



**Borealis Energy Storage Project
Sonoma County, California**

Visual Impact Analysis

December 2022

Borealis ESS, LLC

CONFIDENTIAL BUSINESS INFORMATION



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Acronyms and Abbreviations

Applicant	Borealis ESS, LLC
AVE	area of visual effect
BESS	Battery Energy Storage System
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMU	concrete masonry unit
CUP	conditional use permit
FHWA	Federal Highway Administration
gen-tie	generation tie-line
Jacobs	Jacobs Engineering Group Inc.
KOP	key observation point
kV	kilovolt
LEA	land extensive agriculture
LV	low voltage
MPT	Main Power Transformer
MV	medium voltage
MW	megawatts
PCS	Power Conversion System
PDC	Power Distribution Center
PG&E	Pacific Gas and Electric Company
POI	Point of Interconnect
Project	Borealis BESS Project
SR	scenic resource
VIA	visual impact assessment
VOH	Valley Oak Habitat
Westwood	Westwood Professional Services, Inc.
yd ³	cubic yard(s)

1. Purpose

Jacobs Engineering Group Inc. (Jacobs), in conjunction with Westwood Professional Services, Inc. (Westwood), an engineering firm that designed the proposed Project, has completed this visual impact assessment (VIA) for Borealis ESS, LLC (Applicant) for the proposed development of the Borealis Energy Storage Project (Project) in Sonoma County, California.

The purpose of this VIA is to describe the existing visual setting, applicable regulatory setting, and potential significant impacts to aesthetic resources resulting from implementation of the Project. For purposes of this report, aesthetic resources include resources considered in the aesthetics thresholds of Appendix G of the California Environmental Quality Act (CEQA) Guidelines (scenic vistas, scenic resources within a state Scenic Highway, existing visual quality and character, zoning and other regulations, and day and nighttime views) and in the thresholds of the Sonoma County *Visual Assessment Guidelines*.

2. Introduction

2.1 Proposed Project Overview

The Applicant plans to construct, own, and operate a lithium-ion battery energy storage facility capable of storing and delivering approximately 300 megawatts (MW) of electric energy and associated ancillary services into the California electric grid. The Project will be comprised of lithium-ion battery modules installed in racks housed in purpose-built outdoor Battery Energy Storage System (BESS) enclosures, associated equipment, a project substation, and an approximately 0.6-mile transmission line, referred to in this VIA as a generation tie-line (gen-tie) connecting the Project to the adjacent existing Pacific Gas and Electric Company (PG&E) Lakeville Substation. The interconnection to the PG&E 115-kilovolt (kV) Lakeville Substation, located south and across Old Adobe Road from the Project site, will be via a new approximately 0.6-mile overhead gen-tie alignment

The Project will be sited on an approximately 20-acre leasehold within a larger 137.52-acre parcel at 3571 Old Adobe Road, in unincorporated Sonoma County, California. The Project site is located on the western portion of the parcel in an area of the property that the landowner identifies as underutilized and less productive for crop cultivation. Approximately 10 acres of the 20-acre Project site will be an enclosed area that will include the energy storage equipment and structures, referred to as the BESS facility. Within the BESS facility, approximately 1 acre will be separately fenced for the Project substation facilities. The remaining Project area, approximately 10 acres, will be designed for drainage, access, gen-tie corridors, and temporary construction use.

The Project will be monitored and operated remotely 24/7 from an offsite control center with no permanent onsite operations and maintenance personnel. Operating staff, typically in crews of two to four staff members, will visit the site biweekly and as needed for project maintenance. The site will be fully enclosed and will not be open to the public.

2.2 Detailed Project Description

This section describes the components of the Project that would be most visible from public viewpoints. Table 2-1 summarizes the project equipment components, their footprint sizes, and their heights, where applicable; detailed descriptions follow.

Table 2-1: Project Equipment Details

Equipment	Description	Number of Units/ Footprint Size	Height
Battery Containers	Integrated batteries, battery controls, and ancillary equipment	Contained within the approximately 10-acre BESS facility	Up to 20 feet
Power Conversion System Equipment (Inverters and Transformers)	PCS inverters and low voltage to medium voltage transformer skids	Contained within the approximately 10-acre BESS facility	10 feet
Power Distribution Center	Substation controls building	1 to 2; contained within the approximately 1-acre Project substation area	20 feet

Table 2-1: Project Equipment Details

Equipment	Description	Number of Units/ Footprint Size	Height
Main Power Transformer	Main power high-voltage transformer	1 to 2; contained within the approximately 1-acre Project substation area	Up to 30 feet, with up to 6 lightning rods (static masts) that are up to 100 feet
Auxiliary Transformers	Medium voltage-low voltage auxiliary transformers for equipment back-feed power	Up to 10; contained within the approximately 10-acre BESS site	10 feet
Transmission Towers/ Poles (gen-tie)	Steel monopole or wood pole electrical transmission towers/ poles	Approximately 10	Approximately 100 feet
Other lighting, electrical, safety, communications, and security equipment	Various	Not applicable	Switchgear cabinets and power distribution panels up to 10 feet; junction boxes and telephony equipment up to 8 feet
Perimeter Site Security Wall/Fence	Concrete masonry unit, composite, or similar perimeter wall with noise attenuation features and/or chain link fence and single gate surrounding the BESS site and Project substation.	Approximately 2,600 linear feet	8 to 12 feet

2.2.1 Battery Energy Storage System Enclosures

The Project will be comprised of lithium-based battery modules installed in racks and housed within purpose-built outdoor enclosures. A typical BESS enclosure is approximately the same dimensions as a standard shipping container and can house hundreds of battery modules. Each individual module within an enclosure would be monitored and controlled to ensure safe and efficient operations. The modules within each enclosure would be accessed for maintenance from the outside via cabinet doors.

The dimensions of a typical BESS enclosure vary among manufacturers and are arranged in repeated “blocks” across the site. System blocks may consist of a single enclosure, or several smaller enclosures set side-by-side to create banks of batteries with similar overall dimensions. Smaller enclosures typically are closely spaced or physically attached at the time of construction, and larger enclosures are placed individually or in small groups. An enclosure grouping typically consists of 4 to 12 enclosures measuring approximately 30 feet long by 6 feet wide and 10 feet high. Smaller enclosures may be as small as 3.5 feet long by 5 feet wide by 8 feet tall, while larger enclosures may measure more than 50 feet long by 12 feet wide with a height of up to 20 feet. The number, size, layout, and capabilities of each enclosure would vary depending on the battery, enclosure manufacturer design, and BESS system manufacturer(s) selected for the Project. Regardless of the system manufacturer, the Project’s developed footprint and overall

capability would remain essentially the same. In some instances, the battery enclosures may contain inverters, which are described in Section 2.2.2.

2.2.2 Power Conversion System—Inverters and Transformers

Low-voltage (LV) underground cables would connect the BESS enclosures to adjacent low profile, pad-mounted power conversion system (PCS) inverters and transformers located adjacent to each enclosure. Inverters are approximately 10-foot-tall structures that convert electricity voltage when power is being taken from the battery into the grid and vice versa. In some instances, the inverter is contained within the battery enclosures and a standalone transformer is used instead of a PCS. In this instance, the medium voltage (MV) transformer equipment is connected directly to the battery enclosures via low-voltage alternating current wiring.

2.2.3 Outdoor Electrical Equipment

MV transformers and other electrical equipment, such as electrical cabinets and panels, would be installed outside the BESS enclosures within the site area. This equipment is smaller than the BESS enclosures and PCS and would be distributed through the site as needed. In addition, buried cable would be placed throughout the site to connect power and communications to individual components and to the Project substation. All outside electrical equipment would be housed in the appropriate National Electrical Manufacturers Association-rated enclosures.

2.2.4 Project Substation

The Project's onsite substation would be a secure, separately fenced (chain link security fencing) area where high-voltage electrical equipment, switchgear cabinets, auxiliary transformers, meters, and communications equipment are located, including the power distribution center (PDC) and one or two main power transformers (MPTs). The Project Point of Interconnect (POI) would be a bay position at the PG&E 115-kV Lakeville substation. One or more PDC enclosures, which house and protect electrical, life-safety, communications, and command equipment, would be located near the main step-up transformer within the onsite substation area. The substation would be connected to the adjacent PG&E Lakeville Substation via a 0.6-mile gen-tie line.

2.2.5 Generation Tie-Line

An approximately 0.6-mile, aboveground high-voltage (115 kV) generation tie line (gen-tie) and fiber optic cables would be constructed leading from the Project substation, southwest on the Project site, across Old Adobe Road, and onto PG&E's Lakeville Substation property and to the Project's POI. This line would be located on Project property and within the existing PG&E Lakeville Substation property, except for a portion crossing roughly perpendicular to Old Adobe Road

Up to 10 new steel monopole or wood pole electrical transmission pole structures would be installed. Each pole would be approximately 100 feet high, depending on interconnection and line crossing conditions.

2.2.6 Access and Security

Site access during operations would be provided from Old Adobe Road via improvements to the existing farm access route from Old Adobe Road. The existing one-way parallel gravel roads would be improved and widened so that they are 12 feet wide. A new approximately 300-foot-long, 24-foot-wide access route would be constructed to connect the Project site to the existing farm road. The existing portion of this access route would be shared with the farm operations.

The Project will install an 8- to 12-foot-tall concrete masonry unit (CMU), composite, or similar perimeter wall with a stone façade finish and chain link fence pursuant to the landscaping plan submitted as part of the conditional use permit (CUP) application. The wall and chain link fence would enclose the 10-acre BESS facility and substation. Additionally, the 1-acre substation would be separately fenced from the BESS facility. An interior perimeter access route also would be within the Project site.

The Project will be monitored and operated remotely 24/7 from an offsite control center with no permanent onsite operations and maintenance personnel. Operating staff, typically in crews of two to four staff members, will visit the site biweekly and as needed for project maintenance. The site will be fully enclosed and will not be open to the public. Augmentation of batteries and battery enclosures would be required during the life of the Project, potentially including replacement of batteries within enclosures and the phased installation of additional BESS enclosures.

2.2.7 Lighting

The Project site will not be lighted during normal operations. Security and safety lighting would be turned on for security, emergency, and maintenance purposes. The lights would be shielded and directed downward per local building code requirements. Should nighttime maintenance activities be required, maintenance personnel would bring temporary, portable maintenance lighting as needed to the specific area under maintenance.

2.2.8 Landscaping and Frontage Improvements

The Project would employ a combination of drought-tolerant, native landscaping, earthen berms, and an 8- to 12-foot-tall wall described under Section 2.2.6. The BESS facility landscape plan is provided as Appendix A, Figure 4, Landscape Plan. Plantings within the landscape areas would consist of a mixture of trees and shrubs consistent with the County's approved plant list/palette. The landscape areas would be designed and irrigated consistent with all applicable County requirements.

An engineered stormwater drainage system would be constructed on the Project site to reroute offsite flows from the adjacent farm fields around the Project and to collect onsite stormwater flows. The stormwater drainage system would include drainage swales and a stormwater retention basin near the southern corner of the site, where the majority of stormwater currently exits the area.

The Project would either secure municipal, domestic water supply from the City of Petaluma Water Service, accessed from an existing water supply line located in Old Adobe Road, or use existing onsite wells for landscape irrigation and fire water. A new water tank may be erected adjacent to the site entrance to provide a sufficient quantity of water as agreed upon with the fire authority.

2.2.9 Tree Removal

Any tree removal as part of the gen-tie line construction or any other Project component, is subject to the Sonoma County Tree Preservation Ordinance. This ordinance outlines requirements related to mandatory tree replacement and compensation for the trees removed.

A tree inventory was conducted by Jacobs biologists in 2022 to catalog the location and species of trees on and adjacent to the Project site. Nine species of trees and a total of 81 individual trees, with a diameter at breast height of 4 inches or greater, were mapped during the survey. The most common tree species found in the study area was cottonwood. The trees north of Old Adobe Road appear to be landscaped and are irrigated. The trees south of Old Adobe Road and within the Lakeville Substation represent a mix of seminatural and planted trees, but they are not irrigated. This tree inventory can be found in the Project's Biological Resources Technical Report.

Based on current site design, it is anticipated that 9 trees will be removed. An additional 9 trees may ultimately need to be removed based on final design and clearance requirements for the overhead gen-tie line. These trees are all cottonwoods or willow trees, appear to have been planted, and are actively irrigated. None are associated with riparian corridors.

The project site is located within a Valley Oak Habitat (VOH) Combining District. This overlay is designed to protect Valley oak trees or require mitigation if removal is required. The Project will not remove or alter any existing Valley oak trees.

2.2.10 Construction

The proposed construction schedule is 12 months. Construction activities would include clearing and grubbing, grading, earthwork, trenching, and facility equipment installation.

The Project is expected to require approximately 50,000 cubic yards (yd³) of earthwork, including up to 15,000 yd³ of imported engineered materials (primarily aggregates) that would be trucked to the site. Raw materials include gravel for onsite roads; concrete, sand, and cement for foundations; and water for concrete, dust control, and erosion control. Construction would generate additional traffic in the surrounding area, consisting primarily of heavy-duty trucks, smaller vendor trucks, and worker vehicles. An average of 40 to 50 workers would be onsite, with a peak daily workforce of approximately 60 to 80 workers.

One temporary staging area would be located on the Property, consisting of approximately 4 acres adjacent to the site access road, for construction-management facilities, materials and equipment storage, and worker parking. Upon completion of construction, the staging area would be removed and restored to pre-Project conditions.

2.2.11 Decommissioning

At the end of the Project's useful life, it will either be replaced with a new energy storage technology or decommissioned. Decommissioning will involve the removal and recycling of facility equipment from the site and restoration to pre-Project conditions.

3. Regulatory Setting

3.1 Federal

The Project is not within the jurisdiction of the federal government. However, the Federal Highway Administration (FHWA) *Guidelines for the Visual Impact Assessment of Highway Projects* was used in this study as a model for the assessment of visual impacts. The FHWA *Guidelines for the Visual Impact Assessment for Highway Projects* represents the FHWA's current thinking about best practices regarding the assessment and consideration of visual impacts of highway projects (FHWA 2015). In general, the FHWA guidelines establish a standard VIA process. This VIA uses methodologies and definitions that are discussed in Section 4.2.

3.2 State

3.2.1 California Environmental Quality Act

The CEQA "is intended to inform government decisionmakers and the public about the potential environmental effects of proposed activities and to prevent significant, avoidable environmental damage" (State of California 2022). The *2022 CEQA Statute and Guidelines* applies to projects proposed to be carried out or approved by public agencies, including the issuance of CUPs. Application of the guidelines is used to determine if a project would have a significant effect on the environment. Appendix G, Environmental Checklist, of the guidelines is used to determine the level of impact (California Association of Environmental Professionals 2022). Section I of Appendix G, which addresses aesthetics, was incorporated into the methodology to analyze visual impacts (Section 4.2).

3.2.2 California Department of Transportation Scenic Highway Program

The California Department of Transportation (Caltrans) Scenic Highway Program was created by the State Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highway Code, Section 260 et seq. The Scenic Highway Program comprises officially designated scenic highways (those highways for which corridor protection programs have been adopted and the highways are listed in the Streets and Highway Code) and eligible scenic highways (those highways designated as scenic by the local planning department).

3.3 Local

3.3.1 Sonoma County General Plan

The *Sonoma County General Plan* contains goals, objectives, and policies that pertain to the protection of visual resources, which are listed in Table 3-1.

Table 3-1: Sonoma County General Plan Goals, Objectives, and Policies

General Plan Goals, Objectives, and Policies
<p>GOAL OSRC-2. Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers.</p> <p>Objective OSRC-2.1. Retain a rural, scenic character in Scenic Landscape Units with very low intensities of development. Avoid their inclusion within spheres of influence for public service providers.</p> <p>Policy OSRC-2b. Avoid commercial or industrial uses in Scenic Landscape Units other than those that are permitted by the agricultural or resource land use categories.</p> <p>Policy OSRC-2c. Apply the Scenic Resources (SR) combining district consistent with this element to all lands located within Scenic Landscape Units.</p> <p>Policy OSRC-2h. For developments on parcels located both within Scenic Landscape Units and adjacent to Scenic Corridors, apply the more restrictive siting and setback policies to preserve visual quality.</p>
<p>GOAL OSRC-3. Identify and preserve roadside landscapes that have a high visual quality as they contribute to the living environment of local residents and to the County's tourism economy.</p> <p>Objective OSRC-3.2. Provide guidelines so future land uses, development, and roadway construction are compatible with the preservation of scenic values along designated Scenic Corridors.</p> <p>Policy OSRC-3c. Establish a rural Scenic Corridor setback of 30 percent of the depth of the lot to a maximum of 200 feet from the centerline of the road unless a different setback is provided in the Land Use Policies for the Planning Areas. Exceptions to the prohibition of development within the setback are not applicable to the Project.</p> <p>Policy OSRC-3h. Design public works projects to minimize tree damage and removal along Scenic Corridors. Where trees must be removed, design replanting programs so as to accommodate ultimate planned highway improvements. Require revegetation following grading and road cuts.</p>
<p>GOAL OSRC-4. Preserve and maintain views of the nighttime skies and visual character of urban, rural, and natural areas, while allowing for nighttime lighting levels appropriate to the use and location.</p> <p>Objective OSRC-4.1. Maintain nighttime lighting levels at the minimum necessary to provide for security and safety of the use and users to preserve nighttime skies and the nighttime character of urban, rural, and natural areas.</p> <p>Objective OSRC-4.2. Ensure that nighttime lighting levels for new development are designed to minimize light spillage offsite or upward into the sky.</p> <p>Policy OSRC-4a. Require that all new development projects, County projects, and signage utilize light fixtures that shield the light source so that light is cast downward and that are no more than the minimum height and power necessary to adequately light the proposed use.</p> <p>Policy OSRC-4b. Prohibit continuous all night exterior lighting in rural areas, unless it is demonstrated to the decision-making body that such lighting is necessary for security or operational purposes or that it is necessary for agricultural production or processing on a seasonal basis. Where lighting is necessary for the above purposes, minimize glare onto adjacent properties and into the night sky</p>
<p>GOAL OSRC-6. Preserve the unique rural and natural character of Sonoma County for residents, businesses, visitors, and future generations.</p> <p>Objective OSRC-6.1. Develop Rural Character Design Guidelines to achieve the following: preservation of existing site features contributing to rural character; siting of buildings and development features to blend in with the surrounding landscape; and allowance for rural design features in rural areas.</p> <p>Objective OSRC-6.2. Establish Rural Character as a primary criterion for review of discretionary projects, but not including administrative design review for single family homes on existing lots outside of Urban Service Areas.</p> <p>Policy OSRC-6a. Develop design guidelines for discretionary projects in rural areas, but not including administrative design review for single family homes on existing lots, that protect and reflect the rural character of Sonoma County. Use the following general design principles until these Design Guidelines are adopted, while assuring that</p>

Table 3-1: Sonoma County General Plan Goals, Objectives, and Policies

General Plan Goals, Objectives, and Policies
<p>Design Guidelines for agricultural support uses on agricultural lands are consistent with Policy AR-9h of the Agricultural Resources Element.</p> <ol style="list-style-type: none"> 1) New structures blend into the surrounding landscape, rather than stand out. 2) Landscaping is included and is designed to blend in with the character of the area. 3) Paved areas are minimized and allow for informal parking areas. 4) Adequate space is provided for natural site amenities. 5) Exterior lighting and signage is minimized.
<p>GOAL OSRC-15. Contribute to the supply of energy in the County primarily by increased reliance on renewable energy sources.</p> <p>Objective OSRC-15.3: Establish guidelines and standards for development of energy generation systems and facilities in the County.</p> <p>Policy OSRC-15d: Incorporate energy facility siting policies into the Sonoma County Development Code that would:</p> <ol style="list-style-type: none"> 1) Define accessory renewable energy systems as those designed to primarily serve on-site energy demand, and commercial renewable energy facilities as providing energy for offsite use. 2) Allow accessory renewable energy systems close to the end energy users in all zoning districts where visual and other environmental impacts can be mitigated. 3) Allow commercial renewable energy facilities on lands designated for commercial, industrial, resource or public use. Avoid in agricultural areas mapped as Prime, Statewide or Unique Farmlands, and areas designated as Scenic and Biotic Resources. Limit their use to a compatible scale in rural residential, and agricultural areas. 4) Notwithstanding Policy AR-4a, consider allowing commercial renewable energy as primary use facilities on agricultural lands only where a Renewable Energy Combining District is applied, when the history of the site demonstrates that it is of low value for agricultural production, and agricultural operations on surrounding agricultural parcels are not compromised, consistent with Policies AR 4d, 4e, and 4f. 5) Discourage commercial renewable energy facilities in designated Biotic Resource Areas, Scenic Resource Areas, and Geologic Hazard Areas.

3.3.2 Sonoma County Municipal Code

The Sonoma County Municipal Code contains specific regulations that pertain to the protection of visual resources, which are listed in Table 3-2.

Table 3-2: Sonoma County Municipal Codes

Municipal Code
<p>Section 26C-221 – Scenic landscape units.</p> <ol style="list-style-type: none"> a) All structures located within scenic landscape units illustrated on figures OS-5a through OS-5i, inclusive, of the general plan open space element and included within the SR district, shall be subject to the following criteria: <ol style="list-style-type: none"> 1. Structures shall be sited below exposed ridge lines. 2. Structures shall use natural landforms and existing vegetation to screen them from view from public roads. On exposed sites, screening with native, fire-retardant plants may be required. 3. Cuts and fills are discouraged, and where practical, driveways are screened from public view.

Table 3-2: Sonoma County Municipal Codes

Municipal Code
<p>4. Utilities are placed underground except when such undergrounding would have a more significant effect than an overhead line.</p> <p>In the event that compliance with these standards would make a parcel unbuildable, structures shall be sited where minimum visual impacts would result.</p> <p>b) In addition to the criteria listed in Section 26C-221(a), the following standards shall apply to subdivisions within scenic landscape units and included within the SR district unless otherwise provided herein:</p> <ol style="list-style-type: none"> 1. Building envelopes shall be established for structures. Use of the height limitations should be considered if necessary to further mitigate visual impacts. 2. Clustering shall be used to reduce visual impact where consistent with the applicable base district. 3. Building sites and roadways shall be located to preserve trees and tree stands as provided in Section 26C-320(k) of the ordinance codified in this chapter. <p>c) Where development occurs on parcels located both within scenic landscape units and adjacent to scenic corridors, the more restrictive provisions set forth in the article shall apply.</p> <p>d) Additional or varied development may be allowed in designated Scenic Landscape Units in accordance with General Plan Policy OS-2c.</p>
<p>Section 26C-222 – Scenic Corridors.</p> <p>The following provisions shall apply to properties along scenic corridors illustrated on figures OS-5a through OS-5i, inclusive, of the general plan open space element unless otherwise provided herein:</p> <ol style="list-style-type: none"> 1. All structures located within scenic corridors established outside of the urban service area boundaries shown on Figures LU-5a through LU-5i, inclusive, of the general plan land use element shall be subject to the setbacks of thirty percent (30%) of the depth of the lot to a maximum of two hundred feet (200') from the centerline of the road. Development within the setback shall be prohibited with the following exceptions, where such uses are allowed by the base district with which this district is combined: <ol style="list-style-type: none"> 1. [Not applicable] 2. [Not applicable] 3. [Not applicable] 4. Other new structures provided they are subject to design review and <ol style="list-style-type: none"> i. They are associated with existing structures; ii. There is no other reasonable location for the structure; iii. The location within the setback is necessary for the use; or iv. Existing vegetation and topography screen the use. 5. Compliance with the setback would render the parcel unbuildable. 6. Satellite dishes which are not visible from the roadway. 2. Where development occurs on parcels located both within scenic landscape units and adjacent to scenic corridors, the more restrictive provisions set forth in this article shall apply.
<p>Section 26-64-020. Community separators and scenic landscape units.</p> <p>a. All structures, except certain telecommunications facilities as provided for in Section 26-64-040, located within community separators and scenic landscape units illustrated on Figures OS-5a through OS-5i, inclusive, of the general plan open space element and included within the SR district shall be subject to the following criteria:</p> <ol style="list-style-type: none"> 1. Structures shall be sited below exposed ridgelines;

Table 3-2: Sonoma County Municipal Codes

Municipal Code
<ul style="list-style-type: none"> 2. Structures shall use natural landforms and existing vegetation to screen them from view from public roads. On exposed sites, screening with native, fire resistant plants may be required; 3. Cuts and fills are discouraged, and where practical, driveways are screened from public view; 4. Utilities are placed underground where economically practical; <p>The above criteria shall not apply to agricultural accessory structures which do not require a use permit in the district with which this district is combined.</p> <ul style="list-style-type: none"> b. In the event that compliance with these standards would make a parcel unbuildable, structures shall be sited where minimum visual impacts would result. <ul style="list-style-type: none"> 1. In addition to the criteria listed in subsection (a) of this section, the following standards shall apply to subdivisions within community separators and scenic landscape units and included within the SR district unless otherwise provided herein: <ul style="list-style-type: none"> i. Building envelopes shall be established for structures. Use of height limitations should be considered, if necessary to further mitigate visual impacts; ii. Clustering shall be used to reduce visual impact where consistent with the applicable base district; iii. Building sites and roadways shall be located to preserve trees and tree stands as provided in Section 26-88-040(m) of this chapter; iv. To the extent allowed by law, dedication of a permanent scenic or agricultural easement shall be required at the time of subdivision for projects in community separators. Consider requiring such easements in critical scenic landscape units pursuant to general plan Policy OS-2g. c. Where development occurs on parcels located both within scenic landscape units and adjacent to scenic corridors, the more restrictive provisions set forth in this article shall apply. d. Require development within community separators to be clustered and limited in scale and intensity. e. Minor timberland conversions shall be allowed within community separators and scenic landscape units, subject to compliance with the requirements of this article and Section 2-88-140. f. Certain single-family dwelling units and appurtenant structures within the area covered by the Taylor Mountain/Sonoma Mountain development guidelines shall be subject to Section 26-90-050, as specified therein. Where the provisions of this section conflict with the provisions of Section 26-90-050, the general plan, or any applicable area plan, the more restrictive provisions shall apply.
<p>Sec. 26-64-030. Scenic corridors.</p> <p>The following provisions shall apply to properties along scenic corridors illustrated on Figures OS-5a through OS-5i, inclusive, of the general plan open space element unless otherwise provided herein:</p> <ul style="list-style-type: none"> a. All structures located within scenic corridors established outside of the urban service area boundaries shown on Figures LU-5a through LU-5i, inclusive, of the general plan land use element shall be subject to the setbacks of thirty percent (30%) of the depth of the lot to a maximum of two hundred feet (200') from the centerline of the road. Development within the setback shall be prohibited with the following exceptions, where such uses are allowed by the base district with which this district is combined: <ul style="list-style-type: none"> 1. New barns and similar agricultural support structures which are added to existing farm complexes provided that such structures proposed within a state scenic highway or where local design review exists by community choice in an adopted specific or area plan are subject to design review; 2. New barns and similar agricultural support structures which do not require a use permit in this chapter; provided, however, that such structures proposed within a State Scenic Highway or where local design review exists by community choice in an adopted specific or area plan are subject to design review;

Table 3-2: Sonoma County Municipal Codes

Municipal Code
<ul style="list-style-type: none"> 3. Maintenance, restoration, reconstruction or minor expansion of existing structures; 4. Certain telecommunication facilities as provided in Section 26-64-040; 5. Other new structures provided they are subject to design review and <ul style="list-style-type: none"> (i) They are associated with existing structures, (ii) There is no other reasonable location for the structure, (iii) The location within the setback is necessary for the use, or (iv) Existing vegetation and topography screen the use; 6. Compliance with the setback would render the parcel unbuildable; 7. Satellite dishes which are not visible from the roadway. <ul style="list-style-type: none"> b. Where the scenic corridor setback provided for in Section 26-64-030(a), conflicts with the scenic corridor setback along Highway 12 established by Ordinance 1810, the latter shall apply. c. A building setback of twenty feet (20') shall be applied along the Highway 101 scenic corridor to properties which are within the urban service area boundaries shown on Figures LU-5b, -5c, -5e, -5g, and -5h of the general plan land use element, to be reserved for landscaping. d. Where development occurs on parcels located both within scenic landscape units and adjacent to scenic corridors, the more restrictive provisions set forth in this article shall apply. e. Building permits within the setback established in Section 26-64-030(a) along Bohemian Highway between Occidental and Freestone and Bodega Highway between Bodega and Freestone shall be referred to the county landmarks commission for review and recommendation.

3.3.3 Sonoma Mountain Area Plan

The *Sonoma Mountain Area Plan* applies to the Project site and contains specific regulations that pertain to the protection of visual resources, which are listed in Table 3-3.

Table 3-3: Sonoma Mountain Area Plan Goals, Objectives, and Policies

Sonoma Mountain Area Plan
<p><u>Scenic Corridors</u></p> <p>Goals and Policies</p> <p>The General Plan establishes the importance of protecting and maintaining the County of Sonoma's diverse scenic resources. The Open Space Plan Map identifies Petaluma Hill Road, Adobe Road, and Stage Gulch Road as Scenic Corridors.</p> <p>Policies</p> <ul style="list-style-type: none"> 1. Structures should be set back from scenic highways to protect uninterrupted views from the road and to maintain the impression of openness in Sonoma Mountains. 2. Structure design should be in keeping with the rural character of the area. 3. Structures should not be sited in visually vulnerable locations such as on ridgelines and in prominent foregrounds. 4. Proposals for structures in potentially vulnerable locations should be reviewed by the Design Review Committee. 5. Utilities should be installed underground for new construction when feasible. <p>Note: Where the above policies are less restrictive than standards required by the General Plan, compliance with General Plan standards is required.</p>

3.3.4 Sonoma County Zoning

The Project site has a *Sonoma County General Plan* land use designation of Land Extensive Agriculture (LEA), as well as a Sonoma County zoning designation of LEA with several applicable overlay zones, including Floodplain (F2), Local Guidelines/Taylor/Sonoma/Mayacamas Mountains (LG/MTN), Riparian Corridor (RC), Scenic Resources (SR), and Valley Oak Habitat (VOH) (Sonoma County 2022c). The site also is subject to the *Sonoma Mountain Area Plan*, which was approved in 1978. The *Sonoma Mountain Area Plan* designates the parcel's land use as Diverse Agriculture (Sonoma County 1978).

The Sonoma County Municipal Code describes the LEA zoning district as a designation intended to enhance and protect land best suited for permanent agricultural use and capable of relatively low production per acre of land (Sonoma County 2022b). Per Section 26-06-030 of the Sonoma County Municipal Code, public utility facilities are conditionally permitted.

Development Standards

Sonoma County Municipal Code Section 26-06-040 describes the development standards for projects within the LEA zoning district. Required setbacks in the LEA zoning district are 10 feet from street-side property lines, 10 feet from interior-side property lines, and 20 feet from rear property lines. The maximum height for structures within the LEA district is 50 feet.

Per Section 26-64-030 of the Sonoma County Municipal Code, within a scenic corridor, structures are subject to setbacks of 30% of the depth of the lot to a maximum of 200 feet from the centerline of the road.

3.3.5 Sonoma County Visual Assessment Guidelines

Sonoma County prepared *Visual Assessment Guidelines* in 2019 to guide preparation and analysis of visual impacts by implementing a methodology that uses "objective standards that can be described and utilized in a consistent manner" (Sonoma County 2019). This process was applied to the methodology for analyzing impacts as defined in Section 4.1.

4. Methodology

4.1 Sonoma County Visual Assessment Guidelines

This VIA applies the procedures defined under the Sonoma County *Visual Assessment Guidelines*, a document that is intended to guide visual analyses for evaluations under CEQA. Applicable procedures include the following steps (Sonoma County 2019):

1. Determine viewpoints and characterize environmental setting (addressed in Section 5.1.1, Section 5.1.3)
2. Prepare photos to illustrate visual impacts (addressed in Section 5.1.2, Appendix B)
3. Characterize the site's sensitivity (using a rating of low, moderate, high, or maximum) (addressed in Section 5.1.2)
4. Determine visual dominance (by comparing project contrast in terms of form, line, color, texture, and night lighting) (addressed in Section 5.1.5)
5. Determine significance of visual impacts (addressed in Section 6)
6. Identify possible mitigation measures (addressed in Section 7)

4.2 CEQA Statute and Guidelines

This VIA also addresses requirements from the CEQA Statute and Guidelines, specifically the Appendix G Environmental Checklist, which is used to determine the level of impact (California Association of Environmental Professionals 2022). Section I addresses aesthetics and asks "would the project":

- a) Have a substantial adverse effect on a scenic vista? (addressed in Section 6.2.1)
- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (addressed in Section 6.2.2)
- c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (addressed in Section 6.2.3)
- d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?" (addressed in Section 6.2.4)

As described under Section 5.1.1, the proposed site is located in an area that straddles nonurban and urban landscapes. Therefore, regarding CEQA Guideline question "c)," this VIA analyzes visual character and quality, and identifies any potential conflicts with zoning or other regulations. This document applies the Caltrans VIA guidance, which uses the FHWA VIA methodology to define visual character and visual quality. Although the Caltrans guidance acknowledges the most recent (2015) update to the FHWA guidance, the Caltrans policy is to use the original 1988 FHWA guidance or an alternate approach until further notice (Caltrans 2015). Therefore, this methodology uses the 1988 FHWA definitions, as follows (FHWA 1988):

Visual Impact Analysis

- Visual character: The visual character of a landscape is formed by the order of pattern composing it, consisting of form, line, color, and texture. Their interrelationships can be described in terms of dominance, diversity, continuity, and so on. The interrelationships of these elements can be described in terms of dominance, scale, diversity, and continuity (uninterrupted flow).
- Visual quality: Consists of:
 - Vividness: The memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern.
 - Intactness: The integrity of visual order in the landscape, and the extent to which it is free from encroachment.
 - Unity: The degree to which the visual resources of a landscape join together to form a coherent, harmonious visual pattern. Refers to the compositional harmony or intercompatibility between landscape elements.

The proximity of viewers in terms of distance zones is defined by FHWA as (FHWA 2015):

- Foreground: 0.25 to 0.5 mile from viewer
- Middle ground: From foreground to 3 to 5 miles from viewer
- Background: From middle ground to the limit of visibility

The CEQA Checklist is addressed under Section 5.1.5 and Section 6.2.

5. Visual Setting and Aesthetic Resources

The Project site is in unincorporated Sonoma County, outside the City of Petaluma. The site consists of largely undeveloped agricultural land with several unpaved agricultural access roads. The zoning designation for the Project Site is LEA (Sonoma County 2016). The *Sonoma County General Plan* divides the County into nine smaller planning areas, with this particular parcel being subject to the *Sonoma Mountain Area Plan*. The *Sonoma Mountain Area Plan* designates the parcel's land use as Diverse Agriculture (Sonoma County 1978).

Adobe Road, adjacent to the Project site, is a Sonoma County designated Scenic Corridor. Per Section 26-64-030 of the Sonoma County Municipal Code, within a Scenic Corridor, structures are subject to setbacks of 30% of the depth of the lot to a maximum of 200 feet from the centerline of the road. Structures associated with the Project would be set back from Old Adobe Road at distances greater than 200 feet. The Project site is located within a Sonoma County designated Scenic Landscape Unit, which also is subject to a Scenic Resources zoning overlay. The Scenic Resources overlay is intended to preserve visual character and scenic resources in the County. Development criteria include maximum building heights, minimum lot areas and widths, and other criteria such as screening standards.

5.1 Sonoma County Visual Assessment Guidelines

5.1.1 Environmental Setting

The Project site is located northwest of the intersection of Old Adobe Road and Frates Road. The generally flat, privately owned site is covered in agricultural fields, beyond which are mostly uninterrupted views of the Sonoma Mountains to the north and northeast. The Project site is within a designated Scenic Landscape Unit, which mostly surrounds the site from approximately 9 miles north of Old Adobe Road, clockwise to the southeast near State Route 116, and extending to the Sonoma Mountains to the northeast.

Petaluma Adobe State Historic Park is immediately adjacent to the southwest of the BESS facility and is accessed via Old Adobe Road. The park is visually separated from the BESS facility by a dense row of mature trees. The park is home to “the largest privately owned adobe building in Northern California in the 1830-40’s” and provides “shaded picnic areas with views of farmland and oak-studded hills” (California Department of Parks and Recreation 2022). The large, two-story adobe structure is immediately adjacent to Old Adobe Road, but is partially screened from view by vegetation. Although the adobe building is adjacent to the BESS site, dense clusters of trees and shrubs provide a partial visual obstruction of the site from both the building and parking areas. These trees, as well as the adobe building and a slight rise in topography, also block views of the BESS facility from the southern end of Manor Lane to the west. The park is zoned as Public Facilities District and Local Guidelines Combining District, Scenic Resources Combining District—Valley Oak Habitat Combining District. Old Adobe Road, a Sonoma County designated Scenic Corridor, travels diagonally northwest to southeast, originating in Penngrove and dead ending at Frates Road, which forms a perpendicular intersection. Old Adobe Road travels through mostly agricultural lands, with widely scattered residential and farming structures, many of which are set back from the roadway. Deciduous trees, landscaped palms, and evenly spaced, cylindrical evergreens and low fencing intermittently line both sides of the road from Petaluma Adobe State Historic Park to the northwest. However, most views from the road are of open agricultural land uses and rolling hills, creating an overall pastoral scene.

The pastoral landscape is interrupted by the PG&E Lakeville Substation, which is directly opposite the Project site on the west side of the Adobe Road and Frates Road intersection. The fenced, approximately

19-acre footprint of the substation is conspicuously defined by tall, tubular, and metallic racks, bays, and other vertical components, as well as a slightly chaotic assortment of conductors and wires. The tall lattice towers and linear forms of the substation, as well as multiple lines that extend from them in several directions, visually intrude upon the rural setting and contrast sharply with the surrounding agricultural fields. An associated laydown, storage, and parking yard is adjacent to the substation to the northwest, where trucks, various pieces of large, boxy equipment and cranes, and a metal shelter are stored on a dirt lot enclosed by two rows of tall, chain-link fence. The substation and storage lot interject an industrial setting into the overall agricultural landscape.

This rural area also is encroached upon by dense residential development that is bounded by the Petaluma city limits approximately 0.5 mile to the southwest of the BESS site. This boundary roughly parallels Old Adobe Road for approximately 4 miles from Frates Road to Corona Road. The residences are tightly spaced and consist of small- to medium-sized, one- to two-story structures. The density of these residential areas contrasts with the widely spaced, low-profile residences associated with the agricultural land uses nearby and outside the city limits. A slight rise in topography, vegetation, and the existing substation block views toward the BESS site from most residences.

The now-closed Adobe Creek Golf Course is located between the Lakeville Substation and residential area on the northwest side of Frates Road and occupies approximately 129 acres (Google Earth 2022). In 2017, operators closed the 18-hole course, which neighbors have described as “an overgrown eyesore in their backyards” (Brown 2020). Another BESS facility is currently proposed for a 15-acre section of this golf course directly southwest of the substation (Dudek 2022).

The Petaluma Municipal Airport is immediately adjacent to the residential area paralleling Old Adobe Road, located at 601 Sky Ranch Drive. The airport’s southeastern end is approximately 1.1 miles northwest of Frates Road and extends another mile northwest to East Washington Street. The airport is operational 24 hours a day. The airport has 180 aircraft storage hangars and 130 tie-down spaces for 240 based aircraft (City of Petaluma 2021, n.d.), and an approximate 0.75-mile runway. Petaluma Municipal Airport is a general aviation airport, which is a public-use airport with no scheduled service or less than 2,500 annual passenger boardings (FAA 2022). General aviation aircraft are small, seating fewer than 20 passengers (GlobalSecurity.org). Petaluma Municipal Airport handles flights involving airplanes, helicopters, and hot air balloons, and records about 60,000 takeoffs annually (City of Petaluma 2021). Approximately 90% of the aircraft flown at Petaluma Municipal Airport are single-engine airplanes (Aircraft Owners and Pilots Association 2022). The airport and its low, warehouse-like structures introduce an aeronautical facility into the agricultural and residential setting. Based on the airport’s alignment with Old Adobe Road and proximity to the BESS site, aircraft takeoffs and landings would be visible from the Project site as well as by nearby sensitive viewers, such as residents.

5.1.2 Visual Simulations

Visual simulations are included in Appendix B and used in this analysis for representing the relative scale and extent of change to the existing visual environment anticipated to occur as a result of Project implementation. For purposes of this report, visual simulations have been prepared from representative public viewpoints in the surrounding area and depict the Project at completion of construction with landscaping growth shown at approximately 10 years after planting. The visual simulations present an estimated real view that would be experienced by the public from publicly accessible locations. A total of nine visual simulations have been prepared and present an approximation of visual change, project dominance, and contrast as experienced from the Petaluma Adobe State Historic Park parking lot, multiple locations on Manor Lane, Old Adobe Road, Adobe Road, the Petaluma Adobe State Historic Park entrance, and the Petaluma Adobe State Historic Park adobe structure.

5.1.3 Viewpoints

A viewshed map was created to define the area of visual effect (AVE) (Appendix A, Figure 1). The map depicts areas from which the Project would be visible up to approximately 3 miles away based on topography; the map does not consider intervening buildings or vegetation. This distance was used because the Earth's surface curves out of sight at approximately 3 miles, and the tallest Project structure, excluding the gen-tie and static mast structures, is expected to be no more than 30 feet high, roughly the equivalent of a three-story house (Weekend Builds 2022).

Working with Sonoma County, a variety of public viewpoints, or key observation points (KOPs), were selected during a desktop review of publicly available views of the area in conjunction with the viewshed map. KOPs are representative public vantage points offering views to the Project site from a variety of locations, viewing angles, and site proximities. Jacobs conducted a photographic field survey of the Project site and surrounding area in August 2021 and February 2022. Viewpoint selection was based on viewer sensitivity, which considered land use designations; proximity to designated SRs and Scenic Vistas; topographical slope; number of viewers; and viewer proximity, activity, and duration of view. Jacobs photographed the site to document viewpoints, the general visibility of the Project site, and existing visual resources in the landscape. Local conditions during the field survey were sunny and clear. Field photographs were taken from several locations on Frates Road at varying distances from the Project site, from Casa Grande Road, and from publicly accessible locations on the Adobe Creek Golf Club parking lot. Photographs were taken with a Sony a6000 mirrorless camera with a 32-millimeter lens.

Nine KOPs were selected (Appendix A, Figure 3) to assist in analyzing visual impacts. The visual character and the quality of views from the KOPs are summarized in the following sections, as defined in Section 4.2.

Key Observation Point 1

KOP 1 represents the view from the Petaluma Adobe State Historic Park parking lot, facing northeast toward the boundary of the Project site, which is approximately 250 feet away. The view represents what visitors to the park would see while looking toward the Project site. The foreground consists of wide, horizontal expanses of dry brown grasses (the photo was taken in the dry season). A horizontal row of deciduous trees dominates the view as they protrude into the skyline. The row of deciduous trees consists of a variety of green colors but they have similar sizes, textures, and rounded form with multiple vertical trunks. The middle ground is viewed through gaps in the row of trees and consists of a relatively low valley with dirt roads and graded/plowed fields. Transmission lines are seen partially in a horizontal arrangement. In the background and viewed through gaps in the trees, the Sonoma Mountains appear as a horizontal line of rolling hills with a uniform brown and green color pattern and rounded form.

Key Observation Point 2

KOP 2 represents the view from Manor Lane, approximately 0.65 mile north of the Project site, facing south. Manor Lane is a two-lane roadway off Old Adobe Road and extends northward primarily to provide access to rural residential and agricultural properties. KOP 2 is situated at an elevation of approximately 150 feet above the Project site. The foreground consists of horizontal distribution lines, transmission lines, and several barbed wire fences. These features dominate the view but experience some visual absorption toward the lower elevations of Manor Lane because of the darker green vegetation color and a variety of textures that allow the distribution line and fences to blend into the background toward the lower elevations of Manor Lane. In the middle ground, a plowed brown field slopes gently to the south and provides a coarse texture. Several transmission line structures provide vertical lines that are not uniform with the primarily horizontal arrangement of features. Agricultural structures, including a barn, are visible and provide brighter grey colors that mildly contrast with the muted greens and browns of the

surroundings. In the background, the hills south of Petaluma appear as a relatively large horizontal arrangement with green and brown patterns and round form.

Key Observation Point 3

KOP 3 represents the view from Old Adobe Road, approximately 300 feet northwest of Frates Road, facing northwest toward the Project site. Old Adobe Road is a two-lane highway designated by Sonoma County as a Scenic Corridor. The foreground consists of Old Adobe Road, which is viewed as a smooth, grey swath that narrows as the road recedes into the middle ground and background. Dark brown, green, and light brown cut grasses and other ruderal vegetation along the sides of Old Adobe Road appear as a coarse texture. Wooden and metallic fence posts, street signs, wooden electrical distribution poles, and lattice steel transmission structures are vertical features. Multiple circuits of lattice steel transmission structures, distribution poles, and black electrical conduit are suspended over and along Old Adobe Road in parallel and perpendicular alignments, creating a chaotic intrusion against the skyline. The numerous lines comprising the PG&E Lakeville Substation and associated lattice towers on the south (left) of the photo create a chaotic pattern and unbalanced composition. Because these human-made features have introduced an industrial element that dominates the view and encroaches upon the otherwise agricultural setting, the scene is no longer visually intact.

In the middle ground, mature trees appear as a broken horizontal row of rounded features on both sides of Old Adobe Road. The trees are not uniform and appear as a variety of green and brown colors, sizes, and species. Lattice steel transmission structures are visible near the Project area on the north (right) side of the view; their visibility varies based on distance and visual absorption by background elements. The background consists of the brown and green vegetation patterns of the Sonoma Mountains, which are intermittently visible through low clouds. Cloudy atmospheric conditions are common in Petaluma from October through May (Cedar Lake Ventures, Inc. 2022). The photo for KOP 3 was taken in December 2022.

Key Observation Point 4

KOP 4 represents the view from Adobe Road, approximately 675 feet northeast of the intersection with Old Adobe Road and Frates Road, facing northwest toward the Project site. The foreground consists of a barbed wire fence with a vertical fence post and horizontal wires. A wide expanse of barren soil with cut and dried brown grass adds a coarse texture. Multiple circuits of existing transmission lines and distribution lines, including structures, are visible vertical features protruding into the skyline. A solid brown fence and a row of deciduous trees of varying sizes shades of green, and textures are arranged in a horizontal manner beyond the barren soil. Several large agricultural structures, including a greenhouse and barn, can be seen on the right (northwest) side of the photograph. The middle ground consists of a row of deciduous trees of varying green colors but similar size, rounded shape, and textures. In the background, the Sonoma Mountains are only partially visible as brown, rounded forms through gaps of the deciduous trees, agricultural structures, and distribution towers.

Key Observation Point 5

KOP 5 represents the view from the Petaluma Adobe State Historic Park entrance, facing northeast toward the Project site, approximately 950 feet away. The foreground consists of the park entrance road, which is light grey in color and dominant in the view. Dense deciduous vegetation with varying green color, size, and texture frames the view. Small patches of brown grasses form an irregular pattern on both sides of the road. A park entrance kiosk and traffic signage can be seen as the park entrance road leads away from the view in a primarily vertical arrangement. In the background, the Sonoma Mountains are partially visible through gaps in the mature deciduous trees lining both sides of the park entrance road. The Sonoma Mountains display as a rounded feature with a pattern of green vegetation and brown grasses.

Key Observation Point 6

KOP 6 represents the view from the second story of the Petaluma Adobe State Historic Park historic adobe building, facing northeast toward the Project site, approximately 700 feet away. In the foreground, portions of the Petaluma Adobe structure appear as dark brown vertical posts and a horizontal roof of wooden texture. A small, flat brown grassy area leads to very dense deciduous vegetation with varying patterns, textures, and colors. In the background, the Sonoma Mountains are partially visible to the northeast through gaps in the dense vegetation within the park. The Sonoma Mountains appear as a horizontal form with brown grasses.

Key Observation Point 7

KOP 7 represents the view from Manor Lane, approximately 750 feet west of the Project site, facing east. The foreground consists of patchy and dry brown grasses of coarse texture. A low, wooden post fence and distribution line are horizontal features, although, the fence posts are vertical lines. A one-story, modest-sized residential structure and barbed wire fencing is visible on the right (southeast). Beyond the residential structure is a large deciduous tree that protrudes into the skyline and distribution lines. A horizontal row of dense vegetation with varying sizes, textures, and colors obstructs view of the middle and backgrounds.

Key Observation Point 8

KOP 8 represents the view from Manor Lane, approximately 750 feet northwest of the Project site, facing southeast. The foreground consists of cut and dry brown grasses that have a coarse texture. Two low wire fences and distribution lines are horizontal features, although the fence posts are vertical lines. An additional low wire fence leads away from view and is visually absorbed by vegetation. A one-story residential structure is partially visible on the left (northeast) side of the photograph. A horizontal row of dense vegetation with varying sizes, textures, and colors obstructs view of the middle and backgrounds.

Key Observation Point 9

KOP 9 represents the view from Manor Lane, approximately 850 feet northwest of the Project site, facing southeast. In the foreground, a strip of barren roadside forms a horizontal feature with a gravel texture. Electrical distribution lines and a row of ornamental plants form additional horizontal features. Wooden fence posts, arranged in both a horizontal and near vertical pattern, add vertical lines. A field of cut and dry brown grass adds a coarse texture. A one-story dark brown residential structure is visible on the left (northeast) side of the photo. The middle ground consists of a horizontal row of dense vegetation with varying sizes, textures, and colors that interferes with the view of the background. Through gaps in the row of dense vegetation, transmission lines are visible as horizontal lines. Transmission structures also are visible protruding into the skyline above the row of trees.

Viewpoints Dismissed

While nine viewpoints were advanced to KOPs, 11 viewpoints were dismissed for reasons described in the following list and shown on Appendix A, Figure 2:

- Viewpoint 10: Topography obstructs the view of the Project site, as viewed from Manor Lane near Matteri Road.
- Viewpoint 11: Topography and distance interfere with the view of the Project site, as viewed from Manor Lane north of KOP 2.

- Viewpoint 12: Vegetation obstructs the view of the Project site, as viewed from Manor Lane on the bridge over Adobe Creek.
- Viewpoint 13: Existing agricultural structures and vegetation along Adobe Creek obstruct the view of the Project site from Manor Lane near the intersection with Manor Lane West Branch.
- Viewpoint 14: Existing residential structures and vegetation along Adobe Creek obstruct the view of the Project site from Manor Lane north of KOP 9.
- Viewpoint 15: Existing trees and electrical distribution lines interfere with the view of the Project site from Old Adobe Road immediately east of the Petaluma Adobe State Historic Park entrance.
- Viewpoint 16: Existing trees and electrical distribution lines interfere with the view of the Project site from Old Adobe Road immediately east of the Petaluma Adobe State Historic Park entrance.
- Viewpoint 17: Existing trees and electrical distribution lines interfere with the view of the Project site from Old Adobe Road immediately east of the Petaluma Adobe State Historic Park entrance.
- Viewpoint 18: The existing vegetation surrounding the PG&E Lakeville Substation, along with the substation itself, obstructs the view from the former Adobe Creek Golf Course parking lot.
- Viewpoint 19: Distance, existing vegetation, and existing structures obstruct the view of the Project from Hidden Valley Drive at Timberline Lane.
- Viewpoint 20: Topography, distance, and existing structures interfere with the view of the Project site from Adobe Road approximately 400 feet southwest of the intersection with Pozza Road.
- Viewpoint 21: Existing residential structures and the vegetation near Petaluma Adobe State Historic Park obstruct the view of the Project from the Petaluma Community Sports Fields.

5.1.4 Site Sensitivity

Sonoma County provides a rating scale to determine the sensitivity of the Project site, shown in Table 5-1.

Table 5-1: Site Sensitivity

Site Sensitivity	Characteristics
Low	The site is within an urban land use designation and has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by urban development or the site is surrounded by urban zoning designations and has no historic character and is not a gateway to a community. The project site terrain has visible slopes less than 20 percent and is not on a prominent ridgeline and has no significant natural vegetation of aesthetic value to the surrounding community.
Moderate	The site or portion thereof is within a rural land use designation or an urban designation that does not meet the criteria above for low sensitivity, but the site has no land use or zoning designations protecting scenic resources. The project vicinity is characterized by rural or urban development but may include historic resources or be considered a gateway to a community. This category includes building or construction sites with visible slopes less than 30 percent or where there is significant natural features of aesthetic value that are visible from public roads or public use areas (parks, trails, and so on).
High	The site or any portion thereof is within a land use or zoning designation protecting scenic or natural resources, such as General Plan designated Scenic Landscape Units, coastal zone, community separators, or Scenic Corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for the community or scenic corridor. This category includes building and construction areas within the SR designation located on prominent hilltops, visible slopes less than 40 percent, or where there are significant natural features of aesthetic

Table 5-1: Site Sensitivity

Site Sensitivity	Characteristics
	value that are visible from public roads or public use areas (parks, trails, and so on). This category also includes building or construction sites on prominent ridgelines that may not be designated as scenic resources but are visible from a designated Scenic Corridor.
Maximum	The site or any portion thereof is within a land use or zoning designation protecting scenic resources, such as General Plan designated Scenic Landscape Units, coastal zone, community separators, or Scenic Corridors. The site vicinity is generally characterized by the natural setting and forms a scenic backdrop for a designated Scenic Corridor. This category includes building or construction sites within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40 percent, or where there are significant natural features of aesthetic value that are visible from a designated Scenic Corridor.

Source: Sonoma County 2019.

As noted in Section 5.1.1, the proposed BESS site straddles the border between urban and rural landscapes, with the Petaluma city limits acting as an official dividing line and Old Adobe Road as a visual one. Although views immediately surrounding the site are mostly rural, the PG&E Lakeville Substation, as well as small aircraft flying overhead, introduce industrial and aeronautical elements into the landscape. The existing substation and storage lot, and the transmission towers and lines that emanate from it and through the BESS site, substantially detract from the naturalness of the setting. However, the Project site is within a designated Scenic Landscape Unit, which mostly surrounds the site to the north, east, and south. Petaluma Adobe State Historic Park is zoned as Public Facilities District and Local Guidelines Combining District, Scenic Resources Combining District—Valley Oak Habitat Combining District. In addition, Old Adobe Road, which the site would front, is a Sonoma County designated Scenic Corridor. For these reasons, site sensitivity is considered high, per Table 5-1.

5.1.5 Visual Dominance

In accordance with Sonoma County guidelines, visual dominance is determined by examining the contrasts of the landscape character elements of form, line, color, texture, and night lighting. Upon evaluating these visual characteristics, a descriptive dominance “rating” of either inevident, subordinate, co-dominant, or dominant is determined. The evaluation of contrast and dominance is a comparative assessment of project components and existing elements in the surrounding landscape. Visual dominance evaluations are informed by project scale and contrast levels (strong, moderate, low, or none) as presented in visual simulations.

The County’s visual dominance levels criteria are presented in Table 5-2.

Table 5-2: Visual Dominance

Dominance Level	
Dominant	Project elements are strong. They stand out against the setting and attract attention away from the surrounding landscape. Form, line, color, texture, and night lighting contrast with existing elements in the surrounding landscape.
Co-Dominant	Project elements are moderate. They can be prominent within the setting, but attract attention equally with other landscape features. Form, line, color, texture, and night lighting are compatible with their surroundings.

Table 5-2: Visual Dominance

Subordinate	The project is minimally visible from public view. Element contrasts are weak. They can be seen but do not attract attention. The project generally repeats the form, line, color, texture, and night lighting of its surroundings.
Inevident	The project generally is not visible from public view because of intervening natural land forms or vegetation.

Source: Sonoma County 2019.

Nine visual simulations of the Project were prepared to inform this VIA. Existing photographs and visual simulations are included as Appendix B. As presented in the visual simulations, the BESS enclosures would be experienced from offsite viewing locations as a series of lightly colored, low, and repeating horizontal forms and lines. As viewed from the Petaluma Adobe State Park parking lot, Manor Lane, Old Adobe Road, and Adobe Road (KOPs 1, 2, 3, and 4), the BESS facility would present as low, horizontal forms because of proposed 8- to 12-foot-tall CMU, composite, or similar perimeter wall with a stone façade finish and chain link fence. The facility’s switchyard also would create a concentrated series of metallic, thin, vertical and horizontal lines that would be most pronounced from locations to the east of the site, including from Adobe Road. The Project gen-tie line would result in approximately 10 vertical brown-colored structures, reaching approximately 100 feet in height, on the north and south side of Old Adobe Road, leading to the PG&E Lakeville Substation. These structures would be most visible from the south and east, including Old Adobe Road and Adobe Road.

Anticipated BESS facility elements and contrasts would be softened and reduced by the installation and maturation of Project landscaping along the site’s perimeter (Appendix A, Figure 3). As shown on the visual simulations (Appendix B), the light brown color of BESS containers and resulting landscape contrast also would be softened by the installation of proposed landscaping and the success of landscape masking would improve over time as trees and shrubs become full and mature. The gen-tie structures would not be directly screened by Project vegetation, particularly near Old Adobe Road. Similarly, the static mast structures within the substation would not be directly screened by Project vegetation and would be most noticeable from Old Adobe Road and Adobe Road. The gen-tie and static mast structures are smaller in size and generally would appear consistent in form, line, and shape with existing electrical utility structures in the immediate vicinity of the Project. The brown color of the gen-tie structures would allow for greater visual absorption with the surrounding hillsides than the existing metallic utility structures.

Regarding light and glare, outdoor project lighting would be fully shielded and directed downward to avoid light spill beyond the Project site (the BESS facility also would not be illuminated during normal operations). Based on the operational characteristics of lighting and the proximity of the adjacent PG&E Lakeville Substation, which includes lighting of similar usage and intensity as the proposed substation, the Project lighting is not anticipated to result in substantial contrast. Based on this assessment, the Project would be subordinate in the visual landscape from viewing locations in the immediate surrounding area.

5.1.6 Thresholds of Significance for Visual Impact Analysis

The *Sonoma County Thresholds of Significance for Visual Impact Analysis* are informed by: (1) the visual sensitivity of the site, and (2) characterization of the visual dominance of the Project. Table 5-3 is used by Sonoma County to determine the thresholds of significance for visual impact analysis.

Table 5-3: Thresholds of Significance for Visual Impact Analysis

Site Sensitivity	Characteristics			
	Dominant	Co-Dominant	Subordinate	Inevident
Maximum	Significant	Significant	Significant	Less than significant
High	Significant	Significant	Less than significant	Less than significant
Moderate	Significant	Less than significant	Less than significant	Less than significant
Low	Less than significant	Less than significant	Less than significant	Less than significant

Refer to Section 6.1.3 for a determination of significance for visual resources, as analyzed per the Sonoma County *Visual Assessment Guidelines*.

5.2 CEQA Guidelines

5.2.1 Scenic Vistas

Designated Scenic Vistas are not identified within the *Sonoma County General Plan*. However, the General Plan identifies landscapes of special importance, including the Sonoma Mountains and the hills south of Petaluma.

The Sonoma Mountains are at times visible from Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, and Adobe Road (the presence of existing trees occasionally blocks the mountains from view). Additionally, the hills south of Petaluma are at times visible from Manor Lane. Refer to the visual simulations at KOP locations in Appendix B for views of landscapes of special importance.

5.2.2 State Scenic Highways

Scenic highways include those state facilities that have been officially designated or nominated for designation through eligible status by Caltrans. Pursuant to CEQA Appendix G guidelines, scenic resources include trees, rock outcroppings, and historic buildings and also may include locally recognized scenic resources.

The Project site is situated approximately 6.4 miles west from the nearest segment of roadway included on the State Scenic Highway System. Specifically, State Route 12 from State Route 101 (near Santa Rosa) to State Route 121 (near Sonoma) is an eligible state scenic highway. The nearest officially designated state scenic highway, State Route 12 (at London Way near Agua Caliente) is located north of the Sonoma Mountains and nearly 7 miles to the northeast of the Project site (Caltrans 2022). Although not a designated State Scenic Highway, Old Adobe Road is a Sonoma County designated Scenic Corridor.

While a segment of State Route 116 located approximately 1.78 miles southwest of the BESS facility site is included on Caltrans' State Scenic Highway Map (<https://dot.ca.gov/programs/design/lap-landscape-architectureand-community-livability/lap-liv-i-scenic-highways>), the short segment of the included highway and its location suggest that the map is in error as it relates to this specific segment. Thus, this nearby segment of State Route 116 is not assumed to be an eligible state scenic highway.

5.2.3 Visual Character, Quality, and Consistency with Applicable Regulations

Visual Character

Refer to Section 5.1.3 for information on the existing visual character at each KOP location.

Visual Quality

In general, visual quality is a measure of how viewers perceive the aesthetic value of the landscape. As compared with the regional landscape, views around the Project site do not contain particularly striking or distinctive features. The generally pastoral setting of the Project site and surrounding areas, particularly shown in KOPs 1 through 4, contains fairly common features such as agricultural fields, agricultural structures, bands of trees and other vegetation, two-lane roadways, utility infrastructure, and rolling hillsides with uniform patterns of vegetation. Memorability and distinctiveness of the Project site is slightly reduced based on the commonality of the setting; however, vividness of the visual setting is considered moderate. Within the AVE, there are occasional views of generally natural landscapes, particularly, the grasses, tree lines, and Sonoma Mountains viewed from KOP 1. However, the Project site includes existing transmission line structures, agricultural equipment, dirt roads, and fences. The surrounding area includes paved roadways, the PG&E Lakeville Substation, and residences. The visual order in the landscape is not free from encroachment and the integrity of visual order is reduced. The intactness of the visual setting is considered moderate.

The area surrounding the Project site contains uniform rolling hills of similar size with regular patterns of brown grasses and green vegetation. The deciduous trees and vegetation generally have rounded shape and a consistently varied texture. These resources join together to form a somewhat coherent, harmonious visual pattern. Utility infrastructure, sporadic agricultural structures, roadways, and residences serve to break up the uniformity, which reduces unity to a moderate level.

Zoning and Other Regulations

Refer to Section 3 for information on the regulatory setting, including land use and zoning.

5.2.4 Lighting and Glare

The Project site primarily consists of agricultural uses and several areas of mature trees. Existing transmission lines and associated lattice steel towers may produce minor amounts of glare in certain lighting conditions. Similarly, the existing PG&E Lakeville Substation contains metallic racks, bays, and other associated substation infrastructure that may produce glare as light is reflected from metallic surfaces. Driveways to the substation and construction and laydown yards include outdoor lighting for security and general illumination and outdoor lighting sources also occur on the sites.

6. Visual Impacts

6.1 Sonoma County Visual Assessment Guidelines

This section describes the visual impacts, per the Sonoma County *Visual Assessment Guidelines*.

6.1.1 Site Sensitivity

As described in Section 5.1.4, the existing site sensitivity is considered high. The Project would not include building or construction within the scenic resource designation on or near prominent ridgelines, visible slopes greater than 40%, or where there are significant natural features of aesthetic value that are visible from a designated Scenic Corridor. Therefore, the site sensitivity would not increase to the maximum level and would remain at a high sensitivity. Impacts would be less than significant.

6.1.2 Visual Dominance

Refer to Section 5.1.3 for descriptions of existing conditions, including form, line, color, texture, and night lighting at each KOP location. The following impact analysis focuses on changes to visual dominance, as defined by Section 4 of the Sonoma County *Visual Assessment Guidelines*, that would be visually present at each KOP upon completion of Project construction and landscape installation.

KOP 1: A new horizontal form of brown color would appear through the gaps in existing trees because of the 8- to 12-foot-tall CMU, composite, or similar perimeter wall with a stone façade finish. The stone façade would provide textured finish with a pattern of grooves designed to mimic a stone wall. The wall generally would blend in with brown grasses in the foreground and along the Sonoma Mountains in the background. Project landscaping would appear as a horizontal row of deciduous trees of similar varied green color and textures, rounded form, and size as the existing trees. Night lighting would not be visible as the access gate is not in view. The completed Project would be minimally visible from public view. Element contrasts would be weak since the perimeter wall and landscaping would be seen but would not attract attention. The Project generally would repeat the form, line, color, and texture of its surroundings; therefore, it would be considered subordinate.

KOP 2: The BESS facility would add a new horizontal form of light brown color in the middle ground through gaps in existing trees and undulating topography. The 8- to 12-foot-tall CMU, composite, or similar perimeter wall with a stone façade finish would be visible as a dark horizontal line. Project landscaping would appear as a horizontal row of deciduous trees of similar varied green color, textures, and rounded form as existing nearby trees. Project vegetation at planting would appear smaller in size than the dense vegetation east of the Project site. Night lighting at the access gate may be visible; however, it would be fully shielded and directed downward to avoid light spill beyond the Project site and would be consistent with surrounding uses such as the PG&E Lakeville Substation and development within Petaluma. The completed Project would be minimally visible from public view. Element contrasts would be weak since the perimeter wall and landscaping would be seen but would not attract attention. The Project generally would repeat the form, line, color, texture, and night lighting of its surroundings; therefore, it would be considered subordinate.

KOP 3: The most visible Project components would be the Project gen-tie towers, which would add vertical brown forms and lines protruding into the skyline in the foreground. The gen-tie wires would be visible against the sky as a series of horizontal connecting lines. However, these features would be mostly obscured by the existing substation, lattice transmission towers, and numerous lines crossing at various angles throughout this view, which already introduce an industrial setting into this view. In addition, the

gen-tie components would be visually absorbed by the brown grasses, green vegetation, and undulating topography of the Sonoma Mountains as the alignment becomes more distant from Old Adobe Road. The BESS facility, particularly the perimeter wall and fencing, would be minimally visible as a light brown and gray horizontal form. Equipment within the BESS facility is imperceptible from KOP 3. Project landscaping would appear as a horizontal row of deciduous trees of similar varied green color, textures, size, and rounded form as existing nearby trees. Night lighting at the access gate may be visible; however, it would be fully shielded and directed downward to avoid light spill beyond the Project site and would be consistent with surrounding uses such as the residences and agricultural operations. The BESS facility components would be minimally visible from public view. The gen-tie components would be visible within the setting but would not attract attention based on the existing nearby transmission line and substation, which feature larger, taller, and more visually dominating structures. Additionally, the brown color of the gen-tie structures would allow for greater visual absorption with the background hillsides. Therefore, the gen-tie form, line, color, and texture generally would be repeated with the existing utility features and would be considered **subordinate**.

KOP 4: The Project gen-tie towers would add vertical brown lines, which would protrude into the skyline in the middle ground that would be minimally perceptible because of distance and distracting foreground elements. The gen-tie wires also would be visible against the skyline as horizontal lines, but visually absorbed by the existing wires in the foreground. A few existing and mature deciduous trees would be removed just left (north) of center, through which the Project's perimeter wall and fence would be barely visible. The removal of the trees also would allow for less-obstructed views of the Sonoma Mountains, which would appear as a brown, slightly undulating horizontal form along the horizon. Project landscaping would appear as a horizontal row of deciduous trees of similar varied green color, textures, size, and rounded form as existing nearby trees. Although barely perceptible from this distance, landscaping is expected to mature over time and screen views of the perimeter wall. Night lighting at the access gate may be visible; however, it would be fully shielded and directed downward to avoid light spill beyond the Project site and would be consistent with surrounding uses such as the agricultural structures. The BESS facility components would be minimally visible from public view. The gen-tie components would be more visible than the BESS facility but would not attract attention because of the existing nearby transmission line and distribution lines, which feature larger, taller, and more visually dominating structures. The removal of trees would be temporarily apparent until Project landscaping matures. The brown color of the gen-tie structures would allow for greater visual absorption with the background hillsides. Therefore, the Project form, line, color, texture, and night lighting generally would repeat those of the surroundings and would be considered **subordinate**.

KOP 5: Project landscaping would appear through a small gap in existing deciduous trees as a small, rounded form of deciduous trees that are similar varied green color, textures, size, and rounded form as existing nearby trees. The Project generally would not be visible from public view because of intervening vegetation and would be considered inevent.

KOP 6 to KOP 9: Project landscaping would appear through small gaps in vegetation as similar varied green color and textures as the existing dense vegetation. The Project components generally would not be visible from public view because of intervening vegetation and would be considered inevent.

Mitigation Measure MM-AES-1 is recommended to reduce impacts from contrasting color and glare sourced from metallic components, such as the gen-tie towers. However, based on the previous assessment, the Project, even with implementation of MM-AES-1, would be co-dominant in the visual landscape, particularly the gen-tie components as viewed from KOPs 3 and 4.

- **MM-AES-1:** The Project will treat the surfaces of metallic structures visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors; and (b) their colors and finishes do not create excessive glare.

6.1.3 Determination of Significance of Visual Impacts

Per Section 6.1.1, the Project was assessed as having high sensitivity prior to and after construction. Per Section 6.1.2, the Project was determined to be **visually subordinate** with the surroundings, with implementation of MM-AES-1. Therefore, in accordance with the County's *Visual Assessment Guidelines*, specifically Section 5.1.6 (Table 5-3), the Project, as presented, is likely to result in **less-than-significant impacts**.

6.2 CEQA Appendix G Analysis

6.2.1 Scenic Vistas

Would the Project have a substantial adverse effect on a scenic vista?

Designated Scenic Vistas are not identified within the *Sonoma County General Plan*. However, the General Plan identifies landscapes of special importance, including the Sonoma Mountains and the hills south of Petaluma (Sonoma County 2016). The Sonoma Mountains are at times visible in the background beyond the Project site from Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, and Adobe Road. Additionally, the hills south of Petaluma are at times visible in the background beyond the Project site from Manor Lane. Views of these recognized landscapes of special importance are occasionally blocked, interrupted, or degraded by the presence of existing trees and structures, such as electrical transmission lines and the Lakeville Substation.

Construction

Vehicles and stored materials/components would not block or substantially interrupt existing publicly available views from Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, or Adobe Road to the Sonoma Mountains or from Manor Lane to the hills south of Petaluma.

While the majority of construction vehicles used on the Project site, including graders, loaders, backhoes, compactors, and excavators, would be of typical heights (10 to 20 feet in height), these vehicle types would be partially backscreened (that is, viewed against/in front of) by existing mature trees and vegetation surrounding the Project site. Tall cranes used during battery/container installation and substation and gen-tie installation could potentially be silhouetted, viewed in line with the distant Sonoma Mountains or hills south of Petaluma, or protrude into the skyline. As such, the presence of cranes onsite during construction and, more specifically, the static storage of particularly tall components (for example, jib and mast) in vertical/fully extended positions could have an adverse effect and interrupt available views to the Sonoma Mountains or hills south of Petaluma as experienced from Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, and Adobe Road. Therefore, onsite usage of cranes during project construction could result in an adverse, temporary impact to publicly available views of designated landscapes of special importance (namely, public views to the Sonoma Mountains and hills south of Petaluma). Because of the temporary nature of construction, impacts are considered less than significant.

Operations

The Sonoma Mountains are partially visible from Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, and Adobe Road. Because of the existing trees, topography, and electrical transmission and distribution lines, and the PG&E Lakeville Substation, views to the Sonoma Mountains are occasionally obstructed, as shown by the visual simulation in Appendix B. Vertically extending Project components, including a riser pole, static mast, and gen-tie structures, would be of similar or less scale as the existing transmission lines and the PG&E Lakeville Substation.

Based on the temporary nature of construction and the existing natural and industrial features that interfere with views of surroundings scenic resources, the Project would not have a substantial adverse effect on Sonoma County designated landscapes of special importance, and impacts would be less than significant.

6.2.2 Scenic Highways

Would the Project substantially degrade scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Because of distance and the presence of intervening features, including terrain, vegetation, and development, construction and operation of the Project would not be visible from designated state scenic highways and, therefore, would have no visual impacts to scenic resources within a state scenic highway.

While the Project would require the removal of trees, the nearest tree removal to Old Adobe Road would be approximately 260 feet south of the Scenic Corridor, near the construction yard and PG&E Lakeville Substation. The Project would not involve the removal of unique rock outcroppings or historic buildings.

6.2.3 Visual Character, Quality, and Consistency with Applicable Regulations

In non-urbanized areas, would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Because the Project site straddles the boundary between urban and rural communities, both visual character and quality, as well as applicable zoning and other regulations governing scenic quality, are addressed in the following sections.

Visual Character

For the purposes of this VIA, visual character is defined in Section 4.2. The visual character of a landscape is formed by the order of pattern composing it, consisting of form, line, color, and texture.

Construction

Vehicles, equipment, and construction personnel would be temporarily present on local roads and the Project site for the approximately 12-month duration of construction. The influx of construction activity would temporarily change the visual character from an agricultural site to an active construction site. This change in visual character would be apparent to passing motorists on Old Adobe Road, Manor Lane, Petaluma Adobe State Historic Park, Adobe Road, and other vantage points providing views to the Project site. Project construction equipment may be brightly colored, metallic in texture, and unfixed in position.

Site preparation and grading generally would appear as horizontal forms that would be varying shades of brown from the freshly exposed soil. The removal of trees would eliminate textures and expose landforms, such as the Sonoma Mountains in the distance, adding patterns of brown grasses and green vegetation.

The installation of Project components, including the BESS foundations, installing the BESS enclosures, laying the undergrounding electrical collection and communication lines, assembly of accessory electrical components, including inverters and transformers, and installation of high-voltage equipment, including the onsite substation and gen-tie line, would be diverse and noncontinuous because of the movement of equipment and materials. Cranes would be visible as vertical forms or lines with metallic textures that would protrude into the skyline, particularly visible to viewers on Old Adobe Road.

Therefore, short-term construction activities would change the existing visual character of the site and its surroundings. MM-AES-2 and MM-AES-3 are recommended to reduce impacts related to the short-term, onsite storage of construction equipment, vehicles, and materials. MM-AES-1 involves the storage of construction items within a fenced and screened designated staging area, while MM-AES-2 pertains to the prompt removal of demolition and construction debris from the Project site. With implementation of MM-AES-2 and MM-AES-3, short-term and temporary impacts to visual character and quality would be less than significant.

- **MM-AES-2:** The Project will ensure that, during nonconstruction hours, all construction equipment, vehicles, and materials are relegated to a designated staging areas on or adjacent to the Project site. The staging areas will be fenced to clearly identify the boundary of the storage area and to limit views of stored construction items from adjacent land uses and roadways. The temporary staging area and enclosures will remain closed at times when work is not taking place.

All staging area fencing will use coated material to eliminate glare. The fencing material will incorporate colors and color patterns that have the least contrast with the surroundings and modify the overall impact of the fence surface that is directly viewed by nearby visual receptors.

Any onsite staging area will be located within an appropriate, convenient portion of the Project site, away from adjacent land uses and roadways, as feasible. Storage containers also will be used to store loose construction items and materials to prevent a haphazard visual appearance on the Project site.

- **MM-AES-3:** The Project will ensure that any demolition and construction debris not designated for reuse on the Project site will be promptly removed from the site in accordance with the approved construction schedule. No long-term stockpiling of such debris will occur on the Project site.

Operation

For the purposes of this VIA, visual dominance, as defined by the Sonoma County *Visual Assessment Guidelines* and described in Section 4.1, evaluates the same characteristics as visual character (form, line, color, texture). Therefore, refer to the impact analysis for visual dominance in Section 6.1.2.

Vertical project components, including the gen-tie structures and static masts, would be prominent within the setting but would attract attention equally with the existing transmission lines, distribution lines, and PG&E's Lakeville Substation. Mitigation Measure MM-AES-1 is recommended to reduce impacts from contrasting color and glare sourced from metallic components, such as the gen-tie towers. With implementation of MM-AES-1, the Project would result in less-than-significant impacts to the visual character.

- **MM-AES-1:** The Project will treat the surfaces of metallic structures visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors; and b) their colors and finishes do not create excessive glare.

Visual Quality

Refer to Section 5.2.3 for a description of the existing visual quality of the Project site. Because of the temporary nature of construction, visual quality would not substantially change during the construction phase of the Project. Although the Sonoma Mountains, hills south of Petaluma, and the general pastoral and rural characteristics of the area are valued in the community, as evidenced by the Sonoma County designated scenic resources overlay district and landforms of special importance, this is a fairly common setting in the region and the existing setting of the Project site does not include particularly striking and distinctive visual pattern. The introduction of new forms and patterns, including the horizontally formed perimeter wall and fence and vertical forms of the gen-tie structures and static masts, would not contrast

with surrounding landscape elements. Therefore, the vividness or memorability of the setting would not experience a substantial change and would remain moderate.

Existing transmission lines, distribution lines, PG&E Lakeville Substation, roadways, and structures occasionally result in encroachments to views of generally natural or pastoral landscapes. The integrity of visual order of the landscape would be slightly reduced by the Project because of the addition of visual encroachments by the gen-tie structures, static masts, and, to a lesser degree, substation components. However, the added visual encroachments by the Project generally would be consistent with existing visual encroachments. The intactness of the visual setting would not experience a substantial change and would remain moderate.

The Project would include a perimeter wall that is a similar brown color and texture to surrounding features such as agricultural fields, vegetation, and distant hills. Project landscaping would be consistent in a variety of green color, rounded form, and leafy texture to existing deciduous trees. The maturation of landscaping would result in similar sizes to existing trees. The gen-tie structures and static mast would be similar in vertical form and metallic texture to existing transmission and distribution lines; however, the color of these features would be designed to blend in with surrounding natural features rather than the grey or metallic color of the existing transmission lines. The area surrounding the Project site would continue to display generally uniform rolling hills of similar size with regular patterns of brown grasses and green vegetation. The Project would occasionally break up the uniformity; however, the landscape would continue to join together to form a somewhat coherent, harmonious visual pattern. The intactness of the visual setting would not experience a substantial change and would remain moderate.

Overall, the Project would not substantially reduce the vividness, intactness, or unity of the existing landscape. Therefore, impacts to visual quality would be less than significant.

In urbanized areas, would the project conflict with applicable zoning and other regulations governing scenic quality?

Per Sonoma County Municipal Code Section 26-10-030, public utility facilities are permitted in the LEA district with a CUP. Sonoma County Municipal Code Section 26-6-040 contains development standards for LEA zoning district. The standard maximum height for agricultural structures in this zoning district is 50 feet. Excluding the gen-tie structures (approximately 100 feet in height) and static mast structures, which are not agricultural structures, within the substation (approximately 100 feet in height), Project components are not expected to exceed 30 feet in height. The gen-tie and static mast structures will be lower in height than the existing adjacent PG&E transmission lines.

The Project is adjacent to Old Adobe Road, a designated Scenic Corridor. Per Section 26-64-030 of the Sonoma County Municipal Code, within a Scenic Corridor, structures are subject to setbacks of 30% of the depth of the lot to a maximum of 200 feet from the centerline of the road. Structures associated with the Project would be set back at distances greater than 200 feet from Old Adobe Road.

The public utility land use is consistent with the Sonoma County zoning code with the issuance of a CUP and is consistent with the applicable regulation governing scenic quality. Therefore, impacts to visual quality would be less than significant.

6.2.4 Lighting and Glare

For safety and security purposes, a limited number of new lights would be installed on the Project site, within the boundaries of the primary BESS Facility. The facility will not be lighted during typical operations. Security and safety lighting would be turned on for security, emergency, and maintenance purposes, when necessary. Should nighttime maintenance activities be required, maintenance personnel would bring

temporary, portable maintenance lighting as needed to the specific area under maintenance. Per Sonoma County Municipal Code Section 26-82-020, the final plans of development will depict the location and design of exterior night lighting (Sonoma County 2022a). The Petaluma Municipal Airport is located at 601 Sky Ranch Drive, approximately 0.75 mile west of the Project. Lighting for the gen-tie or static masts to comply with the Federal Aviation Administration is not expected because the Project features will not exceed 200 feet in height.

The immediate surrounding area, including the residences to the west, agricultural and residential properties to the east, and the Petaluma Adobe State Historic Park to the south, is largely void of significant urban lighting. Although the Project lights would be fully shielded, directed downward, and used to avoid light spill beyond the Project site, lighting could be a noticeable change if required at nighttime.

Mitigation Measure MM-AES-1 would reduce the potential for glare by requiring metallic surfaces be treated with materials that minimize glare. Because the lighting being required will be used only for security, emergency, and maintenance purposes, and with the implementation of MM-AES-1, the Project would not create a new significant source of light or glare that would adversely affect day or nighttime views and impacts would be less than significant.

7. Mitigation

MM-AES-1: The Project will treat the surfaces of metallic structures visible to the public such that (a) their colors minimize visual contrast by blending with the characteristic landscape colors; and (b) their colors and finishes do not create excessive glare.

MM-AES-2: The Project will ensure that, during non-construction hours, all construction equipment, vehicles, and materials will be relegated to a designated staging areas on or adjacent to the project site. The staging areas will be fenced to clearly identify the boundary of the storage area and to limit views of stored construction items from adjacent land uses and roadways. The temporary staging area and enclosures will remain closed at times when work is not taking place.

All staging area fencing will use coated material to eliminate glare. The fencing material will incorporate colors and color patterns that have the least contrast with the surroundings and modify the overall impact of the fence surface that is directly viewed by nearby visual receptors.

Any onsite staging area will be located within an appropriate, convenient portion of the Project site, away from adjacent land uses and roadways, as feasible. Storage containers also will be used to store loose construction items and materials to prevent a haphazard visual appearance on the Project site.

MM-AES-3: The Project will ensure that any demolition and construction debris not designated for reuse on the Project site will be promptly removed from the site in accordance with the approved construction schedule. No long-term stockpiling of such debris will occur on the Project site.

8. References

- Aircraft Owners and Pilots Association. 2022. "(O69) Petaluma Municipal Airport." <https://www.aopa.org/destinations/airports/O69/details>.
- Brown, Matt. 2020. "Battery storage proposed at Adobe Creek Golf Course in Petaluma." *Argus-Courier*. September 23. [Battery storage proposed at Adobe Creek Golf Course in Petaluma \(petaluma360.com\)](https://www.petaluma360.com/news/2020/09/23/battery-storage-proposed-at-adobe-creek-golf-course-in-petaluma/).
- California Association of Environmental Professionals. 2022. *2022 CEQA California Environmental Quality Act Statute & Guidelines*. https://www.califaep.org/docs/2022_CEQA_Statue_and_Guidelines.pdf.
- California Department of Parks and Recreation. 2022. Petaluma Adobe State Historic Park. https://www.parks.ca.gov/?page_id=474.
- California Department of Transportation (Caltrans). 2015. *Memorandum: FHWA Visual Impact Assessment Guidance*. November 6. <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/via-memo-craggs-a11y.pdf>.
- Caltrans. 2022. *California State Scenic Highway Program*. 2022. Accessed on December 19, 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.
- Cedar Lake Ventures, Inc. 2022. "Weather Spark—Climate and Average Weather Year Round in Petaluma." <https://weatherspark.com/y/619/Average-Weather-in-Petaluma-California-United-States-Year-Round>. Accessed on December 16, 2022.
- City of Petaluma. n.d. "Petaluma Municipal Airport." <https://cityofpetaluma.org/airport/>. Accessed November 7.
- City of Petaluma. 2021. "Petaluma Municipal Airport." <https://petalumastar.com/petaluma-municipal-airport/>.
- Dudek. 2022. *North Bay Energy Storage Project – Visual Resources Study*. June 24. On file with Jacobs.
- Federal Aviation Administration (FAA). 2022. Airport Categories. https://www.faa.gov/airports/planning_capacity/categories#:~:text=General%20Aviation%20Airports%20are%20public,the%20NPIAS%20are%20general%20aviation.
- Federal Highway Administration (FHWA). 1988. *Visual Impact Assessment for Highway Projects*. Washington D.C. 1988.
- GlobalSecurity.org. 2022. General Aviation. <https://www.globalsecurity.org/military/world/general-aviation.htm#:~:text=Various%20types%20of%20aircraft%20can,%2C%20gliders%2C%20and%20experimental%20aircraft..>
- Google. 2022. *Google Earth (Satellite Imagery of Sonoma County)*. Accessed on December 19, 2022.
- Sonoma County. 1978. *Sonoma Mountain Area Plan*. Accessed July 19, 2021. <https://sonomacounty.ca.gov/PRMD/Long-Range-Plans/Area-and-Specific-Plans/Area-and-Specific-Plans/>.

Visual Impact Analysis

Sonoma County. 2016. "Open Space and Resource Conservation Element." In *Sonoma County General Plan 2020*. As amended August 9. Sonoma County Permit and Resource Management Department. https://permitsonoma.org/Microsites/Permit%20Sonoma/Documents/Archive/_Documents/General-Plan-Open-Space-and-Resource-Conservation-Element.pdf

Sonoma County. 2019. *Visual Assessment Guidelines*. January. <https://permitsonoma.org/longrangeplans/proposedlong-rangeplans/environmentalreviewguidelines/visualassessmentguidelines>.

Sonoma County. 2022a. Sonoma County Municipal Code. https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH26DHELATR.

Sonoma County. 2022b. Code of Ordinances. Section 26-04-020 Article 06 – Agricultural and Resource Zones. https://library.municode.com/ca/sonoma_county/codes/code_of_ordinances?nodeId=CH26SOCOZORE_ART06AGREZO.

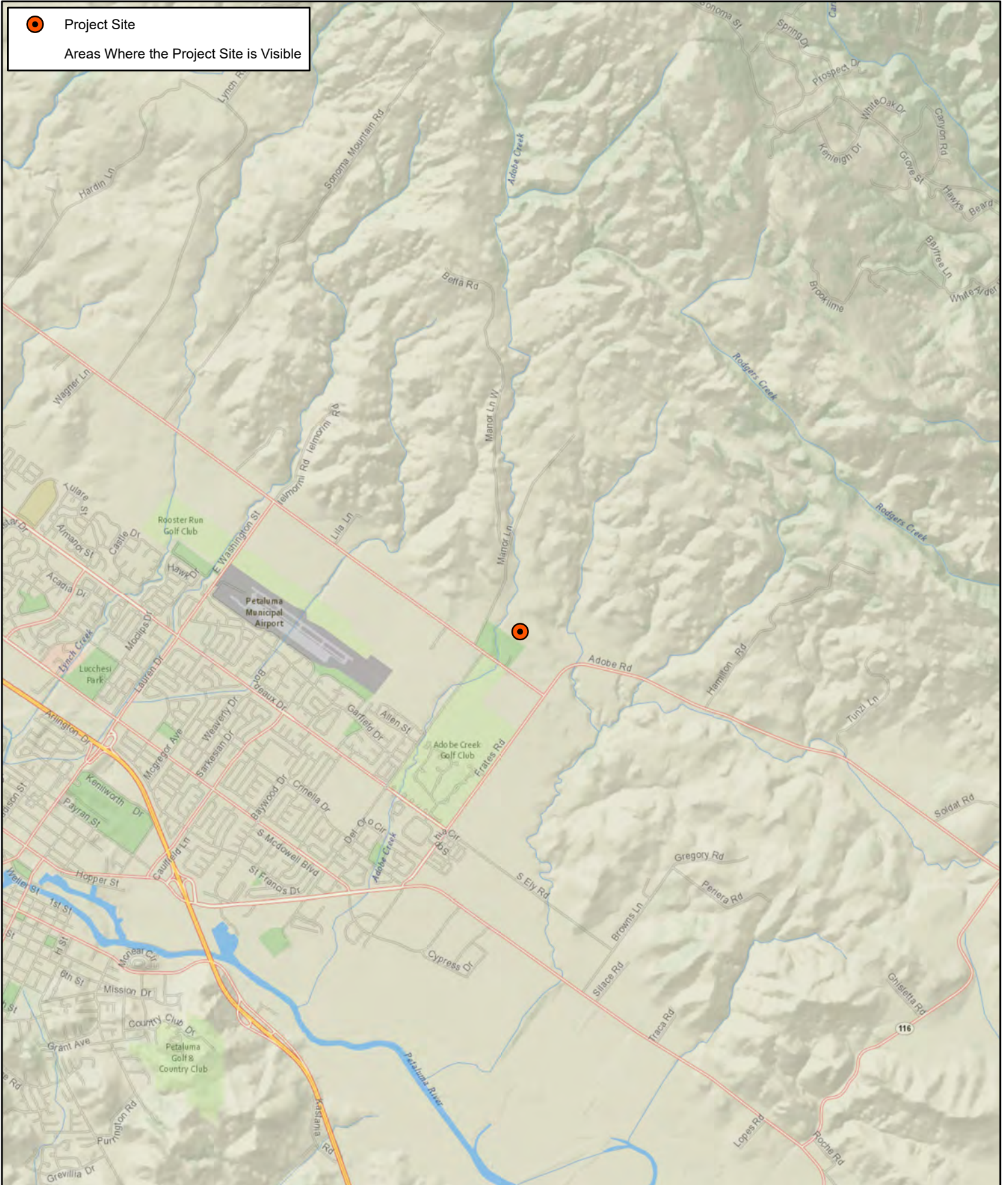
Sonoma County. 2022c. Zoning and Land Use GIS map. <https://sonomacounty.maps.arcgis.com/apps/webappviewer/index.html?id=06ac7fe1b8554171b4682dc141293962>.

State of California. 2022. CEQA: The California Environmental Quality Act. Governor's Office of Planning and Research. <https://opr.ca.gov/ceqa/>.

Weekend Builds. 2022. How Tall Is a 1, 2 and 3 Story House? <https://weekendbuilds.com/how-tall-is-a-house/>.

Appendix A

Figures



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Figure 1
 Area of Visual Effect
 Borealis ESS, LLC
 Borealis Energy Storage Project

- Project Footprint
- ▲ Viewpoints Advanced
- X Eliminated Viewpoints
- City of Petaluma Limits



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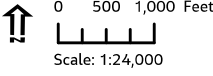





Figure 2
Viewpoints Considered
 Borealis ESS, LLC
 Borealis Energy Storage Project

-  Project Footprint
-  Key Observation Points
-  City of Petaluma Limits



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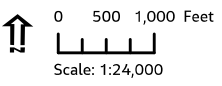
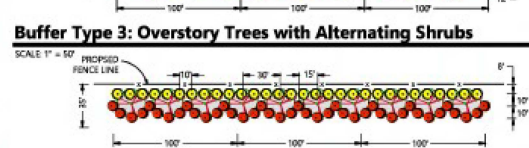
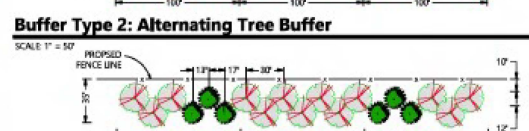
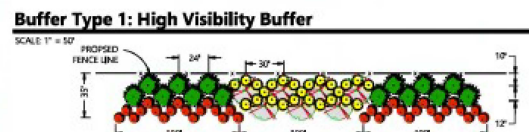
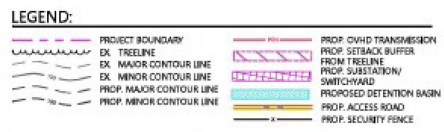
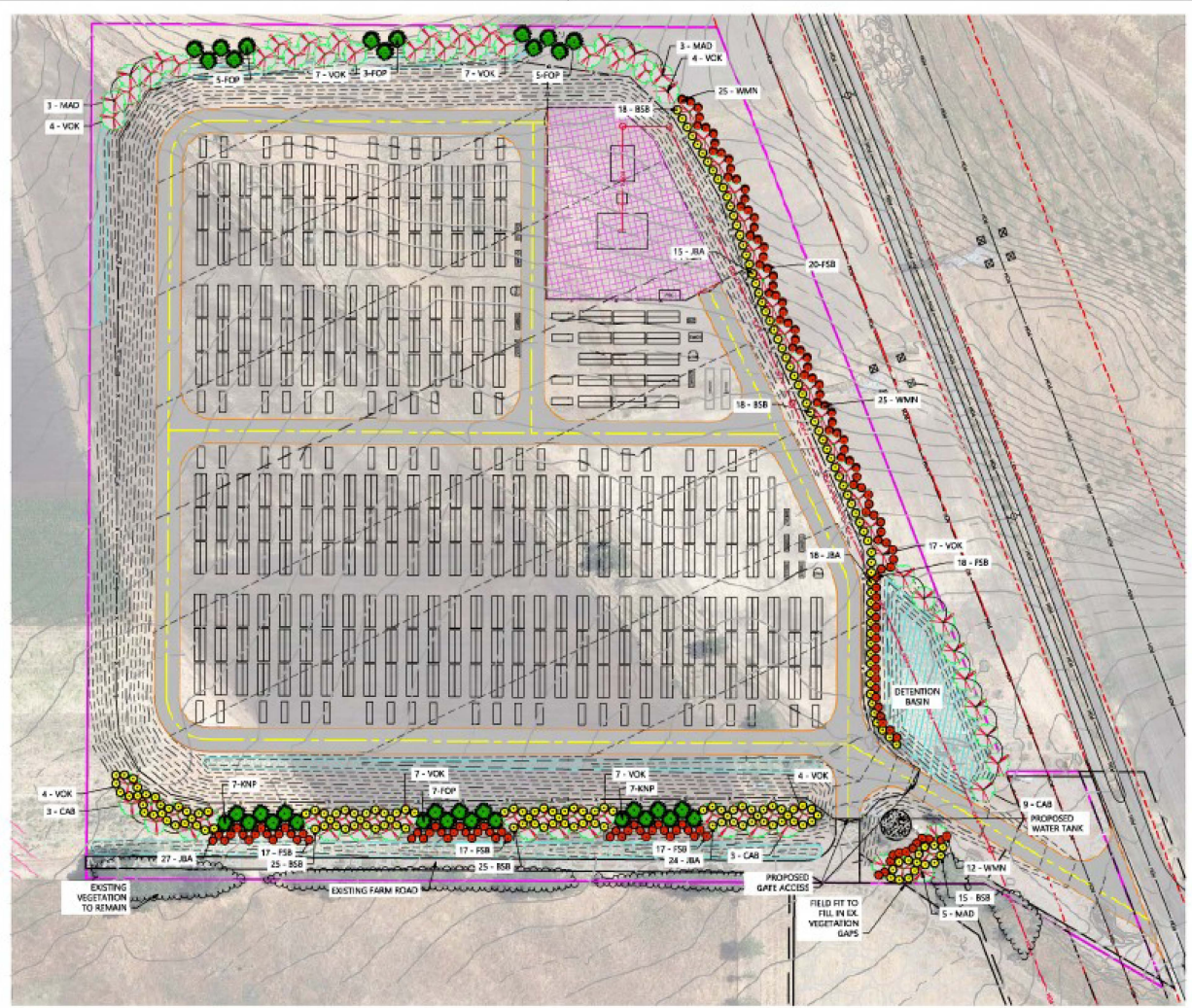


Figure 3
Key Observation Points
 Borealis ESS, LLC
 Borealis Energy Storage Project



Water Budget Calculations

PROJECT SERVED BY POTABLE WATER SOURCES
 MAXIMUM APPLIED WATER ALLOWANCE (MAWA)
 MAWA (BY GALLONS) = (ETOD x A) + (L x SLA) + (SLA)

ETOD: 48.9
 LA: 52,778.0 SF
 SLA: 0.5F

MAWA: 813,518.88 Gal

ESTIMATED ANNUAL WATER USE (EAWU)
 EAWU (BY GALLONS) = (ETOD x A) + (MAWA x SLA)

ETOD: 48.9
 PF: 0.1 (VERY LOW)
 HA: 73,257 SF
 BS: 0.71
 SLA: 0.5F

EAWU Sub-Total: 232,202.73 Gal

ESTIMATED ANNUAL WATER USE (EAWU)
 EAWU (BY GALLONS) = (ETOD x A) + (MAWA x SLA)

ETOD: 48.9
 PF: 0.2 (LOW)
 HA: 4,881 SF
 BS: 0.71
 SLA: 0.5F

EAWU Sub-Total: 32,734.95 Gal

OVERALL ESTIMATED ANNUAL WATER USE (EAWU)
 OVERALL EAWU (BY GALLONS) = (EAWU Sub-Total) + (EAWU Sub-Total) (0.85)

OVERALL EAWU Total: 269,444.39 Gal

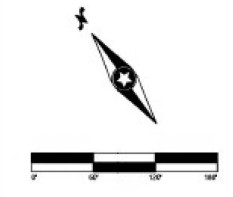
- NOTES**
- I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM FOR THE PROPOSED USE OF WATER IN THE LANDSCAPE DESIGN PLAN.
 - ALL PLANTING AREAS ARE TO HAVE A MINIMUM OF 2" SHREDDED HARDWOOD MULCH.
 - ALL SPECIES WERE SELECTED TO REQUIRE LOW WATER NEEDS BY WUCOLS BY REGION 1, SUNSET ZONE 14.

BUFFER & SCREENING PLANT SPECIES LIST

SYMBOL	CODE	QTY	COMMON/BOTANICAL NAME	WUCOLS BY CLIMATE ZONE	SIZE (AT INSTALL)	SPACING O.C.	MATURE SIZE	WUCOLSA WATER USE CLASSIFICATION
OVERSTORY TREE	VOK	61	Valley Oak / Quercus laevis	1	7' BB	AS SHOWN	H 50'-70' W 30'-50'	VERY LOW
	CAB	15	California Buckeye / Aesculus californica	1	2' BB	AS SHOWN	H 15'-20' W 15'-20'	VERY LOW
	MAD	11	Madrone / Arbutus menziesii	1	2' BB	AS SHOWN	H 20'-30' W 15'-40'	LOW
CONIFER TREE	KNP	14	Knox Pine / Pinus attenuata	1	8' HT	AS SHOWN	H 20'-30' W 25'-25'	VERY LOW
	FOP	20	Foothill Fir / Pseudotsuga sitchensis	1	8' HT	AS SHOWN	H 40'-75' W 30'-50'	VERY LOW
DECIDUOUS SHRUBS	TIB	88	Four-winged Saltbush / Artemisia canescens	1	#5 CONT	8' O.C.	H 2'-8" W 4'-8"	VERY LOW
	JA	64	Jayadee / Symmondsia chinensis	1	#5 CONT	8' O.C.	H 3'-8" W 3'-8"	VERY LOW
	WMN	63	Whiteleaf Manzanita / Arctostaphylos viscida	1	#5 CONT	8' O.C.	H 3'-13" W 3'-8"	VERY LOW
	BSB	161	Big Sagebrush / Artemisia tridentata	1	#5 CONT	8' O.C.	H 3'-2" W 4'-2"	VERY LOW

NOTES: 1) QUANTITIES ON PLAN SUPERSEDE LIST QUANTITIES IN THE EVENT OF A DISCREPANCY. 2) B & B SPECIES ROOT TYPE AS BALLED AND BURLAFFED. 3) H-T SPECIES MINIMUM SPECIMEN HEIGHT UPON INSTALLATION. 4) #5 CONT. TO MEET MINIMUM SIZE REQUIREMENT OF 24" H OR 30" W FOR DECIDUOUS SHRUBS UPON INSTALLATION. IF PLANT SIZE UNAVAILABLE AT #5 CONT. UPSIZE CONTAINER UNTIL MINIMUM PLANT SIZE REQUIREMENT IS MET. 5) VALLEY OAKS SHALL COMPOSE A MINIMUM OF 75% QUANTITY OF THE REQUIRED LANDSCAPE TREES FOR THE DEVELOPMENT PROJECT IS 25-67-040.

REVISIONS:

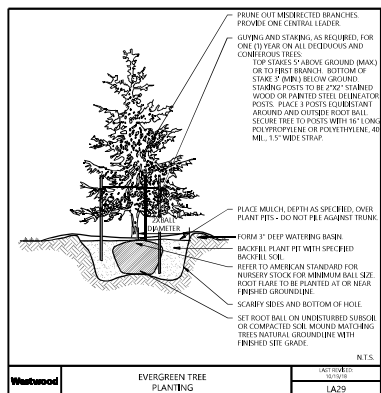
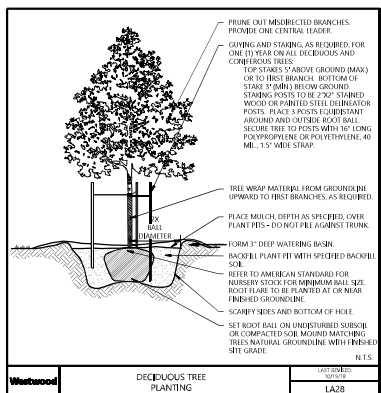
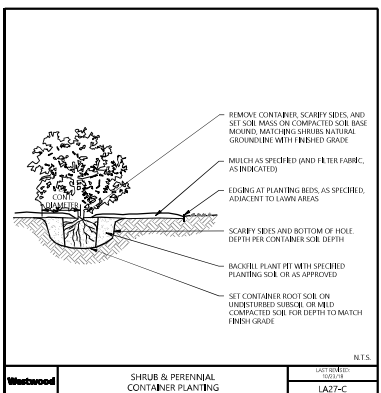


Borealis Battery Energy Storage Project
 Sonoma County, California

Preliminary Landscape Plan

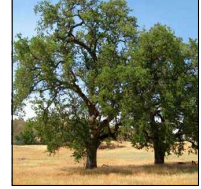
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DATE: 09/13/2022
 SHEET: L100



BUFFER & SCREENING PLANT MATERIAL

Valley Oak



California Buckeye



Madrone



Foothill Pine



Knobcone Pine



Jajoba



Four-wing Saltbush



Whiteleaf Manzanita



Big Sagebrush



BATTERY STORAGE - SCREENING REQUIREMENTS

- CONTRACTOR SHALL CONTACT CALIFORNIA USA NORTH 811 DIG SAFE SYSTEM (811) OR (800-442-2444) TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
- ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.
- NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- ALL SUBSTITUTIONS MUST BE APPROVED BY THE OWNER PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
- CONTRACTOR SHALL PROVIDE ONE YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
- ALL PLANTS TO BE SPECIMEN GRADE, CALIFORNIA-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ACHIEVE, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:
 - ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.
 - ALL PLANTS SHALL BE FREE FROM NOTICIBLE GAPS, HOLES, OR DEFORMITIES.
 - ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.
 - ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.
 - CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
- PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
- PLANTS TO BE INSTALLED AS PER CALA & ANSI STANDARD PLANTING PRACTICES.
- PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY, TEMPORARY ONLY.
- PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLARE IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLARE. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLARE SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED GRADE.
- REMOVE POT ON POTTED PLANTS, SPLIT AND BREAK APART PEAT POTS.
- PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
- THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY OWNER FOR THE NEED OF ANY SOIL AMENDMENTS.
- BACKFILL SOIL AND TOPSOIL TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.
- PROVIDE MULCH FOR ALL TREE AND SHRUB PLANTINGS PER DETAIL. MULCH TO BE SHREDDED HARDWOOD AND FREE OF DELETERIOUS MATERIAL. MULCH 3" DIAMETER RING AROUND ALL TREES AND SHRUBS TO A DEPTH OF 4". KEEP MULCH OFF TRUNK.
- CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
- REPAIR, REPLACE, OR PROVIDE SLOTTED AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
- REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.

REVISIONS	

Borealis Battery Energy Storage Project
 Sonoma County, California

Preliminary Landscape Plan

NOT FOR CONSTRUCTION

DATE: 09/13/2022

SHEET: L101

Appendix B

Visual Simulation

VIEW FROM PARKING LOT - BEFORE



Westwood

Phone (920) 937-5150 12701 Whitesett Drive
Fax (920) 937-5822 Minnetonka, MN 55343
Toll Free (888) 937-5150 westwoods.com

09-23-22
0032289

BOREALIS BATTERY STORAGE SONOMA COUNTY, CA

Westwood Professional Services, Inc.

VIEW FROM PARKING LOT - AFTER



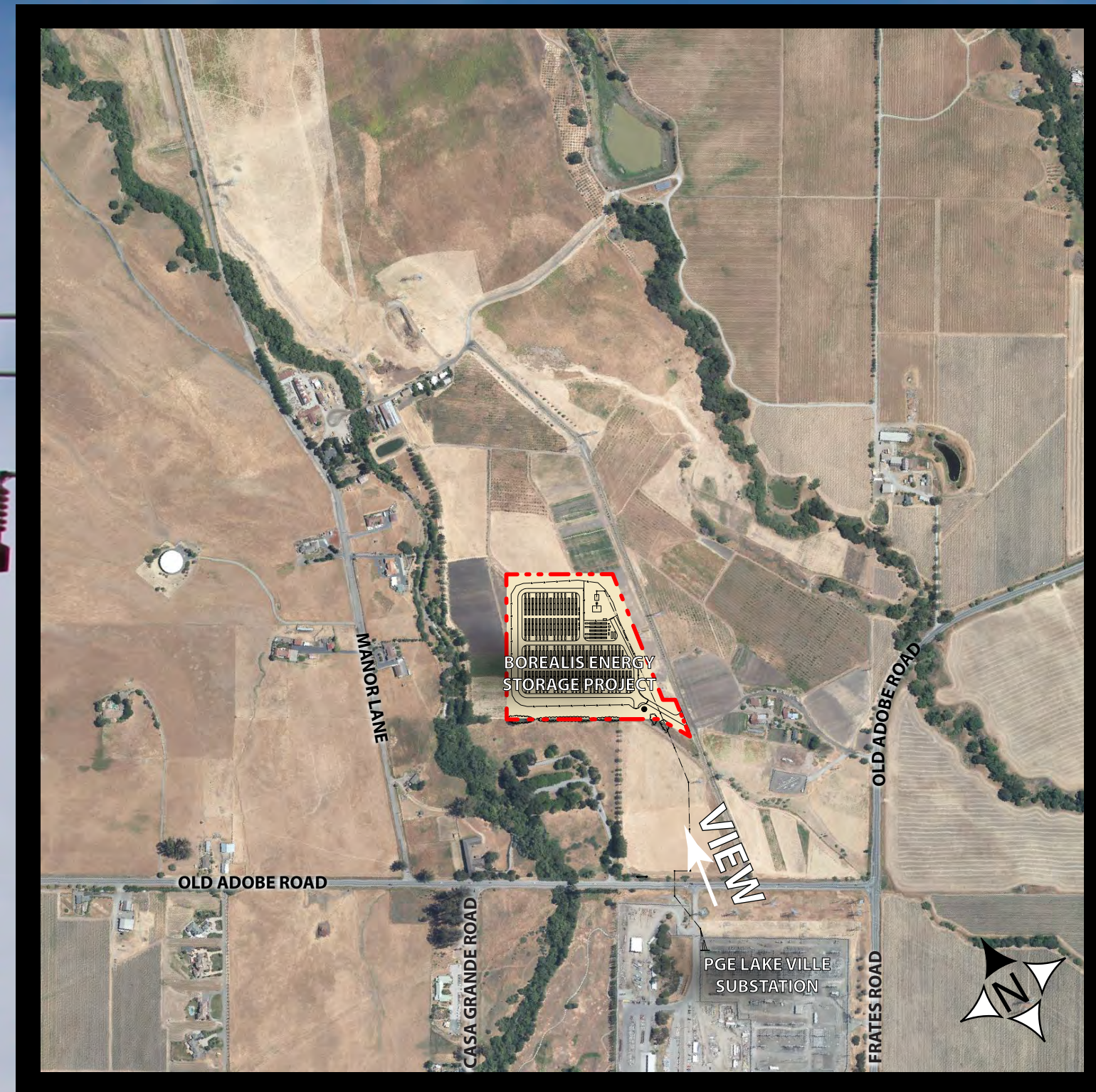
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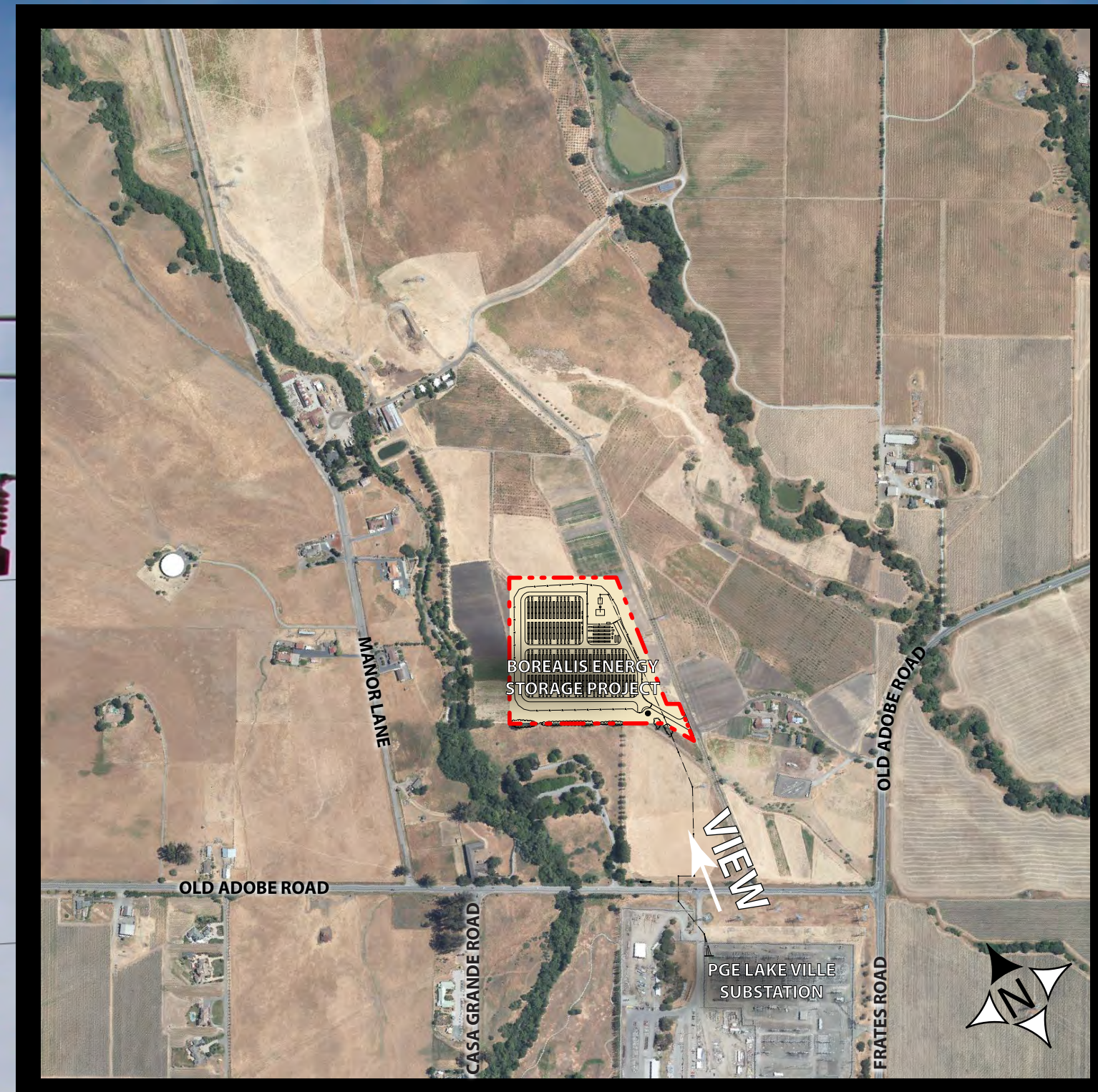
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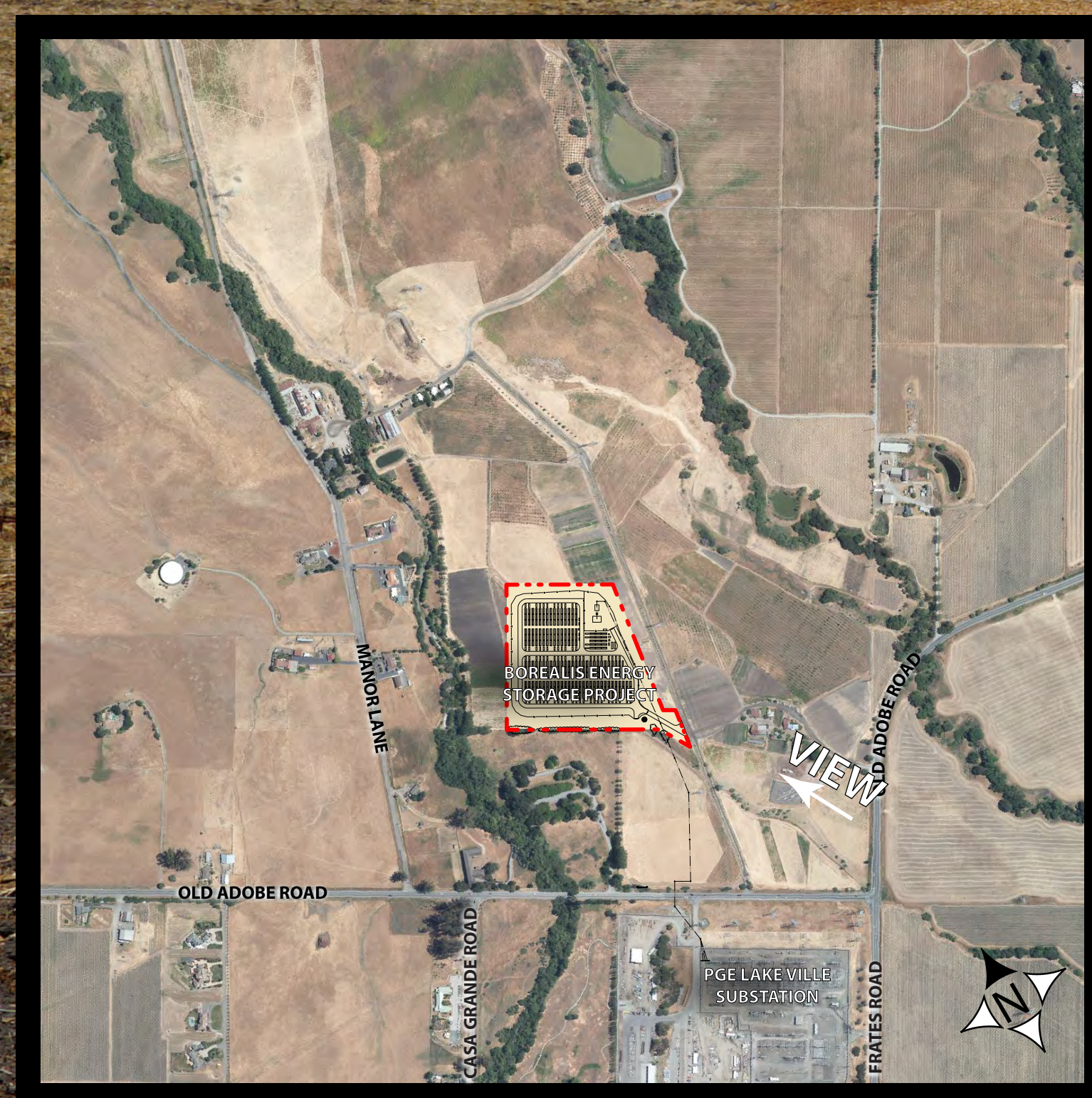
VIEW FROM OLD ADOBE ROAD TO NORTH - BEFORE



VIEW FROM OLD ADOBE ROAD TO NORTH - AFTER



VIEW FROM OLD ADOBE ROAD TO WEST - BEFORE



Westwood

Phone (920) 937-5150 12701 Whitesett Drive
Fax (920) 937-9822 Minnetonka, MN 55343
Toll Free (888) 937-5150 westwoods.com

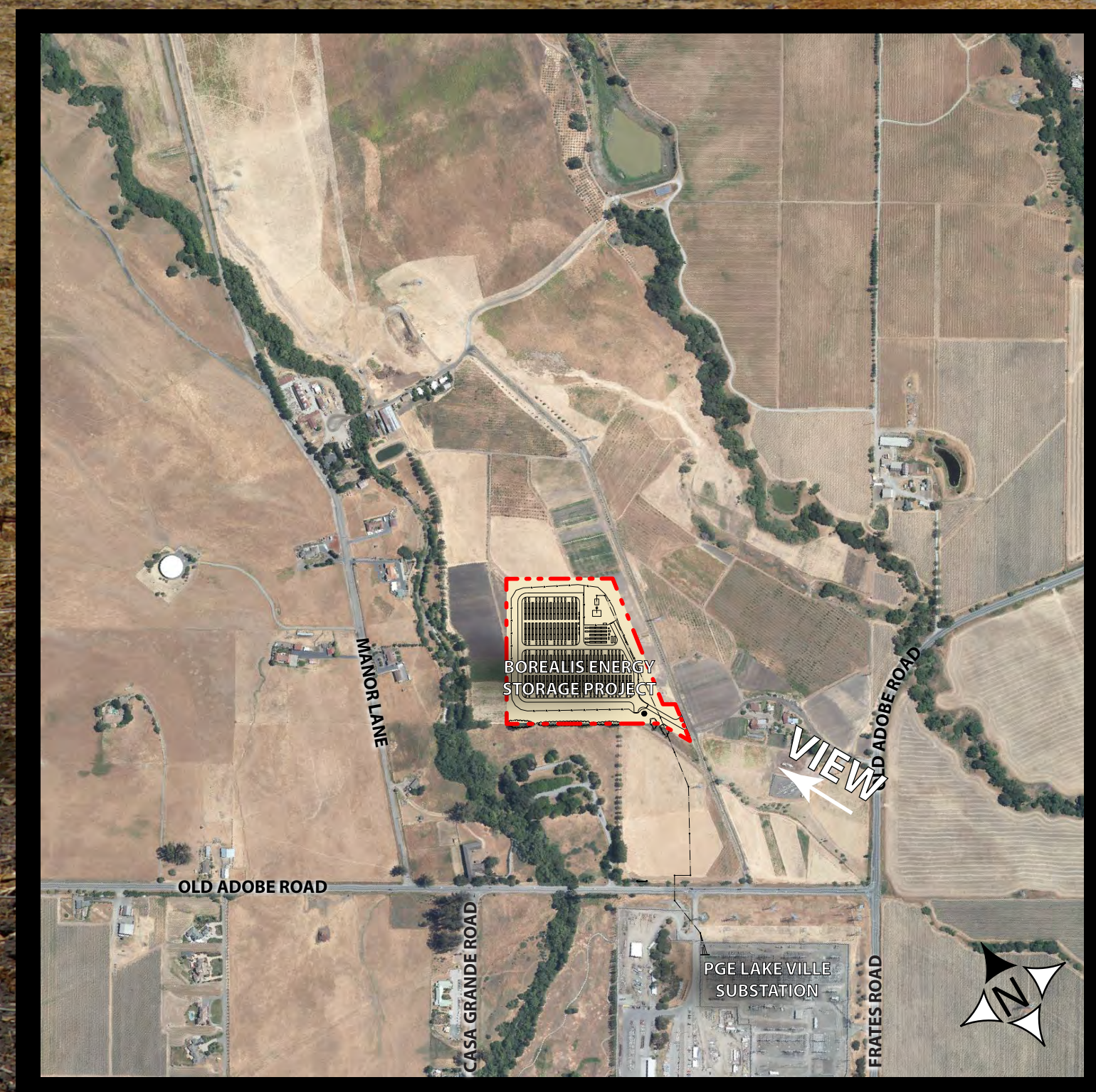
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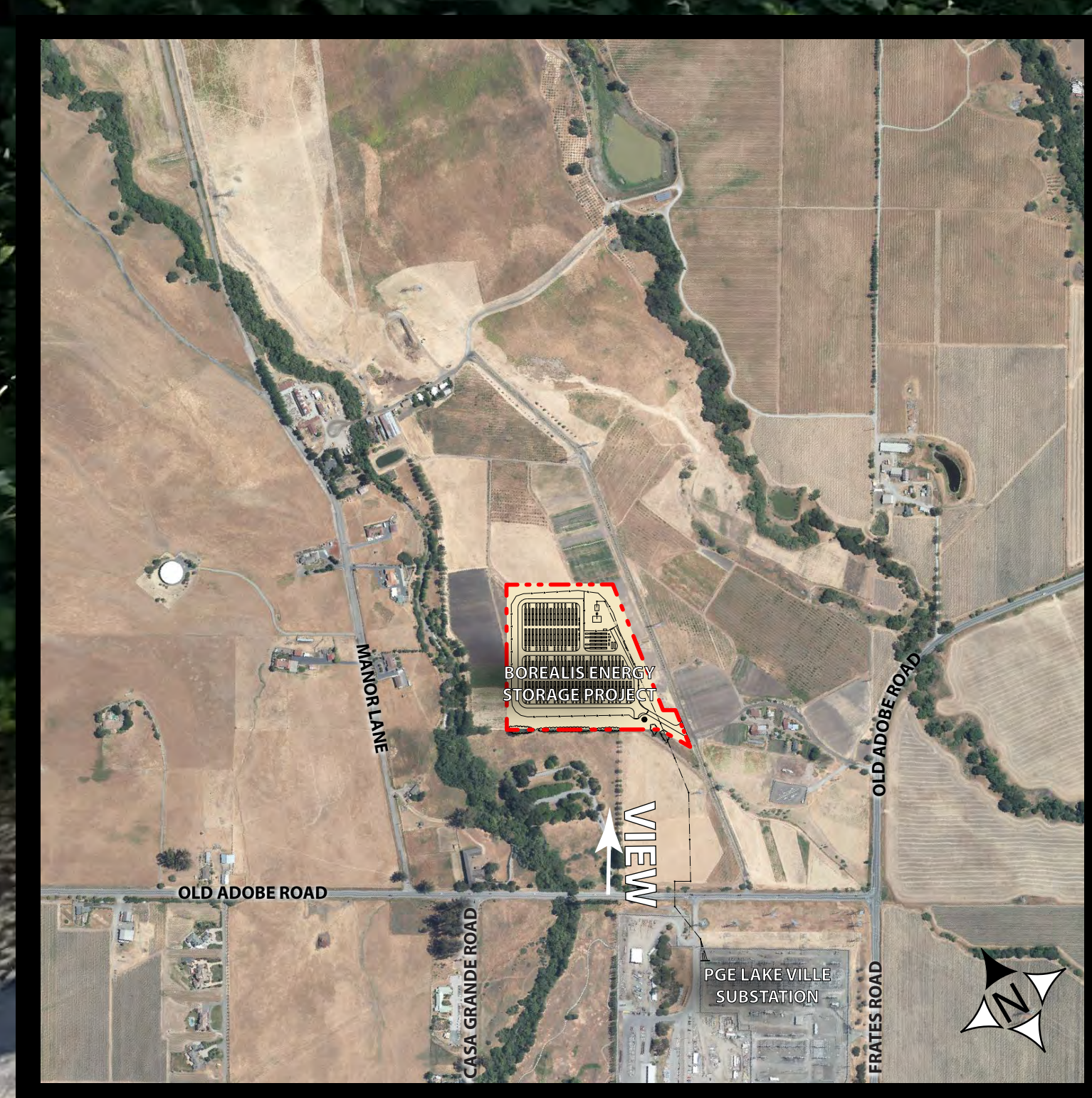
Westwood Professional Services, Inc.

BOREALIS BATTERY STORAGE SONOMA COUNTY, CA

VIEW FROM OLD ADOBE ROAD TO WEST - AFTER



VIEW FROM PETALUMA ADOBE STATE HISTORIC PARK ENTRANCE TO NORTHEAST - BEFORE



Westwood

Phone (952) 937-5150 12701 Whiteoak Drive
Fax (952) 937-9822 Minnetonka, MN 55343
Toll Free (888) 937-5150 westwoods.com

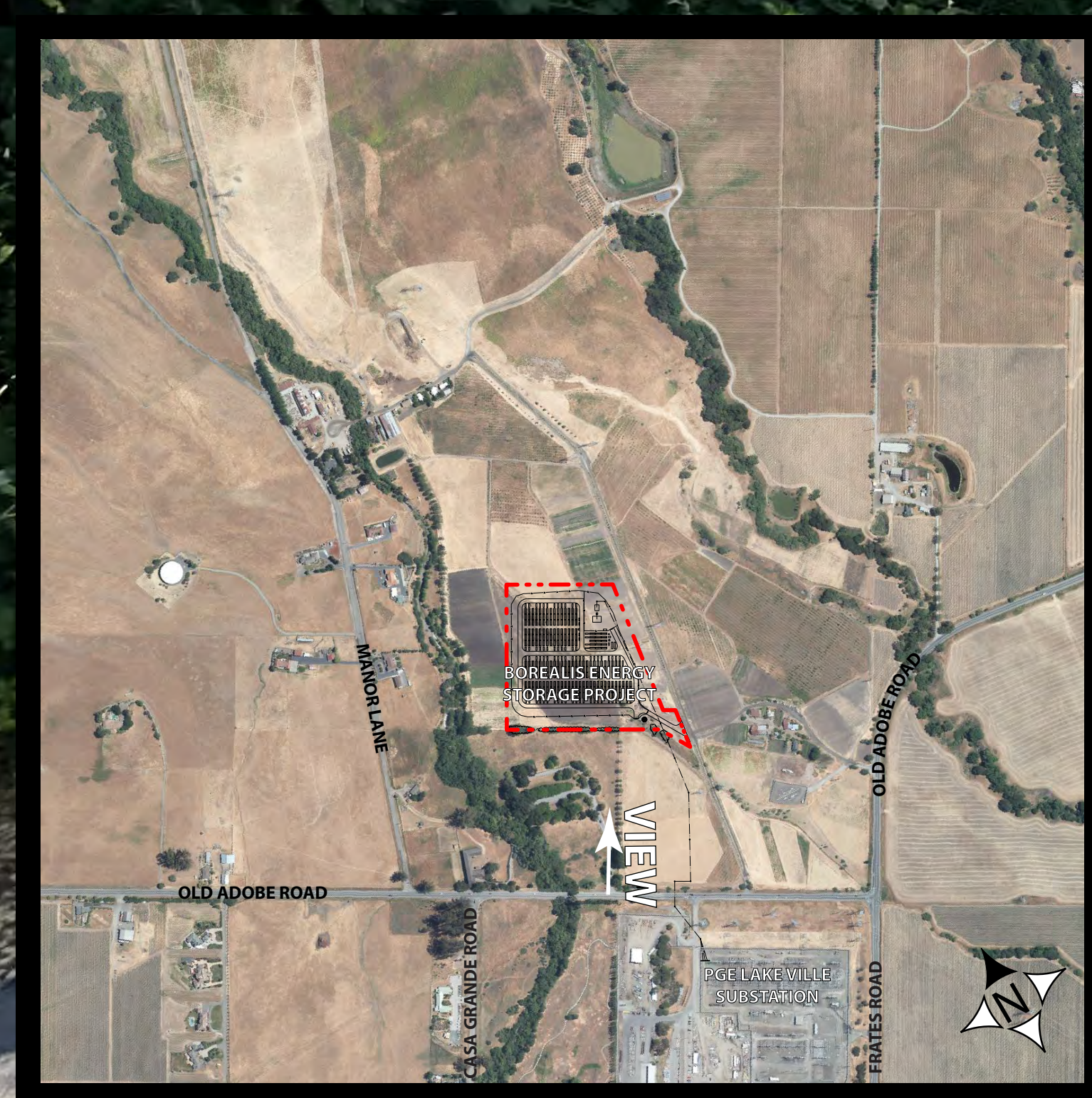
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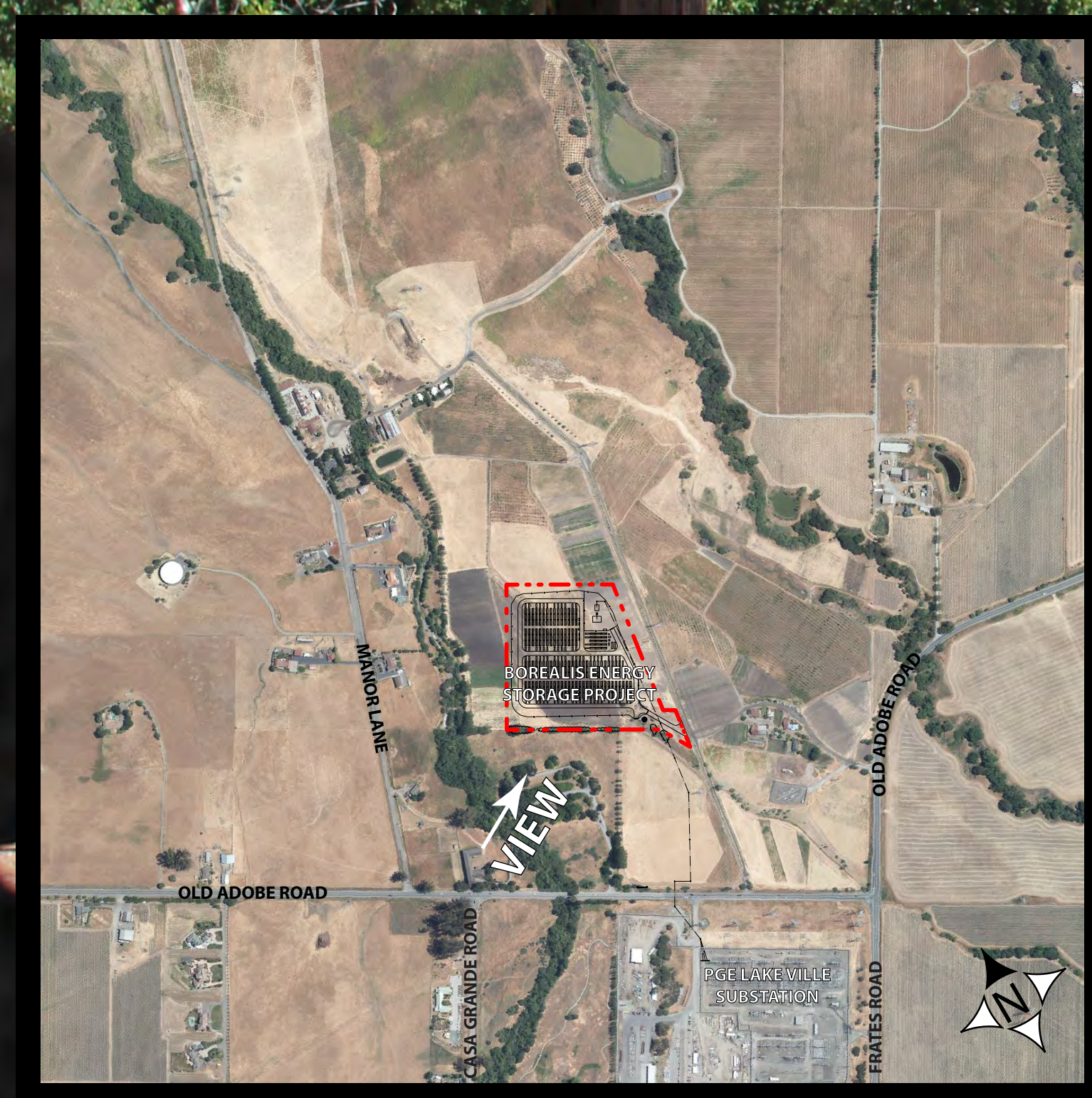
BOREALIS BATTERY STORAGE

SONOMA COUNTY, CA

VIEW FROM PETALUMA ADOBE STATE HISTORIC PARK ENTRANCE TO NORTHEAST AFTER



VIEW FROM RANCHO PETALUMA ADOBE HOUSE TO EAST - BEFORE



Westwood

Phone: (831) 937-9184
Fax: (831) 937-9822
Toll Free: (831) 937-5151

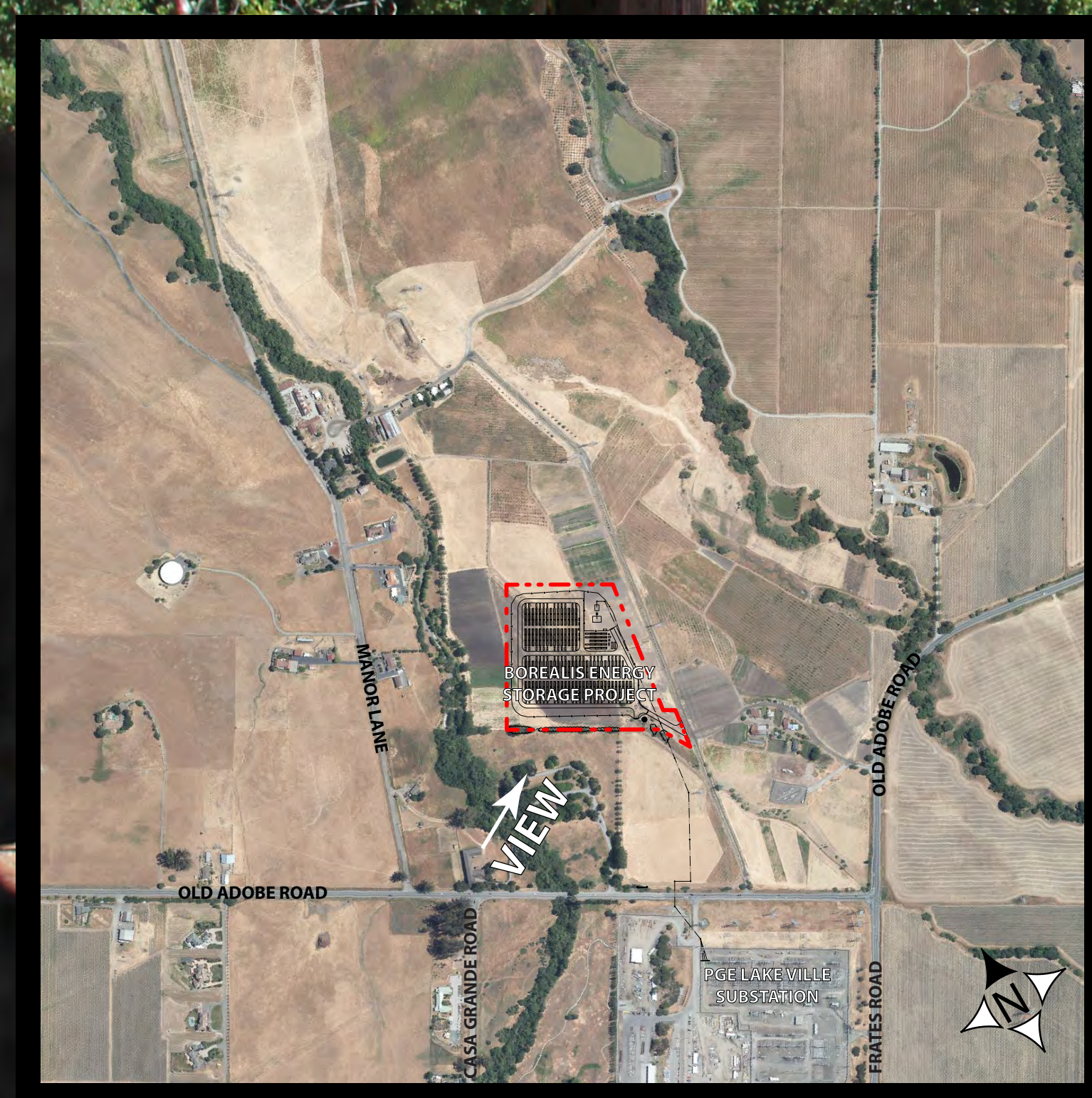
09-23-22
003-289

12211 Wilkesboro, MN
Maple Grove, MN 55127
westwoodps.com

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BOREALIS BATTERY STORAGE
SONOMA COUNTY, CA

VIEW FROM RANCHO PETALUMA ADOBE HOUSE TO EAST - AFTER



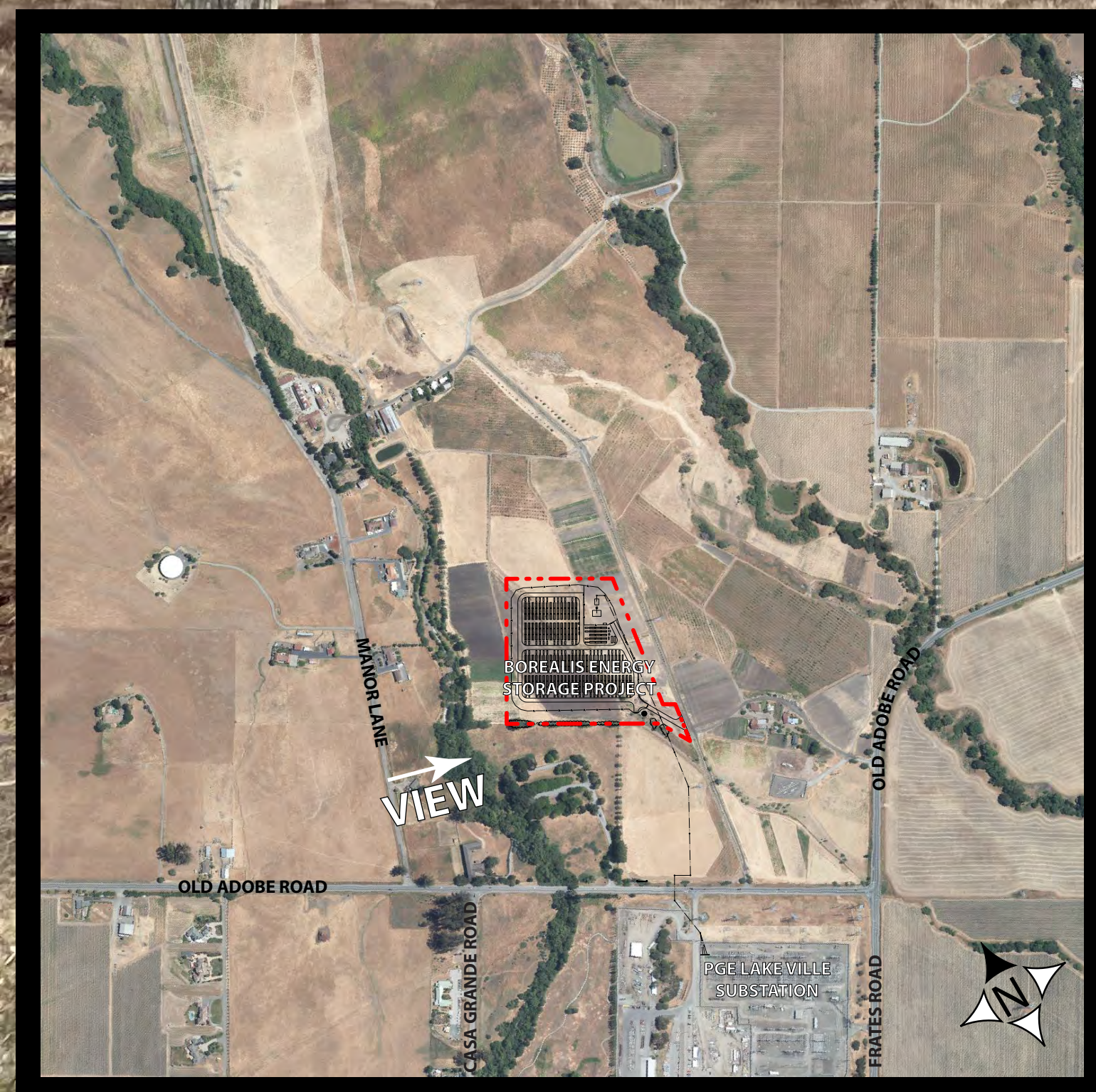
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Phone: (831) 937-9184 Fax: (831) 937-9822
12211 Wilshire Blvd., Suite 1000, Culver City, CA 90230
www.westwoodps.com

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BOREALIS BATTERY STORAGE
SONOMA COUNTY, CA

VIEW FROM MANOR LANE TO EAST - BEFORE



Westwood

09-23-22

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BOREALIS BATTERY STORAGE
SONOMA COUNTY, CA

VIEW FROM MANOR LANE TO EAST - AFTER



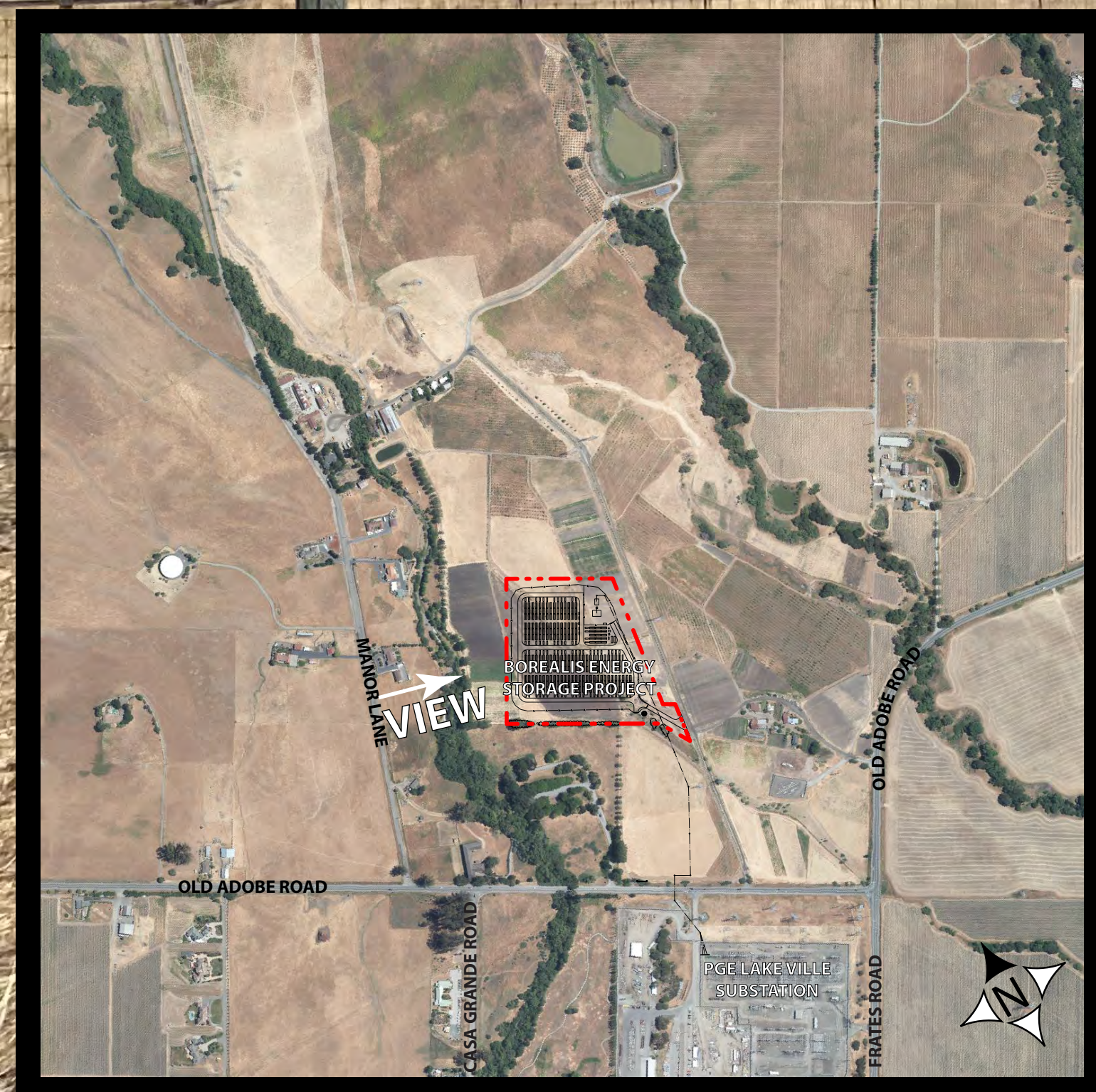
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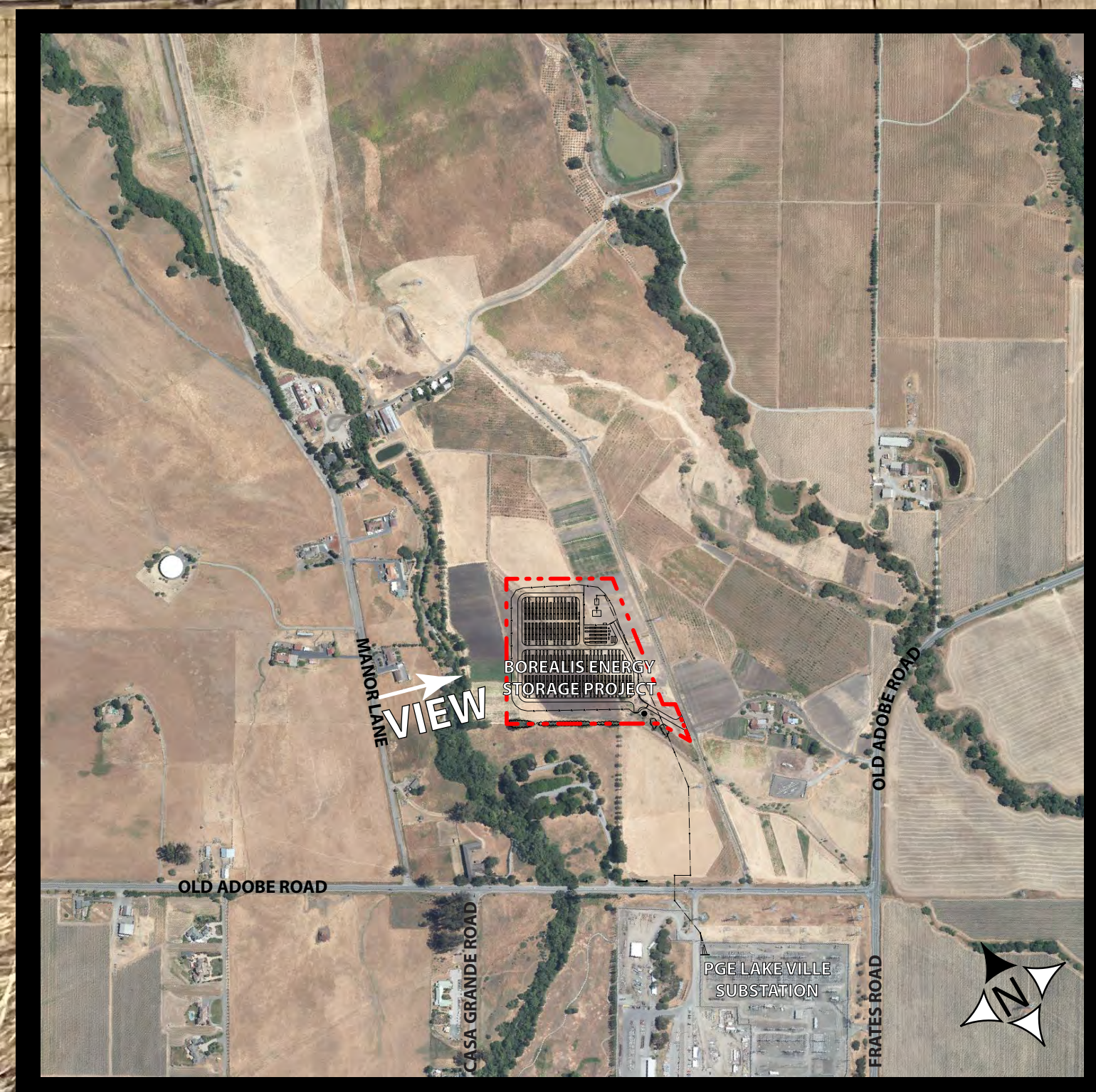
0032289

BOREALIS BATTERY STORAGE
SONOMA COUNTY, CA

VIEW FROM MANOR LANE TO EAST - BEFORE



VIEW FROM MANOR LANE TO EAST - AFTER



VIEW FROM MANOR LANE TO EAST - BEFORE



VIEW FROM MANOR LANE TO EAST - AFTER

