts to biological resources found to be less than significant with mitigation, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Next Gen improvements at the Coyote Peak Site include ground disturbing activities for installation of a new equipment shelter and monopole, which could impact American badger, golden eagle, grasshopper sparrow, white-tailed kite, Bryant's savannah sparrow, and California red-legged frog. These impacts would be less than significant when mitigated by work windows, surveys, biological monitoring, and no-disturbance buffers required in Mitigation Measures BIO-6 through BIO-8. Additional known proposals by other operators that may occur at the Coyote Peak Site include only minor equipment modifications and additions, which are not anticipated to result in significant biological resources impacts Therefore, no significant cumulative impact would occur. With impacts to biological resources found to be less than significant with mitigation, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Next Gen improvements at the Mill Valley Water Tank Site include ground disturbing activities for installation of a new equipment shelter and monopole. Due to the degree of tree cover in proximity to these activities, nesting birds have the potential to be impacted. Furthermore, 10 Oakland star-tulip individuals were observed south of the project site. These impacts would be less than significant when mitigated by nesting bird surveys and avoidance measures in Mitigation Measure BIO-2 and avoidance flagging required in Mitigation Measure BIO-9. No additional proposals by other operators at the Mill Valley Water Tank Site were identified to analyze in combination with the proposed project's biological resource effects, therefore no significant cumulative impact would occur. With impacts to biological resources found to be less than significant with mitigation, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, and BIO-9 were formulated to ensure less-than-significant impacts to biological resources using a combination of surveys, biological monitoring, required work periods, no-disturbance buffers, fencing, and avoidance flagging. With the implementation of these mitigation measures, the proposed project

would have a less-than-significant impact on special-status plant and animal species. Project-related biological resources impacts are considered and mitigated in accordance with local, state and federal regulations. This includes compliance with "no net loss" of wetland acreage and values, as well as policies of the state and federal regulatory agencies.

The required mitigation would reduce all effects to biological resources from the proposed project to a less-than-significant level, and any additional proposals identified from other operators were minimal and unlikely to impact biological resources. Therefore, no significant cumulative impacts would occur when considering the effects of the proposed project in combination with other projects causing related impacts. Furthermore, even if cumulative impacts were found to be significant, the incremental contribution of the proposed project's less-than-significant impacts would be ***less than cumulatively considerable***.

Land Use Consistency

As a joint powers authority, MERA is exempt from compliance with the local planning and building codes of the towns, cities, and counties in which its facilities are located, except where its immunity has been expressly waived by the State Legislature. MERA is required to comply with state and federal land use regulations.

As noted in Chapter IV.D (Land Use Consistency), applicable federal and state land use plans and regulations include the Marin County Local Coastal Program (LCP) (Units 1 and 2), the California Streets and Highways Code Sections 660-695, the Federal Aviation Administration Height Requirements, the Golden Gate National Recreation Area (GGNRA) General Management Plan (GMP), and the Point Reyes National Seashore General Management Plan. Sites subject to the land use plans listed above include the Point Reyes Hill, Stewart Point, Wolfback Ridge, Tomales, and Muir Beach Sites.

As analyzed in detail in Chapter V, land use impacts at all five of the above sites were found to be less than significant. The Point Reyes Hill Site is subject to the Marin County LCP Unit II, the Point Reyes National Seashore GMP, and the NPS Natural Resources Management Plan. The Stewart Point Site is subject to the Marin County LCP Unit I. The Tomales Site is subject to the Marin County LCP Unit II. The Muir Beach Site is subject to the Marin County LCP Unit I, as well as the GGNRA GMP. The Wolfback Ridge Site is subject to the GGNRA GMP.

Next Gen proposals at the Point Reyes Hill, Stewart Point, and Wolfback Ridge Sites include only minor modifications and upgrades within the existing infrastructure footprint, which do not conflict with the general resource and recreation conservation goals of the Point Reyes National Seashore and GGNRA GMPs. Proposals would be required to meet the design standards and permit conditions set forth by the LCP and the Marin County zoning code provisions incorporated therein. No additional proposals by other operators at any of these sites were identified to analyze in combination with the proposed project's land use effects, therefore no significant cumulative impact would occur. With impacts to land use found to be less than significant, the Next Gen's contribution to any cumulative impact would be less than cumulatively considerable.

Next Gen proposals at the Tomales and Muir Beach Sites include new monopoles with heights of 75 feet and 60 feet, respectively, and new equipment shelters. These improvements were not

found to conflict with any applicable land use plan or regulation in the Chapter V analyses, as the proposal designs comply with LCP guidelines to minimize aesthetic, noise, and biological effects, and work would be subject to a Coastal Development Permit. Furthermore, future development brought forth by these improvements (i.e., addition of equipment by other operators on the new MERA poles) would not increase the physical footprint of the project or thereby create a new conflict with these plans. Additional facilities planned or proposed by other operators include minor equipment adjustments and additions at the Tomales Site and a potential new fire station at the Muir Beach Site. These future proposals are still with the development footprint at both sites, and are unlikely to have adverse impacts on the aesthetic, noise, or biological goals of the LCP. Additional development would also be required to obtain a Coastal Development Permit. Therefore, no significant cumulative impacts were found when considering the effects of the proposed project in combination with other projects causing related impacts. Furthermore, even if cumulative impacts were found to be significant, the incremental contribution of the proposed project's less than significant impacts would be ***less than cumulatively considerable***.

Radio Frequency Exposure

The study area of cumulative impacts from radio frequency (RF) exposure is the area in the immediate vicinity of each MERA site where new transmitters and antennas would be installed, as discussed in Chapter V. All MERA sites were surveyed to inventory all transmitting antennas currently at each site, to measure the existing electromagnetic fields relative to Maximum Permissible Exposure (MPE) limits, and to determine the site's current compliance with applicable RF regulations. Three conditions of RF exposure were then modeled: the existing condition with all systems operational at the same time, the theoretical worst-case scenario assuming the Next Gen system is operational while all other existing systems are operating including the current MERA system, and the long-term 'proposed condition' after the existing system's antennas are removed and the remaining antennas plus the new Next Gen antennas are on. On-site electromagnetic measurements and a series of conservative assumptions about duty cycle, system implementation, and existing emissions from other nearby RF sources on the same tower were used to calibrate models of projected RF emissions.

The analysis showed that RF emissions outside the perimeter security fences, including those by other operators at each site, are currently below public MPE limits, and they would remain so after project implementation. Within some controlled areas (limited locations where only workers have access), the total theoretical maximum emissions could exceed the public MPE limits, but not the occupational MPE limits (5x public MPE), particularly during the transition period, but only if all transmitting devices were to operate simultaneously at full power, which is not typical. As proposed, the project would lead to only small changes in total RF emissions. The Prime Site EOF, Civic Center Site, and Tiburon Site are the only MERA Next Gen sites that required mitigation to reduce impacts to less-than-significant levels. This mitigation includes warning signage to comply with FCC standards, and with this mitigation all sites were found to have less-than-significant impacts in regard to RF exposure.

Five Next Gen sites require new monopoles to be built: Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank. It is reasonably foreseeable to assume that building a

new monopole could draw other operators to install additional equipment in the future, as open space on the pole could invite such facilities. These future developments would be subject to the same FCC standards guiding RF emissions, which would therefore cap the number of antennas or other RF-emitting equipment at each location. Therefore, no significant cumulative impacts were found when considering the effects of the proposed project in combination with other projects causing related impacts. Furthermore, even if cumulative impacts were found to be significant, the incremental contribution of the proposed project's less than significant impacts would be ***less than cumulatively considerable***.

B. SIGNIFICANT, UNAVOIDABLE IMPACTS

Introduction

Section 15126.2(c) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided. Specifically, Section 15126.2(c) states:

> "*Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reason why the project is being proposed, notwithstanding their effect, should be described."*

Analysis of Significant, Unavoidable Impacts

Significant, unavoidable impacts identified in the original EIR (MERA 2000) included impacts to aesthetic resources associated with the installation of towers at the Bolinas Fire Station, Forbes Hill, and Dollar Hill sites. The proposed Next Gen improvements would result in significant and unavoidable aesthetic resource impacts at five sites new to the MERA network: Tomales, Coyote Peak, Skyview Terrace, Muir Beach Water Tank, and Mill Valley Water Tank. These impacts and their relation to the Next Gen System are described by site number below.

Site 6. Bolinas Fire Station

Although the original EIR identified significant, unavoidable aesthetic impacts at the Bolinas Fire Station, the proposed MERA tower at this site was never installed. Instead, the Stewart Point (Martinelli) Site was authorized with a CEQA Addendum and a Coastal Development Permit, and was constructed without significant environmental impacts.

Site 9. Forbes Hill

A 60-foot tall lattice tower that is visible above the ridgeline from many public streets, parks and neighborhoods was constructed at the Forbes Hill site in San Rafael. Mitigation measures described in the original EIR included painting the base of the new tower a dark color in order to blend with existing trees, and adding landscaping to screen views of the equipment building from the nearby open space. However, these mitigation measures did not completely eliminate, or adequately reduce, the visual impacts to a less-than-significant level, and the impacts remained significant and unavoidable.

The MERA equipment at the Forbes Hill site would be decommissioned as part of the Next Gen Project. Since removal of the existing tower and communications equipment would reduce the

visual impact at this site to less-than-significant, additional mitigation measures would not be necessary. The complete removal of the tower and all equipment at Forbes Hills would be a cumulative benefit to aesthetic resources.

However, two local sanitation districts may require continued use of the Forbes Hill communications site after the implementation of the proposed project. If so, the equipment building, utility connections, and the 60-foot tall lattice tower, the source of the previous significant and unavoidable visual impact, would remain. If these were to remain, their impact would continue to be significant and unavoidable and the continuation of the mitigation measures previously described in the original EIR would be required.

Site 10. Dollar Hill

The Dollar Hill site located above downtown San Rafael was originally built with a 60-foot tall three-legged lattice tower that is visible from downtown, from nearby neighborhoods, and from Highway 101. The original EIR found that the 60-foot lattice tower, microwave dishes, and antennas would result in a significant unavoidable visual/aesthetic impact even after implementation of recommended mitigation measures. The improvements resulting from the Next Gen System will not reduce the visibility of the Dollar Hill site and the visual/aesthetic impact resulting from the proposed project will remain ***significant and unavoidable.***

Site 20. Tomales

MERA's proposed facilities at the Tomales Site would be visible from only certain angles in the near-view but would be more highly visible from distant points along State Route 1. State Route 1 is eligible as a state scenic highway, and is considered as such in this analysis. Because the site is visible from State Route 1, and because proposed improvements call for a prominent 75-foot-tall monopole, impacts are found to be significant. Mitigation Measure AES-1, AES-2, and AES-3 call for limited nighttime lighting, certain paint colors for structures and screening schemes in order to reduce the site's visibility, but even with these mitigation measures the impacts are still found to be ***significant and unavoidable***.

Site 22. Skyview Terrace

The proposed MERA facility at Skyview Terrace would obstruct the scenic vistas available from some locations on the ridgeline site, such that the project would have a substantial adverse effect on a scenic vista from a public open space. In addition, the 35-foot monopole would be prominent from several vantage points, and the fenced equipment structure and monopole would affect the existing visual character and quality of the hilltop open space.

Notwithstanding the implementation of Mitigation Measures AES-5 and AES-6, calling for screening and the reconstruction of the pedestrian trail by the site toward a more unobstructed view, impacts would remain ***significant and unavoidable***.

Site 23. Muir Beach Water Tank

The Muir Beach site is located adjacent to the Muir Beach water tank and the GGNRA Muir Beach Scenic Overlook. While views of the ocean would not be affected by installation of the proposed

Next Gen facility, inland views of Mt. Tamalpais would be affected by the presence of the new 60-foot monopole.

Notwithstanding the implementation of Mitigation Measure AES-7, recommending landscaping, fencing, and other screening techniques, the impacts of the proposed project would remain ***significant and unavoidable***.

Site 26. Mill Valley Water Tank

A large water tank is already located on the Mill Valley Tank Site. The most prominent visual change created by the proposed project is the addition of a 55-foot monopole and the 2-inch diameter whip antennas that rise 11-feet above the monopole. The existing water tank is slightly over 30-feet tall, and the trees surrounding the site are nearly 60-feet tall. Therefore, the antennas from the proposed facility would rise above the tree line by approximately ten to fifteen feet, and would be partially visible from nearby vantage points.

Despite implementation of Mitigation Measure AES-8, which calls for blending the colors of the improvements with the environment, impacts would remain ***significant and unavoidable***.

C. SIGNIFICANT, IRREVERSIBLE IMPACTS

Introduction

Section 15126.2(d) of the CEQA Guidelines states that significant, irreversible environmental changes associated with a proposed project shall be discussed, including the following:

1. *Uses of nonrenewable resources during the initial and continued phases of the project that may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely;*
2. *Primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area), which generally commit future generations to similar uses; and*
3. *Irreversible damage that could result from environmental accidents associated with the project.*
4. *Irreversible commitments of resources.*

Analysis of Significant, Irreversible Impacts

The Original 2000 EIR did not identify any significant, irreversible environmental impacts from development of the original MERA system. More specifically, it found that while the project would use minor amounts of non-renewable resources during construction, this would not occur in sufficient quantities to result in substantial depletion of any such resource or increase overall usage rates.

The construction phase of the Next Gen System would require the use of non-renewable construction materials, such as fuel and steel for grading and fabrication of towers. Construction vehicles would burn fossil fuels to access each site and

install the various equipment, and these diesel-powered vehicles have the potential to create environmental accident conditions (e.g., spills).

In the operational phase of the Next Gen System, each site would use generators powered by diesel fuel, and water would be used for irrigation activities. The diesel fuel would be stored on-site, providing some potential for accidental spills of hazardous materials. Further, proposals at the Coyote Peak Site require a 1.5-mile-long road to be regraded, improving ease of access to this remote location.

The amount of energy, water, and raw materials consumed during construction and operation of the Next Gen System would continue to be minimal, and energy would continue to be purchased from Marin Clean Energy, a Community Choice Aggregator under the California Public Utilities Code Section 366.2, which relies on renewable energy resources for generation. Access road improvements to the Coyote Peak site would commit present or future generations to using the site in a certain way more so than it is already committed; however, some existing infrastructure improvements such as well pump heads are already present at the site. Further, it would be possible to decommission and remove the proposed communications equipment at some point in the future if it is no longer needed. Lastly, the fuel containment and hazardous materials Best Management Practices (BMPs) listed in Chapter III (Project Description) would be implemented to ensure impacts related to the use of such fuels would be less than significant. Given the above, significant irreversible impacts are not anticipated.

D. GROWTH-INDUCING IMPACTS

Introduction

Section 15126.2(e) of the CEQA Guidelines requires a discussion how a proposed project could directly or indirectly induce growth in the surrounding area. Section 15126.2(e) of the CEQA Guidelines reads as follows:

> "*Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are project which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some project which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*

Analysis of Growth-Inducing Impacts

The proposed project would update MERA's current communications network in order to improve communications among dispatch operators, emergency responders, and other public agencies throughout Marin County. The project would not improve communications systems available to the general public, nor would it provide or extend infrastructure that would accommodate or

facilitate economic or population growth. The proposed project would not permanently attract new residents to the area served by the proposed radio communications system. Furthermore, the operational phase would not require additional staff beyond those who currently to maintain the existing system. Thus, the proposed project would not induce growth in the local region.

E. IMPACTS FOUND TO BE LESS THAN SIGNIFICANT

Introduction

Section 15128 of the CEQA Guidelines states:

> *"An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Such a statement may be contained in an attached copy of an Initial Study."*

An Initial Study (IS) was prepared for the 2000 MERA Emergency Communications Radio System Environmental Impact Report (EIR). The detailed analysis contained in the IS and summarized in Section I.E (Environmental Effects Found Not to be Significant) of the 2000 EIR determined that implementation of the proposed 2000 MERA Emergency Communications Radio System project would not result in significant environmental impacts within the categories listed below. Therefore, the possible effects of the project in these areas was not analyzed in detail in the 2000 EIR:

1. Agricultural Resources
2. Air Quality*
3. Cultural Resources*
5. Geologic Problems*
6. Water*
7. Land Use and Planning**
8. Energy and Mineral Resources
8. Noise*
9. Population and Housing
10. Public Services
11. Recreation
12. Transportation and Circulation
13. Utilities and Service Systems

***MERA is exempt from local agency regulation and is only subject to state and federal regulatory provisions.*

**Five topics listed above required mitigation measures in the IS to ensure impacts would be less than significant, including: Air Quality, Cultural Resources, Geologic Problems, Water, and Noise.*

The impacts in these areas continue to be less than significant, as explained below. As a result, and with the exception of Cultural Resources, they are not discussed in detail in Chapter V (Existing Conditions and Impacts at Each Site), but associated mitigation measures and their applicability to the Next Gen Project are discussed below. Mitigation measures are incorporated in Table II-2 (Summary of Significant Environmental Impacts and Mitigation Measures) and will also be included in the Final SEIR under the project's Mitigation Monitoring and Reporting Program (MMRP). A detailed discussion of Cultural and Tribal Cultural Resources has been

added in Chapters IV.B (Cultural and Tribal Cultural Resources) and V of this SEIR to comply with the provisions of Assembly Bill 52 (AB-52), which was passed after certification of the original EIR in 2000.

The topics of Greenhouse Gas Emissions and Forestry Resources were not included in the original IS and EIR since they were introduced to Appendix G of the CEQA Guidelines after the IS and EIR were certified. These topics are included below.

Analysis of Impacts Found to be Less Than Significant

1. Agricultural and Forestry Resources

The CEQA Guidelines require analysis of whether the project would:

a.) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency?

The latest Farmland Monitoring and Mapping Program's (FMMP) survey of Marin County (2016), shows that none of the 23 sites included in the proposed project are located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. All sites are located on land currently designated as grazing land, urban/built up land, or "other" land. Consequently, there would be no conversion of any such lands to non-agricultural uses and the proposed project would have ***no impacts.*** No further consideration of this issue is required.

b.) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

MERA is generally exempt from compliance with the zoning codes of the cities and counties in which Next Gen facilities will be constructed. However, MERA is not exempt from the requirements of the California Coastal Act and must obtain a coastal permit if the Next Gen project involves construction within the coastal zone.

The Big Rock Ridge, Mt. Barnabe, Point Reyes Hill, Stewart Point, Tomales, Coyote Peak, and Mt. Burdell OTA sites are zoned for agricultural use, but Tomales is the only site with an agricultural conservation easement (Marin County, 2012), that was granted to the Marin Agricultural Land Trust (MALT). Big Rock Ridge, Mt. Barnabe, Point Reyes Hill, and Stewart Point are existing sites where operational MERA facilities currently exist, and the proposed project would not encroach upon any additional agricultural land. Similarly, the Mt. Burdell OTA site is an existing communications facility and will not expand to remove agricultural land. Consequently, these sites would not result in any impacts related to conflicts with existing zoning for agricultural use.

The proposed Tomales Site would be directly adjacent to an existing communications facility, and MERA would utilize the existing unpaved private access road that serves the cellular site. When Marin County approved the coastal permit for the existing cellular site, that communication facility was found to be compatible with and accessory to the existing agricultural uses of the property. In July 2012, Marin County made a similar finding and approved a coastal permit for a MERA

communications facility. MALT also found that both the cellular facility and the MERA facility would not interfere with the agricultural use of the property.

The Coyote Peak Site is improved with well heads and water pumps to serve the Walker Creek Ranch education facility. The proposed MERA site is close to the existing well-heads site and will make grading and some alignment changes to the existing unpaved road for access.

The Tomales Site is zoned as a Coastal Agricultural Production Zone (C-APZ-60) and Coyote Peak is zoned as Agricultural Residential Planned (ARP-60). For both of these zoning designations, the Marin Countywide Plan lists telecommunications facilities as an allowed use with a permit, and in the case of ARP, a master plan/precise development plan. The Coastal Plan also permits telecommunications facilities in the Coastal Zone as a conditional use. The proposed changes at these sites would not conflict with agricultural use on the remainder of the property or on adjacent lands, and the placement of improvements directly adjacent to existing infrastructure ensures that minimal land would be removed from its current grazing use.

Based on these conclusions, and that no sites are under a Williamson Act contract, the proposed project will not conflict with agricultural zoning or Williamson Act Contracts, and impacts would be ***less than significant***. No further consideration of this topic is required.

c.) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

MERA is generally exempt from compliance with the zoning codes of the cities and counties in which Next Gen facilities will be constructed. Further, none of the sites proposed for the Next Gen system are zoned as forestland or timberland, and the majority of the sites are located within the boundaries of existing communications facilities, governmental buildings, or other public infrastructure facilities such as water tanks.

There would be ***no impact*** related to conflict with forestland and timberland zoning. No further consideration of this topic is required.

d.) Result in the loss of forest land or conversion of forest land to non-forest use.

Eight Next Gen sites are located in forested areas: Mt. Tamalpais, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Stewart Point, Muir Beach, Mt. Burdell OTA, and Mill Valley Water Tank. However, trees were previously cleared from each of these sites for construction and safety purposes related to the existing development. The installation of Next Gen Improvements will not require additional loss of forest land. Therefore, there would be ***no impact*** related to the loss or conversion of forestland.

e.) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The purpose of the project is to enhance communications. As discussed in sections (a) through (c) above, none of the proposed Next Gen sites will disrupt or cause the conversion of Farmland to non-agricultural use or the conversion of forest land to non-forest use, nor does the proposed project involve any other changes in the existing environment which could result in the conversion of Farmland or forest land. Therefore, there would be ***no impact*** on agricultural or forestland.

2. Air Quality and Greenhouse Gas Emissions

The CEQA Guidelines require analysis of whether the project would:

a.) Conflict with or obstruct implementation of the applicable air quality plan?

The Air Quality Management Plan (AQMP) prepared by the Bay Area Air Quality Management District (BAAQMD) applies to all projects proposed within the San Francisco Bay Area Air basin. BAAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

BAAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources, and it has responded to this requirement by preparing a series of AQMPs, with the most recent issued in April 2017 (the 2017 Clean Air Plan). AQMPs are prepared with the cooperation of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). The plans outline goals and control measures to reduce emissions of criteria pollutants and greenhouse gases in the Bay Area, including fine particulate matter (PM2.5), for which the Bay Area is classified as a federal non-attainment region. The 2017 Clean Air Plan strives to improve Bay Area air quality and protect public health by defining a control strategy to reduce emissions and ambient concentrations of air pollutants, reducing exposure to air pollutants the pose the greatest health risk, and reducing greenhouse gas emissions to protect the climate.

Projects that are consistent with the population forecasts identified by ABAG are considered consistent with the 2017 Clean Air Plan's growth-related goals and policies, since ABAG's projections form the basis of the land use and transportation control strategies of the Plan. The Plan also assumes that general development projects will include feasible strategies (i.e., mitigation measures) to reduce emissions generated during construction and operation and bases estimates of future emissions taking into account State policies and regulations already adopted or likely to be adopted and implemented over the next 10-15 years.

The proposed Next Gen Project would not attract new permanent residents to the area, and is therefore consistent with the 2017 Clean Air Plan's employment and population forecasts. While it is possible that construction jobs could temporarily attract individuals to the area, this impact would be temporary and would not occur in sufficiently high quantities to violate applicable plans. The Project is also consistent with the transportation control strategies of the Plan, as it would not increase demand for motor vehicle travel, and Mitigation Measure AIR-1 (below) would reduce the potential impacts of vehicle emissions during construction.

In total, there are 26 MERA sites within the BAAQMD's jurisdiction discussed in this SEIR. Among these sites, ten are pre-existing MERA facilities that would undergo modification as part of the Next Gen System, eight were either excluded from the original system or would be decommissioned as part of the Next Gen System, and eight would be new to the system. Project construction activities would result in short-term increases in emissions from the use of heavy equipment that generates dust, exhaust, and tire-wear emissions; soil disturbance; materials used in construction; and minor construction traffic. Project construction would produce fugitive dust (PM_{10} and $PM_{2.5}$) during ground disturbance and would generate carbon monoxide, ozone precursors, and other emissions from vehicle and equipment operation.

The duration of construction at any given site would vary according to the nature and extent of the proposed facilities. Most sites have only minor equipment changes, such as new antennas or microwave dishes on existing towers or monopoles. Construction duration at these sites would range from a few days to a few weeks. Removal of original equipment would take another few weeks. Other sites, shown in Table III-2 (Chapter III, Project Description) would require monopole or tower foundation improvements to meet seismic safety standards. These sites could require deeper excavations directly adjacent to the existing monopole or tower and construction duration may take up to 8 weeks to complete the foundation work.

Five new sites, which do not have existing communications infrastructure, would have more extensive construction requirements. These five sites include: Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank (the two other new sites to MERA, Wolfback Ridge and Mt. Burdell OTA, are existing communications facilities with towers and equipment that MERA would lease). These five sites would require grading of the immediate area around the proposed tower, a deep foundation for a new monopole and shallow slab foundations for the small equipment building, fuel tank, and generator. Small laydown areas at the generally flat sites would receive shallow grading to remove grass and shrubby vegetation to provide a clean assembly space for tower construction, materials, and equipment.

Coyote Peak is the one site that would require more extensive grading of two overly steep sections of the existing 1.5-mile graded dirt access road. Access road construction would necessarily precede any site construction. Underground power lines would also be installed to serve the Coyote Peak site. At Coyote Peak, the site construction would last six months during the dry summer season.

At the time of the 1999 IS, mitigation measures were suggested to reduce impacts regarding potential conflicts with applicable air quality management plans to less-than-significant levels. While construction emissions would be relatively limited and temporary, implementation of the construction-related mitigation measures detailed below in Mitigation Measure AIR-1 shall be required to ensure potential conflicts with the 2017 Clean Air Plan's pollutant control strategy are reduced to less-than-significant levels.

During the operational phase of the proposed project there would be no change to the emissions of the ten existing facilities. New facilities would see a slight increase in existing air pollutant emissions and decommissioned facilities would experience a slight decrease, but these changes

would be negligible, as the communication facilities proposed emit very few pollutants. Air pollutants associated with facility operations include vehicle emissions from periodic maintenance visits to each site and exhaust from the use of on-site emergency generators. Emergency generators are periodically cycled for preventative maintenance purposes in addition to being occasionally used during power outages. Propane and diesel-fueled generators have the potential for minor contributions to regulated emissions, which would be further reduced with the use of modern pollution control equipment.

As these emissions are minimal, and very sporadic in nature, long-term project emissions would not conflict with or obstruct implementation of the applicable air quality plan. However, Mitigation Measure AIR-2 is required below to ensure that operational emissions would be less-than-significant.

Overall, with implementation of Mitigation Measures AIR-1 and AIR-2, the Next Gen Project would not conflict with or obstruct implementation of the applicable measures in the 2017 Clean Air Plan, and this impact would be ***less than significant with mitigation incorporated***. No further consideration of this topic is necessary.

The Construction Project Manager shall be responsible for following requirements in Mitigation Measures AIR-1 and AIR-2, and MERA shall be responsible for ensuring this compliance.

Mitigation Measure AIR-1

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations).
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications, and all equipment will be checked by a certified vehicle emissions evaluator.
- A publicly visible sign with the telephone number and person to contact at the lead agency regarding any dust complaints shall be posted in or near the project site. The contact person shall respond to complaints and take corrective action within 48 hours. The Air District‘s phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AIR-2

Emergency power generators shall be equipped with emission control devices.

b.) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

As discussed above, during operations the project would generate negligible emissions. During the construction phase, some criteria pollutants may be emitted, but implementation of the Mitigation Measures discussed above would ensure that the project would not result in long-term or cumulatively considerable increases in criteria pollutants for which the Bay Area is currently in non-attainment (ozone and particulate matter). . Impacts in this area would therefore be ***less than significant*** and no further consideration of the topic is required.

c.) Expose sensitive receptors to substantial pollutant concentrations?

There are no noxious fumes associated with the long-term operation of the proposed communications system with the exception of the emergency generator during its limited time of operation. During the operational phase, the project would therefore not expose any sensitive receptors to substantial pollutant concentrations.

Short-term construction-related operations may generate a small amount of dust and diesel particulate matter at those sites where there is new construction. Adherence to the BAAQMD-recommended construction measures discussed in Mitigation Measure AIR-1 would reduce the impacts associated with potential generation of fugitive dust and particulate matter to a less-than-significant level. Given that the operational project would not generate substantial pollutant concentrations and the construction phase's pollutant concentrations would be minimized by implementation of Mitigation Measure AIR-1, the project would not expose sensitive receptors to substantial pollutant concentrations and the impact would be ***less than significant.*** No further consideration of the topic is required.

d.) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Operation of the existing MERA sites has not resulted in any complaints related to objectionable odors, nor would complaints be anticipated at new or modified sites. However, there is potential for temporary, localized odors associated with construction activities and the use of emergency generators during power outages.

Because no permanent odors are anticipated and temporary odors would be minimized through implementation of BAAQMD standards and regulations and of manufacturer's recommendations, impacts would be ***less than significant.*** No further consideration of this topic is necessary.

When it comes to GHG emissions, the CEQA Guidelines also require analysis of whether the project would:

a.) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

According to the BAAQMD CEQA Guidelines issued in 2017, public land uses and facilities would result in a cumulatively significant impact to global climate change if more than 1,100 metric tons per year of carbon dioxide equivalent (CO_{2e}) are emitted during the operational phase. BAAQMD has not established a threshold of significance for greenhouse gases during the construction phase, but advises lead agencies to quantify and disclose GHG emissions from construction and make a determination on their significance in relation to meeting Assembly Bill (AB) 32 GHG reduction goals.

The proposed project would generate minimal greenhouse gases (GHG) during the operational phase. Direct GHG emissions associated with the operation of the proposed project would be caused by periodic visits to each site by vehicles transporting maintenance personnel to service equipment and the occasional use of on-site emergency generators. Indirect GHG emissions would be the result of the consumption of electricity used to operate the equipment at each project site. Based on MERA energy consumption rates, and the fact that MERA obtains electricity generated by renewable sources through Marin Clean Energy, all GHG emissions for the Next Gen Project during the operational phase would be well below 1,100 metric tons of CO_{2e} annually.

Construction activities would be short-term for each site, and are not anticipated to last for greater than one year for the overall project. Implementation of Mitigation Measure AIR-1 to minimize idling times and ensure that construction equipment is properly maintained will also serve to reduce the generation of greenhouse gas emissions during construction. Collectively, the temporary emissions from construction activities would not be sufficiently large to impede the achievement of AB 32 GHG reduction goals.

As construction and operational impacts would generate minimal quantities of greenhouse gases, impacts would be ***less than significant***. No further consideration of this topic is required.

b.) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

GHG emissions from off-road equipment and utility electrical usage are identified and planned for in the BAAQMD's 2017 Clean Air Plan, a primary objective of which is to reduce greenhouse gas emissions to 1990 levels by 2020 and 40% below 1990 levels by 2030, in keeping with the targets set by Assembly Bill 32 (2006) and Senate Bill 32 (2016). Many of the control strategies and measures laid out in the 2017 Clean Air Plan support and complement the land use and transportation strategies outlined in the Sustainable Communities Strategy (SCS), a document jointly produced by ABAG and MTC in 2013. The California Air Resources Board determined that the SCS will achieve the Bay Area's SB 375 target, which called for a per-capita GHG reduction from cars and light-duty trucks by seven percent by 2020 and by 15% by 2035. Plan Bay Area's SCS sets forth changes in land use and transportation investments, and includes a number of complementary policies and programs designed to reduce vehicle travel and GHG emissions from on-road vehicles.

As previously discussed, the proposed project would generate small quantities of greenhouse gases during construction and operation, but these quantities are planned for in the 2017 Clean Air Plan estimates and would not be sufficiently large as to conflict with the plans, policies, or

regulations mentioned above. Consequently, the proposed project would have impacts that are ***less than significant*** and no further consideration of the topic is required.

3. Geology and Soils[1]

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a-i.) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

All of the proposed project's 23 sites are outside of Alquist-Priolo special study fault zones, and the risk of ground rupture during an earthquake is expected to be low. Nonetheless, all the sites are subject to the effects of seismic-induced ground shaking. Given the relatively high magnitude of earthquakes that can occur on the San Andreas, Hayward, and other smaller faults in the San Francisco Bay area, the potential exists for fault rupture and significant ground shaking in the region. None of the sites are located in areas identified as susceptible to liquefaction.

Based on a review of geologic data available from Marin County, there are no unusual geologic conditions present at any of proposed sites, such that there is no increased risk of damage from seismic shaking beyond what is common to the region. Although future large earthquakes could damage structures and towers, adherence to California Building Standards Code and earthquake engineering standards is considered adequate to attenuate impacts to less-than-significant levels. As a result, the proposed project would not expose people or structures to any increase in the adverse effects from earthquake and the project's impacts would be ***less than significant***. No further consideration of this topic is required.

a-ii.)Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Due to their location in seismically active areas, all of the proposed project sites are subject to the effects of seismic-induced ground shaking which could potentially be significant, and the IS provided mitigation measures to reduce the risks associated with seismic groundshaking to less-than-significant levels. These include requirements for geotechnical reports and conformance with the California Building Standards Code. Geotechnical reports have been completed for the proposed new MERA sites, and no special conditions were identified that would present increased vulnerability to seismic groundshaking.

Although future large earthquakes could damage structures and towers, adherence to the California Building Standards Code and earthquake engineering standards is considered adequate to attenuate impacts to less-than-significant levels. As no sites' risks extend beyond those present throughout the Bay Area, and all structures would be constructed according to the California Building Standards Code and applicable earthquake engineering standards, people

[1] *This subsection addresses the topic of Geologic Problems included in the Initial Study prepared for the 2000 EIR.*

and structures would not be exposed to substantial adverse effects involving strong seismic ground shaking; impacts would be ***less than significant with mitigation incorporated*** and no further discussion of this issue is required.

Mitigation Measure GEO-1

A design-level geotechnical report shall be prepared for the facilities proposed at each of the communication sites. A qualified geotechnical engineer and engineering geologist shall prepare the document, and this design-level report shall provide criteria for site preparation, pavement, and foundations. Site-specific earthquake forces shall also be identified and incorporated into the design of structures. All structures, including towers and earthworks, shall conform to the applicable earthquake design standard such as the California Building Standards Code.

a-iii.)Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

According to geologic data available for download on the Marin County Geographic Information Systems website, all of the proposed project sites are categorized as either low or very low hazard for liquefaction. Given all proposed sites have been classified as low or very low risk for liquefaction and no other risk factors have been identified at any site, the proposed project would not expose people or structures to substantial adverse effects involving seismic ground failure; therefore impacts would be ***less than significant***. No further consideration of this topic is required.

a-iv.)Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

According to the United States Geological Service (USGS), the best available predictor of where landslides and earthflows might occur is the distribution of past slides and movements. USGS historical landslide data categorizes the distribution of landslides and earth flows in Marin County as follows: Mostly Landslide, Many Landslides, Few Landslides, and Flat Land. The first two categories are areas with the most severe landslide risk. The “Mostly Landslide” area “consists of mapped landslides, intervening areas typically narrower than 1500 feet, and narrow borders around landslides; defined by drawing envelopes around groups of mapped landslides”. The “Many Landslides” area “consists of mapped landslides and more extensive intervening areas than in ‘Mostly Landslide’; defined by excluding areas free of mapped landslides; outer boundaries are quadrangle and county limits to the areas in which this unit was defined”.

Although much of Marin County is mapped as the “Mostly Landslides” category, the majority of the proposed changes to the MERA system involve modifications to existing structures, rather than construction of new structures. At existing facilities, proposed modifications include minor changes such as foundation reinforcement and installation of antennas and dishes on existing structures. Such changes would not directly or indirectly cause any additional landslide risk than currently exists at these sites. At eight sites, existing tower foundations would be improved, decreasing these structures’ susceptibility to landslides.

Six sites would require the construction of new structures: Tomales, Coyote Peak, Skyview Terrace, Muir Beach, Wolfback Ridge, and Mill Valley Water Tank. Wolfback Ridge, Mill Valley Water Tank, Skyview Terrace, and Tomales are within zones classified as "Few Landslides." Coyote Peak is within a "Many Landslides" zone, but the facility is a ridgetop site significantly set back from the eroding hillsides. Similarly, Muir Beach is classified as "Mostly Landslides", but proposed improvements will also be set back from eroding coastal bluffs by several hundred feet. Landslide risk at both the Muir Beach and Coyote Peak sites would be reduced by building all structures in accordance with current building codes and regulations, which would reduce impacts related to landslide to less-than-significant levels.

Because the proposed new structures within the Next Gen System would be compliant with all applicable building codes and regulations, and are in locations that are less likely to slide, the project would not directly or indirectly cause potential substantial adverse effects involving landslides. Thus, impacts would be ***less than significant***. No further consideration of this topic is required.

b.) Result in substantial soil erosion or the loss of topsoil?

Few of the proposed project sites or facilities would involve disturbance of substantial quantities of soil, removal of vegetation, or other actions which might result in substantial soil erosion or loss of topsoil. Ten Next Gen sites (Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Stewart Point, Wolfback Ridge, and Mt. Burdell OTA) require ground disturbance to reinforce existing tower foundations, which would disturb soil only in the immediate vicinity of the tower. Five sites (Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank) require construction of new towers, equipment shelters, and fencing.

Regional geologic mapping indicates that all seventeen sites included in the original EIR are derived from sandstone with smaller amounts of shale and mudstone, excepting the Novato Police Department Site, which is underlain by alluvial soils. For the most part, these rocks weather to sandy or silty soils that are easily eroded and do not tend to accumulate in thick unstable masses. In most ridge locations the soil is eroded away as fast as it forms, and bedrock is at or within a foot of the surface. All of the original sites are relatively flat, except the Bolinas Ridge Site, which was excluded from the MERA system after completion of the original EIR. As a result, the original EIR concluded that the 17 sites did not appear to have the geologic or soils characteristics that would make future improvements subject to changes in erosion patterns or unstable soil conditions. Based on this determination, the modifications proposed by the Next Gen project to the existing sites will result in less-than-significant impacts related to soil erosion or loss of topsoil.

For the proposed new sites, the Tomales, Skyview Terrace, Muir Beach, and Mill Valley Water Tank sites would require grading and other earth-disturbing processes as part of the construction of towers, equipment shelters, utilities, and perimeter fences. As construction of these facilities requires a small land area, there would be an insufficient area of land disturbance and vegetation removal to present a significant risk of substantial soil erosion or loss of topsoil.

The Coyote Peak Site requires improvements to the access road that would necessitate grading, with cuts of three to eight feet deep in short sections, and some additional vegetation removal within the boundaries of an existing 1.5-mile dirt road. These improvements have the potential to expose soils to wind and water erosion, but the project would not alter the existing drainage pattern of the area or cause a long-term substantial change to erosion and accretion patterns. Temporary construction impacts related to run-off from any cut soil could occur, but the project would be required by the County to submit and implement a Storm Water Pollution Prevention Plan (SWPPP) that includes appropriate water pollution control and dust control BMPs. This would ensure the project would not result in substantial erosion or loss of topsoil, and impacts would be ***less than significant***. No further consideration of this topic is required.

c.) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

As mentioned previously, the soils present at the proposed project sites do not tend to accumulate to great depths. Regional geologic mapping indicates that all seventeen sites included in the original EIR are derived from sandstone with smaller amounts of shale and mudstone, excepting the Novato Police Department site, which is underlain by alluvial soils. For the most part, these rocks weather to sandy or silty soils that are easily eroded and do not tend to accumulate in thick unstable masses. In most ridge locations the soil is eroded away as fast as it forms, and bedrock is at or within a foot of the surface. As a result of this, the proposed project sites do not appear to have the geologic or soil characteristics that would make future improvements subject to landslide, lateral spreading, subsidence, liquefaction, or collapse. At all sites, structures would be constructed in accordance with applicable building codes and regulations to minimize risks from unstable geologic units and unstable soils. Therefore the proposed project would result in impacts that are ***less than significant***. No further consideration of this topic is required.

d.) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Soil characteristics, such as the potential presence of expansive soils, are a primary factor in the engineering designs required for tower foundation retrofitting. All soil characteristics, including those defined in Table 18-1-B of the Uniform Building Code (1994) are incorporated into the engineering designs required for tower foundation retrofitting that are part of the Next Gen Project.

Given that no special soils risks have been identified at any of the project sites, meaning that none of the sites are on expansive soils, and all structures would be built according to applicable building codes, the proposed project would not be adversely affected expansive soil. Thus, the proposed project would result impacts that are ***less than significant***. No further consideration of this topic is required.

e.) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Waste water and septic tanks are not part of the Next Gen project design, therefore the proposed project would have ***no impact.*** No further consideration of this topic is required.

f.) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.[2]

There are no known paleontological sites or resources or unique geological features within or near the identified Areas of Direct Impact (ADI) for the project sites, and the likelihood of unearthing any such resources during ground disturbance is very low. The majority of the sites' ADIs are underlain by exposed bedrock and at the remaining sites the ground disturbance would be limited to depths ranging from zero to a maximum of eight feet below the surface in a single location. Ten Next Gen sites (Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Stewart Point, Wolfback Ridge, and Mt. Burdell OTA) require ground disturbance to reinforce existing tower foundations, which would disturb soil only in the immediate vicinity of the tower. Five sites (Tomales, Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank) require construction of new towers, equipment shelters, and fencing. Nonetheless, Mitigation Measure GEO-2 calls for the contractor to stop work within 100 feet of any accidentally discovered paleontological or unique geologic resources.

Based upon the lack of known resources, the low likelihood of accidental discovery, and the implementation of Mitigation Measure GEO-2, the project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, and impacts would be ***less than significant with mitigation incorporated***. This finding applies uniformly across all sites, and this issue is therefore not examined further.

Mitigation Measure GEO-2

If buried paleontological resources or unique geologic features are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified registered geologist or paleontologist can assess the significance of the find and, if necessary, develop appropriate procedures for its treatment or avoidance.

4. Hazards and Hazardous Materials

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Diesel and propane fuels are the primary hazardous materials that will be used at the proposed project sites. The proposed project would result in the operation of 18 unoccupied communications facilities, and propane and diesel fuel are necessary for construction and operations of these facilities.

During project construction, minimal quantities of hazardous materials would be necessary. Materials classified as hazardous would be handled in accordance with the construction BMPs described in Chapter III (Project Description) Section G, the proper safety protocols as recommended by the materials' manufacturers, and the health and safety requirements enforced

[2] *Paleontological Resources was moved in 2019 from Cultural Resources to Geological Resources.*

by the Occupational Safety and Health Administration (OSHA) and California Division of Occupational Safety and Health (Cal/OSHA).

During operations, the proposed project would utilize propane and diesel fuels to power proposed and existing emergency generators at the project sites. Replenishment of fuel in on-site tanks would occur periodically (quarterly) in order to maintain adequate supplies for emergency generator demand. Propane and diesel are relatively safe when handled, stored, and used for their intended purpose. With the project's compliance with fuel containment and other BMPs included in Chapter III (Project Description), impacts related to the routine transport, use, or disposal of hazardous materials would be ***less than significant***.

b.) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

This topic is addressed in Chapter IV, Section E (Hazards and Hazardous Materials).

c.) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The only site included in the proposed project that is located within one-quarter mile of an existing or proposed school is the Coyote Peak Site, which is part of the Walker Creek Ranch campus of the Marin County Office of Education's Outdoor Education School. The site is not within or near Walker Creek Ranch's educational or conference facilities. While chemicals used to operate construction equipment such as fuels and lubricants would be used at this site, this use would be temporary and in small quantities. Following a brief construction period, there would be no handling or emissions of hazardous materials, except for the generation of small quantities of air pollutants during occasional generator use. Consequently, impacts would be ***less than significant*** and no further consideration of this topic is required.

d.) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

The 2000 Final EIR consulted an array of authoritative databases to analyze the proximity of the 17 original MERA sites to hazardous materials sites. The EIR concluded that none of the proposed communication sites were located on a hazardous materials site and that no impact would occur. According to data downloaded from the EnviroStor (DTSC 2018) and GeoTracker (CAvState WRCB 2018) databases, none of the sites in the proposed Next Gen Project are located on a hazardous materials site. The Muir Beach, Mill Valley Water Tank, and Civic Center sites are located near hazardous materials sites.

The Mill Valley Landfill is located at the intersection of Cypress and Edgewood, which is 0.1 mile west of the Mill Valley Water Tank site. Its status was last updated with the California Department of Toxic Substances Control (DTSC) in 2002, when it was placed in the evaluation stage under the oversight of Marin County, but no contaminants of concern were found. The Muir Beach Site is approximately 0.07 mile northeast of a Formerly Used Defense Site (FUDS), but in 2013 DTSC

and the Water Board wrote a letter of concurrence with the U.S. Army Corps of Engineers' finding of No Department of Defense Actions Indicated (NDAI). The Civic Center Site has four Leaking Underground Storage Tank (LUST) cleanup sites in its nearby vicinity (ranging from adjacent to the building to 0.25 mile southeast of the building). All four sites were fuel-contaminated, having an unauthorized leak of diesel or gasoline, but all were cleaned up and the cases were closed as of 1992, 1998, 2009, and 2010.

Because none of the proposed project sites are located on a hazardous materials site, impacts would be ***less than significant*** and no further consideration of this topic is required.

e.) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would not result in a safety hazard or excessive noise for people residing or working in the project area?

None of the MERA sites are located within an airport land use plan or within two miles of a public airport or public use airport. As such, there would be ***no impact.*** No further consideration of this topic is required.

f.) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Most Next Gen facilities would be located away from population centers, and those facilities located in populated areas would be within the boundaries of existing communications facilities or other existing infrastructure. Construction of the sites could cause temporary increases in traffic for the transportation of construction equipment, but these impacts would be negligible in remote areas, and very minor and temporary in urban site locations. Further, as the Next Gen facilities would be unoccupied the majority of the time, they would not result in any permanent increases in traffic. Therefore, they would not impair implementation of or physically interfere with any emergency response or evacuation plans.

The Next Gen System would not result in physical structures or changes to traffic patterns that would interfere with emergency response or evacuation plans and, in the long-term, would benefit such systems. The main purpose of the proposed project is to upgrade emergency response communications, enhancing the ability of dispatchers and first responders to carry out adopted emergency plans. Impacts would be beneficial and therefore ***less than significant***. No further consideration of this topic is required.

g.) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

This topic is addressed in Chapter IV, Section E (Hazards and Hazardous Materials).

5. Hydrology and Water Quality[3]

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The proposed project is a communications system, and the communications facilities would include few new impervious surfaces. Project operations would not result in the use of chemicals or wastewater discharges, or generate measurable amounts of water runoff, such that violations of water quality standards or waste discharge requirements might occur.

Although the operational phase of the project would not impact water quality, construction-related activities have the potential to do so. Fuel, oil, grease, solvents, and other chemicals used in construction operations could potentially enter a waterway. Concrete is a potential source of pollutants, through possible spillage, and washing or cleaning equipment within the proposed project areas. Construction activities are also a source of various other unwanted materials including trash, soap, and sanitary wastes.

The degree of construction-related impacts to water quality is partially determined by the duration of the various construction activities in conjunction with rainfall distribution. Summer construction activities, for example, would decrease the potential for sediment and other pollutants impacting water quality.

In order to reduce potential erosion and water quality impacts, the contractor will be required by the County to submit and implement a Stormwater Pollution Prevention Plan (SWPPP) that includes appropriate water pollution control and dust control BMPs. Surface water quality and groundwater quality impacts during project construction and operation would therefore be ***less than significant***. No further consideration of this topic is required.

b.) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed project facilities do not contain de-watering or draw-down elements or contour changes that would affect the groundwater or result in changes to the quantity of groundwater through withdrawal or loss of recharge capacity, therefore there are ***no impacts*** from the proposed project. No further consideration of this topic is required.

c-i.) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or offsite.

The proposed project sites exist within the boundaries of existing developments. At any given site, few impervious surfaces would be created. The largest impervious surfaces to be constructed are equipment shelters and fuel tanks, which would not be large enough to alter

[3] *This subsection addresses the topic of Water included in the Initial Study prepared for the 2000 EIR.*

area drainage patterns. At the Coyote Peak Site, the proposed project includes improvements to the existing access road serving the existing equipment on the ridge, but this road would remain unpaved and would not impact drainage differently than the current condition of the road. There would be no significant change in currents or the course or drainage of water movements as a result of the proposed project. Because the project would not alter the existing drainage pattern of the area, it would therefore not cause a substantial change to the erosion and accretion patterns long-term. Erosion and siltation from construction-related ground disturbance would be minimized via compliance with the County-required SWPPP for the project. As there would be no alterations to drainage patterns, and the project would not result in substantial erosion or siltation on- or off-site, impacts would be ***less than significant***. No further consideration of this topic is required.

c-ii.)Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

As previously discussed in c-i, the proposed project elements are located within the boundaries of existing developments and existing drainage patterns would not be significantly altered. The only impervious surfaces involved in the project are equipment towers, equipment shelters, and fuel tanks, which would not be large enough to alter area drainage patterns, and regrading of an existing unpaved access road at the Coyote Peak Site, which would not change drainage from its current condition. For the same reasons addressed in c-i above, surface runoff would not increase and the proposed project would not result in flooding on or off site; therefore there would be ***less than significant*** impacts. No further consideration of this topic is required.

c-iii.)Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

As described under thresholds c-i and c-ii above, development at each of the 23 sites where project installations or decommissioning would take place would not create substantial additions to impervious surface, and would therefore not generate substantial additional surface water runoff. Any runoff would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Temporary construction-related runoff could occur, but the project will be required by the County to submit and implement a SWPPP that includes appropriate water pollution control and dust control BMPs. Therefore impacts would be ***less than significant*** and no further consideration of this topic is required.

c-iv)Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

All 26 MERA and proposed MERA sites discussed in this SEIR are located outside of flood hazard zones. A portion of the Marin Civic Center property lies within a 100-year flood hazard area, but the building complex itself is at a higher elevation outside the area susceptible to flooding. As such there would be ***no impact*** with regard to the restriction or redirection of 100-year flood flows. No further consideration of this topic is required.

d.) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Most sites proposed as part of the Next Gen System are located inland, away from large bodies of water. These sites are inherently not at risk of inundation by seiche or tsunami. The Muir Beach Water Tank and Tiburon Sites are proximate (less than half a mile) to the Pacific Ocean and the San Pablo Bay, respectively. While this may present some risk of tsunami, both sites are located at sufficiently high elevation as to minimize this risk. All sites are located outside of flood hazard zones, in areas of undetermined flood risk (Point Reyes Hill Site) or of minimal flood risk (all other sites). Given all sites are located away from large water bodies and/or at a relatively high elevation, the project would not be susceptible to releasing pollutants due to inundation by flood, seiche, tsunami, or mudflow, resulting in impacts that are ***less than significant***. No further consideration of this topic is required.

e.) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project would not have other water quality or groundwater sustainability impacts beyond those discussed under items a) through c) above. Project activities would leave the area similar to its existing condition, given that most development would occur in existing development footprints, and the project would be required by the County to submit and implement a SWPPP that includes appropriate water pollution control and dust control BMPs. Impacts would be ***less than significant***. No further consideration of this topic is required.

6. Energy

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

During the construction phase, trucks and other equipment will use fuels that by nature utilize energy resources. These impacts will be short-term, and the BAAQMD BMPs listed in Mitigation Measure AIR-1 would reduce any wasteful use of these energy resources by minimizing idling times and requiring the tuning and maintenance of all equipment. During the operational phase, with the exception of the Prime Site EOF, Next Gen facilities would be unoccupied and energy demands would remain relatively constant. When technicians are not present, energy at each site is consumed only by communications equipment and, in summer months, by air conditioning units that prevent the overheating of equipment. As part of the project, the air conditioning units at six existing sites will be replaced with new, quieter, and more efficient units. While the proposed MERA Next Gen System will have a greater total number of communications sites,

communications equipment and air conditioning units that use electricity more efficiently will result in approximately the same overall consumption for the system as a whole as the baseline condition. Thus, impacts related to energy consumption would be ***less than significant*** and no further consideration of this topic is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would use electric power, except in the case of outages, when on-site generators powered by either propane or diesel fuel would be used. Electricity at all MERA sites is provided by Marin Clean Energy, a Community Choice Aggregator that acquires electricity from commercial suppliers of renewable energy. As all aspects of the project except the emergency generators would be powered by renewable energy, impacts with regard to state or local plans for renewable energy or energy efficiency would be ***less than significant***. No further consideration of this topic is required.

7. Mineral Resources

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Result in the loss of availability of a known mineral resources that would be of value to the region and the residents of the state?

None of the proposed project sites are located within known mineral resource sites presented in the U.S. Geological Survey Mineral Resources Data System, nor are they located on active mines identified by the California Department of Conservation, Division of Mine Reclamation. The project would therefore not use rare, non-renewable mineral resources, nor would it preclude future excavation of oil or minerals should such extraction become viable. The proposed project would not result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state. This results in ***no impact*** and no further consideration of this topic is required.

b.) The proposed project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

As discussed above, there are no known mineral resource sites or mine sites in the vicinity of the project. The proposed project would therefore not result in the loss of availability of locally-important mineral resource recovery sites and consequently, would have ***no impact.*** No further consideration of this topic is required.

8. Noise

The CEQA Guidelines require that impacts are analyzed relating to whether the project would result in:

a.) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day, night, or over a 24-hour period. For residential uses, environmental noise levels are generally considered low when the CNEL (Community Noise Equivalent Level, a 24-hour average accounting for additional noise sensitivity in the evening and nighttime) is below 60 dBA (A-weighted decibel scale, which approximates human ear sensitivity). Noise levels are considered moderate in the 60–70 dBA range and high when they reach above 70 dBA.[4] Noise levels greater than 85 dBA can cause temporary or permanent hearing loss. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet suburban residential streets with noise levels around 40 dBA. Examples of moderate level noise environments are urban residential or semi-commercial areas (typically 55–60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with more noisy urban residential or residential-commercial areas (60–75 dBA) or dense urban or industrial areas (65–80 dBA).

It is widely accepted that in the community noise environment the average healthy ear can barely perceive CNEL noise level changes of 3 dBA. CNEL changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA CNEL increase is readily noticeable, while the human ear perceives a 10 dBA CNEL increase as a doubling of sound.

Noise levels from a particular source generally decline as distance to the receptor increases. Other factors, such as the weather and reflecting or barriers, also help intensify or reduce the noise level at any given location. A commonly used rule of thumb for stationary or point-source noise, such as that from construction, is that for every doubling of distance from the source, the noise level is reduced by about 6 dBA at acoustically “hard” locations (i.e., the area between the noise source and the receptor is nearly complete asphalt, concrete, hard-packed soil, or other solid materials) and 7.5 dBA at acoustically “soft” locations (i.e., the area between the source and receptor is normal earth or has vegetation, including grass). Noise levels are also generally reduced by 1 dBA for each 1,000 feet of distance due to air absorption. Noise levels may also be reduced by intervening structures – generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The normal noise attenuation within residential structures with open windows is about 17 dBA, while the noise attenuation with closed windows is about 25 dBA.[5]

Construction activities associated with the proposed project would create noise typical of small-scale development. Examples of construction-generated noise would be from construction equipment usage, such as hand power tools, construction vehicles, and construction equipment such as a tower crane, and back-up warning "beepers". Construction equipment would generally generate a maximum noise level of approximately 101 dB at 50 feet and would be reduced by 6 dBA per doubling of distance.

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[4] Office of Planning and Research, State of California General Plan Guidelines, October 2003 (in coordination with the California Department of Health Services).

[5] National Cooperative Highway Research Program Report 117, Highway Noise: A Design Guide for Highway Engineers, 1971.

As discussed in the Land Use/Planning Sections of Chapters IV (Environmental Impact Analysis) and V (Existing Conditions and Impacts at Each Site), MERA is not subject to certain local land use plans and ordinances under the doctrine of intergovernmental immunity. Therefore, the noise level standards established in local plans and ordinances are not necessarily applicable to the proposed project. Nevertheless, as provided in Mitigation Measure NOISE-1 below, construction activities would be required to comply with local noise standards and hours of construction.

Operation of the 18 proposed communications sites that would make up the Next Gen system would result in less-than-significant long-term ambient noise level impacts. Potential sources of noise at new sites are 1) air conditioning units attached to exterior walls of the equipment shelters, and 2) the periodic operation of the emergency generators. These noise sources exist today at MERA's current sites and will not increase as a result of the project. Any new equipment would meet adopted noise level requirements, and Mitigation Measure NOISE-1 requires air conditioners and generators located nearby the general public be equipped with noise reduction features.

Given that construction noise impacts will be temporary in nature and that Mitigation Measure NOISE-1 ensures local noise standards be followed for construction noise and noise reduction features be used to minimize the already minimal operational impacts to sensitive receptors, the project would not expose people to or generate noise in excess of established standards and impacts would be ***less than significant with mitigation incorporated***. No further consideration of this topic is required.

Mitigation Measure NOISE-1

1) The Contractor shall comply with local standards regarding noise generation and hours of construction during all phases of the project construction. The Construction Project Manager or designated representative shall provide the Contractor with the applicable restrictions.

2) At all newly constructed sites and at sites where the general public would be regularly exposed to the sound of air conditioning units and emergency power generators (Prime Site EOF, Civic Center, Mt. Tiburon, Mill Valley Water Tank, and Muir Beach), those units and generators shall be equipped with noise reduction features.

3) The Construction Project Manager or designated representative shall verify that all workers on-site are aware of and understand applicable noise restrictions. This will be accomplished by on-site meetings with each contractor and their employees prior to the start of construction.

4) The Construction Project Manager shall verify that project documents specify the use of equipment that meets the requirements of this mitigation measure and shall maintain a written record of compliance.

b.) Generation of excessive groundborne vibration or ground borne noise levels.

Construction activities can generate groundborne vibration that is capable of being felt (causes annoyance) and in extreme cases, causes physical damage to nearby buildings. However, groundborne vibration and noise is typically associated with blasting operations, the use of pile drivers, and large-scale demolition activities, none of which are required for the construction or operation of the proposed project. Any groundborne vibration and noise that does result would be minimal and temporary, and would only occur during site construction activities. Consequently, impacts would be ***less than significant***. No further consideration of this topic is required.

c.) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No MERA sites are located within two miles of a public airport. However, private airstrips in Marin County include the Commodore Center Heliport and Seaplane Base, located approximately two miles from the Wolfback Ridge site, and San Rafael Airport, north of San Rafael, which is within two miles of four MERA sites: Skyview Terrace Water Tank, Prime Site EOF, Civic Center, and San Pedro Ridge. Periodic maintenance of the project sites could potentially result in workers being exposed to noise from air operations at these airstrips, but site visits are limited in duration and work will primarily be indoors. None of the other project sites are within two miles of a private airstrip. Based on the location of the sites and limited exposure to airport noises, the impacts to people working in the proposed project would be ***less than significant***. No further consideration of this topic is required.

9. Population and Housing

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Induce substantial unplanned population growth in an area, either directly or indirectly?

None of the proposed project sites would have a direct or indirect impact on growth in Marin or Sonoma Counties. The proposed project is an emergency telecommunications system that would serve the existing population in Marin County and would not require or prompt growth. The project is intended to improve emergency communication coordination and dispatch capabilities, and would not increase mobile units or patrols. The proposed project would benefit the community population through more efficient use of the existing law enforcement, fire, and emergency capabilities. Given the project would simply improve Marin County's emergency communications system and would not induce population growth in the area directly or indirectly, there would be ***less than significant impacts***. No further consideration of this topic is required.

b.) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction and operation of the proposed project would not require the displacement or removal of people since there are no existing on-site residential units on any of the 23 sites. Construction

would not displace any existing housing, and the proposed project would result in ***no impact***. No further consideration of this topic is required.

10. Public Services

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, polices protection, schools, parks, or other public facilities?

The proposed project would result in the physical development, decommissioning, or alteration of 23 communications sites for public safety communications. The design and operation of the proposed project will benefit the fire and police protection afforded to Marin County businesses, industries, and residents. The proposed project would not accelerate the deterioration of any public services facilities or necessitate the construction or alteration of new facilities. The Coyote Peak site is located on an upland portion of Walker Creek Ranch Outdoor School and Conference Center that is owned by the Marin County Office of Education. However, the proposed MERA facilities are not within or near Walker Creek Ranch's educational or conference facilities. Further, the proposed project would not require any new park development or increase usage of area parks. Consequently, the proposed project's impacts would be ***less than significant***. No further consideration of this topic is required.

11. Recreation

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

All proposed project improvements are located at existing communications or public infrastructure sites. No existing parks or recreational facilities would be adversely affected through increased demand or use as a result of the proposed project. The proposed project does not include any residential component or create any employment opportunities that would potentially increase recreational demands. As the project would not result in any excess population that might increase the use of existing parks and recreational facilities, the project would not result in the substantial deterioration of any such facilities, and would result in impacts that are ***less than significant***. No further consideration of this topic is required.

b.) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project does not include recreational facilities, and, as previously noted, there would be no population increase associated with the project, that would require new or expanded

recreational facilities; thus, the impacts would be ***less than significant***. No further consideration of this topic is required.

12. Transportation and Circulation

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project would have a minimal impact on the circulation system. There may be a short-term increase in area traffic during construction at new and existing sites, and at the sites to be decommissioned, but this would be minimal and temporary. In the long-term, the project would generate one vehicle trip per month for each existing and new site, and delete one existing vehicle trip for each decommissioned site each month. This would not be sufficient to have an impact on regional traffic or interfere with any applicable program, plan, policy or ordinance establishing measures of effectiveness for the transportation system in Marin County.

None of the proposed MERA sites are identified in adopted community plans or programs as sites for public transit, bicycle or pedestrian improvements. Nor will the will proposed improvements at these sites impact or decrease the performance of existing or planned transit, bicycle or pedestrian routes. Further, the proposed communications facilities are generally located atop hillsides, ridges, and buildings or are otherwise set back from existing roadways, bikeways and sidewalks.

Given that there would only be small, sporadic increases in traffic associated with the project, there would be no conflict with applicable plans, policies, or ordinances addressing the circulation system. As such, impacts would be ***less than significant*** and no further consideration of this topic is required.

b.) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines section 15064.3, subdivision (b) sets forth criteria for analyzing transportation impacts using Vehicle Miles Traveled (VMT). Under the CEQA Guidelines, a lead agency has discretion to choose the most appropriate methodology to evaluate a project's VMT, including a qualitative analysis.

Construction traffic (equipment and materials transport and daily worker traffic) would slightly increase traffic on local roads during the temporary construction phase of the proposed project. Temporary construction traffic would be limited to equipment delivery and material transport, and a few employee vehicles on a daily basis, which would be parked on-site and out of the way of main streets. The temporary construction-related traffic would not result in a noticeable increase in traffic on local roads.

The proposed project would have minimal impacts on vehicle miles traveled in and around the project sites on an operational level. Each site proposed for inclusion in the Next Gen System would generate approximately one vehicle trip per month. At the 14 sites that are already existing communication sites, this would be no change from the current baseline condition. There are four

sites at which communications equipment will be installed where none currently exists (Coyote Peak, Skyview Terrace, Muir Beach, and Mill Valley Water Tank), adding one vehicle trip each month, but there are also five sites being decommissioned as part of the proposed project, which would reduce one routine maintenance trip per month. The communication sites would require very little maintenance once operational, and that which would be required would be consistent with current baseline conditions.

As VMT during both the construction phase and the operational phase of the project would be minimal and similar to the existing condition, transportation impacts would be ***less than significant***. No further consideration of this topic is required.

c.) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

The proposed project will not require any public roadway improvements, nor will traffic generated by the project cause any changes in regional, local or neighborhood vehicle traffic patterns. All transportation and circulation design features associated with the proposed project follow standard industry practice, and all portions of the transportation design are compatible with their surroundings.

All proposed project sites are already improved with public infrastructure, and the proposed communications improvements, including roadway access, are compatible with existing public improvements. The project will not introduce any incompatible uses to local roads. As a result the project will not create roadway hazards due to design features or incompatible uses. Therefore project impacts would be ***less than significant***. No further consideration of this topic is required.

d.) Result in inadequate emergency access.

Emergency vehicle access routes already exist at each of the proposed telecommunication sites. At Coyote Peak, the existing access road would be regraded for improved access. In some cases the sites have more than one emergency vehicle access route. Given that the project would not modify emergency access routes, except for improvements at the Coyote Peak Site, the project would not result in inadequate emergency access, and there would be ***less than significant*** impacts. No further consideration of this topic is required.

13. Utilities and Service Systems

The CEQA Guidelines require that impacts are analyzed relating to whether the project would:

a.) Require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed project by nature calls for the construction of new communications towers, the environmental impacts of which are identified and analyzed throughout this SEIR, but no additional communications systems infrastructure would be required, since the sites will interconnect using MERA's own microwave network. The Coyote Peak, Mill Valley Water Tank,

Muir Beach, Skyview Terrace, and Tomales sites would require new electrical utility connections. These routine connections will be via new underground cables and do not require substantial alterations to the power infrastructure. None of the proposed project sites will use natural gas. The additional runoff from roofs and other impervious surface areas related to the proposed project are less than significant and will not require construction of new or expansion of existing storm water facilities.

Given that changes to electrical infrastructure would be standard and localized, and there would be no changes to natural gas, storm water drainage, or communications infrastructure, impacts would be ***less than significant.*** No further consideration of this topic is required. .

b.) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed project would not require water service. Therefore, the proposed project would result in ***no impact***. No further consideration of this topic is required.

c.) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As previously discussed, no increase in wastewater treatment would result from the project and none of the proposed facilities would require water service. Accordingly, the proposed project would not result in any increased demand on the treatment capacity of local or regional wastewater treatment providers that would result in an adverse determination, and the proposed project would result in ***no impact***. No further discussion of the issue is required.

d.) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Seventeen of the 18 communications sites are unoccupied facilities and, during the operation phase, small volumes of solid waste would be generated during periodic visits and would be removed by maintenance personnel.

Construction associated with the proposed project would result in a short-term incremental increase in solid wastes, including roofing, wood, metals, plastics, concrete, fabric, and glass. This short-term impact on solid waste disposal is anticipated to conclude in 2020.

The County of Marin is served by one permitted landfill, the Redwood Landfill. As of 2008, Redwood Landfill had 26,000,000 cubic yards of capacity remaining with end-of-operations planned for July 2024. Any materials used during construction would be properly disposed of in accordance with federal, state, and local regulations. As the project would generate little solid waste during the operational phase, the landfill serving the project is projected to have capacity for several years past the conclusion of construction, and State and local standards would be adhered to, impacts would be ***less than significant***. No further consideration of this topic is required.

e.) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As discussed in threshold d), the proposed project would result in small quantities of solid waste, which would be removed from the site and disposed of legally and appropriately, in a landfill permitted to take construction-generated waste. The proposed project would comply with applicable federal, state, and local statutes and regulations, resulting in impacts that are ***less than significant***. No further consideration of this topic is required.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

A. INTRODUCTION

The State CEQA Guidelines mandate that an EIR for a proposed project (such as the Next Gen System) describe a range of reasonable alternatives to the project or to the location of the project. These alternatives must be able to feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any significant effects. The CEQA process requires an evaluation of the comparative merits and environmental impacts of the alternatives (Aesthetics, Biological Resources, Cultural Resources, Radio Frequency (RF) Exposure, etc.), including the differences in radio coverage between the alternatives and the proposed project.

More specifically, Section 15126.6(a) of the CEQA Guidelines states: *"An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparable merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."*

This chapter lists the necessary project objectives that any project alternative must achieve (first noted in Section III Project Description) and describes the methodology by which alternatives were formulated. Five rejected potential alternatives are initially described, along with the reasons for their elimination, and then four potentially feasible project alternatives are evaluated with more detailed discussion.

The anticipated means for implementation of the alternatives can influence the assessment and/or probability of impacts for those alternatives. For example, a project may have the potential to generate significant impacts, but considerations in project design may also afford the opportunity to avoid or reduce such impacts. The alternatives analysis is presented as a comparative analysis to the proposed project and assumes that all applicable mitigation measures proposed for the project would apply to each alternative. The following alternatives analysis compares the potential significant environmental impacts of four alternatives with those of the proposed project for the environmental topics analyzed in detail in Chapters IV.A – IV.E and Chapters V.A – V.B of the SEIR.

B. PROJECT OBJECTIVES

As discussed in Chapter III Project Description, MERA defined six project objectives for the Next Gen System:

1. Install a new radio communications system as approved in Measure A by a vote of the public in November 2014.
2. Modify the existing aging MERA System with new 700 MHz equipment to meet revised FCC requirements by 2023.
3. Improve Marin County communications coverage to reduce emergency response times and ensure reliable communications among first responders during all major events, and everyday operations.
4. Provide MERA Next Gen System communications coverage to meet 97% reliability within the Motorola Solutions contracted radio coverage area with delivered audio quality of 3.4 or better as measured by TSB-88 testing methods.
5. Relocate the radio system's Network Core and Prime Site from the Marin County Civic Center to the Emergency Operations Facility (EOF).
6. Maintain compliance with all applicable land use, permitting, and CEQA requirements.

C. METHODOLOGY

For any alternative to be viable, the entire MERA system must meet the project objectives, including reliable performance over 97% within the contracted radio coverage area (generally the County). In developing alternatives, adjustment of individual components (i.e., tower placement, tower height, power, antenna design) affects other distant components and the ability of the system to meet overall project objectives.

This chapter describes multiple alternatives that were considered during design development for the Next Gen System. Design development began in 2010 with an assessment of the existing system, and subsequent design proposals have since been refined, leading to MERA's approval of the proposed Project Description, as detailed in Chapter III of this SEIR. This chapter begins with an introductory evaluation of various preliminary alternatives that were proposed early in the design development process. Next are five alternatives that were initially considered feasible, but were ultimately rejected because they did not meet the project objectives or would result in greater impacts compared to the proposed project. What follows are the detailed evaluations of four Next Gen Project specific alternatives, including a comparison of the impacts of each alternative to those of the proposed project (Table VII-2, at the end of this chapter). Table VII-2 summarizes the comparative impacts for each alternative when compared to the proposed project and shows whether the impacts anticipated under each alternative would be less than, similar to, or greater than the proposed project. These four alternatives have the strongest potential to attain project objectives while attempting to reduce or avoid the proposed project's significant environmental impacts. Last is the identification of the "environmentally superior alternative" as required by Section 15126.6 of the CEQA Guidelines.

D. 2010 LONG-TERM STUDY

MERA commissioned a study to consider various high-level, forward-looking plans to modernize the existing MERA system and address Marin County's long-term wireless voice needs. The resulting *System Design Report* (AECOM, April 2010) assessed the emergency radio environment of 2010, considering existing equipment, capacity and coverage and compared that to projected future needs and radio frequency availability. The 700 MHz frequency band was considered at the time, but now is a requirement.

The *System Design Report* evaluated strengths and weaknesses of four preliminary approaches to upgrade the existing MERA system into a Next Gen System:

1. Use the existing MERA system, with a 700 MHz overlay. This alternative does not address gaps in radio coverage nor long-term conversion needs.
2. Upgrade the existing system to a single simulcast system. This alternative addresses capacity issues with future implementation of P25 technology (allows multiple system interoperability), but does not address radio coverage issues.
3. Upgrades to a single simulcast system, with P25 technology incorporated and adds additional sites to address coverage issues. The frequency band used, however was the existing UHF-T Band which now does not meet the FCC's 700 MHz requirement.
4. Countywide 700 MHz System with 11 sites and four fill-in sites. This alternative addresses radio coverage gaps, and has long-term benefits, but it also has extensive conversion costs and requires two systems to briefly operate simultaneously. This preliminary alternative was the seed for the Next Gen System.

Because it was exploratory the *System Design Report* did not evaluate or compare the potential environmental impacts of the preliminary alternatives as required by CEQA.

E. FIVE ALTERNATIVES CONSIDERED BUT REJECTED

Section 15126.6(c) of the CEQA Guidelines requires EIRs to identify any alternatives that were considered by the lead agency but were rejected as infeasible for detailed study, and briefly explain the reasons underlying the lead agency's determination. Furthermore, Section 15126.6(f)(1) states that "[*a]mong the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries . . . and whether the proponent can reasonably acquire or control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives*."

After the 2010 system study, additional alternatives were examined. The following five alternatives were rejected because they did not meet the Project Objectives identified above and in some instances would result in greater impacts compared to the proposed project.

Lower Tower Heights

The lower tower heights alternative attempts to reduce the potential adverse visual impacts of the

proposed project by limiting tower heights to a maximum of 40 feet. This would result in a visual improvement, but this solution would not meet Project Objectives 3 or 4, since the desired increase in coverage and reliability requires higher towers or more towers, each with their own environmental impacts. Lower tower heights also increase the risk of RF exposure to workers and the public because the radio transmit antennas would be closer to the ground.

Cellular Based Communication System

The cellular based system alternative would utilize cell phone networks for emergency and public service communications, rather than a County-owned radio system. This option also requires many more towers be built for the same or lesser coverage, thus increasing visual impacts in the County. This option also presents greater risk for mission-critical communications, as cellular communication networks are less reliable during a disaster and more time-consuming to restore to service. Additionally, radio communications provide features such as Push to Talk (PTT) and group modes in a more straightforward, emergency-ready way than cellular communication technologies. Cellular and user equipment is also typically less durable, and therefore costlier over time. A cellular based communications system would not ensure reliable communications among first responders during major events, and everyday operations.

Satellite Communication System

The satellite system alternative requires leasing voice capacity on existing satellites with appropriate technology and acquiring the associated satellite end user equipment. There are delays in signal transmission to and from the satellite, which are “repeated” back to radio receivers on earth over a wide geographic area. This could cause weak signals based on satellite position, poor radio coverage in buildings, and a decrease in some local and specific-area communication abilities. Therefore a satellite communications system would not ensure reliable communications among first responders during major events and everyday operations.

FirstNet Communications System

FirstNet is a nationwide broadband network that is currently being deployed. The US Congress allotted $7 billon and 20 MHz of valuable radio spectrum to develop, build, operate, and maintain an interoperable public safety broadband network. This resulted in a public-private partnership between AT&T and the First Responder Network Authority (FirstNet Authority) to accomplish these tasks. When fully built, FirstNet is intended to deliver broadband communications for first responders using special smartphones, tablets, and in-vehicle devices, providing usable coverage across most of the US. However, the construction and rollout of the FirstNet infrastructure is in its early stages, making this solution unsuitable at this time for use by Marin County agencies for a number of reasons:

- The coverage footprint of the FirstNet system does not currently extend to rural areas of Marin County. While FirstNet may eventually reach these locations, the coverage of the existing and planned MERA systems will include most areas of the County.
- The FirstNet system has not yet been certified for mission-critical voice applications. First responders require reliable and robust voice transmission capabilities that FirstNet is not currently able to provide.

- Basic features that are now available in the MERA system and planned for the proposed system do not yet exist in the FirstNet system. These include Group Communications (one-to-many calls) and Direct Mode (one-to-one calls without relaying through cell towers).

Because of these deficiencies, the FirstNet system does not meet the objectives of the proposed project, and this alternative is not feasible at present.

Multiple Non-Integrated Radio System

This alternative would be a reversion back to the disparate radio communications network that existed prior to the original MERA System. Each agency comprising MERA would be expected to operate its own emergency communications network within its area of responsibility. The radio systems utilized by each agency would not be integrated, and upgrades to the previous non-integrated system would be necessary, although it is not possible to predict to what degree upgrades would be needed for each agency. This would not meet Project Objectives 3 or 4, as it would decrease system coverage, reliability and interoperability.

F. FOUR ALTERNATIVES TO THE PROPOSED PROJECT

The analysis below expands the evaluation of the alternatives described in the 2010 design report to consider other variations that could potentially lessen or avoid the environmental impacts of MERA's proposed project. As required by CEQA, the evaluation of alternatives includes the No Project Alternative – Alternative 1.

Alternative 1: No Project Alternative - 16 Sites, Two Zone Simulcast System (400 MHz)

The No Project Alternative (Alternative 1) assumes that the proposed Next Gen Project would not proceed and that MERA would continue to operate under its current network of communication sites using 400 MHz frequencies (Figure VII-1). Under this alternative, the proposed project would not be constructed or implemented, and the project sites would remain in their current condition. The analysis of the No Project Alternative assumes the continuation of existing physical conditions on the project sites, as well as the cumulative development described in Chapter VI. The No Project Alternative and its potential environmental impacts is described and compared to the impacts associated with the proposed project.



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Sources: National Geographic Basemap, WRA | Prepared By: njander, 11/13/2018

Figure VII-1: Alternative 1, No Project Alternative, Existing Condition at 400 Mhz

0 2.5 5 Miles

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This SEIR incorporates the analyses of the current MERA system's 1999 Draft and 2000 Final EIRs by reference for all existing MERA sites and discusses only the topic areas where these previous CEQA documents determined potentially significant impacts may occur (Aesthetics, Biological Resources) and topic areas for which new information, public concern, or changes in the regulatory setting require further analysis (Tribal and Cultural Resources, Radio Frequency Exposure). These environmental topic areas as relevant to Alternative 1 are discussed below and in Table VII-2.

Aesthetics

Significant visual impacts related to the obstruction of scenic vistas or views were identified in the 1999 Draft EIR for four sites: Dollar Hill, Forbes Hill, Bolinas Ridge, and Bolinas Fire Station. Less-than-significant visual impacts were identified on the remaining 13 sites. For the four sites with significant impacts, mitigation measures recommended in the 1999 Draft EIR reduced visual impacts to less-than-significant at Bolinas Ridge, but they could not reduce impacts to less-than-significant at the other three sites. As a result, a Statement of Overriding Considerations was adopted by MERA for these sites, outlining the rationale for finding the significant, unavoidable aesthetic impacts acceptable in balancing the region-wide economic, legal, social, technological, and other benefits of the MERA communications system.

The Bolinas Fire Station and Bolinas Ridge Sites were dropped from the original system and never constructed, so significant, unavoidable impacts currently apply only to the Forbes Hill and Dollar Hill Sites. Alternative 1 would not alter the currently-operating site locations, number of sites or towers, tower heights, or existing equipment in any way. Therefore, Alternative 1 would not result in any additional aesthetics impacts beyond those of the existing MERA system. Because no impacts to aesthetic resources would occur under Alternative 1, the impacts would be less than the proposed project.

Biological Resources

The 1999 Draft EIR found that 27 special-status plants on the California Native Plant Society's (CNPS) 1-B List (considered rare or endangered in California and elsewhere) had potential to occur in the vicinity of the project sites. The majority of these plants had little or no potential to occur at the project sites due to a lack of suitable habitat, but a few had potential to occur at Point Reyes Hill and Bolinas Ridge. Individual oak trees and oak woodland are also considered sensitive resources by the County of Marin and the City of San Rafael and must be protected in accordance with local policies. Numerous oaks occur adjacent to facilities at Dollar Hill and Forbes Hill.

The Bolinas Ridge Site was dropped from the original system and never constructed, so potential impacts currently only apply to the Point Reyes Hill, Forbes Hill, and Dollar Hill Sites. Mitigation measures were recommended to bring all impacts to biological resources during development of the current MERA system to a less-than-significant level. Because Alternative 1 would not alter the existing site locations, number of sites or towers, tower heights, or existing equipment in any way, there would be no additional biological resources impacts beyond those of the existing

system. Because no impacts to biological resources would occur under Alternative 1, the impacts would be less than the proposed project.

Cultural Resources

The Initial Study for the current MERA system (MERA 1999) did not identify any significant impacts to cultural resources at any of the sites analyzed and therefore this topic area was not discussed in the 1999 Draft EIR or 2000 Final EIR.

A Cultural Resources Inventory Report was completed for the proposed Next Gen System in October, 2018 that included an analysis of all currently operating MERA sites, the only sites relevant for Alternative 1. The report found that only two previously recorded cultural resources exist within the Area of Direct Impacts (the area where ground disturbance would occur) for Next Gen work at existing MERA sites: 1) a historic road segment near the Mt. Barnabe Site and 2) the Civic Center building, which is listed on the National Register of Historic Places (NRHP). Alternative 1 would not require any ground disturbance and would not alter the site locations, number of sites or towers, tower heights, or existing equipment in any way. Therefore, Alternative 1 would have no impact on cultural resources, and the impacts would be less than the proposed project.

Tribal Cultural Resources

Tribal Cultural Resources (TCRs) were not considered in the 1999 Draft EIR, but an evaluation of the project's impacts to TCRs is now required under California Assembly Bill (AB) 52. In 2018, MERA participated in consultations with the Federated Indians of Graton Rancheria (FIGR) to identify impacts, if any, at existing sites and any future potential impacts to TCR's as a result of the Next Gen project.

On February 1, 2019, FIGR described the potential for impacts to TCRs at 13 Next Gen sites. Nine sites of the 13 sites that were identified are existing sites, including: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, and Stewart Point. However, Alternative 1 would not require any ground disturbance and would not alter the site locations, number of sites or towers, tower heights, or existing equipment in any way. Therefore, Alternative 1 would have no impact on TCRs, and the impacts would be less than the proposed project.

Radio Frequency Exposure

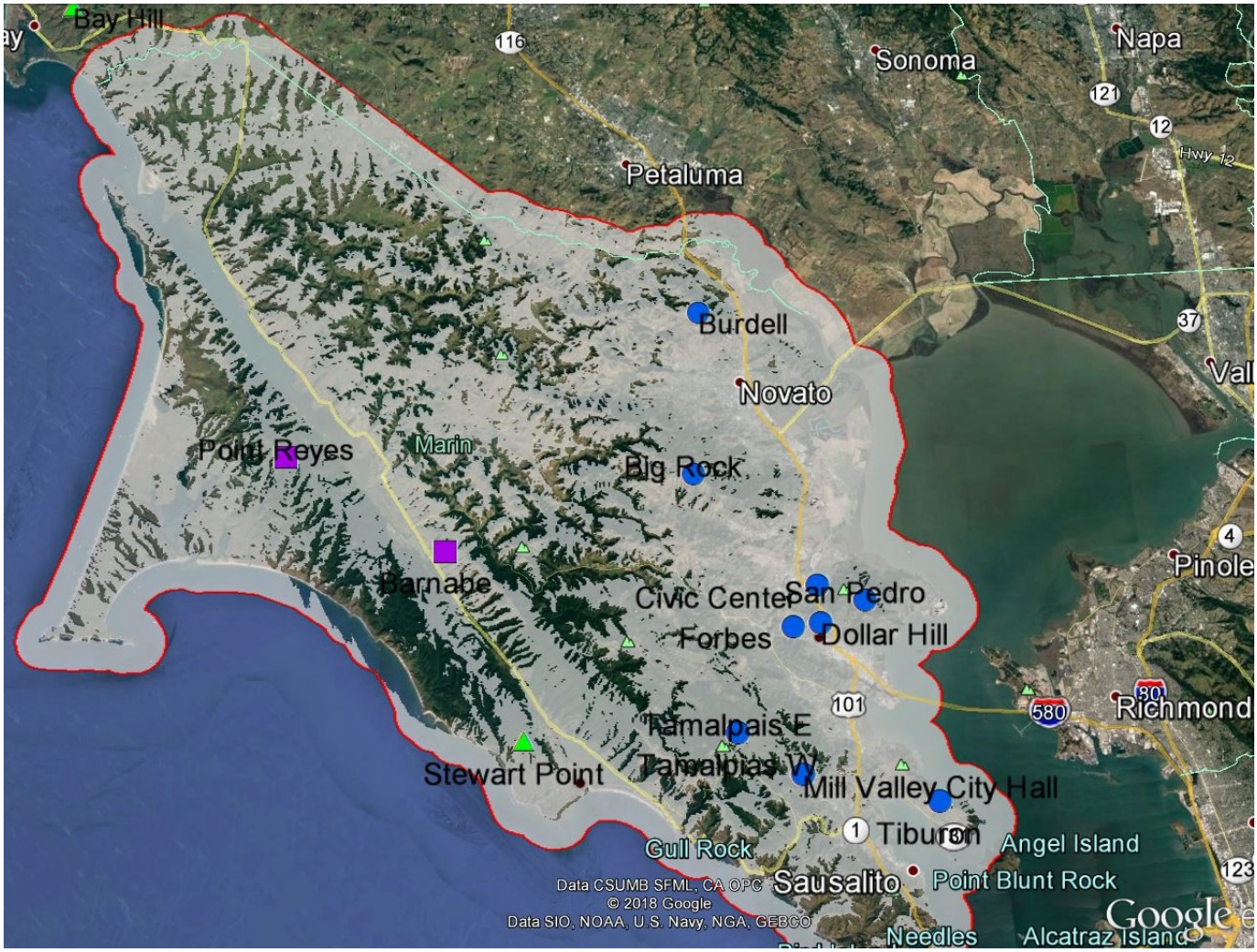
According to the 1999 Draft EIR for the current MERA system, the calculated effect of implementing the original MERA project would exceed the FCC's public (uncontrolled) maximum permissible RF exposure levels at only one site (Point Reyes Hill), while 14 of the sites would comply with the FCC's public maximum permissible exposure requirements. No RF impacts were found at two sites (the Prime Site EOF and Novato Police Department Site). The RF exposure analysis in the 1999 Draft EIR found that 12 sites had the potential to exceed the FCC's maximum permissible occupational RF exposure standard. The sites identified were: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Bolinas Fire Station, Point Reyes Hill, Forbes Hill, Dollar Hill, San Pedro Ridge, Mt. Burdell OTA, Mt Tiburon Tank, Bay Hill Road, and Sonoma Mountain.

MERA mitigated these potential effects in the final design and during construction of the current MERA system by extending the fencing to control public access to the Point Reyes Hill Site, implementing RF safety Best Management Procedures (BMPs), establishing training protocols, and adding signage indicating potential RF exposure hazards at all entry points to controlled site areas. These mitigation measures ensured that potentially significant public and occupational RF exposure levels were diminished to a less-than-significant level.

Alternative 1 would not alter the existing site locations, number of sites or towers, tower heights, or existing equipment in any way. Therefore, there would be no impacts related to RF exposure beyond those of the existing system, and RF impacts would be less than under the proposed project.

Conclusion

Alternative 1, the No Project Alternative, would not create any additional environmental impacts beyond those of the existing system, and would have fewer impacts as compared to the proposed project. However, with the exception of Project Objective 6 (Maintain compliance with all applicable land use, permitting, and CEQA requirements), this alternative does not meet any of the project objectives. It would not install a new system as approved in Measure A, upgrade the system with new 700 MHz equipment to meet revised FCC requirements, increase reliability, improve radio coverage, or relocate the system's Network Core and Prime Site EOF from the Marin County Civic Center to the EOF. Existing coverage is shown below in Figure VII-2. It has been determined that Marin County requires a more reliable communications network for emergency situations, to provide first responders the resources they need to keep the citizens of Marin County safe. Maintaining the 20-year-old network would be difficult due to lack of replacement parts and the difficulty or inability to incorporate new technologies. Keeping the MERA network as-is would leave coverage and reliability gaps in the system.



Grey - Coverage provided by existing MERA System without improvements. Sources: MERA, Motorola, Google 2018

Figure VII-2: Alternative 1, Coverage by Existing 400 MHz System

Alternative 2: Upgrade Existing Sites – 16 Sites, Two Zone Simulcast System (700 MHz)

Alternative 2 assumes that there would be no change in the location or number of existing MERA sites, but modifications would be made at each of the 16 sites to provide 700 MHz communication channels (Figure VII-3).

This SEIR incorporates the analyses of the current MERA system's 1999 Draft EIR and 2000 Final EIR by reference for all existing MERA sites and discusses only the topic areas where these previous CEQA documents determined potentially significant impacts may occur (Aesthetics, Biological Resources) and topic areas for which new information, public concern, or changes in the regulatory setting require further analysis (Cultural Resources, Tribal Cultural Resources, Radio Frequency Exposure). These environmental topics as relevant to Alternative 2 are discussed below and in Table VII-2.

Aesthetics

As summarized in Alternative 1, the 1999 Draft EIR for the current MERA system found that despite implementation of recommended mitigation measures, there were significant and unavoidable impacts to visual resources at two of the currently operating sites (Dollar Hill and Forbes Hill). A Statement of Overriding Considerations was adopted in the MERA resolution certifying the 1999 Draft EIR for the existing system. Alternative 2 would not alter the site locations, number of towers or sites, or tower heights of the existing system in any way, but might require installation of some additional equipment (antennas and radios) in order to upgrade the system to 700 MHz. There would be no significant change to visual impacts identified in the 1999 Draft EIR under Alternative 2. aesthetics impacts under this alternative would be less than significant and, because it would involve fewer sites, impacts would be less than under the proposed project.

Biological Resources

As summarized in Alternative 1, the 1999 Draft EIR found that special-status plant species had potential to occur at Point Reyes Hill and Bolinas Ridge and that numerous protected oaks occur adjacent to facilities at Dollar Hill and Forbes Hill. The Bolinas Ridge Site was removed from the original system design and never constructed. Therefore, the potential for impacts to biological resources would only apply to the Point Reyes Hill, Forbes Hill, and Dollar Hill Sites. Mitigation Measures recommended in the 1999 Draft EIR to reduce all impacts to biological resources to a less-than-significant level were incorporated into the final design for the original MERA project.



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Sources: National Geographic Basemap, WRA | Prepared By: njander, 11/13/2018

Figure VII-3: Alternative 2, Upgrade Existing Sites To 700 MHz Frequencies

0 2.5 5 Miles

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Alternative 2 would not alter existing MERA site locations, number of towers or sites, or tower heights in any way. As previously noted, some additional equipment may be necessary to upgrade to 700 MHz, but these modifications would not result in any new or more significant impacts to biological resources as compared to those identified for the existing MERA system in the 1999 Draft EIR. As detailed in Table VII-2 at the end of this chapter, biological resources impacts under this alternative would range depending on the site from no impact, to less-than-significant impact, to less-than-significant impact with mitigation. Overall, impacts would be less than under the proposed project, as this alternative involves fewer sites.

Cultural Resources

The Initial Study for the current MERA system (MERA 1999) did not identify any significant impacts to cultural resources at any of the sites analyzed and therefore did not discuss this topic in the 1999 Draft EIR or 2000 Final EIR.

A Cultural Resources Inventory Report was completed for the proposed Next Gen System in October, 2018 that included an analysis of all currently operating MERA sites, the only sites relevant to Alternative 2. The report found that only two previously recorded cultural resources exist within the Area of Direct Impacts (the area where ground disturbance would occur) for Next Gen work at existing MERA sites: 1) a historic road segment near the Mt. Barnabe Site and 2) the Civic Center building, which is listed on the NRHP. Alternative 2 would not require any ground disturbance and would not alter the site locations, number of sites or towers, or tower heights in any way; thus, there would be no impact to cultural resources. Impacts would be less than under the proposed project, as this alternative involves fewer sites.

Tribal Cultural Resources

TCRs were not considered in the 1999 Draft EIR but an evaluation of the project's impacts to TCRs is now required under AB 52. In 2018, MERA participated in consultations with FIGR to identify impacts, if any, at existing MERA sites and any future potential impacts to TCR's as a result of the Next Gen project.

On February 1, 2019, FIGR described the potential for impacts to TCRs at 13 Next Gen sites. Nine sites of the 13 identified are existing sites, including: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, and Stewart Point. However, Alternative 2 would not require any ground disturbance and would not alter the site locations, number of sites or towers, or tower heights. Thus, Alternative 2 would have no impact on TCRs. Impacts would be less than under the proposed project, as this alternative involves fewer sites.

Radio Frequency Exposure

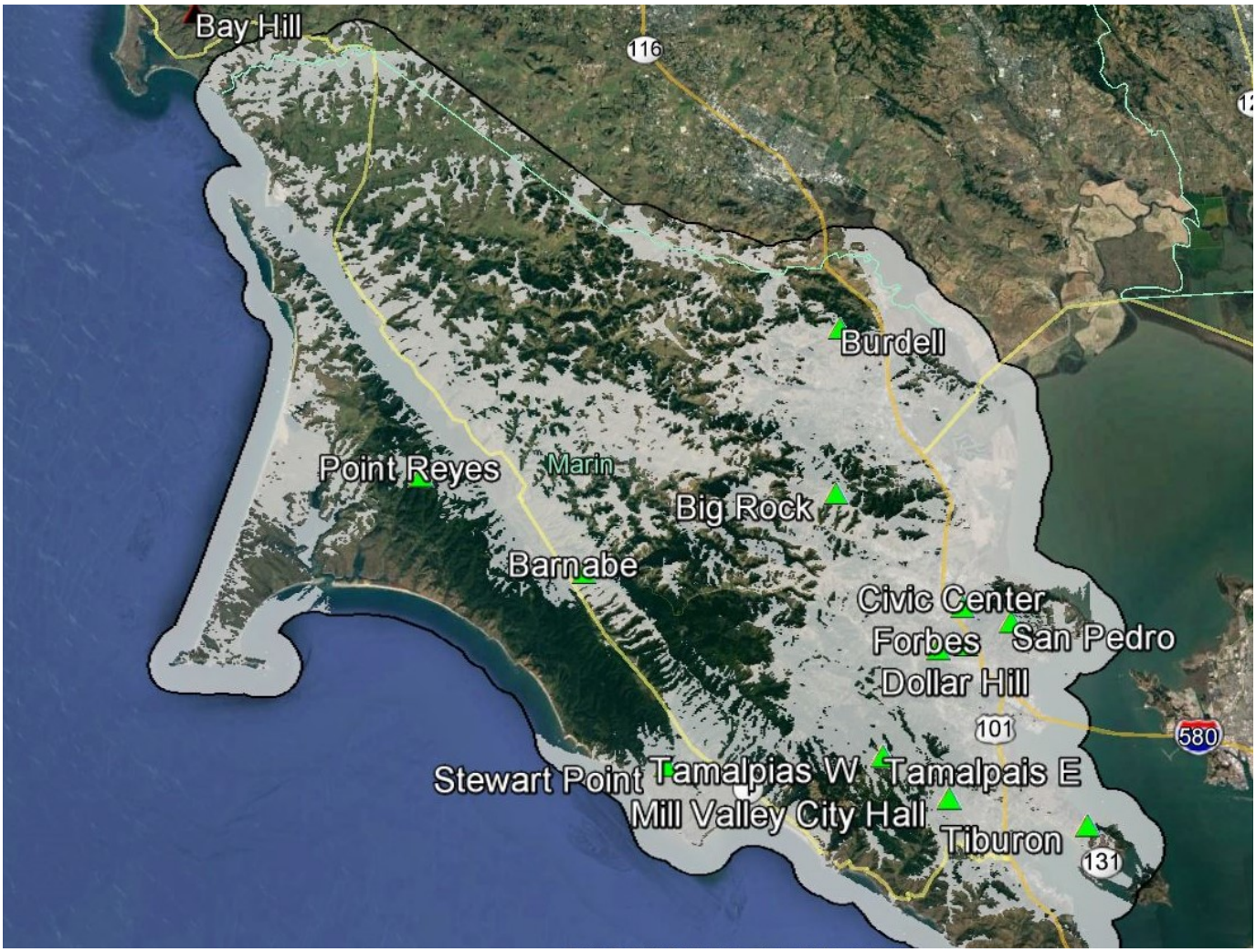
As summarized in Alternative 1, the calculated effect of implementing the current MERA system exceeded the FCC's public (uncontrolled) maximum permissible RF exposure levels at only one site (Point Reyes Hill). The RF exposure analysis in the 1999 Draft EIR found that the FCC's maximum permissible occupational RF exposure levels were exceeded at 12 sites: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Bolinas Fire Station, Point Reyes Hill, Forbes Hill, Dollar Hill,

San Pedro Ridge, Mt. Burdell OTA, Mt Tiburon Tank, Bay Hill Road, and Sonoma Mountain. MERA mitigated for these potential effects in the development of the current MERA system with fencing, safety BMPs, training protocols, and signage indicating potential RF exposure hazards at all entry points to controlled site areas. These measures ensured that all identified impacts were reduced to a less-than-significant level.

Alternative 2 would require some additional equipment (antennas and radios) in order to change the system to 700 MHz frequencies. However, as with the proposed Next Gen project, Alternative 2 would be required to implement Mitigation Measures RF-1, RF-2, and RF-3 and the safety BMPs and training protocols included in Chapter III (Project Description), in order to comply with exposure standards and regulations. Given these requirements and the minor equipment modifications to the existing system, there would be no significant change to radio frequency exposure under Alternative 2. RF exposure impacts under Alternative 2 would be less than significant with mitigation. Overall, RF impacts would be less than the proposed project, as this alternative involves fewer sites.

Conclusion

Alternative 2 would have lesser impacts as compared to the proposed project, but it would not meet four out of six of MERA's Next Gen project objectives. This alternative would allow MERA to modify the existing system with new 700 MHz equipment to meet the revised FCC requirements, but it would not improve Marin County communications coverage to reduce emergency response times and ensure reliable communications among first responders during major events and everyday operations. In fact, rather than achieving the project objective of increasing coverage to meet 97% reliability within the coverage area, the coverage area would be diminished as compared to the existing system as a result of shifting to the 700 MHz frequency band, as shown in Figure VII-4. Finally, Alternative 2 would not relocate the existing system's Network Core and Prime Site EOF from the Marin County Civic Center to the EOF.



Grey - Coverage provided by existing facilities converted to 700 MHz.

Sources: MERA, Motorola, Google 2018

Figure VII-4: Alternative 2, Coverage by Existing Facilities at 700 MHz

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Alternative 3: Original Motorola Solutions Proposal - 15 Sites, Two Zone Simulcast System (700 MHz)

Alternative 3 was submitted by Motorola Solutions on February 14, 2017 in response to MERA's Request for Proposals issued on May 6, 2016. Motorola's proposed system (Figure VII-5) would utilize eight of MERA's existing telecommunication sites (with existing towers), decommission eight existing sites, and add seven new sites (with towers of similar height as the proposed project). In contrast, the proposed project adds eight new sites and decommissions five existing sites.

The proposed Motorola Solutions network would include 12 radio communication sites:

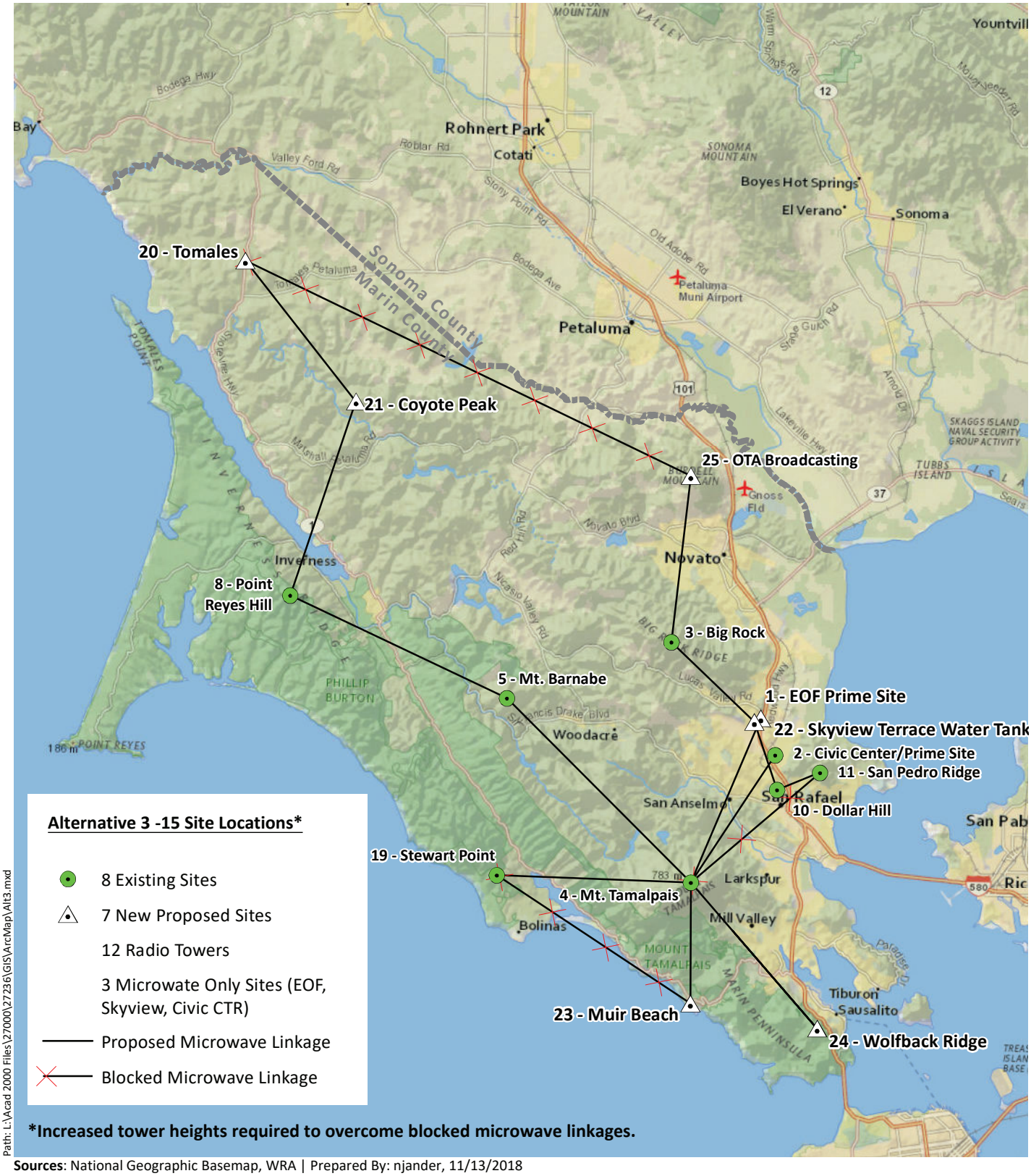
- Big Rock Ridge
- Dollar Hill
- Marshall - Coyote Peak (New Site)
- Mt. Barnabe
- Mt. Tamalpais
- Muir Beach Water Tank (New Site)
- Mt. Burdell OTA (Existing Site, New to MERA)
- Point Reyes Hill
- San Pedro Ridge
- Stewart Point
- Tomales - Parks Ranch (New Site)
- Wolfback Ridge (Existing Site, New to MERA)

And three microwave-only sites:

- Prime Site EOF (Existing Site, New to MERA)
- Marin County Civic Center
- Skyview Terrace Water Tank (New Site)

Eight existing MERA sites are not included in Motorola's proposed radio communication system and would be decommissioned: Sonoma Mountain, Bay Hill Road, Mt. Burdell OTA, Forbes Hill, Mt. Tiburon Water Tank, Mill Valley City Hall, Mill Valley Public Safety Building, and the current Prime Site EOF at the Marin County Civic Center.

This SEIR incorporates the analyses of the current MERA system's 1999 Draft EIR and 2000 Final EIR by reference for all existing MERA sites and discusses only the topic areas where these previous CEQA documents determined potentially significant impacts may occur (Aesthetics, Biological Resources) and topic areas for which new information, public concern, or changes in the regulatory setting require further analysis (Cultural Resources, Tribal Cultural Resources, Radio Frequency Exposure). These environmental topic areas as relevant to Alternative 3 are discussed below and in Table VII-2.



Sources: National Geographic Basemap, WRA | Prepared By: njander, 11/13/2018

Figure VII-5: Alternative 3, Original Motorola Solutions Proposal

0 2.5 5 Miles

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Aesthetics

As summarized in Alternative 1, the current system's 1999 Draft EIR found that despite implementation of recommended mitigation measures there were significant and unavoidable impacts to visual resources at two of the currently operating sites (Dollar Hill and Forbes Hill). Alternative 3 would decommission the Forbes Hill Site, just as in the proposed project, thus avoiding an existing significant aesthetic impact that could not be mitigated to a less-than-significant level in the original project. The significant visual impact at Dollar Hill identified in the 1999 Draft EIR would remain under this alternative. In addition, Alternative 3 could possibly result in visual impacts at seven new sites: the Prime Site EOF, Coyote Peak, Muir Beach, Mt. Burdell OTA, Tomales, Wolfback Ridge, and Skyview Terrace. A brief analysis of potential aesthetic impacts from Alternative 3 at each of these sites is below:

Dollar Hill: The analysis of the Dollar Hill Site from the 1999 Draft EIR found significant and unavoidable impacts to visual resources with the development of the current system, as a 60-foot tower was installed where none previously existed. A Statement of Overriding Considerations was adopted for these impacts. Infrastructure at the site currently includes a 60-foot tall tower with antennas that bring it to a maximum height of 75 feet, a water tank and pump, and two buildings. Given the current state of development and type of equipment already in place at Dollar Hill, the Alternative 3 equipment modifications would not cause new significant aesthetic impacts or substantially increase the severity of existing impacts. Chapter V of the SEIR concludes that project impacts related to scenic vistas and public views at the Dollar Hill Site would be less than significant, and that the project would result in no impact related to scenic resources within a state scenic highway. Given the improvements at the Dollar Hill Site under Alternative 3 would be similar to the proposed project, aesthetics impacts under this alternative at the Dollar Hill Site would also be similar to the proposed project.

Prime Site EOF: The site is proposed for the roof of the Marin County Emergency Operations Facility (EOF), which is an existing communications site with 19 existing antennas. Modifications to remove or install additional communications equipment on the existing lattice structure would not be obvious on the existing tower, which is designed to carry such features, but would be detectable upon closer inspection. Chapter V of the SEIR concludes that project improvements at the Prime Site EOF would result in no impact related to scenic vistas and scenic resources within a state scenic highway, and that impacts related to public views would be less than significant. Given the improvements at the Prime Site EOF under Alternative 3 would be similar to the proposed project, aesthetics impacts under this alternative at the Prime Site EOF would also be similar to the proposed project.

Coyote Peak: The Coyote Peak Site is located atop a remote hilltop at roughly 970 feet of elevation, with access via a narrow dirt road. The site currently contains two water well pump heads, which have limited visibility off-site. Development of Coyote Peak into a MERA communications site would require the installation of a new, approximately 60-foot tower, an equipment shelter, and other related equipment, along with site modifications to provide underground power and access. For the Coyote Peak Site, Chapter V of the SEIR concludes that the project would result in less-than-significant impacts related to scenic vistas and no impact to

scenic resources within a state scenic highway. Given the improvements at the Coyote Peak Site under Alternative 3 would be similar to the proposed project, scenic vista and scenic highway impacts under this alternative at the Coyote Peak Site would also be similar to the proposed project.

However, improvements at this site under either the proposed project or Alternative 3 would change the visual character of the site, and would be noticeable from a number of distant vantage points. When combined with the close proximity and use of the Walker Creek Ranch as an outdoor education facility (owned by the Marin County Office of Education), the addition of a new communications tower and related infrastructure in an area that otherwise appears to be minimally disturbed would be a significant and unavoidable visual impact under both the proposed project and Alternative 3.

Muir Beach: The Muir Beach Site is already developed with a water tank, concrete pad left over from a previous water tank, and some communications equipment. The existing water tank is highly visible from the scenic overlook parking area and some nearby residences. Existing infrastructure improvements at this location are behind the scenic overlook restrooms and, while visible, do not obstruct or deter from the views towards the ocean from the overlook. Similar to the proposed project, Alternative 3's development of this site as a communication facility would require the installation of a new tower, equipment shelter, and antennas, along with other related equipment and site modifications to provide power. These facilities would be collocated with the existing infrastructure, adjacent to the existing Muir Beach Water Tank and the GGNRA Muir Beach Overlook parking lot, and would not alter or affect views toward the ocean. For the Muir Beach Site, Chapter V of the SEIR concludes that the project would result in less-than-significant impacts related to scenic vistas and no impact to scenic resources within a state scenic highway. Given the improvements at the Muir Beach Site under Alternative 3 would be similar to the proposed project, scenic vista and scenic highway impacts under this alternative at the Muir Beach Site would also be similar to the proposed project.

The addition of a monopole tower, equipment shelter, microwave dishes and antennas to the site under either the proposed project or Alternative 3 would significantly change the existing character of the site. The monopole tower would intrude into the existing view of Mt. Tamalpais from the GGNRA overlook, and would be visible to the residents of the existing homes across the street from the project site. Therefore, the impacts to public views of installing communications equipment at this site under the proposed project and Alternative 3 would be similar and significant and unavoidable.

Mt. Burdell OTA: The site is currently developed as a radio communications site and is located among dense vegetation, so existing infrastructure is well-hidden from view. Similar to the proposed project, the modifications called for in Alternative 3 would likely require alterations to equipment on the existing tower but would not change the screening of this site. Chapter V of the SEIR concludes that project impacts related to scenic vistas and public views at the Mt. Burdell OTA Site would be less than significant, and that the project would result in no impact related to scenic resources within a state scenic highway. Given the improvements at the Mt. Burdell OTA

Site under Alternative 3 would be similar to the proposed project, aesthetics impacts under this alternative at the Mt. Burdell OTA Site would also be similar to the proposed project.

Tomales: The Tomales Site is situated just north of the Town of Tomales on a small hilltop surrounded by grassy, rolling hills and open space. The site currently has two existing, though relatively short cell towers, and an equipment shelter which is generally out of view from Highway 1, except for a few distant vantage points to the north. Similar to the proposed project, development of the Tomales Site as a radio communications site as provided in Alternative 3 would include installation of a new 75-foot tall monopole tower, a new equipment shelter, and modest site modifications for underground power. The proposed equipment shelter would be just as visible as the existing shelter from the same distant vantage points to the north. In addition, the proposed monopole tower would be more visible from Highway 1 than the existing facilities on the site. Travelers along Highway 1 would see various portions of the top of the monopole from different locations along the roadway, and the complete monopole from about 0.6 mile away to the north, as well as from Whitaker Bluff Road about a mile to the north. Highway 1 is eligible for designation as a State Scenic Highway and is treated as such in this analysis. Because of the visibility of new MERA equipment from Highway 1, both the proposed project and Alternative 3 would result in similar significant and unavoidable impacts related to scenic resources within a state scenic highway and public views. As there are no designated scenic vistas in the area, Alternative 3 would also result in no impact to scenic vistas, similar to the proposed project.

Wolfback Ridge: The Wolfback Ridge Site is located on a ridge above Highway 1/101, west of Sausalito. The site is large and contains a number of communication and broadcast facilities. The site is entirely fenced and contains several 100-foot towers with multiple antennas. Similar modifications would be made to the existing communications site under Alternative 3 as under the proposed project.

The stretch of Highway 1/101 below the Wolfback Ridge Site is not an officially designated State Scenic Highway, but is eligible for designation. This part of the highway provides a conduit for motorists crossing the Golden Gate Bridge, an important aesthetic and cultural resource of Marin County. The area's topography and vegetation block the project site from view along nearly all points on the highway. Although motorists can view the site from Wolfback Ridge Road, the impacts from this vantage point is limited by the City of Sausalito's assertion that Wolfback Ridge Road is a private thoroughfare and may only be used by residents who own property in the area. The site's location atop a peak is also visible to recreationists using nearby trails, but the modifications that would be made to the existing highly developed communications site under either Alternative 3 or the proposed project would not create significant changes to scenic vistas, scenic highways, or visual character of the site or surroundings. Under both Alternative 3 and the proposed project, and therefore these impacts would be and less than significant.

Skyview Terrace: The Skyview Terrace Site is adjacent to an existing MMWD water tank. The tank is generally sheltered from view by an earthen berm constructed around the tank. No other infrastructure is currently present on the hilltop. The southern half of the hill is wooded while the northern half, where the Skyview Terrace Site would be located, is relatively open and grassy. The site is visible from nearby neighborhoods along Las Gallinas Road about 0.2 mile to the west,

from commercial areas about 0.3 to 0.5 mile east across Highway 101, and by motorists on Smith Ranch Road headed west from about 0.8 to 0.5 mile away. The site is also briefly visible, though perpendicular to the line of travel, by a high volume of motorists on Highway 101. Improvements to this site under Alternative 3 would be the same as the proposed project. Given the lack of existing radio tower infrastructure and the visibility of the ridgeline within designated open space, development of Skyview Terrace into a microwave relay site, with a new 35-foot tall monopole tower, two microwave dishes, and an equipment shelter, would result in similar significant and unavoidable impacts to scenic vistas, scenic highways, and visual character under both Alternative 3 and the proposed project.

In summary, impacts to aesthetic resources under Alternative 3 would be similar to the impacts of the proposed project. However, as discussed in more detail below, it is possible that tower heights for the Alternative 3 sites would need to be increased in order to meet the project's coverage objectives while maintaining RF emissions at safe levels. If tower heights were increased, Alternative 3 would have a greater impact on aesthetic resources than the proposed project.

Biological Resources

As summarized in Alternative 1, the original 1999 Draft EIR found that special-status plant species had potential to occur at Point Reyes Hill and Bolinas Ridge and that numerous protected oaks occur adjacent to facilities at Dollar Hill and Forbes Hill. The Bolinas Ridge Site was removed from the original system and never constructed. Therefore, the potential for biological resources impacts still apply to the Point Reyes Hill, Forbes Hill, and Dollar Hill Sites. Mitigation Measures adopted in the 1999 Draft EIR reduced all impacts to biological resources from the current MERA system to a less-than-significant level.

Alternative 3 includes seven new communications sites not analyzed in the 1999 Draft EIR. Three of the sites (Wolfback Ridge, Mt. Burdell OTA and the Prime Site EOF) are already developed communication sites. Chapter V of the SEIR concludes that the proposed project would result in no impact to biological resources at each of these sites. Given the improvements under Alterative 3 at these sites would be similar to the proposed project, Alternative 3 would result in no impact to biological resources at these sites, similar to the proposed project.

The other four sites (Coyote Peak, Muir Beach, Tomales, and Skyview Terrace) were previously developed with water tanks, water well heads, or cell towers, but are not existing telecommunication sites and would require development of new radio tower infrastructure. All four sites were surveyed for the Next Gen Project without finding candidate, sensitive, or special-status species that might occur in the areas. Muir Beach, Tomales, and Skyview Terrace also do not include wetlands or riparian areas.

For Tomales and Skyview Terrace, Chapter V of the SEIR concludes that the proposed project would have no impact to wetlands or candidate, sensitive, or special-status species. Project impacts to wetlands at the Coyote Peak Site would be less than significant after mitigation. For Muir Beach, Chapter V of the SEIR concludes that the proposed project would result in in less-than-significant impacts after mitigation relative to possible nesting birds during construction. As

Alternative 3 involves the same improvements as the proposed project at these sites, this alternative would result in similar biological resources impacts as the proposed project at these sites (with the exception of the Coyote Peak Site).Overall, Alternative 3 would result in less impacts to biological resources than the proposed project as this alternative involves fewer sites.

Cultural Resources

The Initial Study for the current MERA system (MERA 1999) did not identify any significant impacts to cultural resources at any of the sites analyzed, and therefore did not discuss this topic in the 1999 Draft EIR or 2000 Final EIR.

A Cultural Resources Inventory Report was completed for the proposed Next Gen System in October, 2018 that included an analysis of all currently operating MERA sites, as well as all new sites proposed under Alternative 3. The report found that a total of three previously recorded resources exist within the Area of Direct Impacts (the area where ground disturbance would occur) at sites proposed for work under Alternative 3: 1) a historic road segment near the Mt. Barnabe Site, 2) the Civic Center building, which is listed on the NRHP, and 3) a rock wall feature associated with Rancho Olompali near the Mt. Burdell OTA Site.

The Mt. Barnabe, Civic Center, and Mt. Burdell OTA Sites are existing developed radio communications sites. Modifications under Alternative 3 would be similar to those in the Proposed Next Gen Project, requiring relatively minor equipment alterations on existing towers and limited ground disturbance to improve tower foundations. Protection and avoidance of the cultural features at Mt. Barnabe and Mt. Burdell OTA would avoid impacts there, and incorporation of mitigation measures at the Civic Center, as recommended in the 1999 Draft EIR, would reduce overall impacts from Alternative 3 to a less-than-significant level. Therefore, cultural resources impacts under Alternative 3 would be similar to the proposed project for sites that are included in both scenarios (i.e., project and alternative), but overall impacts would be less under Alternative 3 as this alternative involves fewer sites compared to the proposed project.

Tribal Cultural Resources

TCRs were not considered in the 1999 Draft EIR but an evaluation of the project's impacts to them is now required under California Assembly Bill AB-52. In 2018, MERA participated in consultations with FIGR to identify if there are existing impacts and any future potential impacts to TCR's as a result of the Next Gen project.

On February 1, 2019, FIGR described the potential for impacts to TCRs at 13 sites. Eleven of the sites identified by FIGR are components of Alternative 3: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Stewart Point, Tomales, Coyote Peak, Skyview Terrace, and Muir Beach.

Eight of these eleven sites are existing MERA sites, where existing towers would be used and equipment would simply be changed out. Some sites would not require any ground disturbance, in which case project activities would have no impact to TCRs. The sites in Alternative 3 that are new sites or are existing sites needing tower foundation reinforcement include the following: Tomales, which requires a new monopole; Coyote Peak, which requires a new monopole, road

grading, and minor road cuts to a maximum depth of eight feet in one place; and Skyview Terrace and Muir Beach, which both require a new monopole and an underground power line. . These improvements at each site are the same for Alternative 3 and the proposed project. As with the proposed project, the implementation of Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 would be required under Alternative 3 at these sites to ensure that impacts to TCRs would be less than significant. Therefore, TCR impacts under Alternative 3 would be similar to the proposed project for sites that are included in both scenarios (i.e., project and alternative), but overall would be less under Alternative 3 as this alternative involves fewer sites compared to the proposed project.

Radio Frequency Exposure

The potential RF exposure associated with the existing MERA system was evaluated in the 1999 Draft EIR and mitigated with the realignment of a fence to prevent public access into an area with elevated RF levels at one site, Point Reyes Hill. Within controlled areas of all the sites (areas that only knowledgeable workers can access), MERA mitigated potentially elevated RF levels by instituting safety procedures, establishing training protocols, and adding signage indicating potential RF exposure hazards at all entry points to controlled site areas, all of which are consistent with FCC regulations to ensure impacts were diminished to a less-than-significant level.

Alternative 3 proposes to utilize eight existing sites and seven new sites. Like the proposed project, it would incorporate the RF safety BMPs described in Chapter III. Because the Alternative 3 system has fewer sites than the proposed project, the system requires more power output at each site to achieve similar signal penetration and area coverage (Motorola Solutions 2018). With the increase in power required for the Alternative 3 system to meet the project's coverage objectives, radio communications would radiate beyond the three-mile buffer surrounding Marin County established by the Regional Planning Committee (RPC) to limit penetration of the 700 MHz emissions into adjacent jurisdictions. This potential condition would not be approved by the RPC, and therefore the system resulting from Alternative 3 could not be licensed by the FCC (which requires RPC approval).

Further, an increase in power output would increase the level of RF emissions at each site. To maintain safe RF exposure levels on the ground and within work spaces near the towers, Alternative 3 would require either increased tower heights or reduced power output, which would in turn increase the impacts to aesthetic resources or impair system coverage. Because of the limitations in system coverage at acceptable power levels, as shown in Figure VII-6, this alternative could not meet MERA's objectives for the Next Gen project. For comparison, Figure VII-7 shows improved coverage in the same area provided by the Next Gen System.

Motorola Solutions also considered an alternative with the Alternative 3 configuration, using 800 MHz frequencies since that frequency range is not coordinated by the RPC. This too did not meet MERA's project objectives because the 800 MHz frequency range is not protected or guaranteed by the FCC to be available over the long-term for public safety use. Similar to the proposed project, RF exposure impacts under Alternative 3 would be less than significant after implementation Mitigation Measures RF-1, RF-2, and RF-3.

Conclusion

Alternative 3 has a reduced physical footprint, with less potential for environmental impacts than the proposed project because it has one fewer new site. However, the power required to boost radio signals in order to compensate for the smaller number of tower sites would cause the MERA system signal to extend beyond the geographic boundaries established to limit conflicts with radio systems in surrounding areas.

MERA's review of the proposed Motorola Solutions 15-site communications network (Alternative 3) found that it did not meet all the radio coverage and reliability objectives set forth in MERA's May 2016 RFP and in Section VII.B above. Therefore, in September/October 2017, MERA and Motorola Solutions conducted a workshop with the objective of designing a system that met all of MERA's coverage and reliability objectives. The result of that workshop is the proposed project.



Grey - Coverage by Motorola Proposal.

Sources: MERA, Motorola, Google 2018

Figure VII-6: Alternative 3, Southern Marin Coverage with Motorola Proposal



Grey - Coverage provided Next Gen System. Sources: MERA, Motorola, Google 2018

Figure VII-7: Next Gen System, Southern Marin Coverage with Tiburon at 700 MHz

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Alternative 4: Revised Project Design – 16 Sites, Two Zone Simulcast System (700 MHz)

Alternative 4 (Figure VII-8) is similar to the proposed project (Figure VII-9), but analyzes alternate tower locations for three of the proposed sites in an effort to reduce significant project-related aesthetics impacts. As such, Alternative 4 considers the following modifications to the proposed project, as analyzed below as 4A, 4B, and 4C (Table VII-1):

Table VII-1. Alternative 4 Revised Project Design

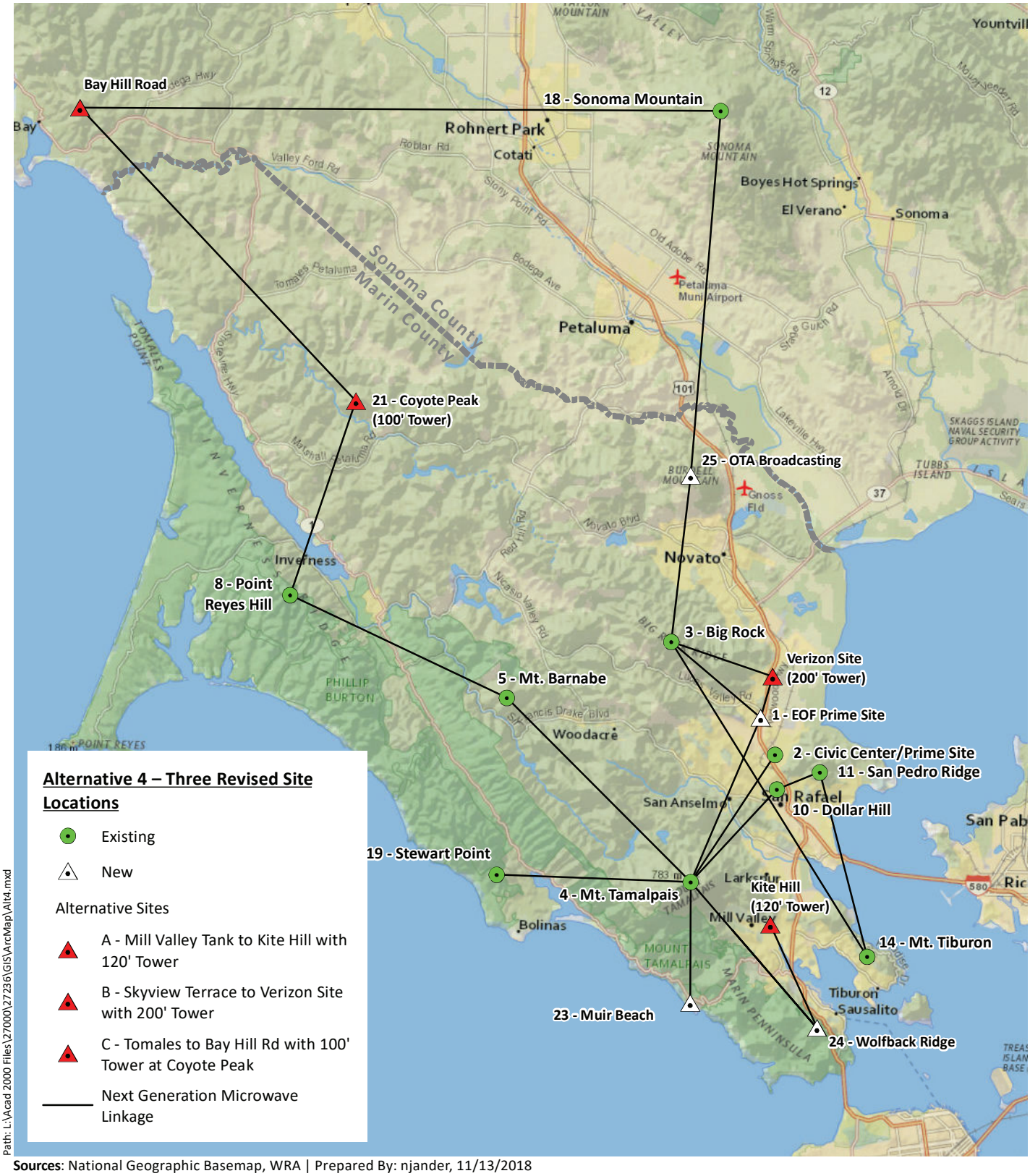
Next Gen Proposed Project Site	Alternative 4 Site	Alternative Tower Height
Mill Valley Water Tank	A. Kite Hill (Northeast of Mill Valley)	~120' - 300'
Skyview Terrace	B. Verizon Alternative (Highway 101 North of Skyview Terrace)	~300+'
Tomales	C. Bay Hill Road with Coyote Peak modified.	~100'

A. Kite Hill Water Tank as an alternative for Mill Valley Water Tank

The Kite Hill Site is presented as an alternative location for the Mill Valley Water Tank Site at Edgewood Avenue because it is a high elevation site that could serve the Mill Valley area and it is owned and operated by a MERA member agency, MMWD. In order to function as part of the radio system, the Kite Hill Water Tank Site would require a line-of-sight path to the Mt. Tamalpais Site and to the Wolfback Ridge Site for microwave radio connectivity. A microwave path analysis was completed using Google Earth satellite imagery and Digital Elevation Models (DEMs) of terrain to evaluate the site's usability (Figure VII-10).

The line-of-sight microwave path between Mt. Tamalpais and Kite Hill is blocked by existing terrain (Figure VII-11). This terrain rises to approximately 2,300 feet, and the calculated line-of-sight path crosses that terrain at about 2,200 feet. Overcoming this obstacle would require installation of a tower that is nearly 300 feet tall at the Kite Hill Site.

Alternatively, the microwave dishes at Mt. Tamalpais could be mounted at a higher elevation on the existing 75-foot towers to reduce the overall tower height requirements at Kite Hill. Even if the microwave were mounted at higher elevations, however, a relatively tall tower (greater than 120 feet) would be required at the Kite Hill Site, and/or additional equipment would need to be installed on the tower at Mt. Tamalpais, which would increase overall visual impacts associated with this alternative. The microwave path between Kite Hill and Wolfback Ridge (Figure VII-12), however, does not have terrain restrictions and is feasible without increased tower height at Kite Hill.



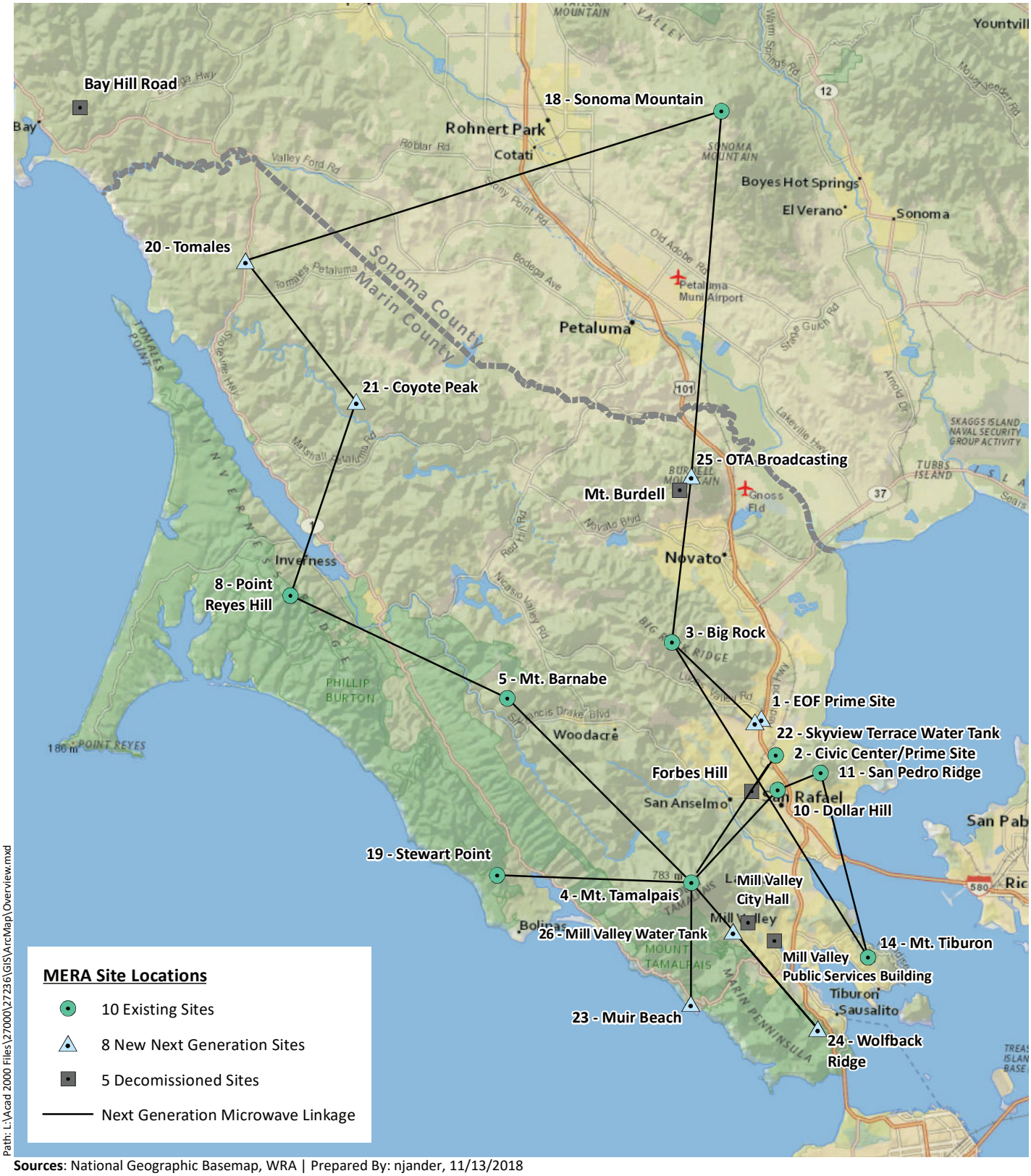
Sources: National Geographic Basemap, WRA | Prepared By: njander, 11/13/2018

Figure VII-8: Alternative 4: Revised Project Design

0 2.5 5 Miles

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Path: L:\Acad 2000 Files\27000\27236\GIS\ArcMap\Overview.mxd

Sources: National Geographic Basemap, WRA | Prepared By: njander, 11/13/2018

Figure VII-9: Proposed Project, MERA Next Generation System Configuration

0 2.5 5 Miles

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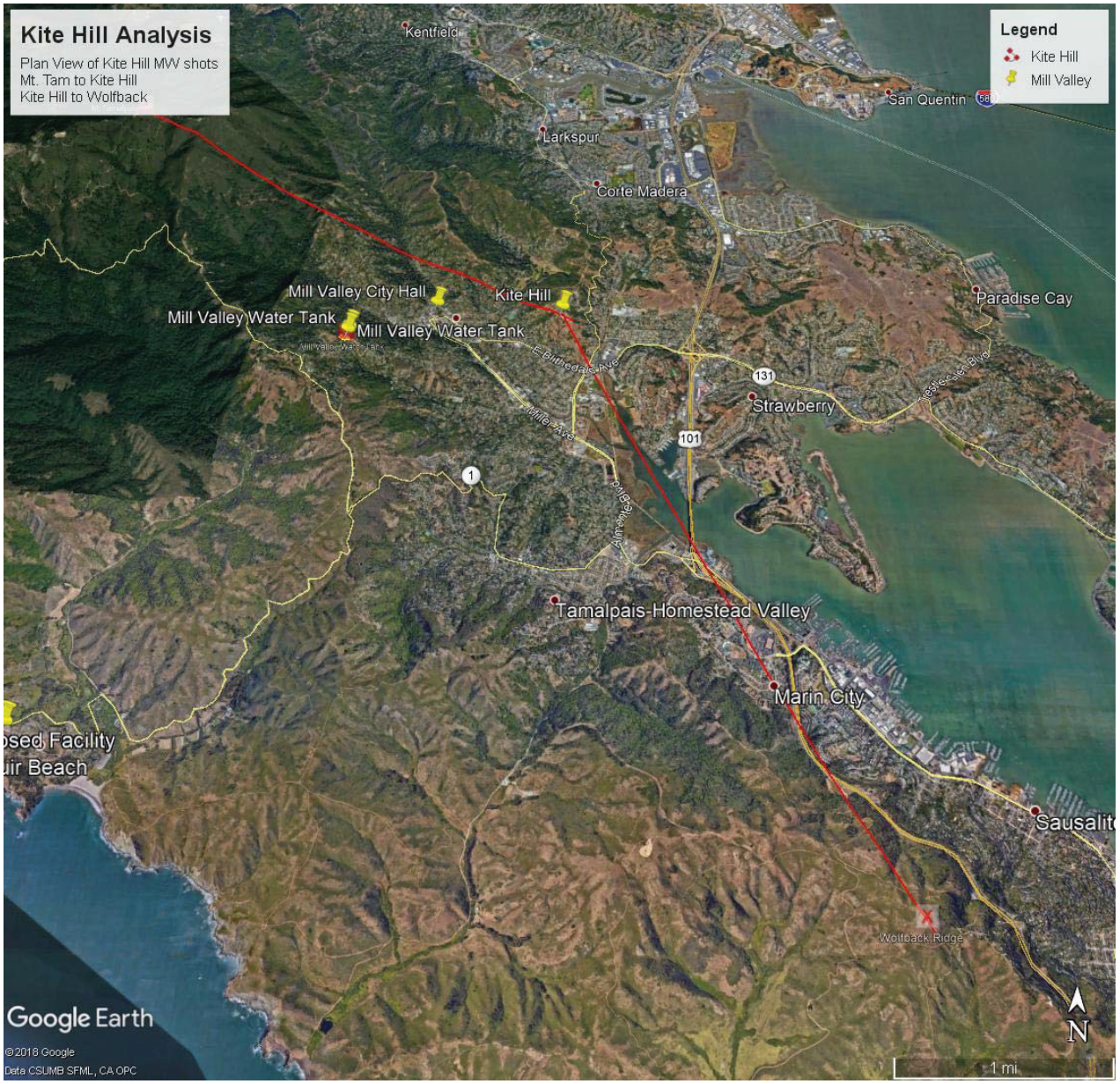


Figure VII-10: Mill Valley Water Tank Alternative 4, Kite Hill Water Tank Site Microwave Radio Path

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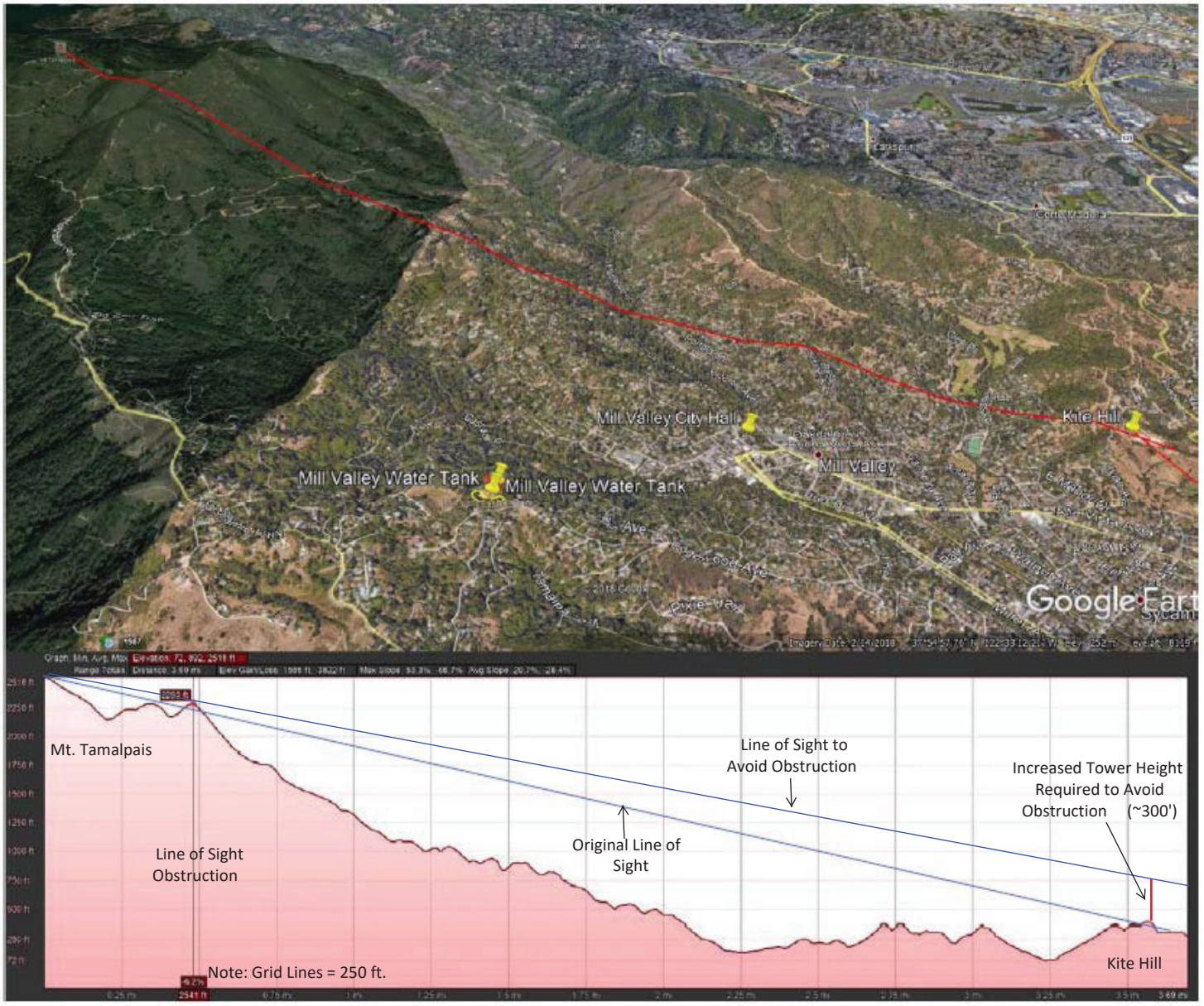


Figure VII-11: Mill Valley Water Tank Alternative 4, Microwave Radio Path Between Mt. Tamalpais and Kite Hill

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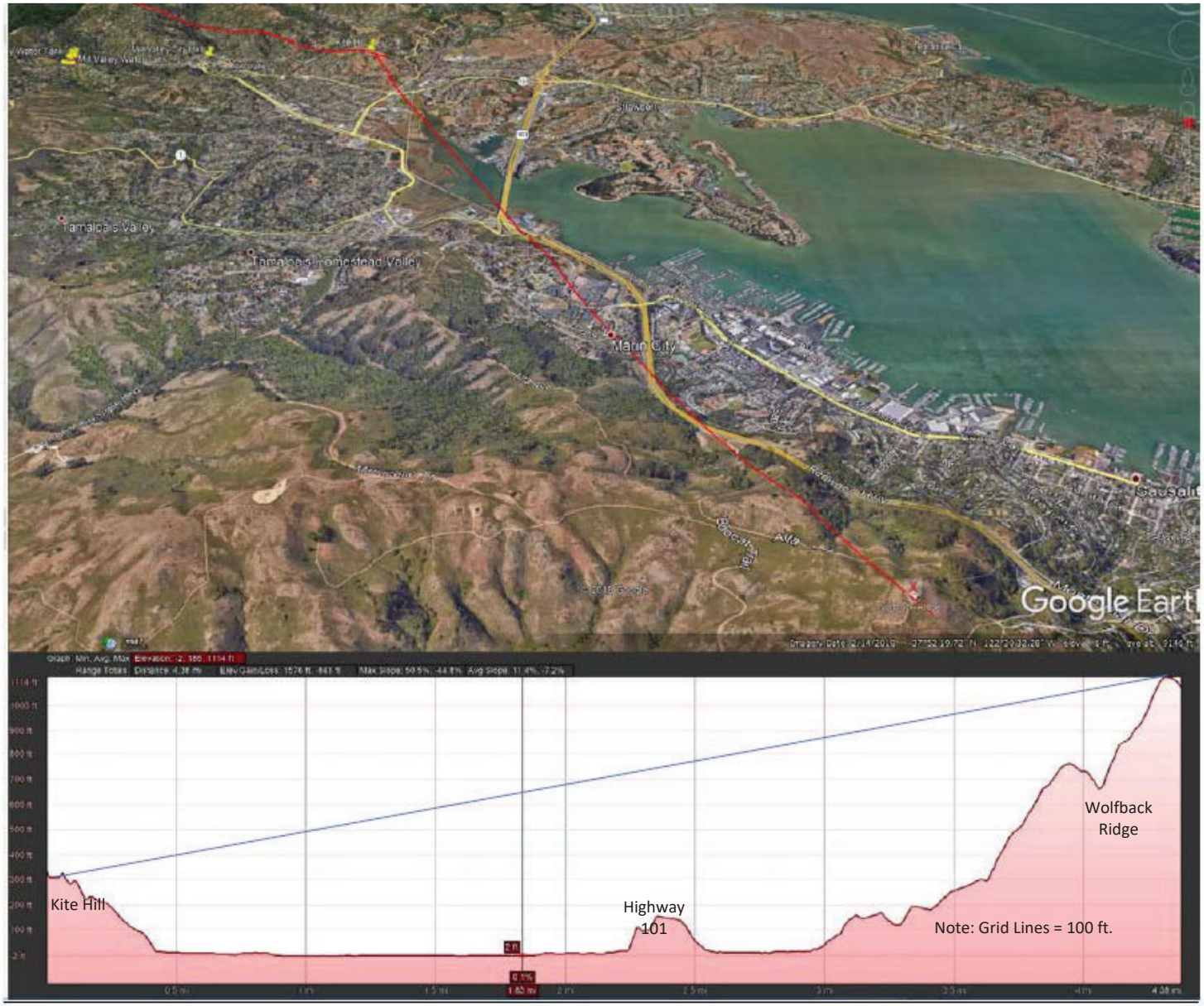


Figure VII-12: Mill Valley Water Tank Alternative 4, Microwave Radio Path Between Kite Hill and Wolfback Ridge

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Radio coverage comparisons of the Mill Valley Water Tank Site and the Kite Hill Site are shown in Figure VII-13. The Mill Valley Water Tank Site provides superior coverage in the densely populated areas of Mill Valley (in dark red and mustard colors).

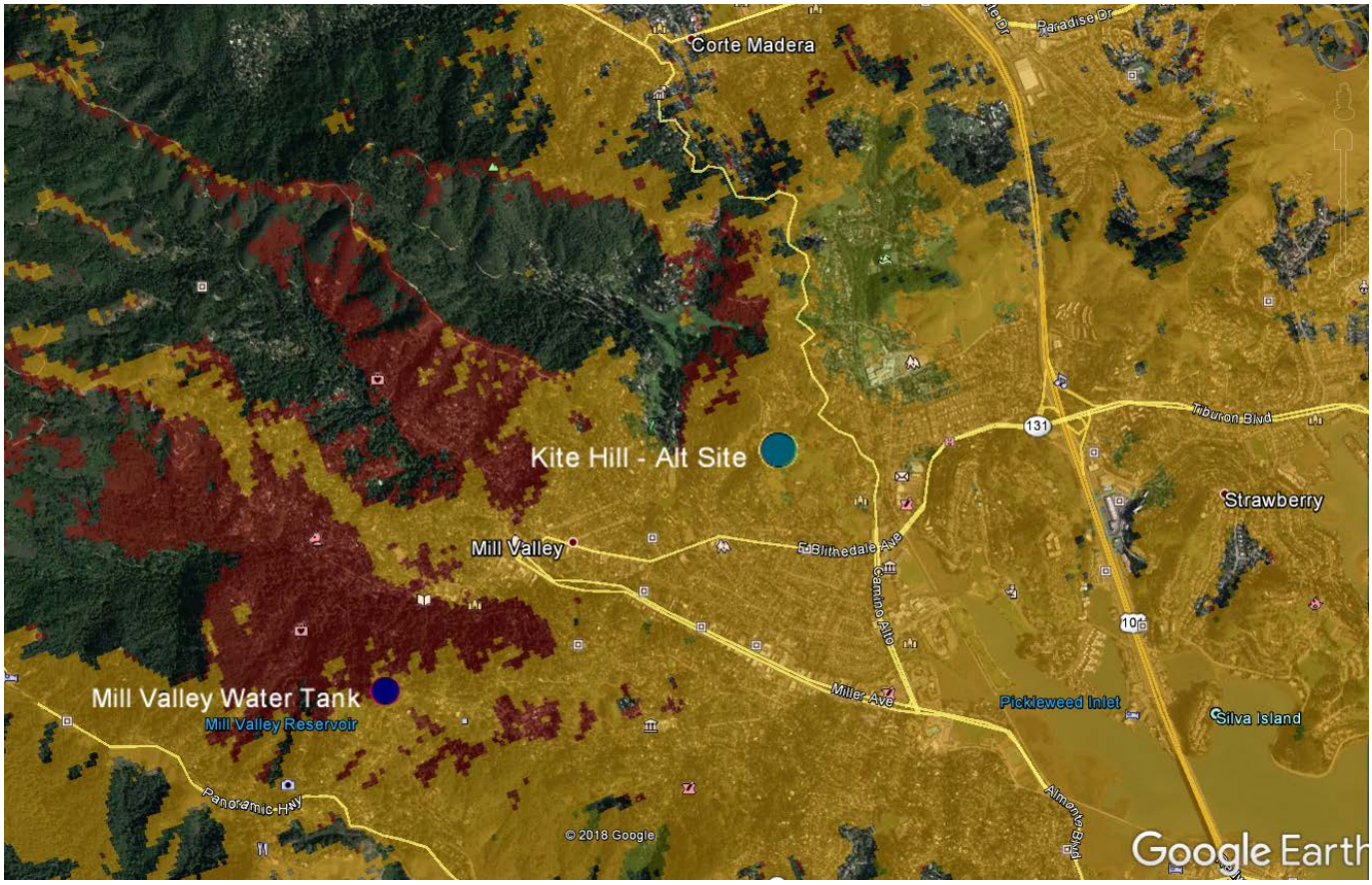
B. Verizon Site as an alternative for Skyview Terrace

The Verizon Site is an existing cell tower site located just east of Highway 101, on the rise separating Marinwood and Miller Creek from the Pacheco Valley and Novato. This site was suggested by a resident-neighbor as an alternative to the proposed Skyview Terrace Site, and would provide a microwave radio link between the Prime Site EOF and the Big Rock Ridge Site. A microwave path analysis was completed using Google Earth satellite imagery and Digital Elevation Models (DEMs) of terrain to evaluate the site's feasibility (Figure VII-14).

There are two terrain blockages preventing the Verizon Site from being a viable alternative to the Skyview Terrace Site. There is a visible terrain restriction between Big Rock Ridge and the Verizon Site (Figure VII-15), as well as smaller terrain obstructions between the Verizon Site and the top of the Prime Site EOF building (Figure VII-16). A tower at the Verizon Site would need to be nearly 300 feet tall to overcome the terrain obstacle to Big Rock Ridge, and therefore is not a desirable (although potentially feasible) alternative when compared to the proposed 35-foot monopole tower near the Skyview Terrace Water Tank. Radio coverage analyses comparisons were not performed for the Verizon Site because it is a microwave-link-only alternative.

C. Bay Hill Road in Sonoma and a taller tower at Coyote Peak as an alternative for Tomales

Areas of northern Marin County currently experience zones of reduced radio coverage. The proposed project would improve radio coverage by constructing a new communications site in the Tomales area. Rather than develop the new Tomales Site, Alternative 4 examined the use of the existing Bay Hill Road Site and increasing the proposed height of the tower at the Coyote Peak Site. However, as these two sites are still several miles from Tomales, this configuration does not allow saturation of the RF signal into the deep valleys surrounding Tomales. A reduced or weakened signal from more distant tower sites would isolate the Tomales area and the State Highway 1 corridor, similar to existing conditions. This isolation is portrayed in Figure VII-17 which compares Alternative 4 to the radio coverage provided by the Tomales Site. To compensate, the proposed tower height at the Coyote Peak Site would need to increase to over 100 feet tall, creating adverse visual impacts in that location. Based upon the lack of coverage that would still exist where people are concentrated in the valley floors and along State Highway 1, Alternative 4 does not meet the project objectives for this region.



Mustard - Radio coverage by both Kite Hill and Mill Valley Water Tank (MVWT). Dark Red - Upper Mill Valley radio coverage by MVWT only. Light Green - Radio coverage east of Camino Alto by Kite Hill only. Very Dark Green - No radio Coverage, high elevation forests. **Sources:** MERA, Motorola, Google 2018

Figure VII-13: Next Gen Alternative 4A, Radio Coverage: Mill Valley Water Tank Compared to Kite Hill



Figure VII-14: Skyview Terrace Water Tank Alternative 4, Verizon Site Microwave Radio Paths

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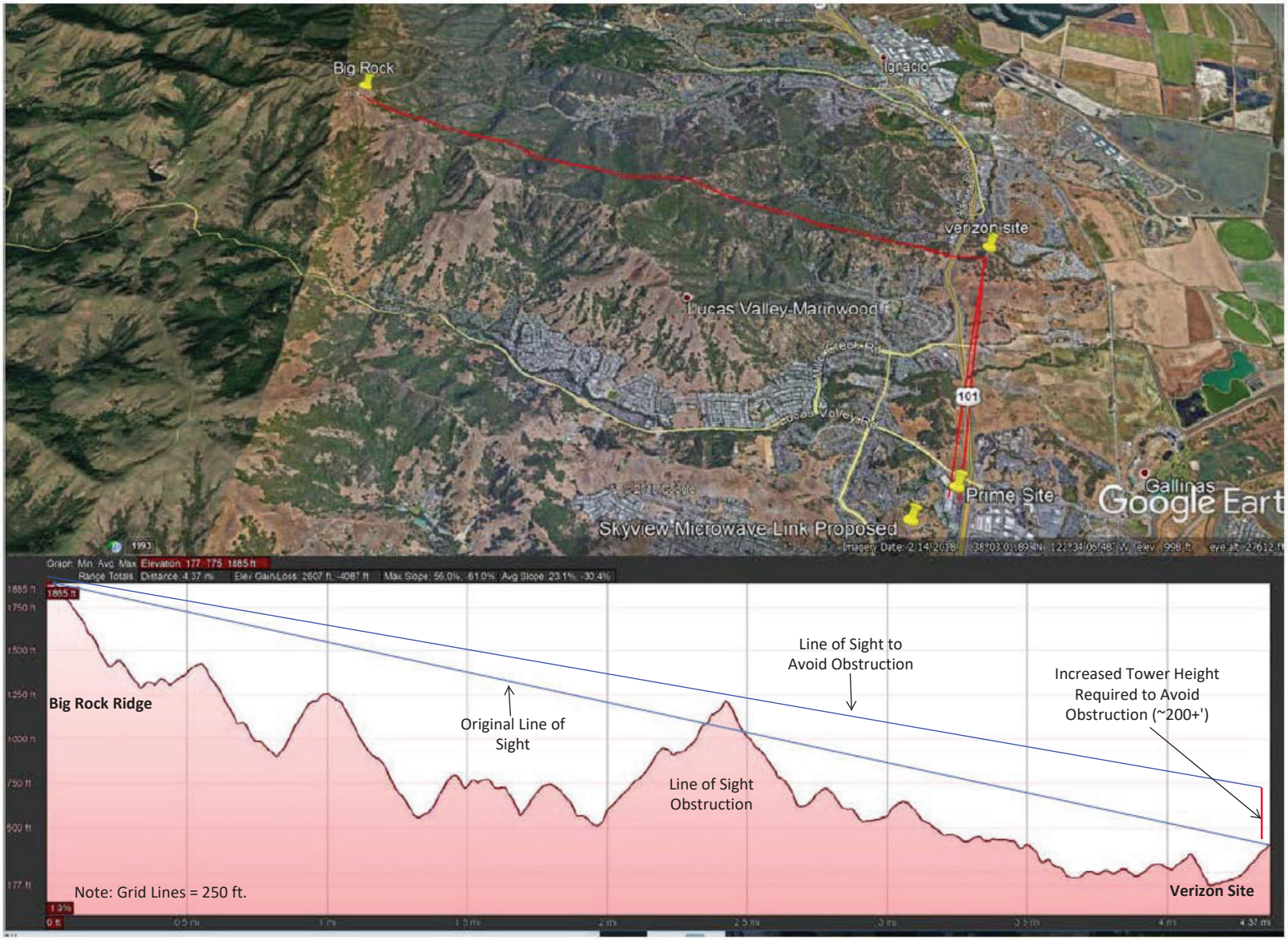


Figure VII-15: Skyview Terrace Water Tank Alternative 4, Microwave Radio Path Between Big Rock Ridge and Verizon Site

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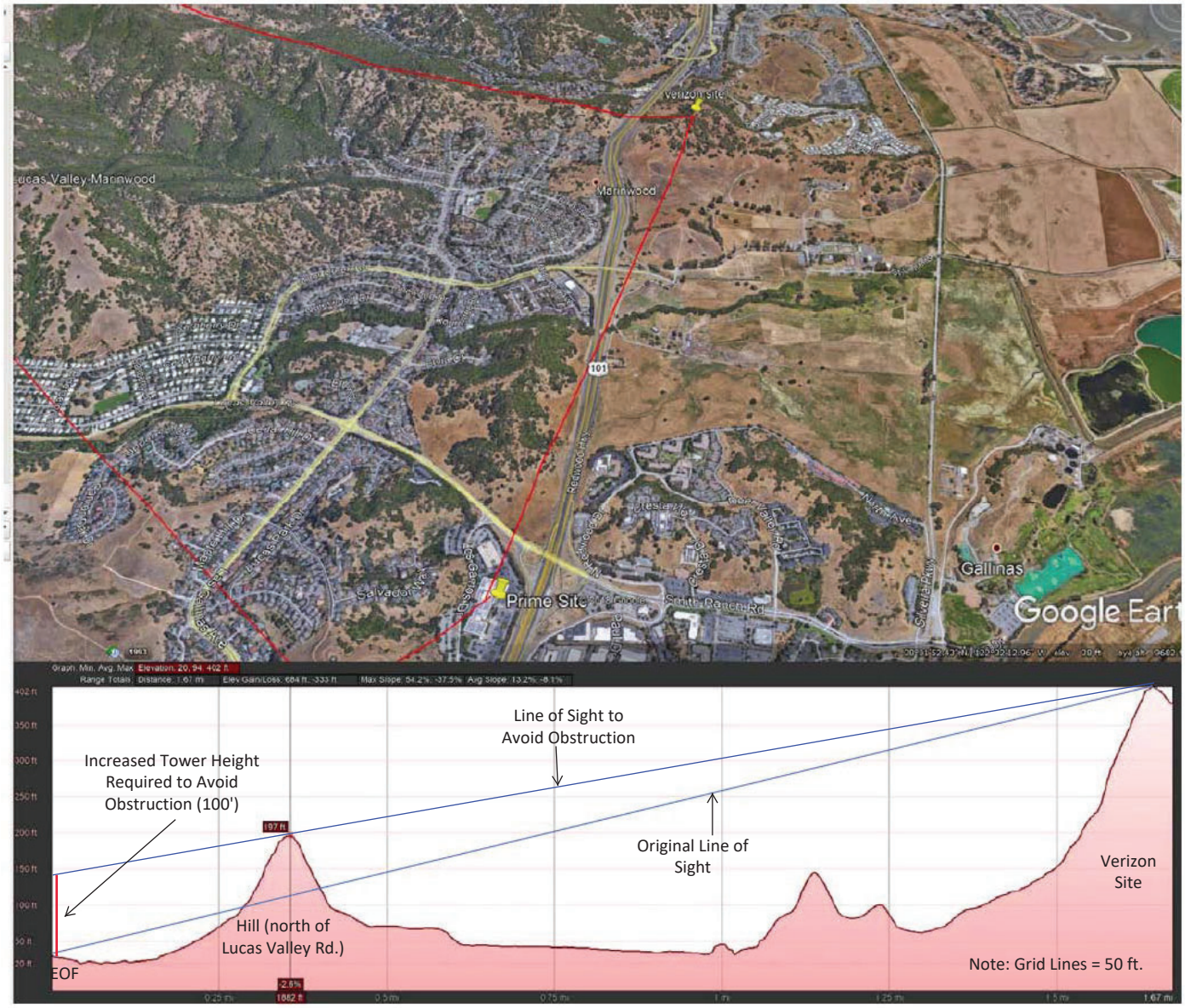
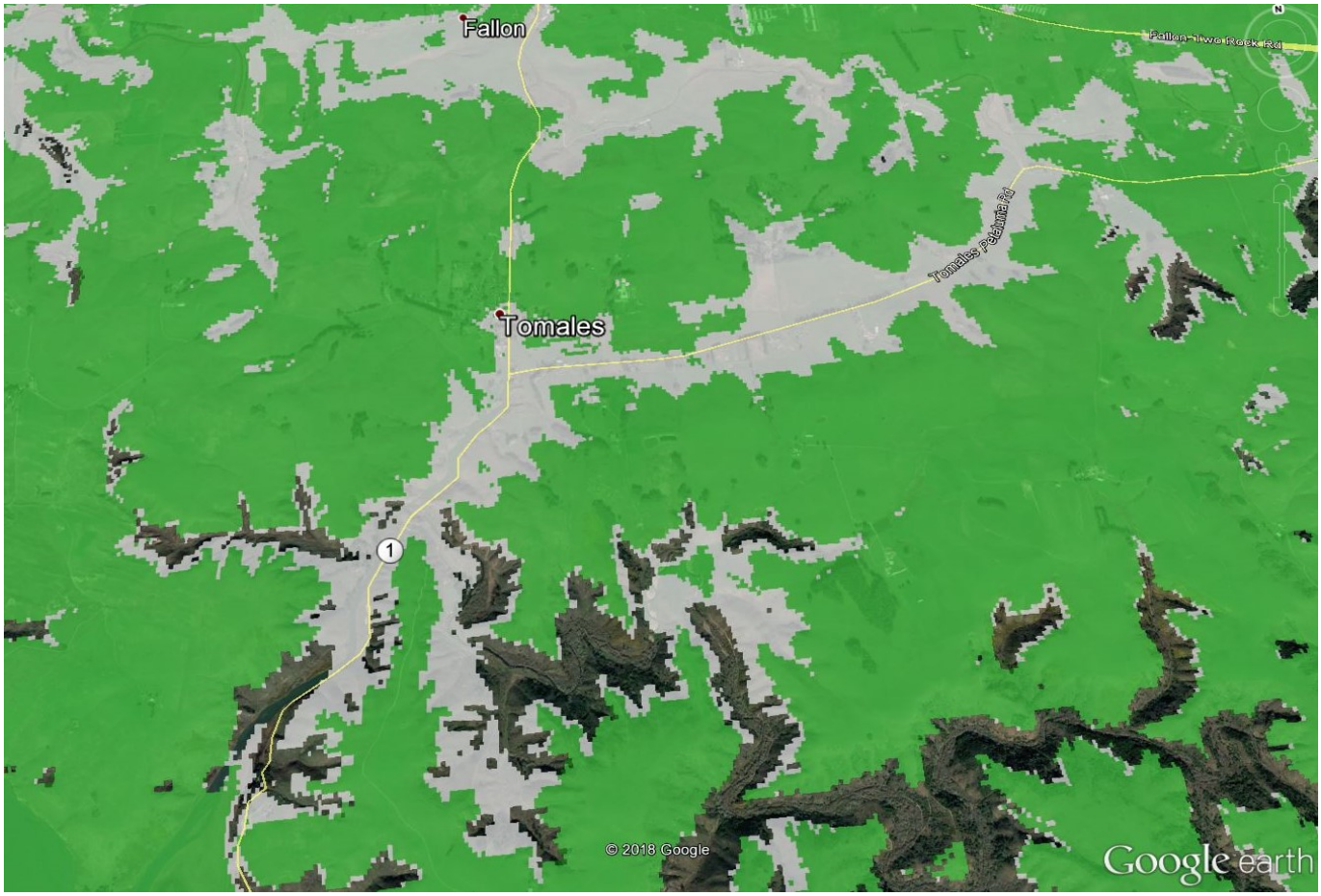


Figure VII-16: Skyview Terrace Water Tank Alternative 4, Microwave Radio Path Between Prime Site EOF and Verizon Site

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Light Green- Coverage provided by Coyote Peak and Bay Hill sites. Grey - Improved coverage area provided by Tomales site only. Dark Green - No coverage, high elevation forests. **Source:** MERA, Motorola, Google 2018

Figure VII-17: Next Gen Alternative 4C, Radio Coverage: Tomales Compared to Coyote Peak/ Bay Hill

This SEIR incorporates the analyses of the current MERA system's 1999 Draft EIR by reference for all existing MERA sites and discusses only the topic areas where these previous CEQA documents determined potentially significant impacts may occur (Aesthetics, Biological Resources) and topic areas for which new information, public concern, or changes in the regulatory setting require further analysis (Cultural Resources, Radio Frequency Exposure). These environmental topic areas as relevant to Alternatives 4A – 4C are discussed below and in Table VII-2.

Aesthetics

As summarized in Alternative 1, the current system's 1999 Draft EIR found that there were significant and unavoidable significant impacts to visual resources at two of the currently operating sites (Dollar Hill and Forbes Hill) despite implementation of recommended mitigation measures.

Like the proposed project, Alternative 4 would decommission the Forbes Hill Site. It would also eliminate the proposed project's Tomales Site, thus avoiding any possible contribution to aesthetic impacts at these locations. However, Alternative 4 has the potential to cause aesthetic impacts at seven newly proposed sites (the Prime Site EOF, Coyote Peak, Muir Beach, Mt. Burdell OTA, Wolfback Ridge, Kite Hill, and the Verizon Site) and at the exiting Dollar Hill Site.

The potential for aesthetic impacts at Dollar Hill, the Prime Site EOF, Muir Beach, Mt. Burdell OTA, and Wolfback Ridge are the same as are discussed in the preceding Alternative 3 analysis. Below are brief discussions of the possible aesthetic impacts resulting from Alternative 4's use of alternative locations at the Kite Hill and Verizon Site and a taller tower at Coyote Peak.

A. Kite Hill (alternative for Mill Valley Water Tank): Alternative 4 proposes the Kite Hill Site to avoid the significant aesthetics (public views) impacts associated with constructing the Mill Valley Water Tank Site. The proposed project requires a 55-foot monopole tower at the Mill Valley Water Tank Site, which would reach a maximum height of 70 feet with the antennas. The Mill Valley Water Tank Site is located in a residential neighborhood, buffered by a band of trees that screen the existing water tank from the road and surrounding residences. The new monopole would reach above the water tank and the surrounding trees, thus allowing the top portions of the antennas to be potentially visible from some vantage points in the nearby neighborhoods and from the Dipsea Trail. Specifically, the water tank is slightly over 30-feet tall, and the trees surrounding the site are nearly 60-feet tall; meaning that antennas would rise above the tree line by approximately ten to 15 feet and would be partially visible from various vantage points in the area.

The Kite Hill Site alternative is a hilltop currently developed with two large MMWD water tanks, which are partially screened by vegetation and topography. Due to terrain obstructions, a tower at Kite Hill would need to be in the range of 120 to 300 feet tall to provide the necessary line-of-sight microwave links to the Mt. Tamalpais Site and the Wolfback Ridge Site. The tower could extend as much as 200 feet above tree line. Given the height of the tower and the fact that Kite Hill is a prominent ridge above Mill Valley, this option would have greater visual impacts than the proposed project.

B. Verizon Site (alternative for Skyview Terrace): Alternative 4 proposes to use the Verizon Site to avoid significant aesthetics (scenic vista and public views) impacts associated with constructing

the Skyview Terrace Site. The proposed project would require a new 35-foot monopole tower, equipment shelter, fence, generator, and fuel tank on an open grassy hilltop. Skyview Terrace is currently undeveloped as a communications site and these changes would be visible to San Rafael residents, recreationists using the surrounding open space, and motorists along Highway 101 and other area roadways. The closest residential uses to the Skyview Terrace site are approximately 550 feet away.

The Verizon Site alternative is a vegetated hilltop location already developed as a cell tower site, which includes one building and one cell tower. It is directly visible from both Northbound and Southbound Highway 101 and is in close proximity to residential neighborhoods to the east (0.18 mile), west (0.29 mile) and north (0.25 mile). Due to terrain obstructions, a tower at the Verizon Site would need to be nearly 300 feet tall to provide the necessary line-of-site microwave links to the Prime Site EOF and the Big Rock Ridge Site. The tower could extend more than 200 feet above tree line. Given the height of this tower, the views from Highway 101, and the proximity to residential neighborhoods, this option would have greater visual impacts than the proposed project.

C. Taller tower at Coyote Peak (alternative for the Tomales Site): Alternative 4 proposes to use the existing Bay Hill Road Site in conjunction with the proposed Coyote Peak Site, in order to avoid the aesthetic impacts associated with constructing the Tomales Site included in the proposed Next Gen Project. The Tomales Site is visible from Highway 1, which is eligible for designation as a State Scenic Highway. The site currently houses two small existing cell towers and an equipment shelter that are generally screened from close up views by surrounding topography. The proposed project requires the development of a new equipment shelter, perimeter fence, generator, water tank, 60-foot monopole tower, and underground power cable. The proposed monopole would have an antenna on top that would bring its maximum height to 70-feet. Elimination of the Tomales Site would prevent impacts to views from Highway 1 at various locations where portions of the top of the monopole would be visible and at specific locations where the complete monopole would be visible, including from about 0.6 mile away to the north, and from Whitaker Bluff Road about a mile to the north.

To compensate for the distance from Tomales to the Bay Hill Road Site and Coyote Peak Site, and to allow RF saturation into the valleys in the area where Tomales and Highway 1 are located, the tower at Coyote Peak would need to be approximately 100 feet tall. The taller tower at Coyote Peak would increase visibility of the site, with no potential for screening. There are no designated scenic roadways impacted by the visual effects of the Coyote Peak Site, but there are numerous rural roadways in the vicinity that would be directly affected. Coyote Peak is within Walker Creek Ranch, which is the outdoor recreation education center for the Marin County Office of Education. The location's scenic quality is an important feature of the outdoor education experience offered to nearly every fifth-grader in the County. Because of this, the 60-foot tower proposed Coyote Peak by the proposed project was already found to be significant and unavoidable. A taller tower in the same location there worsen this condition. In effect, Alternative 4 would shift visual impacts from the communities that benefit from improved radio coverage (Tomales and the traveling public on Highway 1) to Walker Creek Ranch. Overall, aesthetics impacts related to public views under

this alternative would be significant and unavoidable, and would be greater than under the proposed project.

Biological Resources

As summarized in Alternative 1, the 1999 Draft EIR found that special-status plant species had potential to occur only at Point Reyes Hill and Bolinas Ridge, and that numerous protected oaks occur adjacent to facilities at Dollar Hill and Forbes Hill. The Bolinas Ridge Site was eliminated from the original system and never constructed. Therefore, the potential for biological resources impacts currently applies to the Point Reyes Hill, Forbes Hill, and Dollar Hill Sites. Mitigation measures were recommended in the 1999 Draft EIR and implemented during the construction of the existing MERA system reduced impacts to biological resources to a less-than-significant level.

Alternative 4 would decommission Forbes Hill, thus avoiding any further impact to biological resources at that location. Alternative 4 would also require the use of seven new sites, only four of which (Coyote Peak, Muir Beach, Verizon as an alternative for Skyview Terrace, and Kite Hill as an alternative for Mill Valley Water Tank) would require new development of radio tower infrastructure. The Coyote Peak, Muir Beach, Verizon, and Kite Hill Sites have been previously developed with water tanks, water well heads, or cell towers. All four sites have been surveyed for the Next Gen Project without finding any wetlands, with the exception of the Coyote Peak Site. Impacts to wetlands at the Coyote Peak Site under this alternative would be less than significant after mitigation, similar to the proposed project. Chapter V of the SEIR concludes that nesting bird impacts at the Muir Beach Site would be less than significant after mitigation. Alternative 4 would result in similar less than significant after mitigation impacts to nesting birds at the Muir Beach Site, similar to the proposed project. Alternative 4 would avoid any project-related biological resources impacts to the Tomales Site, as that site is eliminated under this alternative. Overall, biological resources impacts under Alternative 4 would be less than the proposed project given the removal of the Tomales Site from this alternative.

Cultural Resources

The Initial Study for the current MERA system (MERA 1999) did not identify any significant impacts to cultural resources at any of the sites analyzed and therefore did not discuss this topic in the 1999 Draft EIR or 2000 Final EIR.

A Cultural Resources Inventory Report was completed for the proposed Next Gen project in October, 2018 that included an analysis of all currently operating MERA sites, as well as all new sites proposed under Alternative 4, except for Verizon and Kite Hill. The report found that a total of three previously recorded cultural resources exist within the Area of Direct Impacts (the area where ground disturbance would occur) at non-alternate sites proposed for work under Alternative 4: 1) a historic road segment near the Mt. Barnabe Site, 2) the Civic Center building, which is listed on the NRHP, and 3) a rock wall feature associated with Rancho Olompali near the Mt. Burdell OTA Site.

The Mt. Barnabe, Civic Center, and Mt. Burdell OTA Sites are existing developed radio communications sites. Alternative 4 proposes the same modifications at these sites as the proposed project, requiring minor equipment alterations on existing towers and tower foundation

reinforcements with very localized ground disturbance near the base of existing towers. As discussed in Chapters IV and V of this SEIR, cultural resources impacts of the proposed project would be less than significant with the implementation of Mitigation Measure CULT-1. The impacts of Alternative 4 would be the same for all sites excepting the Kite Hill and Verizon Sites.

The new towers required by Alternative 4 at the Kite Hill and Verizon Sites pose a greater risk of adverse impacts to cultural resources, as they would require taller towers and larger areas of ground disturbance. These sites were not included in the Cultural Resources Inventory Report. In the event Alternative 4 is formally considered for approval, MERA shall complete a Cultural Resources Inventory Report for the Kite Hill and Verizon Sites to determine whether additional measures may be necessary to mitigate the potential impacts on cultural resources. However, cultural resource impacts under Alternative 4 may be greater than under the proposed project.

Tribal Cultural Resources

Alternative 4 is very similar to the proposed project, involving the same sites and improvements with the exception of the Mill Valley Tank Site and Skyview Terrace Site, which are moved to alternative locations in an attempt to minimize potential aesthetic impacts. The proposed project's infrastructure for the Mill Valley Tank Site and Skyview Terrace would be moved to new locations nearby, the Kite Hill Site and Verizon Site. As Alternative 4 does not involve use of the Tomales Site, there would be no potential for impacts to TCRs at that site, whereas the project's TCR impacts at this site were found to be less than significant with mitigation incorporated.

On February 1, 2019, FIGR described the potential for impacts to TCRs at 13 sites. Eleven of the 13 sites FIGR identified are components of Alternative 4, and have the potential for adverse impacts to TCRs to occur: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Point Reyes Hill, Dollar Hill, San Pedro Ridge, Mt. Tiburon, Sonoma Mountain, Stewart Point, Coyote Peak, and Muir Beach.

Nine of the 13 sites identified by FIGR are existing sites, and eight of them require reinforcement of the existing tower foundation (all but Sonoma Mountain). Tower foundation reinforcement work would require ground disturbance up to four-feet deep and would therefore create the potential for impacts to TCRs at these eight sites. Alternative 4 also uses two sites that would be new to MERA: Coyote Peak and Muir Beach. These sites were also identified by FIGR as having potential for impacts to TCRs. Coyote Peak requires a new monopole and road grading with minor road cuts to a maximum depth of eight feet in one place. Muir Beach requires a new monopole and underground power line.

These improvements create the potential for TCR impacts under Alternative 4. As with the proposed project, Mitigation Measures TRIBE-1, TRIBE-2, and TRIBE-3 would be required under Alternative 4, and would mitigate impacts to TCRs to less-than-significant levels for the eight sites that are also components of the proposed project. In the event Alternative 4 is formally considered for approval, MERA shall initiate consultation with FIGR with respect to the Kite Hill and Verizon Sites to determine whether additional measures may be necessary to mitigate the potential impacts on TCRs. However, TCR impacts under Alternative 4 may be greater than under the proposed project.

Radio Frequency Exposure

As summarized in Alternative 1, the effect of implementing the existing MERA system had the potential to exceed the FCC's public (uncontrolled) maximum permissible RF exposure levels at one site (Point Reyes Hill), and the potential to exceed the FCC's required occupational (controlled) maximum permissible RF exposure levels at 12 other sites: Big Rock Ridge, Mt. Tamalpais, Mt. Barnabe, Bolinas Fire Station (never constructed), Point Reyes Hill, Forbes Hill, Dollar Hill, San Pedro Ridge, Mt. Burdell OTA, Mt Tiburon Tank, Bay Hill Road, and Sonoma Mountain. In response to the analysis provided in the 1999 Draft EIR, MERA mitigated the potential impacts in the development of the current MERA system with fencing, safety BMPs, training protocols, and signage indicating potential RF exposure hazards at all entry points to controlled site areas, thus ensuring that impacts were reduced to a less-than-significant level.

With the development of seven new sites, Alternative 4 has the potential to increase impacts related to RF exposure. However, in addition to compliance with Mitigation Measures RF-1 through RF-3, Alternative 4 would incorporate the safety BMPs and training protocols described in Chapter III (Project Description) and would comply with applicable standards and regulations. By removing the Tomales Site, this alternative would eliminate the project's RF hazards from this site which were found to be less than significant after mitigation for the proposed project. The Kite Hill Site is located further away (approximately 75 feet) from nearby residential uses compared to the Mill Valley Tank Site. Similarly, the Verizon Site is located further away (approximately 875 feet) from existing residential uses compared to the Skyview Terrace Site (approximately 550 feet). Finally, because equipment at the Kite Hill, Verizon, and Coyote Peak Sites would be mounted on higher towers, Alternative 4 may expose the public and workers to reduced RF emissions as compared to the proposed project.

Conclusion

Alternative 4 has a reduced physical footprint, with less potential for environmental impacts than the proposed project due to the elimination of the Tomales Site. This alternative would also reduce aesthetics impacts by removing the Tomales Site and by finding alterative locations for the Mill Valley Water Tank and Skyview Terrace Sites. However, these benefits to aesthetics in some areas are achieved only by creating more significant visual impacts at the Kite Hill, Verizon, and Coyote Peak Sites, potentially affecting nearby residences. In addition to the aesthetic impacts of the taller towers, these alternative locations would also cause logistical and feasibility problems based on the extreme tower heights necessary to overcome terrain obstructions.

Overall, Alternative 4 is very similar to the proposed project but includes one less tower in the coastal zone (a benefit) and two alternative sites with significantly increased tower heights (up to 300 feet taller) near the populated Highway 101 corridor. A third tower with increased height at Coyote Peak in the Walker Creek Ranch outdoor education center would also increase that facility's visibility in a particularly sensitive outdoor educational environment. With three towers that are significantly taller than those under the proposed project, Alternative 4 increases overall project impacts to visual resources. Alternative 4 also reduces radio coverage in portions of Mill

Valley, Tomales and along Highway 1 in northwest Marin County. Accordingly, Alternative 4 does not meet the project's coverage objectives.

G. ENVIRONMENTALLY SUPERIOR ALTERNATIVE

In addition to the discussion and comparison of impacts of the proposed project and the alternatives, Section 15126.6 of the CEQA Guidelines requires that an "environmentally superior" alternative be selected and the reasons for such a selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. Identification of the environmentally superior alternative is an informational procedure and the alternative selected may not be the alternative that best achieves the goals or needs of the project applicant.

Based on the analysis presented in this section, Alternative 1, the No Project Alternative, would result in the greatest reduction in project impacts and would be the environmentally superior alternative. However, where the environmentally superior alternative is the "no project" alternative, CEQA requires that the EIR shall also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines*, Section 15126.6[e][2]). Based on the analysis provided above and the Alternatives Comparison table below (Table VII-2), and because Alternatives 1-4 do not meet the basic objectives of the proposed project, it has been determined that the proposed project would be the environmentally superior alternative.

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Table VII-2. Alternatives Comparison

IMPACT AREA	PROPOSED PROJECT	ALTERNATIVE 1 No Project	ALTERNATIVE 2 Upgrade Existing Sites	ALTERNATIVE 3 Original Motorola Solutions Proposal	ALTERNATIVE 4 Revised Project Design
Alternative Summary	18 Sites (700 MHz)	16 Sites (400 MHz)	16 Sites (700 MHz)	15 Sites (700 MHz)	16 Sites (700 MHz)
Aesthetics					
Scenic Vistas	*S&U*	*Less*	*Less*	*Similar*	*Greater*
Scenic Highways	*S&U*	*Less*	*Less*	*Similar*	*Greater*
Public Views	*S&U*	*Less*	*Less*	*Similar*	*Greater*
Light and Glare	*LTS*	*Less*	*Less*	*Similar*	*Greater*
Biological Resources					
Special-Status Species	*LTS w M*	*Less*	*Less*	*Less*	*Less*
Sensitive Natural Communities and Wetlands	*LTS w M*	*Less*	*Less*	*Less*	*Less*
Policies Protecting Biological Resources	*LTS w M*	*Less*	*Less*	*Less*	*Less*
Cultural and Tribal Cultural Resources					
Historical Resources	*LTS w M*	*Less*	*Less*	*Less*	*Greater*
Archaeological Resources	*LTS w M*	*Less*	*Less*	*Less*	*Greater*
Paleo. Resources & Geologic Features	*LTS w M*	*Less*	*Less*	*Less*	*Greater*
Human Remains	*LTS w M*	*Less*	*Less*	*Less*	*Greater*

IMPACT AREA	PROPOSED PROJECT	ALTERNATIVE 1 No Project	ALTERNATIVE 2 Upgrade Existing Sites	ALTERNATIVE 3 Original Motorola Solutions Proposal	ALTERNATIVE 4 Revised Project Design
Listed Tribal Resources	*LTS w M*	*Less*	*Less*	*Less*	*Greater*
Significant Tribal Resources	*LTS w M*	*Less*	*Less*	*Less*	*Greater*
RF Hazards					
RF Exposure	*LTS w M*	*Less*	*Less*	*Similar*	*Less*
Environmental Impact Classification: S&U = Significant and Unavoidable, LTS w M = Less than Significant with Mitigation, LTS = Less-than-Significant Impact					

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