Napa County

1195 THIRD STREET
SUITE 310
NAPA, CA 94559

Agenda - Final

Wednesday, June 17, 2026
9:00 AM

Board of Supervisors Chambers
1195 Third Street, Third Floor
Napa, CA 94559

Planning Commission

District 1, Kara Brunzell (Chair)
District 2, Walter Brooks
District 3, Molly Moran Williams
District 4, Pete Richmond (Vice-Chair)
District 5, Megan Dameron

Brian D. Bordona, Director
Laura Anderson, County Counsel
Michael Parker, Planning Manager
Alexandria Quackenbush, Meeting Clerk
Angie Ramirez Vega, Meeting Clerk
Aime Ramos, Meeting Clerk

How to Watch or Listen to the Napa County Planning Commission Meetings

The Napa County Planning Commission will continue to meet pursuant to the annually adopted meeting calendar available at the following link:

https://www.napacounty.gov/DocumentCenter/View/40034/2026-Planning-Commission-Meeting-Calendar?bidId=

The Napa County Planning Commission meets as specified in its adopted annual calendar on the first and third Wednesdays of the month at 9:00 A.M. at 1195 Third Street, Suite 310, Napa, California 94559. The meeting room is wheelchair accessible. Assistive listening devices and interpreters are available through the Clerk of the Planning Commission. Requests for disability related modifications or accommodations, aids or services may be made to the Clerk of the Planning Commission's office no less than 72 hours prior to the meeting date by contacting (707) 253-4417 or meetingclerk@countyofnapa.org.

The Napa County Planning Commission realizes that not all County residents have the same ways to stay engaged, so several alternatives are offered. Remote Zoom participation for members of the public is provided for convenience only. In the event that the Zoom connection malfunctions for any reason, the Planning Commission reserves the right to conduct the meeting without remote access.

Please watch or listen to the Planning Commission meeting in one of the following ways:

1. Attend in-person at the Board of Supervisors Chambers, 1195 Third Street, Napa, Third Floor.
2. Watch online at https://napa.legistar.com/calendar.aspx (click the "In Progress" link in the "Video" column).
3. Watch on Zoom using the attendee link: https://countyofnapa.zoom.us/j/87621457786. Make sure the browser is up-to-date.
4. Listen on Zoom by calling 1-669-900-6833 (Meeting ID: 876-2145-7786).
5. Watch on your TV - Napa Valley TV Channel 28.

If you are unable to attend the meeting in person and wish to submit a general public comment or a comment on a specific agenda item, please do the following:

1. Email your comment to meetingclerk@countyofnapa.org. Emails will not be read aloud but will still become part of the public record and shared with the Planning Commission.
2. Use the Zoom attendee link: https://Countyofnapa.zoom.us/j/87621457786. Make sure the browser is up-to-date. When the Chair calls for the item on which you wish to speak, click "raise hand". Please limit your remarks to three minutes.

3. Call the Zoom phone number: 1-669-900-6833. (Meeting ID: 876-2145-7786). When the Chair calls for the item on which you wish to speak, press *9 to raise hand. Please limit your remarks to three minutes.

   Please note that phone numbers in their entirety will be visible online while speakers are speaking

For more information, please contact us via telephone at (707) 253-4417 or send an email to meetingclerk@countyofnapa.org

ANY MEMBER OF THE AUDIENCE DESIRING TO ADDRESS THE COMMISSION:

ON A MATTER ON THE AGENDA
Please proceed to the podium when the matter is called and, after receiving recognition from the Chair, give your name and your comments or questions. In order that all interested parties have an opportunity to speak, please be brief and limit your comments to the specific subject under discussion. Time limitations shall be at the discretion of the Chair or Commission, but is generally limited to three minutes.

ON A MATTER NOT ON THE AGENDA
Public comment is an opportunity for members of the public to speak on items that are not on the agenda but are within the subject matter jurisdiction of the Commission. Public comment is limited to three minutes per speaker, subject to the discretion of the Chair. Comments should be brief and focused, and speakers should be respectful of one another who may have different opinions. Please remember this meeting is being recorded and broadcast on live television. The County will not tolerate profanity, hate speech, abusive language, or threats. Also, while public input is appreciated, the Brown Act prohibits the Commission from taking any action on matters raised during public comment that are not on the agenda.

1. CALL TO ORDER; ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENTS AND RECOMMENDATIONS

The Commission invites public comments and recommendations concerning current issues and future prospects of a planning nature which are within the jurisdiction of the Planning Commission. Anyone who wishes to speak to the Commission on such a matter, if it is not on the agenda, may do so at this time.

4. APPROVAL OF MINUTES

A. The Clerk of the Commission requests approval of minutes from the regular meeting held on June 3, 2026. **26-1280**

Attachments: 6-3-26 Minutes

5. AGENDA REVIEW

6. DISCLOSURES

7. PUBLIC HEARING ITEMS

A. ETERNAL PRESERVES HOLDINGS LLC. / HOWELL MOUNTAIN CEMETERY / USE PERMIT NO. P20-00030, USE PERMIT FOR AN EXCEPTION TO THE CONSERVATION REGULATIONS P25-00293, AND AN EXCEPTION TO THE ROAD AND STREET STANDARDS **26-1240**

CEQA status: Consideration and possible adoption of a Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program (MMRP). According to the proposed Mitigated Negative Declaration, the proposed project would not have any potentially significant environmental impacts after implementation of mitigation measures. Mitigation measures are proposed for the following areas: Biological and Tribal Cultural Resources. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Request: Approval of a use permit to establish a green burial cemetery to include the following:
(1) construct replacement of the existing well (E15-000784);
(2) demolition of both single-story structures;
(3) construction of a single-story 509 square-foot welcome center including two restrooms;
(4) designate a total 16.19 acres of interment areas split among eight interment areas which range in size from 0.18 to 7.52 acres;
(5) establish approximately 1.5 miles of trails with minor grading;
(6) construct a driveway with an automatic gate; and
(7) conduct limited grading for a total of a 0.69 acre impact area.
The project also requests an Exception to the Conservation Regulations in the form of a Use Permit (P25-00293) to conduct minimal grading for trails and interment areas otherwise inaccessible and an Exception to the Napa County Road and Street Standards to forego a warranted Left Turn Lane. The site is located in the eastern portion of a +/- 109.3-acre parcel on the west side of Howell Mountain Road, approximately 5 miles west of the State Highway 29, within the Agricultural Watershed (AW) zoning district, located at 1225 Howell Mountain Road, Angwin, CA 94508. APN: 018-120-027, 018-120-043, and 018-120-044.

Staff Recommendation: Adopt the Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program prepared for the project, approve the Exception to the Napa County Roads and

Streets Standards, approve the Exception to the Conservation Regulations, and approve the Use Permit, as conditioned.

Staff Contact: Enrique Torres, Planner II, 1195 Third St, Suite 210, Napa, CA 94559; (707) 253-4307; enrique.torres@countyofnapa.org

Applicant Contact: Susan Lapsley, Wildlands, 6558 Lonetree Boulevard, Rocklin, CA 95765; (714) 906-4616; slapsley@heronpacific.com

Applicant Agent: Jim Bushey, PPI Engineering, Inc., 2800 Jefferson Street, Napa, CA 94558; (707) 253-1806; jbushey@ppiengineering.com

Attachments:
Attachment A - Recommended Findings
Attachment B - Recommended Conditions of Approval
Attachment C - Intitial Study - Mitigated Negative Declaration
Attachment D - Use Permit and Conservation Regulations Exception Application.pdf
Attachment E - Napa County Roads & Streets Standards Exception Letter
Attachment F - Traffic Impact Study
Attachment G - Historical Building Evaluation
Attachment H - Biological Resources Reconnaissance Survey
Attachment I - Water Availability Analysis and Water System Feasibility Study
Attachment J - Stormwater Control Plan
Attachment K - Geologic Hazard Report
Attachment L - Graphics

B. Proposed Napa County Code Amendments Related to Urban Lot Splits and Two-Unit Development **26-848**

Request: This is a County-initiated amendment to the Napa County Code for Titles 17 (Subdivisions) and 18 (Zoning), to bring the Code into alignment with current State law regarding Urban Lot Splits and Two-Unit Development.

Staff Recommendation: Hold a public hearing and recommend the Board of Supervisors adopt the proposed Ordinance amendment to the Napa County Code.

Staff Contact: Trevor Hawkes, Supervising Planner, 707-253-4388 or trevor.hawkes@countyofnapa.org

Attachments: Attachment A - Proposed Ordinance (Clean)
Attachment B - Proposed Ordinance (Redline)
Attachment C - Executive Summary

8. ADMINISTRATIVE ITEMS

9. DIRECTOR OR DIRECTOR'S DESIGNEE REPORT

- DISCUSSION OF ITEMS FOR THE JULY 1, 2026 REGULAR MEETING

- BOARD OF SUPERVISORS ACTIONS

- OTHER DEPARTMENT ACTIVITIES

- CODE COMPLIANCE REPORT

- ZONING ADMINISTRATOR ACTIONS

- OTHER PENDING PROJECTS' STATUS

10. COMMISSIONER COMMENTS/COMMITTEE REPORTS

11. ADJOURNMENT

I HEREBY CERTIFY THAT THE AGENDA FOR THE ABOVE STATED MEETING WAS POSTED AT A LOCATION FREELY ACCESSIBLE TO MEMBERS OF THE PUBLIC AT THE NAPA COUNTY ADMINISTRATIVE BUILDING, 1195 THIRD STREET, NAPA, CALIFORNIA ON JUNE 5, 2026 BY 3:00 P.M. A HARDCOPY SIGNED VERSION OF THE CERTIFICATE IS ON FILE WITH THE CLERK OF THE COMMISSION AND AVAILABLE FOR PUBLIC INSPECTION.

AIME RAMOS(By e-signature)
Aime Ramos, Clerk of the Commission

Napa County

Board Agenda Letter

1195 THIRD STREET
SUITE 310
NAPA, CA 94559
www.napacounty.gov

Main: (707) 253-4580

Planning Commission | **Agenda Date:** 6/17/2026 | **File ID #:** 26-1280

TO: Napa County Planning Commission

FROM: Brian D. Bordona, Director, Napa County Planning Building & Environmental Services

REPORT BY: Angie Ramirez Vega, Clerk of the Commission

SUBJECT: Approval of Minutes

RECOMMENDATION

The Clerk of the Commission requests approval of minutes from the regular meeting held on June 3, 2026.

EXECUTIVE SUMMARY

The Clerk of the Commission requests approval of minutes from the regular meeting held on June 3, 2026.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: The proposed action is not a project as defined by 14 California Code of Regulations 15378 (State CEQA Guidelines) and therefore CEQA is not applicable.

BACKGROUND AND DISCUSSION

Only Commission members who attended the June 3, 2026, meeting may vote on the minutes.

Meeting Minutes

Napa County Planning Commission

District 1, Kara Brunzell (Chair)
District 2, Walter Brooks
District 3, Molly Moran Williams
District 4, Pete Richmond (Vice-Chair)
District 5, Megan Dameron

Brian D. Bordona, Director
Laura Anderson, County Counsel
Michael Parker, Planning Manager
Alexandria Quackenbush, Meeting Clerk
Angie Ramirez Vega, Meeting Clerk

Wednesday, June 3, 2026	9:00 AM	Board of Supervisors Chambers 1195 Third Street, Third Floor

1. CALL TO ORDER / ROLL CALL
   Commissioners Present: Kara Brunzell, Pete Richmond, Megan Dameron, Molly Moran Williams, Walter Brooks
   Commissioners Absent: None

2. PLEDGE OF ALLEGIANCE

3. CITIZEN COMMENTS AND RECOMMENDATIONS
   None

4. APPROVAL OF MINUTES
   Motion by Commissioner Brooks to approve minutes for the May 20, 2026, regular meeting as presented, seconded by Commissioner Dameron
   Vote: Carried 5-0-0
   Yes: Brooks, Dameron, Moran Williams, Richmond, Brunzell
   No: None
   Absent: None

5. AGENDA REVIEW
   Michael Parker gave the agenda review.

6. DISCLOSURES
   Yes: Moran Williams, Brooks, Brunzell
   No: Richmond, Dameron
   Absent: None

7. PUBLIC HEARING ITEMS

A. MARK SCHRATZ / AXR NAPA VALLEY WINERY / USE PERMIT MAJOR MODIFICATION P22-00417-MOD, VARIANCE P26-00045-VAR, AND ADMINISTRATIVE VIEWSHED PERMIT P26-00044-VIEW

CEQA STATUS: Consideration and possible adoption of a Subsequent Mitigated Negative Declaration. According to the proposed Subsequent Mitigated Negative Declaration, the project would not have any potentially significant environmental impacts after implementation of mitigation measures. Mitigation measures are proposed for the following areas: Aesthetics, Biological Resources, Cultural Resources, Transportation, and Tribal Cultural Resources. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

REQUEST: 1) Approval of a Major Modification to Winery Use Permit Nos. P08-00099 and P04-0541 to allow construction of a new type I wine cave, conversion of the barrel storage building to a tasting room and the adjacent outdoor crush/tank pad to hospitality uses, conversion of the main residence (apartment) to winery office use, an increase in employees and visitation, an expanded marketing program, water and wastewater system improvements, a left turn lane on St. Helena Highway / Highway 29 (SR 29) and associated driveway modifications;
2) A Variance to the 600-foot winery setback from SR 29 to allow aboveground structures associated with the wastewater treatment system; and
3) an Administrative Viewshed Permit for cave portals and water and wastewater system improvements on slopes ranging from 15 to 18 percent.

The project is located on a 7.85-acre parcel zoned for Agricultural Watershed (AW) with a General Plan land use designation of Agriculture, Watershed, and Open Space (AWOS) at 3199 N. St. Helena Highway, St. Helena, CA 94574; APN: 022-080-025.

STAFF RECOMMENDATION: Adopt the Initial Study/Subsequent Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program prepared for the project and approve the Use Permit Major Modification No. P22-00417, Variance No. P26-00045, and Administrative Viewshed Permit No. P26-00044, as conditioned.

STAFF CONTACT: Hannah Spencer, Planner III; Hannah.spencer@countyofnapa.org, (707) 253-4018

APPLICANT CONTACT: Mark Schratz, 3199 N. St. Helena Highway, St. Helena, CA 94574

APPLICANT REPRESENTATIVE CONTACT: Jeffrey Redding, Land Use Planning Services, 2423 Renfrew Street, Napa CA 94558; jreddingaicp@comcast.net, (707) 815-0723.
Chair Brunzell opened public comment, receiving none, she closed public comment.
Motion by Commissioner Brooks to Adopt the Initial Study/Subsequent Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program (MMRP) based on recommended Findings 1-7 in Attachment A; 2. Approve the Variance request (P26-00045-VAR) based on recommended Findings 8-12 in Attachment A, and subject to the recommended Conditions of Approval in Attachment B;3. Approve the Administrative Viewshed Permit request (P26-00044-VIEW) based on recommended Findings 13-19 in Attachment A, and subject to the recommended Conditions of Approval in Attachment B;4. Approve the Use Permit Major Modification (P22-00417-MOD) based on recommended Findings 20-24 in Attachment A, and subject to the recommended Conditions of Approval in Attachment B. as amended, seconded by Commissioner Moran Williams.
Vote: Carried 5-0-0
Yes: Brooks, Moran Williams, Dameron, Richmond, Brunzell
No: None
Absent: None

8. ADMINISTRATIVE ITEMS

A. Receive an informational presentation from the Planning Division of the Planning, Building, and Environmental Services (PBES) Department and the County Fire Marshal on the application and scope of the County's Viewshed Protection Program (NCC 18.106) and Defensible Space Ordinance (NCC 8.36).
Presented by Trevor Hawkes, Planning Supervisor and Jason Downs, Fire Marshal.
No action required

9. DIRECTOR OR DIRECTOR'S DESIGNEE REPORT

DISCUSSION OF ITEMS FOR THE ***JUNE 17, 2026, REGULAR MEETING***
Michael Parker discussed potential items for the June 17, 2026, meeting.
BOARD OF SUPERVISORS ACTIONS
Michael Parker reported on project actions.
OTHER DEPARTMENT ACTIVITIES - None
CODE COMPLIANCE REPORT - None
ZONING ADMINISTRATOR ACTIONS- None
OTHER PENDING PROJECT'S STATUS - None

10. COMMISSIONER COMMENTS / COMMITTEE REPORTS

Chair Brunzell reported on the Airport Advisory Committee.

11. ADJOURNMENT

Meeting adjourned at 12:07pm

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ANGIE RAMIREZ VEGA, Meeting Clerk

1195 THIRD STREET
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NAPA, CA 94559
www.napacounty.gov

Main: (707) 253-4580

Planning Commission **Agenda Date:** 6/17/2026 **File ID #:** 26-1240

TO: Napa County Planning Commission

FROM: Brian D. Bordona - Director of Planning, Building and Environmental Services

REPORT BY: Enrique Torres - Planner II

SUBJECT: Howell Mountain Cemetery Use Permit P20-00030-UP, Exception to the Conservation Regulations P25-00293, and an Exception to the Road and Street Standards

RECOMMENDATION

ETERNAL PRESERVES HOLDINGS LLC. / HOWELL MOUNTAIN CEMETERY / USE PERMIT NO. P20-00030, USE PERMIT FOR AN EXCEPTION TO THE CONSERVATION REGULATIONS P25-00293, AND AN EXCEPTION TO THE ROAD AND STREET STANDARDS

CEQA status: Consideration and possible adoption of a Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program (MMRP). According to the proposed Mitigated Negative Declaration, the proposed project would not have any potentially significant environmental impacts after implementation of mitigation measures. Mitigation measures are proposed for the following areas: Biological and Tribal Cultural Resources. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Request: Approval of a use permit to establish a green burial cemetery to include the following:

(1) construct replacement of the existing well (E15-000784);

(2) demolition of both single-story structures;

(3) construction of a single-story 509 square-foot welcome center including two restrooms;

(4) designate a total 16.19 acres of interment areas split among eight interment areas which range in size from 0.18 to 7.52 acres;

(5) establish approximately 1.5 miles of trails with minor grading;

(6) construct a driveway with an automatic gate; and

(7) conduct limited grading for a total of a 0.69 acre impact area.

The project also requests an Exception to the Conservation Regulations in the form of a Use Permit (P25-00293) to conduct minimal grading for trails and interment areas otherwise inaccessible and an Exception to the Napa County Road and Street Standards to forego a warranted Left Turn Lane. The site is located in the eastern portion of a +/- 109.3-acre parcel on the west side of Howell Mountain Road, approximately 5 miles west of the State Highway 29, within the Agricultural Watershed (AW) zoning district, located at 1225 Howell Mountain Road, Angwin, CA 94508. APN: 018-120-027, 018-120-043, and 018-120-044.

Staff Recommendation: Adopt the Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program prepared for the project, approve the Exception to the Napa County Roads and Streets Standards, approve the Exception to the Conservation Regulations, and approve the Use Permit, as conditioned.

Staff Contact: Enrique Torres, Planner II, 1195 Third St, Suite 210, Napa, CA 94559; (707) 253-4307; enrique.torres@countyofnapa.org

Applicant Contact: Susan Lapsley, Wildlands, 6558 Lonetree Boulevard, Rocklin, CA 95765; (714) 906-4616; slapsley@heronpacific.com

Applicant Agent: Jim Bushey, PPI Engineering, Inc., 2800 Jefferson Street, Napa, CA 94558; (707) 253-1806; jbushey@ppiengineering.com

EXECUTIVE SUMMARY

PROPOSED ACTIONS:

That the Planning Commission:

1. Adopt the Mitigated Negative Declaration and the Mitigation, Monitoring and Reporting Program based on recommended Findings 1-7 in Attachment A;

2. Approve the Napa County Roads and Streets Standards Exception Request based on recommended Findings 8-9 in Attachment A, and subject to the recommended Conditions of Approval in Attachment B.

3. Approve the Conservation Regulation Exception Request (P25-00293) based on the recommended Findings 10-16 in Attachment A, and subject to the recommended Conditions of Approval in Attachment B.

4. Approve Use Permit Application No. P20-00030-UP, based on recommended Findings 17 through 21 in Attachment A and subject to the recommended Conditions of Approval in Attachment B.

Discussion:

The proposed Howell Mountain Cemetery is located on an existing homestead. The project site is approximately +/- 109.3-acres, spanning between 2 parcels, which the applicant had filed for a Lot Line Adjustment (LLA), October 15, 2025. The LLA resulted in APN's: 018-120-016-000 & 018-120-027-000, now measuring 68.76 acres (018-120-043) and 43.39 (018-120-044 & 018-120-027 Split For Assessment Purposes (SFAP)) acres respectively. The site is located at 1225 Howell Mountain Road, north of Angwin. On January 31, 2020, the applicant submitted a request for a use permit to establish and operate a green cemetery. Napa County Code Section 18.120.010(B)(12) allows cemeteries in any zoning district upon the grant of a permit.

The project shall include the construction of a 509 square foot welcome center with 2 exterior accessible restrooms, demolition of two existing single-story structures, a proposed replacement well, and establishment of trails and interment areas. The center shall be found at the end of the proposed driveway, providing 31 parking stalls along the driveway, 7 parking stalls adjacent to the center, with 1 parking stall meeting ADA accessibility requirements. The trail's access and signage shall be found at the welcome center, providing 1.5 miles of trails, leading towards eight interment areas totaling 16.19 acres. APN: 018-120-043-000 will serve as the access parcel to the project site and serve as the green conservation cemetery. APN: 018-120-027-000 & 018-120-044-000 (SFAP) will remain undeveloped. An off-site office will be rented in downtown St. Helena to facilitate sales and daily operations of the cemetery while minimizing daily commuter traffic trips to the cemetery itself.

Upon use permit approval from Napa County, the cemetery shall be under the authority of the State of California Department of Consumer Affairs Cemetery and Funeral Bureau (the Bureau). The Bureau requires the proposed cemetery location to be compatible or allowed by the local land authority and requires a copy of the Napa County application for the use permit. Prior to the establishment and operation of the proposed cemetery, the applicant shall apply to the Bureau for a Certificate of Authority to operate the cemetery.

The cemetery is requesting an exception to the Napa County Roads and Streets Standards, and to the Napa County Conservation Regulations, as an integral aspect of the proposed project. The exceptions are subject to the findings in 8-9 and 10-16. Findings 8-9 provide the rationale for foregoing the left turn lane warrant, as doing so would prevent the removal of existing native trees and excessive grading on rocky steep slopes, while remaining consistent with the existing operation and character of Howell Mountain Road or in the vicinity of the project site. Findings 10-16 provide evidence which supports the Exception to the Conservation Regulations, by demonstrating that the establishment of trails and access to the interment areas is not feasible through other alternatives, therefore an exception is warranted for the purpose of preserving the existing environmental landform. The proposed project is subject to the recommended Conditions of Approval in Attachment B. Findings in support of the Mitigated Negative Declaration, Mitigation Reporting Program (MMRP), and the Use Permit have been prepared in Attachment A.

Staff has reviewed the proposed project and supports recommending that the Planning Commission adopt the Mitigated Negative Declaration and the Mitigation, Monitoring and Reporting Program, and approve the Use Permit request as currently drafted in the staff report packet, along with the Exceptions to the Conservation Regulations and the Napa County Roads and Streets Standards.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: Consideration and possible adoption of a Mitigated Negative Declaration and Mitigation, Monitoring and Reporting Program (MMRP). According to the proposed Mitigated Negative Declaration, the proposed project would not have any potentially significant environmental impacts after implementation of mitigation measures. Mitigation measures are proposed for the following areas: Biological and Tribal Cultural Resources. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

BACKGROUND AND DISCUSSION

Owner: Eternal Preserve Holdings LLC., 1225 Howell Mountain Road, Angwin, CA 94508.

Applicant: Susan Lapsley

Zoning: Agricultural Watershed (AW)

General Plan Designation: Agricultural Watershed & Open Space (AWOS)

Filed: January 31, 2020

Deemed Complete: August 19, 2025

Property Area: +/- 109.3 Acres

Existing Development: Primary Residence, Accessory Structure, Agricultural Watershed

Proposed Structural Development: Welcome Center with attached exterior restrooms.

Signage: Signage incorporated into automatic gate and natural grave markers allowed.

Adjacent General Plan Designation/Zoning/Land Use:

North: Agriculture, Watershed and Open Space; Agricultural Watershed; Open Space

East: Agriculture, Watershed and Open Space ; Agricultural Watershed; Open Space, Vineyards & Rural Residences

South: Agriculture, Watershed and Open Space ; Agricultural Watershed; Vineyards & Rural Residences

West: Agriculture, Watershed and Open Space ; Agricultural Watershed; Open Space, Vineyards & Rural Residences

Parcel History: Development history on the parcel primarily consists of recently issued permits, dating only as far back as 2014 for a Public Works permit for a Record of Survey for both project parcels that were Split For Assessment Purposes (SFAP). Three other permits were issued to the project parcels from 2015 to 2018, for site improvements such as site evaluation, new well, and a replaced electrical panel. Two Planning Permits in 2017 were reviewed with the intent to explore the idea of a vineyard conversion and a green cemetery with existing structures being an integral part of the project respectively but were not processed further. Following the October 15, 2025, lot line adjustment, parcels 018-120-016-000 & 018-120-027-000, are now 018-120-043-000 and 018-120-044-000 & 018-120-027-000 (SFAP) respectively.

Code Compliance History: There are no active code violations related to the project site.

Discussion Points:

Setting

Howell Mountain Cemetery is proposed to be located on an existing homestead, south of the Town of Angwin. The homestead first appears on historical maps in 1942, and the project site has served as a homestead since. The project site is approximately +/- 109.3 acres, originally split amongst 2 parcels, which was recorded for a Lot Line Adjustment (LLA) on October 15, 2025, resulting in APN's: 018-120-016-000 & 018-120-027-000, now measuring 68.76 acres (018-120-043) and 43.39 (018-120-044 & 018-120-027 Split For Assessment Purposes (SFAP)) acres, respectively. The local watershed is Maxwell Creek (HUC 12: 180201620203), the regional watershed is Pope Creek (HUC 8: 180201620203), and there are multiple ephemeral streams on the site, which shall be avoided along the project site, meeting the required stream setbacks. The nearest creek is Conn Creek, which is approximately 5,381 feet from the project site, leaving the proposed replacement project well, beyond

the required stream setback as described in NCC §18.108.025. There is a known existing spring within 1,500 feet of the proposed replacement well, however due to the proposed use having a decrease in groundwater usage and being located farther from the spring than the existing well, Tier 2 WAA analysis is not required (Interim Napa County Well Permit Standards- January 2024, PPI Engineering, May 2026). The site consists of gently to steeply sloped, ranging from 1,100 to 1,900 feet above sea level, and the underlain by four soil mapping units comprising of forward gravelly loam, 2 to 9 percent slopes, forward gravelly loam, 9 to 30 percent slopes, forward gravelly loam, 30 to 75 percent slopes, and aiken loam, 30 to 50 percent slopes. The project vegetation is comprised of conifer forest, broadleaf forest, and with patches of chaparral, running along the project site.

Biological Resources

On August 2024, WRA conducted a Biological Resources Reconnaissance Survey (BRRS), in order to document the presence or potential for special-status plant and animal species and their habitats, sensitive habitats or communities, federal or State protected wetlands and waters of the U.S., and native wildlife species, wildlife corridors, or native wildlife nursery sites. Biological information for the site was also obtained from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and the California Native Plant Society Electronic Inventory.

Of the 28 special-status plant species that have the potential to occur at the project site, the five (5) following special-status plant species were identified on the project site during reconnaissance surveys: narrow-anthered brodiaea, redwood lily, Cobb Mountain lupine, green monardella, and dark-mouthed triteleia. Two of the special-status plant species identified are located within the proposed development areas of the project. There are approximately 2.94 acres of dark-mouthed triteleia on the project site of which .35 acres would be permanently impacted and then five (5) total individuals out of 71 individuals of Cobb Mountain lupine which would be permanently impacted.

Given the nature of the proposed project, the BRRS concluded that the project was unlikely to pose a significant impact in the immediate and long term to dark-mouthed triteleia, and similarly that Cobb Mountain lupine could be avoided within the proposed interment areas. Considering that interment areas would be developed over time and that special-status species distribution will likely change over time, the BRRS proposes Mitigation Measure BIO-1, which if adopted would require the applicant to conduct periodic surveys of the interment areas to monitor special-status plant populations and require informational materials be provided to the County.

No special-status wildlife species were observed during the survey, however the BRRS acknowledged the potential for eight (8) special-status species to occur within the project site such as, pallid bat, Townsend's western big-eared bat, fringed myotis, golden eagle, olive-sided flycatcher, purple Martin, blacked chinned sparrow, and the northern spotted owl. While none of these species were observed during the BRRS surveys, given the potential for them to enter the project site area during nesting/breeding seasons and the broad baseline protections for a variety of non-status bird species, Mitigation Measures BIO-2 through BIO-4 are also recommended for adoption.

The project site contains approximately 27.7 acres of California black oak woodland (8.73 acres of which occurs in the proposed development area), 17.45 acres of tanoak forest (6.31 acres of which occurs in the proposed development area), and 64.51 acres of Douglas fir forest (8.81 acres of which occurs in the proposed development area). Of the habitats which occur within the proposed development area, 0.95 acres of oak woodland, 0.64 acres of tanoak forest and 1.26 acres of Douglas fir forest would be permanently impacted. However, none of the tree canopy within the oak woodland or tanoak forest would be removed as project activities in these areas take place entirely on the forest/woodland floor. The construction of the proposed driveway would convert .69 acres of Douglas fir forest by removing 25 Douglas fir trees and two (2) Black oak trees.

Located within an AW zoning district, the project is subject to Napa County Code 18.108.020(C-D), which requires parcels to retain 70% of the vegetation canopy cover as it was configured on June 16, 2016, and to mitigate the removal of any vegetation canopy cover on a 3:1 basis through the permanent replacement or preservation of comparable canopy cover. Additionally, Napa County General Plan Conservation Element Policy CON-24 requires calls for replacement or preservation of impacted oak woodlands at a 2:1 ratio. Considering that only 0.69 acres of Douglas fir forest are intended for conversion from a total of 64.51 acres, the project complies with NCC 18.108.020(C). Mitigation Measure BIO-5 is proposed which would require preservation areas for the 0.69 acres of impacted Douglas fir forest and 0.95 acres of impacted oak woodlands.

The 27 trees proposed for removal are timber species regulated by the California Department of Forestry and Fire Protection (CAL FIRE). The associated trees to be removed in the total impact area for construction of the driveway and welcome center is 0.69 acre. As such, a Registered Professional Forester (Scott Butler, RPF #1851) will be preparing a less-than-3-acre timber conversion exemption for this project.

Phasing & Construction Scheduling

Howell Mountain Cemetery is proposing to carry out the construction in phases. In 2027 the first phase shall consist of site improvements such as driveway improvements, welcome center, installation of the septic system to the proposed replacement well, taking approximately six months to construct between April 1 to October 15. The second phase shall overlap with the first phase, taking place from June 15 to October 15, which includes the buildout of the interment areas and trail systems. Preliminary work including tree removal may begin prior to April 1, 2027, if approval is obtained from Napa County to begin work before April 1.

Interment Areas

The project site shall designate 8 interment areas which have been sited to take advantage of conserving open space. The interment areas shall span a total of 16.19 acres, ranging from 0.18 acres to 7.52 acres. Interment areas shall be used to conduct burials, retain existing vegetation, and have been shaped to avoid steep terrain, stream setbacks and impacts to trees. A Conservation Regulation Exception has been applied for under P25-00293 to allow for minimal grading to otherwise

inaccessible interment areas. Pre-interment site preparation for a burial is allowed as needed without a grading permit upon issuance of a cemetery use permit.

Trails

As the cemetery offers trails that are open to the general public, there will be minor grading to establish approximately 1.5 miles of trails which will provide access for pedestrians and operations vehicles to plots within interment areas (TSD Engineering, April 2025). The trails will be improved to eight-feet in width with maximum cross slope of 15%, max longitudinal slope of 28% and 12.5' vertical clearance, consistent with the County's standard for Special Purpose Ways. The trails will include signage, benches, and wayfinding features. In some cases, the proposed trails will follow the existing informal trails, and there is no surfacing proposed, with the potential of woodchips being used.

Access Improvements

There are two existing roads providing road/site access on the project site, the existing road to the east of the project shall be converted to a driveway serving as site access and for emergency vehicle access which will have a minimum width of 22 feet (including shoulders) that would extend from Howell Mountain Road into the site and terminate at a turnaround area north of the welcome center. The existing road to the west shall be maintained but not improved to accommodate emergency vehicles per Napa County Roads and Street Standards, and a Knox Lock or similar shall be installed to allow for emergency access.

Transportation & Parking

The proposed driveway and welcome center shall provide 38 total parking stalls. 31 parking stalls shall be located along the driveway, 7 parking stalls adjacent to the center, with 1 parking stall being accessible. There shall also be 8 bicycle parking stalls located near the welcome center.

Since operational and visitor trips associated with the proposed project would be below the 110-trip threshold in the Office of Land Use and Climate Innovation guidelines and the County's TIS Guidelines and VMT screening criteria, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less than significant. Additionally, there are no existing pedestrian, bicycle or transit facilities in the project vicinity, the proposed project would not conflict with any policies relevant to these modes and would result in an increase in bicycle parking accessibility at the project site.

An Exception to the Napa County RSS is also requested to forego a Left Turn Lane Warrant, for eastbound traffic on Howell Mountain Road to preserve unique features of the natural environment, minimize the need for grading on steeps slopes, and to still meet the same overall practical effect as the Napa County RSS towards providing defensible space and consideration towards life, safety and public welfare. The Director of the Department of Public Works has reviewed the Left Turn Lane exception analysis and supports the request (Attachment E).

Groundwater

A Tier 1 Water Availability Analysis (WAA) was prepared (RSA+, January 31, 2020) as directed by the County's Water Availability Analysis (WAA) Guidance Document (May 2015) and the Interim Well Permit Standards (January 2024); the report includes Tier 1 calculations for the existing and proposed water uses on the project site. The existing groundwater usage of the project site is estimated at 0.5 acre-feet per year (AF/yr), resulting in a reduction in groundwater use with the proposed project estimating 0.41 AF/yr. The estimated annual future groundwater demand to the proposed project well is below the estimated average annual recharge volume of 24.52 AF/yr (PPI. Engineering, July 1, 2025). The proposed project would result in a decrease of groundwater use by 0.09 AF/yr and would have no net increase in groundwater usage, through utilization of the existing project well to establish a replacement well, and by locating the proposed replacement well farther from an identified natural spring than the existing well. Additionally, the nearest well is approximately 1,400 feet away and the nearest significant stream is Burton Creek, approximately 6,000 feet away. The absence of interference to nearby existing wells or springs, and the project site being located outside the 1,500 foot buffer to a significant stream, screens the project out of Tier 2 and Tier 3 analysis requirements (PPI Engineering, May 2026).

Welcome Center

The 509 square foot welcome center shall be integrated into the existing setting, slope, and vegetation. The welcome center shall be a single-story structure to match the existing slope, building colors used shall be earth tone, shall be proposed to be located at the end of the driveway on site with exterior access to restrooms, and the project shall require all building and grading permits, prior to any project associated development.

Visitation and Employees

Visitation shall occur when the cemetery is operational, attracting those who are using the burial services and the general public who will be allowed to use the trail system from dawn to dusk daily. In the event where visitors are yet to vacate the property after hours of operation, the automatic gate shall open to allow visitors to exit the property but will remain closed to those trying to access the site outside of hours of operation. The cemetery will employ approximately two people on the property, including a cemetery manager and maintenance/operations staff. A minimum of one person will be on -site during business hours. Business hours at the onsite welcome center will be from dawn till dusk Monday through Friday, with one employee available by appointment on Saturdays and Sundays. There will be one employee working daily at the offsite office building on Main Street, St. Helena, from 9 am to 5 pm Tuesday through Saturday. Tuesdays, Thursdays, and Saturdays are open house days while Wednesdays and Fridays will be site tour days.

Cemeteries

Napa County approved three small family cemeteries in 2010, 2012, and 2025 (P10-00154, P12-

00266, and P24-00327), which established between 10 and 16 burial plots per cemetery. The County has no immediate knowledge of the potential for more cemetery requests, and cemeteries are allowed within all zoning districts subject to use permit approval per NCC §18.120.010(B)(12).

The Bureau maintains a rigorous process for applicants to establish a cemetery. The cemetery, as proposed, comes under the authority of the Bureau. They require that the proposed cemetery location be compatible or allowed by the local land use authority and require the applicant to submit a copy of the use permit application with the cemetery application. A cemetery manager must be designated by the applicant and included in the Bureau's application process. The applicant has hired a cemetery manager, Jim Bushey, PPI Engineering, to oversee management of the cemetery and ensure the ongoing protection of public health and safety. The Bureau also requires the applicant to record a cemetery map with the County Recorder's office. Once the use permit application process is complete and the requirements of the Bureau have been fulfilled, a field representative from the Bureau will conduct an inspection of the cemetery. Final approval is given by the Bureau, and at that point the Certificate of Authority license will be issued.

Archaeological & Cultural Resources

Due to the undeveloped nature of the proposed project parcel, a study was conducted to determine the presence or absence of historical or archaeological resources, and potential impacts, if any, as a result of the proposed project. Within the study, they held a preliminary assessment of the potential significance of identified cultural resources and assessed the cultural resources' vulnerability to significant impacts that could arise from the proposed project's activities. Two cabins and a water storage tank were found during the field survey. The study required that if future plans call for the alteration or removal of the cabins, they should be formally evaluated by a qualified archaeologist or architectural historian.

Following up on the preliminary assessment, the identified field survey findings were reviewed in regard to their historical significance. A Historical Evaluation Study (Eileen Barrow & Associates, 2025) evaluated the cabins per criteria for inclusion on the California Register of Historical Resources. After conducting archival research, developing a historical context, and examining the two cabins, the study determined that the structures do not meet criteria for inclusion on the California Register of Historical Resources and no further recommendations were warranted.

An AB 52 consultation was conducted December 16, 2025, and carried out by the Middletown Rancheria on the project site. The proposed project site and its surrounding areas are a site of cultural, historical, and religious significance for the Tribe. The Tribe is aware of and concerned about significant cultural and sacred resources that, while known to the Tribe, might not be properly identified through record and survey searches. On January 23, 2026, the Tribe requested for the mitigation measures the Middletown Rancheria Tibe provided, to be incorporated into the project to ensure preservation or mitigation of impacts to tribal cultural resources.

Public Comments

At the time this staff report was completed no public comments have been received.

Decision Making Options:

Staff is recommending the Planning Commission approve the project as summarized in Option 1, below. Decision making options include the following:

Option 1 - Approve Applicant's Proposal (Staff Recommendation)

Disposition - This action would result in approval of an exception to the Napa County Road and Street Standards, an Exception to the Napa County Conservation Regulations in the form of a Use Permit and a Use Permit to establish a green cemetery. Staff recommends this option as the request is consistent with the Zoning Ordinance, applicable General Plan policies, and other County regulations as presented in the Recommended Findings (Attachment A) and as conditioned (Attachment B).

Action Required - Follow the proposed actions listed in the Executive Summary. If conditions of approval are to be amended, specify conditions to be amended at time motion is made.

Option 2 - Modify the Applicant's Proposal

Disposition - This option would result in modification to the proposed cemetery to address concerns of the Planning Commission and/or public comments if solicited.

Action Required - Follow proposed actions listed in the Executive Summary and recommend amended scope and applicable conditions of approval. The item may need to be continued to a future date if significant revisions to the recommended plans and conditions of approval are desired.

Option 3 - Deny Proposed Project

Disposition - In the event the Commission determines that the project does not, or cannot, meet the required findings for the granting of the Use Permit, Commissioners should articulate what aspect or aspects of the project are in conflict with the required findings. State Law requires the Commission to adopt findings, based on the General Plan and County Code, setting forth why the proposed Use Permit is not being approved.

Action Required - Commission would take tentative motion to deny the project and remand the matter to staff for preparation of required findings, based upon the Commission's statements. Staff would return to the Commission with the findings for denial at a future date.

Option 4 - Continuance

The Commission may choose to continue the item to a later date at it's discretion.

Attachments:

A. Recommended Findings
B. Recommended Conditions of Approval
C. Initial Study - Mitigated Negative Declaration
D. Use Permit and Conservation Regulations Exception Application
E. Napa County Roads & Streets Standards Exception Letter
F. Traffic Impact Study
G. Historical Building Evaluation
H. Biological Resources Reconnaissance Survey
I. Water Availability Analysis
J. Stormwater Control Plan
K. Geologic Hazard Report
L. Graphics

“A”

Recommended Findings

PLANNING COMMISSION HEARING – JUNE 17, 2026
RECOMMENDED FINDINGS

HOWELL MOUNTAIN CEMETERY
USE PERMIT P20-00030-UP, CONSERVATION REGULATIONS EXCEPTION P25-00293, AND EXCEPTION TO THE ROAD AND SAFETY STANDARDS
1225 HOWELL MOUNTAIN ROAD, ANGWIN, CA 94508
(APN: 018-120-027-000, 018-120-043-000, & 018-120-044-000)

ENVIRONMENTAL:

The Planning Commission (Commission) has received and reviewed the proposed Mitigated Negative Declaration pursuant to the provisions of the California Environmental Quality Act (CEQA) and of Napa County's Local Procedures for Implementing CEQA, and finds that:

1. The Planning Commission has read and considered the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (MMRP) prior to taking action on said Mitigated Negative Declaration and the proposed project.

2. The Mitigated Negative Declaration is based on independent judgement exercised by the Planning Commission.

3. The Mitigated Negative Declaration and MMRP was prepared and considered in accordance with the requirements of the California Environmental Quality Act (CEQA).

4. There is no substantial evidence in the record as a whole, that the project will have a significant effect on the environment provided that measures to mitigate potentially significant impacts to biological and tribal cultural resources are incorporated into the project approval.

5. There is no evidence, in considering the record as a whole that the proposed project will have a potentially adverse effect on wildlife resource or habitat upon which the wildlife depends.

6. The site of this proposed project is not on any of the lists of hazardous waste sites enumerated under government Code Section 65962.5 and is not within the boundaries of any airport land use plan.

7. The Secretary of the Planning Commission is the custodian of the records of the proceedings on which this decision is based. Records are located at the Napa County Planning, Building, and Environmental Services Department, 1195 Third Street, Suite 210, Napa, CA 94559

EXCEPTION TO THE ROAD AND STREET STANDARDS:

The Commission has reviewed the attached described Road and Street Standards Exception request in accordance with Road and Street Standards Sections 3 and makes the following findings:

8. The exception will preserve unique features of the natural environment which includes, but is not limited to, steep slopes, heritage oak trees, or other trees of at least 6"dbh and found by the decision-

maker to be of significant importance, but does not include man made environmental features such as vineyards, rock walls, ornamental or decorative landscaping, fences or the like.

Analysis: Under the Napa County Roads and Streets Standards (NCRSS), a left-turn lane (LTL) would be warranted due to the proposed plus project volumes. Although the LTL is warranted, the project would unavoidably and excessively, cause adverse affects on the unique features of the natural environment. On April 6, 2026, the Director of Public Works concluded that the Traffic Impact Study (W-Trans, December, 2025), provides the necessary evidence to forego construction of a left-turn lane. The evidence to forego the LTL consisted of impacts to a substantial number of native trees and other vegetation, which are an important part of the ecosystem in this area. Additionally, the LTL will require grading of relatively steep rock slopes, and damage or removal of related trees. These slopes are also an important part of the aesthetic of this area. Approval of an exemption to the NCRSS will ensure that these features of the natural environment will be preserved to the maximum extent possible. Additionally, not requiring the construction of a left-turn lane when there are currently no left-turn lanes along Howell Mountain Road or in the vicinity of the project site, would validate the NCRSS exception because it would maintain the existing operation and character of Howell Mountain Road, while also preserving the site's features of the natural environment.

9. Grant of the Road and Street Standards Exception will provide the same overall practical effect as the Standards do in providing defensible space, and does not adversely affect the life, safety, and welfare of the public or persons coming to the property.

   Analysis: The requested NCRSS Exception would allow for the project to forego the left turn lane installation, which would prevent the removal of existing native trees and excessive grading on rocky steep slopes, while remaining consistent with the existing operation and character of Howell Mountain Road or in the vicinity of the project site. As provided in the Howell Mountain Road TIS, there were 15 collisions in the five-year period between October 1, 2014, to September 30, 2019. The study was utilized to create the Roadway Segment Collision Rate Worksheet which demonstrates a lesser rate of collisions per million vehicle miles than the statewide average, which occurs on roadways of similar conventional two (2) lane highways. A study provided by the Statewide Integrated Traffic Records System (SWITRS), utilizing the five-year period between June 1, 2017, to May 31, 2022, found that there were four (4) collisions reported on Howell Mountain Road, resulting in less than one (1) documented collision annually. Sight distance extends approximately 180 feet to the west and 260 feet to the east, and to maintain adequate site distance over time, the project has been conditioned (Condition 2 to Public Works Memorandum dated 5/27/25) to trim and maintain vegetation as recommended in the TIS, Figure 7. For those cars that do need to make a left turn into the driveway, there is adequate sight distance to allow cars to see a turning vehicle and stop to avoid it. As a result, an exception to the Napa County Road and Street Standards will not affect the project's capability to meet Napa County Fire Department's defensible space conditions, and the Department of Public Works on April 6, 2026, has reviewed this analysis and agreed with the findings. Therefore, the Exception will not adversely affect the life, safety, or welfare of the public or persons coming to the property.

EXCEPTION TO CONSERVATION REGULATIONS:

The Planning Commission has reviewed the Use Permit request in accordance with the requirements of Napa County Code (NCC) Section 18.108.040(A) and makes the following findings:

10. Roads, driveways, buildings and other man-made structures have been designed to complement the natural landform and to avoid excessive grading;

    Analysis: The overall development area consists of mild to steep slopes throughout the site due to the nature of the project parcel. The proposed driveway has been designed to minimize tree removal and grading. Proposed trails shall be designed to avoid trees, stream setbacks, and slopes greater than 50%, by designing the driveway and trails to maintain the existing landform and vegetation to the maximum extent feasible in order to create a natural environment for interment of human remains.

11. Primary and accessory structures employ architectural and design elements which in total serve to reduce the amount of grading and earthmoving activity required for the project, including the following elements: a) multiple-floor levels which follow existing, natural slopes; b) foundation types such as poles, piles, or stepping levels which minimize cut and fill and the need for retaining walls; and c) fence lines, walls, and other features which blend with the existing terrain rather than strike off at an angle against it;

    Analysis: The proposed structure on-site shall consist of a single-story structure to serve as the welcome center located at the end of the proposed driveway. The welcome center has been sited and designed to be constructed on a lower elevated and flat portion of the site, with the foundation utilizing spread footing or drilled piers, foregoing the need for a retaining wall and minimizing the net cut and fill. The project looks to have the welcome center follow the natural grade with a single-story structure and minimize the amount of grading.

12. The development project minimizes removal of existing vegetation, incorporates existing vegetation into the final design plan, and replacement vegetation of appropriate size, quality and quantity is included to mitigate adverse environmental effects;

    Analysis: The project is to be implemented with the intent of minimizing the total impacts of the proposed development. The project was designed to do so by locating the trails, interment areas, and the welcome center, so that there is no removal of existing vegetation. The driveway has been designed in a manner which minimizes the extent of existing vegetation removal, with 21 out of the 27 trees proposed for removal being approved for removal by a Registered Professional Forester (Scott Butler, RPF #1851), who will be preparing a less-than-3-acre timber conversion exemption for this project. Non-approved trees proposed for removal shall be replaced at 3:1 ratio NCC per 18.108.020(D). The total project will only impact 0.6 acres of vegetation on a 109.3-acre project parcel, which results in an over 99% retention of existing vegetation.

13. Adequate fire safety measures have been incorporated into the design of the proposed development;

    Analysis: The project proposed shall construct a driveway which meets the Napa County Road and Streets Standards, while also utilizing the existing driveway as an emergency access for Cal Fire. This project maintains and ensures that the project may be accessible at all times to all emergency vehicles. Site improvements shall provide and maintain defensible space as required by the Napa County Fire Department.

14. Disturbance to streams and watercourses shall be minimized, and the encroachment, if any, is the minimum necessary to implement the project;

Analysis: The proposed project does not include any disturbances to streams or watercourse, and the development does not encroach upon the 35-foot setback in place for the existing, onsite ephemeral watercourse. On the project site, the ephemeral streams and watercourse shall be avoided by designing and locating the proposed construction of the welcome center, new driveway, and the 1.5 miles of trails to follow the natural environment with minimal grading, avoiding all on-site ephemeral streams or watercourses.

15. The project does not adversely impact threatened or endangered plant or animal habitats as designated by state or federal agencies or identified as special status species, sensitive biotic communities or habitats of limited distribution in the county's Baseline Data Report (2005 or as amended) or Environmental Resources Mapping System;

    Analysis: The applicant provided an Updated Biological Resources Reconnaissance Survey, conducted by Wildlife Research Associates, dated August, 2024. The study expands on special status species of both plant and wildlife, by providing mitigation measures which prevent adverse impacts result in any special status species. Mitigations will address the five (5) special status plants which occur in the study area by implanting periodic surveys to assess and avoid adversely affecting special status plants. For special status wildlife, mitigation measures include survey and assessment of trees proposed for removal in respect to bat habitat. Additional surveys and assessments are to be implemented for any proposed tree removal or ground disturbance, outside of the general bird nesting season. The project includes environmental mitigations as conditions of approval, including the implementation of pre-construction surveys by qualified biologists for sensitive species of birds and bats. Therefore, it is not anticipated that any adverse impacts on special status species would result from project implementation.

16. An erosion control plan, or equivalent NPDES stormwater management plan, has been prepared in accordance with NCC Section 18.108.080 and has been approved by the Director or designee.

    Analysis: The proposed project application submittal materials including a Stormwater Control Plan (TSD Engineering, Inc., dated August 20, 2024). The materials were reviewed by the Engineering Division and found to comply with the requirements of the County's NPDES stormwater management program approved by Napa County Engineering Division.

USE PERMIT:

The Planning Commission has reviewed the Use Permit request in accordance with the requirements of Napa County Code (NCC) Section 18.124.070 and makes the following findings:

17. The Planning Commission has the power to issue a use permit under the zoning regulations in effect as applied to the property.

    Analysis: The project is consistent with zoning district regulations. Cemeteries (as listed in Napa County Code Section 18.120.010(B)(12)) are permitted in all zoning districts with an approved use permit. The project complies with the requirements of the remainder of the Napa County Zoning Ordinance (Title 18, Napa County Code) as applicable.

18. The procedural requirements for a Use Permit set in Chapter 18.124 of the Napa County Code have been met.

Analysis: Under NCC § 18.124.010, the use permit may be granted by the planning commission and a companion action is not required by the board of supervisors. The appropriate applications, fees, and public hearing requirements have been met. The hearing notice to approve the project and to adopt a Mitigated Negative Declaration under CEQA was posted and published in the Napa Valley Register on May 14, 2026. and copies of the notice were forwarded to property owners within 1,000 feet of all project parcels. In addition to the requirements, the notice of public hearing was sent to interested parties requesting such notice.

19. The grant of the Use Permit, as conditioned, will not adversely affect the public health, safety or welfare of the County of Napa.

    Analysis: Various County divisions and departments were provided an opportunity to review and comment on the project. After the Napa County divisions and departments independently reviewed the project, the divisions provided project specific Conditions of Approval(COA's). The COA's, are provided so that any potential adverse effects on public health, safety, and welfare, are properly mitigated in relation to the project. Additionally cemeteries are primarily regulated by the State of California Department of Consumer Affairs Cemetery and Funeral Bureau (the Cemetery and Funeral Bureau) and requires a Certificate of Authority. With the additional regulation, it ensures that the proper regulations and mitigations are effectively, and properly enforced. The Certification of Authority, which includes a cemetery manager, application has been submitted by the applicant to the Cemetery and Funeral Bureau. The application includes a cemetery manager (Jim Bushey, PPI Engineering), and therefore, the cemetery as conditioned will ensure the ongoing protection of public health and safety.

20. The proposed Use Permit complies with applicable provisions of the Napa County Code and is consistent with the policies and standards of the Napa County General Plan.

    Analysis: The subject parcel is located on land zoned as Agricultural Watershed. The proposed use complies with applicable provisions of the Napa County Code and is consistent with the policies and standards of the Napa County General Plan. Applicable Napa County Zoning Ordinances sections include 18.20 (AW Zoning District), 18.104 (Additional Zoning Information), 18.108 (Conservation Regulations), 18.120 (Exceptions to Use Limitations), and 18.124 (Use Permits).

    In terms of General Plan policies and standards, the project is a green cemetery and will disturb approximately 0.69 acres, for the purpose of limited grading on a 109.3-acre project site and will minimize the effect on the existing vegetation and open space. The cemetery is comprised of 16.19 acres of eight interment areas ranging from 0.18 to 7.52 acres, 1.5 miles of public trails, automatic gate, driveway, parking, and welcome center. The welcome center and driveway improvements shall require a building permit, and existing landscaping shall be retained to maintain the existing integrity of the site. Interment will be green burial and marked by natural headstones which blend in with the naturally occurring on-site materials. The cemetery site is in a natural setting surrounded by mature trees and native landscaping. As the proposed project maintains the character of a preserve and will allow natural native grass species to continue to inhabit the area, the project supports General Plan Policy AG/LU-4 concerning the reservation of open space, as well as Policy CON-1 promoting the preservation of native vegetation. Land disturbance will only take place to establish the green cemetery with driveway improvements, welcome center, and daily burials. This use will not have any effect on the preservation or use of agriculturally designated land for current and future agricultural purposes,

which supports General Plan Goals AG/LU-1 regarding agricultural preservation.

APPLICABLE GENERAL PLAN GOALS AND POLICIES ANALYSIS:

Policy AG/LU-4: The County will reserve agricultural lands for agricultural use including lands used for grazing and watershed/open space, except for those lands which are shown on the Land Use Map as planned for urban development.

Policy AG/LU-64: To maintain the rural atmosphere of the Angwin community, the County will not promote policies that encourage land uses that are incompatible with or out of character with the area, recognizing that a large part of the community's character is derived from its wooded setting.

Policy AG/LU-67: The County will continue to maintain a road network to service the needs of Angwin residents and provide accessibility to emergency vehicles.

Policy CIR-5: Roadways outside the urbanized areas of the county shall reflect the rural character of the county

Policy CIR-7: Roadway improvements shall be designed to conform to existing landforms and shall include landscaping and/or other treatments to ensure that aesthetics and rural character are preserved.

Policy CIR-15: The County shall maintain and apply consistent highway access standards regarding new driveways to minimize interference with through traffic while providing adequate local access. The County shall also maintain and apply consistent standards (though not exceeding public road standards) regarding road widths, turn lanes, and other improvements required in association with new development. Application of these standards shall consider the level of improvements on contiguous roads.

Policy CIR-19: Applicants proposing new discretionary development projects with the potential to significantly affect traffic operations shall be required to prepare a traffic analysis prior to consideration of their project by the County and shall be required to mitigate project impacts and to pay their fair share of countywide cumulative traffic improvements based on their contribution to the need for these improvements.

Policy CIR-23: New uses shall provide adequate parking to meet their anticipated parking demand and shall not provide excess parking that could stimulate unnecessary vehicle trips or commercial activity exceeding the site's capacity. The concept of shared parking may be considered.

Goal CC-1: Preserve, improve, and provide visual access to the beauty of Napa County.

Policy CC-1: The County will retain the character and natural beauty of Napa County through the preservation of open space.

Policy CC-6: The grading of building sites, vineyards, and other uses shall incorporate techniques to retain as much as possible a natural landform appearance. Examples include:

a) The overall shape, height, and grade of any cut or fill slope shall be designed to simulate the existing natural contours and scale of the natural terrain of the site.

b) The angle of the graded slope shall be gradually adjusted to the angle of the natural terrain.
c) Sharp, angular forms shall be rounded and smoothed to blend with the natural terrain.

Policy CON-1: The County will preserve land for greenbelts, forest, recreation, flood control, adequate water supply, air quality improvement, habitat for fish, wildlife and wildlife movement, native vegetation, and natural beauty. The County will encourage management of these areas in ways that promote wildlife habitat renewal, diversification, and protection.

Policy CON-4: The County recognizes that preserving watershed open space is consistent with and critical to the support of agriculture and agricultural preservation goals.

Goal CON-2: Maintain and enhance the existing level of biodiversity.

Goal CON-3: Protect the continued presence of special-status species, including special-status plants, special-status wildlife, and their habitats, and comply with all applicable state, federal, or local laws or regulations.

Goal CON-4: Conserve, protect, and improve plant, wildlife, and fishery habitats for all native species in Napa County.

Goal CON-5: Protect connectivity and continuous habitat areas for wildlife movement.

Goal CON-6: Preserve, sustain, and restore forests, woodlands, and commercial timberland for their economic, environmental, recreation, and open space values.

Policy CON-27: The County shall enforce compliance and continued implementation of the intermittent and perennial stream setback requirements set forth in existing stream setback regulations, provide education and information regarding the importance of stream setbacks and the active management and enhancement/restoration of native vegetation within setbacks, and develop incentives to encourage greater stream setbacks where appropriate. Incentives shall include streamlined permitting for certain vineyard proposals on slopes between 5 and 30 percent and flexibility regarding yard and road setbacks for other proposals.

Policy CON-48: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

Policy CON-53: The County shall ensure that the intensity and timing of new development are consistent with the capacity of water supplies and protect groundwater and other water supplies by requiring all applicants for discretionary projects to demonstrate the availability of an adequate water supply prior to approval. Depending on the site location and the specific circumstances, adequate demonstration of availability may include evidence or calculation of groundwater availability via an appropriate hydrogeologic analysis or may be satisfied by compliance with County

Code “fair-share” provisions or applicable State law. In some areas, evidence may be provided through coordination with applicable municipalities and public and private water purveyors to verify water supply sufficiency.

Goal E-2: Develop and promote a diversity of business opportunities, which do not conflict with agriculture.

Goal ROS-1: To ensure an extensive landscape of open spaces in which recreation, the protection of natural, cultural, and archaeological resources, agricultural production, and private property are mutually supportive and complementary.

Policy ROS-1: The County encourages the acquisition, location, design, management, and operation of recreational open space and facilities, in ways that protect natural resources, enhance natural habitats, conserve agricultural lands, maintain agricultural productivity, and respect private property. The County shall coordinate with and support the Napa County Regional Park and Open Space District in implementing this policy.

Policy ROS-8: Minimize potential negative impacts of proposed open space improvements and uses through appropriate design and by requiring mitigation for any remaining significant impacts.

Policy SAF-10.6: Meet or exceed fire safety standards for Napa County buildings and roads. The County should set a good example and meet or exceed fire safety standards and defensible space requirements for all Napa County buildings and roads.

21. That, in the case of other groundwater basins, or areas which do not overlay an identified groundwater basin, substantial evidence has not been presented which demonstrates that the new water system or improvement might cause a significant adverse affect on any underlying groundwater basin, unless that use would satisfy any of the other criteria specified for approval or waiver of a groundwater permit.

    Analysis: The proposed project parcel is located outside of groundwater basins identified as “groundwater deficient areas” under Napa County Code Section 13.15.010. The proposed use would require a new water system and improvements, however the proposed well is a replacement to the existing well (E15-00784) and the proposed use results in a net decrease of Acre-feet per year. By reducing the net water usage, increasing the proposed well distance to the existing spring, and utilizing a replacement well, a Tier II WAA was not warranted, additionally the project did not trigger the Tier III WAA due to the project site being located more than 1,500 feet away from a significant stream. Therefore, the proposed cemetery shall not cause significant adverse effects, either individually or cumulatively, on an affected groundwater basin in Napa County.

“B”

Recommended Conditions of Approval

PLANNING COMMISSION HEARING – JUNE 17, 2026
RECOMMENDED CONDITIONS OF APPROVAL

HOWELL MOUNTAIN CEMETERY
USE PERMIT P20-00030-UP, CONSERVATION REGULATIONS EXCEPTION P25-00293, AND EXCEPTION TO THE ROAD AND STREET STANDARDS
1225 HOWELL MOUNTAIN ROAD, ANGWIN, CA 94508
(APN: 018-120-027-000, 018-120-043-000, & 018-120-044-000)

This Permit encompasses and shall be limited to the project commonly known as **Howell Mountain Cemetery, located at 1225 Howell Mountain Road, Angwin, CA.** Part I encompasses the Project Scope and general conditions pertaining to statutory and local code references, project monitoring and the process for any future changes or activities. Part II encompasses the ongoing conditions relevant to the operation of the project. Part III encompasses the conditions relevant to construction and the prerequisites for a Final Certificate of Occupancy. It is the responsibility of the permittee to communicate the requirements of these conditions and mitigations (if any) to all designers, contractors, employees, and the general public to ensure compliance is achieved.

Where conditions are not applicable or relevant to this project, they shall be noted as "Reserved" and, therefore, have been removed.

When modifying a legally established entitlement related to this project, these conditions are not intended to be retroactive or to have any effect on existing vested rights except where specifically indicated.

PART I

1.0 PROJECT SCOPE

This Permit shall be limited to:

1.1 An Exception to the Napa County Road and Streets Standards to forego installing a left turn lane.

1.2 An Exception to the Napa County Conservation Regulations in the form of a Use Permit in order to allow minimal grading to be able to access interment areas, trails, and welcome center.

1.3 Approval to establish a green cemetery approximately 109.3 acres in size.

a. Designation of 16.19 acres of interment areas, (A-H), ranging in size from 0.18 to 7.52 acres.
b. Construction of a 509 square-foot welcome center with two restrooms accessible from the exterior of the building.
c. Construction of an entrance gate and driveway from the site access to the welcome center.
d. 38 parking spaces.
e. Construct replacement of the existing well (E15-00784).
f. Installation of a domestic wastewater system.

g. Demolition of two (2) single-story structures
h. Establish approximately 1.5 miles of trails to provide access to interment areas.
i. Operation of motor vehicles (All-terrain vehicles and all-terrain passenger carts) on interment access trails.

The **Howell Mountain Cemetery** shall be designed in substantial conformance with the submitted site plan, elevation drawings, and other submittal materials and shall comply with all requirements of the Napa County Code (the County Code). It is the responsibility of the permittee to communicate the requirements of these conditions and mitigations (if any) to all designers, contractors, employees, and the general public to ensure compliance is achieved. Any expansion of or change in use or alternative locations for fire suppression or other types of water tanks shall be approved in accordance with the County Code and may be subject to the permit modification process.

2.0 STATUTORY AND CODE SECTION REFERENCES

All references to statutes and code sections shall refer to their successor as those sections or statutes may be subsequently amended from time to time.

3.0 MONITORING COSTS

All Staff costs associated with monitoring compliance with these conditions, previous permit conditions, and project revisions shall be borne by the permittee and/or property owner. Costs associated with conditions of approval and mitigation measures that require monitoring, including investigation of complaints, other than those costs related to investigation of complaints of non-compliance that are determined to be unfounded, shall be charged to the property owner or permittee. Costs shall be as established by resolution of the Board of Supervisors in accordance with the hourly consulting rate established at the time of the monitoring and shall include maintenance of a $500 deposit for construction compliance monitoring that shall be retained until issuance of a Final Certificate of Occupancy. Violations of conditions of approval or mitigation measures caused by the permittee's contractors, employees, and/or guests are the responsibility of the permittee.

The Planning Commission may implement an audit program if compliance deficiencies are noted. If evidence of a compliance deficiency is found to exist by the Planning Commission at some time in the future, the Planning Commission may institute the program at the permittee's expense (including requiring a deposit of funds in an amount determined by the Commission) as needed until compliance assurance is achieved. The Planning Commission may also use the data, if so warranted, to commence revocation proceedings in accordance with the County Code.

PART II

4.0 OPERATIONAL CHARACTERISTICS OF THE PROJECT

Permittee shall comply with the following during operation of the project:

4.1 GROUND WATER MANAGEMENT – WELLS

This condition is implemented by the Planning, Building, and Environmental Services:

The permittee shall be required (at the permittee's expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water withdrawn no less than monthly). Such data will be provided to the County, if the Director of Planning, Building, and Environmental Services (PBES Director) determines that substantial evidence[1] indicates that water usage at the project is affecting, or would potentially affect, groundwater supplies or nearby wells. If data indicates the need for additional monitoring, and if the applicant is unable to secure monitoring access to neighboring wells, onsite monitoring wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.

In order to support the County's groundwater monitoring program, well monitoring data as discussed above will be provided to the County if the PBES Director determines that such data could be useful in supporting the County's groundwater monitoring program. The project well will be made available for inclusion in the groundwater monitoring network if the PBES Director determines that the well could be useful in supporting the program.

In the event that changed circumstances or significant new information provide substantial evidence that the groundwater system referenced in this use permit would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the permittee, or revocation of this permit, as necessary to meet the requirements of the County Code and to protect public health, safety, and welfare.

4.2 AMPLIFIED MUSIC

There shall be no amplified sound system or amplified music utilized outside of approved, enclosed, buildings.

4.3 TRAFFIC

To the maximum extent feasible, scheduling of reoccurring vehicles trips to and from the site for employees and deliveries shall not occur during peak travel times (4:00 p.m. to 6:00 p.m. Monday to Sunday). All road improvements on private property required per Engineering Services shall be maintained in good working condition and in accordance with the Napa County Roads and Streets Standards.

4.4 PARKING

The location and visitor parking and truck loading zone areas shall be identified along with proposed circulation and traffic control signage.

[1] Substantial evidence is defined by case law as evidence that is of ponderable legal significance, reasonable in nature, credible and of solid value. The following constitute substantial evidence: facts, reasonable assumptions predicated on facts; and expert opinions supported by facts. Argument, speculation, unsubstantiated opinion or narrative, or clearly inaccurate or erroneous information do not constitute substantial evidence.

Parking shall be limited to approved parking spaces only and shall not occur along access or public roads or in other locations except during authorized events. In no case shall parking impede emergency access or public roads.

4.5 BUILDING DIVISION – USE OR OCCUPANCY CHANGES
Please contact the Building Division with any questions regarding the following:

In accordance with the California Building Code (CBC), no change shall be made in the use of occupancy of an existing building unless the building is made to comply with the requirements of the current CBC for a new building.

4.6 FIRE DEPARTMENT – TEMPORARY STRUCTURES **[RESERVED]**

4.7 NAPA COUNTY MOSQUITO ABATEMENT PROGRAM **[RESERVED]**

4.8 GENERAL PROPERTY MAINTENANCE – LIGHTING, LANDSCAPING, PAINTING, OUTDOOR EQUIPMENT STORAGE, MECHANICAL EQUIPMENT, AND TRASH ENCLOSURE AREAS

a. All lighting shall be permanently maintained in accordance with the lighting and building plans approved by the County.

b. All landscaping shall be permanently maintained in accordance with the landscaping approved by the County.

c. All outdoor screening, storage, mechanical equipment and utility structures shall be permanently maintained in accordance with the landscaping and building plans approved by the County. No stored items shall exceed the height of the screening. Exterior equipment shall be maintained to not create a noise disturbance or exceed noise thresholds in the County Code.

d. The colors used for the roof, exterior walls and built landscaping features of the project shall be limited to earth tones that will blend the facility into the colors of the surrounding site-specific vegetation. The permittee shall obtain the written approval of the Planning Division prior to any change in paint color that differs from the approved building permit. Highly reflective surfaces are prohibited.

e. Designated trash enclosure areas shall be made available and properly maintained for intended use.

4.9 NO TEMPORARY SIGNS
Temporary off-site signage, such as “A-Frame” signs are prohibited.

4.10 COMPLIANCE WITH OTHER DEPARTMENTS AND AGENCIES - OPERATIONAL CONDITIONS

The attached project conditions of approval include all of the following County Divisions, Departments and Agencies’ requirements. Without limiting the force of

those other requirements which may be applicable, the following are incorporated by reference as enumerated herein:

a. Engineering Services Division operational conditions as stated in their Memorandum dated August 14, 2025.

b. Fire Department operational conditions as stated in their Memorandum dated July 1, 2025.

c. Public Works Division operational conditions as stated in their Memorandum dated May 27, 2025.

The determination as to whether or not the permittee has substantially complied with the requirements of other County Divisions, Departments and Agencies shall be determined by those County Divisions, Departments or Agencies. The inability to substantially comply with the requirements of other County Divisions, Departments and Agencies may result in the need to modify this permit.

4.11 OPERATIONAL MITIGATION MEASURES

The permittee shall comply with the following operational mitigation measures identified in the adopted Initial Study/Mitigated Negative Declaration and Project Revision Statement/Mitigation Monitoring and Reporting Program prepared for the project:

a. MM TCR-1: Tribal Construction Monitoring

1. Prior to initial ground disturbance, the applicant shall retain a project Tribal Cultural Advisor approved by the Tribe, to direct all mitigation measures related to tribal cultural resources.

2. Ground disturbing activities occurring in conjunction with the Project (including surveys, testing, concrete pilings, debris removal, rescrapes, punchlists, erosion control (mulching, waddles, hydroseeding, etc.), pot-holing or auguring, boring, grading, trenching, foundation work and other excavations or other ground disturbance involving the moving of dirt or rocks with heavy equipment or hand tools within the Project area) shall be monitored on a full-time basis by qualified tribal monitor(s) approved by the Tribe. The tribal monitoring shall be supervised by the project Tribal Cultural Advisor. Tribal monitoring should be conducted by qualified tribal monitor(s) approved by the Tribe, who is defined as qualified individual(s) who has experience with identification, collection and treatment of tribal cultural resources of value to the Tribe. The duration and timing of the monitoring will be determined by the project Tribal Cultural Advisor. If the project Tribal Cultural Advisor determines that full-time monitoring is no longer warranted, he or she may recommend that tribal monitoring be reduced to periodic spot-checking or cease entirely. Tribal

monitoring would be reinstated in the event of any new or unforeseen ground disturbances or discoveries.

3. The project Tribal Cultural Advisor and tribal monitor(s) may halt ground disturbance activities in the immediate area of discovery when known or suspected tribal cultural resources are identified until further evaluation can be made in determining their significance and appropriate treatment or disposition. There must be at minimum one tribal monitor for every separate area of ground disturbance activity that is at least 30 meters or 100 feet apart unless otherwise agreed upon in writing between the Tribe and applicant. Depending on the scope and schedule of ground disturbance activities of the Project (e.g., discoveries of cultural resources or simultaneous activities in multiple locations that requires multiple tribal monitors, etc.) additional tribal monitors may be required on-site. If additional tribal monitors are needed, the Tribe shall be provided with a minimum of three (3) business days advance notice unless otherwise agreed upon between the Tribe and applicant. The on-site tribal monitoring shall end when the ground disturbance activities are completed, or when the project Tribal Cultural Advisor has indicated that the site has a low potential for tribal cultural resources.

4. All on-site personnel of the Project shall receive adequate cultural resource sensitivity training approved by the project Tribal Cultural Advisor or his or her authorized designee prior to initiation of ground disturbance activities on the Project. The training must also address the potential for exposing subsurface resources and procedures if a potential resource is identified consistent. The Project applicant will coordinate with the Tribe on the cultural resource sensitivity training.

5. The Project applicant must meet and confer with the Tribe, at least 45 days prior to commencing ground disturbance activities on the Project to address notification, protection, treatment, care and handling of tribal cultural resources potentially discovered or disturbed during ground disturbance activities of the Project. All potential cultural resources unearthed by Project activities shall be evaluated by the project Tribal Cultural Advisor. The Tribe must have an opportunity to inspect and determine the nature of the resource and the best course of action for avoidance, protection and/or treatment of tribal cultural resources to the extent permitted by law. If the resource is determined to be a tribal cultural resource of value to the Tribe, the Tribe will coordinate with the Project applicant to establish appropriate treatment and disposition of the resources with appropriate dignity which may include reburial or preservation of resources. The Project applicant must facilitate and ensure that the determination of treatment and disposition by the Tribe is followed to the extent permitted by law. No laboratory studies, scientific analysis,

curation, or video recording are permitted for tribal cultural resources without the prior written consent of the Tribe.

Method of Monitoring: At least forty-five (45) days prior to commencement of any ground-disturbing activities, the permittee shall provide written documentation to the Napa County Planning Division confirming that the required meet-and-confer meeting(s) with the Tribe have occurred or been scheduled.

Prior to initial ground-disturbing activities, the permittee shall submit written documentation to the Napa County Planning Division confirming retention of a project Tribal Cultural Advisor approved by the Tribe and that all on-site personnel have completed cultural resource sensitivity training approved by the project Tribal Cultural Advisor or authorized designee.

Lead Agency: PBES Department

Responsible Agency(ies): Culturally-affiliated Native American tribes

b. Mitigation Measure BIO-1: Special-Status Species Monitoring

1. As part of the management and conservation of the project site, periodic surveys (every five years) of the internment areas for special-status plant and animal species shall be conducted to determine an estimated census, distribution, and management needs. Informative materials (photographs, descriptions) of all on-site special-status species shall be provided to staff to avoid impacts to such species. A copy of the survey findings shall be provided to the Napa County Planning Division within 30 days of completing the surveys.

Method of Monitoring: Permittee shall conduct surveys every five (5) years and shall submit the report to the Napa County Planning Division of PBES, within 30 days of completing surveys.

Lead Agency: PBES Department

Responsible Agency(ies): CDFW

c. Mitigation Measure BIO-5: Environmental Resources

1. A Preservation Area, totaling a minimum of 2.07 acres of Douglas fir forest (3:1 preservation ratio for the canopy impact) and 1.9 acres of oak woodland (2:1 preservation ratio for the habitat impact) shall be designated as such in a deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals

and policies of Napa County. The permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the forest being impacted as a result of the proposed project, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project site and Napa County; the acreage included in the preservation area should be selected in a manner that minimizes fragmentation of oak woodland within the project site; and the preservation area should not include portions of the project site already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.

The land placed in protection shall be restricted from development and other uses that would potentially degrade the quality of the habitat (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion), and should be otherwise restricted by the existing goals and policies of Napa County.

The permittee shall provide an endowment to the accredited land trust that is sufficient to ensure that the mitigation easement is monitored, enforced, and defended in perpetuity. The amount of the endowment shall be calculated using the Center for Natural Land Management's Property Analysis Record software, or an equivalent methodology if preferred by the land trust and accepted by the Land Trust Alliance, which provides the systematic and objective determination of the amount of the endowment in light of the conservation values to be protected by the easement. The record showing how the amount of the endowment was calculated shall be provided to County Counsel as part of its review of the mitigation easement. Any county staff time spent assessing and monitoring said provision shall be charged to the permittee, at the rate in effect at the time assessment and monitoring occurs, pursuant to County Fee Policy Part 80.

2. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the proposed development area (typically within approximately 50-feet of the proposed development area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of earthmoving activities.

3. The permittee shall refrain from severely trimming the trees (typically no more than 1/3 of the canopy) and vegetation to be retained adjacent to the proposed development area.

4. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293 shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval that includes, at a minimum, the locations where replacement trees would be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented prior to issuance of a building or grading permit. Any replaced trees shall be monitored for at least three years to ensure an 80% survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the associated building permits.

Method of Monitoring: Prior to construction or within 90 days of project approval, whichever occurs first, the permittee shall record the required deed restriction, conservation easement, or other permanent protection mechanism for the required preservation and provide documentation to the Napa County Planning Division and County Counsel for review and approval. Documentation demonstrating establishment of the required endowment funding, including the methodology used to calculate the endowment amount, shall be submitted to County Counsel as part of the mitigation easement review process prior to commencement of earth-disturbing activities.

Prior to commencement of any earthmoving activities, the permittee shall request inspection of the temporary fencing by the Napa County Planning Division.

Ongoing enforcement by the applicant and/or by site visit request of the Napa County Planning Division during ground disturbance activities.

Lead Agency: PBES Department

4.12 OTHER CONDITIONS APPLICABLE TO THE OPERATIONAL ASPECTS OF THE PROJECT

a. Visitation is open to the general public during operating hours for trail use but interment areas shall be exclusive to family and friends of the deceased.

b. Existing native vegetation shall be retained at the cemetery site without any installation of irrigation or additional water use for cemetery landscaping purposes or improvements.

c. No signage will be installed other than a sign integrated with the entrance gate, natural grave markers, and any required State of California Cemetery and Funeral Bureau identification signage at the cemetery and in the administrative office.

d. Where feasible avoid excavation of interment plots near the boles of trees. Excavation should be with hand tools and small power tools, whenever feasible. Topsoil, including the root wads of any large perennial herbs and small shrubs, should be diligently set aside to resurface the interment plot. All tools, quads, and other equipment should be regularly cleaned and decontaminated to prevent the spread of invasive plants and soil borne pathogens.

e. In the event that a discovery of a braes, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find. All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

f. The permittee shall implement the following best management practices during construction activities and maintenance and operations:

    i. Workers shall follow manufacturer's recommendations on use, storage and disposal of chemical products.

    ii. Workers shall avoid overtopping fuel gas tanks and use automatic shutoff nozzles where available.

    iii. During routine maintenance of equipment, properly contain and remove grease and oils.

    iv. Discarded containers of fuel and other chemicals shall be properly disposed of.

    v. Spill containment features shall be installed at the project site wherever chemicals are stored overnight.

    vi. All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from watercourses, existing groundwater well(s), and any other water resource to avoid the potential for risk of surface and groundwater contamination.

    vii. To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers

shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

4.13 PREVIOUS CONDITIONS **[RESERVED]**

PART III

5.0 PREREQUISITE FOR ISSUANCE OF PERMITS

5.1 PAYMENT OF FEES
No building, grading or sewage disposal permits shall be issued or other permits authorized until all accrued planning permit processing fees have been paid in full. This includes all fees associated with plan check and building inspections, associated development impact fees established by County Ordinance or Resolution, and the Napa County Affordable Housing Mitigation Fee in accordance with County Code.

6.0 GRADING/DEMOLITION/ENVIRONMENTAL/BUILDING PERMIT/OTHER PERMIT PREREQUISITES

Permittee shall comply with the following with the submittal of a grading, demolition environmental, building and/or other applicable permit applications:

6.1 COMPLIANCE WITH OTHER DEPARTMENTS AND AGENCIES - PLAN REVIEW, CONSTRUCTION AND PREOCCUPANCY CONDITIONS

The attached project conditions of approval include all of the following County Divisions, Departments and Agencies' requirements. The permittee shall comply with all applicable building codes, zoning standards, and requirements of County Divisions, Departments and Agencies at the time of submittal and may be subject to change. Without limiting the force of those other requirements which may be applicable, the following are incorporated by reference as enumerated herein:

a. Engineering Services Division plan review/construction/preoccupancy conditions as stated in their Memorandum dated August 14, 2025.

b. Fire Department plan review/construction/preoccupancy conditions as stated in their Memorandum dated July 1, 2025.

c. Public Works Services Division plan review/construction/preoccupancy conditions as stated in their Memorandum dated May 27, 2025.

The determination as to whether or not the permittee has substantially complied with the requirements of other County Divisions, Departments and Agencies shall be determined by those County Divisions, Departments or Agencies. The inability to substantially comply with the requirements of other County Divisions, Departments and Agencies may result in the need to modify the permit.

6.2 BUILDING DIVISION – GENERAL CONDITIONS
Please contact the Building Division with any questions regarding the following:

a. A building permit shall be obtained for all construction occurring on the site not otherwise exempt by the CBC or any State or local amendment adopted thereto

b. If there are any existing structures and/or buildings on the property that will need to be removed to accommodate construction activities, a separate demolition permit shall be required from the Building Division prior to removal. The permittee shall provide a "J" number from the Bay Area Air Quality Management District (BAAQMD) at the time the permittee applies for a demolition permit if applicable.

c. All areas of newly designed and newly constructed buildings, facilities and or site improvements must comply with the CBC accessibility requirements, as well as, American with Disabilities Act requirements when applicable. When alterations or additions are made to existing buildings or facilities, an accessible path of travel to the specific area of alteration or addition shall be provided as required per the CBC.

6.3 LIGHTING – PLAN SUBMITTAL

a. Two (2) copies of a detailed lighting plan showing the location and specifications for all lighting fixtures to be installed on the property shall be submitted for Planning Division review and approval. All lighting shall comply with the CBC.

b. All exterior lighting, including landscape lighting, shall be shielded and directed downward; located as low to the ground as possible; the minimum necessary for security, safety, or operations; on timers; and shall incorporate the use of motion detection sensors to the greatest extent practical. All lighting shall be shielded or placed such that it does not shine directly on adjacent properties or impact vehicles on adjacent streets. No flood-lighting or sodium lighting of the building is permitted, including architectural highlighting and spotting. Low-level lighting shall be utilized in parking areas as opposed to elevated high-intensity light standards.

6.4 LANDSCAPING – PLAN SUBMITTAL

a. Two (2) copies of a detailed final landscaping and irrigation plan, including parking details, shall be submitted with the building permit application package for the Planning Division's review and approval prior to the issuance of any building permit associated with this permit. The plan shall be prepared pursuant to the Water Efficient Landscape Ordinance (Chapter 18.118 of the County Code) requirements in effect at the time of building permit application submittal, as applicable, and shall indicate the names and locations of all plant materials to be used along with their method of maintenance.

b. Plant materials shall be purchased locally when practical, and, to the greatest extent possible, the plant materials shall be the same native plants found in Napa County. The Agricultural Commissioner's office shall

be notified of all impending deliveries of live plants with points of origin outside of Napa County.

c. No trees greater than 6” diameter at breast height shall be removed, except for those identified on the submitted site plan. Any Oak trees removed as a result of the project shall be replaced at a 2:1 ratio and shown on the landscaping plans for the Planning Division’s review and approval. Trees to be retained shall be protected during construction by fencing securely installed at the outer most dripline of the tree or trees. Such fencing shall be maintained throughout the duration of the work undertaken in connection with project development/construction. In no case shall construction material, debris or vehicles be stored in the fenced tree protection area.

6.5 COLORS

The colors used for the roof, exterior walls and built landscaping features of the project shall be limited to earth tones that will blend the facility into the colors of the surrounding site specific vegetation. The permittee shall obtain the written approval of the Planning Division in conjunction with building permit review and/or prior to painting the building. Highly reflective surfaces are prohibited.

6.6 OUTDOOR STORAGE/SCREENING/UTILITIES

a. Details of outdoor storage areas and structures shall be included on the building and landscape plans. All outdoor storage of equipment shall be screened from the view of residences of adjacent properties by a visual barrier consisting of fencing or dense landscaping. No stored item shall exceed the height of the screening. Water and fuel tanks, and similar structures, shall be screened to the extent practical so as to not be visible from public roads and adjacent parcels.

b. New utility lines required for this project that are visible from any designated scenic transportation route (see Community Character Element of the General Plan and the County Code) shall be placed underground or be made virtually invisible from the subject roadway.

6.7 MECHANICAL EQUIPMENT

a. Roof mounted equipment shall be screened by a parapet wall of equal or greater height than the highest piece of roof mounted equipment or vent. Equipment may be screened by a separate roof screen that is architecturally integrated with the building if screening by a parapet wall is not feasible or is architecturally undesirable. When separate roof screens are used, roof equipment should be organized into major groups screening a smaller number of units rather than multiple areas. The PBES Director may approve exceptions for solar equipment. All screening is subject to review and approval by the PBES Director. Any skylights shall be subject to review and approval by the PBES Director prior to the issuance of building permits.

b. The term "equipment" includes roof mounted equipment or vents, electrical equipment, gas meter, communication antennas, irrigation

valves, storage tanks, or other mechanical equipment. The manner of screening shall be as follows: Communications equipment, including microwave equipment, may remain unscreened if visually integrated with the building design through color, location, and construction; all building mounted equipment, including but not limited to louvers, pipes, overhead doors or service doors, access ladders, downspouts, conduit, and electrical/service boxes, shall be painted consistent with the color scheme of the building.

c. Ground mounted equipment shall be screened by walls or landscaping to the satisfaction of the PBES Director.

d. Exterior equipment shall be located, enclosed or muffled so as not to exceed noise thresholds in the County Code.

6.8 TRASH ENCLOSURES

Adequate area must be provided for collection and loading of garbage and recyclables generated by the project. The applicant must work with the franchised garbage hauler for the service area in which they are located, in order to determine the area and the pedestrian and vehicle access needed for the collection site. The garbage and recycling enclosure shall meet the minimum enclosure requirements established by staff and the franchised hauler, which shall be included in the building permit submittal.

6.9 ADDRESSING

All project site addresses shall be determined by the PBES Director, and be reviewed and approved by the United States Post Office. The PBES Director reserves the right to issue or re-issue an appropriate situs address at the time of issuance of any building permit to ensure proper identification and sequencing of numbers. For multi-tenant or multiple structure projects, this includes building permits for later building modifications or tenant improvements.

6.10 HISTORIC RESOURCES **[RESERVED]**

6.11 DEMOLITION ACTIVITIES

a. Final demolition plans of the two single-story structures (cabins) shall be submitted for building permit issuance. A site plan prepared by a qualified professional shall denote streams, stream setbacks, existing and proposed improvements and slopes. No new construction or earthmoving activities is allowed within established stream setbacks unless specifically approved as part of this permit in COA No.1.0 (Scope) above. As determined by the PBES Director or designee, temporary construction fencing shall be placed at the stream setback line to prevent unauthorized encroachments.

b. A landscape plan for the demolition area shall be submitted showing how the area will be restored to its natural vegetation state to the extent feasible. The landscape plan shall be approved by the PBES Director or designee prior to installation.

6.12 VIEWSHED – EXECUTION OF USE RESTRICTION **[RESERVED]**

6.13 PERMIT PREREQUISITE MITIGATION MEASURES

The permittee shall comply with the following permit prerequisite mitigation measures identified in the adopted Initial Study/Mitigated Negative Declaration and Project Revision Statement/Mitigation Monitoring and Reporting Program prepared for the project:

a. Mitigation Measure BIO-3: Nesting Bird Habitat Avoidance

1. For earth-disturbing activities occurring between February 1 and August 15 (which coincides with breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a pre-construction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The pre-construction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work.

After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

In the event that nesting birds are found, the permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County and the USFWS and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with the County's Planning Division and/or the USFWS or CDFW. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities.

Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or

chemical (i.e., spraying nesting birds or their habitats) are prohibited.

Method of Monitoring: For earth-disturbing activities occurring between February 1 and August 15, a qualified biologist shall conduct a pre-construction surveys for nesting birds. The pre-construction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work. After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

Lead Agency: PBES Department

Responsible Agency: CDFW

b. Mitigation Measure BIO-2: Nesting Bat Habitat Avoidance

1. Tree removal shall be performed from September through March, outside of the general bat maternity season, to the extent feasible. If tree removal during this period is not feasible, it is recommended that a bat habitat assessment and survey effort (the latter if needed) be performed by a qualified biologist prior to tree removal to determine if bats are present in the trees. If no suitable roosting habitat for bats is found, then no further study is warranted. If special-status bat species or bat maternity roosts are detected, then roost trees shall be avoided until the end of the maternity roosting season. If this avoidance is not feasible, appropriate species- and roost-specific mitigation measures should be developed in consultation with CDFW.

   Irrespective of time of year, all felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats present within the felled trees to escape.

Method of Monitoring: If tree removal is set to begin during bat maternity season (April – August) than the results of the bat habitat assessment and survey effort, including any species- and/or roost-specific mitigation measures developed in consultation with CDFW, will be forwarded to the PBES Planning Division.

Lead Agency: PBES Department

Responsible Agency: CDFW

c. MM BIO-4: Northern Spotten Owl

1. For project activities occurring between March 15 and July 31, prior to any vegetation removal or construction activities, a qualified biologist shall perform a northern spotted owl habitat assessment to determine the potential for this species to be present within the disturbance area as well as within a 0.25-mile buffer surrounding each disturbance area. The assessment shall include both a review of recent aerial photography and a field visit to review conditions directly. Additionally, the qualified biologist shall perform an on-site nocturnal calling survey for northern spotted owl from at least mid-March onward and prior to initiation of construction activities. Survey stations for the calling survey shall be sited to cover post-fire forest stands that are most suitable for northern spotted owl occupation. The results of the habitat assessment and survey shall be provided to the County for review prior to project initiation. If northern spotted owl is observed or otherwise believed to be present within the focal area described above, measures shall be implemented in consultation with CDFW to ensure that project activities would not result in a take of the species and that any potential impacts are otherwise minimized.

Method of Monitoring: For activities occurring between March 15 and July 31, prior to any vegetation removal or construction activities, the permittee shall submit to the Napa County Planning Division documentation of the northern spotted owl habitat assessment. The permittee shall provide the County with the full results of the habitat assessment for review and approval prior to project initiation. If northern spotted owl is observed or determined to be present, the permittee shall provide documentation of consultation with CDFW and proposed avoidance and minimization measures to ensure no take occurs prior to commencement of any vegetation removal or construction activities.

Lead Agency: PBES Department

Responsible Agency: CDFW

d. The permittee shall comply with the permit prerequisite mitigation measures of TCR-1 and BIO-5 as listed in COA 4.11.

6.14 PARCEL CHANGE REQUIREMENTS **[RESERVED]**

6.15 FINAL MAPS **[RESERVED]**

6.16 OTHER CONDITIONS APPLICABLE TO THE PROJECT PERMITTING PROCESS

a. Pursuant to Section 8551 of the Health and Safety Code of the State of California, a Declaration of Dedication to Cemetery Property shall be recorded and shall be attached to the map of the cemetery dedication located at 1225 Howell Mountain Road, Angwin, CA 94508, APN: 018-120-043, 018-120-044, and 018-120-027.

b. The permittee shall comply with all applicable building codes, zoning standards, and requirements of County Divisions, Departments, and Agencies including the State of California Department of Consumer Affairs, Cemetery and Funeral Bureau (Certificate of Authority), as appropriate.

c. Once all required documents have been submitted and approved by the Cemetery and Funeral Bureau, a field representative will inspect the cemetery before final approval is given and a Certificate of Authority license issued. As part of the inspection process, the field representative will review the cemetery maps. The permittee shall have available for inspection a copy of the map(s) that have been filed with the County Recorder for retention by the field representative. Upon completion of a satisfactory inspection, the field representative shall submit the maps to the Cemetery and Funeral Bureau in accordance with the licensing requirements.

d. Prior to the commencement of vegetation removal and earthmoving activities pursuant to Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293, the permittee shall provide documentation to Napa County demonstrating that a Less Than Three Acre Timber Conversion Exemption for the proposed project has been obtained from the California Department of Forestry and Fire Protection (CAL FIRE). A registered professional forester shall submit the required application to CAL FIRE.

e. Prior to project development, the permittee shall submit a geotechnical study to the Planning Division that documents specific design recommendations based on site-specific test borings or backhoe pits, laboratory testing and engineering analyses. The data generated should be reviewed by a geotechnical engineer and/or engineering geologist and be incorporated into the project design.

7.0 PROJECT CONSTRUCTION

Permittee shall comply with the following during project construction:

7.1 SITE IMPROVEMENT

Please contact Engineering Services with any questions regarding the following:

a. GRADING & SPOILS

All grading and spoils generated by construction of the project facilities shall be managed per Engineering Services direction. Alternative locations for spoils are permitted, subject to review and approval by the PBES Director, when such alternative locations do not change the overall concept, and do not conflict with any environmental mitigation measures or conditions of approval.

b. DUST CONTROL

Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities on-site to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.

c. AIR QUALITY

During all construction activities the permittee shall comply with the most current version of BAAQMD Basic Construction Best Management Practices including but not limited to the following, as applicable:

1. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The BAAQMD's phone number shall also be visible.

2. Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.

3. Cover all haul trucks transporting soil, sand, or other loose material off-site.

4. Remove all visible mud or dirt tracked onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

5. All vehicle speeds on unpaved roads shall be limited to 15 mph.

6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

7. Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required State Regulations). Clear signage shall be provided for construction workers at all access points.

8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the BAAQMD's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a BAAQMD permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ http://www.arb.ca.gov/portable/perp/perpfaq_04-16-15.pdf or the PERP website http://www.arb.ca.gov/portable/portable.htm.

d. STORM WATER CONTROL

The permittee shall comply with all construction and post-construction storm water pollution prevention protocols as required by the County Engineering Services Division, and the State Regional Water Quality Control Board.

7.2 ARCHEOLOGICAL FINDING

In the event that archeological artifacts or human remains are discovered during construction, work shall cease in a 50-foot radius surrounding the area of discovery. The permittee shall contact the PBES Department for further guidance, which will likely include the requirement for the permittee to hire a qualified professional to analyze the artifacts encountered and to determine if additional measures are required.

If human remains are encountered during project development, all work in the vicinity must be halted, and the Napa County Coroner informed, so that the Coroner can determine if an investigation of the cause of death is required, and if the remains are of Native American origin. If the remains are of Native American origin, the permittee shall comply with the requirements of Public Resources Code Section 5097.98.

7.3 CONSTRUCTION NOISE

Construction noise shall be minimized to the greatest extent practical and feasible under State and local safety laws, consistent with construction noise levels permitted by the General Plan Community Character Element and the County Noise Ordinance. Construction equipment muffling and hours of operation shall be in compliance with the County Code. Equipment shall be shut down when not in use. Construction equipment shall be staged, loaded, and unloaded on the project site, if at all practicable. If project terrain or access road conditions require construction equipment to be staged, loaded, or unloaded off the project site (such as on a neighboring road or at the base of a hill), such activities only shall occur daily between the hours of 8:00 AM to 5:00 PM.

7.4 CONSTRUCTION MITIGATION MEASURES

The permittee shall comply with the following construction mitigation measures identified in the adopted Initial Study/Mitigated Negative Declaration and Project Revision Statement/Mitigation Monitoring and Reporting Program prepared for the project:

a. The permittee shall comply with the construction mitigation measures of BIO-1 as listed in COA 6.13.

7.5 OTHER CONSTRUCTION CONDITIONS APPLICABLE TO THE PROJECT PROPOSAL

a. The location of stream setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the PBES Planning Division prior to any earthmoving and/or development

activities, no disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of construction activities. The protection fencing shall remain in place for the duration of project implementation.

All construction and related traffic shall remain outside of the protective fencing to the maximum extent practicable to ensure that the stream, buffer zones, and associated woodland habitat remains undisturbed.

b. Discovery of paleontological resources during construction, grading, or other earth moving activities:

In the event that a discovery of a braes, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find. All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

8.0 TEMPORARY CERTIFICATE OF OCCUPANCY – PREREQUISITES [RESERVED]

9.0 FINAL CERTIFICATE OF OCCUPANCY – PREREQUISITES

Permittee shall comply with the following before a Final Certificate of Occupancy is granted by the County Building Official, which upon granting, authorizes all use permit activities to commence:

9.1 FINAL OCCUPANCY
All project improvements, including compliance with applicable codes, conditions, and requirements of all Departments and Agencies with jurisdiction over the project, shall be completed.

9.2 SIGNS
Detailed plans, including elevations, materials, color, and lighting for any project identification or directional signs shall be submitted to the Department for administrative review and approval prior to installation. Administrative review and approval is not required if the signage to be installed is consistent with signage plans submitted, reviewed and approved as part of this permit approval. All signs shall meet the design standards as set forth in the County Code. Any off-site signs allowed shall be in conformance with the County Code.

9.3 GATE/ENTRY STRUCTURES
Any gate installed at the project entrance shall be reviewed by the PBES Department and the Fire Department to assure that the design allows large vehicles, such as motorhomes, to turn around if the gate is closed without backing into the public roadway, and that fire suppression access is available at all times. If the gate is part of an entry structure an additional permit shall be

required pursuant to the County Code and in accordance with the Napa County Roads and Street Standards. A separate entry structure permit is not required if the entry structure is consistent with entry structure plans submitted, reviewed, and approved as part of this permit approval.

9.4 LANDSCAPING
Landscaping shall be installed in accordance with the approved landscape plan.

9.5 ROAD OR TRAFFIC IMPROVEMENT REQUIREMENTS **[RESERVED]**

9.6 DEMOLITION ACTIVITIES
All demolition activities associated with the two single-story structures (cabins) at the Howell Mountain Cemetery shall be completed, landscaping installed, and debris cleared from the subject parcel.

9.7 GRADING SPOILS
All spoils piles shall be removed in accordance with the approved grading permit and/or building permit.

9.8 MITIGATION MEASURES APPLICABLE PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY **[RESERVED]**

9.9 OTHER CONDITIONS APPLICABLE PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY

a. Prior to project operation, the permittee shall submit a Certificate of Authority from the California Department of Consumer Affairs Cemetery and Funeral Bureau to the Planning Division.

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Department of Public Works

1195 Third Street, Suite 101
Napa, CA 94559-3092
www.countyofnapa.org/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Steven Lederer
Director

M E M O R A N D U M

To:	PBES Staff	From:	Anna Vickroy, P.E., T.E. Traffic Engineering Consultant
Date:	May 27, 2025	Re:	Howell Mountain Cemetery Conditions of Approval (P20-00030)

This memorandum is prepared at the request of Planning, Building, and Environmental Services (PBES) staff to provide conditions of approval regarding Use Permit Application P20-00030, for the Howell Mountain Cemetery (APN 018-120-016 and -027) located at 1225 Howell Mountain Road, Napa, CA.

To prepare this memorandum, the following documents were reviewed:

- Project Description dated May, 2025
- Final Traffic Impact Study dated December 13, 2023 by W-Trans
- Stopping Sight Distance Report dated January 31, 2020 by RSA
- Site Plan dated April 1, 2025 by TSD Engineering
- Water Availability Analysis dated January 31, 2020 by RSA

After careful evaluation of the above mentioned submitted documents, we offer no additional comments at this time.

The Department of Public Works has established the following conditions of approval related to the Use Permit Application Number P20-00030. All listed conditions of approval shall be fully completed accordingly prior to the issuance of Building/Occupancy permit:

1. Project Driveway

Driveway access to the public right-of-way must conform to the latest edition of the Napa County Road and Street Standards.

2. Landscaping Maintenance

Landscaping adjacent to the project driveway shall be designed and maintained to not interfere with sight lines required for safe stopping distance on the public right-of-way. No items wider than 18 inches can be taller than 30 inches other than street trees and traffic control devices. Street trees should be deciduous and have branches lower than 6 feet in height removed once the tree is established.

3. Encroachment Permit Requirement

An encroachment permit along with the required fee and a proposed traffic control plan will be required for the construction of any improvements within the public right-of-way. Please contact the Roads office at (707) 944-0196 to initiate the encroachment permit process. More information on these is available at our website: **http://www.countyofnapa.org/publicworks/roads/**

4. On Street Parking

Parking within the public right-of-way will be prohibited at all times, including large marketing and/or temporary events.

If you have any questions or concerns on this matter, please call Ahsan Kazmi, P. E. at (707) 259-8370 or contact at **syedahsan.kazmi@countyofnapa.org**.

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Planning, Building & Environmental Services

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Brian D. Bordona
Director

MEMORANDUM

To:	Curtis Sawyer, Planning	From:	Jeannette Doss, Engineering
Date:	August 14, 2025	Re:	Howell Mountain Cemetery Use Permit – Engineering CoA 1225 Howell Mountain Rd, Angwin, CA P20-00030 APN 018-120-016-000 And 018-120-027-000

The Engineering Division received a referral for comment on a new use permit. Based upon the information provided in the application, Engineering finds the application **complete** and recommends the following conditions of approval:

EXISTING CONDITIONS:

1. Existing access taken from Howell Mountain Road via an existing paved driveway.

2. The existing parcels are approximately 105 acres and 4.3 acres respectively.

3. The parcels are currently developed with residential structures which will be demolished upon construction of the project.

RECOMMENDED APPROVAL CONDITIONS:
OPERATIONAL CHARACTERISTICS

1. The Engineering Division has reviewed the Water Availability Analysis (WAA) titled Water Availability Analysis for Howell Mountain Conservation Cemetery, dated January 31, 2020, and prepared by RSA+ and supplemental Groundwater Recharge Memorandum prepared by PPI Engineering and dated July 1, 2025. The Engineering Division has evaluated the project based on information provided by the applicant, its location, and available geologic and hydrologic information and has determined the WAA to be complete and reasonable. Engineering concludes the WAA is technically adequate as it relates to Napa County's water use criteria, well and spring interference, groundwater/surface water interaction pursuant to Napa County's WAA Guidelines, Governor's Executive Order N-7-22/N-3-23, Napa Valley Subbasin Groundwater Sustainability Plan, and the Public Trust Doctrine.

2. Any proposed or required modifications to the existing project wells shall be completed **prior to execution** of any new entitlements approved under this Use Permit Modification.

3. All roadway, access drive, and parking area improvements shall be completed **prior to execution** of any new entitlements approved under this Use Permit Modification.

PREREQUISITES FOR ISSUANCE OF PERMITS

4. All on site civil improvements including but not limited to the excavation, fill, general grading, drainage, curb, gutter, surface drainage, storm drainage, parking and drive isles, shall be constructed according to plans prepared by a registered civil engineer, which will be reviewed and approved by the Engineering Division of the Napa County Planning, Building, and Environmental Services Department (PBES) **prior to the commencement** of any on site land preparation or construction. Plans shall be wet signed and submitted with the building and/or grading permit documents at the time of permit application. A plan check fee will apply.

5. Grading and drainage improvements shall be constructed according to the current Napa County Road and Street Standards, and Chapter 16.28 of the Napa County Code, and Appendix J of the California Building Code.

6. **Prior to issuance of a building or grading permit** the owner shall submit the necessary documents for Erosion Control as determined by the area of disturbance of the proposed development in accordance with the Napa Countywide Stormwater Pollution Prevention program Erosion and Sediment Control Plan Guidance for Applicant and Review Staff dated December 2014.

7. Any roadway, access driveway, and parking areas, proposed new or reconstructed shall meet the requirements as outlined in the latest edition of the Napa County Road & Street Standards. The property owner shall obtain a grading permit for all proposed roadway improvements.

8. **Prior to the issuance of a building or grading permit** the owner shall prepare a Stormwater Control Plan (SCP) in accordance with the latest edition of the BASMAA Post-Construction Manual for review and approval by the Engineering Division in PBES. The Stormwater Control Plan shall include the water balance analysis for the use of the existing wastewater pond to handle the additional stormwater flows.

9. **Prior to issuance of a building permit**, an Operation and Maintenance Plan shall be submitted and tentatively approved by the Engineering Division in PBES. **Before final occupancy** the property owner must legally record the "Operation and Maintenance Agreement", approved by the Engineering Division in PBES.

PREREQUISITES FOR TEMPORARY CERTIFICATE OF OCCUPANCY

10. All roadway, access drive, and parking area improvements shall be completed **prior to** issuance of temporary occupancy of any new and/or remodeled structures.

**** If no temporary occupancy is requested, then the above conditions become requirements prior to final occupancy.**

PREREQUISITES FOR FINAL CERTIFICATION OF OCCUPANCY

11. Operations and Maintenance Agreement for any required post-construction Stormwater facilities must be legally recorded.

12. Site shall be completely stabilized to the satisfaction of the County Engineer prior to Final Occupancy.

Any changes in use may necessitate additional conditions for approval.

If you have any questions regarding the above items, please contact Jeannette Doss from Napa County Planning, Building, and Environmental Services Department, Engineering and Conservation Division, at (707) 259-8179 or by email at Jeannette.Doss@countyofnapa.org

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Napa County Fire Department
Fire Marshal's Office

951 California Blvd
Napa, CA 94559
www.countyofnapa.org
Main: (707) 299-1464

Jason W. Downs
Fire Marshal

Napa County Fire Department
Conditions of Approval

TO:	Planning Department	**DATE:**	7/1/2025
FROM:	Jason Downs, Fire Marshal	**PERMIT #**	P20-00030
SUBJECT:	Howell Mountain Cemetery	**APN:**	018-120-016-000

The Napa County Fire Marshal's Office has reviewed the submittal package for the above-proposed project. The Fire Marshal approves the project as submitted with the following conditions of approval:

1. All construction and use of the facility shall comply with all applicable standards, regulations, codes, and ordinances at the time of Building Permit issuance.

2. Beneficial occupancy will not be granted until all fire department fire and life safety items have been installed, tested, and finalized.

3. Where conditions listed in 2022 California Fire Code Section 105 are proposed, separate permits will be required before Building Permit issuance for:

    1. Private Fire service mains and their appurtenances
    2. Gates and barricades across fire apparatus access roads

4. All buildings, facilities, and developments shall be accessible to fire department apparatus by way of approved access roadways and/or driveways. The fire access road shall comply with the requirements of the Napa County Road & Street Standards

5. Access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced to provide all-weather driving capabilities. Provide an engineered analysis of the proposed roadway noting its ability to support apparatus weighing 75,000 lbs.

6. Provide fire department access roads to within 150 feet of any exterior portion of the buildings as measured by an approved route around the exterior of the building or facility.

7. Gates for driveways and/or roadways shall comply with the California Fire Code, section 503.5, the Napa County Road & Street Standards, and CA Fire Safe Regulations for

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projects within SRA. All residential properties with an electric gate are required to install a Knox Key Switch (Model 3501 or 3502). Manual gates shall be secured with a Knox Padlock.

8. Roadways shall be a minimum of 20 feet in width with a 2-foot shoulder and 15-foot vertical clearance.

9. Turnouts shall be a minimum of 12 feet in width, 30 feet in length, and 25-foot taper on each end.

10. Turnarounds are required on driveways and dead-end roadways.

11. Grades for all roadways and driveways shall not exceed 16 percent. The roadway grade may exceed 16 percent, not to exceed 20 percent, provided the provisions outlined in the NCRSS are met.

12. Roadway radius shall not have an inside radius of less than 50 feet. An additional surface width of 4 feet shall be added to curves of 50-100 feet radius and 2 feet to curves of 100-200 feet radius.

13. Commercial - Water storage (for buildings not served by a public water system) and fire flow calculations shall be provided by a Certified State Licensed Civil Engineer, C-16 licensed contractor, or registered engineer indicating compliance with California Fire Code Appendix B and the Napa County Municipal Code.

14. Commercial - Approved pressurized hydrants shall be installed within 250 feet of any exterior portion of the building as measured along vehicular access roads. Private fire service mains shall be installed, tested, and maintained per NFPA 24.

15. Commercial - The minimum main size of all fire hydrants shall be 6 inches in diameter. Piping shall be installed with C-900 class 200 piping or ductile iron or equivalent per NFPA 24 for the installation of Underground Fire Protection Mains

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Fire Marshal

Napa County Fire Department
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16. All buildings shall comply with California Fire Code, Chapter 10 Means of Egress requirements. Including but not limited to; exit signs, exit doors, exit hardware, and exit illumination.

17. The permittee shall provide and maintain a minimum 100-foot defensible space around all structures, in compliance with the Napa County Defensible Space Ordinance, the Napa County Fire Marshal's Defensible Space Guidelines, and California Public Resources Code Section 4291, as applicable. Defensible space shall be established prior to final project approval or occupancy and maintained in a fire-safe condition for the life of the project, subject to inspection by the Napa County Fire Marshal's Office.

18. The permittee shall provide and maintain a minimum 10-foot defensible space on both sides of all roadways, driveways, and access routes leading to the facility, measured from the edge of the roadway surface. This defensible space shall comply with the Napa County Defensible Space Ordinance and the Fire Marshal's Defensible Space Guidelines and shall be always maintained in a fire-safe condition, subject to inspection and verification by the Napa County Fire Marshal's Office.

Please note the conditions of approval noted above are based on the Fire Marshal review only. There may be additional comments or information requested from other County Departments or Divisions reviewing this application package. Napa County Fire Marshal's Office Development Guidelines can be found @ www.countyofnapa.org/firemarshal. Should you have any further questions please contact the Napa County Fire Marshal's Office by email at Fire.Marshal@countyofnapa.org.

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Planning, Building & Environmental Services

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David Morrison
Director

MEMORANDUM

To:	Curtis Sawyer, Project Planner	From:	Armeda Simpson-Van Dam, Senior Environmental Health Specialist
Date:	5/1/23	Re:	Use Permit Application for Howell Mountain Cemetery Located at 1225 Howell Mountain Rd, Angwin, CA Assessor Parcel # 018-120-016-000 Permit#P20-00030

Environmental Health Division staff has reviewed an application for the Howell Mountain Cemetery. This Division has no objection to approval of the application with the following conditions of approval:

Prior to building permit issuance:

1. An inspection of the existing conventional sewage system must be performed by a licensed sewage contractor and the findings submitted to this Division prior to building permit approval by the Environmental Health Division.
2. The use of the dispersal field areas shall be restricted to activities which will not contribute to compaction of the soil with consequent reduction in soil aeration. Activities which must be avoided in the area of the septic system include equipment storage, traffic, parking, pavement, livestock, etc.
3. The water supply and related components must comply with the California Safe Drinking Water Act and Related Laws. This will require plan review and approval prior to approval of building permits. The technical report must be completed by a licensed engineer with experience in designing water systems. The preliminary technical report must be submitted to the Regional Water Quality Control Board staff a minimum of six (6) months prior to beginning any water-related improvement in accordance with the California Health and Safety Code, Section 116527. Prior to occupancy, the owner must apply for and obtain an annual operating permit for the water system from this Division. The applicant must comply with all required monitoring and reporting.
4. During the construction, demolition, or renovation period of the project the applicant must use the franchised garbage hauler for the service area in which they are located for all wastes

generated during project development, unless applicant transports their own waste. If the applicant transports their own waste, they must use the appropriate landfill or solid waste transfer station for the service area in which the project is located.

Upon final occupancy and thereafter:

5. All solid waste shall be stored and disposed of in a manner to prevent nuisances or health threats from insects, vectors, and odors.

“C”

Initial Study –
Mitigated Negative Declaration

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

COUNTY OF NAPA
PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT
1195 THIRD STREET, SUITE 210
NAPA, CA 94559
(707) 253-4417

Initial Study Checklist
(form updated January 2019)

1. **Project Title:** Howell Mountain Green Burial Cemetery, Use Permit Application (#P20-00030), Application for Use Permit Exception to Conservation Regulations (#P25-00293), and an Exception Request to the Napa County Roads and Streets Standards

2. **Property Owner:** Eternal Preserve Holdings, LLC, 6558 Lonetree Boulevard, Rocklin, CA 95765

3. **Contact Person, Phone Number and Email:** Enrique Torres, Planner II, enrique.torres@countyofnapa.org, (707) 253-4307

4. **Project Location and Assessor's Parcel Number (APN):** The approximately 109.3-acre project site is located north and west of Howell Mountain Road and east of Ink Grade Road, at 1225 Howell Mountain Road, Angwin, CA 94508, approximately 1.3 miles northeast of Angwin in unincorporated Napa County. The project site includes APNs 018-120-043 (SFAP) and 018-120-027 & 018-120-044 (SFAP).

5. **Project Sponsor's Name and Address:** Susan Lapsley, slapsley@heronpacific.com; 6558 Lonetree Boulevard, Rocklin, CA 95765

6. **General Plan Designation:** Agriculture, Watershed and Open Space (AWOS)

7. **Zoning:** Agricultural Watershed (AW)

8. **Background/Project History:** A Lot Line Adjustment (W25-00198) between the two project site parcels (APNs 018-120-016 (SFAP) and 018-120-027 (SFAP)) was previously approved by Napa County on October 16, 2025. The adjustment resulted in approximately 35.45 acres of land from APN 018-120-016 being combined with approximately 4.3 acres of APN 018-120-027; this resulted in an adjusted total acreage for APN 018-120-016 of 69.55 acres (018-120-043) and 39.75 acres for APN 018-120-027 (018-120-027 & 018-120-044 SFAP). Additionally, the project parcel shall be served by a proposed replacement well, the existing well was approved by the County on January 25, 2016 (E15-00784).

9. **Description of Project:** The project proposes to develop the Howell Mountain Cemetery, a green burial cemetery (referred to in this document as the proposed project). Green burial, or natural burial, is a way of caring for the dead with minimal impacts that aids in the conservation of natural resources. Green burial necessitates the use of non-toxic and biodegradable materials. The cemetery would be managed as a conservation site. As an open space property, the cemetery would have lower plot densities than a traditional cemetery, limitations on visible markers (i.e., only natural markers made from small native rocks would be used), and burial vaults and embalming would be prohibited. Access trails within the interment areas would be open for hiking use by the public. An Exception to the Napa County Conservation Regulations and to the Napa County Roads & Streets Standards are requested as part of the project scope. The exceptions will allow for minor grading on slopes over 30% so that the proposed trails and access to the interment areas may be established, as the trails and access are not feasible through other alternatives, and to forego the left turn lane installation, which would prevent the removal of existing native trees and excessive grading on rocky steep slopes, while remaining consistent with the existing operation and character of Howell Mountain Road or in the vicinity of the project site, respectively. The elements of the proposed project are described below.

   Interment Areas. Designate approximately 16.19 acres of the approximately 109.3-acre project site (14.7 percent [%] of the project site) would be used for interment areas and would accommodate plots and gravesites. Eight interment areas (A-H) are proposed, ranging in size from 0.18 to 7.52 acres and have been designed to avoid steep terrain, stream setbacks and trees. All of the interment areas would be in the north part of the project site. The interment areas would be set back a minimum of ten feet from the north, east and west property boundaries. Within the proposed interment areas, existing debris would be removed, and ladder fuels would be managed while retaining existing vegetation when possible. No landscaping or tree removal is proposed in the interment areas.

   Trails. Establish approximately 1.5 miles of trails would provide access for pedestrians and operations vehicles to plots within interment areas. The proposed trails would be eight feet in width with maximum cross slope of 15%, maximum longitudinal slope of 28% and 12.5 feet vertical clearance, consistent with the County's standard for Special Purpose Ways (**Exhibit A-1**). In some cases, the proposed trails would follow the alignments of existing informal trails on the site. The trails would be used by staff and visitors as the sole access to interment areas and would be open for hiking use by the public during cemetery hours of operation (dawn to dusk daily, year-round). Since the slopes vary, operations staff would use carts to transport visitors in need of assistance accessing the site. Trail access points would be gated to restrict vehicle access and allow pedestrian passage. The trail system would include a trail map posted at the trailhead near the welcome center, "Keep on Trails" signage, benches, and wayfinding features. During operations, trails would not be used if they are impassable.

   Trail construction would consist of brush clearing and, in some places, would require minor grading to create safe pedestrian and maintenance vehicle passage and to prevent erosion from drainage. Trails would consist of native material and would not include additional surfacing with the

potential exception of wood chips. Trail construction would occur in phases as access to the interment areas is needed to accommodate plots. No grading would occur outside of the trail alignments. Trails would be maintained but would be kept natural and unimproved.

Driveway. The existing road to the east on the project site would be converted into a driveway with a minimum width of 22 feet (including shoulders) that would extend from Howell Mountain Road into the project site and terminate at a turnaround area north of the welcome center. The turnaround area is designed to accommodate fire trucks. Construction of the driveway would require removal of 27 Douglas fir trees (**Exhibit A-1** Sheet 7/12). The existing road to the west in the project site would not be improved but would be maintained for emergency vehicle access. The southern end of this road connects to Howell Mountain Road and has an existing gate that would remain locked to restrict access to the public. A Knox Lock or similar would be installed to allow access to emergency personnel.

Parking. Thirty-eight parking spaces would be provided including 31 spaces parallel and diagonal to the driveway, six spaces adjacent to the welcome center, and one accessible space adjacent to the welcome center. Several of these parking spaces would be oversized to accommodate shuttles or stretch vehicles with higher capacity. Eight bicycle parking stalls are proposed to be located near the welcome center. Cemetery guests and the general public could use the driveway to access the welcome center and trails. If a funeral or memorial is planned that requires more parking than what is available onsite, shuttles would be arranged to the welcome center.

Welcome Center. A single-story 509 square foot (15.7 feet x 32.5 feet) welcome center would be located at the end of the driveway. Cemetery hours of operation and site operations information would be posted at the welcome center. The building would include two restrooms accessible from the exterior of the building. Motion-activated short-range lights would be mounted above the doorways on the welcome center. Low-profile landscaping is planned adjacent to the welcome center.

Offsite Office. An offsite office space would be rented in downtown St. Helena on either Main Street, Oak Avenue, or Railroad Avenue, north of Pope Street and south of Pine Street to facilitate sales and daily operations of the cemetery while minimizing daily commuter traffic trips to the cemetery itself.

Storage. Storage of landscape equipment, operations equipment, and all-terrain vehicles would occur in 20-foot steel storage containers (Conex containers). Two storage containers would be placed to support maintenance; one container would be placed in the northeast portion of interment area E and another would be placed in the mid-eastern portion of interment area H (**Exhibit A-1)**. These storage containers are mobile, durable, do not require ground disturbance, are fireproof, and no trees would be removed to accommodate them. They would be painted to be concealed with the environment and would be accessed by staff during maintenance or burial preparation times.

Gate and Signage. At the project site entry on Howell Mountain Road, a gate would be installed and would remain open during operating hours. The gate would also include an automatic open/close function to allow visitors to exit the property outside of operating hours. Signage would be designed into the entry gate supports to identify the Howell Mountain Cemetery and street address. Small signs would be placed on property lines denoting private property and cemetery use, and on trails for safety and orientation. Additionally, “NO PARKING ANY TIME” Sign R-26 (CA) signs would be placed near the driveway along Howell Mountain Road.

Grading. Limited grading (0.69-acre area) is proposed for construction of the driveway and parking areas and to create a pad for the welcome center. There are anticipated to be ±4,239 cubic yards of cut and ±717 cubic yards of fill, for a net of ±3,522 cubic yards of export. A portion of the estimated ±3,522 cubic yards of export will be used to fulfill the approximately 1,750 cubic yards of import required for the trail corridor. The remaining 1,772 cubic yards will be retained onsite by accounting for shrinkage in the disturbed area, which wasn’t factored into the original earthwork calculations, and we will make slight adjustments to the grading within the allowable tolerance to accommodate this. Grading for the trails would be minimized to the extent feasible with an anticipated cut of ±900 cubic yards and ±2,650 cubic yards of fill for a net of ±1,750 cubic yards of fill. Two existing cabins (one with a kitchen/garage), concrete holding tank (spring box), and pump treatment shed on the project site would be demolished.

Utilities and Services

Water. The existing well (E15-00784), near the proposed welcome center, is proposed to be replaced. A proposed underground water tank would convey water to the fire hydrant on the driveway via a four-inch line, and a two-inch water line would convey water to the welcome center. Water would be used for the fire hydrant, restroom and welcome center. Maximum annual water use for the proposed project would be approximately 0.41 acre-feet (AF) per year.

Wastewater. An on-site septic system would provide wastewater disposal. A leach field and septic tank would be southeast of the welcome center.

Solid Waste. Solid waste generation is projected to be equivalent to that of a single-family residential unit. Solid waste would be collected from containers on the site and stored in large totes on the northeast side of the welcome center and would be collected by a private hauler. Green waste (e.g., landscape materials, trimmings) would remain on-site and would be repurposed as mulch.

Construction Phasing and Construction Schedule

Construction Phasing. Phasing of the project would occur as demanded by the market for burials. The first phase of the cemetery would consist of all improvements to the driveway from Howell Mountain Road, parking spaces, welcome center, and septic system. The second phase would include the buildout of all interment areas and trail systems. A list of expected equipment and their use duration shall consists of a large excavator (40 days), medium excavator (50 days), mini excavator (60 days), D6 dozer (30 days), D4 dozer (15 days), water truck (120 days), sheepsfoot compactor (20 days), paving machine (5 days), smooth-drum roller (10 days), 10-wheel dump truck (20 days), and skip loader (20 days).

Construction Schedule. The first phase of the cemetery is anticipated to be constructed in 2026, upon receipt of regulatory and permit approvals. The first phase improvements (driveway and parking) would take approximately three months to construct and would take place between April 1 and October 15. The second phase (welcome center, interment areas, and trail system) would take approximately three months to complete and would overlap with the first phase, taking place between June 15 and October 15. It is estimated that there will be 11 truck trips at the start of the project to mobilize equipment and 11 truck trips at the end to demobilize. An additional 20 truck trips are estimated to bring in construction materials. The number of workers will vary an average of 6 per day is anticipated.

Cemetery Operations

Onsite Staffing. The cemetery would employ approximately two people, including a cemetery manager and maintenance/operations staff. A minimum of one person would be on-site during business hours. Business hours at the onsite welcome center would be from 7 AM to 3 PM Monday through Friday, with one employee available by appointment on Saturdays and Sundays. Business operations and sales would occur off-site.

Offsite Staffing. There would be one employee working daily at the offsite office building from 9 AM to 5 PM Tuesday through Saturday. Tuesdays, Thursdays, and Saturdays are open house days while Wednesdays and Fridays would be site tour days.

Hours of Operation. The hours of operation of the cemetery itself would be dawn to dusk daily, year-round. During hours of operation, the gate at the entry would remain open, and trails will be available for public use.

Burial Service Scheduling. The cemetery manager would schedule all burials so that there are no unscheduled events and parking is available for visitors. Two to three burials would occur daily on average. As operations ramp up, approximately five burials could occur per day.

Memorial Gatherings. Small memorial gatherings may be held at the plot. The proposed project does not include the facilities to accommodate indoor gatherings.

Cemetery Buildout. At full buildout, the interment areas would accommodate approximately 17,340 full body burials and 35,530 plots for cremains (interred or scattered). The pace of burials in the interment areas is entirely market-driven. It is estimated that the cemetery would reach capacity in approximately 80 to 100 years.

Pet Burial. A portion of one or more of the interment areas may be used for pet burials.

Salutary Gunfire. Salutary gunfire would be prohibited except for military service burials.

On-Site Circulation. No vehicles would access the site beyond the terminus of the driveway and fire truck turnaround. Trail access points would be gated to restrict vehicle access and allow pedestrian passage. All-terrain vehicles would be used by employees to maintain the site, and all-terrain passenger carts would be used to transport visitors.

Interment Process

- *Interment Area and Plot Mapping.* The limits of interment areas and plots would be mapped and recorded consistent with the California Health and Safety Code and set forth by the California Cemetery and Funeral Bureau. Location pins would be set every five to ten spaces on every other row of plots. All burial locations would be GPS mapped, and plot locations would be available at the office.
- *Plot Sizes and Configuration.* Plot sizes and grave placement would vary based on natural conditions such as slope, soil structure, and vegetation densities. The spacing around plots in conservation cemeteries is larger and more irregular than in conventional cemeteries due to variations in natural conditions (e.g., slope, vegetation, etc.). Plots would be sized to accommodate adjacent natural features such as trees and rocks and to allow for the irregular pattern of natural habitat. Approximately 80% of interment areas would be used for graves and the remaining portion used for cremains. Plots would be sized to allow the grave to be situated in the center of the plot among natural constraints. No trees would be removed for interment.
- *Grave Excavation and Restoration.* Excavated graves would be sized to fit the vessel or container that will be interred. A typical adult full-body grave is approximately 3.3 feet x 10 feet, and an urn grave approximately 1.7 feet x 2 feet. Graves would occur at approximately 3 feet underground providing between 1.5 to 2 feet of soil cover above the body or urn creating a “smell barrier” protecting the remains from

animals and producing odors. Excavation and site restoration activities would be performed with small, mechanized equipment or manual labor to limit site impacts and avoid impacts to vegetation. After interment, the soil and vegetation would be restored over the grave and set by the operations staff. Vegetation restored on the top of the burial would be lightly compacted by hand equipment. Plots would be observed for settlement and irregular ground surfaces corrected with placement of additional soil as necessary to avoid ponded water and to monitor new burials for sign of disturbance from wildlife should it occur.

- *Burial Methods.* A full-body interment requires the body to be preservative-free. Decedents would be embalmed with non-toxic products, and all burial containers would be 100% biodegradable and non-toxic. Metal caskets and fasteners, synthetic linings, formaldehyde glues, and high volatile organic compounds (VOC) finishes would be prohibited. All caskets would be constructed from wood, grasses, reeds, bamboo, or other natural materials; only fully biodegradable caskets would be used. All burial shrouds would be made of natural plant or animal fibers; outer burial containers, such as concrete liners, metal vaults, partitions, and slabs, would be prohibited. The body could be buried in a biodegradable coffin or a shroud, allowing the body to decompose naturally, thereby enriching the soil ecology. Cremated remains may be mixed with an additive to make the ashes chemically available to plants and soil organisms, thereby enriching soil ecology.
- *Grave Identification.* If desired, simple grave markers made of select rock from the site or wood with names and dates etched on them may be placed flush with the ground at the gravesite after interment. Rocks would not be polished or shaped, or of other material. Markers would not be anchored to the ground.
- *Regulatory Requirements.* Interment rights are sold for one-time use only. Interments would be performed according to the California Health and Safety Code's rules and regulations and as set forth by the California Cemetery and Funeral Bureau. The Applicant would operate the cemetery under a Certificate of Authority (cemetery license) from the State Cemetery and Funeral Bureau.

Site Management

Resource Avoidance and Management. The cemetery would be managed as a conservation site. Long-term management would include monitoring and control of invasive species using adaptive management strategies. Perpetual management of the site would be conducted by Wildlands and funded by the facility's endowment.

Fuel Load Management. Fuel load management measures would include thinning vegetation and clearing defensible space around parking, improvement areas, interment areas, and buildings and maintaining fuel break areas. No burning is proposed for vegetation management.

Implementation of the proposed project would be in accordance with the Howell Mountain Cemetery Preliminary Overall Site Plan prepared by TDS, Inc. Engineering (April 2025 – **Exhibit A-1**). The proposed project is further described in the application materials. All documents are incorporated herein by reference and available for review in the Napa Planning, Building and Environmental Services Department, and at https://pbes.cloud/index.php/s/HnxeampcArct6rA.

10. Describe the environmental setting and surrounding land uses.

The approximately 109.3-acre project site is located directly north of Howell Mountain Road and west of Ink Grade Road. The site is in the foothills that surround the Napa Valley, and terrain generally consists of rolling mountains. The project site is densely vegetated with trees and brush and contains scattered rock outcroppings. Two unimproved dirt roads extend through the project site. One of the roads terminates near two single-story structures (both referred to as cabins in this document). The currently unoccupied buildings consist of a small cabin and a kitchen and garage. The wood-sided structures are on a slope and partially supported by wood piers. A septic tank is located adjacent to the cabin, and a water storage tank is located southeast and upslope from the kitchen/garage. A well (Napa County Permit E15-00784) is on the south side of the project site, and an electric transformer adjacent to Howell Mountain Road provides electric service to the structures. The remainder of the project site is undeveloped.

Surrounding land uses include open space, agriculture/vineyard, and winery and rural residential uses. Access to the project site is provided via Howell Mountain Road. The nearest residence to the project site is approximately 230 feet to the south on the opposite side of Howell Mountain Road. There are no Napa County designated Significant Streams on or near the project site; the closest Significant Stream is Conn Creek located approximately 5,831 feet to the southwest.

11. Other agencies whose approval may be required (e.g., permits, financing approval, or participation agreement).
Discretionary approval required by Napa County consists of a Use Permit Application (#P20-00030) and Application for Use Permit Exception to the Conservation Regulations (#P25-00293). The Conservation Regulations Exception is requested because, due to the nature of the project site, it would be necessary for some access pathways to be located on slopes over 30% and less than 50%. The proposed project would also require various ministerial approvals by the County including, but not limited to building and grading permits. A Storm Water Pollution Prevention Plan (SWPPP) is also required to meet San Francisco Regional Water Quality Control Board standards and obtain a Less Than Three Acre Timber Conversion Exemption from the California Department of Forestry and Fire Protection. A Certificate of Authority would be required from the State of California Department of Consumer Affairs Cemetery and Funeral Bureau for cemetery operations.

Responsible (R) and Trustee (T) Agencies

Regional Water Quality Control Board (Regional Water Board) (R)
California Department of Fish and Wildlife (CDFW) (T)
California Department of Forestry and Fire Protection (CAL FIRE)

Other Agencies Contacted
Middletown Rancheria
Mishewal Wappo Tribe of Alexander Valley
Yocha Dehe Wintun Nation

12. **California Native American Tribal Consultation:** Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resource, procedures regarding confidentiality, etc.?

    On March 19, 2020, County Staff sent invitations to consult on the proposed project to Native American tribes who had a cultural interest in the area of the proposed project and who as of that date had requested to be invited to consult on projects, in accordance with the requirements of Public Resources Code Section 21080.3.1, which included Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley and Yocha Dehe Wintun Nation.

    The Middletown Rancheria (Tribe) conducted an AB 52 Site Visit on December 16, 2025. The proposed project site and its surrounding area is a site of cultural, historical, and religious significance for the Tribe. The Tribe is aware of and concerned about significant cultural and sacred resources that, while known to the Tribe, might not be properly identified through record and survey searches. Moreover, the potential for cumulative impacts to tribal cultural resources must be adequately assessed. On January 23, 2026, Middletown Rancheria (Tribe) provided the County with Mitigation Measures for the protection of tribal and cultural resources. The County agreed to incorporate additional mitigation measures for the protection of tribal cultural resources in response to new information and concerns raised by the Middletown Rancheria. This is discussed in detail in Section XVIII (Tribal Cultural Resources).

    Note: Conducting consultation early in the California Environmental Quality Act (CEQA) process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code Section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code Section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code Section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS

The conclusions and recommendations contained herein are professional opinions derived in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the other sources of information listed in the file, and the comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and visit(s) to the project site and proposed development area.

Other sources of information used in the preparation of this Initial Study include site-specific studies conducted and filed by the applicant in conjunction with use permit application (#P20-00030) and application for use permit exception to Conservation Regulations (#P25-00293) as listed below, and the environmental background information contained in the permanent file on this project. These documents and information sources are incorporated herein by reference and available for review at the Napa County Department of Planning, Building and Environmental Services located at 1195 Third Street, Suite 210, Napa, CA 94559, or https://pbes.cloud/index.php/s/HnxeampcArct6rA.

- PPI Engineering, May 11, 2026 Replacement Well Memorandum, P20-00030 Howell Mountain Cemetery, 1225 Howell Mountain Road, Angwin, California, APN 018-120-043
- TDS Engineering, Inc., April 1, 2025, Preliminary Overall Site Plan (**Exhibit A-1**)
- Domum, December 6, 2022, Howell Mountain Cemetery New Office (**Exhibit A-2**)
- ESA, 2025, Howell Mountain Detailed Air Quality Emissions Report (**Exhibit B**)
- Wildlife Research Associates, August 2024, Biological Resources Reconnaissance Survey, 1225 Howell Mountain Road (018-120-016, 018-120-027), Napa County, California (**Exhibit C-1**)
- Wildlife Research Associates, August 3, 2023, Updated Special-status Plant Survey for Howell Mountain Cemetery, 1225 Howell Mountain Road, Napa County, CA (APN: 018-120-016; 018-120-027) (WRA Project #330023) (**Exhibit C-2**)
- Tom Origer and Associates, September 29, 2017, Historical Resources Study for the Green Burial Cemetery Project, Angwin, Napa County, California (contents confidential)
- Eileen Barrow & Associates, July 7, 2025, Historical Evaluation Study of the Bade Cabins, 1225 Howell Mountain Road, Angwin, Napa County, California (contents confidential)
- Middletown Rancheria Tribal Historic Preservation Department, January 23, 2026, Howell Mountain Cemetery Mitigation Measures, 1225 Howell Mountain Road, Angwin, Napa County, California (contents confidential)
- RGH Consultants, October 25, 2023, Geologic Hazard Report, Howell Mountain Cemetery, 1225 Howell Mountain Road, Angwin, California (**Exhibit D**)
- TSD Engineering, Inc., September 29, 2023, Drainage Memo, P20-00030; Howell Mountain Cemetery, 1225 Howell Mountain Road; APN 018-120-016 (**Exhibit E**)
- TSD Engineering, Inc., August 20, 2024, Stormwater Control Plan for Howell Mountain Cemetery, 1225 Howell Mountain Road, Napa County, CA (**Exhibit F**)
- RSA+, January 31, 2020, Wastewater Feasibility Report, Howell Mountain Conservation Cemetery, 1225 Howell Mountain Road, Angwin, California, APN 0180-120-016 and 018-120-027 (**Exhibit G**)
- RSA+, January 31, 2020, Water Availability Analysis, Howell Mountain Conservation Cemetery, 1225 Howell Mountain Road, Napa, CA (APN 0180-120-016 and 018-120-027) (**Exhibit H-1**)
- PPI Engineering, July 1, 2025, Groundwater Recharge Memorandum, P20-00030 Howell Mountain Cemetery, 1225 Howell Mountain Road, Angwin, California, APN 018-120-016 & 018-120-027 (**Exhibit H-2**)
- RSA+, January 31, 2020, Water System Feasibility Study for a Regulated System, Howell Mountain Conservation Cemetery, 1225 Howell Mountain Road, Napa, CA (APN 0180120-016 and 018-120-027) (**Exhibit H-3**)
- W-Trans, December 13, 2023, Final Traffic Impact Study for the Howell Mountain Cemetery Project (**Exhibit I-1**)
- RSA+, January 31, 2020, Site Distance Report, Howell Mountain Conservation Cemetery, APN 0180-120-016 and 018-120-027, 1225 Howell Mountain Road, Angwin, California (**Exhibit I-2**)

On the basis of this initial evaluation:

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

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

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

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

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

Enrique Torres — May 13, 2026

Signature — Date

Name and Title: Enrique Torres, Planner II

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS.** Except as provided in Public Resources Code Section 21099, would the project:				
	a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
	c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (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?	☐	☐	☒	☐
	d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion

a-c. Visual resources are those physical features that make up the environment, including landforms, geological features, water, trees and other plants, and elements of the human cultural landscape. A scenic vista is a publicly accessible vantage point such as a road, park, trail, or scenic overlook from which distant or landscape-scale views of a beautiful or otherwise important assembly of visual resources can be taken-in. As generally described in the Project Description, the area around the project site includes open space, rural residential uses, and agricultural/vineyard and winery uses. The proposed project would not result in substantial damage to scenic resources or substantially degrade the visual character or quality of the site and its surroundings. The project site is not located within the vicinity of an officially designated state scenic highway; State Route 128, which is listed as eligible, is the closest and it is approximately 8.1 miles to the west (Napa County GIS Road Layer; California State Scenic Highway System Map).

The proposed project includes conversion of one of the existing dirt roads on the project site to a driveway, construction of an approximately 509-square foot welcome center and minor landscaping, two 20-foot steel storage containers, gating and signage, as well as installation of a water supply and wastewater management system within previously disturbed areas. Additionally, the proposed project would include approximately 16.19 acres of interment areas and approximately 1.5 miles of unimproved trails. The existing cabin, kitchen, and garage, as well as a concrete holding tank (spring box) and pump treatment shed would be demolished.

The proposed welcome center would be constructed using poured concrete and/or CMU block, with steel roof framing, stone veneer accents, stained wood accents, and a seam metal roof; building colors would be charcoal gray and tan and would generally be low-profile blending the welcome center into the surrounding environment. Gating and signage would be limited and would not detract from the visual character of the surrounding area. The gate would be custom fabricated using steel and concrete. Signage would be designed into the entry gate supports to identify the Howell Mountain Cemetery and street address and would be a maximum of 4 feet by 5 feet. Small signs would be placed on the interior of the project site along property lines denoting private property and cemetery use, and on trails for safety and orientation. Additionally, “NO PARKING ANY TIME” Sign R-26 (CA) signs would be placed near the driveway along Howell Mountain Road to maintain emergency access.

The proposed project would not be located in an area which would damage any known scenic vista, or damage scenic resources, rock outcroppings, or historic buildings. The proposed project would include removal of approximately 27 Douglas fir trees for construction of the driveway (approximately 0.69 acres of Doulas fir forest) (**Exhibit A-1** Sheet 7/12). The remaining 63.82 acres of Douglas fir forest on the project site (99%), as well as 27.7 acres of oak woodland and 17.45 acres of tanoak forest would be retained. There would be minor grading and vegetation removal required to develop trails, but these improvements would be minor and in some cases would follow existing informal trails already present on the project site. Interment areas would require minor vegetation removal upon burial; however, plots would be restored to natural conditions following interment and no trees would be removed for interment. Additionally, outside of the proposed driveway, gate, and signage, development of the project site would generally be on the interior of the project site, screened by vegetation and would not be visible from surrounding roadways including Howell Mountain Road to the southeast and Ink Grade Road to the southwest.

According to NCC §18.106.010(A), a primary purpose of the Napa County Viewshed Protection Program is to provide hillside development standards to minimize the impact of man-made structures and grading on views of existing landforms, unique geologic features, existing

landscape features and open space as seen from designated public roads within the county. These standards include the protection of "substantial views" where 51 percent or more of the area facing the designated viewshed road can be seen, while NCC §18.106.030(A) states that the Viewshed Protection Program shall apply to all new structures located on slopes of 15 percent or more. The project proposes a welcome center and two storage containers on slopes exceeding 15 percent; however, these features of the project cannot be viewed from any designated public road because of their relationship to surrounding topography and existing vegetation. Standard conditions of approval require that the landowner execute and record in the county's recorder's office a use restriction, in a form approved by county counsel, requiring the existing covering vegetation be maintained, or replaced with equivalent vegetation by the owner or the owner's successors. By incorporating standard conditions of approval, impacts to public views from Howell Mountain Road would be less than significant.

The proposed project would not substantially alter a scenic vista or substantially degrade the existing visual character of the site or its immediate surroundings. Impacts related to scenic resources would be less than significant.

d. The proposed project includes the installation of two motion-activated short range lights at the door of the proposed welcome center, cited in the interior of the project site and not be visible from surrounding roadways including Howell Mountain Road and Ink Grade Road. No other lighting is proposed. The limited proposed lighting would not produce substantial light or glare that would affect day or nighttime views. Further, pursuant to standard Napa County conditions of approval, outdoor lighting would be required to be shielded and directed downwards, with only low-level lighting allowed in parking areas. With incorporation of the County's standard conditions of approval below, the proposed project would not have a significant impact resulting from new sources of outside lighting.

6.3 LIGHTING – PLAN SUBMITTAL

a. Two (2) copies of a detailed lighting plan showing the location and specifications for all lighting fixtures to be installed on the property shall be submitted for Planning Division review and approval. All lighting shall comply with the CBC.

b. All exterior lighting, including landscape lighting, shall be shielded and directed downward, shall be located as low to the ground as possible, shall be the minimum necessary for security, safety, or operations; on timers; and shall incorporate the use of motion detection sensors to the greatest extent practical. All lighting shall be shielded or placed such that it does not shine directly on adjacent properties or impact vehicles on adjacent streets. No flood-lighting or sodium lighting of the building is permitted, including architectural highlighting and spotting. Low-level lighting shall be utilized in parking areas as opposed to elevated high-intensity light standards.

4.8 GENERAL PROPERTY MAINTENANCE – LIGHTING, LANDSCAPING, PAINTING, OUTDOOR EQUIPMENT STORAGE, AND TRASH ENCLOSURE AREAS

a. All lighting shall be permanently maintained in accordance with the lighting and building plans approved by the County. Lighting utilized during harvest activities is exempt from this requirement.

Project approval, if granted, would also be subject to the following standard condition of approval, which prohibits the use of highly reflective surfaces. With implementation of the condition of approval below, the proposed project would not have a significant impact resulting from new sources of glare.

6.5 COLORS

a. The colors used for the roof, exterior walls and built landscaping features of the project shall be limited to earth tones that will blend the facility into the colors of the surrounding site-specific vegetation; or colors required by the Secretary of Interior's Standards for Treatment of Historic Properties; or natural earth tone building materials. The permittee shall obtain the written approval of the Planning Division in conjunction with building permit review and/or prior to painting the building. Highly reflective surfaces are prohibited.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES[1]. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resource Code Section 12220(g)), timberland (as defined in Public Resource Code Section 4526), or timberland zoned Timberland Production (as defined in Government Code Section 51104(g))?	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐

Discussion

a. The California Department of Conservation District map currently designates the project site as "Other Land," and the project site is not mapped as "Prime Farmland", "Unique Farmland", or "Farmland of Statewide Importance" (California Important Farmland Finder). The proposed project does not include the removal of agricultural lands. The proposed project would not result in the conversion of Farmland to non-agricultural use. No impact would occur.

b. The project site is zoned Agricultural Watershed (AW) and the General Plan land use designation is Agriculture, Watershed, and Open Space (AWOS) (Napa County GIS Zoning and General Plan Layers). The proposed project would be consistent with the project site's zoning with issuance of a use permit, should Use Permit Application #P20-00030 and Application for Use Permit Exception to Conservation Regulations #P25-00293 be approved, as Napa County Code Section 18.120.010.B permits cemeteries in any zoning district with a use permit. The proposed project would not alter the natural setting of the site and would meet development standards for the AWOS designation in General Plan Policy AG/LU-20 and contained in Napa County Code Section 18.20.010 for the Agricultural Watershed zoning district. There are no Williamson Act contracts associated with the project site (Napa County GIS, Willaimson Act Parcels). No impact would occur.

c-d. The project site is not zoned as forest land as defined in Public Resource Code Section 12220(g), timberland as defined in Public Resource Code Section 4526, or a Timberland Production Zone (TPZ) as defined in Government Code Section 51104(g) and the proposed project would not conflict with zoning for forest land or timberland. However, the project site contains coniferous forest (Napa County GIS Zoning Layer, Napa County GIS Vegetation Layer) and is considered timberland according to the California Forest Practice Rules. The applicant is applying for a Less Than Three Acre Timber Conversion Exemption from CAL FIRE for project development, including removal of 27 Douglas fir trees (approximately 0.69 acre of Douglas fir forest) to construct the driveway. The exemption is applicable to conversions of less than three acres and may only be used once per contiguous land ownership. Project approval, if granted, would be subject to the condition of approval below. Impacts would be less than significant.

[1] "Forest Land" is defined in California Public Resource Code Section 12220(g) as "land that can support 10% native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." "Timberland" is defined in California Public Resource Code Section 4526 as "land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forests products, including Christmas Trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others."

6.16.(d) OTHER CONDITIONS APPLICABLE TO THE PROJECT PERMITTING PROCESS

a. Prior to the commencement of vegetation removal and earthmoving activities pursuant to Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293, the permittee shall provide documentation to Napa County demonstrating that a Less Than Three Acre Timber Conversion Exemption for the proposed project has been obtained from the California Department of Forestry and Fire Protection (CAL FIRE). A registered professional forester (Scott Butler, RPF #1851) shall submit the required application to CAL FIRE.

e. The project site does not contain designated Farmland and is not zoned as forest land, timberland, or a Timberland Production Zone. The applicant is applying for a Less Than Three Acre Timber Conversion Exemption from CAL FIRE for project development, including the removal of 27 Douglas fir trees (approximately 0.69 acre of Douglas fir forest) to construct the driveway. The proposed project would not involve any other changes to the environment that could result in the conversion of designated Farmland to a non-agricultural use or conversion of forest to non-forest use. Project approval, if granted, would be subject to the Forest Land condition of approval above. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Discussion[2]

On June 2, 2010, the Bay Area Air Quality Management District's (now known as the Bay Area Air District) Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds are designed to establish the level at which the Bay Area Air District believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on the Bay Area Air District's website and included in the Bay Area Air District 's updated CEQA Guidelines (updated May 2012). The thresholds are advisory and may be followed by local agencies at their own discretion.

The thresholds were challenged in court. Following litigation in the trial court, the court of appeal, and the California Supreme Court, all of the thresholds were upheld. However, in an opinion issued on December 17, 2015, the California Supreme Court held that CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate existing environmental hazards. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA.

In view of the Supreme Court's opinion, local agencies may rely on thresholds designed to reflect the impact of locating development near areas of toxic air contamination where such an analysis is required by CEQA or where the agency has determined that such an analysis would assist in making a decision about the project. However, the thresholds are not mandatory and agencies should apply them only after determining that they reflect an appropriate measure of a project's impacts. These Guidelines may inform environmental review for development projects in the Bay Area, but do not commit local governments or the Bay Area Air District to any specific course of regulatory action.

The Bay Area Air District published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court's opinion. The May 2017 Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The Bay Area Air District is currently working to revise any outdated information in the Guidelines as part of its update to the CEQA Guidelines and thresholds of significance.

a. The mountains bordering Napa Valley block much of the prevailing northwesterly winds throughout the year. Sunshine is plentiful in Napa County, and summertime can be very warm in the valley, particularly in the northern end. Winters are usually mild, with cool temperatures overnight and mild-to-moderate temperatures during the day. Wintertime temperatures tend to be slightly cooler in the northern end of the valley. Winds are generally calm throughout the county. Annual precipitation averages range from about 24 inches in low elevations to more than 40 inches in the mountains.

   Ozone and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter. In Napa County, ozone rarely exceeds health standards, but $PM_{2.5}$ occasionally does reach unhealthy concentrations. There are multiple reasons for $PM_{2.5}$ exceedances in Napa County. First, much of the county is wind-sheltered, which tends to trap $PM_{2.5}$ within the Napa Valley. Second, much of the area is well north of the moderating temperatures of San Pablo Bay and, as a result, Napa County experiences some of the coldest nights in the Bay Area. This leads to greater fireplace use and, in turn, higher $PM_{2.5}$ levels. Finally, in the winter easterly winds often move fine-particle-laden air from the

[2] See **Section VIII (Greenhouse Gas Emissions)** for the greenhouse gas (GHG) emissions disclosure and impact assessment.

Central Valley to the Carquinez Strait and then into western Solano and southern Napa County (Bay Area Air District, In Your Community: Napa County, April 2016).

The potential impacts associated with implementation of the project were evaluated consistent with guidance provided by the Bay Area Air District. Ambient air quality standards have been established by state and federal environmental agencies for specific air pollutants most pervasive in urban environments. These pollutants are referred to as criteria air pollutants because the standards established for them were developed to meet specific health and welfare criteria set forth in the enabling legislation. The criteria air pollutants emitted by development, traffic and other activities anticipated under the proposed development include ozone, ozone precursors oxides of nitrogen and reactive organic gases (NO_x and ROG), carbon monoxide (CO), nitrogen dioxide (NO_2), and suspended particulate matter (PM_{10} and $PM_{2.5}$). Other criteria pollutants, such as lead and sulfur dioxide (SO_2), would not be substantially emitted by the proposed development or traffic, and air quality standards for them are being met throughout the Bay Area.

The Bay Area Air District has not officially recommended the use of its thresholds in CEQA analyses and CEQA ultimately allows lead agencies the discretion to determine whether a particular environmental impact would be considered significant, as evidenced by scientific or other factual data. The Bay Area Air District also states that lead agencies need to determine appropriate air quality thresholds to use for each project they review based on substantial evidence that they include in the administrative record of the CEQA document. One resource the Bay Area Air District provides as a reference for determining appropriate thresholds is the California Environmental Quality Act Air Quality Guidelines developed by its staff in 2010 and updated through 2022. These guidelines outline substantial evidence supporting a variety of thresholds of significance.

Construction-related emissions are considered short-term in duration; nevertheless, construction emissions can represent a significant adverse impact on air quality. During construction, the proposed project would generate emissions of criteria air pollutants from operation of heavy-duty construction equipment, operation of worker vehicles and haul trucks, excavation of materials, and paving activities. Construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1.1 and then compared to the Bay Area Air District's applicable regional significance thresholds. Construction emissions were estimated for the construction of 509 square feet of floor area welcome center and 28,755 square feet of paving, driveway, and parking uses for visitors. No construction is required for the 1.5 miles of unimproved trails or operation of 16.19 acres of dedicated interment areas; therefore, they were not included in the construction emission estimates. Project-specific information provided by the project applicant for the construction schedule, off-road equipment, and export volume were used. Where project-specific data was not available, CalEEMod defaults were used. Detailed modeling assumptions are included in **Exhibit B**.

Construction is assumed to take place over an approximate 7-month period (April 1 through October 15). Construction of the project would involve demolition, site preparation, grading, building construction, and paving. The total emissions generated over the duration of construction was divided by the number of construction days (142) to determine average daily emissions from construction and are presented in **Table 1**. As shown in the table, emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ would all be below their respective significance thresholds which, for construction, have been established by the Bay Area Air District in terms of average daily emissions. Therefore, the proposed project would not have a significant impact related to construction criteria air pollutant emissions.

Table 1 – Average Daily Construction-Related Criteria Air Pollutant Emissions

Project Average Daily Construction Emissions by Year	ROG	NO_x	Exhaust PM_{10}[a]	Exhaust $PM_{2.5}$[a]
2026	1.1	9	0.4	0.3
Bay Area Air District Threshold for Significant Construction Impacts	54	54	82	54
Potential Significant Impact?	No	No	No	No

NOTES: ROG = reactive organic gases; NOX = oxides of nitrogen; PM_{10} = particulate matter with diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with diameter equal to or less than 2.5 microns.

a. BAAQMD's construction-related significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust.

SOURCE: ESA, 2025 (Exhibit B)

Further, the proposed project would be subject to the condition of approval below, which includes standard air quality and construction best management practices consistent with the Bay Area Air District measures identified in Table 5-2 of the Bay Area Air District CEQA Guidelines.

7.1(c) *SITE IMPROVEMENTS*

During all construction activities the permittee shall comply with the most current version of Bay Area Air District's Basic Construction Best Management Practices including but not limited to the following, as applicable:

1. *Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. The Bay Area Air District's phone number shall also be visible.*
2. *Water all exposed surfaces (e.g., parking areas, staging areas, soil piles, grading areas, and unpaved access roads) two times per day.*
3. *Cover all haul trucks transporting soil, sand, or other loose material off-site.*
4. *Remove all visible mud or dirt traced onto adjacent public roads by using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.*
5. *All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.*
6. *All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.*
7. *Idling times shall be minimized either by shutting off equipment when not in use or reducing the maximum idling time to five (5) minutes (as required by State Regulations). Clear signage shall be provided for construction workers at all access points.*
8. *All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. Any portable engines greater than 50 horsepower or associated equipment operated within the Bay Area Air District's jurisdiction shall have either a California Air Resources Board (ARB) registration Portable Equipment Registration Program (PERP) or a Bay Area Air District permit. For general information regarding the certified visible emissions evaluator or the registration program, visit the ARB FAQ http://www.arb.ca.gov/portable/perp/perpfact_04-16-15.pdf or the PERP website http://www.arb.ca.gov/portable/portable.htm.*

The Bay Area Air District developed screening criteria for operational air pollutants as part of the 2022 CEQA Guidelines. Projects that meet all of the operational screening criteria from Chapter 4 of the Bay Area Air District's 2022 CEQA Guidelines, detailed below, would result in less than significant impact related to operational criteria air pollutants and precursors.

Operational Criteria

1. The project size is at or below the applicable operational screening level size.
2. Operational activities would not include stationary engines (e.g., backup generators) and industrial sources subject to Air District rules and regulations.
3. Operational activities would not overlap with construction-related activities.

The size of the proposed project is estimated to be 509 square feet of welcome center space which is well below the 750,000 square feet operational screening level for general office building land use subcategory. Additionally, the proposed project does not include stationary engines and operational activities are scheduled to begin after completion of construction-related activities, with no overlap. Based on these aspects, the proposed project meets the screening criteria for operational criteria air pollutants and precursors.

As noted above, the proposed project falls below the Bay Area Air District's construction criteria air pollution thresholds, would implement the Bay Area Air District's Basic Construction Best Management Practices, and meets the operational screening criteria for criteria air pollutants and precursors; therefore, with the condition of approval above the proposed project would not significantly affect air quality individually or contribute considerably to any cumulative air quality impacts. Impacts would be less than significant.

c-d. Land uses such as schools, playgrounds, childcare centers, hospitals and convalescent homes are considered sensitive to poor air quality, because infants and children, the elderly, and people with health afflictions, especially respiratory ailments, are more susceptible to respiratory infections and other air quality related health problems than the general public. Residential areas are also considered to be sensitive to air pollution because residents, which include children and the elderly, tend to be in close proximity of home for extended periods of time.

Land uses in the vicinity of project site include open space, rural residential, agriculture (primarily vineyard), and wineries. The closest school (Howell Mountain Elementary School) is located approximately 1.3 linear miles to the southwest of the project site in Napa (Google Earth). The closest residence is located approximately 230 feet to the south on the opposite side of Howell Mountain Road. The closest residential area (the Town of Angwin) is over 1.3 miles southwest of the project site.

In the short term, potential air quality impacts are most likely to result from earthmoving and construction activities required for project construction. Earthmoving and construction emissions would have a temporary effect; consisting mainly of dust generated during grading and other construction activities, exhaust emissions from construction related equipment and vehicles, and relatively minor emissions from paints and other architectural coatings. These sources would generally be temporary and occur at least 1.3 miles from the closest school and nearest residential community, providing dilution of pollutants and odors. The Bay Area Air District recommends incorporating feasible control measures as a means of addressing construction impacts. If the proposed project adheres to these relevant best management practices identified by the Bay Area Air District and the condition of approval included above, construction-related impacts are considered less than significant. Additionally, for the reasons identified above, the proposed project would not expose sensitive receptors or a substantial number of people to pollutants or objectionable odors, resulting in a less-than-significant impact.

While earthmoving and construction on the project site would generate dust particulates in the short-term, project approval, if granted, would be subject to the following condition of approval relating to dust control:

7.1(b) SITE IMPROVEMENTS – DUST CONTROL

a. Water and/or dust palliatives shall be applied in sufficient quantities during grading and other ground disturbing activities on-site to minimize the amount of dust produced. Outdoor construction activities shall not occur when average wind speeds exceed 20 mph.

Operations and maintenance activities would consist of limited excavation for interment and minor landscaping and maintenance activities which would consist of the use of small, mechanized equipment or hand tools. These activities would not be of an intensity expected to generate substantial pollutant concentrations. The proposed project would also include trips by members of the public; however, as discussed in Section XVII (Transportation), while the proposed project could generate a conservative average of 108 daily trips, these trips would fall below the 110-trip significance threshold as outlined in the Governor's Office of Planning and Research (OPR) Technical Advisory.

While the Bay Area Air District defines public exposure to offensive odors as a potentially significant impact, cemeteries are not known operational producers of pollutants capable of causing substantial negative impacts to sensitive receptors. Graves would occur at approximately 3 feet underground providing between 1.5 to 2 feet of soil cover above the body or urn creating a "smell barrier" protecting the remains from producing odors and from animals. Further, the nearest residence is approximately 230 feet to the south on the opposite side of Howell Mountain Road. Operations and maintenance of the proposed project would not create pollutant concentrations or objectionable odors affecting a substantial number of people. Impacts would be less than significant.

Mitigation Measures: None required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES.** Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion

Wildlife Research Associates conducted an assessment of biological resources present or potentially present on the project site (approximately 112 acres) and protocol-level rare plant surveys. Surveys were conducted on August 25, 2017, April 26 and June 22, 2018; and April 14, May 18, and June 29, 2023 (Wildlife Research Associates, August 2024 – **Exhibit C-1**). The surveys documented the presence or potential for special-status plant and animal species and their habitats, sensitive habitats or communities, federal or State protected wetlands and waters of the U.S., and native wildlife species, wildlife corridors, or native wildlife nursery sites.

Prior to conducting the biological surveys, biological information for the project site was obtained from the following sources: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and the California Native Plant Society Electronic Inventory. The CNDDB and CNPS database searches included the Detert Reservoir, Aetna Springs, Walter Springs, Calistoga, St. Helena, Chiles Valley, Kenwood, Rutherford, and Yountville USGS 7.5-minute quadrangles. The special-status wildlife evaluation considered database searches for the entirety of Napa County.

Field surveys were conducted by qualified biologists familiar with the resources of Napa County and surrounding counties, with the goal of identifying the presence of sensitive biological communities, the potential for biological communities on the site to support special-status plant and wildlife species, and the presence of any other sensitive natural resources protected by local, State, or federal laws and regulations.

As shown in **Table 2**, vegetation types in the project site and proposed development area consist of Stanford's manzanita chaparral, California black oak woodland, tanoak forest, and Douglas fir forest.

Table 2 – Vegetation Types

Vegetation Types	Approximate Pre-Project Acres in Project Site	Approximate Acres in Proposed Development Area
Stanford's Manzanita Chaparral	2.57	0.00
California Black Oak Woodland	27.70	8.73
Tanoak Forest	17.45	6.31

Douglas Fir Forest	64.51	8.81
Total	**112.23**	**23.85**

Source: Wildlife Research Associates, August 2024 – Exhibit C-1

a. The project site is generally undisturbed and contains limited development including two unimproved dirt roads, two single-story structures, a septic tank, a water storage tank, an existing well (E15-00784), and an electric transformer located adjacent to Howell Mountain Road. The proposed project would include a 509 square-foot welcome center and minor landscaping, a replacement well, approximately 1.5 miles of unimproved trails, 16.19 acres of designated interment areas, a driveway and parking areas, two storage containers, gates and signage, and water supply and wastewater infrastructure. The two structures, concrete holding tank (spring box), and pump treatment shed would be demolished. The remainder of the project site would be left undeveloped and would be managed in perpetuity as a conservation site.

The project site includes 2.57 acres of Stanford's manzanita chaparral, 27.70 acres of California black oak woodland, 17.45 acres of tanoak forest, and 64.51 acres of Douglas fir forest. Construction of the proposed driveway would require limited grading resulting in conversion of approximately 0.69 acre of Douglas fir habitat and the removal of 27 Douglas fir trees (**Exhibit A-1** Sheet 7/12). There would also be permanent impacts to approximately 0.95 acre of oak woodland, 0.64 acre of tanoak forest, 0.57 acre Douglas fir forest through development of the proposed project; however, no tree removal would occur in these areas and the proposed project would be entirely on the forest/woodland floor resulting in no loss of oak woodland and no additional forest loss. The remaining 7.78 acres of oak woodland, 5.67 acres of tanoak forest, and 7.55 acres of Douglas fir forest within the proposed development area would be within interment areas and receive only temporary impacts through installation of waterlines and reoccurring excavation and restoration of burial plots (Wildlife Research Associates, August 2024 – **Exhibit C-1**).

The Biological Resources Reconnaissance Survey reported 105 special-status plant species occurring in the vicinity of the project site. Of those, 28 species have the potential to occur in the project site. The following five special-status plant species were identified on the project site (**Exhibits C-1 and C-2**).

- Narrow-anthered brodiaea (*Brodiaea leptandra*) California Rare Plant Rank (CRPR) 1B. Narrow-anthered California brodiaea is a perennial herb in the brodiaea family (Themidaceae) that blooms from May to July. It typically occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest habitat at elevations ranging from 360 to 3,000 feet. Soil survey data from documented locations suggest this species is closely associated with gravelly loam and clay loam substrates derived from rhyolites, metavolcanics, and serpentine. This species has a serpentine affinity rank of weak indicator (2.0). A total of 156 Narrow-anthered California brodiaea individuals were observed in 2023 within the chaparral in the southern portion of the project site; this is an increase of nine individuals between 2018 and 2023. These individuals were located interstitial to shrubs in the chaparral.
- Redwood lily (*Lilium rubescens*). CRPR 4. Redwood lily is a bulbiferous perennial forb in the lily family (Liliaceae) that blooms from April through September. It typically occurs in openings, roadsides, and trails, often on serpentine and volcanic substrates in broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, and North Coast coniferous forest habitat at elevations ranging from 95 to 6,210 feet. This species has a serpentine affinity rank of weak indicator (2.0). A total of 27 redwood lily individuals were observed in 2023 on the central-western edge of the project site in tanoak forest; this is an increase of six individuals between 2018 and 2023. These individuals were located on a rocky gentle to moderate slope in a relatively open understory.
- Cobb Mountain lupine (*Lupinus sericatus*). CRPR 1B. Cobb Mountain lupine is a perennial forb in the pea family (Fabaceae) that blooms from March through July. It typically occurs in openings in wooded slopes underlain by gravelly, often serpentine or volcanic, substrate in chaparral, cismontane woodland (knobcone pine woodland, blue oak woodland), and lower montane coniferous forest at elevations ranging from 890 to 4,960 feet. A total of 71 Cobb Mountain lupine individuals were observed in 2023 in the central portion of the project site on a fire break that was installed during the 2020 Glass Fire; this species was not observed in 2018 likely because of the closed canopy of the site.
- Green monardella (*Monardella viridis*). CRPR 4. Green monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet. This species has a serpentine affinity rank of broad endemic/strict indicator (4.3). A total of 27 green monardella individuals were observed in both 2018 and 2023 in the southern portion of the project site. These individuals were located interstitial and beneath the canopy of large shrubs.
- Dark-mouthed triteleia (*Triteleia lugens*). CRPR 4. Dark-mouthed triteleia is a perennial bulbiferous forb in the brodiaea family (Themidaceae) that blooms from April through June. It typically occurs in chaparral, coastal scrub, broadleaf upland forest, and lower montane coniferous forest habitat at elevations ranging from 325 to 3,250 feet. An estimated (and partially counted) 721 dark-mouthed triteleia individuals were observed in 2023 within the California black oak and Douglas fir forests in the central and northern portions of the project site; this is an estimated increase of 121 individuals between 2018 and 2023. Generally, populations were situated in the understory with low cover of shrubs and higher cover of herbaceous species.

Of the five special-status plant species that occur within the project site, two are located within the proposed development area including dark-mouthed triteleia (with approximately 2.94 acres occurring within the proposed development area, of which 0.35 acre would be permanently impacted, or 3% of total population area) and Cobb Mountain lupine (with five of a total of 71 individuals of this species in a proposed interment area, or 7% of total population).

The Biological Resources Reconnaissance Survey found that given the diffuse nature of the on-going project (i.e., interment plots) over such a sizable area, is unlikely to pose a significant impact to dark-mouthed triteleia in the immediate and long term. Similarly, the survey found that Cobb Mountain lupine could be avoided within the proposed interment areas. Given that the interment areas would be developed over time and distributions of these species would change over time and other special-status plant species may become established in the interment areas and be impacted by the proposed project, **Mitigation Measure BIO-1** would be implemented to require periodic surveys of the interment areas to monitor for special-status plant populations and require informational materials be provided to staff to reduce this potential impact to less-than-significant levels.

The Biological Resources Reconnaissance Survey reported eight special-status wildlife species that have a moderate to high potential to occur within the project site (none were observed during the surveys) (**Exhibit C-1**):

- Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, Western Bat Working Group (WBWG) High Priority. Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented within snags and basal hollows of conifers, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas. Trees within the project site (primarily oaks) may contain cavities or snags suitable for roosting by this species, and there are CNDDB occurrences in the vicinity.
- Townsend's western big-eared bat (*Corynorhinus townsendii Townsendii*). CDFW Species of Special Concern. WBWG High Priority. The Townsend's western big-eared bat are found in humid coastal regions of northern and central California. They are typically associated with caves, but are also found in man-made structures, including mines and buildings. While many bats wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth. Females roost with their young until late summer or early fall, until young become independent, flying and foraging on their own. Trees within the project site may contain cavities or snags suitable for roosting by this species
- Fringed myotis (*Myotis thysanodes*). WBWG High Priority. The fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. These bats most frequently utilize oak and pinyon-juniper woodlands. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California. The trees within the project site may contain cavities or exfoliating bark suitable for roosting.
- Golden eagle (*Aquila chrysaetos*). Bald and Gold Eagle Protection Act Species, CDFW Fully Protected Species. This species ranges throughout western North America, from British Columbia to central Mexico. It occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas. The trees within the project site may contain habitat for the species.
- Olive-sided flycatcher (*Contopus cooperi*). CDFW Species of Special Concern. This passerine bird is known from across Canada into the West Coast, Rocky Mountains, and Great Lake Area. They typically nest in coniferous or mixed forests, particularly lower montane forest. These birds forage for flying insects in forest openings, burns, edges, and other mixed open area in greater forest habitats. Nests are well-hidden in dense branches of large trees, preferentially conifer trees. The trees within the project site may contain habitat for the species.
- Purple martin (*Progne subis*). CDFW Species of Special Concern. Purple martin is an uncommon summer resident in California, occurring in woodlands and low-elevation hardwood and coniferous forest. It usually feeds on insects captured in flight approximately 100 to 200 feet above ground. These birds nest in cavities of tall, old, isolated trees or snags in open forest or woodland. The trees within the project site may contain habitat for the species.
- Black-chinned sparrow (*Spizella atrogularis*). Local Rare. The black-chinned sparrow is a locally common summer resident in dry brushlands and mountain slopes up to 8,800 feet in elevation. This species breeds in California in the inner north and south Coast Ranges, Transverse Range, Peninsular Range, the western slopes of the Sierra Nevada from Kern to Mariposa Counties, irregularly in Tehama County, and locally on mountains of southeastern California. This species inhabits scrub, chaparral, and sagebrush habitats and prefers sloping, dense, xeric environments, often with ceanothus, manzanita, sagebrush, and chamise. Pairs nest in the interior of dense shrubs. The trees within the project site may contain habitat for the species.

- Northern spotted owl (*Strix occidentalis caurina*). Federal Threatened, CDFW Species of Special Concern. Northern spotted owl is a subspecies of spotted owl (*Strix occidentalis*) found in Western North America. It is a medium-sized (16 to 20 inches) dark brown owl with a wingspan of approximately forty inches; females are larger than males. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California); however, trees are old and contain structures suitable for nesting (e.g., epicormics branching, large cavities, platforms). Northern spotted owl is primarily nocturnal; its diet consists mainly of wood rats (*Neotoma* sp.) and squirrels, as well as other small mammals, reptiles, birds and insects. It is intolerant of habitat disturbance and highly territorial; each nesting pair requires a large territory for hunting and raising young. The trees within the project site may contain habitat for the species.

As discussed above, development of the proposed project has the potential to impact special-status bat species, including pallid bat, Townsend's western big-eared bat, and fringed myotis. **Mitigation Measure BIO-2** would be implemented to reduce impacts to special-status bats to less-than-significant levels.

In addition to the special-status bird species discussed above, a variety of non-status bird species with baseline protections under the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5 may use vegetation within the project site for nesting. On-going activities (i.e., ground maintenance, interments) would not pose a significant risk to nesting birds. **Mitigation Measure BIO-3** would be implemented to reduce impacts to special-status and nesting birds to less-than-significant levels.

The project site also has a high potential for northern spotted owl to occur. **Mitigation Measure BIO-4** would be implemented to reduce impacts to less-than-significant levels.

With the incorporation of **Mitigation Measures BIO-1 through BIO-4** and the conditions of approval below, the potential for the proposed project to have an impact on special-status plant and wildlife species would be less than significant.

Specific to oak woodland, Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON 24(c)[3], specifically provides for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible, where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. Napa County Code Section 18.108.020(D) (Vegetation Removal Mitigation) further requires that the removal of any vegetation canopy cover in the Agricultural Watershed zoning district be mitigated by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio. Oak woodland impacts and mitigation are discussed in Question e below.

b-c. There are seven ephemeral drainages located within the northern half of the project site outside of the proposed development area. The banks of these drainages are vegetated and shaded, but the vegetation is not composed of characteristically riparian species (Wildlife Research Associates, August 2024 – **Exhibit C-1**). These drainages do not meet the Napa County stream definition pursuant to Napa County Code Section 18.108.030; despite not qualifying as streams under Napa County Code, minimum 35-foot stream setbacks have been maintained. No state or federally protected wetlands have been identified on the project site. Impacts would be less than significant. The proposed project, if approved, a condition of approval would be required to mark the stream setbacks to prevent the inadvertent encroachment into specified stream setbacks during construction.

7.5(a) OTHER CONSTRUCTION CONDITIONS APPLICABLE TO THE PROJECT PROPOSAL

a. The location of stream setbacks shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. Prior to any earthmoving activities, temporary fencing shall be installed: the precise locations of said fences shall be inspected and approved by the Conservation Division prior to any earthmoving and/or development activities, no disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of construction activities. The protection fencing shall remain in place for the duration of project implementation.

All construction and related traffic shall remain outside of the protective fencing to the maximum extent practicable to ensure that the stream, buffer zones, and associated woodland habitat remains undisturbed.

d. Wildlife corridors are natural areas interspersed with developed areas that are important for animal movement, increasing genetic variation in plant and animal populations, the reduction of population fluctuations, and the retention of predators of agricultural pests and for movement of wildlife and plant populations. Wildlife corridors have been demonstrated to not only increase the range of vertebrates including avifauna between patches of habitat but also facilitate two key plant-animal interactions: pollination and seed dispersal. Corridors

[3] Policy CON 24(c): Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ration when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.

also preserve watershed connectivity. Corridor users can be grouped into two types: passage species and corridor dwellers. The data from various studies indicate that corridors should be at least 100 feet wide to provide adequate movement for passage species and corridor dwellers in the landscape.

Construction activities could result in temporary barriers to wildlife movement, but these are not expected to be significant because these activities are temporary and because of the limited scale of the project. The project site is not within either a Natural Landscape Block or an Essential Connectivity Area. At a localized scale the project site provides connectivity between similar forested and heavily wooded land parcels in surrounding areas capable of hosting a variety of wildlife species. While common wildlife species presumably use the site to some degree for movement at a local scale, the project site itself does not provide corridor functions beyond connecting similar forested and heavily wooded land parcels in surrounding areas. Additionally, most of the project site would remain undeveloped, including the majority of the site's oak woodland, tanoak forest, and Douglas fir forest resulting in direct connectivity with similar habitats within the project site and undeveloped lands adjacent to the project site allowing for continued wildlife movement at the localized and regional scale. Given the relatively small size of the proposed development area (relative to the area of the greater corridor tract), the apparent lack of development impacts within interment areas, and the retention of the oak woodland, tanoak forest, and Douglas fir forest within the project site, the proposed project is not anticipated to result in any potentially significant impacts to wildlife movement or migration. (Wildlife Research Associates, August 2024 – **Exhibit C-1**).

Though the proposed project would incrementally reduce a small amount of habitat in the project area, resulting in changes in avifauna and rodent utilization in the area, the proposed project would not lead to significant impacts to habitat fragmentation in the region, significant species exclusion, or a significant change in species composition in the region. Wildlife nursery sites were not identified in the project site, and there would thus be no impacts to wildlife nursery sites. Due to these factors, project activities would not interfere with the movement of any native resident or migratory fish or wildlife species or with their corridors or nursery sites. Impacts would be less than significant.

e. The proposed project would not interfere with any ordinances protecting biological resources. The project site contains approximately 27.7 acres of California black oak woodland (8.73 acres of which occurs in the proposed development area), 17.45 acres of tanoak forest (6.31 acres of which occurs in the proposed development area), and 64.51 acres of Douglas fir forest (8.81 acres of which occurs in the proposed development area). The proposed development area contains 27 Douglas fir trees that are proposed for removal (**Exhibit A-1**).

Of the habitats which occur within the proposed development area, 0.95 acre of oak woodland, 0.64 acre of tanoak forest, 1.26 acres Douglas fir forest would be permanently impacted. A total of 27 Douglas fir trees would be removed. The remaining 7.78 acres of oak woodland, 5.67 acres of tanoak forest, and 7.55 acres of Douglas fir forest within the proposed development area would be temporarily impacted (through installation of waterlines and excavation of burial plots) and the remaining 18.97 acres of oak woodland, 11.14 acres of tanoak forest, and 55.7 acres of Douglas fir forest outside of the proposed development area would remain undisturbed (**Exhibit C-1**).

Napa County Code Section 18.108.020(C) (General Provisions: Vegetation Retention Requirements) requires that parcels within the Agricultural Watershed zoning district retain 70% of the vegetation canopy cover[4] based on the on-site canopy present on June 16, 2016. Per the Biological Resources Reconnaissance Survey, there has been no appreciable change in canopy cover since 2016 (**Exhibit C-1)**. Approximately 0.95 acre of oak woodland (3% of the oak woodland in the project site), 0.64 acre of tanoak forest (4% of the tanoak forest in the project site), and 1.26 acres Douglas fir forest (2% of the Douglas fir forest in the project site) would be permanently impacted with the proposed project (**Exhibit C-1).** However, none of the California black oak woodland or tanoak forest canopy cover would be removed as the proposed project would be entirely on the forest/woodland floor and all 27.7 acres of California black oak woodland canopy and 17.45 acres of tanoak forest canopy would be retained (or 100%). Construction of the proposed driveway would require limited grading resulting in conversion of approximately 0.69 acre of Douglas fir forest (1% of the Douglas fir forest in the project site) and the removal of 27 Douglas fir trees. Therefore, the proposed project would retain 99% of the tree canopy that exists on the project site in areas under 30% slope and outside of stream setbacks, exceeding the 70% retention requirement.

Specific to vegetation removal mitigation and preservation Napa County Code Section 18.108.020(D) (Vegetation Removal Mitigation) requires that the removal of any vegetation canopy cover in the Agricultural Watershed zoning district be mitigated by permanent replacement or preservation of comparable vegetation canopy cover, on an acreage basis at a minimum 3:1 ratio. Napa County Code Section 18.108.020(D) prioritizes where the mitigation replacement and preservation areas should be allowed, whereby the first priority is for onsite replacement and/or preservation areas that generally occur on slopes less than 30% and outside of stream and wetland setbacks. If this cannot be reasonably accomplished, then onsite replacement and/or preservation may occur on slopes up to 50%, in areas that result in the highest biological and water quality protections, etc. Napa County Code Section 18.108.020(E) (Preserved Vegetation Canopy Cover) requires preserved vegetation canopy cover to be protected (or otherwise enforceably restricted) thorough a perpetual protective easement or deed restriction preserving and conserving the preserved vegetation canopy cover.

[4] Napa County Code Section 18.108.030 defines "vegetation canopy cover" as "the biotic communities classified as oak woodland, riparian oak woodland, or coniferous forest based on the current Manual of California Vegetation (MCV) and as described in the Napa County Baseline Data Report (2005 or as amended)."

For the proposed project to comply with Napa County Code Section 18.108.020(D) and preserve three (3) acres of canopy cover for every one (1) acre impacted, a minimum of 2.07 acres of canopy cover should be preserved on the project site for the approximately 0.69 acre of canopy that would be removed in the proposed development area.

Additionally, Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained to the extent feasible to provide oak woodland and wildlife habitat, slope stabilization, soil protection and species diversity. Policy CON-24(c) specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio where feasible; where preservation/avoidance of oak woodland is not feasible replacement of oak woodland at a 2:1 ratio is required. Removal of more than one (1) acre of oak woodland for every two (2) acres preserved would be a significant impact. With the proposed project, 0.95 acres of oak woodland would be impacted and a minimum of 1.9 acres of oak woodland should be preserved on the project site.

To comply with Napa County Code Section 18.108.020(D) and Conservation Element Policy CON-24 and reduce impacts on canopy cover and oak woodland to less-than-significant levels, **Mitigation Measure BIO-5** below would be implemented. Further, the entire project site would be perpetually managed as a conservation site by Wildlands thereby protecting the remaining canopy cover and vegetation present on-site. The proposed project, if approved, shall incorporate a condition of approval which would be required to set procedures for how the excavation and equipment shall be used, in order to avoid excessive grading, prevent the spread of invasive plants and soil borne pathogens, and to further protect onsite woodland and forest.

4.12(d) OTHER CONDITIONS APPLICABLE TO THE OPERATIONAL ASPECTS OF THE PROJECT

a. Where feasible avoid excavation of interment plots near the boles of trees. Excavation should be with hand tools and small power tools, whenever feasible. Topsoil, including the root wads of any large perennial herbs and small shrubs, should be diligently set aside to resurface the interment plot. All tools, quads, and other equipment should be regularly cleaned and decontaminated to prevent the spread of invasive plants and soil borne pathogens.

With the implementation of **Mitigation Measures BIO-1 through BIO-5** and conditions of approval, the proposed project would have less-than-significant impacts on special-status plants and wildlife as well as wildlife movement and result in conformance with policies protecting biological resources in the Napa County General Plan and Conservation Regulations. Further, as discussed in Section VII (Geology and Soils) and Section X (Hydrology and Water Quality), under proposed project conditions, soil loss is anticipated to result in no net increase as compared to existing conditions. Therefore, the findings can be made that highest biological and water quality protections have been incorporated into the project, as proposed, with incorporation of **Mitigation Measures BIO-1 through BIO-5** and conditions of approval, consistent with applicable Napa County General Plan Policies and Napa County Code Chapter 18.108, resulting in less-than-significant impacts.

f. The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plans, Natural Community Conservation Plans or other approved local, regional or state habitat conservation plans because there are no plans applicable to the subject site. No impacts would occur.

Mitigation Measures:

Mitigation Measure BIO-1: As part of the management and conservation of the project site, periodic surveys (every five years) of the interment areas for special-status plant and animal species shall be conducted to determine an estimated census, distribution, and management needs. Informative materials (photographs, descriptions) of all on-site special-status species shall be provided to staff to avoid impacts to such species. A copy of the survey findings shall be provided to the Napa County Planning Division within 30 days of completing the surveys.

Mitigation Measure BIO-2: Tree removal shall be performed from September through March, outside of the general bat maternity season, to the extent feasible. If tree removal during this period is not feasible, it is recommended that a bat habitat assessment and survey effort (the latter if needed) be performed by a qualified biologist prior to tree removal to determine if bats are present in the trees. If no suitable roosting habitat for bats is found, then no further study is warranted. If special-status bat species or bat maternity roosts are detected, then roost trees shall be avoided until the end of the maternity roosting season. If this avoidance is not feasible, appropriate species- and roost-specific mitigation measures should be developed in consultation with CDFW.

Irrespective of time of year, all felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats present within the felled trees to escape.

Mitigation Measure BIO-3: For earth-disturbing activities occurring between February 1 and August 15 (which coincides with breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a pre-construction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The pre-construction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work.

After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.

In the event that nesting birds are found, the permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County and the USFWS and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with the County's Planning Division and/or the USFWS or CDFW.

Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) are prohibited.

Mitigation measure BIO-4: For project activities occurring between March 15 and July 31, prior to any vegetation removal or construction activities, a qualified biologist shall perform a northern spotted owl habitat assessment to determine the potential for this species to be present within the disturbance area as well as within a 0.25-mile buffer surrounding each disturbance area. The assessment shall include both a review of recent aerial photography and a field visit to review conditions directly. Additionally, the qualified biologist shall perform an on-site nocturnal calling survey for northern spotted owl from at least mid-March onward and prior to initiation of construction activities. Survey stations for the calling survey shall be sited to cover post-fire forest stands that are most suitable for northern spotted owl occupation. The results of the habitat assessment and survey shall be provided to the County for review prior to project initiation. If northern spotted owl is observed or otherwise believed to be present within the focal area described above, measures shall be implemented in consultation with CDFW to ensure that project activities would not result in a take of the species and that any potential impacts are otherwise minimized.

Mitigation Measure BIO-5:

a. A Preservation Area, totaling a minimum of 2.07 acres of Douglas fir forest (2:1 preservation ratio for the canopy impact) and 1.9 acres of oak woodland (3:1 preservation ratio for the habitat impact) shall be designated as such in a deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the forest being impacted as a result of the proposed project, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project site and Napa County; the acreage included in the preservation

area should be selected in a manner that minimizes fragmentation of oak woodland within the project site; and the preservation area should not include portions of the project site already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.

The land placed in protection shall be restricted from development and other uses that would potentially degrade the quality of the habitat (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion), and should be otherwise restricted by the existing goals and policies of Napa County.

The permittee shall provide an endowment to the accredited land trust that is sufficient to ensure that the mitigation easement is monitored, enforced, and defended in perpetuity. The amount of the endowment shall be calculated using the Center for Natural Land Management's Property Analysis Record software, or an equivalent methodology if preferred by the land trust and accepted by the Land Trust Alliance, which provides the systematic and objective determination of the amount of the endowment in light of the conservation values to be protected by the easement. The record showing how the amount of the endowment was calculated shall be provided to County Counsel as part of its review of the mitigation easement. Any county staff time spent assessing and monitoring said provision shall be charged to the permittee, at the rate in effect at the time assessment and monitoring occurs, pursuant to County Fee Policy Part 80.

b. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the proposed development area (typically within approximately 50-feet of the proposed development area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of erosion control plan and vineyard installation.

c. The permittee shall refrain from severely trimming the trees (typically no more than 1/3 of the canopy) and vegetation to be retained adjacent to the proposed development area.

d. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293 shall be replaced on-site with 15-gallon trees at a ratio of 3:1 at locations approved by the Director. A replacement plan shall be prepared for county review and approval that includes, at a minimum, the locations where replacement trees would be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented prior to issuance of a building or grading permit. Any replaced trees shall be monitored for at least three years to ensure an 80% survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the associated building permits.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Discussion

a-b. Tom Origer and Associates prepared a Historical Resource Study for the proposed project. A historical resource study of the property was completed in September 2017 (Tom Oiger and Associates, 2017). The study was conducted to determine the presence or absence of historical or archaeological resources, and potential impacts, if any, as a result of the proposed project. The study included a check of information on file with the regional office of the California Historical Resources Information System (CHRIS) and consultation with the Native American Heritage Commission for a search of the Sacred Lands File to determine presence or absence of previously recorded historic or prehistoric cultural resources; a check of relevant historic references to determine the potential for historic era archaeological deposits or structures; and a surface reconnaissance survey of approximately 92 acres of the project site to locate any visible signs of potentially significant historic or prehistoric cultural deposits. Two cabins and a water storage tank were found during the survey. No historical resources were observed during the survey. The study stated that if future plans call for the alteration or removal of the cabins that they should be formally evaluated by a qualified archaeologist or architectural historian.

A Historical Evaluation Study (Eileen Barrow & Associates, 2025) evaluated the cabins per criteria for inclusion on the California Register of Historical Resources. After conducting archival research, developing an historical context, and examining the two cabins, the study determined that the structures do not meet criteria for inclusion on the California Register of Historical Resources and no further recommendations were warranted. Impacts would be less than significant.

Although no cultural resources were found, there is the possibility that buried archaeological deposits could be present and accidental discovery could occur. Therefore, the proposed project, if approved, would be subject to the condition of approval identified below to protect cultural resources that may be discovered accidentally.

7.2 ARCHEOLOGICAL FINDING

In the event that archeological artifacts or human remains are discovered during construction, work shall cease in a 50-foot radius surrounding the area of discovery. The permittee shall contact the PBES Department for further guidance, which will likely include the requirement for the permittee to hire a qualified professional to analyze the artifacts encountered and to determine if additional measures are required.

If human remains are encountered during project development, all work in the vicinity must be halted, and the Napa County Coroner informed, so that the Coroner can determine if an investigation of the cause of death is required, and if the remains are of Native American origin. If the remains are of Native American origin, the permittee shall comply with the requirements of Public Resources Code Section 5097.98.

c. The Historical Resources Study did not locate any human remains in the project site and does not anticipate the discovery of human remains due to implementation of the proposed project. Therefore, impacts on human remains are anticipated to be less than significant. Furthermore, the condition of approval above would be incorporated should the proposed project be approved, which would ensure that potential impacts on human remains would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion

a. During construction of the proposed project, the use of construction equipment, truck trips for hauling materials, and construction workers' commutes to and from the project site would consume fuel. Construction activities and corresponding fuel energy consumption would be temporary and localized. In addition, there are no unusual project characteristics that would cause the use of construction equipment or haul vehicles that would be less energy efficient compared with other similar construction sites within Napa County.

The proposed project would comply with Title 24 energy use requirements. Once construction is complete, equipment and energy use would be slightly higher than under existing conditions as the proposed project would include construction of a welcome center; however, the proposed project would not include any unusual maintenance activities that would cause a significant difference in energy efficiency compared to the surrounding developed land uses. Thus, the proposed project would not result in wasteful, inefficient, or unnecessary energy use. This impact would be less than significant.

b. The transportation sector is a major end-user of energy in California, accounting for approximately 28% of total statewide energy consumption in 2019 (U.S. Energy Information Administration 2020). In addition, energy is consumed in connection with construction and maintenance of transportation infrastructure, such as streets, highways, freeways, rail lines, and airport runways. California's 30 million vehicles consumed more than 13 billion gallons of gasoline and more than 3 billion gallons of diesel each year (CEC 2024). In Napa County, building energy accounted for approximately 31% of total emissions in 2014, with the percentage anticipated to decrease by 55% through 2050 (Napa County Revised Draft Climate Action Plan, July 2018).

With respect to transportation energy, existing energy standards are promulgated through the regulation of fuel refineries and products such as the Low Carbon Fuel Standard (LCFS), which mandated a 10% reduction in the non-biogenic carbon content of vehicle fuels by 2020. Additionally, there are other regulatory programs with emissions and fuel efficiency standards established by United States Environmental Protection Agency and the California ARB such as Pavley II/LEV III from California's Advanced Clean Cars Program and the Heavy-Duty (Tractor-Trailer) Greenhouse Gas (GHG) Regulation. Further, construction sites are required to comply with State requirements designed to minimize idling and associated emissions, which also minimizes use of fuel. Specifically, idling of commercial vehicles and off-road equipment would be limited to five minutes in accordance with the Commercial Motor Vehicle Idling Regulation and the Off-Road Regulation.[5] The proposed project would comply with these State requirements and the condition of approval presented in Section III (Air Quality). Napa County has not implemented an energy action plan. Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency or impede progress towards achieving goals and targets, and impacts would be less than significant.

Mitigation Measures: None required.

[5] California Code of Regulations, 2005. Title 13, Chapter 10, 2485, updated through 2014.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☒	☐
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion

a. i.) There are no known faults on the project site and the project site is not within a current Alquist-Priolo Earthquake Fault Zone (RGH Consultants, October 2023 – **Exhibit D**). As such, the proposed project would result in a less than significant impact with regards to rupturing a known fault.

ii.) All areas of the San Francisco Bay region are subject to strong seismic ground shaking. Construction of the proposed project would be required to comply with the latest building standards and codes, including the California Building Code that would reduce any potential impacts to a less-than-significant level.

iii.) No subsurface conditions have been identified on the project site that indicated a susceptibility to seismic-related ground failure or liquefaction. The project site is not located within an area delineated by the California Geological Survey as being susceptible to liquefaction (RGH Consultants, October 2023 – **Exhibit D**). Compliance with the latest edition of the California Building Code for seismic stability would result in less-than-significant impacts.

iv.) The Geologic Hazard Report that was prepared for the proposed project reported that the California Landslide Inventory does not indicate large-scale slope instability at the portion of the project site proposed for development. However, large-scale landslides are mapped downslope of the project site and on the opposite side of the ridge to the northwest of the proposed development area. The scarp of the landslide downslope of the project site extends upwards toward the project site and the welcome center would be constructed adjacent to the scarp. The report stated that it would be geotechnically feasible to construct the planned driveway and welcome center and recommended that the welcome center gain support in undisturbed bedrock and have adequate lateral

confinement based on the slope geometry, and consider bedrock joint and/or bedding orientations in the foundation construction (RGH Consultants, October 2023 – **Exhibit D**). The proposed project, if approved, shall incorporate a condition of approval which would be require the permittee to submit a geotechnical study, that has provided design recommendations based off the data provided and reviewed by a geotechnical engineer and/or engineering geologist. Impacts would be less than significant with the incorporation of site-specific geotechnical recommendations into the project design.

6.16.(e) OTHER CONDITIONS APPLICABLE TO THE PROJECT PERMITTING PROCESS

a. Prior to project development, the permittee shall submit a geotechnical study to the Planning Division that documents specific design recommendations based on site-specific test borings or backhoe pits, laboratory testing and engineering analyses. The data generated should be reviewed by a geotechnical engineer and/or engineering geologist and be incorporated into the project design.

b. While the majority of the proposed project would be constructed on slopes under 30%, some access pathways would be located on slopes over 30% and less than 50%. All on site civil improvements would be constructed according to plans prepared by a registered civil engineer and would be reviewed and approved by the County Engineering Division. The Engineering Division has reviewed the application and has provided recommended conditions of approval. Further, grading and drainage improvements would be constructed according to the current Napa County Road and Street Standards (RSS), Chapter 16.28 of the Napa County Code, and Appendix J of the California Building Code and prior to issuance of a building or grading permit the applicant would submit the necessary documents for Erosion Control, as determined by the area of disturbance of the proposed development, in accordance with the Napa Countywide Stormwater Pollution Prevention Program Erosion and Sediment Control Plan Guidance.

The project's Drainage Memo, prepared by TSD Engineering, Inc. dated September 29, 2023 (**Exhibit E**), discusses drainage, stormwater quality measures, and best management practices to be implemented as part of the proposed project to manage water quality, such as pollution source control measures, best management practices for sediment control, and measures for paving and waste management consistent with the California Stormwater Quality Association Stormwater Best Management Practices Handbook.

Additionally, the project's Stormwater Control Plan, prepared by TSD Engineering dated August 20, 2024 (**Exhibit F**), outlines the stormwater control measures proposed to manage runoff on-site. The plan also includes management strategies for maintaining proposed stormwater management features. As discussed, the proposed project would result in a minor increase in impervious surfaces with the construction of the welcome center, associated driveway, and parking (total new and replaced impervious surface area: 1,405 square feet, total pre-project impervious surface area: 9,823 square feet, total post-project impervious surface area: 11,243 square feet); however, the proposed project would include the use of porous pavement for the driveway and parking stalls. Drainage would be designed to flow from a drainage management area into an existing open space east of the area which would be used as a self-treating area for runoff to help slow, capture, and filter flows. The drainage management area would be approximately 29,330 square feet and would drain 27,925 square feet of porous pavement, 830 square feet of sidewalk, and the 575 square foot welcome center (roof footprint) totaling approximately 29,330 square feet.

Specific to interment activities, burials would include excavation of individual plots with topsoil and vegetation being replaced and lightly compacted by staff using hand equipment following burial; no tree removal would occur. Plots would be observed for settlement and irregular ground surfaces would be corrected with placement of additional soil as necessary to avoid ponding water and maintain drainage conditions. Further, while the proposed project would include the removal of 27 trees, the majority of existing tree coverage (99%) and vegetation on-site would remain undisturbed. The proposed project would be managed in perpetuity as a conservation site by Wildlands, thereby further reducing the potential for increases in runoff and erosion. Additionally, proposed project would include minimum 35-foot stream setback from ephemeral drainages located on the project site. Impacts would be less than significant.

c-d. Based upon the Soil Survey of Napa County, prepared by the United States Department of Agriculture (USDA), the site is composed of Aiken loam, 30 to 50% slopes, Forward silt loam, 3 to 26% slopes, Forward silt loam, 5 to 39% slopes, and Forward silt loam, 12 to 57% slopes. These soils generally exhibit a low to moderate shrink-swell potential (USDA, 1978). According to the Geologic Hazards Report (RGH Consultants, October 2023 – **Exhibit D**), the project site is primarily underlain by Tertiary Sonoma Volcanic deposits and is not located within an area delineated by the California Geological Survey as being susceptible to liquefaction. All proposed construction would be required to comply with all the latest building standards and codes at the time of construction. Compliance with the latest editions of the California Building Code for seismic stability, and the geotechnical and engineering condition of approval above, would reduce any potential impacts to the maximum extent possible, resulting in less-than-significant impacts.

e. A Wastewater Feasibility Study prepared by RSA+ and dated January 31, 2020 (**Exhibit G**) was prepared to demonstrate that the proposed project could treat and disperse domestic wastewater on-site meeting Napa County Environmental Management Design standards for the treatment of domestic wastewater. The Napa County Environmental Health Division reviewed the application and provided conditions of approval (see Section XIX [Utilities and Service Systems]). Soils on the property have been determined to be

adequate to support the proposed on-site treatment and dispersal of wastewater generated by the proposed welcome center as well as sanitary wastewater based on the proposed number of visitors and employees. Therefore, impacts from the proposed project would be less than significant.

f. No paleontological resources or unique geological features have been identified on the project site to date. The proposed project would include development of a welcome center, internal access roads and parking, trails, and utility installation which would involve temporary ground disturbing activities and limited grading activities. The proposed project would also include an interment area which would include minor ground disturbing activities throughout its operating life. Due to the nature of the soils in the project site, which are composed primarily of Tertiary Sonoma Volcanic deposits (RGH Consultants, October 2023 – **Exhibit D**), the probability of encountering paleontological resources within the project site is minimal. In the event, that resources are found during any earth disturbing activities associated with the project, construction and operations of the project are required to cease, and a qualified paleontologist would be retained to investigate the site, in accordance with the condition of approval below. Therefore impacts to geologic features and paleontological resources are anticipated to be less than significant.

4.12.(e) OTHER CONSTRUCTION CONDITIONS APPLICABLE TO THE PROJECT PROPOSAL

a. Discovery of paleontological resources during construction, grading, or other earth moving activities: In the event that a discovery of a braes, true, and/or trace fossils are discovered during ground disturbing activities, all work within 100 feet of the fined shall be temporarily halted of diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before ground disturbing activities are allowed to resume at the location of the find. All persons working onsite shall be bound by contract and instructed in the field to adhere to these provisions and restrictions.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate a net increase in greenhouse gas, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion

On April 20, 2022, the Bay Area Air District adopted updated thresholds of significance for climate impacts (CEQA Thresholds for Evaluating the Significance of Climate Impacts, Bay Area Air District April 2022)[6]. The updated thresholds to evaluate GHG and climate impacts from land use projects are qualitative and geared toward building and transportation projects. Per the Bay Area Air District, all other projects should be analyzed against either an adopted local Greenhouse Gas Reduction Strategy (i.e., Climate Action Plan (CAP)) or other threshold determined on a case-by-case basis by the Lead Agency. If a project is consistent with the State's long-term climate goals of being carbon neutral by 2045, then a project would have a less-than-significant impact as endorsed by the California Supreme Court in Center for Biological Diversity v. Department of Fish & Wildlife (2015) 62 Cal. 4th 204). There is no proposed construction-related climate impact threshold at this time. GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions. The proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions.

Napa County has been working to develop a CAP for several years. In 2012, a Draft CAP (March 2012) was recommended using the emissions checklist in the Draft CAP, on a trial basis, to determine potential GHG emissions associated with project development and operation. At the December 11, 2012, Napa County Board of Supervisors (BOS) hearing, the BOS considered adoption of the proposed CAP. In addition to reducing Napa County's GHG emissions, the proposed plan was intended to address compliance with CEQA for projects reviewed by the County and to lay the foundation for development of a local offset program. While the BOS acknowledged the plan's objectives, the BOS requested that the CAP be revised to better address transportation-related GHG, to acknowledge and credit past accomplishments and voluntary efforts, and to allow more time for establishment of a cost-effective local offset program. The BOS also requested that best management practices be applied and considered when reviewing projects until a revised CAP is adopted to ensure that projects address the County's policy goal related to reducing GHG emissions. In addition, the BOS recommended utilizing the emissions checklist and associated carbon stock and sequestration factors in the Draft CAP to assess and disclose potential GHG emissions associated with project development and operation pursuant to CEQA.

In July 2015, the County re-commenced preparation of the CAP to: i) account for present day conditions and modeling assumptions (such as but not limited to methods, emission factors, and data sources), ii) address the concerns with the previous CAP effort as outlined above, iii) meet applicable State requirements, and iv) result in a functional and legally defensible CAP. On April 13, 2016, the County, as the part of the first phase of development and preparation of the CAP, released Final Technical Memorandum #1: 2014 Greenhouse Gas Emissions Inventory and Forecast, April 13, 2016. This initial phase included: i) updating the unincorporated County's community-wide GHG emissions inventory to 2014, and ii) preparing new GHG emissions forecasts for the 2020, 2030, and 2050 horizons. On July 24, 2018, the County prepared a Notice of Preparation of a Draft Focused EIR for the Climate Action Plan. The review period was from July 24, 2018, through August 22, 2018. The Draft Focused EIR for the CAP was published May 9, 2019. Additional information on the County CAP can be obtained at the Napa County Department of Planning, Building and Environmental Services or online at https://www.countyofnapa.org/589/Planning-Building-Environmental-Services. The County's draft CAP was placed on hold when the Climate Action Committee (CAC) began meeting on regional GHG reduction strategies in 2019. The County is currently preparing an updated CAP to provide a clear framework to determine what land use actions would be necessary to meet the State's adopted GHG reduction goals, including a quantitative and measurable strategy for achieving net zero emissions by 2045.

Regarding operational emissions, as part of the statewide implementation of Senate Bill (SB) 743, OPR settled upon automobile vehicle miles of travel (VMT) as the preferred metric for assessing passenger vehicle-related impacts under CEQA and issued revised CEQA Guidelines in December 2018, along with a Technical Advisory on Evaluating Transportation Impacts in CEQA to assist practitioners in implementing the CEQA Guidelines revisions. The CEQA Guidelines and the OPR Technical Advisory concluded that, absent substantial evidence otherwise, the addition of 110 or fewer daily trips could be presumed to have a less-than-significant VMT impact. The County maintains a set of Transportation Impact Study (TIS) Guidelines (TIS Guidelines) that define situations and project characteristics that trigger the need to prepare a TIS. The purpose of a TIS is to identify whether the project is likely to cause adverse physical or operational changes on a County roadway, bridge, bikeway or other transportation facility, to determine whether the project should be required to implement or contribute to improvement

[6] https://www.BAAD.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, April 2022

measures to address those changes, and to ensure that the project is developed consistent with the County's transportation plans and policies. Per the County's current TIS Guidelines, a project is required to prepare a TIS if it generates 110 or more net new daily vehicle trips.

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that provides a structure to determine what level of VMT analysis may be required for a given project. For a new project that would generate less than 110 net new daily vehicle and truck trips, not only is the project not required to prepare a TIS, it is also presumed to have a less-than-significant impact for VMT. However, applicants are encouraged to describe the measures they are taking and/or plan to take that would reduce the project's trip generation and/or VMT. Projects that generate more than 110 net new passenger vehicle trips must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel; if the feasible strategies would not reduce the project's VMT by at least 15%, the conclusion would be that the project would cause a significant environmental impact.

a-b. Overall increases in GHG emissions in Napa County were assessed in the Environmental Impact Report (EIR) prepared for the Napa County General Plan Update and certified in June 2008. GHG emissions were found to be significant and unavoidable in that document, despite the adoption of mitigation measures incorporating specific policies and action items into the General Plan.

Consistent with the General Plan action items, Napa County participated in the development of a community-wide GHG emissions inventory and "emission reduction framework" for all local jurisdictions in the County in 2008-2009. This planning effort was completed by the Napa County Transportation and Planning Agency in December 2009, and served as the basis for development of a refined inventory and emission reduction plan for unincorporated Napa County.

The County requires project applicants to consider methods to reduce GHG emissions consistent with Napa County General Plan Policy CON-65(e). Pursuant to State CEQA Guidelines Section 15183, this assessment focuses on impacts that are "peculiar to the project," rather than the cumulative impacts previously assessed, because this Initial Study assesses a project that is consistent with an adopted General Plan for which an EIR was prepared. GHGs are the atmospheric gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide (CO_2), methane, ozone, and the fluorocarbons, which contribute to climate change. CO_2 is the principal GHG emitted by human activities, and its concentration in the atmosphere is most affected by human activity. It also serves as the reference gas to which to compare other GHGs. For the purposes of this analysis potential GHG emissions associated with cemetery 'construction' and 'development' and with 'ongoing' cemetery operations have been discussed.

GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions. The Bay Area Air District recommended thresholds do not include a construction-related climate impact threshold at this time. One time "construction emissions" associated with the project include: emissions associated with the energy used to develop and prepare the project site, construction, and construction equipment, and worker vehicle trips (hereinafter referred to as equipment emissions). The physical improvements associated with the proposed project include the construction of approximately 509 square foot welcome center, 28,755 square feet of paving, driveway, and parking uses for visitors, 1.5 miles of unimproved trails, operation of 16.19 acres of dedicated interment areas, and other infrastructure related improvements. As discussed in Section III (Air Quality), construction emissions would have a temporary effect, and Bay Area Air District recommends incorporating feasible control measures as a means of addressing construction impacts. With implementation of the relevant best management practices identified by the Bay Area Air District identified in the Air Quality condition of approval in Section III (Air Quality), construction-related impacts are considered less than significant.

The Bay Area Air District proposed thresholds for land use projects are designed to address "operational" GHG emissions which represent the vast majority of project GHG emissions. Operational emissions associated with the proposed project would include: i) any reduction in the amount of carbon sequestered by existing vegetation that is removed as part of the project compared to a "no project" scenario (hereinafter referred to as operational sequestration emissions); and ii) ongoing emissions from the energy used to maintain and operate the cemetery, including vehicle trips associated with employee and visitor trips (hereinafter referred to as operational emissions).

As noted above, Napa County has not adopted a qualified GHG reduction strategy or an air quality plan; therefore, the proposed project was evaluated per the Bay Area Air District's recommended minimum design elements. Specifically for buildings, the project must not:

- Include natural gas appliances or natural gas plumbing (in both residential and nonresidential development); and
- Result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and CEQA Guidelines Section 15126.2(b).

The proposed project does not propose the use of natural gas appliances or plumbing. Additionally, at the time of construction the project would be required to comply with the California Building Code, which is currently being updated to include regulations to assist in the reduction of air quality impacts associated with construction, such as prohibiting natural gas appliance and plumbing. The new construction would be required to install energy efficient fixtures complying with California Building Code Title 24 standards. See Section VI (Energy) for additional information on energy usage.

Specifically for transportation, the project must:

- Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2, and
- Achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15%) or meet a locally adopted Senate Bill 743 VMT target reflecting the following recommendations:

    - Residential projects: 15% below the existing VMT per capita;
    - Office projects: 15% below the existing VMT per employee; or
    - Retail projects: no net increase in existing VMT.

As discussed above and in Section XVII (Transportation), the County maintains TIS Guidelines that include VMT analysis requirements for projects based on trip generation. The project trip generation numbers did not require completion of a traffic study or VMT analysis because new trips would be below the 110 daily trip threshold.

As stated above, per the OPR Technical Advisory, the addition of 110 or fewer daily trips could be presumed to have a less-than-significant VMT impact. As detailed in Section XVII (Transportation), the proposed project could generate a conservative average of 108 trips per day by employees, visitors of the cemetery, and members of the public using the proposed trails. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day; therefore, less-than-significant impacts related to operational GHG emissions are anticipated.

The applicant proposes implementing GHG reduction strategies. These include energy conserving lighting, bicycle incentives, the installation of water efficient fixtures, water efficient landscaping, and limiting the amount of grading and tree removal. A condition of approval will be included to require implementation of the checked Voluntary Best Management Practices Measures submitted with the project application. The increase in emissions expected as a result of the project would be relatively modest, and the project is in compliance with the County's efforts to reduce emissions as described above. By adhering to these relevant design standards identified by BAAD, the requirements of the California Building Code, and Conditions of Approval, the project would be consistent with the State's long-term climate goals of being carbon neutral by 2045. Impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Discussion

a-b. Construction of the proposed project would require a variety of equipment and vehicles that use fuel and other petroleum-based products such as oil and transmission fluids and paints, which are considered hazardous materials. Cemetery operations generally would not involve the use of hazardous materials because green burial necessitates the use of non-toxic and biodegradable materials and would include the use of simple caskets, shrouds, and urns, but could include the use of limited amounts of pesticides for low-profile landscaped areas adjacent to the welcome center and occasional structural pest control.

A Business Plan would be filed with the Division of Environmental Health should the use of hazardous materials be required and the amount of hazardous materials reach reportable levels. In the event that future use involves the use, storage or transportation of greater than 55 gallons or 500 pounds of hazardous materials, a use permit and subsequent environmental assessment would be required in accordance with the Napa County Zoning Ordinance prior to the establishment of the use.

There are no blue line or County-defined streams on the project site. The project site contains seven ephemeral drainages and minimum 35-foot stream setbacks have been maintained from these drainages (**Exhibit A-1**). Therefore, no waterways have the potential to be significantly impacted by the proposed project. It is not reasonably foreseeable that the proposed project would create upset or accident conditions that involve the release of hazardous materials into the environment.

Impacts related to routine use, transportation, application and disposal of hazardous materials are anticipated to be less than significant. The proposed project, if approved, shall incorporate a condition of approval which sets out clear procedures so that the permittee may follow the best management practices included to reduce the accidental exposure of hazardous materials to the environment.

4.12(f) OTHER CONDITIONS APPLICABLE TO THE OPERATIONAL ASPECTS OF THE PROJECT

a. The permittee shall implement the following best management practices during construction activities and maintenance and operations:

i. Workers shall follow manufacturer's recommendations on use, storage and disposal of chemical products.

ii. *Workers shall avoid overtopping fuel gas tanks and use automatic shutoff nozzles where available.*

iii. *During routine maintenance of equipment, properly contain and remove grease and oils.*

iv. *Discarded containers of fuel and other chemicals shall be properly disposed of.*

v. *Spill containment features shall be installed at the project site wherever chemicals are stored overnight.*

vi. *All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from watercourses, existing groundwater well(s), and any other water resource to avoid the potential for risk of surface and groundwater contamination.*

vii. *To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.*

Specific to burials and impacts on public health, cemeteries are primarily regulated by the California Department of Consumer Affairs Cemetery and Funeral Bureau (Cemetery and Funeral Bureau) and operation requires a Certificate of Authority. The proposed project, if approved, shall incorporate a condition of approval which shall require the permittee to obtain a Certificate of Authority, prior to issuance of any associated development permits and the documentation shall be submitted to the Napa County Planning Division.

9.9.(a) OTHER CONDITIONS APPLICABLE PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY

a. *Prior to project operation, the permittee shall submit a Certificate of Authority from the California Department of Consumer Affairs Cemetery and Funeral Bureau to the Planning Division.*

For these reasons, and with incorporation of the condition of approval described above, impacts associated with the use, storage, disposal and transport of hazardous materials and accidental release of hazardous materials would be less than significant.

c. There are no schools located within 0.25 mile from the project site. According to Google Earth, the nearest school to the project site is the Howell Mountain Elementary School, located approximately 1.3 linear miles to the southwest of the project site in the Town of Angwin. No impacts would occur.

d. Based on a search of the California Department of Toxic Substances Control database, the project site does not contain any known Environmental Protection Agency National Priority List sites, State response sites, voluntary cleanup sites, or any school cleanup sites. No impact would occur as the project site is not on any known list of hazardous materials sites.

e. The project site is located near Angwin Airport – Parrett Field, which is approximately 1.3 miles to the southwest, and is within Compatibility Zone E of the Angwin Airport – Parrett Field Compatibility Map (Napa Countywide Airport Land Use Compatibility Plan, 2024, and Napa County GIS Airport Layer). Zone E of the compatibility plan is an area of other airport environments and low risk. The proposed use is normally compatible with the risk and noise impacts associated with properties within Zone E. There is no limit on intensity (people per acre) in Zone E. All aspects of the development have been designed to comply with these limitations. The proposed project would include development of a welcome center, a driveway and parking, trails, and utility installation, as well as interment areas located in several areas throughout the project site. However, the proposed project does not include development of large structures, the use or processing of hazardous materials, or any of the other conditional or incompatible land uses applicable to Zone E as described in the policies of the Napa Countywide Airport Land Use Compatibility Plan.

The proposed project would require the hiring of new employees; however, operations would require minimal staffing, limited to two on-site employees. While airplanes may travel overhead, employees at the project site would generally not be exposed to excessive noise from airport operations. Additionally, proposed project would not include new housing which would result in an increase in people living at the project site that could be exposed to airport noise. Therefore, impacts would be less than significant.

f. The existing road to the east on the project site would be converted into a driveway with a minimum width of 22 feet (including shoulders) that would extend from Howell Mountain Road into the project site and terminate at a turnaround area north of the welcome center. The turnaround area is designed to accommodate fire trucks. The existing road to the west in the project site would not be improved but would be maintained for emergency vehicle access. The southern end of this road connects to Howell Mountain Road and has an existing gate that would remain locked to restrict access to the public. A Knox Lock or similar would be installed to allow access to emergency personnel. The proposed project has been reviewed by the County Fire Department and Engineering Division and found acceptable as conditioned (see Section VII [Geology and Soils] and Section XX [Wildfire]). Therefore, the proposed project would not impair

implementation of or physically interfere with any adopted emergency response plan or emergency evacuation plan, or obstruct emergency vehicle access and impacts would be less than significant.

g. The proposed project would not increase exposure of people and/or structures to a significant loss, injury or death involving wildland fires. As discussed above, the proposed project has been reviewed by the County Fire Department and Engineering Division and found acceptable as conditioned (see Section VII [Geology and Soils] and Section XX [Wildfire]). The proposed driveway would provide adequate access to Howell Mountain Road, and the proposed project would comply with current California Department of Forestry and California Building Code requirements for fire safety. A water storage tank and hydrant for fire suppression would be provided on site and the turnaround area near the proposed welcome center has been designed to accommodate fire trucks. Additionally, the welcome center would be constructed using fire-resistant materials including poured concrete and/or CMU block, with steel roof framing, stone veneer accents, stained wood accents, and a seam metal roof. The existing road to the west in the project site that would not be improved would be maintained to provide additional emergency vehicle access. The southern end of this road connects to Howell Mountain Road and has an existing gate that would remain locked to restrict access to the public; a Knox Lock or similar would be installed to allow access to emergency personnel. Further, operation and maintenance of the project site would include fuel load management measures including thinning vegetation and clearing defensible space around parking, improvement areas, interment areas, and the welcome center and maintaining fuel break areas. No burning is proposed for vegetation management. Impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion

The County requires all discretionary permit applications to complete necessary water analyses in order to document that sufficient water supplies are available for the proposed project and to implement water saving measures to prepare for periods of limited water supply and to conserve limited groundwater resources.

On June 7, 2022, the Napa County Board of Supervisors provided interim procedures to implement provisions of the Napa County Groundwater Sustainability Plan (GSP) for issuance of new, altered or replacement well permits and discretionary projects that would increase groundwater use. The direction limits a parcel's groundwater allocation to 0.3 acre feet per acre per year, or no net increase in groundwater use if that threshold is exceeded already for parcels located in the GSA Subbasin. For parcels not located in the GSA Subbasin (i.e., generally located in the hillsides), a parcel-specific Water Availability Analysis would suffice to assess potential impacts on groundwater supplies. The project site and existing/replacement project well are not located within the GSA Subbasin.

To assess potential impacts resulting from the project well interference with neighboring wells within 500 feet and/or springs within 1,500 feet, the County's Water Availability Analysis Guidance Document (May 2015; WAA) requires applicants to perform a Tier 2 analysis where the proposed project would result in an increase in groundwater extraction from the project well compared to existing levels. The proposed project well is located to the east of the proposed welcome center (**Exhibit A-1**) and is over 500 feet from the closest neighboring parcel while within 1,500 feet of a known spring. The proposed replacement project well is located within 1,500 feet of known springs. This, however, does not necessitate the need for a Tier 2 analysis because per the 2024 Interim WAA Guidelines, a replacement well within the 1,500 foot spring setback is not subject to a Tier 2 analysis if the proposed use has a decrease in groundwater usage and is located farther from the spring than the existing well (PPI Engineering, May 11, 2026).

To assess the potential impacts of groundwater pumping on hydrologically connected navigable waterways and those non-navigable tributaries connected to navigable waters, the WAA guidance requires applicants to perform a Tier 3 or equivalent analysis for new or replacement wells,

or discretionary projects that would rely on groundwater from existing or proposed wells that are located within 1,500 feet of designated "Significant Streams."[7] A Tier 3 review is the County's adopted method for complying with its duties under the public trust doctrine.

The public trust doctrine requires the state and its legal subdivisions to "consider," give "due regard," and "take the public trust into account" when considering actions that may adversely affect a navigable waterway. (Environmental Law Foundation v. State Water Resources Control Bd.; San Francisco Baykeeper, Inc. v. State Lands Com.) There is no "procedural matrix" governing how an agency should consider public trust uses. (Citizens for East Shore Parks v. State Lands Com.) Rather, the level of analysis "begins and ends with whether the challenged activity harms a navigable waterway and thereby violates the public trust." (Environmental Law Foundation, 26 Cal.App.5th at p. 403.). As demonstrated in the Environmental Law Foundation vs State Water Resources Control Board Third District Appellate Court Case, that arose in the context of a lawsuit over Siskiyou County's obligation in administering groundwater well permits and management program with respect to Scott River, a navigable waterway (considered a public trust resource), the court affirmed that the public trust doctrine is relevant to extractions of groundwater that adversely impact a navigable waterway and that Counties are obligated to consider the doctrine, irrespective of the enactment of the Sustainable Groundwater Management Act (SGMA). On January 10, 2024, Napa County released the Interim Napa County Well Permit Standards and WAA Requirements, providing guidance to comply with the public trust doctrine.

According to the County's WAA Guidelines, if a project well is within 1,500 feet of a Significant Stream a Tier 3 Groundwater/Surface Water Interaction Evaluation/analysis is required. No Significant Streams are located in the vicinity of the project well (Napa County Significant Streams layer); therefore, a Tier 3 WAA is not required.

a. As discussed in Section VII (Geology and Soils), a Wastewater Feasibility Study, dated January 31, 2020, and prepared by RSA+ (**Exhibit G**), outlines the required wastewater system to meet the needs of the proposed green burial cemetery, which includes a welcome center and two restrooms. The Wastewater Feasibility Study analyzes the proposed system and evaluates its ability to treat and disperse domestic wastewater on-site meeting Napa County Environmental Health Division design standards. The predicted peak wastewater flow from the proposed project would be approximately 150 gallons per day, wastewater would flow to a 1,200-gallon septic tank then to a standard dispersal field sized to meet Napa County Environmental Health Division guidelines for a standard system. Wastewater would be conveyed to the dispersal field via an underground perforated pipe with a 1-foot-deep rock filled trench with 3 feet of acceptable soil below and 1 foot above. The dispersal field would consist of three 2-foot-wide trenches spaced 12 feet apart with a 12% grade, one trench would be approximately 100 feet, and the remaining trenches would be approximately 65 feet each.

   The analysis determined that the proposed system would have adequate capacity to treat and disperse domestic wastewater and predicted peak wastewater flow is within the capacity of the proposed system. The Environmental Health Division reviewed the study and concurred with its findings, conditioned that an inspection of the conventional sewage system be performed by a licensed sewage contractor with the findings submitted to the Environmental Health Division, and that the use of dispersal field area be restricted to activities which would not contribute to compaction or reduction in soil aeration (see Section XIX [Utilities and Service Systems]). Further, the proposed project would implement stormwater quality control measures including standard best management practices and the use of porous pavement as a low impact development facility in the driveway and parking areas. Existing drainage would also be retained allowing runoff to flow to a natural open space located east of the development area which would help slow, capture, and filter stormwater flows. Water quality would be maintained through standard stormwater quality treatment control measures and best management practices outlined in the Stormwater Control Plan, dated August 20, 2024, prepared by TSD Engineering, Inc. **(Exhibit F)**, and in compliance with Engineering Division conditions of approval (see Section VII [Geology and Soils]).

   Specific to potential water quality impacts from interment and as discussed above in Section IX (Hazards and Hazardous Materials), cemetery operation requires a Certificate of Authority from the Cemetery and Funeral Bureau (see Section IX [Hazards and Hazardous Materials]). Further, minimum 35-foot stream setbacks have been maintained from waterways adjacent to interment areas to prevent impacts to water quality, and existing vegetation and trees would be retained within interment areas maintaining natural drainage conditions and rates of runoff and erosion. Therefore, impacts would be less than significant.

b. A Tier 1 Water Availability Analysis was prepared by RSA+, dated January 31, 2020 (**Exhibit H-1**). As directed by the County's Water Availability Analysis Guidance Document of May 2015 and the Interim Well Permit Standards (January 2024), the report includes Tier 1 calculations for the existing and proposed water uses on the project site. The existing groundwater usage of the project site is estimated at 0.5 acre-feet per year (AF/yr). The proposed project would result in a decrease of groundwater use by 0.09 AF/yr and would maintain a no net increase of groundwater usage, through utilization of a replacement well, and by locating the proposed replacement well farther from the spring than the existing well, which would necessitate not requiring a Tier 2 analysis (PPI Engineering, May 11, 2026).

[7] Refer to Figure 1: Significant Streams for Tier 3, located at www.countyofnapa.org/3074/Groundwater-Sustainability. The "Significant_Streams" and "Significant_Streams_1500ft_buffer" GIS layers are published as publicly-available open data through the County's ArcGIS Online Account.

Water was historically supplied to the existing cabin on the project site via a pipe connected to a developed spring located upslope. The spring development consists of a concrete holding tank (spring box) that was reportedly supplied by a natural spring that has since dried up.

Water supply for the proposed project would be provided from a proposed replacement well near the welcome center. A proposed underground water tank would convey water to the fire hydrant on the driveway via a four-inch line, and a two-inch water line would convey water to the welcome center. Water would be used for the fire hydrant, restrooms and welcome center.

Maximum annual water demand for the proposed project is estimated at 0.41 AF/yr per year (RSA+, January 2020 – **Exhibit H-1**); note that after the Water Availability Analysis was completed the project description was revised to move the office to an offsite location, minimizing the number of people traveling to and using the site on a daily basis. The Water Availability Analysis assumes that all employees would be located onsite, which presents a more conservative analysis of potential groundwater impacts. **Table 3** provides a summary of existing and proposed water use on the project site.

Table 3 – Existing and Proposed Water Use

Use Type	Existing Use (AF/yr)	Proposed Use (AF/yr)
Residential	0.50	0.00
Landscape	0.00	0.25
Employees	0.00	0.02
Visitors	0.00	0.14
Total (AF/year)	**0.50**	**0.41**

Source: RSA+, January 2020 – Exhibit H-1

Long-term average groundwater recharge can be estimated as the percentage of rainfall that falls on the project aquifer recharge area and percolates into the underlying aquifer. The percentage of rain that has the potential to infiltrate varies depending on factors such as rates of evaporation and transpiration, soil type and geology that exists at the site, and average annual rainfall. Based on available climatological data, site-specific information, and other available data and analysis relevant to potential recharge, an average annual rainfall of 33.65 inches within the project site was calculated for water years 2012 through 2021 and serves as the project site's normal water year conditions. By multiplying the size of the project site by the average annual rainfall, it is estimated that the project site received a total of 3,677.95 acre-inches of rain per annum between 2012 and 2021. The 3,677.95 acre-inches is then converted to acre-feet for a total of 306.50 acre-feet. Average annual recharge during this period is therefore 8% of the 306.50 acre feet total annual precipitation or approximately 24.52 acre-feet of recharge (PPI Engineering, July 2025 – **Exhibit H-2**). The estimated annual future groundwater demand in the project well recharge area of 0.41 AF/yr is below the estimated average annual recharge volume of 24.52 AF/yr.

The proposed replacement groundwater well is capable of supporting the proposed peak daily groundwater demand (conservatively estimated at 509 gallons per day, as the project description was revised after this analysis to move the office to an offsite location, minimizing the number of people traveling to and using the site on a daily basis). The replacement well has a capacity of 30 gallons per minute. When pumped on a 50% operational basis (pumping 12 hours per day), the daily projected well yield is 21,600 gallons per day; this exceeds the proposed peak daily demand on the well (RSA+, January 2020 – **Exhibit H-3**).

Considering: i) anticipated annual water use of the proposed project and project well groundwater recharge area of approximately 0.41 AF/yr is below the anticipated annual groundwater recharge rate screening criteria (or allocation) of approximately 24.52 AF/yr; ii) there is no evidence to date indicating that there are groundwater problems or declining well production in the this area of the County; and iii) incorporation of the standard condition of approval below to reduce potential impacts associated with groundwater use, the proposed project, if approved, would result in less-than-significant impacts to groundwater supplies, groundwater recharge, and local groundwater aquifer levels.

4.1 GROUND WATER MANAGEMENT - WELLS

This condition is implemented by the Planning, Building and Environmental Services Department:

The permittee shall be required (at the permittee's expense) to record well monitoring data (specifically, static water level no less than quarterly, and the volume of water no less than monthly). Such data will be provided to the County, if the Director of Planning, Building and Environmental Services Department (PBES Director) determines that substantial evidence[8] indicates that water usage at the project is affecting, or would potentially affect, groundwater supplies or nearby wells. If data indicates the need for additional monitoring, and if the applicant is unable to secure monitoring access to neighboring wells, onsite monitoring

[8] Substantial evidence is defined by case law as evidence that is of ponderable legal significance, reasonable in nature, credible and of solid value. The following constitute substantial evidence: facts, reasonable assumptions predicated on facts; and expert opinions supported by facts. Argument, speculation, unsubstantiated opinion or narrative, or clearly inaccurate or erroneous information do not constitute substantial evidence.

wells may need to be established to gauge potential impacts on the groundwater resource utilized for the project. Water usage shall be minimized by use of best available control technology and best water management conservation practices.

In order to support the County's groundwater monitoring program, well monitoring data as discussed above will be provided to the County if the PBES Director determines that such data could be useful in supporting the County's groundwater monitoring program. The project well will be made available for inclusion in the groundwater monitoring network if the PBES Director determines that the well could be useful in supporting the program.

In the event that changed circumstances or significant new information provide substantial evidence1 that the groundwater system referenced in the Use Permit would significantly affect the groundwater basin, the PBES Director shall be authorized to recommend additional reasonable conditions on the permittee, or revocation of this permit, as necessary to meet the requirements of the County Code and to protect public health, safety, and welfare.

c. The proposed project would not substantially alter the drainage pattern on site or cause a significant increase in erosion or siltation on or off the project site. The project site currently drains from west to east with run-off sheet-flowing onto natural open space. The existing drainage patterns would be maintained with the proposed project, and porous pavement would be used in the driveway and parking area (totaling approximately 27,923 square feet) to manage runoff. Construction of the proposed project would result in approximately 1,340 square feet of new impervious surfaces, which comprises roughly 0.03% of the total project site (**Exhibit E**).

   Improvement plans prepared prior to the issuance of grading or building permits would ensure that the proposed project does not increase runoff flow rate or volume as a result of project implementation. General Plan Policy CON-50(c) requires discretionary projects, including this project, to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development are not greater than predevelopment conditions. The project's Stormwater Control Plan (**Exhibit F**) has been reviewed by the Engineering Division. The proposed project would implement standard stormwater quality treatment controls to treat runoff prior to discharge from the project site. Further, the Drainage Memo was prepared by TSD Engineering Inc. dated September 29, 2023 (**Exhibit E**), which discusses drainage, stormwater quality measures, and best management practices that would be implemented to manage water quality, such as pollution source control measures, best management practices for sediment control, paving and grinding operations, and waste management, which would be consistent with the CASQA Stormwater Best Management Practices Handbook. The incorporation of these features into the proposed project would ensure that the proposed project would not create substantial sources of polluted runoff. In addition, the proposed project does not have any unusual characteristics that create sources of pollution that would degrade water quality. Impacts would be less than significant.

d. The project site is not within the boundaries of the 100-year flood hazard boundaries (Napa County GIS FEMA flood zone and dam levee inundation areas layers; Napa County General Plan-Safety Element, 2023). The project site is also not located in an area that is subject to inundation by tsunamis, seiches, or mudflows. Therefore, no impact would occur.

e. The proposed project would not have an adverse impact on water quality because the proposed project has been designed to keep polluted runoff and sediment from leaving the project site. As discussed in Section IX (Hazards and Hazardous Materials), the project may use limited amounts of pesticides for minor landscaping near the proposed welcome center and occasional structural pest control; however, cemetery operations generally would not involve the use of hazardous materials, as green burial necessitates the use of non-toxic and biodegradable materials, such as caskets, shrouds, and urns. As discussed in Sections IV (Biological Resources) and IX (Hazards and Hazardous Materials), minimum 35-foot stream setbacks have been maintained from ephemeral drainages and would facilitate increased water infiltration so that chemicals and potentially hazardous materials associated with project implementation and operation can be trapped and degraded in buffer vegetation and soils to protect water quality. Because the proposed project as designed is not expected to increase overall runoff rates or decrease times of concentration in relation to existing conditions (as discussed in Question c above), the proposed stormwater management area and buffers would be able to effectively trap and filter sediments, minimizing their entry into nearby water resources.

   As discussed above and in Section VII (Geology and Soils), the proposed project has been designed to maintain existing drainages. The proposed project would use a stormwater management area and existing open space to prevent sediment, runoff, and pollutants from leaving the project site, and standard stormwater control measures and best management practices would be implemented to further reduce impacts to water quality. As such, the proposed project is anticipated to have no negative effect on runoff rates and would maintain project site drainage characteristics as compared to existing conditions.

   Therefore, the proposed project as designed would not adversely conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Mitigation Measures: None required.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**LAND USE AND PLANNING.** Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion

a-b. The project site is located on Howell Mountain Road, and the nearest established community is Angwin, approximately 1.3 miles southwest of the project site. Existing improvements on the project site include two unimproved north-south dirt roads, two cabins, and associated infrastructure improvements including an existing well, water tank, a septic tank, and an electric transformer located adjacent to Howell Mountain Road. Surrounding areas contain dense vegetation and winery and rural residential land uses.

The project site is located in the Agricultural Watershed zoning district; development of the project site would therefore be subject to the development standards contained in Napa County Code Section 18.020.010. The proposed project complies with the Napa County Code and all other applicable regulations and would be compliant with the physical limitations of the Napa County Zoning Ordinance. Further, Napa County Code Section 18.120.010(B) allows cemeteries in all zoning districts with an approved use permit. The proposed project would also be subject to Napa County Conservation Regulations. Specifically, Napa County Code Section 18.108.060 forbids development from occurring on areas where slopes would be greater than 30% and exceptions to Conservation Regulations are outlined in Napa County Code Section 18.108.040. Pursuant to Napa County Code Sections 18.120.010.B and 18.108.040, the Applicant has filed a Use Permit Application (#P20-00030) and Application for Use Permit Exception to Conservation Regulations (#P25-00293) to allow improvements on slopes over 30% with the County, and if approved the proposed cemetery would be considered an allowed use.

Agricultural Preservation and Land Use Policy AG/LU-1 of the 2008 General Plan states that the County shall, "preserve existing agricultural land uses and plan for agriculture and related activities as the primary land uses in Napa County." As discussed in Section II (Agriculture and Forestry Resources), no agricultural uses exist on the project site and there are no Williamson Act contracts associated with the project site. Therefore, proposed project would not have any effect on the preservation or use of agriculturally designated land for current and future agricultural purposes and as such supports General Plan Goals AG/LU-1 regarding agricultural preservation. The project would allow for the continuation of agriculture as a dominant land use within the County and is consistent with the Napa County General Plan.

As the proposed project would maintain the character of the project site and allow natural, native species to continue to inhabit the area with the project site managed as a conservation site, the proposed project supports General Plan Policy AG/LU-4 concerning the preservation of open space, as well as Policy CON-1 in terms of the preservation of native vegetation. After development of the proposed project, soil and vegetation disturbance would be limited to interment areas. The proposed project could include up to five burials per day; however, plots would be restored to natural conditions following interment; therefore, minimal land disturbance is expected during operations and maintenance.

If approved and with issuance of Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293, the proposed project would be consistent with the allowed uses of the project site which is zoned as Agricultural Watershed. The proposed project would not result in the division of an established community. Impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion

a-b. Historically, the two most valuable mineral commodities in Napa County in economic terms have been mercury and mineral water. More recently, building stone and aggregate have become economically valuable. Mines and Mineral Deposits mapping included in the Napa County Baseline Data Report (Mines and Mineral Deposits, BDR Figure 2-2) indicates that there are no known mineral resources nor any locally important mineral resource recovery sites located on the project site. No impacts would occur.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion

a-b. The proposed project would result in a temporary increase in noise levels during construction and operation activities for the proposed welcome center, interment areas, trails, driveway and parking, storage, gating and signage, and water and wastewater systems. The proposed project would include cemetery operations, with two to three burials a day initially with up to five a day as operations increase. Burial excavation and site maintenance activities would be performed via small, mechanized equipment or manual labor. Salutary gunfire would be prohibited except for military burials. Therefore, noise generated by the proposed project would be short-term and temporary. As such, the proposed project would not result in potentially significant noise or vibration impacts. The nearest residence to construction activities at the project site is approximately 230 feet to the south on the opposite side of Howell Mountain Road. Due to distance and vegetative screening, there is a low potential for noise to result in a significant impact.

Further, construction activities would occur during the period of 7a.m. – 7 p.m. on weekdays, during normal hours of human activity.All construction activities would be conducted in compliance with the Napa County Noise Ordinance (Napa County Code Chapter 8.16). Project approval, if granted, would be subject to the condition of approval identified below, which require construction activities to be limited to daylight hours, vehicles to be muffled, and backup alarms adjusted to the lowest allowable levels. Impacts would be less than significant.

7.3 CONSTRUCTION NOISE

Construction noise shall be minimized to the greatest extent practical and feasible under State and local safety laws, consistent with construction noise levels permitted by the General Plan Community Character Element and the County Noise Ordinance. Construction equipment muffling and hours of operation shall be in compliance with the County Code. Equipment shall be shut down when not in use. Construction equipment shall normally be staged, loaded, and unloaded on the project site, if at all practicable. If project terrain or access road conditions require construction equipment to be staged, loaded, or unloaded off the project site (such as on a neighboring road or at the base of a hill), such activities shall only occur daily between the hours of 8 am to 5 pm."

Additional regulations contained within County Code Chapter 8.16 establish exterior noise criteria for various land uses in the County. Based on the standards in County Code Section 8.16.070, noise levels, measured at the exterior of a residential structure or residential use on a portion of a larger property, may not exceed 50 decibels for more than half of any hour in the window of daytime hours (7 AM to 10 PM). Noise impacts of the proposed project would be considered bothersome and potentially significant if sound generated by it had the effect of exceeding the standards in County Code more than 50% of the time (i.e., more than 50 decibels for more than 30 minutes in an hour for a residential use). Amplified music or sound systems would not be permitted for outdoor events and project approval, if granted, would be subject to the condition of approval below.

4.2 AMPLIFIED MUSIC

There shall be no amplified sound system or amplified music utilized outside of approved, enclosed, winery buildings."

Compliance with the conditions of approval above would result in less-than-significant noise and vibration impacts, and would result in no permanent increase in ambient noise levels in the vicinity of the proposed project in excess of County standards. Impacts would be less than significant.

c. The project site is located near Angwin Airport – Parrett Field, which is approximately 1.3 miles to the southwest, and is within Compatibility Zone E of the Angwin Airport – Parrett Field Compatibility Map (Napa Countywide Airport Land Use Compatibility Plan, 2024, and Napa County GIS Airport Layer). Project operations would require minimal staffing, limited to two on-site employees. While airplanes may travel overhead, employees at the project site would generally not be exposed to excessive noise from airport operations. Additionally, proposed project would not include new housing which would result in an increase in people living at the project site that could be exposed to airport noise. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a. The Association of Bay Area Governments' Plan Bay Area 2050 Growth Pattern figures indicate that the total households for Napa County are projected to increase approximately 10% by the year 2050, increasing from 50,000 to 56,000. Unincorporated Napa County, along with the cities of American Canyon, Napa, St. Helena, Calistoga and the town of Yountville all have existing compliant 6th Cycle Housing Elements certified by the State Department of Housing and Community Development. For the 6th Cycle, which runs from 2023 – 2031, Napa County jurisdictions have identified and have rezoned or are in the process of rezoning land to accommodate 3,844 dwelling units, more than half of the households projected by the Association of Bay Area Governments to develop in Napa County by 2050.

   Cumulative impacts related to population and housing balance were identified in the 2008 General Plan EIR. As set forth in Government Code Section 65580, the County of Napa must facilitate the improvement and development of housing to make adequate provision for the housing needs of all economic segments of the community. Similarly, CEQA recognizes the importance of balancing the prevention of environment damage with the provision of a "decent home and satisfying living environment for every Californian." (See Public Resources Code Section 21000(g).) The 2008 General Plan sets forth the County's long-range plan for meeting regional housing needs, during the present and future housing cycles, while balancing environmental, economic, and fiscal factors and community goals. The policies and programs identified in the General Plan Housing Element function, in combination with the County's housing impact mitigation fee, to ensure adequate cumulative volume and diversity of housing.

   With the need for two onsite only employees, the proposed project would not result in substantial population growth. Relative to the County's projected low to moderate growth rate and overall adequate programmed housing supply, the proposed project would not create population growth that rises to a level of environmental significance. In addition, Napa County collects fees from developers of nonresidential projects to help fund local affordable housing (see Napa County Code Section 18.107.060 – Nonresidential developments – Housing fee requirement). The fees are assessed with new construction and are collected at time of building permit issuance for new construction. The proposed project would be subject to the County's housing impact mitigation fee, which provides funding to meet local housing needs. Cumulative impacts on the local and regional population and housing balance would be less than significant.

   If approved, the proposed project would develop a green burial cemetery. This would include the development of a welcome center, proposed on-site water supply system using a proposed replacement on-site well, an on-site septic system including a septic tank and leach field, and two integral paved access roads. The proposed infrastructure would be designed specifically to serve the project site and would not include features which might induce growth by extending service outside of boundaries of the project site or increasing the capacity of any existing roadway.

   Employees and visitors to the cemetery could increase demand for group transportation services to the cemetery, though the potential for employment changes of other business supporting the cemetery's requested operations is uncertain, unquantifiable, and speculative. The policies and programs identified in the General Plan Housing Element, in combination with the County's housing impact mitigation fee, ensure adequate cumulative volume and diversity of housing. With limited staffing proposed and no off-site expansion of utilities or facilities required to serve the project site, the proposed project would have less-than-significant impact on population growth.

b. No existing housing or people would be displaced as a result of the proposed project. The two existing cabins that would be demolished with the proposed project are not occupied. Therefore, the proposed project would not displace substantial numbers of existing housing or numbers of people necessitating the construction of replacement housing elsewhere and no impact would occur.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☒	☐
ii. Police protection?	☐	☐	☒	☐
iii. Schools?	☐	☐	☒	☐
iv. Parks?	☐	☐	☒	☐
v. Other public facilities?	☐	☐	☒	☐

Discussion

a. The project site is located within the service areas of both the Napa County Sheriff's Department as well as the Napa County Fire Department. The Napa County Sheriff's Office in Angwin is located approximately 2 miles away from the project site. The Napa County Fire Station 18 in Angwin and Station 20 in Pope Valley are located approximately 2.3 miles and 1.8 miles from the project site, respectively. The proposed cemetery and other site improvements, if approved, would be inspected by County building inspectors and fire officials in order to ensure that construction occurs in accordance with current Building and Fire Codes applicable at the time of submittal of any requisite building permit application.

If approved, the requested use permit and use permit exception to Conservation Regulations would facilitate the development of a green burial cemetery. The proposed project would construct a new welcome center, interment area, and associated trails. The proposed project does not include construction of any new residential units, would not result in substantial population growth in the area, and would not introduce new residents that would use existing parks or potentially increase student enrollment in nearby schools. School impact fees, which assist local school districts with capacity building measures, would be levied pursuant to building permit submittal. The proposed project would include trails that would provide access for pedestrians and operations vehicles to plots within interment areas, and these trails would be open for hiking use by the public during cemetery hours of operation (dawn to dusk daily, year-round). Impacts to public services would be less than significant. Also, see discussion below under Section XVI (Recreation).

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion

a. As discussed above in Section XIV (Population and Housing), the proposed project would not result in substantial population growth. The proposed project would not increase the use of existing recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, no impact would occur.

b. The proposed project includes approximately 1.5 miles of trails that would provide access to visitors and employees to interment areas. These trails would also be open for hiking use by the public during cemetery hours of operation (dawn to dusk daily, year-round). Trail construction would consist of brush clearing and, in some places, would require minor grading to create safe pedestrian and maintenance vehicle passage and to prevent erosion from drainage. Trails would consist of native material and would not include additional surfacing with the potential exception of wood chips. The trails would be maintained but would be kept natural and unimproved. Therefore, the proposed project would not include recreational facilities that may have an adverse physical effect on the environment. Impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA guidelines § 15064.3 subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐
e) Conflict with General Plan Policy CIR-14, which requires new uses to meet their anticipated parking demand, but to avoid providing excess parking which could stimulate unnecessary vehicle trips or activity exceeding the site's capacity?	☐	☐	☒	☐

Discussion

a-b. As part of the statewide implementation of SB 743, the Governor's Office of Land Use and Climate Innovation (LCI) settled upon automobile VMT as the preferred metric for assessing passenger vehicle-related impacts under CEQA and issued revised CEQA Guidelines in December 2018, along with a Technical Advisory on Evaluating Transportation Impacts in CEQA to assist practitioners in implementing the CEQA Guidelines revisions.

The County's General Plan Circulation Element contains a policy statement (Policy CIR-7) indicating that the County expects development projects to achieve a 15% reduction in project-generated VMT to avoid triggering a significant environmental impact. Specifically, the policy directs project applicants to identify feasible measures that would reduce their project's VMT and to estimate the amount of VMT reduction that could be expected from each measure. The policy states that "projects for which the specified VMT reduction measures would not reduce unmitigated VMT by 15 or more percent shall be considered to have a significant environmental impact." That policy is followed by an action item (CIR-7.1) directing the County to update its CEQA procedures to develop screening criteria for projects that "would not be considered to have a significant impact to VMT" and that could therefore be exempted from VMT reduction requirements.

The new CEQA Guidelines and the LCI Technical Advisory note that CEQA provides a categorical exemption (Section 15303) for additions to existing structures of up to 10,000 square feet, so long as the project is in an area that is not environmentally sensitive and where public infrastructure is available. LCI determined that "typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract 110-124 trips per 10,000 square feet." They concluded that, absent substantial evidence otherwise, the addition of 110 or fewer daily trips could be presumed to have a less-than-significant VMT impact.

The County maintains a set of TIS Guidelines that define situations and project characteristics that trigger the need to prepare a TIS. The purpose of a TIS is to identify whether the project is likely to cause adverse physical or operational changes on a County roadway, bridge, bikeway or other transportation facility, to determine whether the project should be required to implement or contribute to improvement measures to address those changes, and to ensure that the project is developed consistent with the County's transportation plans and policies. Per the County's current TIS Guidelines, a project is required to prepare a TIS if it generates 110 or more net new daily vehicle trips.

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that provides a structure to determine what level of VMT analysis may be required for a given project. For a new project that would generate less than 110 net new daily vehicle and truck trips, not only is the project not required to prepare a TIS, it is also presumed to have a less than significant impact for VMT. However, applicants are encouraged to describe the measures they are taking and/or plan to take that would reduce the project's trip generation and/or VMT.

Projects that generate more than 110 net new passenger vehicle trips must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel; if the feasible strategies would not reduce the project's VMT by at least 15%, the conclusion would be that the project would cause a significant environmental impact.

Currently, the project site includes two one-story structures, two dirt roads, and associated infrastructure including a existing well, water tank, a septic tank, and an electric transformer located adjacent to Howell Mountain Road. The project site is accessed from an existing dirt road off Howell Mountain Road. Trucks and other equipment would use County roads or State highways for short periods during construction and personal vehicles and work trucks would typically be used by employees and guests during subsequent cemetery operations. Based on data considering maximum employees and guests attending burials and using the proposed trail system (W-Trans, December 2023 – **Exhibit I-1**), the proposed project is expected to generate a conservative average of 108 trips per day, including eight PM peak hour trips on Friday and 34 trips during the Saturday PM peak hour.

Since operational and visitor trips associated with the proposed project would be below the 110-trip threshold in the LCI guidelines and the County's TIS Guidelines and VMT screening criteria, the proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Impacts would be less than significant.

Additionally, there are no existing pedestrian, bicycle or transit facilities in the project vicinity, the proposed project would not conflict with any policies relevant to these modes and would result in an increase in bicycle parking accessibility at the project site (**Exhibit I-1**). Impacts would be less than significant.

c. The proposed project would use the existing private driveway off Howell Mountain Road for project development. The proposed project would include roadway improvements to the dirt road that would extend from Howell Mountain Road and terminate at a turnaround area north of the welcome center. The proposed project does not include improvements or modifications to Howell Mountain Road or include any other design feature that would result in hazardous conditions due to a geometric design feature or incompatible uses. Additionally, the installation of the cemetery upon acquiring a use permit (Use Permit Application #P20-00030 and Application for Use Permit Exception to Conservation Regulations #P25-00293) would be consistent with the allowed uses of the project site which is zoned as Agricultural Watershed.

   A Site Distance Report was prepared for the proposed project by RSA+, January 2020 (**Exhibit I-2**), consistent with the Caltrans Highway Design Manual. The analysis determined the stopping sight distance meets minimum requirements in both travel directions along Howell Mountain Road. Additionally, the corner sight distance from the proposed driveway heading west also met minimum sight requirements; however, the corner sight distance looking east was determined to be less than the minimum required sight distance. The report recommended tree and vegetation trimming at this corner to establish minimum sight distance requirements and a subsequent sight distance evaluation to confirm sight distance minimum requirements have been met following trimming. These measures were reviewed and accepted by the Department of Public Works. Project Conditions of Approval require the applicant to obtain an encroachment permit from the Department Public Works prior to commencement of any improvements/work within the public right-of-way.

   The proposed project under the Napa County Roads and Streets Standards, would warrant the installation of a left-turn lane at the project driveway. However, the Department of Public Works determined on April 6, 2026, that the Traffic Impact Study (W-Trans, December 2023) provides sufficient evidence to support an exception to the NCRSS requirement for construction of the LTL. The analysis concluded that construction of the LTL would result in substantial and unavoidable impacts to the natural environment, including removal of a substantial number of native trees, vegetation, along with grading of steep rocky slopes adjacent to Howell Mountain Road. The NCRSS Exception would also remain consistent with the existing operation and character of Howell Mountain Road or in the vicinity of the project site. In the Howell Mountain Road TIS, there were 15 collisions in the five-year period between October 1, 2014, to September 30, 2019. The study was utilized to create the Roadway Segment Collision Rate Worksheet which demonstrates a lesser rate of collisions per million vehicle miles than the statewide average, which occurs on roadways of similar conventional two (2) lane highways. A study provided by the Statewide Integrated Traffic Records System (SWITRS), utilizing the five-year period between June 1, 2017, to May 31, 2022, found that there were four (4) collisions reported on Howell Mountain Road, resulting in less than one (1) documented collision annually. Sight distance extends approximately 180 feet to the west and 260 feet to the east, and to maintain adequate site distance over time, the project has been conditioned (Condition 2 to Public Works Memorandum dated 5/27/25) to trim and maintain vegetation as recommended in the TIS, Figure 7. For those cars that do need to make a left turn into the driveway there is adequate sight distance to allow cars to see a turning vehicle and stop to avoid it.

d-e. The proposed project was analyzed to determine whether the proposed parking supply would be sufficient for the anticipated daily demand during operations (RSA+, January 2020 - **Exhibit I-2**). As proposed, the project site would have a total of 38 parking spaces (with one designated for ADA drivers). On a busy day, 30 to 40 vehicles are estimated for larger services. The two employees per day would occupy two of the 38 available spaces. The Napa County Code does not identify a specific parking standard for cemeteries. Napa County Code

Section 18.110.030 allows the Planning Commission to determine the number of parking spaces required for any use specifically not listed in the Napa County Code.

The proposed project is designed to meet the Napa County Road and Street standards, with the exception of a warranted left-turn lane on Howell Mountain Road, conforming to the latest emergency access requirements and providing adequate emergency access to the project site. The County's Engineering Division and County Fire have reviewed the proposed project as currently designed and recommend approval. The Department of Public Works have reviewed the TIS' review of the left turn lane warrant and concurred with the findings that the project will not adversely affect the life, safety and welfare of the public or persons coming to the property, recommending decision makers approve the request for exception to the Road and Street Standards. Several of the proposed parking spaces would be oversized to accommodate shuttles or stretch vehicles with higher capacity. If a funeral or memorial is planned that requires more parking than what is available onsite, shuttles would be arranged, further reducing the proposed project's need for additional parking. Impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☐	☒	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Discussion

a-b. On March 19, 2020, County Staff sent invitations to consult on the proposed project to Native American tribes who had a cultural interest in the area of the proposed project and who as of that date had requested to be invited to consult on projects, in accordance with the requirements of Public Resources Code Section 21080.3.1, which included Middletown Rancheria, Mishewal Wappo Tribe of Alexander Valley and Yocha Dehe Wintun Nation. On December 16, 2025, the Middletown Rancheria (Tribe) and County, conducted a site visit to assess the project site. On January 23, 2026, Middletown Rancheria (Tribe) provided the County with Mitigation Measures deemed necessary for the protection of tribal and cultural resources (contents confidential). In response, the County incorporated additional mitigation measures for the protection of tribal cultural resources as discussed further below. The project was determined to have the possibility of unearthing tribal cultural resources which include, but are not limited to, Native American human remains, funerary objects, items or artifacts, sites, features, places, landscapes or objects with cultural values to the Middletown Rancheria during ground disturbance activities. Therefore, Mitigation Measure TCR-1 has been incorporated into the Project to ensure the preservation or mitigation of significant impacts to tribal cultural resources.

As discussed in Section V (Cultural Resources) the proposed project's Historical Resources Study (Tom Oiger and Associates, 2017) did not identify significant cultural resources in the project site. Furthermore, no resources that may be significant pursuant to Public Resources Code Section 5024.1(c) have been identified in the project site and the Cultural Resources condition of approval discussed in Section V (Cultural Resources) would avoid and reduce potential impacts to unknown resources.

As such, the proposed project, with the Cultural Resources condition of approval, would result in less-than-significant impacts to Tribal Cultural Resources, including those that may be eligible for the California Historical Resources Information System or local register, or cultural resources as defined in Public Resources Code Section 5024.1(c).

Mitigation Measures:

Due to the possibility of unearthing tribal cultural resources which include, but is not limited to, Native American human remains, funerary objects, items or artifacts, sites, features, places, landscapes or objects with cultural values to the Middletown Rancheria of Pomo Indians of California ("Tribe"), during ground disturbance activities, the following mitigation measures shall be incorporated into the Project for preservation or mitigation of significant impacts to tribal cultural resources.

Mitigation Measure TCR-1:

1. Prior to initial ground disturbance, the applicant shall retain a project Tribal Cultural Advisor approved by the Tribe, to direct all mitigation measures related to tribal cultural resources.

2. Ground disturbing activities occurring in conjunction with the Project (including surveys, testing, concrete pilings, debris removal, rescrapes, punchlists, erosion control (mulching, waddles, hydroseeding, etc.), pot-holing or auguring, boring, grading, trenching, foundation work and other excavations or other ground disturbance involving the moving of dirt or rocks with heavy equipment or hand

tools within the Project area) shall be monitored on a full-time basis by qualified tribal monitor(s) approved by the Tribe. The tribal monitoring shall be supervised by the project Tribal Cultural Advisor. Tribal monitoring should be conducted by qualified tribal monitor(s) approved by the Tribe, who is defined as qualified individual(s) who has experience with identification, collection and treatment of tribal cultural resources of value to the Tribe. The duration and timing of the monitoring will be determined by the project Tribal Cultural Advisor. If the project Tribal Cultural Advisor determines that full-time monitoring is no longer warranted, he or she may recommend that tribal monitoring be reduced to periodic spot-checking or cease entirely. Tribal monitoring would be reinstated in the event of any new or unforeseen ground disturbances or discoveries.

3. The project Tribal Cultural Advisor and tribal monitor(s) may halt ground disturbance activities in the immediate area of discovery when known or suspected tribal cultural resources are identified until further evaluation can be made in determining their significance and appropriate treatment or disposition. There must be at minimum one tribal monitor for every separate area of ground disturbance activity that is at least 30 meters or 100 feet apart unless otherwise agreed upon in writing between the Tribe and applicant. Depending on the scope and schedule of ground disturbance activities of the Project (e.g., discoveries of cultural resources or simultaneous activities in multiple locations that requires multiple tribal monitors, etc.) additional tribal monitors may be required on-site. If additional tribal monitors are needed, the Tribe shall be provided with a minimum of three (3) business days advance notice unless otherwise agreed upon between the Tribe and applicant. The on-site tribal monitoring shall end when the ground disturbance activities are completed, or when the project Tribal Cultural Advisor have indicated that the site has a low potential for tribal cultural resources.

4. All on-site personnel of the Project shall receive adequate cultural resource sensitivity training approved by the project Tribal Cultural Advisor or his or her authorized designee prior to initiation of ground disturbance activities on the Project. The training must also address the potential for exposing subsurface resources and procedures if a potential resource is identified consistent. The Project applicant will coordinate with the Tribe on the cultural resource sensitivity training.

5. The Project applicant must meet and confer with the Tribe, at least 45 days prior to commencing ground disturbance activities on the Project to address notification, protection, treatment, care and handling of tribal cultural resources potentially discovered or disturbed during ground disturbance activities of the Project. All potential cultural resources unearthed by Project activities shall be evaluated by the project Tribal Cultural Advisor. The Tribe must have an opportunity to inspect and determine the nature of the resource and the best course of action for avoidance, protection and/or treatment of tribal cultural resources to the extent permitted by law. If the resource is determined to be a tribal cultural resource of value to the Tribe, the Tribe will coordinate with the Project applicant to establish appropriate treatment and disposition of the resources with appropriate dignity which may include reburial or preservation of resources. The Project applicant must facilitate and ensure that the determination of treatment and disposition by the Tribe is followed to the extent permitted by law. No laboratory studies, scientific analysis, curation, or video recording are permitted for tribal cultural resources without the prior written consent of the Tribe.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion

a. As discussed in detail in Section X (Hydrology and Water Quality), a Wastewater Feasibility Study, dated January 31, 2020, and prepared by RSA+ (**Exhibit G**) outlines the required wastewater system to meet the needs of the proposed cemetery, employees, and visitors. The Wastewater Feasibility Study analyzed the proposed system and evaluated its ability to treat and disperse domestic wastewater on-site meeting Napa County Environmental Health design standards. The predicted peak wastewater flow from the proposed project would be approximately 150 gallons per day, wastewater would flow to a 1,200-gallon septic tank then to a standard dispersal field sized to meet Napa County Environmental Health guidelines for a standard system. The analysis found that the proposed system would have adequate capacity to treat and disperse domestic wastewater and predicted peak wastewater flow is within the capacity of the proposed system. The Environmental Health Division reviewed the study and concurred with its findings, conditioned that an inspection of the conventional sewage system be performed by a licensed sewage contractor with the findings submitted to the Environmental Health Division, and that the use of dispersal field area be restricted to activities which would not contribute to compaction or reduction in soil aeration. The waste system was designed per Regional Water Quality Control Board and County requirements and project approval, if granted, would be subject to the condition of approval below.

   Based on the proposed uses, the onsite water system would be classified as a transient noncommunity public water system per the State of California Drinking Water Requirements. RSA+ completed a Water System Feasibility Study for a Regulated System, dated January 31, 2020 (**Exhibit H-3**). The RSA+ report concludes that the project's well meets all applicable state standards. The proposed replacement well would comply with Napa County Code Section 13.12.380 as a Class IA well for a public water system and would exceed projected daily groundwater demand. Water quality sampling of the well would be conducted prior to operation of the proposed water system water quality is expected to meet or exceed all requirements of Chapter 15 OF Title 22, California Coode of Regulations. The Environmental Health Division reviewed the Water System Feasibility Study and concurred with its findings and has recommended conditions of approval.

   The proposed project would include electric service provided by PG&E; service would be established via an existing transformer located along Howell Mountain Road which previously provided service to the cabins currently at the project site and that would be demolished under the proposed project. Impacts would be less than significant.

b. As discussed in Section X (Hydrology and Water Quality), a Tier 1 Water Availability Analysis (WAA) was prepared by RSA+, dated January 31, 2020 (**Exhibit H-1**). The WAA assumes that all employees would be located onsite, which presents a more conservative analysis of potential groundwater impacts. The report includes calculations for the existing and proposed water uses at the project site. An onsite water audit of existing uses was completed, and the existing water use associated with the cabin and kitchen and garage is

estimated to be 0.5 AF/yr. However, these structures would be demolished with the proposed project. Total water demand with the proposed project would be 0.41 AF/yr. Note that after the WAA was completed the project description was revised to move the office to an offsite location, minimizing the number of people traveling to and using the site on a daily basis. The proposed project would not increase groundwater use compared to existing conditions. PPI Engineering prepared a Groundwater Recharge Memorandum dated July 1, 2025 (**Exhibit H-2**), which used Napa County's WAA guidance document to establish a 0.22 AF/yr per acre of recharge for the project site and calculates a project site recharge volume of 24.52 AF/yr. Therefore, the proposed water use would not impact groundwater availability.

c. Wastewater would be treated on-site and would not require a wastewater treatment provider; therefore, no impact would occur.

d-e. Solid waste generated during construction activities (e.g., trash, discarded building materials, debris, etc.) would be negligible and would be cleared daily, or as necessary. Implementation of the proposed project would include limited vegetation management to maintain trails and defensible space as well as nominal amounts of solid waste from operations. Solid waste generation is projected to be equivalent to that of a single-family residential unit. Solid waste would be collected from containers on the site and stored in large totes on the northeast side of the welcome center and would be collected by a private hauler. Green waste (e.g., landscape materials, trimmings) would remain on-site and repurposed as mulch.

According to the Napa County Baseline Data Report, all of the solid waste landfills where Napa County's waste is disposed of have more than sufficient capacity related to the current waste generation. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste. Therefore, impacts would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. **WILDFIRE.** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slop instability, or drainage changes?	☐	☐	☒	☐

Discussion

a-d. The proposed project is located within a State Responsibility Area that is designated as a Very High Fire Hazard Severity Zone (CAL FIRE, Fire Hazard Severity Zone 2025; Napa County GIS CAL FIRE Layers, Fire Protection Responsibility Areas and Fire Hazard Severity Zones). The project site generally consists of rolling mountains with slopes ranging from 0% to greater than 50%; the proposed development area is generally within areas with slopes ranging from 0 to 30%, although some access pathways would be located on slopes over 30% and less than 50%, and has access to Howell Mountain Road, a County maintained road. There is an existing electric transformer on the project site near Howell Mountain Road.

There are no project features that would substantially impair an adopted emergency response plan or emergency evacuation plan. Project construction and operation would not require any road closures and would not substantially increase traffic in the area compared to current conditions. Existing roads would continue to provide adequate emergency access to the project site.

Project construction would require the use of vehicles and heavy equipment for grading and other activities, and these vehicles and equipment could spark and ignite flammable vegetation. However, during construction, the risk of igniting a fire would be low because vegetation would be cleared prior to developing the proposed project, and the risk would be temporary during project construction.

Operation and maintenance activities would require two onsite workers and could generate a conservative average of 108 daily trips. A water storage tank and hydrant for fire suppression would be provided on site and the turnaround area near the proposed welcome center has been designed to accommodate fire trucks. Additionally, the welcome center would be constructed using fire-resistant materials including poured concrete and/or CMU block, with steel roof framing, stone veneer accents, stained wood accents, and a seam metal roof. The existing onsite road that would not be improved with the proposed project would be maintained to provide additional emergency vehicle access. The southern end of this road connects to Howell Mountain Road and has an existing gate that would remain locked to restrict access to the public; a Knox Lock or similar would be installed to allow access to emergency personnel. Further, fuel load management measures would include thinning vegetation and clearing defensible space around parking, improvement areas, interment areas, and buildings and maintaining fuel break areas. No burning is proposed for vegetation management. Additionally, the proposed project has been reviewed by the County Fire Department and Engineering Services Division and found acceptable as conditioned and would comply with current California Department of Forestry and California Building Code requirements for fire safety. Therefore, the proposed project would not exacerbate wildfire risks. Other impacts to the environment from the proposed project are discussed throughout this document.

Although the proposed project would alter land cover, temporary and permanent erosion control measures would be implemented for the proposed project which would reduce the impact of stormwater runoff or drainage changes being discharged on or offsite and there would not be an increase in peak flow in the project site. Therefore, there are no structures or people that would be exposed to downslope or downstream flooding or landslides as a result of the proposed project, and the impact would be less than significant.

Mitigation Measures: None required.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion

a. Portions of the project site have been previously disturbed during development of two existing one-story structures, two dirt roads, and associated infrastructure including an existing well, water tank, a septic tank, and an electric transformer located adjacent to Howell Mountain Road. A Biological Resources Reconnaissance Survey was conducted by Wildlife Research Associates, prepared August 2024 (**Exhibit C-1**); five special-status plant species were observed within the project site including narrow-anthered brodiaea, redwood lily, Cobb Mountain lupine, green monardella, and dark-mouthed triteleia. The surveys also identified moderate to high potential to occur for eight special-status wildlife species, including special-status bat and bird species. A historical resource study of the property was completed in September 2017 (contents confidential), followed by an Historical Evaluation Study (contents confidential) evaluated the cabins per criteria for inclusion on the California Register of Historical Resources (contents confidential). On December 16, 2025, the Middletown Rancheria (Tribe) and County, conducted a site visit to assess the project site. On January 23, 2026, Middletown Rancheria (Tribe) provided the County with Mitigation Measures deemed necessary for the protection of tribal and cultural resources (contents confidential).

With the incorporation of **Mitigation Measures BIO-1 through BIO-5 and TCR-1,** the potential for the proposed project to have an impact on special-status plant & wildlife species and tribal & cultural would be less than significant. Therefore, the proposed project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. To reduce impacts on water quality within streams, the proposed project has been designed to avoid the closest ephemeral drainage with minimum 35-foot setbacks in accordance with Napa County Code Section 18.108.025. As identified in Section V above, no known historically sensitive sites or structures, archaeological or paleontological resources, or sites of unique geological features have been identified within the project site. No historic or prehistoric resources are anticipated to be affected by the proposed project, nor would the proposed project eliminate important examples of the major periods of California history or prehistory. The proposed project, if approved, would be subject to the condition of approval to protect cultural resources that may be discovered accidentally. Impacts would be less than significant with mitigation incorporated.

b. The project does not have impacts that are individually limited, but cumulatively considerable. Potential impacts to air quality, GHG emissions, hydrology and water quality, and transportation are discussed in the respective sections above and were determined to have less-than-significant impacts. As discussed in Section III (Air Quality), Section VIII (Greenhouse Gas Emissions), and Section XVII (Transportation), the proposed project falls below the Bay Area Air District's construction criteria air pollution thresholds, would implement the Bay Area Air District's Basic Construction Best Management Practices, and meets the operational screening criteria for criteria air pollutants and precursors; therefore, with the conditions of approval the proposed project would not significantly affect air quality individually or contribute considerably to any cumulative air quality impacts. Further, per the OPR Technical Advisory, the addition of 110 or fewer daily trips could be presumed to have a less-than-significant VMT impact. As detailed in Section XVII (Transportation), the proposed project could generate a conservative average of 108 per day by employees, visitors to the cemetery, and members of the public

using the proposed trails. Therefore, daily trips (including passenger vehicle trips and truck trips) generated by the proposed project would be below the Governor's Office of Planning and Research's recommended screening criterion threshold for small projects generating fewer than 110 trips per day and less-than-significant impacts related to operational GHG emissions are anticipated. Additionally, the proposed project under the Napa County Roads and Streets Standards, would warrant the installation of a left-turn lane at the project driveway. However, the Department of Public Works determined on April 6, 2026, that the Traffic Impact Study (W-Trans, December 2023) provides sufficient evidence to support an exception to the NCRSS requirement for construction of the LTL. The analysis concluded that construction of the LTL would result in substantial and unavoidable impacts to the natural environment, including removal of a substantial number of native trees, vegetation, along with grading of steep rocky slopes adjacent to Howell Mountain Road. The NCRSS Exception would also remaining consistent with the existing operation and character of Howell Mountain Road or in the vicinity of the project site. The proposed project would offer shuttle services for larger services to reduce overall trips. Section X (Hydrology) includes detail on the Water Availability Analysis which demonstrates that the proposed project would result in no net increase in groundwater demand over the existing levels.

As discussed above, all potential biological and tribal & cultural related impacts would be less than significant with the implementation of **Mitigation Measures BIO-1 through BIO-5 and TCR-1,** and the conditions of approval identified in this document. Further, no known historically sensitive sites or structures, archaeological or paleontological resources, or sites of unique geological features have been identified within the project site.

In addition to the impact categories identified above, impacts to the following resource topics are considered to be less than significant with development of the proposed project: Aesthetics, Agriculture and Forestry Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Utilities and Service Systems, and Wildfire.

Considering the project site's characteristics, surrounding environment, and the scope and scale of the proposed project, the proposed project with incorporation of identified mitigation measures and conditions of approval, as discussed throughout this Initial Study would reduce the contribution of the proposed project to cumulative impacts to less than cumulatively considerable, and cumulative impacts would be less than significant.

c. All potential impacts identified in this Initial Study are less than significant with the exception of Biological Resources and Tribal & Cultural Resources, for which mitigation measures are proposed. Therefore, the proposed project would not result in significant environmental effects that cause substantial adverse effects on human beings either directly or indirectly. Impacts would be less than significant.

Planning, Building & Environmental Services

1195 Third Street, Suite 210
Napa, CA 94559
www.napacounty.gov
Main: (707) 253-4417

Brian D. Bordona
Director

[HOWELL MOUNTAIN CEMETERY (P20-00030)]
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure BIO-1: Special-Status Species Monitoring

BIO-1: As part of the management and conservation of the project site, periodic surveys (every five years) of the internment areas for special-status plant and animal species shall be conducted to determine an estimated census, distribution, and management needs. Informative materials (photographs, descriptions) of all on-site special-status species shall be provided to staff to avoid impacts to such species. A copy of the survey findings shall be provided to the Napa County Planning Division within 30 days of completing the surveys.

Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

Permittee shall conduct surveys every five (5) years and shall submit the report to the Napa County Planning Division of PBES, within 30 days of completing surveys.

Implementation*: P

Monitoring*: PD, OG

Reporting and Date of Compliance / Completion*:
Permittee shall provide proof of Measure BIO-1 by providing periodic surveys (every five years). A copy of the survey findings shall be provided to the Napa County Planning Division within 30 days of completing the surveys.

Mitigation Measure BIO-2 Nesting Bat Habitat Avoidance

BIO-2: Tree removal shall be performed from September through March, outside of the general bat maternity season, to the extent feasible. If tree removal during this period is not feasible, it is recommended that a bat habitat assessment and survey effort (the latter if needed) be performed by a qualified biologist prior to tree removal to determine if bats are present in the trees. If no suitable roosting habitat for bats is found, then no further study is warranted. If special-status bat species or bat maternity roosts are detected, then roost trees shall be avoided until the end of the maternity roosting season. If this avoidance is not feasible, appropriate species- and roost-specific mitigation measures should be developed in consultation with CDFW.

Irrespective of time of year, all felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats present within the felled trees to escape.

Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

If tree removal is set to begin during bat maternity season (April – August) than the results of the bat habitat assessment and survey effort, including any species- and/or roost-specific mitigation measures developed in consultation with CDFW, will be forwarded to the PBES Planning Division.

Implementation*: P

Monitoring*: PD, CDFW

Reporting and Date of Compliance / Completion*:

- Permittee shall implement Measure BIO-2 prior to any tree removal outside of the bat maternity season.

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PC = Prior to Project Commencement CPI = Construction Period Inspections FI = Final Inspection OG = Ongoing PI = Prior to Installation of infrastructure (i.e. trellis and irrigation) and planting.

Mitigation Measure BIO-3 Nesting Bird Habitat Avoidance

BIO-3: For earth-disturbing activities occurring between February 1 and August 15 (which coincides with breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall conduct a pre-construction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The pre-construction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work. After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity. In the event that nesting birds are found, the permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County and the USFWS and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with the County's Planning Division and/or the USFWS or CDFW. Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist. Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) are prohibited.

Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

For earth-disturbing activities occurring between February 1 and August 15, a qualified biologist shall conduct a pre-construction surveys for nesting birds. The pre-construction survey shall be conducted no earlier than seven (7) days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than seven (7) days from the survey date,

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PC = Prior to Project Commencement CPI = Construction Period Inspections FI = Final Inspection OG = Ongoing PI = Prior to Installation of infrastructure (i.e. trellis and irrigation) and planting.

surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work. After commencement of work if there is a period of no work activity of seven (7) days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.-X(a) through (d): Prior to project approval.

Implementation*: P

Monitoring*: PD, CDFW

Reporting and Date of Compliance / Completion*:

- Permittee shall implement Measure BIO-3 prior to any ground disturbing activity outside of the bird maternity season.

Mitigation Measure BIO-4 Northern Spotted Owl

BIO-4: For project activities occurring between March 15 and July 31, prior to any vegetation removal or construction activities, a qualified biologist shall perform a northern spotted owl habitat assessment to determine the potential for this species to be present within the disturbance area as well as within a 0.25-mile buffer surrounding each disturbance area. The assessment shall include both a review of recent aerial photography and a field visit to review conditions directly. Additionally, the qualified biologist shall perform an on-site nocturnal calling survey for northern spotted owl from at least mid-March onward and prior to initiation of construction activities. Survey stations for the calling survey shall be sited to cover post-fire forest stands that are most suitable for northern spotted owl occupation. The results of the habitat assessment and survey shall be provided to the County for review prior to project initiation. If northern spotted owl is observed or otherwise believed to be present within the focal area described above, measures shall be implemented in consultation with CDFW to ensure that project activities would not result in a take of the species and that any potential impacts are otherwise minimized.

Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

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PC = Prior to Project Commencement CPI = Construction Period Inspections FI = Final Inspection OG = Ongoing PI = Prior to Installation of infrastructure (i.e. trellis and irrigation) and planting.

For activities occurring between March 15 and July 31, prior to any vegetation removal or construction activities, the permittee shall submit to the Napa County Planning Division documentation of the northern spotted owl habitat assessment. The permittee shall provide the County with the full results of the habitat assessment for review and approval prior to project initiation. If northern spotted owl is observed or determined to be present, the permittee shall provide documentation of consultation with CDFW and proposed avoidance and minimization measures to ensure no take occurs prior to commencement of any vegetation removal or construction activities.

Implementation*: [P]

Monitoring*: [PD, CDFW]

Reporting and Date of Compliance / Completion*:

- Permittee shall implement Measure BIO-4 prior to any vegetation removal or construction activities, outside of the northern spotted owl habitat.

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Mitigation Measure BIO-5 Environmental Resources

BIO-5:

1. For APreservation Area, totaling a minimum of 2.07 acres of Douglas fir forest (3:1 preservation ratio for the canopy impact) and 1.9 acres of oak woodland (2:1 preservation ratio for the habitat impact) shall be designated as such in a deed restriction or conservation easement or other means of permanent protection. Land placed in protection shall be restricted from development and other uses that would degrade the quality of the habitat (including, but not limited to conversion to other land uses such as agriculture or urban development and excessive off-road vehicle use that increases erosion) and should be otherwise restricted by the existing goals and policies of Napa County. The permittee shall record the deed restriction or conservation easement prior to construction or within 90 days of project approval, whichever comes first. The area to be preserved shall be of like kind and quality to the forest being impacted as a result of the proposed project, as follows: areas to be preserved shall take into account the type of vegetation being removed, and species diversity and species that are limited within the project site and Napa County; the acreage included in the preservation area should be selected in a manner that minimizes fragmentation of oak woodland within the project site; and the preservation area should not include portions of the project site already subject to development restrictions (i.e., within creek setbacks or on slopes over 50%). The area to be preserved shall be determined by a qualified biologist with knowledge of the habitat and species and shall obtain final approval from Napa County.

   The land placed in protection shall be restricted from development and other uses that would potentially degrade the quality of the habitat (including, but not limed to conversion to other land uses such as agriculture or urban development, and excessive off-road vehicle use that increases erosion), and should be otherwise restricted by the existing goals and policies of Napa County.

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The permittee shall provide an endowment to the accredited land trust that is sufficient to ensure that the mitigation easement is monitored, enforced, and defended in perpetuity. The amount of the endowment shall be calculated using the Center for Natural Land Management's Property Analysis Record software, or an equivalent methodology if preferred by the land trust and accepted by the Land Trust Alliance, which provides the systematic and objective determination of the amount of the endowment in light of the conservation values to be protected by the easement. The record showing how the amount of the endowment was calculated shall be provided to County Counsel as part of its review of the mitigation easement. Any county staff time spent assessing and monitoring said provision shall be charged to the permittee, at the rate in effect at the time assessment and monitoring occurs, pursuant to County Fee Policy Part 80.

2. Prior to any earthmoving activities temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located adjacent to the proposed development area (typically within approximately 50-feet of the proposed development area). The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated protection areas for the duration of earthmoving activities.

3. The permittee shall refrain from severely trimming the trees (typically no more than 1/3 of the canopy) and vegetation to be retained adjacent to the proposed development area.

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4. In accordance with County Code Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of Use Permit #P20-00030 and Use Permit Exception to Conservation Regulations #P25-00293 shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the planning director. A replacement plan shall be prepared for county review and approval that includes, at a minimum, the locations where replacement trees would be planted, success criteria of at least 80%, and monitoring activities for the replacement trees. The replacement plan shall be implemented prior to issuance of a building or grading permit. Any replaced trees shall be monitored for at least three years to ensure an 80% survival rate. Replacement trees shall be installed and documented that they are in good health prior to completion and finalization of the associated building permits.

Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

Prior to construction or within 90 days of project approval, whichever occurs first, the permittee shall record the required deed restriction, conservation easement, or other permanent protection mechanism for the required preservation and provide documentation to the Napa County Planning Division and County Counsel for review and approval. Documentation demonstrating establishment of the required endowment funding, including the methodology used to calculate the endowment amount, shall be submitted to County Counsel as part of the mitigation easement review process prior to commencement of earth-disturbing activities.

Prior to commencement of any earthmoving activities, the permittee shall request inspection of the temporary fencing by the Napa County Planning Division.

Ongoing enforcement by the applicant and/or by site visit request of the Napa County Planning Division during ground disturbance activities.

*Notes: P = Permittee, PD = Planning Division, BD = Building Division, ECD = Engineering and Conservation Division, DFW = Dept of Fish and Wildlife, CT = CALTRANS, EH = Environmental Health, PW = Public Works, PE/G = Project Engineer / Geologist
PC = Prior to Project Commencement CPI = Construction Period Inspections FI = Final Inspection OG = Ongoing PI = Prior to Installation of infrastructure (i.e. trellis and irrigation) and planting.

Implementation*: P

Monitoring*: PD, OG

Reporting and Date of Compliance / Completion*:

Permittee shall implement Measure BIO-5 by recording required easements within 90 days of project approval or prior to construction, temporary fencing installed prior to earthmoving activities, and for trees to be properly replaced and for their canopies to be trimmed no less than 1/3 in compliance with Napa County Code.

Mitigation Measure TCR-1 Tribal Resources

TCR-1:

1. Prior to initial ground disturbance, the applicant shall retain a project Tribal Cultural Advisor approved by the Tribe, to direct all mitigation measures related to tribal cultural resources.

2. Ground disturbing activities occurring in conjunction with the Project (including surveys, testing, concrete pilings, debris removal, rescrapes, punchlists, erosion control (mulching, waddles, hydroseeding, etc.), pot-holing or auguring, boring, grading, trenching, foundation work and other excavations or other ground disturbance involving the moving of dirt or rocks with heavy equipment or hand tools within the Project area) shall be monitored on a full-time basis by qualified tribal monitor(s) approved by the Tribe. The tribal monitoring shall be supervised by the project Tribal Cultural Advisor. Tribal monitoring should be conducted by qualified tribal monitor(s) approved by the Tribe, who is defined as qualified individual(s) who has experience with identification, collection and treatment of tribal cultural resources of value to the Tribe. The duration and timing of the monitoring will be determined by the project Tribal Cultural Advisor. If the project Tribal Cultural Advisor determines that full-time monitoring is no longer warranted, he or she may recommend that tribal monitoring be reduced to periodic spot-checking or cease entirely. Tribal monitoring would be reinstated in the event of any new or unforeseen ground disturbances or discoveries.

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3. The project Tribal Cultural Advisor and tribal monitor(s) may halt ground disturbance activities in the immediate area of discovery when known or suspected tribal cultural resources are identified until further evaluation can be made in determining their significance and appropriate treatment or disposition. There must be at minimum one tribal monitor for every separate area of ground disturbance activity that is at least 30 meters or 100 feet apart unless otherwise agreed upon in writing between the Tribe and applicant. Depending on the scope and schedule of ground disturbance activities of the Project (e.g., discoveries of cultural resources or simultaneous activities in multiple locations that requires multiple tribal monitors, etc.) additional tribal monitors may be required on-site. If additional tribal monitors are needed, the Tribe shall be provided with a minimum of three (3) business days advance notice unless otherwise agreed upon between the Tribe and applicant. The on-site tribal monitoring shall end when the ground disturbance activities are completed, or when the project Tribal Cultural Advisor has indicated that the site has a low potential for tribal cultural resources.

4. All on-site personnel of the Project shall receive adequate cultural resource sensitivity training approved by the project Tribal Cultural Advisor or his or her authorized designee prior to initiation of ground disturbance activities on the Project. The training must also address the potential for exposing subsurface resources and procedures if a potential resource is identified consistent. The Project applicant will coordinate with the Tribe on the cultural resource sensitivity training.

5. The Project applicant must meet and confer with the Tribe, at least 45 days prior to commencing ground disturbance activities on the Project to address notification, protection, treatment, care and handling of tribal cultural resources potentially discovered or disturbed during ground disturbance activities of the Project. All potential cultural resources unearthed by Project activities shall be evaluated by the project Tribal Cultural Advisor. The Tribe must have an opportunity to inspect and determine the nature of the resource and the best course of action for avoidance, protection and/or treatment of tribal cultural resources to the extent permitted by law. If the resource is determined to be a tribal cultural resource of value to the Tribe, the Tribe will coordinate with the Project applicant to establish appropriate treatment and disposition of the resources with appropriate dignity which may include reburial or preservation of resources. The Project applicant must facilitate and ensure that the determination of treatment and disposition by the Tribe is followed to the extent permitted by law. No laboratory studies, scientific analysis, curation, or video recording are permitted for tribal cultural resources without the prior written consent of the Tribe.

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Monitoring and Reporting Actions and Schedule:
The above measures shall be incorporated into P20-00030 &P25-00293 as follows:

At least forty-five (45) days prior to commencement of any ground-disturbing activities, the permittee shall provide written documentation to the Napa County Planning Division confirming that the required meet-and-confer meeting(s) with the Tribe have occurred or been scheduled.

Prior to initial ground-disturbing activities, the permittee shall submit written documentation to the Napa County Planning Division confirming retention of a project Tribal Cultural Advisor approved by the Tribe and that all on-site personnel have completed cultural resource sensitivity training approved by the project Tribal Cultural Advisor or authorized designee.

Implementation*: [P]

Monitoring*: [PD]

Reporting and Date of Compliance / Completion*:

The above measure applies to ground disturbing activities and associated building and grading permits. Prior to the commencement of vegetation removal and earthmoving activities pursuant to #P20-00030 &#P25-00293, the Owner/Permittee shall provide documentation to Napa County that they have engaged with the Middletown Rancheria to provide cultural monitors (as necessary) and that cultural sensitivity training has been provided to site workers.

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“D”

Use Permit and Conservation Regulations Exception Application

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

1/16/19

NAPA COUNTY

Planning, Building and Environmental Services

A Tradition of Stewardship
A Commitment to Service

USE PERMIT APPLICATION
NON-RESIDENTIAL & RESIDENTIAL USES

Before you file an application…

Before you submit your application materials, and generally as early in the process as possible, you may schedule a Pre-Application Review Meeting (or Pre-App) with a member of the Planning Department Staff. The Pre-App is helpful as it will give you an opportunity to: get initial feedback from Planning Staff; discuss the specific items which will need to be included in your submittal; and, (as necessary) review the property's history and the County's environmental sensitivity mapping. Please give the Planning Division a call at 707.253.4417 or send us an email at planning@countyofnapa.org to schedule a meeting.

Contents

____ General Application Form

____ Use Permit Checklist of Required Application Materials

____ **Signed** Indemnification Form

____ **Signed** Hourly Fee Agreement

____ Voluntary Best Management Practices Checklist for Development Projects Form

Planning, Building, & Environmental Services
1195 Third Street, Suite 210
Napa, CA 94559
Main: (707) 253-4417
Fax: (707) 253-4336

PLANNING APPLICATION FORM

A Tradition of Stewardship
A Commitment to Service

Applicant Information

Applicant's Name: Ray Zucker, Wildlands	Phone: (916) 435-3555	E-Mail Address: rzucker@heronpacific.com
Applicant's Mailing Address: 3301 Industrial Avenue	City: Rocklin	State/Zip Code: CA 95765
Property Owner's Name: (if different from Applicant) Eternal Preserve Holdings LLC	Phone:	E-Mail Address:
Property Owner's Mailing Address: 3301 Industrial Avenue	City: Rocklin	State/Zip Code: CA 95765
Agent's Name: (if different from Applicant) Bruce Fenton, RSA+	Phone: (707) 252-3301	E-Mail Address: bfenton@rsacivil.com
Agent's Mailing Address: 1515 Fourth Street	City: Napa	State/Zip Code: CA 94559
Other Representative: (Engineer/Architect)	Phone:	E-Mail Address:
Representative's Mailing Address:	City:	State/Zip Code:

Property Information

Project Name and Address: Howell Mountain Cemetery, 1225 Howell Mountain Road

Assessor's Parcel Number(s): 018-120-016 and -027

Site of site (acreage and/or square footage): 105 acres and 4.3 acres

General Plan Designation: Conservation Cemetery Zoning: AW

Application Type[1] (For Staff Use)

Administrative	Zoning Administrator	Planning Commission/ALUC/BOS	Misc. Services
☐ Admin Viewshed	☐ Certificate of Legal Non Conformity	☐ AG Preserve Contract	☐ Use Determination
☐ Erosion Control Plan: Track II	☐ Viewshed	☐ Development Agreement	☐ Status Determination
☐ Erosion Control Plan: Track I	☐ Minor Modification	☐ Airport Land Use Consistency Determination	
☐ Fence Entry Structure Permit	☐ Road Exception	☐ General, Specific or Airport Land Use Plan Amendment	
☐ Land Division/Mergers	☐ Variance	☒ Use Permit	
☐ Site Plan Approval/Modif.		☐ Major Modification	
☐ Temporary Event: _____		☐ Variance	
☐ Very Minor Modification		☐ Zoning Map/Text Amendment	
☐ Addressing		☐ Road Exception	
☐ Signs		☐ Con. Reg. Exception	
☐ Other: _____	☐ Other: _____	☐ Other: _____	☐ Other: _____

[1]: **Include corresponding submittal requirements for each application type.**

Detailed Project Description (required): A typed, detailed project description is required that describes the proposed development or use(s); the existing site conditions/uses; the number, size, type and nature of any proposed residential dwelling units or total amount of new non-residential square-footage by type of use. Please refer to specific Supplemental Application submittal handouts for details to describe the project and required special studies.

Conditions of Application

1. All materials (plans, studies, documents, etc.) and representations submitted in conjunction with this form shall be considered a part of this application and publicly available for review and use, including reproduction.
2. The owner shall inform the Planning Division in writing of any changes.
3. Agent authorization: The property owner authorizes the listed agent(s) and/or other representative(s) to appear before staff, the Director, the Zoning Administrator, and Planning Commission to represent the owner's interests and to file applications, plans and other information on the owner's behalf.
4. Certification and Indemnification Form: Refer to attached form for notifications and required signature.
5. Fees: The applicant agrees to pay the County any and all processing fees imposed by Board of Supervisor Resolution No. 2018-102 including the establishment of an hourly fee application agreement and initial deposit (Section 80.250 Hourly Project Policies and Procedures). Applicant understands that fees include, but not limited to: Planning, Engineering, Public Works, and County Counsel staff time billed at an hourly rate; required Consultant service billed rates; production or reproduction of materials and exhibits; public notice advertisements; and postage. In the event the property owner is different than the applicant, the property owner must sign to indicate consent to the filing and agreement to pay fees in the event of the applicant's failure to pay said fees. Failure to pay all accumulated fees by the time of public hearing will result in a continuance.
6. This form, together with the corresponding application forms for specific permits, will become the Permit Document.

I have read and agree with all of the above. The above information and attached documents are true and correct to the best of my knowledge. All property owners holding a title interest must sign the application form. If there are more than two property owners, list their names, mailing addresses, phone numbers and signatures on a separate sheet of paper.

If you wish notice of meetings/correspondence to be sent to parties other than those listed on Page 1, please list them on a separate piece of paper.

2/3/20

Property Owner's Signature and Date

Property Owner's Signature and Date

Applicant/Agent Statement

I am authorized and empowered to act as an agent on behalf of the owner of record on all matters relating to this application. I declare that the foregoing is true and correct and accept that false or inaccurate owner authorization may invalidate or delay action on this application.

1-27-2020

Applicant's Signature and Date DLM @ WILDLANDS

	Application Fees	
Date Received: _____	Deposit Amount	$
Received by: _____	Flat Fee Due	$
Receipt No._____	Total	$
File No._____	Check No	

Checklist of Required Application Materials

Please make sure that the following documents are complete and legible. Consistent with the State Permit Streamlining Act and Departmental policy, the Planning, Building and Environmental Services (PBES) Department will make an application completeness determination within thirty days of application submittal and the payment of all required initial fees.

☒ **General Application Form:** The attached General Application Form must be completed in full and signed by the property owner or their authorized agent. Corporations, partnership, and the like have special signature requirements as noted on the Form.

☒ **Application Fee:** Total Fees are based on actual time and materials. A deposit in the amount of **$10,000, check made payable to County of Napa.**

☒ **Read and Sign the Hourly Fee Agreement**

☒ **Detailed Project Description:** The Project Description should address all of the applicable items listed below:

1. Existing site conditions and uses.
2. Proposed type of development and size, proposed uses/business, development phases, changes or alterations to the property or building including new/modified improvements and off-site improvements.
3. Days of the week and hours of operation.
4. Maximum number of employees per shift and hours of shifts.
5. Are there additional licenses and/or approvals from outside agencies needed from a Special District, Regional, State, Federal?
6. What is your water supply? How/where is liquid/solid waste disposed?

☒ **To-Scale Site Development Plans (ALL plans must be to an identified architect's or engineer's scale and shall be legible):**

Submit **three (3)** 24" X 36" and **one** 11" x 17"copies of plans consistent with information contained in the ***Building Department Site Plan Handout***.

☒ **To-Scale Floor Plans (ALL plans must be to an identified architect's or engineer's scale, shall show the existing and proposed conditions of the building and shall be legible):**

Submit **three (3)** 24" X 36" and **one** 11" x 17"copies of plans with the following information and details:

1. Dimensions and area of all rooms, hallways and covered or partially enclosed outdoor areas.
2. Use of each area within each structure/building.
3. Location of emergency exists.

☒ **To-Scale Building Elevations (ALL plans must be to an identified architect's or engineer's scale, shall show the existing and proposed conditions of the building and shall be legible):**

Submit **three (3)** 24" X 36" and **one** 11" x 17" copies of plans with the following information and details:

1. All relevant dimensions.
2. Exterior materials.
3. Exterior colors.
4. Existing grade.
5. Finished grade.
6. Finished floor level.
7. Building height consistent with Figure 209-1 of the 1997 UBC Handbook.

☒ **Technical Information and Reports**

The following technical information and studies are generally required unless waived by County Planning Staff at or following a Pre-Application Review Meeting. Please see County Planning Staff for a list of pre-qualified consultants.

1. FOR WINERY PROJECTS: Additional submittal information is necessary and should be included with the submittal packet consistent with the Winery Use Permit Supplemental Submittal Requirements.
2. Traffic Study consistent with Traffic Impact Study Preparation Requirements link: https://www.countyofnapa.org/DocumentCenter/View/2514/Requirements-for-Preparation-of-Traffic-Impact-Studies-PDF.
3. Archeological/Cultural Resources Study (consistent with State of California requirements)
4. Historic Resources Study (consistent with State Office of Historic Preservation requirements)
5. Biological Study – Includes Special Status Survey (consistent with *Guidelines for Preparing Biological Resources Reconnaissance Surveys* and *Guidelines for Preparing Special-Status Plant Studies*)

6. Water Availability/Groundwater Study (consistent with the WAA Guidance Document adopted by the Board 5/12/2015)
7. Special Studies (The following may be required on a project-specific basis at the discretion of the PBES Director.)
   - ☐ Noise Study (demonstrating consistency with Napa County Code Chapter 8.16).
   - ☐ Aviation Compatibility Study (consistent with Airport Land Use Compatibility Plan requirements)
   - ☐ Visual Impacts Study (Photographic simulations)
   - ☒ Geological/Geotechnical Hazard Report – Alquist Priolo Act
   - ☐ Hydraulic Analysis (flood impact) if within Floodplain and/or Floodway
   - ☒ Stormwater Control Plan (consistent with Napa County BASMAA Post Construction Manual)
   - ☐ Other: _____
   - ☐ Other: _____

☒ **Additional Information Required by the Environmental Health Department:**

1. Soil Evaluation Report if an on-site septic system is proposed.
2. Septic Feasibility Report for any new or upgraded septic systems or any expansion of use relying on an existing septic system.
3. Water System Feasibility Report if the water supply system will serve 25 or more people inclusive of employees, visitors, and residents or if kitchen is proposed. See enclosed handout provided by Environmental Services.
4. Water and/or Sewage Disposal Easement if an off-site spring, well, reservoir, storage tank, or individual sewage disposal system is proposed.
5. Completed Business Activities form, enclosed.
6. Solid Waste & Recycling Storage area location and size included on overall site plan. See guidelines at www.countyofnapa.org/DEM/.
7. Cave setback plan if a cave is proposed. See handout provided by Environmental Services.

Please click on Other Information tab at https://www.countyofnapa.org/1904/Environmental-Health-Division for forms and handouts related to use permit application submittal.

☒ **Additional Information Required by the Engineering Services:**

Please contact Engineering Services for any additional handouts or forms related to use permit application submittal.

☒ ***Please Note***

While this checklist includes all information generally required to process a Use Permit application, it is primarily focused on winery uses. Additional information may be required at the discretion of the Planning Manager, and in particular in those cases where non-winery commercial uses (such as restaurants) are proposed. **The Planning Division will make every effort to identify any additional required information at or directly following the Pre-application Review Meeting.**

☒ **Plans and Studies provided electronically via CD, USB Drive and/or DropBox link.**

Certification and Indemnification

Applicant certifies that all the information contained in this application, including all information required in the Checklist of Required Application Materials and any supplemental submitted information including, but not limited to, the information sheet, water supply/waste disposal information sheet, site plan, floor plan, building elevations, water supply/waste disposal system site plan and toxic materials list, is complete and accurate to the best of his/her knowledge. Applicant and property owner hereby authorize such investigations including access to County Assessor's Records as are deemed necessary by the County Planning Division for preparation of reports related to this application, *including the right of access to the property involved.*

Pursuant to Chapter 1.30 of the Napa County Code, as part of the application for a discretionary land use project approval for the project identified below, Applicant agrees to defend, indemnify, release and hold harmless Napa County, its agents, officers, attorneys, employees, departments, boards and commissions (hereafter collectively "County") from any claim, action or proceeding (hereafter collectively "proceeding") brought against County, the purpose of which is to attack, set aside, void or annul the discretionary project approval of the County, or an action relating to this project required by any such proceeding to be taken to comply with the California Environmental Quality Act by County, or both. This indemnification shall include, but not be limited to damages awarded against the County, if any, and cost of suit, attorneys' fees, and other liabilities and expenses incurred in connection with such proceeding that relate to this discretionary approval or an action related to this project taken to comply with CEQA whether incurred by the Applicant, the County, and/or the parties initiating or bringing such proceeding. Applicant further agrees to indemnify the County for all of County's costs, attorneys' fees, and damages, which the County incurs in enforcing this indemnification agreement.

Applicant further agrees, as a condition of project approval, to defend, indemnify and hold harmless the County for all costs incurred in additional investigation of or study of, or for supplementing, redrafting, revising, or amending any document (such as an EIR, negative declaration, specific plan, or general plan amendment) if made necessary by said proceeding and if the Applicant desires to pursue securing approvals which are conditioned on the approval of such documents.

In the event any such proceeding is brought, County shall promptly notify the Applicant of the proceeding, and County shall cooperate fully in the defense. If County fails to promptly notify the Applicant of the proceeding, or if County fails to cooperate fully in the defense, the Applicant shall not thereafter be responsible to defend, indemnify, or hold harmless the County. The County shall retain the right to participate in the defense of the proceeding if it bears its own attorneys' fees and costs, and defends the action in good faith. The Applicant shall not be required to pay or perform any settlement unless the settlement is approved by the Applicant.

Mark B. Heintz	Raymond Zucker, DLM@Wildlands
Print Name of Property Owner	Print Name Signature of Applicant (if different)
1/31/20	1-27-2020
Signature of Property Owner — Date	Signature of Applicant — Date

Hourly Fee Agreement

PROJECT File: _____; request for _____

_____. I, _____, the undersigned, hereby authorize the County of Napa to process the above referenced permit request in accordance with the Napa County Code. I am providing $ _____ as a deposit to pay for County staff review, coordination and processing costs related to my permit request based on actual staff time expended and other direct costs. **In making this deposit, I acknowledge and understand that the deposit may only cover a portion of the total processing costs. Actual costs for staff time are based on hourly rates adopted by the Board of Supervisors in the most current Napa County fee schedule. I also understand and agree that I am responsible for paying these costs even if the application is withdrawn or not approved.**

I understand and agree to the following terms and conditions of this Hourly Fee Agreement:

1. Time spent by Napa County staff in processing my application and any direct costs will be billed against the available deposit. "Staff time" includes, but is not limited to, time spent reviewing application materials, site visits, responding by phone or correspondence to inquiries from the applicant, the applicant's representatives, neighbors and/or interested parties, attendance and participation at meetings and public hearings, preparation of staff reports and other correspondence, or responding to any legal challenges related to the application during the processing of your application. "Staff" includes any employee of the Planning, Building and Environmental Services Department (PBES), the Office of the County Counsel, or other County staff necessary for complete processing of the application. "Direct costs" include any consultant costs for the peer review of materials submitted with the application, preparation of California Environmental Quality Act (CEQA) documents, expanded technical studies, project management, and/or other outside professional assistance required by the County and agreed to by the applicant. The cost to manage consultant contracts by staff will also be billed against the available deposit.

2. Staff will review the application for completeness and provide me with a good faith estimate of the full cost of processing the permit. Any requested additional deposit shall be submitted to PBES to allow continued processing of the project.

3. I understand that the County desires to avoid incurring permit processing costs without having sufficient funds on deposit. If staff determines that inadequate funds are on deposit for continued processing, staff shall notify me in writing and request an additional deposit amount estimated necessary to complete processing of my application. I agree to submit sufficient funds as requested by staff to process the project through the hearing process within 30 days of the request.

4. I understand that if the amount on deposit falls below zero, staff will notify me and stop work on the application until sufficient additional funds are provided

5. If the final cost is less than the amount remaining on deposit, the unused portion of the deposit will be refunded to me. If the final cost is more than the available deposit, I agree to pay the amount due within 30 days of billing.

6. If I fail to pay any invoices or requests for additional deposits within 30 days, the County may either stop processing my permit application, or after conducting a hearing, may deny my permit application. If I fail to pay any amount due after my application is approved, I understand that my permit may not be exercised, or may be subject to revocation. I further agree that no building, grading, sewage, or other project related permits will be issued if my account is in arrears.

7. I may file a written request for a further explanation or itemization of invoices, but such a request does not alter my obligation to pay any invoices in accordance with the terms of this agreement.

Name of Applicant responsible for payment of all County processing fees (Please Print):

RAYMOND ZUCKER, DLM @ WILDLANDS

Mailing Address of the Applicant responsible for paying processing fees:

3301 INDUSTRIAL AVE
ROCKLIN, CA 95765

Signature:* [signature]

Email Address: RZUCKER@HERUNPACIFIC.COM

Date: 1-27-2020

Phone Number: 916-435-3555

*ATTENTION - The applicant will be held responsible for all charges.

Adjoining Property Owner List Requirements

All applications shall include a list of the current owners of all the properties whose outer perimeters are within **1,000 feet** of the property boundary of the project site. The list shall include the property owner's names, their addresses, and the assessor's parcel numbers of the property owned. The list may be expanded to include other affected property owners at the discretion of the Planning Director as well as individuals having a request for notice on file with the Commission Clerk.

Preparation, verification and submission of this list of property owners is the responsibility of the applicant. Lists of the property owners appearing on County tax rolls in the form required are available from all local title insurance companies. Each such list must be certified by a title insurance company as reflecting the most recent County tax roll information. While the mailing list is not necessarily required at initial project submittal, the project cannot be noticed for hearing without it.

Instructions to the Title Company

Please prepare the property owners' list as follows:

1 Type the property owners' names, parcel numbers and mailing addresses on an 8½" by 11" sheet of Avery #5160 Laser Labels so that this information can be readily used in mailing by the Planning, Building & Environmental Services Department.

2. Submit a full page copy of the assessors' parcel book page(s) and a copy of the latest equalized assessment roll used to compile the property owners' list. Please indicate the location of all parcels listed, by check mark or colored parcel number circled on the pages.

If you have any questions, please contact the Planning, Building & Environmental Services Department at (707) 253-4417.

Planning, Building & Environmental Services - Hillary Gitelman, Director
1195 Third Street, Napa, CA 94559 - (707) 253-4417 - www.countyofnapa.org

A Tradition of Stewardship
A Commitment to Service

Project name & APN: Howell Mountain Cemetery 018-120-016 & -027
Project number if known:
Contact person: Ray Zucker
Contact email & phone number: rzucker@heronpacific.com 916-435-3555
Today's date:

Voluntary Best Management Practices Checklist for Development Projects

Napa County General Plan Policy CON-65 (e) and Policy CON-67 (d) requires the consideration of Greenhouse Gas (GHG) emissions in the review of discretionary projects and to promote and encourage "green building" design. The below Best Management Practices (BMPs) reduce GHG emissions through energy and water conservation, waste reduction, efficient transportation, and land conservation. The voluntary checklist included here should be consulted early in the project and be considered for inclusion in new development. It is not intended, and likely not possible for all projects to adhere to all of the BMPs. Rather, these BMPs provide a portfolio of options from which a project could choose, taking into consideration cost, co-benefits, schedule, and project specific requirements. Please check the box for all BMPs that your project proposes to include and include a separate narrative if your project has special circumstances.

Practices with Measurable GHG Reduction Potential

The following measures reduce GHG emissions and if needed can be calculated. They are placed in descending order based on the amount of emission reduction potential.

Already Doing	Plan To Do	ID #	BMP Name
☐	☐	BMP-1	**Generation of on-site renewable energy**

If a project team designs with alternative energy in mind at the conceptual stage it can be integrated into the design. For instance, the roof can be oriented, sized, and engineered to accommodate photovoltaic (PV) panels. If you intend to do this BMP, please indicate the location of the proposed PV panels on the building elevations or the location of the ground mounted PV array on the site plan. Please indicate the total annual energy demand and the total annual kilowatt hours produced or purchased and the potential percentage reduction of electrical consumption. Please contact staff or refer to the handout to calcuate how much electrical energy your project may need.

☐	☐	BMP-2	**Preservation of developable open space in a conservation easement**

Please indicate the amount and location of developable land (i.e.: under 30% slope and not in creek setbacks or environmentally sensitive areas for vineyards) conserved in a permanent easement to prohibit future development.

Already Doing | Plan To Do

☐ ☐ **BMP-3 Habitat restoration or new vegetation (e.g. planting of additional trees over 1/2 acre)**

Napa County is famous for its land stewardship and preservation. Restoring areas within the creek setback reduces erosion potential while planting areas that are currently hardscape (such as doing a bio-retention swale rather than underground storm drains) reduces storm water and helps the groundwater recharge. Planting trees can also increase the annual uptake of CO2e and add the County's carbon stock.

_____

_____

☐ ☐ **BMP-4 Alternative fuel and electrical vehicles in fleet**

The magnitude of GHG reductions achieved through implementation of this measure varies depending on the analysis year, equipment, and fuel type replaced.

Number of total vehicles _____

Typical annual fuel consumption or VMT _____

Number of alternative fuel vehicles _____

Type of fuel/vehicle(s) _____

Potential annual fuel or VMT savings _____

☐ ☐ **BMP-5 Exceed Title 24 energy efficiency standards: Build to CALGREEN Tier 2**

The California Building Code update effective January 1, 2011 has new mandatory green building measures for all new construction and has been labeled CALGREEN. CALGREEN provides two voluntary higher levels labeled CALGREEN Tier I and CALGREEN Tier II. Each tier adds a further set of green building measures that go above and beyond the mandatory measures of the Code. In both tiers, buildings will use less energy than the current Title 24 California Energy Code. Tier I buildings achieve at least a 15% improvement and Tier 2 buildings are to achieve a 30% improvement. Both tiers require additional non-energy prerequisites, as well as a certain number of elective measures in each green building category (energy efficiency, water efficiency, resource conservation, indoor air quality and community).

_____

_____

☐ ☐ **BMP-6 Vehicle Miles Traveled (VMT) reduction plan**

Selecting this BMP states that the business operations intend to implement a VMT reduction plan reducing annual VMTs by at least 15%.

Tick box(es) for what your Transportation Demand Management Plan will/does include:

- ☐ employee incentives
- ☐ employee carpool or vanpool
- ☐ priority parking for efficient transporation (hybrid vehicles, carpools, etc.)
- ☐ bike riding incentives
- ☐ bus transportation for large marketing events
- ☐ Other:

_____

_____

Estimated annual VMT _____

Potential annual VMT saved _____

% Change _____

Already Doing | Plan To Do

☐ ☐ **BMP-7 Exceed Title 24 energy efficiency standards: Build to CALGREEN Tier 1**

See description below under BMP-5.

☐ ☐ **BMP-8 Solar hot water heating**

Solar water heating systems include storage tanks and solar collectors. There are two types of solar water heating systems: active, which have circulating pumps and controls, and passive, which don't. Both of them would still require additional heating to bring them to the temperature necessary for domestic purposes. They are commonly used to heat swimming pools.

☐ ☑ **BMP-9 Energy conserving lighting**

Lighting is approximately 25% of typical electrical consumption. This BMP recommends installing or replacing existing light bulbs with energy-efficient compact fluorescent (CF) bulbs or Light Emitting Diode (LED) for your most-used lights. Although they cost more initially, they save money in the long run by using only 1/4 the energy of an ordinary incandescent bulb and lasting 8-12 times longer. Typical payback from the initial purchase is about 18 months.

CF or LED lighting will be used.

☐ ☐ **BMP-10 Energy Star Roof/Living Roof/Cool Roof**

Most roofs are dark-colored. In the heat of the full sun, the surface of a black roof can reach temperatures of 158 to 194 °F. Cool roofs, on the other hand, offer both immediate and long-term benefits including reduced building heat-gain and savings of up to 15% the annual air-conditioning energy use of a single-story building. A cool roof and a green roof are different in that the green roof provides living material to act as a both heat sink and thermal mass on the roof which provides both winter warming and summer cooling. A green (living) roof also reduces storm water runoff.

☐ ☑ **BMP-11 Bicycle Incentives**

Napa County Zoning Ordinance requires 1 bicycle rack per 20 parking spaces (§18.110.040). Incentives that go beyond this requirement can include on-site lockers for employees, showers, and for visitor's items such as directional signs and information on biking in Napa. Be creative!

Bike rack will be provided to support the recreational use of the proposed trail system. Directional signs will also be installed along the trail.

☐ ☐ **BMP-12 Bicycle route improvements**

Refer to the Napa County Bicycle Plan (NCPTA, December 2011) and note on the site plan the nearest bike routes. Please note proximity, access, and connection to existing and proposed bike lanes (Class I: Completely separated right-of-way; Class II: Striped bike lane; Class III: Signed Bike Routes). Indicate bike accessibility to project and any proposed improvements as part of the project on the site plan or describe below.

Already Doing | Plan To Do

☐ ☐ **BMP-13 Connection to recycled water**

Recycled water has been further treated and disinfected to provide a non-potable (non-drinking water) water supply. Using recycled water for irrigation in place of potable or groundwater helps conserve water resources.

☐ ☑ **BMP-14 Install Water Efficient fixtures**

WaterSense, a partnership program by the U.S. Environmental Protection Agency administers the review of products and services that have earned the WaterSense label. Products have been certified to be at least 20 percent more efficient without sacrificing performance. By checking this box you intend to install water efficient fixtures or fixtures that conserve water by 20%.

New office building will be designed with water efficient fixtures.

☐ ☐ **BMP-15 Low-impact development (LID)**

LID is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Please indicate on the site or landscape plan how your project is designed in this way.

☐ ☑ **BMP-16 Water efficient landscape**

If your project is a residential development proposing in excess of 5,000 sq. ft. or a commercial development proposing in excess of 2,500 sq. ft. The project will be required to comply with the Water Efficient Landscape Ordinance (WELO).

Please check the box if you will be complying with WELO or If your project is smaller than the minimum requirement and you are still proposing drought tolerant, zeroscape, native plantings, zoned irrigation or other water efficient landscape.

WELO will be adhered to.

☐ ☐ **BMP-17 Recycle 75% of all waste**

Did you know that the County of Napa will provide recycling collectors for the interior of your business at no additional charge? With single stream recycling it is really easy and convenient to meet this goal. To qualify for this BMP, your business will have to be aggressive, proactive and purchase with this goal in mind.

Already Doing | Plan To Do

☐ ☐ **BMP-18 Compost 75% food and garden material**

The Napa County food composting program is for any business large or small that generates food scraps and compostable, including restaurants, hotels, wineries, assisted living facilities, grocery stores, schools, manufacturers, cafeterias, coffee shops, etc. All food scraps (including meat & dairy) as well as soiled paper and other compostable - see http://www.naparecycling.com/foodcomposting for more details.

☐ ☐ **BMP-19 Implement a sustainable purchasing and shipping programs**

Environmentally Preferable Purchasing (EPP) or Sustainable Purchasing refers to the procurement of products and services that have a reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. By selecting this BMP, you agree to have an EPP on file for your employees to abide by.

☐ ☐ **BMP-20 Planting of shade trees within 40 feet of the south side of the building elevation**

Well-placed trees can help keep your building cool in summer. If you choose a deciduous tree after the leaves drop in autumn, sunlight will warm your building through south and west-facing windows during the colder months. Well-designed landscaping can reduce cooling costs by 20%. Trees deliver more than energy and cost savings; they are important carbon sinks. Select varieties that require minimal care and water, and can withstand local weather extremes. Fruit or nut trees that produce in your area are great choices, providing you with local food as well as shade. Please use the site or landscape plan to indicate where trees are proposed and which species you are using.

Proposed office building has been positioned to meet this BMP with use of existing trees.

☐ ☐ **BMP-21 Electrical Vehicle Charging Station(s)**

As plug-in hybrid electric vehicles (EV) and battery electric vehicle ownership is expanding, there is a growing need for widely distributed accessible charging stations. Please indicate on the site plan where the station will be.

☐ ☐ **BMP-22 Public Transit Accessibility**

Refer to http://www.ridethevine.com/vine and indicate on the site plan the closest bus stop/route. Please indicate if the site is accessed by transit or by a local shuttle. Provide an explanation of any incentives for visitors and employees to use public transit. Incentives can include bus passes, informational hand outs, construction of a bus shelter, transportation from bus stop, etc.

Already Doing | Plan To Do

☐ ☐ **BMP-23**

Site Design that is oriented and designed to optimize conditions for natural heating, cooling, and day lighting of interior spaces, and to maximize winter sun exposure; such as a cave.

The amount of energy a cave saves is dependent on the type of soil, the microclimate, and the user's request for temperature control. Inherently a cave or a building burned into the ground saves energy because the ground is a consistent temperature and it reduces the amount of heating and cooling required. On the same concept, a building that is oriented to have southern exposure for winter warmth and shading for summer cooling with an east-west cross breeze will naturally heat, cool, and ventilate the structure without using energy. Please check this box if your design includes a cave or exceptional site design that takes into consideration the natural topography and sitting. Be prepared to explain your approach and estimated energy savings.

☐ ☑ **BMP-24 Limit the amount of grading and tree removal**

Limiting the amount of earth disturbance reduces the amount of CO2 released from the soil and mechanical equipment. This BMP is for a project design that either proposes a project within an already disturbed area proposing development that follows the natural contours of the land, and that doesn't require substantial grading or tree removal.

Plan has taken into consideration limited tree removal and best use of terrain (contours) for its site access.

☐ ☐ **BMP-25 Will this project be designed and built so that it could qualify for LEED?**

BMP-25 (a)	☐	**LEED™ Silver** (check box BMP-25 and this one)
BMP-25 (b)	☐	**LEED™ Gold** (check box BMP-25, BMP-25 (a), and this box)
BMP-25 (c)	☐	**LEED™ Platinum** (check all 4 boxes)

Practices with Un-Measured GHG Reduction Potential

☐ ☐ **BMP-26 Are you, or do you intend to become a Certified Green Business or certified as a"Napa Green Winery"?**

As part of the Bay Area Green Business Program, the Napa County Green Business Program is a free, voluntary program that allows businesses to demonstrate the care for the environment by going above and beyond business as usual and implementing environmentally friendly business practices. For more information check out the Napa County Green Business and Winery Program at www.countyofnapa.org.

☐ ☐ **BMP-27 Are you, or do you intend to become a Certified "Napa Green Land"?**

Napa Green Land, fish friendly farming, is a voluntary, comprehensive, "best practices" program for vineyards. Napa Valley vintners and growers develop farm-specific plans tailored to protect and enhance the ecological quality of the region, or create production facility programs that reduce energy and water use, waste and pollution. By selecting this measure either you are certified or you are in the process of certification.

Already Doing | Plan To Do

☐ ☐ **BMP-28 Use of recycled materials**

There are a lot of materials in the market that are made from recycled content. By ticking this box, you are committing to use post-consumer products in your construction and your ongoing operations.

☐ ☐ **BMP-29 Local food production**

There are many intrinsic benefits of locally grown food, for instance reducing the transportation emissions, employing full time farm workers, and improving local access to fresh fruits and vegetables.

☐ ☑ **BMP-30 Education to staff and visitors on sustainable practices**

This BMP can be performed in many ways. One way is to simply put up signs reminding employees to do simple things such as keeping the thermostat at a consistent temperature or turning the lights off after you leave a room. If the project proposes alternative energy or sustainable winegrowing, this BMP could include explaining those business practices to staff and visitors.

Energy conservation signs and dedicated recycle bins.

☐ ☐ **BMP-31 Use 70-80% cover crop**

Cover crops reduce erosion and the amount of tilling which is required, which releases carbon into the environment.

☐ ☑ **BMP-32 Retain biomass removed via pruning and thinning by chipping the material and reusing it rather than burning on-site**

By selecting this BMP, you agree not to burn the material pruned on site.

☐ ☐ **BMP-33 Are you participating in any of the above BMPS at a 'Parent' or outside location?**

☐ ☑ **BMP-34 Are you doing anything that deserves acknowledgement that isn't listed above?**

Intended use for the land is a conservation cemetery.

Comments and Suggestions on this form?

Sources:

1. Napa County Bicycle Plan, NCTPA, December 2011

2. California Air Pollution Control Officers Associate (CAPCOA). January 2008. CEQA and Climate Change

3. Napa County General Plan, June 2008.

4. California Office of the Attorney General. 2010. Addressing Climate Change at at the Project Level available at http: //ag.ca.gove/global warming/pdf/GW_mitigation_measures.pdf

5. U.S. Green Building Council (2009). LEED 2009 for New Construction and Major Renovations Rating System. Washington, DC: United States Green Building Council, Inc.

6. California Energy Commission (2008). Title 24, Part 6, of the California Code of Regulations: California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Sacramento, CA: California Energy Commission.

7. U.S. Department of Energy (2010). Cool roof fact sheet.

8. http://www1.eere.energy.gov/buildings/ssl/ledlightingfacts.html

9. Compact Fluorescent Light Bulbs". Energy Star. Retrieved 2013-05-01.

10. http://energy.gov/energysaver/articles/solar-water-heaters. Retrieved 2013-05-02.

11. http://energy.gov/energysaver/articles/solar-water-heater. Retrieved 2013-05-09

12. http://www.bchydro.com/powersmart/residential/guides_tips/green-your-home/cooling_guide/shade_trees.html

13.http://www.napagreen.org/about. Retrieved 2013-05-09

14. http://www.countyofnapa.org/pages/departmentcontent.aspx?id=4294971612

15. http://www.napasan.com/Pages/ContentMenu.aspx?id=109

16. http://water.epa.gov/polwaste/green/index.cfm

1/16/19

NAPA COUNTY

Planning, Building and Environmental Services

A Tradition of Stewardship
A Commitment to Service

USE PERMIT APPLICATION
NON-RESIDENTIAL & RESIDENTIAL USES

COUNTY OF NAPA
PLANNING, BUILDING, AND ENVIRONMENTAL SERVICES

USE PERMIT
EXCEPTION TO CONSERVATION REGULATIONS

APPLICATION PACKET

1. Checklist
2. Application Review Procedures
3. Application
4. Supplemental Application Form
5. Indemnification Statement
6. Hourly Fee Agreement
7. Adjoining Property Owner Requirements
8. Plan Requirements
9. Sample Graphics

PRE-SUBMISSION REQUIREMENTS

Prior to the submission of your application materials, please call Planning Division Secretary at (707) 253-4417 to schedule a pre-submittal application review meeting (See Completeness Checklist). The purpose of the meeting is to review your application to make sure it is complete for submittal. According to state law, your application will receive a determination of completeness within thirty (30) days after submittal.

USE PERMIT EXCEPTION TO CONSERVATION REGULATIONS

APPLICATION CHECKLIST

1.	X	Completed signed application
2.	X	Completed supplemental application form
3.	X	**Signed** Indemnification statement
4.	X	**Signed** Hourly Fee Agreement
5.	X	Site Location Map (on 7" by 7½" portion of a 7½-minute U.S. Geological survey topographic map
4.	X	Complete Site Plan with all existing and proposed improvements shown, including structures, parking, roads, driveways, easements and leach field.
5.	X	Title Insurance Co. Certified List of All Property Owners within 1000 feet of the subject parcel specifying name, address, and parcel number.
6.	X	Assessor's pages used in compiling property owners list.
7.	X	Make checks out to the **County of Napa**. *(Amount to be determined at the pre-application meeting).*
8.	N/A	Pre-Submittal application review meeting with Planning Division Staff (Date:_____)
9.	X	Additional information that may be required by Planning Division.
10.	N/A	Erosion Control Plan only for agricultural projects (vineyard conversions, etc.)

APPLICATION REVIEW PROCEDURES

USE PERMIT
EXCEPTION TO THE CONSERVATION REGULATIONS

A Use Permit for an exception to the Conservation Regulations must be approved by the Planning Commission prior to development. Development may not begin until all necessary permits have been obtained, including any building or grading permits.

NOTE: The Use Permit application is not complete until all the information listed on the checklist is submitted for review.

The Use Permit applies to the land, not to the property owner. Therefore, once a Use Permit is approved for a given parcel of land, any new owner may operate under the same Use Permit pursuant to the conditions and applicable mitigation measures under which it was approved.

THE INFORMATION THAT YOU PROVIDE IN THE USE PERMIT APPLICATION, INCLUDING THE SUPPLEMENTAL APPLICATION AND EROSION CONTROL PLAN WILL PROVIDE THE BASIS FOR THE EVALUATION OF YOUR APPLICATION, INCLUDING ENVIRONMENTAL REVIEW. THE INFORMATION WILL ALSO BE USED AS A BASIS FOR THE ESTABLISHMENT OF CONDITIONS OF APPROVAL.

Application

1. The attached application and supplemental information forms require that you provide some basic information as well as a detailed erosion control plan for the proposed project. Prior to submittal, the applicant must schedule a pre-application meeting with a representative of the Planning Division to determine whether or not the proposed project can meet the minimum standards and requirements of the Conservation Regulations. When the application is submitted, a filing fee is collected to cover the costs of processing and analysis time, legal advertising, field investigations, and similar matters.

2. Within 30 days of receiving an application, the Planning Division will review the materials submitted to make sure that all the items listed on the application completeness checklist have been provided. Each item submitted will be reviewed for accuracy and completeness. In addition, an initial environmental review of the project will be undertaken. If all pertinent items on the checklist have been provided, each item supplied is complete and accurate, and no additional environmental data is needed, the application will be deemed complete. All applications accepted for processing will be referred to applicable County and public agencies for review, recommendation, and conditions. If the application is incomplete the applicant will be informed as to what additional materials, information and/or studies are needed to make the application complete. Upon submission of **all** the materials requested, the application will be found complete and distributed for review and comment.

Processing Time Limits

3. Use Permit applications are subject to processing time limits pursuant to California Government Code Section 65950. Generally, upon a determination by the County that the application is complete, the County is required to take action on a Use Permit within 180 days unless an environmental impact report (EIR) is required pursuant to the California

Environmental Quality Act of 1970 et seq. If an EIR is required, the permit must be approved or denied within 1 year.

Environmental Assessment

4. After any application has been accepted as complete, an assessment of the project's potential impact(s) on the environment will be conducted. If the Planning Division determines, based on that assessment, that the project is exempt from further environmental review, the project will be scheduled for a noticed public hearing. If the project is located in any recognized environmentally sensitive area or has other potentially significant environmental impacts, one or more detailed studies may be required to determine the extent of these impacts. If it is determined that significant environmental impacts could result from the project, the applicant will be required to prepare an Initial Study/Mitigated Negative Declaration or an Environmental Impact Report (EIR).

Public Hearing

5. Upon completion of the environmental assessment for the project and preparation of the appropriate environmental document (i.e., categorical exemption, negative declaration, or EIR), the project will be scheduled for a noticed public hearing before the Planning Commission. The purpose of the hearing is to receive public testimony, evaluate the appropriateness of the environmental determination made by the Planning Division, determine compliance with County regulations, and either approve or deny the project. A notice of public hearing containing a brief description of the project and the date, time, and location of the hearing will be published and mailed to all property owners within 1000 feet of the project site, 30, 20 or 10 days prior to the scheduled hearing.

6. At the public hearing, the report and recommendation of the Planning Division is presented. The applicant and project proponents are given an opportunity to present testimony in support of the Use Permit. Opponents to the request are given an opportunity to express their reasons why the environmental determination is not appropriate or why the Use Permit should not be granted. At the close of the hearing, the Planning Commission will consider the request, the Planning Division Report, and the testimony received during the public hearing and take formal action to approve, conditionally approve, or deny the Use Permit.

Appeal

7. Following action on the project, there is a 10 working day appeal period before the use permit becomes effective. During this period, the decision of the Planning Commission may be appealed to the Board of Supervisors by a County department, the applicant, or project opponents by filing a written appeal on a form provided by the Department, including payment of an appeal fee that varies with the length of the public hearing that has been held on the project. Once a proper appeal has been filed, a public hearing on the appeal will be set within 90 days. At the conclusion of the public hearing, the Board will either approve, deny, or modify the decision or action being appealed. Reconsideration of the Board's action can be sought if a request for reconsideration is filed within 30 days of the Board's decision.

FILE #_____

A Tradition of Stewardship
A Commitment to Service

NAPA COUNTY
PLANNING, BUILDING, AND ENVIRONMENTAL SERVICES
1195 Third Street, Suite 210, Napa, California, 94559 • (707) 253-4417

APPLICATION FOR USE PERMIT
EXCEPTION TO CONSERVATION REGULATIONS

FOR OFFICE USE ONLY

ZONING DISTRICT: _____ Date Submitted: _____

TYPE OF APPLICATION: _____ Date Published: _____

REQUEST: _____ Date Complete: _____

TO BE COMPLETED BY APPLICANT
(Please type or print legibly)

PROJECT NAME: Howell Mountain Cemetery

Assessor's Parcel #: 018-120-016 and -027 Existing Parcel Size: 105 acres and 4.3 acres

Site Address/Location: 1225 Howell Mountain Road Angwin, CA 94508
No. Street City State Zip

Property Owner's Name: Eternal Preserve Holdings LLC

Mailing Address: 6558 Lonetree Blvd. Rocklin, CA 95765
No. Street City State Zip

Telephone #:(916) 435 - 3555 Fax #: (___) ___ - _____ E-Mail: _____

Applicant's Name: Raymond Zucker

Mailing Address: 6558 Lonetree Blvd. Rocklin, CA 95765
No. Street City State Zip

Telephone #:(916) 435 - 3555 Fax #: (___) ___ - _____ E-Mail: rzucker@heronpacific.com

Status of Applicant's Interest in Property: Vice President

Representative Name: Jim Bushey

Mailing Address: 2800 Jefferson Street Napa, CA 94558
No. Street City State Zip

Telephone # (707) 253-1806 Fax #: (___) _____ E-Mail: jbushey@ppiengineering.com

I certify that all the information contained in this application, including but not limited to the information sheet, water supply/waste disposal information sheet, site plan, plot plan, floor plan, building elevations, water supply/waste disposal system plot plan and toxic materials list, is complete and accurate to the best of my knowledge. I hereby authorize such investigations including access to County Assessor's Records as are deemed necessary by the County Planning Division for preparation of reports related to this application, including the right of access to the property involved.

May 9, 2025
Signature of Applicant Date

Raymond Zucker
Print Name

5/9/2025
Signature of Property Owner Date

Mark Heintz
Print Name

TO BE COMPLETED BY PLANNING, BUILDING, AND ENVIRONMENTAL SERVICES

Application Fee Deposit: $_____ Receipt No.: _____ Received by: _____ Date: _____

SUPPLEMENTAL APPLICATION FORM
USE PERMIT EXCEPTION TO CONSERVATION REGULATION

1. Please explain the reason for the exception request.

Due to the nature of the property it will be necessary for access pathways to traverse some areas over 30% slope and less than 50% slope. These trails will require minimal grading, only that sufficient to allow passage of all-terrain utility vehicles.

2. Are there any alternatives to the project which would not require an exception? Please explain.

No. The interment areas would not be accessible any other way.

3. Describe how the project can meet the findings described in Section 18.104.040 A (structural or road project), or Section 18.108.040B (agricultural project).

Section 18.108.040.A. Structural/road development projects

a. Roads, driveways, buildings and other man-made structures have been designed to complement the natural landform and to avoid excessive grading: (Please describe).

Trails will be sited to avoid trees, stream setbacks, and slopes greater than 50%. The driveway has been aligned to minimize tree removal and grading. The philosophy of this project is to maintain the existing landform and vegetation to the maximum extent feasible in order to create a natural environment for interment of human remains.

b. Primary and accessory structures employ architectural and design elements which in total serve to reduce the amount of grading and earthmoving activity required for the project, including the following elements:

i. Multiple-floor levels which follow existing, natural slopes;

ii. Foundation types such as poles, piles, or stepping level which minimize cut and fill and the need for retaining walls;

iii. Fence lines, walls, and other features which blend with the existing terrain rather than strike off at an angle against it.

The welcome center will be a single-story structure constructed on a relatively flat portion of an existing homestead site. The foundation will likely be concrete slab-on-grade. All aspects of this project are designed to blend with the existing environment to the extent feasible.

c. The development project minimizes removal of existing vegetation , incorporates existing vegetation into final design plans, and replacement vegetation of appropriate size, quality and quantity is included to mitigate adverse environmental effects.

The project proposes removal of approximately 0.6 acre of vegetation on the 110 acre property resulting in retention of over 99% of existing vegetation.

4. Adequate fire safety measures have been incorporated into the design of the proposed development.

The project has been reviewed by Jason Downs, County Fire Marshall, and his comments have been fully incorporated.

5. Disturbance to streams and watercourses shall be minimized, and setbacks shall be retained as specified in Section 18.108.025.

No impacts to streams and watercourses is anticipated. Setbacks are shown on the TSD plans dated April 1, 2025.

6. The project does not adversely impact threatened or endangered plant or animal habitats as designated by state or federal agencies with jurisdiction and identified on the county's environmental sensitivity maps.

See Biological Resources Reconnaissance Survey prepared by WRA Environmental Consultants dated Ausust 2024.

<u>Section 18.108.040.B. Agricultural projects</u>, or Agricultural roads as defined by Planning, Building, and Environmental Services, Engineering Division

7. The erosion rate that results two years from the completion of the proposed agricultural development does not exceed the soil tolerance factor approved by the Natural Resource Conservation Service for the soil type, topography and climatic conditions in which the project is located;

N/A

8. Impacts on streams and watercourses are minimized, and adequate setbacks along these drainageways are or will be maintained.

N/A

9. The project does not adversely impact sensitive, rare, threatened or endangered plant or animal habitats as designated by state or federal agencies with jurisdiction and identified on the county's environmental sensitivity maps.

N/A

INDEMNIFICATION AGREEMENT

Pursuant to Chapter 1.30 of the Napa County Code, as part of the application for a discretionary land use project approval for the project identified below, Applicant agrees to defend, indemnify, release and hold harmless Napa County, its agents, officers, attorneys, employees, departments, boards and commissions (hereafter collectively "County") from any claim, action or proceeding (hereafter collectively "proceeding") brought against County, the purpose of which is to attack, set aside, void or annul the discretionary project approval of the County, or an action relating to this project required by any such proceeding to be taken to comply with the California Environmental Quality Act by County, or both. This indemnification shall include, but not be limited to damages awarded against the County, if any, and cost of suit, attorneys' fees, and other liabilities and expenses incurred in connection with such proceeding that relate to this discretionary approval or an action related to this project taken to comply with CEQA whether incurred by the Applicant, the County, and/or the parties initiating or bringing such proceeding. Applicant further agrees to indemnify the County for all of County's costs, attorneys' fees, and damages, which the County incurs in enforcing this indemnification agreement.

Applicant further agrees, as a condition of project approval, to defend, indemnify and hold harmless the County for all costs incurred in additional investigation of or study of, or for supplementing, redrafting, revising, or amending any document (such as an EIR, negative declaration, specific plan, or general plan amendment) if made necessary by said proceeding and if the Applicant desires to pursue securing approvals which are conditioned on the approval of such documents.

In the event any such proceeding is brought, County shall promptly notify the Applicant of the proceeding, and County shall cooperate fully in the defense. If County fails to promptly notify the Applicant of the proceeding, or if County fails to cooperate fully in the defense, the Applicant shall not thereafter be responsible to defend, indemnify, or hold harmless the County. The County shall retain the right to participate in the defense of the proceeding if it bears its own attorneys' fees and costs, and defends the action in good faith. The Applicant shall not be required to pay or perform any settlement unless the settlement is approved by the Applicant.

Applicant

Property Owner (if other than Applicant)

May 9, 2025

Date

P20-00030

Project Identification

Hourly Fee Agreement

PROJECT File: P20-00030; request for
Eternal Preserve Holdings LLC

. I,
Raymond Zucker, the undersigned, hereby authorize the County of Napa to process the above referenced permit request in accordance with the Napa County Code. I am providing $ _____ as a deposit to pay for County staff review, coordination and processing costs related to my permit request based on actual staff time expended and other direct costs. **In making this deposit, I acknowledge and understand that the deposit may only cover a portion of the total processing costs. Actual costs for staff time are based on hourly rates adopted by the Board of Supervisors in the most current Napa County fee schedule. I also understand and agree that I am responsible for paying these costs even if the application is withdrawn or not approved.**

I understand and agree to the following terms and conditions of this Hourly Fee Agreement:

1. Time spent by Napa County staff in processing my application and any direct costs will be billed against the available deposit. "Staff time" includes, but is not limited to, time spent reviewing application materials, site visits, responding by phone or correspondence to inquiries from the applicant, the applicant's representatives, neighbors and/or interested parties, attendance and participation at meetings and public hearings, preparation of staff reports and other correspondence, or responding to any legal challenges related to the application during the processing of your application. "Staff" includes any employee of the Planning, Building and Environmental Services Department (PBES), the Office of the County Counsel, or other County staff necessary for complete processing of the application. "Direct costs" include any consultant costs for the peer review of materials submitted with the application, preparation of California Environmental Quality Act (CEQA) documents, expanded technical studies, project management, and/or other outside professional assistance required by the County and agreed to by the applicant. The cost to manage consultant contracts by staff will also be billed against the available deposit.

2. Staff will review the application for completeness and provide me with a good faith estimate of the full cost of processing the permit. Any requested additional deposit shall be submitted to PBES to allow continued processing of the project.

3. I understand that the County desires to avoid incurring permit processing costs without having sufficient funds on deposit. If staff determines that inadequate funds are on deposit for continued processing, staff shall notify me in writing and request an additional deposit amount estimated necessary to complete processing of my application. I agree to submit sufficient funds as requested by staff to process the project through the hearing process within 30 days of the request.

4. I understand that if the amount on deposit falls below zero, staff will notify me and stop work on the application until sufficient additional funds are provided

5. If the final cost is less than the amount remaining on deposit, the unused portion of the deposit will be refunded to me. If the final cost is more than the available deposit, I agree to pay the amount due within 30 days of billing.

6. If I fail to pay any invoices or requests for additional deposits within 30 days, the County may either stop processing my permit application, or after conducting a hearing, may deny my permit application. If I fail to pay any amount due after my application is approved, I understand that my permit may not be exercised, or may be subject to revocation. I further agree that no building, grading, sewage, or other project related permits will be issued if my account is in arrears.

7. I may file a written request for a further explanation or itemization of invoices, but such a request does not alter my obligation to pay any invoices in accordance with the terms of this agreement.

Name of Applicant responsible for payment of all County processing fees (Please Print):

Raymond Zucker

Mailing Address of the Applicant responsible for paying processing fees:

Eternal Preserve Holdings, LLC

6558 Lonetree Blvd.

Rocklin, CA 95746

Signature:* 

Email Address: rzucker@heronpacific.com

Date: May 9, 2025

Phone Number: 916-435-3555

*ATTENTION - The applicant will be held responsible for all charges.

ADJOINING PROPERTY OWNER LIST REQUIREMENTS

All applications shall include a list of the current owners of all the properties whose outer perimeters are within **1000 feet** of the property boundary of the project site. The list shall include the property owner's names, their addresses and the assessor's parcel numbers of the property owned.

Preparation, verification and submission of this list of property owners is the responsibility of the applicant. Lists of the property owners appearing on County tax rolls in the form required are available from all local title insurance companies. Each such list must be certified by a title insurance company as reflecting the most recent County tax roll information.

INSTRUCTIONS TO TITLE COMPANY

Please prepare the property owners' list as follows:

1. Type the property owners' names, parcel numbers, and mailing addresses on an 8½" by 11" sheet of Avery #5351 Plain Paper Copier Labels so that this information can be readily copied on to new labels for use in mailing by Planning, Building, and Environmental Services.

2. Submit a full page copy of the assessors' parcel book page(s) and a copy of the latest equalized assessment roll used to compile the property owners' list. Please indicate the location of all parcels listed, by check mark or colored parcel number circled, on the pages.

If you should have any questions, please contact the Planning, Building, and Environmental Services at (707) 253-4417.

PLAN REQUIREMENTS

SITE LOCATION MAP REQUIREMENTS

One (1) copy of a site location map. Said map shall consist of a 7" by 7 1/2" portion of the **7 1/2 minute** U.S. Geological Survey Topographic map that covers the project vicinity or an accurate reproducible copy thereof. This map section shall be pasted or taped (not stapled) in the space provided on the site location map blank contained in this application packet. The following information shall be **accurately** plotted thereon:

a) The location of the boundary lines of all existing parcels involved and any new parcels to be formed.

b) The location of all existing improvements to be used including but not limited to existing access roads.

c) The location of all new improvements proposed including but not limited to buildings and access roads/driveways. For the purpose of this section proposed building sites on parcel/subdivision maps along with all the associated improvements necessary to put a home at the location selected shall be considered as "new improvements".

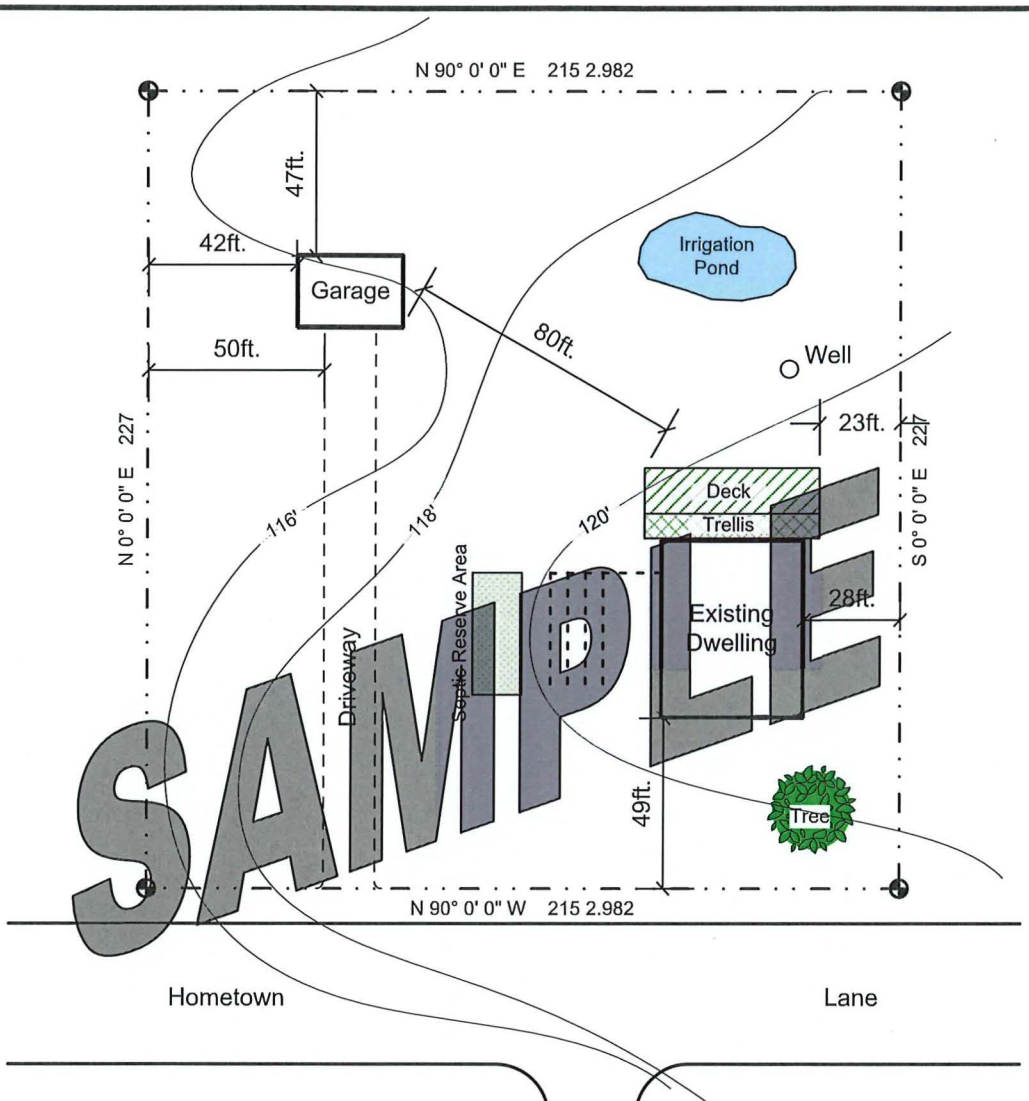
The location of all boundary **lines and** improvements **plotted must be accurate to within 50 feet** (i.e., 1/20th of an inch).

The symbols to be used in preparing this location map are specified in the legend on the site location map blank provided.

EROSION CONTROL PLAN REQUIREMENTS

Four (4) additional copies of the erosion control plan and narrative prepared in accordance with Section 18.108 et seq. of the county Code.

A clear, clean, readable, black-line reduction on 11" X 17" paper may be required to accompany the project. This will be determined at the Pre-application meeting.



Each different plan shall fill a minimum 11" x 17" sheet of paper.
Plans and notes shall be legible.
Provide all of the information requested in the title blocks.
Indicate the scale and show a North Arrow on each site plan.
Did you remember to:

- Show access to property.
- Show all property lines and the distances of all structures to those property lines.
- Show all roads, streets, driveways, rivers, reservoirs, dams, creeks, streams, paths and the distance from centerline of roads, streets and highways.
- Show all buildings and/or structures on the property, existing and proposed and the distances between those buildings and/or structures.
- Show all easements.
- Show all water wells, fire hydrants, water storage tank(s), LP gas tank(s).
- Show all septic system(s) and required 100% expansion area (reserve area). *
- Show stock pile(s) of dirt, soil, rocks and/or earth.

Five copies of the site plan are required for all building permits.

* Reserve area is a County code requirement. You must identify an adequate reserved area on your site plan. This reserve area will be reviewed on a case by case basis. If you have a very small parcel or a parcel with unusual site constraints you may be required to prove reserve area before a clearance on your building permit may be issued.

APN:	
Name:	
Address:	
Phone:	

COUNTY of NAPA
OFFICE OF PLANNING, BUILDING & ENVIRONMENTAL SERVICES
Sample Site Plan for Permit Submission

Howell Mountain Cemetery

Project Description

July 2025

Natural Passages, LLC, proposes to develop the Howell Mountain Cemetery, a green burial cemetery, on a 110-acre site in Napa County (project). The site will be developed as a green burial cemetery and managed as a conservation property. Howell Mountain Cemetery will be the first cemetery in the region devoted entirely to green burial.

Howell Mountain Cemetery is a place where a physical body can become a part of the earth in a natural setting. A conservation cemetery or green burial cemetery is a way of caring for the dead with minimal impacts. The site is well-suited for a conservation cemetery because of its accessibility, visibility, and economic opportunities for environmental restoration and enhancement. The Howell Mountain Cemetery will contribute to land conservation in Napa County and continue to provide visitors with access to a managed trail system.

Project Location

The project site is in unincorporated Napa County, north and west of Howell Mountain Road and east of Ink Grade Road, approximately three miles north of Angwin. The street address is 1225 Howell Mountain Road.

Site Characteristics

The 110-acre site is irregularly shaped and consists of APNs 018-120-016 (105 acres) and 018-120-027 (4.3 acres). Ink Grade Road and Howell Mountain Road are on the southwest and southeast sides of the site.

The site is densely vegetated with trees and brush, and contains scattered rock outcroppings. Two unimproved north-south dirt roads extend through the site. One of the roads terminates near two single-story structures. The unoccupied buildings consist of a small cabin (built in the late 1940s) and a kitchen and garage built in the late 1950s. The wood-sided structures are on a slope and partially supported with wood piers. The remainder of the site is undeveloped.

A septic tank is adjacent to the cabin, and a water storage tank is southeast and upslope from the kitchen/garage. A well (Napa County Permit E15-00784) is on the south side of the site, and an electric transformer adjacent to Howell Mountain Road provides electric service to the structures.

Eternal Preserve Holdings, LLC owns the site.

General Plan and Zoning

General Plan Designation. The site is designated in the Napa County General Plan as Agriculture, Watersheds and Open Space (AWOS). The proposed project is consistent with the intent of the AWOS General Plan land use category because the project would not alter the natural setting of the site and development standards for the AWOS designation in General Plan Policy AG/LU-20.

Zoning Designation. The site is zoned Agricultural Watersheds (AW). Development on the site is subject to the development standards contained in Napa County Code (NCC) 18.040.010.

Conditionally-Permitted Use. NCC 18.120.010.B permits cemeteries in any zoning district with a conditional use permit.

Conservation Cemetery

The Howell Mountain Cemetery is a proposed green burial cemetery. Green burial, or natural burial, is a way of caring for the dead with minimal impacts that aids in the conservation of natural resources. Green burial necessitates the use of non-toxic and biodegradable materials, such as caskets, shrouds, and urns. Howell Mountain Cemetery is a place where a physical body can become a part of the earth in a setting that preserves and restores natural habitats and open space. With no grave markers other than natural markers made from small native rocks, graves will not be visually distinguishable from undisturbed restored habitat.

As open space properties, conservation cemeteries offer lower plot densities than traditional cemeteries, limitations on visible markers, and prohibit burial vaults and embalming. Only fully-biodegradable caskets are used. Conservation burial cemeteries rely on natural habitat and native plantings to reduce demands for chemical fertilizers, and water-intensive landscaping.

Although the conservation cemetery concept is relatively new, green burial practices and traditions are not new ideas. Approximately 150 years ago, most funerals were green funerals. People frequently died from disease and injury, and embalming rarely occurred. Bodies were buried in family plots on the family property or in a local cemetery. The practice of chemical embalming originated during the Civil War as a means to preserve bodies to transport soldiers back to their homes. Modern-day death care has evolved into an industry that is focused heavily on burial merchandise. Conventional burial requires a significant amount of concrete for vaults, metals and hardwoods for caskets, and chemicals for embalming. It also requires substantial amounts of water, fertilizer, and unsustainable resources to maintain green lawns and non-native species at cemeteries.

As a green burial cemetery, the Howell Mountain Cemetery will offer a simplified alternative to the resource-intensive practices of a traditional burial.

Site Layout and Facilities

The Howell Mountain Cemetery will function as an open space preserve with trails and the parking areas serving as a trailhead. The site is designed with conservation as a priority, and improvements avoid natural resources.

Interment Areas. Approximately 16.19 acres of the 110-acre site (14.7% of the site) are designated for interment areas and will accommodate plots and gravesites. Eight interment areas (A-H) range in size from 0.18 to 7.52 acres and have been shaped to avoid steep terrain, stream setbacks and impacts to trees. All of the interment areas are in the north part of the site. The interment areas are set back a minimum of ten feet from

the north, east and west property lines. Within interment areas, existing debris will be removed and ladder fuels will be managed while retaining existing vegetation when possible. No landscaping is proposed.

Trails. Approximately 1.5 miles of trails will provide access for pedestrians and operations vehicles to plots within interment areas, as shown on Figure 1. The proposed trails will be eight-feet in width with maximum cross slope of 15%, max longitudinal slope of 28% and 12.5' vertical clearance., consistent with the County's standard for Special Purpose Ways. Typical trail cross-sections are shown in the Preliminary Plans prepared by TSD Engineering, Inc. dated April 1, 2025 (reference Detail L on Sheet 6). In some cases, the proposed trails will follow the alignments of existing informal trails on the site. The trails will be used by staff and visitors as the sole access to interment areas. Trail access points will be gated to restrict vehicle access and allow pedestrian passage. The trail system will include a trail map posted at the trailhead near the welcome center, "Keep on Trails" signage, benches, and wayfinding features.

Trail construction will consist of brush clearing and, in some instances, will require minor grading to create safe pedestrian and maintenance vehicle passage and to prevent erosion from drainage. Trails will consist of native material and will not include additional surfacing with the potential exception of wood chips. Trail construction will occur in phases as access to the interment areas is needed to accommodate plots. No grading will occur outside of the trail alignments.

Trails will be well-maintained but kept natural and unimproved. Since the slopes vary, operations staff will use carts to transport visitors in need of assistance accessing the site. During operations, trails will not be used if they are impassable. Trails will be open for hiking use by the public during cemetery hours of operation (dawn to dusk daily, year-round).

Driveway. The existing road to the east will be converted into a driveway with a minimum width of 22 feet (including shoulders) that would extend from Howell Mountain Road into the site and terminate at a turnaround area north of the welcome center. The turnaround area is designed to accommodate fire trucks. Please refer to the TSD Engineering plans dated April 1, 2025.

The existing road to the west will not be improved but will be maintained for emergency vehicle access. The southern end of this road connects to Howell Mountain Road and has an existing gate that will remain locked to restrict access to the public. A Knox Lock or similar will be installed to allow access to emergency personnel.

Parking. Thirty-eight (38) parking spaces will be provided including thirty-one (31) spaces parallel and diagonal to the driveway, six spaces adjacent to the welcome center, and one accessible space adjacent to the welcome center. Several of these parking spaces are oversized to accommodate shuttles or stretch vehicles with higher capacity. Cemetery guests and the general public can utilize the driveway to access the welcome center and trails. If a funeral or memorial is planned that requires more parking than what is available onsite, shuttles will be arranged to the welcome center.

Welcome Center. A single-story 509 square foot (sf) (15.7' x 32.5') welcome center will be located at the end of the driveway. Cemetery hours of operation and site operations information will be posted at the

welcome center. The building will include two restrooms accessible from the exterior of the building. The building will be constructed using poured concrete and/or CMU block, with steel roof framing, stone veneer accents, stained wood accents, and a seam metal roof. Building colors will be charcoal gray, tan, with natural wood.

Offsite Office. An offsite office space will be rented in downtown St. Helena on either Main Street, Oak Avenue, or Railroad Avenue, north of Pope Street and south of Pine Street to facilitate sales and daily operations of the cemetery while minimizing daily commuter traffic trips to the cemetery itself. Refer to the "Circulation and Parking" section below for details regarding anticipated traffic to and from the site.

Storage. Storage of landscape equipment, operations equipment, and all-terrain vehicles will occur in 20-foot steel storage containers (conex containers) strategically placed on the property. Two storage containers will be strategically placed to support maintenance. One container will be placed in the northeast portion of interment area E and another will be placed in the mid-eastern portion of interment area H. These storage containers are mobile, durable, do not require ground disturbance, are fireproof, and no trees will be removed to accommodate them. They will be painted to be concealed with the environment and will be accessed by staff during maintenance or burial preparation times. No additional outdoor storage is proposed.

Restroom. The welcome center building will include two accessible all-gender restrooms. The restrooms are available for visitor use and will be accessible from the exterior of the building.

Gate. At the project entry on Howell Mountain Road, a gate is planned and will remain open during operating hours. The gate will also include an automatic open/close function to allow visitors to exit the property outside of operating hours. The gate will be custom fabricated using steel and concrete.

Signage. Signage will be designed into the entry gate supports to identify the Howell Mountain Cemetery and street address. The sign component on the sides of the gate will be a maximum of 4' x 5' with a modern-rustic aesthetic, made of weathering steel with cut out letters and designs. The core of the sign will be concrete with an anchored footer.

Small signs will be placed on property lines denoting private property, cemetery use, and on trails for safety and orientation. Additionally, "NO PARKING ANY TIME" Sign R-26 (CA) signs will be placed near the driveway along Howell Mountain Road.

Lighting. Motion-activated short-range lights will be mounted above the doorways on the welcome center. No other lighting is proposed on the site.

Landscaping. The site is densely vegetated, and no landscaping is proposed in the interment areas. Low-profile landscaping is planned adjacent to the welcome center.

Grading. Limited grading (0.69-acre impact area) is proposed for construction of the driveway and parking areas and to create a pad for the welcome center. There are anticipated to be ±4,239 cubic yards of cut and ±717 cubic yards of fill, for a net of ±3,522 cubic yards of export. Grading for the trail corridor will be

minimized to the extent feasible with an anticipated cut of ±900 cubic yards and ±2,650 cubic yards of fill for a net of ±1,750 cubic yards of fill. Reference the TSD Engineering Plans dated April 1, 2025 for further information.

Existing Structures. The existing cabin, kitchen/garage, concrete holding tank (spring box), and pump treatment shed will be demolished.

Utilities and Services

Water. Water was historically supplied to the cabin via a pipe connected to a developed spring located upslope. The spring development consists of a concrete holding tank (spring box) that was reportedly supplied by a natural spring. This is typical of spring development for remote rural residential development in the 19th and 20th centuries. During a site inspection conducted by PPI on July 2, 2025, it was observed that the spring box, a partially-buried rectangular concrete box approximately 12 feet by 6 feet and at least 6 feet deep, is currently breached with evidence of long-term deterioration. There is no hydrophytic vegetation at the site or in the surrounding area and no evidence that such existed in the past. Based on observations and experience the spring likely dried up decades ago.

Water supply for the new facilities will be provided from a proposed well near the welcome center (reference Sheets 2 and 3 of the Plans by TSD Engineering). There is a proposed underground water tank that will convey water to the fire hydrant on the driveway via a four-inch line, and a two-inch water line will convey water to the welcome center. Water will be used for the fire hydrant, restroom and welcome center.

Maximum annual water demand is estimated at 0.41 acre-feet (AF) per year per the Water Availability Analysis (WAA) conducted by RSA+ dated January 31, 2020. Note that after the WAA was completed the project description has changed to move the office and daily office workers to an offsite location, minimizing the number of people traveling to and utilizing the site on a daily basis. The WAA still assumes that all employees would be located onsite which presents a more conservative analysis of potential groundwater impacts. Even with the more conservative assumption that all employees would be working daily on the property, the proposed groundwater use is 0.41 AF/year while the potential recharge on the property is estimated at 46 AF/year.

Wastewater. An on-site septic system will provide wastewater disposal. The leach field and septic tank will be southeast of the welcome center.

Solid Waste. Solid waste generation is projected to be equivalent to that of a single-family residential unit. Solid waste collection containers on the site will be collected from containers on the site and stored in large totes on the northeast side of the welcome center. Solid waste will be stored in totes and collected by a private hauler. Green waste (e.g., landscape materials, trimmings) will remain on-site and repurposed as mulch.

Fire. The site is served by Napa County Fire Department. The Angwin (Station 18) and Pope Valley (Station 20) fire stations are 2.3 and 1.8 miles from the site, respectively.

Electricity. Electricity will be provided by Pacific Gas and Electric (PG&E).

Off-Site Improvements

No off-site improvements are needed for the implementation of the project. The project will utilize an existing offsite office space that will be leased in the area.

Vegetation

Tree Removal. The 110-acre site is densely vegetated and the design of the project prioritizes tree preservation. Nevertheless, construction of the driveway will require removal of 27 trees as shown on Sheet 7 of the TSD Engineering Preliminary Plans. There will be no tree removal within the interment areas, as the graves will be sited to preserve existing trees.

Timber Harvest Permit. Several of the 27 trees proposed for removal are timber species regulated by the California Department of Forestry and Fire Protection (CAL FIRE). As stated above, the total impact area for construction of the driveway and welcome center is 0.69 acre. As such, a Registered Professional Forester (Scott Butler, RPF #1851) will be preparing a less-than-3-acre timber conversion exemption for this project.

Vegetation Retention and Mitigation. NCC 18.108 requires vegetation retention and mitigation for vegetation impacted. NCC 18.108.020.C requires that, in the AW zoning district, a minimum of seventy percent of vegetation canopy be maintained as part of any use involving earth-disturbing activity. NCC 18.108.020.D requires mitigation for the removal of vegetation cover by permanent replacement or preservation of comparable vegetation on an acreage basis at a minimum of a 3:1 ratio, where on-site areas with slopes of 30% or less and outside of stream setbacks are prioritized for replacement or preservation. Construction of on-site improvements will result in an impact to vegetation cover, including removal of vegetation, on approximately 0.6 acres. This project proposes to retain 99% of the tree canopy that exists on the property on areas under 30% slope and outside of stream setbacks, exceeding the 70% retention requirement and meeting the 3:1 tree preservation ratio. Please reference Figure 2 and the 3:1 Tree Preservation Calculations table enclosed herein.

Phasing and Construction Schedule

Phasing. Phasing of the project will occur as demanded by the market for burials. The first phase of the cemetery will consist of all improvements to the driveway from Howell Mountain Road, parking spaces, welcome center, new water well, and septic system. The second phase will include the buildout of all interment areas and trail systems.

Construction Schedule. The first phase of the cemetery will be constructed in 2026. The first phase improvements (driveway, parking, welcome center), will take approximately six months to construct and will take place during the grading season between April 1 and October 15. The second phase (interment areas and trail system) will take approximately four months to complete and will overlap with the first phase, taking place between June 15 and October 15.

Cemetery Operations

Onsite Staffing. The cemetery will employ approximately two people on the property, including a cemetery manager and maintenance/operations staff. A minimum of one person will be on-site during business hours. Business hours at the onsite welcome center will be from 7 am to 3 pm Monday through Friday, with one employee available by appointment on Saturdays and Sundays. Business operations and sales will occur off-site. The project is expected to generate an average of 108 trips per day. Cemetery guests account for 94 trips and the general public accounts for 14 daily trips to use the trail network. Please refer to Table 7 on page 14 of the Traffic Analysis prepared by W-Trans dated June 15, 2023 for additional details regarding the anticipated numbers of customers to the onsite welcome center.

Offsite Staffing. There will be one employee working daily at the offsite office building from 9 am to 5 pm Tuesday through Saturday. Tuesdays, Thursdays, and Saturdays are open house days while Wednesdays and Fridays will be site tour days.

Hours of Operation. The hours of operation of the cemetery itself will be dawn to dusk daily, year-round. During hours of operation, the gate at the entry will remain open, and trails will be available for public use.

Burial Service Scheduling. The cemetery manager will schedule all burials so that there are no unscheduled events and parking is available for visitors. Two to three burials will occur daily on average. As operations ramp up, approximately five burials could occur per day.

Memorial Gatherings. Small memorial gatherings may be held at the plot. The project does not include the facilities to accommodate indoor gatherings.

Cemetery Buildout. At full buildout, the interment areas will accommodate approximately 17,340 full body burials and 35,530 plots for cremains (interred or scattered). The pace of burials in the interment areas is entirely market-driven. It is estimated that the cemetery would reach capacity in approximately 80 to 100 years.

Pet Burial. A portion of one or more of the interment areas may be used for pet burials.

Salutary Gunfire. Salutary gunfire will be prohibited except for military service burials.

On-Site Circulation. No vehicles will access the site beyond the terminus of the driveway and fire truck turnaround. Trail access points will be gated to restrict vehicle access and allow pedestrian passage. All-terrain vehicles will be used by employees to maintain the site, and all-terrain passenger carts will be used to transport visitors.

Interment Process

Interment Area and Plot Mapping. The limits of interment areas and plots will be mapped and recorded consistent with the California Health and Safety Code and set forth by the California Cemetery and Funeral Bureau. Location pins will be set every five to ten spaces on every other row of plots. All burial locations will be GPS mapped, and plot locations will be available at the office.

Plot Sizes and Configuration. Plot sizes and grave placement will vary based on natural conditions such as slope, soil structure, and vegetation densities. The spacing around plots in conservation cemeteries is larger and more irregular than in conventional cemeteries due to variations in natural conditions (e.g., slope, vegetation, etc.). Plots are sized to accommodate adjacent natural features such as trees and rocks and to allow for the irregular pattern of natural habitat.

Approximately 80% of interment areas will be used for graves and the remaining portion used for cremains. Plots will be sized to allow the grave to be situated in the center of the plot among natural constraints. No trees will be removed for interment.

Grave Excavation and Restoration. Excavated graves will be sized to fit the vessel or container that will be interred. A typical adult full-body grave is approximately 3.33 x 10 feet, and an urn grave approximately 1.66 x 2.00 feet. Excavation and site restoration activities will be performed with small, mechanized equipment or manual labor to limit site impacts and avoid impacts to vegetation. After interment, the soil and vegetation will be restored over the grave and set by the operations staff. Vegetation restored on the top of the burial will be lightly compacted by hand equipment. Plots will be observed for settlement and irregular ground surfaces corrected with placement of additional soil as necessary to avoid ponded water.

Burial Methods. A full-body interment requires the body to be preservative-free. Decedents will be embalmed with non-toxic products, and all burial containers will be 100% biodegradable and non-toxic. Metal caskets and fasteners, synthetic linings, formaldehyde glues, and high volatile organic compounds (VOC) finishes are prohibited. For a green burial, all caskets will be constructed from wood, grasses, reeds, bamboo, or other natural materials. All burial shrouds must be made of natural plant or animal fibers; outer burial containers, such as concrete liners, metal vaults, partitions, and slabs, are prohibited.

The body can be buried in a biodegradable coffin or a shroud, allowing the body to decompose naturally, thereby enriching the soil ecology. Cremated remains may be mixed with an additive to make the ashes chemically available to plants and soil organisms, thereby enriching soil ecology.

Grave Identification. If desired, simple grave markers made of select rock from the site or wood with names and dates etched on them may be placed flush with the ground at the gravesite after interment. Rocks will not be polished or shaped, or of other material. Markers will not be anchored to the ground.

Regulatory Requirements. Interment rights are sold for one-time use only. Interments will be performed according to the California Health and Safety Code's rules and regulations and as set forth by the California Cemetery and Funeral Bureau. Natural Passages will operate the cemetery under a Certificate of Authority (cemetery license) from the State Cemetery and Funeral Bureau.

Circulation and Parking

Site Access. Howell Mountain Road, located on the south and east edges of the site, will provide primary access to the site, and a driveway with a minimum width of 22 feet would extend north to the site and terminate at the fire truck turnaround south of the welcome center. No vehicular access is proposed from the site to Ink Grade Road.

Trip Generation. Based on traffic patterns of traditional cemeteries and similar conservation cemeteries, a graveside interment service typically generates 15-25 vehicles. On limited occasions, graveside interment services could generate approximately 30-40 vehicles. Daily visitors will create three to five daily vehicle trips a day during the week and up to eight customer trips on Saturdays, and operations staff will generate about two daily vehicle trips. Daily visitors to the offsite office will create three to four daily trips with up to eight customer trips on Saturday, and one worker trip. On peak memorial days (e.g., Mother's Day, Father's Day, Christmas, etc.), the cemetery could generate approximately 100-125 vehicle trips throughout the day. Peak periods for the conservation cemetery do not coincide with morning or evening peak commute hours. Please refer to the Traffic Analysis prepared by W-Trans dated June 15, 2023 for additional details regarding the anticipated numbers of customers to the offsite office.

Vehicle Parking. The maximum daily parking demand of the project will consist of the parking requirements associated with an interment service (15-25 vehicles), daily visitors (5-8 vehicles), and operations staff (two vehicles). This scenario represents a typical maximum daily parking demand. Occasionally, an interment service will generate more vehicle traffic (30-40 vehicles). The NCC does not identify a specific parking standard for cemeteries. NCC 18.110.030 allows the Planning Commission to determine the number of parking spaces required for any use specifically not listed in the NCC.

Thirty-eight (38) parking spaces will be provided including thirty-one (31) spaces parallel and diagonal to the driveway, six spaces adjacent to the welcome center, and one accessible space adjacent to the welcome center. Several of these parking spaces are oversized to accommodate shuttles or stretch vehicles with higher capacity. If a funeral or memorial is planned that requires more parking than what is available onsite, shuttles will be arranged to the welcome center.

Bicycle Parking. Eight bicycle parking spaces are planned in racks near the welcome center.

Site Management

Resource Avoidance and Management. The proposed project avoids impacts to trees and other vegetation, special status species, steep slopes, and other resources. The cemetery will be managed as a conservation site. Long-term management will include monitoring and control of invasive species using adaptive management strategies. Perpetual management of the site will be conducted by Wildlands and funded by the facility's endowment.

Fuel Load Management. Fuel load management measures will include thinning vegetation and clearing defensible space around parking, improvement areas, interment areas, and buildings and maintaining fuel break areas. No burning is proposed for vegetation management.

Natural Passages

The Howell Mountain Cemetery green burial cemetery will be developed, owned, and managed by Natural Passages, LLC. As a developer of conservation cemeteries, Natural Passages is committed to responsible long-term land preservation and stewardship.

Natural Passages operates the 160-acre Morgan Oaks Eternal Preserve green burial cemetery in Placer County, northeast of Sacramento. Morgan Oaks Eternal Preserve was opened in summer 2020.

Natural Passages is a new company established by the founder of Wildlands, a national leader in habitat development and land management with mitigation projects throughout the Western United States. Wildlands has a 25-year history of preserving, enhancing, and protecting nearly 40,000 acres on the West Coast with its conservation and mitigation banking projects. Wildlands has over 75 active projects, 45 of which are within the greater Sacramento region, totaling nearly 12,000 acres. Wildlands is now applying its experience and expertise in land conservation to the protection of land for use as a meaningful living legacy. Natural Passages' development of conservation cemeteries is a logical extension of the habitat enhancement, conservation, and protection activities performed by Wildlands.



Multi-Passenger Carts/Utility Vehicles
Visitors to the site would be transported by multi-passenger carts or all-terrain utility vehicles similar to these shown.

“E”

Napa County Roads & Streets Standards Exception Letter

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

A Tradition of Stewardship
A Commitment to Service

Napa County Public Works

1195 Third Street, Suite 101
Napa, CA 94559-3092
www.countyofnapa.org/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Steven E. Lederer
Director

April 6, 2026

Howell Mountain Cemetery
1225 Howell Mountain Road

Subject: Left Turn Exception Request; Howell Mountain Cemetery Use Permit Request #P20-00030; APNs 018-120-016 and 027

Thank you for your Traffic Impact Study (TIS) dated December 13, 2023, describing your request for an exception from the Napa County Road and Street Standards, which would otherwise require installation of a left turn lane at the entrance to the project driveway at 1225 Howell Mountain Rd. (HMR). The requirement is prompted by the property owner's request for a Use Permit Modification (#P20-00030) to operate a Cemetery at this site.

Basis for Request:

In support of your request, you offer that:

1. A code compliant left-turn lane (LTL) will require impact to a substantial number of heritage Redwood trees and other vegetation. These trees are an important part of the ecosystem in this area.
2. The LTL will require grading of relatively steep rock slopes, and damage or remove their related trees. These slopes are also an important part of the aesthetic of this area.
3. Sight distance extends approximately 180 feet to the west and 260 feet to the east. To maintain adequate site distance over time, the project has been conditioned (Condition 2 to Public Works Memorandum dated 5/27/25) to trim and maintain vegetation as recommended in the TIS, Figure 7.
4. For those cars that do need to make a left turn into the driveway, there is adequate sight distance to allow cars to see a turning vehicle and stop to avoid it.

Documents Reviewed

1. Traffic Impact Study Dated December 13, 2026
2. Project File

Discussion:

The standards for waiving a left turn requirement are difficult to meet. The County has one opportunity to ensure needed facilities are installed, even though the project will exist many decades into the future. As such the findings to waive the left turn requirement are challenging. Significant hardship needs to be showed, such as the presence of important environmental resources, steep slopes, geological features or heritage trees, etc. Neither minor earthmoving, reasonable cost, nor inconvenience is a factor to be considered.

Determination:

I tentatively find that based on the evidence provided that the left turn lane need not be installed for this project based on items 1 through 4 listed above. The cumulative impacts as further supported by the fact that very few trips that would benefit by the installation of the left turn lane lead to the reasonable conclusion that the lane need not be installed.

This decision shall automatically become final upon the Planning Commission's final action on the underlying use permit, and this determination relies on the project's CEQA analysis. This decision may be appealed to the Board of Supervisors following the Planning Commission's decision on your project as a whole and based on the record before the Planning Commission. If you have any questions please feel free to contact me.

Sincerely,

Steven E. Lederer
Director of Public Works

Cc: Michael Parker, Deputy Planning Director
Trevor Hawkes, PBES Project Planner
Laura Anderson, Deputy County Counsel
Ahsan Kazmi, Public Works

“F”

Traffic Impact Study

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

Final Traffic Impact Study for the Howell Mountain Cemetery Project



Prepared for the County of Napa

File Number: P20-0030

Submitted by

W-Trans

December 13, 2023

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Executive Summary

The proposed project is the development of a green burial cemetery on a 110-acre site in the County of Napa; the site would be managed as a conservation property. Approximately 21.8 acres of the 110-acre site would be designated for interment areas and would accommodate plots and gravesites. The remaining portion of the site would be retained as open space. The administrative and sales functions of the cemetery would be located off-site in a separate office.

Based on standard rates published by the Institute of Transportation Engineers (ITE) and data from a peak hour survey at North Sonoma Mountain Regional Park and Open Space Preserve in Sonoma County, the project's proposed cemetery and open space uses are expected to generate an average of 108 trips per day, including 8 p.m. peak hour trips on Friday and 34 trips during the Saturday p.m. peak hour.

The study area consists of the section of Howell Mountain Road fronting the project site and the intersection of Silverado Trail/Deer Park Road. The study intersection is currently operating at LOS D during the Friday p.m. peak hour and LOS C during the Saturday p.m. peak hour. With project traffic added these service levels would be the same.

Under the anticipated Future volumes, operation of the study intersection is expected to deteriorate to LOS F during the Friday p.m. peak hour and to LOS E during the Saturday p.m. peak hour under the existing all-way stop control. Acceptable LOS D or C operation could be achieved by energizing the traffic signal that currently operates in red flash and modifying the lane assignments to include exclusive left-turn lanes and shared through/right-turn lanes on all four approaches. Upon the addition of project-generated traffic to the anticipated Future volumes and with the existing all-way stop controls, the study intersection would continue operating at LOS F during the Friday p.m. peak hour and would deteriorate to LOS F during the Saturday p.m. peak hour. Use of the traffic signal with the modified lane configuration would result in acceptable LOS D or C operation during both peaks. Alternatively, should the County determine that the signal should not be energized, modification of the lane configuration to convert the southbound approach from a shared left-turn/through lane and a dedicated right-turn lane to a shared through/right-turn lane and a dedicated left-turn lane would result in improved operation and offset the project's adverse impact.

Bicycle facilities serving the project site are adequate and will improve upon the completion of the proposed facilities. The existing pedestrian facilities serving the project site on Howell Mountain Road are consistent with the surrounding area and adequate for the type of land use. Existing transit facilities serving the project site are adequate given the lack of demand.

While sight lines to the west from the driveway location are adequate, the trees blocking sight lines to the east of the driveway should be trimmed or removed and the low-lying vegetation should be maintained at a height of less than three feet to achieve adequate sight lines.

A left-turn lane is warranted on Howell Mountain Road at the existing project driveway based on the County of Napa's current policy. To install a left-turn lane it would be necessary to remove a substantial number of heritage redwood and other trees as well as grade into a hillside or fill a downward slope. Both of these activities would negatively impact these natural resources, thereby providing evidence for the County to make a finding to allow an exception to this standard. As there are no other left-turn lanes on Howell Mountain Road in the study area, the lack of a left-turn lane would therefore be consistent with the character of the roadway and would not violate driver expectation, resulting in operational conditions that would be effectively the same without a turn lane as with one.

Introduction

This report presents an analysis of the potential effects on traffic operation associated with development of a proposed green burial cemetery to be located on a 110-acre site in the County of Napa. The traffic study was completed in accordance with the criteria established by the County of Napa, reflects a scope of work reviewed and approved by County staff, and is consistent with standard traffic engineering techniques.

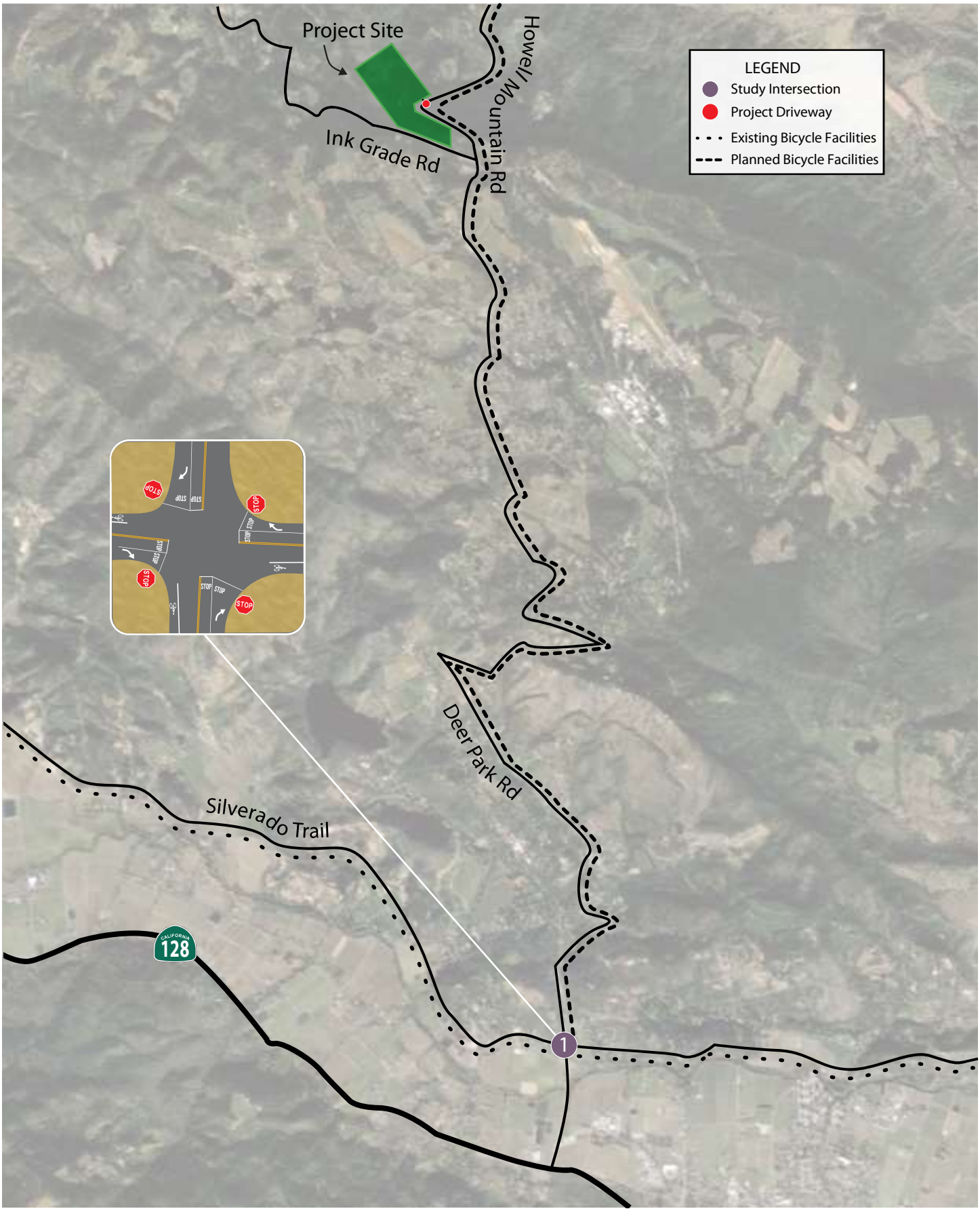
Prelude

The purpose of a traffic impact study is to provide County staff and policy makers with data they can use to make an informed decision regarding the potential traffic impacts and adverse effects of a proposed project, and any associated improvements that would be required to mitigate these impacts to a level of insignificance as defined by the County's General Plan or other policies and address adverse effects. Vehicular traffic is typically evaluated by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on existing travel patterns or anticipated travel patterns specific to the proposed project, then analyzing if the new traffic would be expected to have an adverse effect on operation of critical intersections or roadway segments. Impacts relative to access for pedestrians, bicyclists, and to transit are also addressed.

Project Profile

The proposed project would be developed as a green burial cemetery on a 110-acre site in the County of Napa and managed as a conservation property. Approximately 21.8 acres of the 110-acre site would be designated for interment areas and would accommodate plots and gravesites. The remaining portion of the site would be retained as open space. Existing and planned trails would be open to the public. Trails would provide access for pedestrians and all-terrain vehicles associated with the cemetery function to gain access to plots within interment areas. A 20-foot-wide driveway would extend from Howell Mountain Road into the site and terminate at a turnaround area north of the welcome center. A 400 square foot welcome center would be built at the end of the driveway. The cemetery's administrative and sales functions would be housed in an existing, previously approved office building located in a nearby community.

The County of Napa file number is P20-0030. The project site is located at 1225 Howell Mountain Road, as shown in Figure 1.



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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 1 – Study Area and Existing Lane Configurations

Transportation Setting

Operational Analysis

Study Area and Periods

The study area consists of the section of Howell Mountain Road fronting the project site and the intersection of Silverado Trail/Deer Park Road.

Operating conditions during the Friday and Saturday p.m. peak periods were evaluated as these time periods reflect the highest traffic volumes areawide and for the proposed project. The Friday evening peak hour occurs between 4:00 and 5:00 p.m. and typically reflects the highest level of congestion of the day during the homeward bound commute, while the weekend midday peak occurs between 1:45 and 2:45 p.m. when visitation to area wineries is at its peak.

Study Intersections

Silverado Trail/Deer Park Road is an all-way stop-controlled intersection with stop signs on all four approaches. It is noted that a full traffic signal has been installed at this location, though it is not operational as a signal; rather, it currently operates with only the red indications flashing. The location of the study intersection and the existing lane configurations and controls are shown in Figure 1.

Study Roadway

Howell Mountain Road is a rural two-lane roadway that winds its way north-south from Deer Park Road on the south to Chiles Pope Valley Road on the north. The roadway is approximately 28 feet wide adjacent to the site and includes two 11-foot travel lanes and three-foot shoulders. Howell Mountain Road has a posted speed limit of 35 miles per hour (mph), though it is noted that the roadway has a posted advisory speed of 15 mph at the horizontal curve approximately 275 feet northwest of the existing driveway.

This study was initiated in 2020 when shelter-in-place orders were in effect due to the COVID-19 pandemic, so traffic volumes at that time were considered atypical. As a result, traffic counts were collected on Chiles Pope Valley Road at a location where counts had previously been collected in October 2017 for the *Maxville Lake Winery Traffic Impact Study.* Chiles Pope Valley Road was selected because it has a similar character and use and is in the same geographic area. These new count volumes were used as the "control" for purposes of establishing factors to be applied to current volumes on Howell Mountain Road to achieve "adjusted existing" volumes. New counts on both Howell Mountain Road and Chiles Pope Valley Road were collected for two Fridays and Saturdays each. The growth factor was applied to Howell Mountain Road to estimate conditions in 2020 without the COVID-19 pandemic. The growth factor calculations are provided in Appendix A. Based on these traffic counts collected in October 2017 and June and July of 2020, the ADT adjacent to the site is approximately 1,700 on weekdays and 1,600 on weekend days.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California

Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is June 1, 2017, through May 31, 2022. For purposes of determining the collision rate, the 2020 counts were used rather than estimating volumes in 2022 as use of this smaller number in the denominator provides a more conservative result.

As presented in Table 1, the calculated collision rate for the study intersection was compared to average collision rate for similar facilities statewide, as indicated in *2019 Collision Data on California State Highways*, California Department of Transportation (Caltrans). The intersection of Silverado Trail/Deer Park Road had a calculated collision rate equal to the statewide average for four-legged all-way stop-controlled intersections, indicating that it is operating within what would typically be considered acceptable safety parameters.

Table 1 – Collision Rates at the Study Intersections

Study Intersection	Number of Collisions (2017-2022)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. Silverado Trail/Deer Park Rd	7	0.27	0.27

Note: c/mve = collisions per million vehicles entering

The collision rate for the study roadway segment was also compared to the statewide average for similar facilities. Three of the four reported collisions on the study segment of Howell Mountain Road involved a fixed object and one was a sideswipe. While the study segment had an above-average collision rate compared to the statewide average, the number of collisions is low and the injury rate is below the statewide average; therefore, no remedial action is suggested. In addition, the collision rate is somewhat conservative as it was calculated using the estimated 2020 traffic volumes. The study segment collision history is summarized in Table 2 and the collision rate calculations are provided in Appendix B.

Table 2 – Collision Rates at the Study Roadways

Study Roadway	Number of Collisions (2017-2022)	Calculated Collision Rate (c/mve)	Statewide Average Collision Rate (c/mve)
1. Howell Mountain Rd	4	1.29	0.87

Note: c/mve = collisions per million vehicles entering

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. As might be expected given the rural location of the project site, a connected pedestrian network is lacking, though such facilities would not be appropriate in this setting.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2020, classifies bikeways into the following categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

In the project area, there are bike lanes on Silverado Trail. According to the 2019 *Napa Countywide Bicycle Plan*, bicycle facilities are proposed for Deer Park Road and Howell Mountain Road, as summarized in Table 3.

Table 3 – Bicycle Facility Summary

Status Facility	Class	Length (miles)	Begin Point	End Point
Existing				
Silverado Trail	II	26.9	SR 121 (Napa)	SR 29 (Calistoga)
Planned				
Deer Park Rd	III	4.05	Silverado Trail	White Cottage Rd
Howell Mountain Rd	III	3.54	Deer Park Rd	Ink Grade Rd
Howell Mountain Rd	III	2.48	Ink Grade Rd	Pope Valley Rd
Howell Mountain Rd	III	4.36	Silverado Trail	Deer Park Rd

Source: *Napa County Bicycle Plan*, Napa Valley Transportation Authority, 2019

Transit Facilities

Transit Services throughout Napa County are provided by Napa Valley Transit (VINE). There are no VINE stops within one-quarter of a mile of the project site.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersection has stop signs on all approaches so was analyzed using the "All-Way Stop-Controlled" Intersection methodology from the HCM. This methodology evaluates delay for each approach based on turning movements, opposing and conflicting traffic volumes, and the number of lanes. Average vehicle delay is computed for the intersection as a whole and is then related to a Level of Service.

The ranges of delay associated with the various levels of service are indicated in Table 4.

Table 4 – All-Way Stop-Controlled Intersection Level of Service Criteria	
LOS A	Delay of 0 to 10 seconds. Upon stopping, drivers are immediately able to proceed.
LOS B	Delay of 10 to 15 seconds. Drivers may wait for one or two vehicles to clear the intersection before proceeding from a stop.
LOS C	Delay of 15 to 25 seconds. Drivers will enter a queue of one or two vehicles on the same approach and wait for vehicle to clear from one or more approaches prior to entering the intersection.
LOS D	Delay of 25 to 35 seconds. Queues of more than two vehicles are encountered on one or more approaches.
LOS E	Delay of 35 to 50 seconds. Longer queues are encountered on more than one approach to the intersection.
LOS F	Delay of more than 50 seconds. Drivers enter long queues on all approaches.

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Traffic Operation Standards

Napa County

In the Circulation Element of the *Napa County General Plan*, the following policies have been adopted:

- **Policy CIR-31** – The County seeks to provide a roadway system that maintains current roadway capacities in most locations and is efficient in providing local access.
- **Policy CIR-38** – The County seeks to maintain operations of roads and intersections in the unincorporated County area that minimize travel delays and promote safe access for all users. Operational analysis shall be conducted according to the latest version of the Highway Capacity Manual and as described in the current version of the County's Transportation Impact Study Guidelines. In general, the County seeks to maintain Level of Service (LOS) D on arterial roadways and at signalized intersections, as the service level that best aligns with the County's desire to balance its rural character with the needs of supporting economic vitality and growth.

In situations where the County determines that achieving LOS D would cause an unacceptable conflict with other goals and objectives, minimizing collisions and the adequacy of local access will be the County's priorities. Mitigating operational impacts should first focus on reducing the project's vehicular trips through modifying the project definition, applying TDM strategies, and/or applying new technologies that could reduce vehicular travel and associated delays; then secondarily should consider physical infrastructure changes. Proposed mitigations will be evaluated for their effect on collisions and local access, and for their effectiveness in achieving the maximum potential reduction in the project's operational impacts (see the County's Transportation Impact Study Guidelines for a list of potential mitigation measures).

The following roadway segments are exceptions to the LOS D standard described above:

- *State Route 29 in the unincorporated areas between Yountville and Calistoga: LOS F is acceptable.*
- *Silverado Trail between State Route 128 and Yountville Cross Road: LOS E is acceptable.*
- *State Route 12/121 between the Napa/Sonoma county line and Carneros Junction: LOS F is acceptable.*
- *American Canyon Road from I-80 to American Canyon City Limit: LOS E is acceptable.*

To provide a more quantitative method of adhering to the above standards, the County refers to G*uidelines for Interpretation of General Plan Circulation Policies on Significance Criteria* (Fehr & Peers, 2015). The document establishes thresholds of significance for road segments and different intersection control types. The memorandum states a project would cause a significant impact requiring mitigation if, for existing conditions:

- A signalized intersection operates at LOS A, B, C, or D during the selected peak hours without Project trips, and the LOS deteriorates to LOS E or F with the addition of Project trips; or
- A signalized intersection operates at LOS E or F during the selected peak hours without Project trips, and the addition of Project trips increases the total entering volume by one percent or more.
  - Project Contribution % = Project Trips ÷ Existing Volumes
- An unsignalized intersection operates at LOS A, B, C, or D during the selected peak hours without Project trips, and the LOS deteriorates to LOS E or F with the addition of Project traffic; the peak hour traffic signal warrant criteria should also be evaluated and presented for informational purposes; or
- An unsignalized intersection operates at LOS E or F during the selected peak hours without Project trips, and the project contributes one percent or more of the total entering traffic for all-way stop-controlled intersections, or ten percent or more of the traffic on a side-street approach for side-street stop-controlled intersections; the peak hour traffic signal criteria should also be evaluated and presented for informational purposes. Both of those volumes are for the stop-controlled approaches only. Each stop-controlled approach that operates at LOS E or F should be analyzed individually;
  - <u>All-Way Stop-Controlled Intersections</u> – The following equation should be used if the all-way stop-controlled intersection operates at LOS E or F without the Project:
    - Project Contribution % = Project Trips ÷ Existing Volumes
  - <u>Side-Street Stop-Controlled Intersections</u> – The following equation should be used if the side-street stop-controlled intersection operates at LOS E or F without the Project:
    - Project Contribution % = Project Trips ÷ Existing Volumes
- An arterial segment operates at LOS A, B, C or D during the selected peak hours without Project trips, and deteriorates to LOS E or F with the addition of Project trips; or
- An arterial segment operates at LOS E or F during the selected peak hours without Project trips, and the addition of Project trips increases the total segment volume by one percent or more. The following equation should be used if the arterial segment operates at LOS E or F without the Project:

- Project Contribution % = Project Trips ÷ Existing Volumes

Further, a project would cause a significant impact requiring mitigation if, for cumulative (future) conditions, the Project's volume is equal to, or greater than five percent of the difference between cumulative (future) and existing volumes.

- Cumulative Conditions – A Project's contribution to a cumulative condition would be calculated as the Project's percentage contribution to the total growth in traffic. This calculation applies to arterials, signalized intersections, and unsignalized intersections.
  - Project Contribution % = Project Trips ÷ (Cumulative Volumes – Existing Volumes)

It is noted that under current California Environmental Quality Act (CEQA) law the metric of LOS is no longer a valid indication of a significant traffic impact, so for purposes of this analysis operation was evaluated for consistency with General Plan policies, and where these policies are not met, the results are identified as having an adverse effect under such policies.

Existing Conditions

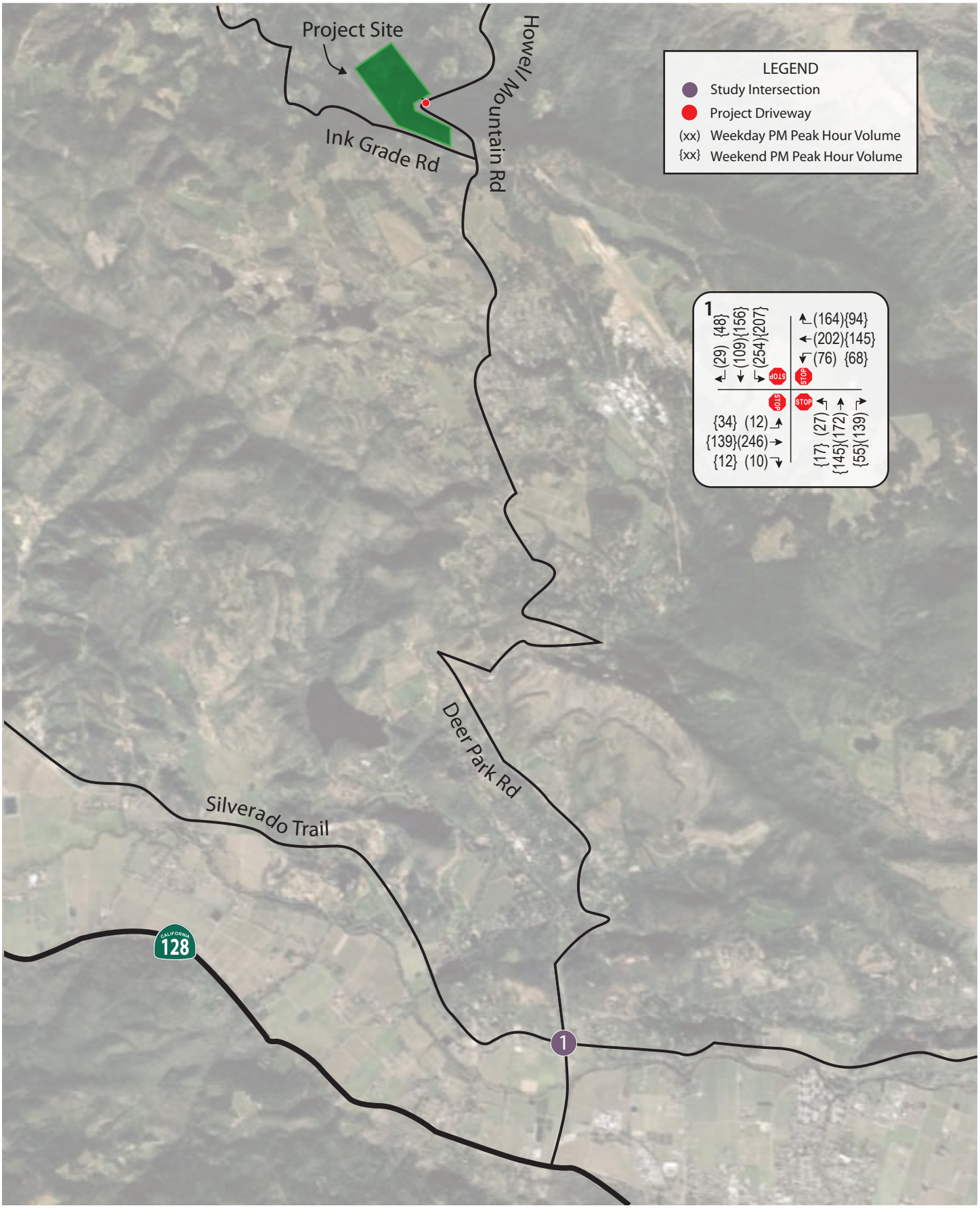
The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the Friday and Saturday p.m. peak periods. This condition does not include project-generated traffic volumes. Peak hour factors (PHF's) were calculated based on the counts obtained and used in the levels of service calculations, unless the calculated PHF was less than 0.90 in which case 0.90 was used as a "floor." The growth factors projected by the *Napa Solano Travel Demand Model* were adjusted to estimate the three years of growth that has occurred from 2017 to 2020. The existing counts for the Silverado Trail/Deer Park Road intersection were multiplied by the growth factor to project 2020 weekday p.m. turning movement volumes. The same growth factors used for the weekday p.m. peak hour were used for the weekend midday peak hour as the model does not contain information for weekend days.

Under existing conditions, the study intersection is operating acceptably. A summary of the intersection level of service calculations is contained in Table 5, and copies of the Level of Service calculations are provided in Appendix C. The existing traffic volumes are shown in Figure 2.

Table 5 – Existing PM Peak Hour Intersection Levels of Service

Study Intersection	Friday Peak		Saturday Peak	
	Delay	LOS	Delay	LOS
1. Silverado Trail/Deer Park Rd	25.0	D	16.7	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service



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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 2 – Existing Traffic Volumes

Future Conditions

Future volumes for the horizon year 2040 were calculated based on output from the *Napa Solano Travel Demand Model*, maintained by the Solano Transportation Authority (STA). Base year (2015) and future (2040) segment volumes for the weekday p.m. peak period were used to calculate a growth factor for the study intersection. It is noted that the model is projecting substantial increases in traffic volumes in the area resulting in a growth factor of 1.47 for Silverado Trail/Deer Park Road.

Under the anticipated Future volumes and assuming continued use of the existing all-way stop control, the study intersection is expected to deteriorate to LOS F operation during the Friday p.m. peak hour and to LOS E during the Saturday p.m. peak hour. Operating conditions are summarized in Table 6 and future volumes are shown in Figure 3.

Table 6 – Future PM Peak Hour Intersection Levels of Service

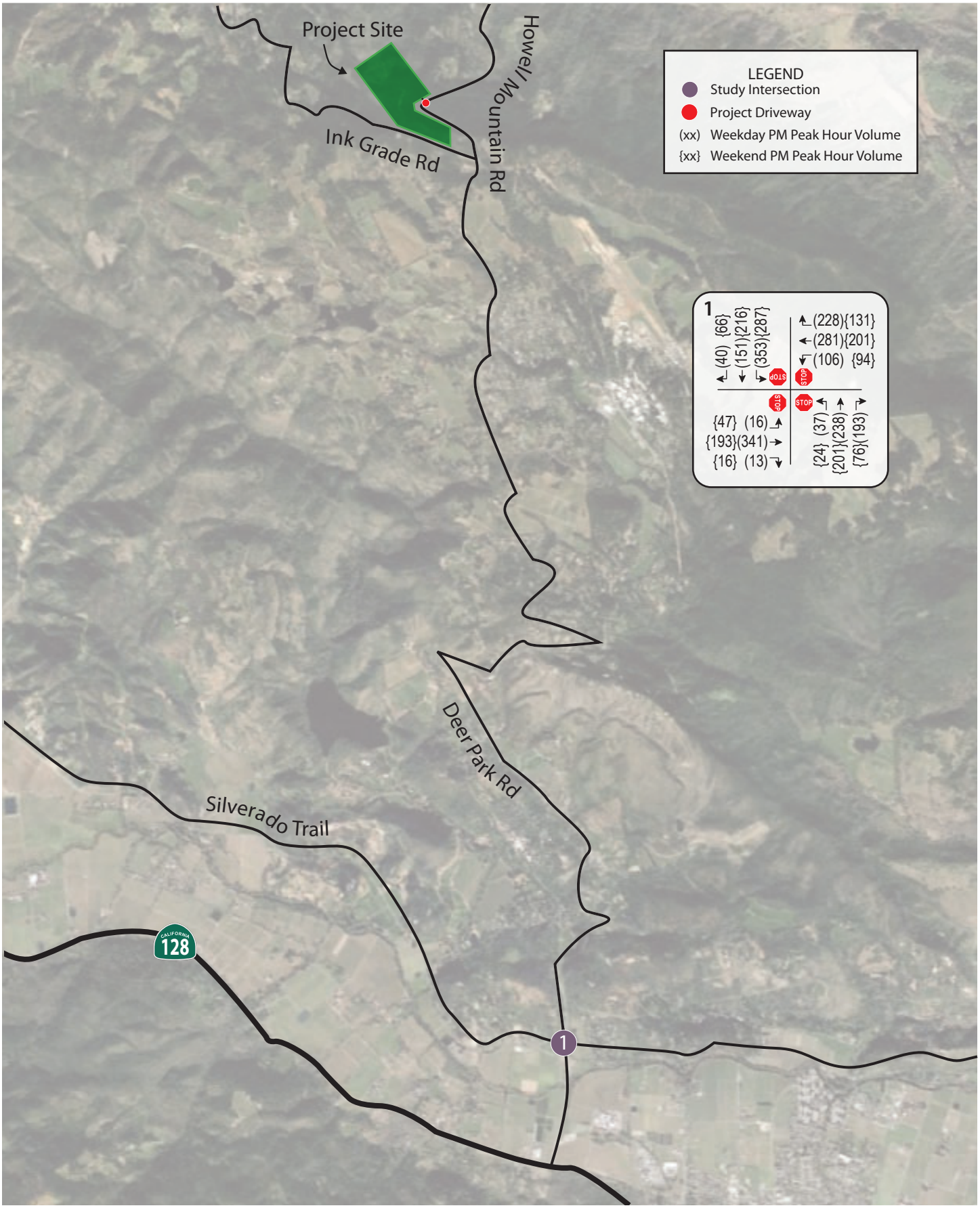
Study Intersection	Friday Peak		Saturday Peak	
	Delay	LOS	Delay	LOS
1. Silverado Trail/Deer Park Rd	**83.1**	**F**	**45.3**	**E**
Signalized	43.3	D	24.9	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; **Bold** text = deficient operation; Shaded = with improvements

Conversion of the existing traffic signal at the intersection from flashing red operation to normal signal operation and modification of the lane configurations to include separate left-turn and shared through/ right-turn lanes on all four approaches would result in acceptable LOS D or C operation during the Friday and Saturday peak hours respectively.

Project Description

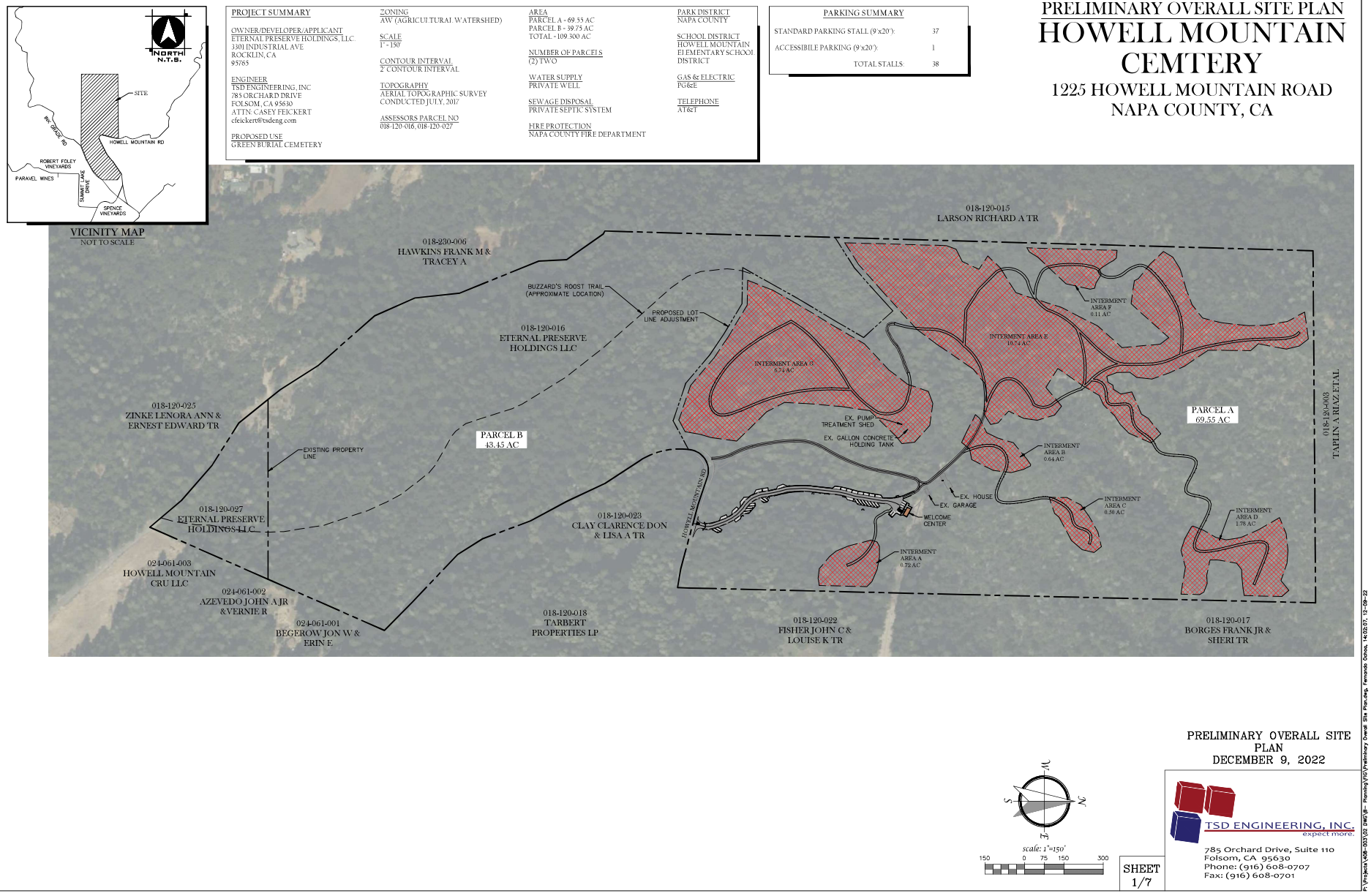
The proposed project would be developed as a green burial cemetery on a 110-acre site in the County of Napa and managed as a conservation property. Approximately 21.8 acres of the 110-acre site would be designated for interment areas and would accommodate plots and gravesites. The remaining portion of the site would be retained as open space. Existing and planned trails would be open to the public. Trails would provide access for pedestrians and all-terrain vehicles associated with the cemetery function to gain access to plots within interment areas. A 20-foot-wide driveway would extend from Howell Mountain Road into the site and terminate at a turnaround area north of the office. The administrative and sales functions of the cemetery would be housed at an off-site location in an existing, previously approved office building in a nearby community. The specific site has not yet been identified, however, the use of an existing building would take advantage of the environmental clearance process for that building and no further analysis would be needed. A 400 square foot welcome center would be built at the end of the driveway. The proposed project site plan is shown in Figure 4.



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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 3 – Future Traffic Volumes



Source: TSD Engineering, Inc. 3/23

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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 4 – Site Plan

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021 for a Cemetery (Land Use #566). Standard rates account for all trips associated with the cemetery use; however, since the administrative and sales functions of the cemetery would be housed off-site, the trip generation estimate is considered conservative. Based on the applicant's knowledge of similar facilities, it was estimated that approximately 28 percent of cemetery-related trips would be to the off-site office, which is not included as part of the proposed project.

Consideration was given to use of the rates for Public Parks (Land Use #411) for the open space; however, the public parks land use represents facilities with activities such as sports, developed picnic facilities, boating, multi-use trails, etc. and this is not representative of the proposed open space. Due to limitations of this data, the trip generation for the 88.2 acres of open space was estimated using data from a peak hour survey for North Sonoma Mountain Regional Park and Open Space Preserve in Sonoma County, where the primary usage is by trail users and which is at a similarly remote location as the project site. Given the rural location of the site and the numerous other parks in the area with hiking trails, including the considerably larger Bothe-Napa Valley State Park (1,900 acres) and Las Posadas State Forest (800 acres), it appears likely that trail users at the project site would consist primarily of cemetery visitors and that few project trips would be for the sole purpose of using the proposed trails. Therefore, the trip generation estimate for the proposed open space is considered conservative.

Based on application of the ITE and use-specific trip generation rates, the proposed project is expected to generate an average of 108 trips per day, including 8 p.m. peak hour trips on Friday and 34 trips during the Saturday p.m. peak hour. These results are summarized in Table 7.

Table 7 – Trip Generation Summary

Land Use	Units	Daily		Weekday PM Peak Hour				Weekend PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Cemetery	21.8 ac	6.02	131	0.46	10	3	7	2.00	44	23	21
Off-Site Office Trips	-28%		-37		-3	-1	-2		-12	-6	-6
Public Parks	88.2 ac	0.16	14	0.017	1	1	0	0.025	2	1	1
Total			108		8	3	5		34	18	16

Note: ac = acres

Trip Distribution

The pattern used to allocate new project trips to the street network was determined based on familiarity with the area and surrounding region as well as likely origins and destinations for patrons of the project. Because the cemetery is located on the east side of the Napa Valley, it is likely that nearly all the project-related trips would occur via Silverado Trail. A distribution of 70 percent to the south and 30 percent to the north via Silverado Trail was applied.

Intersection Operation

It is noted that the intersection operations analysis described below was conducted based on an earlier version of the project description. Based on the previous description it was estimated that the project would generate 170 daily trips, or 62 more than are now estimated, with 14 trips during the weekday p.m. peak hour and 46 during the weekend p.m. peak hour, or six more p.m. peak hour trips and 12 more weekend peak hour trips. As the analysis includes more project-added trips, the estimated impact of the project on intersection operations is conservative.

Existing plus Project Conditions

Upon the addition of project-related traffic to Existing volumes, the study intersection of Silverado Trail/ Deer Park Road would be expected to continue operating acceptably. Project traffic results are summarized in Table 8 and project traffic volumes are shown in Figure 5.

Table 8 – Existing and Existing plus Project PM Peak Hour Intersection Levels of Service

Study Intersection	Existing Conditions				Existing plus Project			
	Friday Peak		Saturday Peak		Friday Peak		Saturday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Silverado Trail/Deer Park Rd	25.0	D	16.7	C	25.9	D	17.9	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service

Finding – The study intersection is expected to continue operating acceptably at the same service levels upon the addition of project-generated traffic.

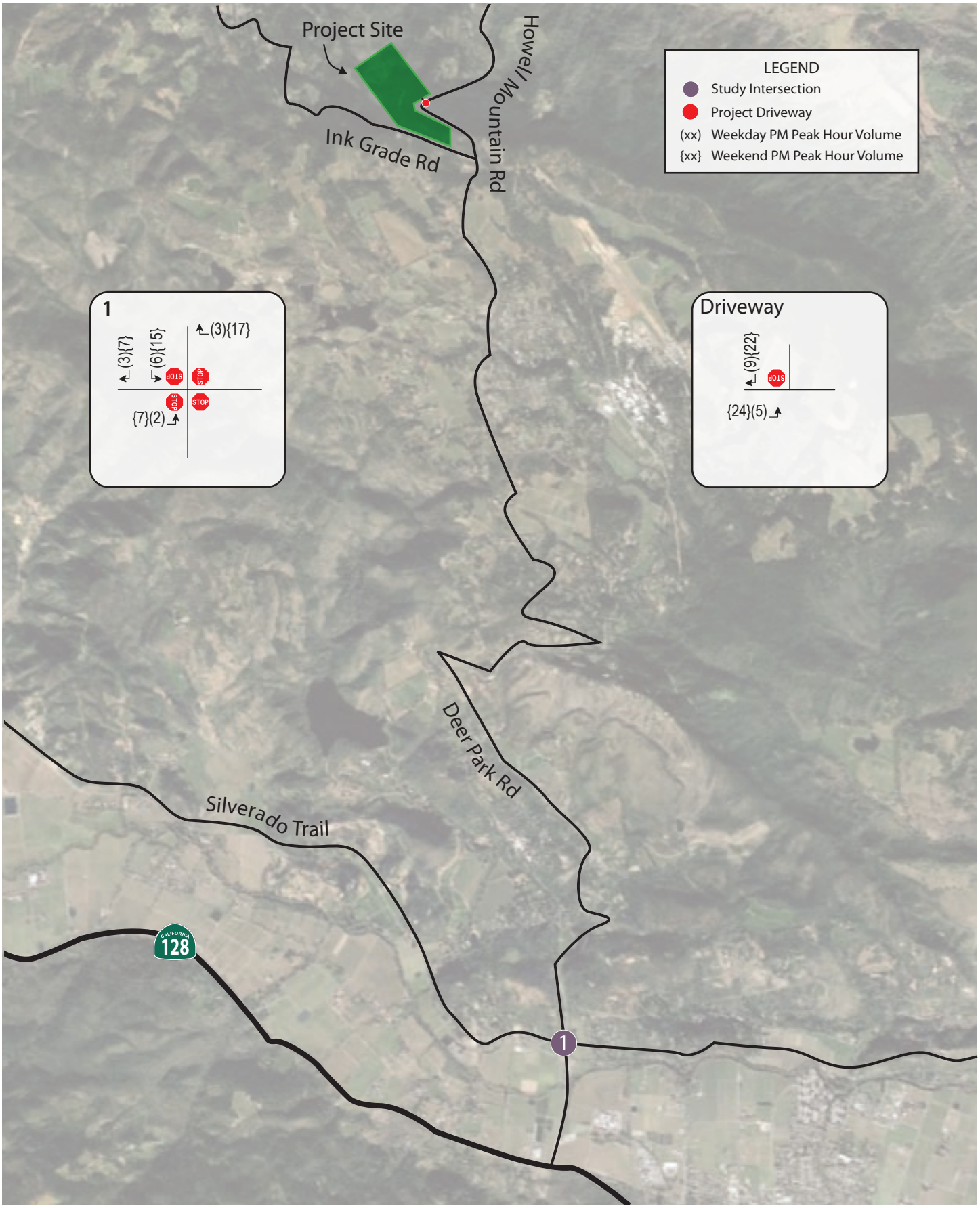
Future plus Project Conditions

Upon the addition of project-generated traffic to the anticipated Future volumes and under the current geometrics and controls, the study intersection would continue operating at LOS F during the Friday p.m. peak hour and would deteriorate to LOS F operation during the Saturday p.m. peak hour. As noted above, the analysis used a higher trip generation estimate based on a previous version of the project description; however, based on the County's evaluation criteria, the project would still result in an adverse impact at this intersection and the finding would not change even if the lower trip generation associated with the project as currently proposed were applied. The Future plus Project operating conditions are summarized in Table 9.

Table 9 – Future and Future plus Project PM Peak Hour Intersection Levels of Service

Study Intersection *Approach*	Future Conditions				Future plus Project			
	Friday Peak		Saturday Peak		Friday Peak		Saturday Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Silverado Trail/Deer Park Rd	**83.1**	**F**	**45.3**	**E**	**85.6**	**F**	**50.5**	**F**
Signalized	43.3	D	24.9	C	44.8	D	25.9	C
Modify SB Lane Assignments					**49.2**	**E**	21.1	C

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; **Bold** text = deficient operation; Shaded cells = conditions with recommended improvements; ln = lane



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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 5 – Project Traffic Volumes

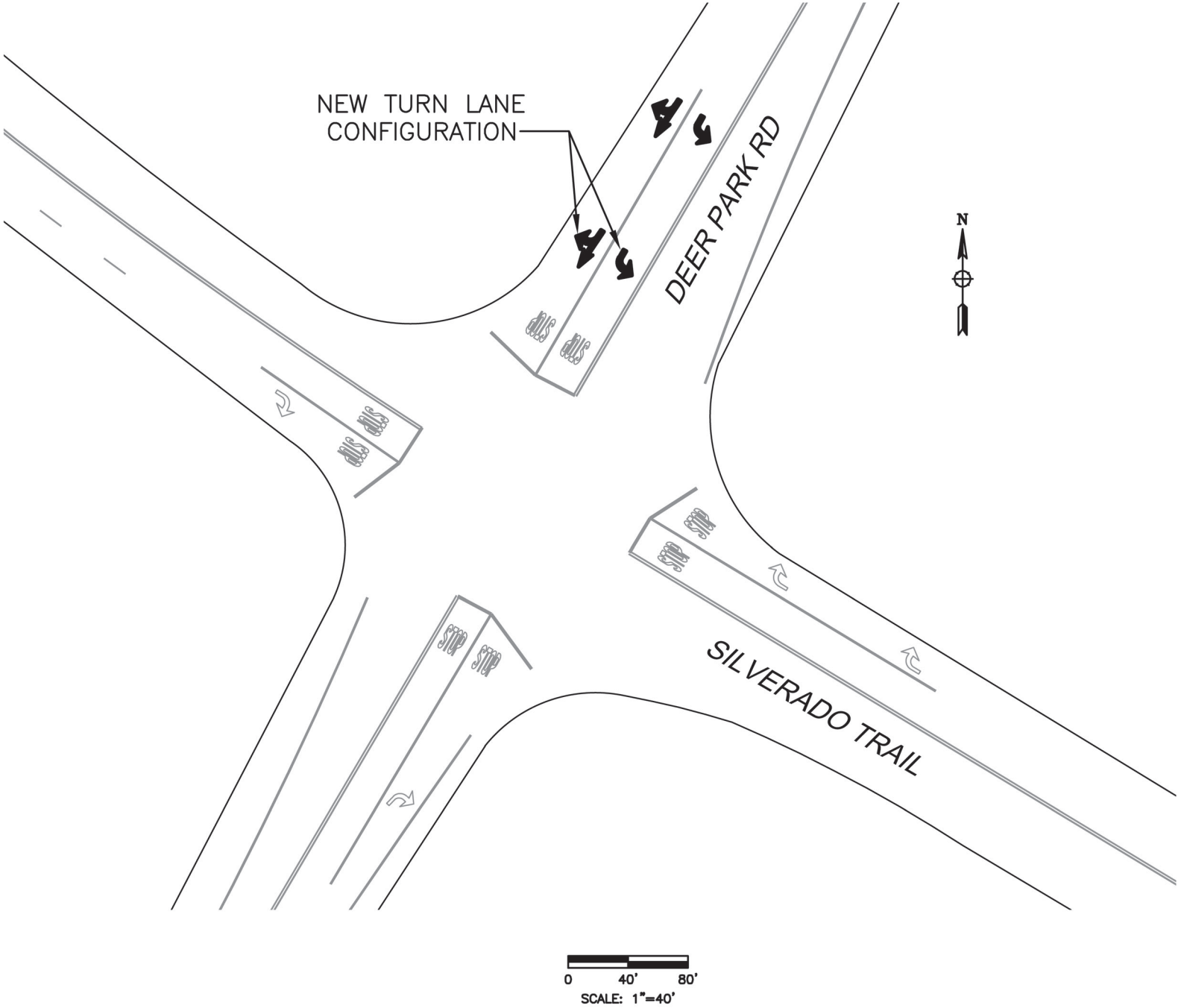
Finding – With the addition of project-generated traffic to the intersection as currently configured and controlled, continued LOS operation would be expected during the Friday p.m. peak hour and operation would deteriorate to LOS F during the Saturday p.m. peak hour. With signalization and modifications to the lane assignments, which are needed to achieve acceptable operation without the project, acceptable operation would be maintained upon the addition of project-generated traffic.

Recommendation – If the County determines that the signal at Silverado Trail/Deer Park Road is not to be energized to accommodate the projected increases in areawide traffic, it is recommended that the markings on the southbound approach be modified to change the through/left-turn lane to a dedicated left-turn lane and change the right-turn lane to a through/right-turn lane as part of the proposed project. While the through lane would be offset from the centerline on the southerly leg with this change, the receiving lane is of sufficient width that the edgeline would direct through traffic to the appropriate location and no further modifications would be needed. With this change in the lane assignments acceptable operation would be achieved during the weekend peak hour and an improvement from LOS F to LOS E would be expected during the weekday p.m. peak hour. The proposed change is indicated in Figure 6.

Travel Demand Analysis

Senate Bill (SB) 743 established a change in the metric to be applied for determining traffic impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the increase in Vehicle Miles Traveled (VMT) as a result of a project will be the basis for determining impacts once this new metric is fully vetted and adopted. The *Napa County Traffic Impact Study (TIS) Guidelines*, 2022, established thresholds of significance related to VMT. The County guidelines state that projects estimated to generate more than 110 net new passenger trips per day must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel. If these strategies would not reduce the project's VMT by at least 15 percent, the project would be considered to have a significant VMT impact. Total VMT has been identified by the County as the metric to be used to assess a project's VMT.

The project is estimated to generate an average of 108 trips per day. Since the estimated trip generation is less than the County's threshold of 110 trips per day, the project is presumed to have a less-than-significant impact for VMT and no mitigation measures are required. However, Transportation Demand Management (TDM) measures are recommended to ensure that the proposed on-site parking supply can meet the anticipated demand on days where visitation is expected to be high; these strategies are described in the parking discussion below. While project-related VMT would be less than significant, and trip reduction measures are not needed as a mitigation, the implementation of TDM measures would reduce VMT further below estimated levels and would support the County's efforts to reduce vehicle trips.



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Traffic Impact Study for the Howell Mountain Cemetery Project

Figure 6 – Recommended Improvement Sketch

Alternative Modes

Pedestrian Facilities

Given its rural location, lack of existing facilities, and the nature of the project, project patrons and employees are not expected to walk to the site.

Finding – The lack of pedestrian facilities serving the project site on Howell Mountain Road is consistent with the surrounding area and adequate for the type of land use.

Bicycle Facilities

Silverado Trail has Class II bike lanes and is a major regional route that may be used to access the project site from the south. The planned Class III bicycle facilities on Howell Mountain Road would further enhance access to the site.

Finding – Bicycle facilities serving the project site are adequate and will improve upon the completion of the proposed facilities. The project would not affect the County's ability to establish the Class III route on Howell Mountain Road, so is consistent with these plans.

Transit

The proposed project would not be expected to generate new transit demand due to the lack of transit facilities in the area.

Finding – The lack of transit facilities serving the project site is adequate for the demand.

Access and Circulation

Site Access

As proposed, a 20-foot-wide driveway would extend from Howell Mountain Road into the site and terminate at a turnaround area north of the welcome center. This would be the only access point to the site for the cemetery and open space uses, and there would be no additional pedestrian entrances or trailheads to provide access to the trails.

Finding – On-site circulation is expected to continue operating acceptably.

Sight Distance

Sight distances along Howell Mountain Road at the project driveway were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for minor street approaches that are driveways are based on stopping sight distance, with approach travel speeds used as the basis for determining the recommended sight distance. For an approach speed of 35 mph the recommended stopping sight distance is 250 feet. This is applicable to the east of the project driveway based on the posted speed limit. To the west, an advisory speed limit of 15 mph is posted around the curve west of the driveway. Applying a conservative design speed of 25 mph for vehicles approaching from this direction, the recommended stopping sight distance is 150 feet.

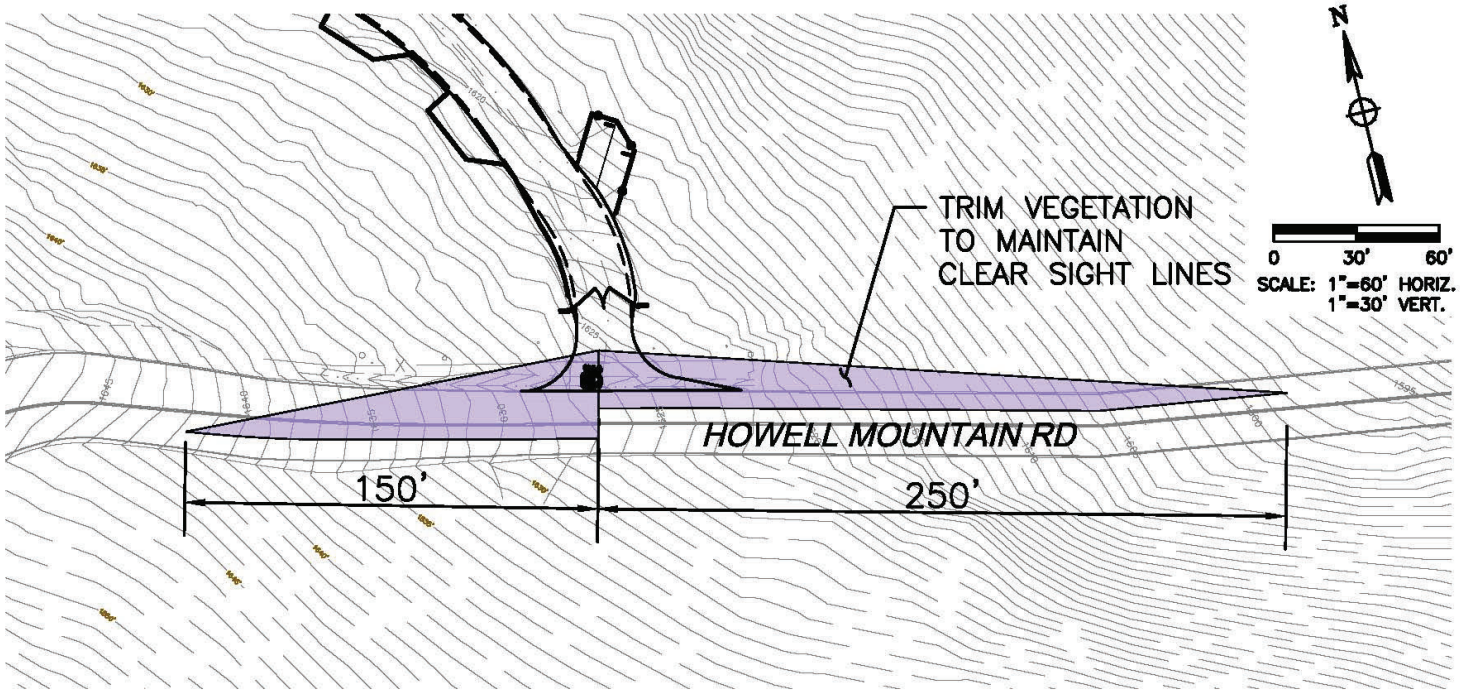
Based on a review of field conditions, sight distance at the driveway extends approximately 180 feet to the west and 260 feet to the east. However, vegetation on the north side of Howell Mountain Road east of the project driveway can hinder sight lines, restricting the available sight distance to below recommended minimums. Therefore, to ensure adequate sight lines are maintained, vegetation east of the driveway should be trimmed per guidance provided by the Federal Highway Administration in its guide on *Vegetation Control for Safety*, 2007, which recommends that bushes and shrubs be kept under three feet in height, and that trees and hanging branches be trimmed to a minimum height of seven feet. Sight distance diagrams for the minimum recommended distance of 150 feet to the west and 250 feet to the east are provided in Figure 7.

Finding – Adequate sight distance is available at the project driveway looking to the west and could be achieved to the east by trimming vegetation.

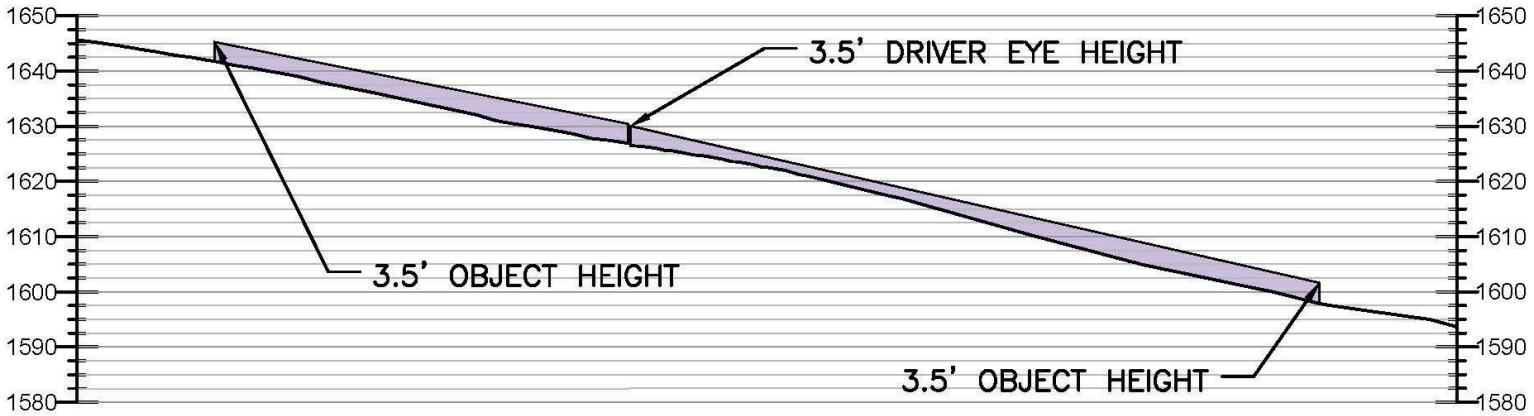
Recommendation – To achieve adequate sight lines to the east vegetation should be trimmed such that bushes and shrubs are kept under three feet in height, and that trees and hanging branches are trimmed to a minimum height of seven feet. Additionally, sight distance should be reevaluated after the vegetation is trimmed.

Emergency Access

The AutoTURN application of AutoCAD was used to simulate the travel path of a typical Napa County fire truck in order to evaluate the adequacy of emergency vehicle access for the project driveway. As designed, a typical fire truck with a length of 29.5 feet would be able to enter, circulate through and exit the site. Access for emergency response vehicles is therefore expected to function acceptably. Two access exhibits, one simulating inbound access to the project site and the other simulating outbound access, are provided in Appendix D.



PLAN



PROFILE

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Figure 7 – Sight Distance Diagram

Access Analysis

Left-Turn Lane Warrants

The County of Napa has a published policy that provides guidance on when a turn lane is needed based on the daily traffic volume projected to use the driveway as a function of roadway ADT (Average Daily Traffic). A left-turn lane meets warrants when the corresponding value plots above the curve indicated on the Left Turn Lane Warrant Graph from the *Napa County Road and Street Standards* and is unwarranted if the value plots below the curve.

Based on the Napa County left turn lane warrant graph, a left-turn lane would be warranted on Howell Mountain Road at the project driveway using Existing plus Project volumes.

According to the *Napa County Road and Street Standards*, 2023, exceptions to Napa County Standards may be allowed if:

> *The exception will preserve unique features of the natural environment which includes, but is not limited to, natural water courses, steep slopes, geological features, heritage oak trees, or other trees of at least six inches in diameter at breast height and found by the decision-maker to be of significant importance, but does not include human altered environmental features such as vineyards and ornamental or decorative landscaping, or artificial features such as, rock walls, fences, or the like;* and
>
> *The Zoning Administrator, Planning Commission, or other approving body shall not grant an exception unless it finds that grant of the exception, as conditioned by the Zoning Administrator, the Planning Commission, or other approving body provides the same overall practical effect as these Standards towards providing defensible space, and consideration towards life, safety, and public welfare.*

As is evident through a review of the area using Google Earth, there are numerous large redwood and other trees on both sides of Howell Mountain Road on either side of the project driveway and close enough to the roadway that they would need to be removed to widen the road to accommodate a left-turn lane. Further, the roadway runs along the side of a mountain, as indicated by the topographic lines on the grading plan, resulting in grades on both sides of the road that would require retaining walls to accommodate any widening. To install a left-turn lane would require removal of heritage trees as well as grading into a hill or fill on a downward slope. As this activity would not preserve the unique features of the natural environment, an exception appears to be warranted.

Because an exception is required to preserve this natural resource, consideration was given to the ability to achieve the same overall effect as providing a left-turn lane. There are currently no left-turn lanes on Howell Mountain Road in the vicinity of the project site, including at nearby intersections and other driveways, so drivers would routinely encounter vehicles stopped or slowing to turn left into cross streets and intersections along this roadway segment. The lack of a left-turn lane would therefore not violate driver expectation and this would, in fact, be consistent with the character and operation of the roadway. As these is not a negative safety impact that would need to be mitigated through installation of a left-turn lane, given the low volume of traffic both on Howell Mountain Road and accessing the site, the overall effect in terms of traffic operation is essentially the same without a turn lane as it would be with one.

A copy of the traffic counts that were collected for the warrant analysis and the left-turn-lane warrant graphs are included in Appendix E.

Finding – A left-turn lane is warranted on Howell Mountain Road at the existing project driveway based on the County of Napa's policy. However, as installation of a left-turn pocket would require removal of numerous large trees and therefore have a negative impact on this natural resource, it appears that an exception to the policy would be reasonable.

Recommendation – An exception to the County's standards to not put in a left-turn pocket should be pursued to avoid removal of a substantial number of heritage trees.

Parking

The project as proposed includes the construction of 38 parking spaces, one of which would be a regular accessible space. Since the cemetery office functions would be located off-site, typically there would be only two employees on site at the cemetery during the week and one on weekends. The largest number of visitors to the cemetery is anticipated on weekends, and assuming that two spaces would be available for employees, the remaining 36 spaces would be available for guests. Since Napa County does not have a specific parking minimum for cemeteries or similar land uses, the planning commission or zoning administrator has the authority to determine the number of parking spaces that are required, in accordance with Napa County Code 18.110.030.

The anticipated demand for on-site parking was estimated based on information provided by the applicant based on their experience with similar facilities. The applicant has estimated that 15 to 25 vehicles are typically used to transport guests to graveside interment services; with an estimated 30 to 40 vehicles at larger services, which occur less frequently. In addition to interment services, consideration was given to cemetery visitation; peak visiting times are holidays including Mother's Day, Father's Day, and Christmas, when it is estimated that there would be 150 to 200 vehicles per day. Visitors are estimated to spend one hour or less at the site. Therefore, with 36 visitor spaces available on weekends, 18 percent of the peak holiday visitors could be accommodated at one time.

To accommodate larger interment services, project staff would need to coordinate with funeral homes and places of worship that host funeral services, providing them with information about the site's maximum capacity, and indicating that they will be turned away from the cemetery if no on-site parking spaces are available. Attendees at services should be encouraged to carpool regardless of the anticipated size of the event to minimize the number of vehicles at the project site, and multiple interment services should not be scheduled simultaneously. For larger gatherings, customers should be encouraged to provide a shuttle to transport groups of guests to and from the site. To minimize the potential for exceeding the available parking supply on high visitation days, interment services should be prohibited on those days to allow the parking spaces to be used by other visitors. Ridesharing should be encouraged for all visitors on such days.

According to Chapter 5 of the Guide to ADA Accessibility Standards and *Napa County Road and Street Standards*, 2021 for a parking lot with between 26 and 50 spaces the parking lot must have a minimum of two accessible spaces, one of which must be a van accessible space. One parking space near the welcome center will need to be designated as an accessible space and resized for an accessible van space.

Napa County Code Section 18.110.040 specifies that all projects requiring more than 10 automobile spaces shall provide 10 bicycle parking spaces. In addition, for projects requiring 20 or more vehicle spaces, one-half of the bicycle parking spaces shall be covered. As proposed, the project would provide 10 spaces at the welcome center, five of which would be covered.

Finding – The project would have adequate parking for day-to-day requirements, but the demand could potentially exceed the supply for parking on high visitation days if one or more interment services are also scheduled. The proposed bicycle parking would meet County requirements.

Recommendations – One space near the welcome center should be designed as a van accessible space. Cemetery staff should coordinate with funeral service operators to encourage carpooling to the site for all interment services, to use a shuttle for larger events, and to indicate that visitors will be turned away

from the cemetery if on-site parking is not available. Only one interment service should be scheduled at a time, and on holidays when higher levels of visitation are expected, no interment services should be scheduled. Ridesharing should be encouraged for all visitors on holidays, and informational materials for the cemetery should indicate that visitors will be turned away if on-site parking spaces are not available. To prevent visitors to the site from interfering with through traffic along Howell Mountain Road, “No Parking on Pavement” signs should be installed along both sides of the roadway for the areas within 500 feet of the driveway.

Conclusions and Recommendations

Conclusions

- The study intersection is currently operating acceptably.
- Under the projected future volumes operation would be expected to deteriorate to LOS E or F during the Saturday and Friday peak periods respectively. Acceptable LOS D operation could be achieved by converting control to the existing traffic signal that currently operates in red flash only. Additionally, the lane assignments would need to be changed to provide a separate left-turn lane and shared through/right-turn lane on each approach.
- The proposed project is expected to generate an average of 108 trips per day, including eight p.m. peak hour trips on Friday and 34 trips during the Saturday p.m. peak hour. This estimate is conservative, as the administrative and sales functions of the cemetery will be located off-site.
- The intersection of Silverado Trail/Deer Park Road would be expected to continue operating acceptably with project traffic added to existing volumes. With signalization, as is needed to achieve acceptable operation under future volumes, acceptable operation would continue upon adding project-generated trips.
- Should the County elect not to convert to full signalized operation at Silverado Trail/Deer Park Road, acceptable operation could be achieved during the weekend peak hour (LOS F to LOS C) and operated improved from LOS F to LOS E during the weekday p.m. peak hour by modifying the striping on the southbound approach to include a left-turn lane and a through/right-turn lane.
- Since the project would generate fewer than 110 trips per day, the project's VMT impact is presumed to be less than significant. The location of the project's administrative and sales functions in an off-site office would result in fewer trips to the site than would otherwise be expected. While the open space portion of the site would be open to the general public, it is anticipated that trail users would be primarily cemetery visitors. The use of carpooling and shuttle services would reduce project-related VMT below levels that would otherwise be expected, though TDM measures are recommended to address parking supply adequacy and would further reduce VMT.
- Under the anticipated Future volumes, operation of the study intersection is expected to deteriorate to LOS F during the Friday p.m. peak hour and to LOS E during the Saturday p.m. peak hour. Upon the addition of project-generated traffic to the anticipated Future volumes, the study intersection would continue operating at LOS F during the Friday p.m. peak hour and would deteriorate to LOS F during the Saturday p.m. peak hour.
- While there are no pedestrian, bicycle or transit facilities in the project vicinity, the project would not conflict with any policies relevant to these modes, so would have a less-than-significant impact as regards these modes.
- On-site circulation is expected to operate acceptably.
- Adequate sight distance is available at the project driveway in both directions.

- A left-turn lane would be warranted on Howell Mountain Road at the existing project driveway based on the County's criteria. Since installation of a turn lane would require the removal of a substantial number of heritage redwood and other trees, an exception to this policy appears to be warranted. As there are no other left turn lanes on Howell Mountain Road in the vicinity of the project site, the lack of a left-turn lane at the project driveway would be consistent with driver expectation and the character of the roadway.

- The proposed parking supply is expected to be adequate for typical use levels, although there would be potential capacity concerns during large interment services and during interment services held on days when visitation is high.

Recommendations

- If the County determines that the existing signal equipment at Silverado Trail/Deer Park Road is not going to be used to control the intersection in the future to achieve acceptable operation, it is recommended that the lane assignment on the southbound approach be modified to convert the left-turn/through lane to a left-turn lane and the right-turn lane to a through/right-turn lane by replacing the existing pavement arrows.

- To achieve adequate sight lines to the east from the project driveway, vegetation on the north side of Howell Mountain Road should be trimmed such that bushes and shrubs be kept under three feet in height, and that trees and hanging branches be trimmed to a minimum height of seven feet. Sight distance should be reevaluated after the vegetation is trimmed.

- A van accessible space should be provided near the welcome center.

- Cemetery staff should coordinate with providers of funeral services to inform cemetery visitors about the limited parking supply, to encourage carpooling to the site, and to recommend the provision of a shuttle to the cemetery for large interment services. Visitors that arrive at the site when no parking spaces are available would be prohibited from entering. "No Parking on Pavement" signs should be installed along both sides of Howell Mountain Road to control parking within 500 feet of the project driveway.

Study Participants and References

Study Participants

Principal in Charge	Dalene J. Whitlock, PE (Civil, Traffic), PTOE,
Senior Planner	Barry Bergman, AICP
Associate Engineer	Cameron Nye, EIT
Graphics	Cameron Wong, Jessica Bender
Editing/Formatting	Jessica Bender
Quality Control	Dalene J. Whitlock, PE (Civil, Traffic), PTOE

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NAX163



Appendix A

Traffic Counts and Growth Rate Calculations

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Prepared by National Data & Surveying Services

VOLUME

Chiles Pope Valley Rd near Maxville Lake Winery

Day: Friday
Date: 6/26/2020

City: St Helena
Project #: CA20_8104_001

DAILY TOTALS	NB	SB	EB	WB	Total
	577	525	0	0	1,102

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0	
00:15	0		1						1	
00:30	1		1						2	
00:45	1	2	0	2					1	4
01:00	1		0						1	
01:15	0		0						0	
01:30	0		0						0	
01:45	0	1	0						0	1
02:00	0		0						0	
02:15	0		1						1	
02:30	1		0						1	
02:45	0	1	1	2					1	3
03:00	2		1						3	
03:15	5		1						6	
03:30	2		1						3	
03:45	1	10	1	4					2	14
04:00	1		3						4	
04:15	3		0						3	
04:30	8		2						10	
04:45	10	22	0	5					10	27
05:00	9		7						16	
05:15	14		2						16	
05:30	16		4						20	
05:45	22	61	7	20					29	81
06:00	4		5						9	
06:15	5		3						8	
06:30	11		4						15	
06:45	11	31	5	17					16	48
07:00	3		5						8	
07:15	3		4						7	
07:30	2		6						8	
07:45	5	13	8	23					13	36
08:00	8		5						13	
08:15	9		10						19	
08:30	7		5						12	
08:45	7	31	9	29					16	60
09:00	4		5						9	
09:15	6		7						13	
09:30	7		3						10	
09:45	9	26	12	27					21	53
10:00	4		13						17	
10:15	9		5						14	
10:30	5		12						17	
10:45	9	27	7	37					16	64
11:00	9		9						18	
11:15	7		11						18	
11:30	5		13						18	
11:45	7	28	8	41					15	69
TOTALS		253		207						**460**
SPLIT %		55.0%		45.0%						**41.7%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	10		14						24	
12:15	6		18						24	
12:30	5		18						23	
12:45	17	38	9	59					26	97
13:00	4		9						13	
13:15	12		9						21	
13:30	9		13						22	
13:45	14	39	12	43					26	82
14:00	18		11						29	
14:15	9		14						23	
14:30	8		16						24	
14:45	10	45	14	55					24	100
15:00	13		14						27	
15:15	6		19						25	
15:30	11		15						26	
15:45	10	40	10	58					20	98
16:00	7		14						21	
16:15	5		4						9	
16:30	11		11						22	
16:45	12	35	8	37					20	72
17:00	9		8						17	
17:15	6		3						9	
17:30	6		1						7	
17:45	14	35	6	18					20	53
18:00	7		4						11	
18:15	7		2						9	
18:30	2		4						6	
18:45	11	27	1	11					12	38
19:00	10		5						15	
19:15	8		5						13	
19:30	5		2						7	
19:45	3	26	2	14					5	40
20:00	0		1						1	
20:15	5		2						7	
20:30	3		3						6	
20:45	4	12	4	10					8	22
21:00	4		5						9	
21:15	0		1						1	
21:30	3		0						3	
21:45	5	12	3	9					8	21
22:00	0		0						0	
22:15	2		0						2	
22:30	1		1						2	
22:45	3	6	0	1					3	7
23:00	3		2						5	
23:15	1		0						1	
23:30	3		0						3	
23:45	2	9	1	3					3	12
TOTALS		324		318						**642**
SPLIT %		50.5%		49.5%						**58.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	577	525	0	0	1,102

AM Peak Hour	05:00	11:45			**11:45**	**PM Peak Hour**	13:15	14:30			**13:45**
AM Pk Volume	61	58			**86**	**PM Pk Volume**	53	63			**102**
Pk Hr Factor	0.693	0.806			**0.896**	**Pk Hr Factor**	0.736	0.829			**0.879**
7 - 9 Volume	44	52	0	0	**96**	**4 - 6 Volume**	70	55	0	0	**125**
7 - 9 Peak Hour	08:00	07:30			**08:00**	**4 - 6 Peak Hour**	16:30	16:00			**16:00**
7 - 9 Pk Volume	31	29	0	0	**60**	**4 - 6 Pk Volume**	38	37	0	0	**72**
Pk Hr Factor	0.861	0.725	0.000	0.000	**0.789**	**Pk Hr Factor**	0.792	0.661	0.000	0.000	**0.818**

Prepared by National Data & Surveying Services

VOLUME

Chiles Pope Valley Rd near Maxville Lake Winery

Day: Saturday
Date: 6/27/2020

City: St Helena
Project #: CA20_8104_001

DAILY TOTALS	NB	SB	EB	WB	Total
	425	450	0	0	875

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	1		0				1		12:00	11		6				17	
00:15	0		0				0		12:15	14		6				20	
00:30	0		0				0		12:30	5		8				13	
00:45	2	3	1	1			3	4	12:45	8	38	3	23			11	61
01:00	0		0				0		13:00	5		9				14	
01:15	0		0				0		13:15	14		10				24	
01:30	1		0				1		13:30	15		13				28	
01:45	1	2	0				1	2	13:45	7	41	11	43			18	84
02:00	0		0				0		14:00	10		12				22	
02:15	0		0				0		14:15	5		5				10	
02:30	1		4				5		14:30	6		10				16	
02:45	0	1	2	6			2	7	14:45	5	26	8	35			13	61
03:00	1		1				2		15:00	5		5				10	
03:15	1		0				1		15:15	10		7				17	
03:30	0		2				2		15:30	9		8				17	
03:45	1	3	0	3			1	6	15:45	6	30	13	33			19	63
04:00	0		0				0		16:00	6		10				16	
04:15	2		0				2		16:15	8		7				15	
04:30	5		0				5		16:30	0		7				7	
04:45	5	12	0				5	12	16:45	7	21	5	29			12	50
05:00	10		2				12		17:00	5		6				11	
05:15	10		2				12		17:15	9		12				21	
05:30	12		0				12		17:30	6		3				9	
05:45	11	43	6	10			17	53	17:45	6	26	6	27			12	53
06:00	3		2				5		18:00	2		6				8	
06:15	5		2				7		18:15	6		5				11	
06:30	10		2				12		18:30	3		13				16	
06:45	3	21	1	7			4	28	18:45	5	16	8	32			13	48
07:00	7		5				12		19:00	2		0				2	
07:15	4		5				9		19:15	4		5				9	
07:30	3		2				5		19:30	4		4				8	
07:45	4	18	9	21			13	39	19:45	2	12	5	14			7	26
08:00	2		4				6		20:00	1		2				3	
08:15	4		9				13		20:15	2		3				5	
08:30	7		6				13		20:30	1		2				3	
08:45	6	19	10	29			16	48	20:45	1	5	4	11			5	16
09:00	4		5				9		21:00	4		5				9	
09:15	8		5				13		21:15	1		2				3	
09:30	1		4				5		21:30	0		2				2	
09:45	13	26	7	21			20	47	21:45	2	7	5	14			7	21
10:00	2		9				11		22:00	3		1				4	
10:15	5		4				9		22:15	0		0				0	
10:30	8		13				21		22:30	1		1				2	
10:45	4	19	12	38			16	57	22:45	1	5	0	2			1	7
11:00	4		10				14		23:00	0		1				1	
11:15	11		22				33		23:15	0		0				0	
11:30	5		10				15		23:30	1		1				2	
11:45	9	29	7	49			16	78	23:45	1	2	0	2			1	4
TOTALS		196		185				381	TOTALS		229		265				494
SPLIT %		51.4%		48.6%				43.5%	SPLIT %		46.4%		53.6%				56.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	425	450	0	0	875

AM Peak Hour	05:00	10:30					10:30		PM Peak Hour	13:15	13:15					13:15		
AM Pk Volume	43	57					84		PM Pk Volume	46	46					92		
Pk Hr Factor	0.896	0.648					0.636		Pk Hr Factor	0.767	0.885					0.821		
7 - 9 Volume	37	50	0	0			87		4 - 6 Volume	47	56	0	0			103		
7 - 9 Peak Hour	08:00	08:00					08:00		4 - 6 Peak Hour	16:45	16:30					16:45		
7 - 9 Pk Volume	19	29	0	0			48		4 - 6 Pk Volume	27	30	0	0			53		
Pk Hr Factor	0.679	0.725	0.000	0.000			0.750		Pk Hr Factor	0.750	0.625	0.000	0.000			0.631		

Prepared by National Data & Surveying Services

VOLUME

Howell Mountain Rd near project site access

Day: Friday
Date: 6/26/2020

City: Angwin
Project #: CA20_8104_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	874	822	1,696

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		0		4		12:00			16		10		26	
00:15			0		2		2		12:15			14		11		25	
00:30			1		3		4		12:30			8		12		20	
00:45			1	6	0	5	1	11	12:45			18	56	12	45	30	101
01:00			1		2		3		13:00			13		18		31	
01:15			1		0		1		13:15			16		13		29	
01:30			2		0		2		13:30			24		6		30	
01:45			1	5	2	4	3	9	13:45			17	70	11	48	28	118
02:00			0		1		1		14:00			22		15		37	
02:15			0		0		0		14:15			19		15		34	
02:30			0		1		1		14:30			21		12		33	
02:45			2	2	1	3	3	5	14:45			11	73	14	56	25	129
03:00			0		0		0		15:00			23		17		40	
03:15			0		1		1		15:15			18		14		32	
03:30			0		0		0		15:30			27		20		47	
03:45			0		1	2	1	2	15:45			24	92	13	64	37	156
04:00			1		0		1		16:00			17		9		26	
04:15			2		1		3		16:15			24		12		36	
04:30			3		3		6		16:30			21		8		29	
04:45			3	9	5	9	8	18	16:45			30	92	9	38	39	130
05:00			11		7		18		17:00			23		12		35	
05:15			4		10		14		17:15			28		4		32	
05:30			4		12		16		17:30			12		8		20	
05:45			10	29	11	40	21	69	17:45			17	80	5	29	22	109
06:00			3		14		17		18:00			15		15		30	
06:15			5		19		24		18:15			15		5		20	
06:30			6		12		18		18:30			10		7		17	
06:45			5	19	8	53	13	72	18:45			9	49	4	31	13	80
07:00			11		23		34		19:00			7		2		9	
07:15			13		20		33		19:15			11		9		20	
07:30			6		21		27		19:30			11		12		23	
07:45			8	38	23	87	31	125	19:45			8	37	2	25	10	62
08:00			2		15		17		20:00			6		7		13	
08:15			7		18		25		20:15			4		6		10	
08:30			12		16		28		20:30			5		7		12	
08:45			13	34	9	58	22	92	20:45			9	24	7	27	16	51
09:00			6		12		18		21:00			2		3		5	
09:15			11		15		26		21:15			3		3		6	
09:30			11		15		26		21:30			6		1		7	
09:45			7	35	18	60	25	95	21:45			6	17	3	10	9	27
10:00			10		15		25		22:00			3		3		6	
10:15			12		16		28		22:15			4		6		10	
10:30			5		13		18		22:30			5		3		8	
10:45			10	37	12	56	22	93	22:45			3	15	2	14	5	29
11:00			6		14		20		23:00			3		4		7	
11:15			17		12		29		23:15			6		2		8	
11:30			7		15		22		23:30			0		2		2	
11:45			15	45	8	49	23	94	23:45			1	10	1	9	2	19
TOTALS				259		426		**685**	**TOTALS**				615		396		**1011**
SPLIT %				37.8%		62.2%		**40.4%**	**SPLIT %**				60.8%		39.2%		**59.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	874	822	1,696

AM Peak Hour			11:15	07:00	**07:00**				**PM Peak Hour**			16:30	14:45	**15:00**		
AM Pk Volume			55	87	**125**				**PM Pk Volume**			102	65	**156**		
Pk Hr Factor			0.809	0.946	**0.919**				**Pk Hr Factor**			0.850	0.813	**0.830**		
7 - 9 Volume	0	0	72	145	**217**				**4 - 6 Volume**	0	0	172	67	**239**		
7 - 9 Peak Hour			07:00	07:00	**07:00**				**4 - 6 Peak Hour**			16:30	16:15	**16:15**		
7 - 9 Pk Volume	0	0	38	87	**125**				**4 - 6 Pk Volume**	0	0	102	41	**139**		
Pk Hr Factor	0.000	0.000	0.731	0.946	**0.919**				**Pk Hr Factor**	0.000	0.000	0.850	0.854	**0.891**		

Prepared by National Data & Surveying Services

VOLUME

Howell Mountain Rd near project site access

Day: Saturday
Date: 6/27/2020

City: Angwin
Project #: CA20_8104_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	660	588	1,248

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			5		9		14	
00:15			0		2		2		12:15			8		10		18	
00:30			0		0		0		12:30			11		17		28	
00:45			2	3	2	4	4	7	12:45			20	44	4	40	24	84
01:00			0		0		0		13:00			18		5		23	
01:15			1		1		2		13:15			9		12		21	
01:30			0		0		0		13:30			14		12		26	
01:45			1	2	0	1	1	3	13:45			11	52	7	36	18	88
02:00			1		0		1		14:00			16		5		21	
02:15			0		1		1		14:15			10		9		19	
02:30			0		1		1		14:30			10		8		18	
02:45			0	1	0	2	0	3	14:45			16	52	14	36	30	88
03:00			0		0		0		15:00			9		8		17	
03:15			0		1		1		15:15			5		12		17	
03:30			0		0		0		15:30			15		8		23	
03:45			0		0	1	0	1	15:45			17	46	12	40	29	86
04:00			0		1		1		16:00			9		17		26	
04:15			0		3		3		16:15			15		11		26	
04:30			2		0		2		16:30			11		11		22	
04:45			2	4	3	7	5	11	16:45			12	47	10	49	22	96
05:00			11		5		16		17:00			11		5		16	
05:15			2		8		10		17:15			10		11		21	
05:30			10		4		14		17:30			5		13		18	
05:45			1	24	5	22	6	46	17:45			12	38	9	38	21	76
06:00			1		4		5		18:00			7		12		19	
06:15			1		2		3		18:15			5		4		9	
06:30			5		4		9		18:30			11		3		14	
06:45			5	12	8	18	13	30	18:45			10	33	12	31	22	64
07:00			2		2		4		19:00			7		12		19	
07:15			4		5		9		19:15			15		7		22	
07:30			7		10		17		19:30			15		7		22	
07:45			10	23	6	23	16	46	19:45			11	48	6	32	17	80
08:00			7		5		12		20:00			5		8		13	
08:15			6		6		12		20:15			7		3		10	
08:30			2		5		7		20:30			13		14		27	
08:45			5	20	7	23	12	43	20:45			12	37	5	30	17	67
09:00			7		12		19		21:00			7		6		13	
09:15			9		13		22		21:15			4		3		7	
09:30			8		5		13		21:30			1		2		3	
09:45			9	33	4	34	13	67	21:45			1	13	3	14	4	27
10:00			10		14		24		22:00			3		2		5	
10:15			9		4		13		22:15			3		2		5	
10:30			16		6		22		22:30			3		3		6	
10:45			13	48	13	37	26	85	22:45			2	11	4	11	6	22
11:00			15		9		24		23:00			4		0		4	
11:15			16		14		30		23:15			3		4		7	
11:30			13		18		31		23:30			4		2		6	
11:45			14	58	11	52	25	110	23:45			0	11	1	7	1	18
TOTALS				228		224		**452**	**TOTALS**				432		364		**796**
SPLIT %				50.4%		49.6%		**36.2%**	**SPLIT %**				54.3%		45.7%		**63.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	660	588	1,248

AM Peak Hour			10:30	10:45	**10:45**	**PM Peak Hour**			12:45	15:45	**15:30**
AM Pk Volume			60	54	**111**	**PM Pk Volume**			61	51	**104**
Pk Hr Factor			0.938	0.750	**0.895**	**Pk Hr Factor**			0.763	0.750	**0.897**
7 - 9 Volume	0	0	43	46	**89**	**4 - 6 Volume**	0	0	85	87	**172**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			16:15	16:00	**16:00**
7 - 9 Pk Volume	0	0	30	27	**57**	**4 - 6 Pk Volume**	0	0	49	49	**96**
Pk Hr Factor	0.000	0.000	0.750	0.675	**0.838**	**Pk Hr Factor**	0.000	0.000	0.817	0.721	**0.923**

Prepared by National Data & Surveying Services

VOLUME

Chiles Pope Valley Rd Near Maxville Lake Winery

Day: Friday
Date: 7/10/2020

City: St. Helena
Project #: CA20_8105_001

DAILY TOTALS	NB	SB	EB	WB	Total
	621	511	0	0	1,132

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		3						6		12:00	10		6						16	
00:15	2		0						2		12:15	7		9						16	
00:30	2		0						2		12:30	10		9						19	
00:45	0	7	0	3					0	10	12:45	10	37	15	39					25	76
01:00	0		0						0		13:00	11		13						24	
01:15	0		0						0		13:15	12		14						26	
01:30	1		0						1		13:30	5		14						19	
01:45	1	2	0						1	2	13:45	14	42	3	44					17	86
02:00	0		1						1		14:00	12		5						17	
02:15	0		0						0		14:15	10		17						27	
02:30	0		0						0		14:30	12		23						35	
02:45	0		0	1					0	1	14:45	12	46	20	65					32	111
03:00	0		0						0		15:00	7		19						26	
03:15	0		1						1		15:15	15		13						28	
03:30	1		0						1		15:30	18		25						43	
03:45	0	1	1	2					1	3	15:45	14	54	8	65					22	119
04:00	2		3						5		16:00	13		12						25	
04:15	1		2						3		16:15	8		9						17	
04:30	1		0						1		16:30	3		9						12	
04:45	5	9	0	5					5	14	16:45	18	42	5	35					23	77
05:00	8		10						18		17:00	9		8						17	
05:15	15		2						17		17:15	11		5						16	
05:30	26		7						33		17:30	8		7						15	
05:45	27	76	12	31					39	107	17:45	8	36	3	23					11	59
06:00	3		5						8		18:00	7		4						11	
06:15	4		6						10		18:15	6		3						9	
06:30	5		9						14		18:30	4		2						6	
06:45	10	22	3	23					13	45	18:45	7	24	4	13					11	37
07:00	8		3						11		19:00	2		1						3	
07:15	6		6						12		19:15	9		4						13	
07:30	3		3						6		19:30	6		5						11	
07:45	5	22	9	21					14	43	19:45	4	21	2	12					6	33
08:00	9		6						15		20:00	3		5						8	
08:15	8		7						15		20:15	6		3						9	
08:30	4		3						7		20:30	0		4						4	
08:45	2	23	7	23					9	46	20:45	0	9	3	15					3	24
09:00	13		12						25		21:00	5		3						8	
09:15	4		6						10		21:15	4		0						4	
09:30	15		5						20		21:30	2		1						3	
09:45	4	36	4	27					8	63	21:45	4	15	1	5					5	20
10:00	11		13						24		22:00	3		1						4	
10:15	20		5						25		22:15	1		0						1	
10:30	8		7						15		22:30	3		0						3	
10:45	8	47	7	32					15	79	22:45	4	11	0	1					4	12
11:00	6		6						12		23:00	4		0						4	
11:15	7		7						14		23:15	1		0						1	
11:30	10		4						14		23:30	2		0						2	
11:45	9	32	8	25					17	57	23:45	0	7	1	1					1	8
TOTALS		277		193						470	TOTALS		344		318						662
SPLIT %		58.9%		41.1%						41.5%	SPLIT %		52.0%		48.0%						58.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	621	511	0	0	1,132

AM Peak Hour	05:00	05:45			05:00	PM Peak Hour	15:15	14:15			14:45
AM Pk Volume	76	32			107	PM Pk Volume	60	79			129
Pk Hr Factor	0.704	0.667			0.686	Pk Hr Factor	0.833	0.859			0.750
7 - 9 Volume	45	44	0	0	89	4 - 6 Volume	78	58	0	0	136
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:45	16:00			16:00
7 - 9 Pk Volume	26	25	0	0	51	4 - 6 Pk Volume	46	35	0	0	77
Pk Hr Factor	0.722	0.694	0.000	0.000	0.850	Pk Hr Factor	0.639	0.729	0.000	0.000	0.770

Prepared by National Data & Surveying Services

VOLUME

Chiles Pope Valley Rd Near Maxville Lake Winery

Day: Saturday
Date: 7/11/2020

City: St. Helena
Project #: CA20_8105_001

DAILY TOTALS	NB	SB	EB	WB	Total
	453	417	0	0	870

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	2		1						3		12:00	6		9						15	
00:15	1		0						1		12:15	13		9						22	
00:30	1		0						1		12:30	5		9						14	
00:45	0	4	1	2					1	6	12:45	9	33	9	36					18	69
01:00	0		0						0		13:00	13		12						25	
01:15	1		0						1		13:15	5		8						13	
01:30	0		0						0		13:30	6		10						16	
01:45	1	2	0						1	2	13:45	11	35	11	41					22	76
02:00	0		0						0		14:00	2		10						12	
02:15	0		0						0		14:15	8		3						11	
02:30	0		1						1		14:30	8		5						13	
02:45	0		0	1					0	1	14:45	12	30	3	21					15	51
03:00	0		0						0		15:00	11		4						15	
03:15	0		0						0		15:15	5		5						10	
03:30	0		0						0		15:30	9		7						16	
03:45	2	2	0						2	2	15:45	8	33	8	24					16	57
04:00	1		1						2		16:00	6		8						14	
04:15	4		0						4		16:15	10		11						21	
04:30	6		0						6		16:30	6		4						10	
04:45	4	15	0	1					4	16	16:45	7	29	6	29					13	58
05:00	11		1						12		17:00	7		6						13	
05:15	5		3						8		17:15	7		4						11	
05:30	8		2						10		17:30	2		3						5	
05:45	13	37	8	14					21	51	17:45	3	19	11	24					14	43
06:00	6		1						7		18:00	6		6						12	
06:15	2		2						4		18:15	6		9						15	
06:30	5		3						8		18:30	5		4						9	
06:45	1	14	1	7					2	21	18:45	1	18	3	22					4	40
07:00	4		5						9		19:00	3		3						6	
07:15	2		2						4		19:15	5		2						7	
07:30	1		2						3		19:30	2		2						4	
07:45	3	10	3	12					6	22	19:45	4	14	2	9					6	23
08:00	6		6						12		20:00	7		8						15	
08:15	3		2						5		20:15	4		4						8	
08:30	3		3						6		20:30	3		1						4	
08:45	13	25	16	27					29	52	20:45	3	17	2	15					5	32
09:00	8		5						13		21:00	2		5						7	
09:15	3		7						10		21:15	3		0						3	
09:30	6		9						15		21:30	2		1						3	
09:45	9	26	3	24					12	50	21:45	5	12	0	6					5	18
10:00	5		7						12		22:00	5		2						7	
10:15	4		15						19		22:15	3		1						4	
10:30	6		4						10		22:30	2		1						3	
10:45	10	25	12	38					22	63	22:45	0	10	0	4					0	14
11:00	12		20						32		23:00	2		4						6	
11:15	9		12						21		23:15	0		1						1	
11:30	11		10						21		23:30	2		0						2	
11:45	7	39	13	55					20	94	23:45	0	4	0	5					0	9
TOTALS		199		181						380	TOTALS		254		236						490
SPLIT %		52.4%		47.6%						43.7%	SPLIT %		51.8%		48.2%						56.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	453	417	0	0	870

AM Peak Hour	10:45	11:00			10:45	PM Peak Hour	12:15	13:00			12:15
AM Pk Volume	42	55			96	PM Pk Volume	40	41			79
Pk Hr Factor	0.875	0.688			0.750	Pk Hr Factor	0.769	0.854			0.790
7 - 9 Volume	35	39	0	0	74	4 - 6 Volume	48	53	0	0	101
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:15	16:00			16:00
7 - 9 Pk Volume	25	27	0	0	52	4 - 6 Pk Volume	30	29	0	0	58
Pk Hr Factor	0.481	0.422	0.000	0.000	0.448	Pk Hr Factor	0.750	0.659	0.000	0.000	0.690

Prepared by National Data & Surveying Services

VOLUME

1225 Howell Mountain Rd Near Project Site Access

Day: Friday
Date: 7/10/2020

City: Angwin
Project #: CA20_8105_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	873	810	1,683

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			19		11		30	
00:15			2		1		3		12:15			13		16		29	
00:30			0		0		0		12:30			14		11		25	
00:45			0	2	2	3	2	5	12:45			19	65	15	53	34	118
01:00			0		0		0		13:00			15		12		27	
01:15			0		0		0		13:15			14		19		33	
01:30			1		1		2		13:30			26		10		36	
01:45			0	1	0	1	0	2	13:45			10	65	15	56	25	121
02:00			0		0		0		14:00			14		16		30	
02:15			1		0		1		14:15			21		20		41	
02:30			2		0		2		14:30			13		12		25	
02:45			0	3	0		0	3	14:45			20	68	14	62	34	130
03:00			1		0		1		15:00			19		11		30	
03:15			0		1		1		15:15			22		10		32	
03:30			0		0		0		15:30			30		12		42	
03:45			0	1	0	1	0	2	15:45			15	86	12	45	27	131
04:00			0		0		0		16:00			24		16		40	
04:15			2		3		5		16:15			17		11		28	
04:30			1		1		2		16:30			18		9		27	
04:45			5	8	5	9	10	17	16:45			17	76	9	45	26	121
05:00			4		7		11		17:00			21		14		35	
05:15			10		9		19		17:15			18		10		28	
05:30			15		14		29		17:30			15		7		22	
05:45			5	34	11	41	16	75	17:45			14	68	9	40	23	108
06:00			9		9		18		18:00			15		4		19	
06:15			7		21		28		18:15			18		9		27	
06:30			6		8		14		18:30			12		9		21	
06:45			10	32	21	59	31	91	18:45			11	56	3	25	14	81
07:00			7		11		18		19:00			14		6		20	
07:15			14		21		35		19:15			10		2		12	
07:30			7		19		26		19:30			8		5		13	
07:45			12	40	17	68	29	108	19:45			18	50	3	16	21	66
08:00			6		15		21		20:00			8		6		14	
08:15			5		18		23		20:15			9		4		13	
08:30			11		22		33		20:30			5		1		6	
08:45			14	36	11	66	25	102	20:45			6	28	1	12	7	40
09:00			9		13		22		21:00			2		7		9	
09:15			8		10		18		21:15			5		4		9	
09:30			10		13		23		21:30			2		3		5	
09:45			6	33	20	56	26	89	21:45			6	15	3	17	9	32
10:00			11		14		25		22:00			0		4		4	
10:15			5		13		18		22:15			1		1		2	
10:30			8		12		20		22:30			1		3		4	
10:45			7	31	10	49	17	80	22:45			3	5	2	10	5	15
11:00			18		19		37		23:00			2		1		3	
11:15			17		15		32		23:15			3		1		4	
11:30			7		24		31		23:30			2		1		3	
11:45			20	62	15	73	35	135	23:45			1	8	0	3	1	11
TOTALS				283		426		**709**	**TOTALS**				590		384		**974**
SPLIT %				39.9%		60.1%		**42.1%**	**SPLIT %**				60.6%		39.4%		**57.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	873	810	1,683

AM Peak Hour			11:45	11:00	**11:00**				**PM Peak Hour**			14:45	13:45	**15:15**		
AM Pk Volume			66	73	**135**				**PM Pk Volume**			91	63	**141**		
Pk Hr Factor			0.825	0.760	**0.912**				**Pk Hr Factor**			0.758	0.788	**0.839**		
7 - 9 Volume	0	0	76	134	**210**				**4 - 6 Volume**	0	0	144	85	**229**		
7 - 9 Peak Hour			07:00	07:15	**07:15**				**4 - 6 Peak Hour**			16:00	16:00	**16:00**		
7 - 9 Pk Volume	0	0	40	72	**111**				**4 - 6 Pk Volume**	0	0	76	45	**121**		
Pk Hr Factor	0.000	0.000	0.714	0.857	**0.793**				**Pk Hr Factor**	0.000	0.000	0.792	0.703	**0.756**		

Prepared by National Data & Surveying Services

VOLUME

1225 Howell Mountain Rd Near Project Site Access

Day: Saturday
Date: 7/11/2020

City: Angwin
Project #: CA20_8105_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	625	581	1,206

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			3	3	6	12:00			10	20	30
00:15			0	0	0	12:15			5	13	18
00:30			1	1	2	12:30			19	17	36
00:45			1	1	2	12:45			6	7	13
01:00			0	0	0	13:00			18	11	29
01:15			0	0	0	13:15			12	6	18
01:30			0	0	0	13:30			16	7	23
01:45			0	1	1	13:45			13	8	21
02:00			0	0	0	14:00			9	10	19
02:15			1	0	1	14:15			8	6	14
02:30			0	1	1	14:30			12	9	21
02:45			0	0	0	14:45			13	10	23
03:00			0	1	1	15:00			14	16	30
03:15			0	1	1	15:15			13	5	18
03:30			3	0	3	15:30			21	11	32
03:45			0	0	0	15:45			15	6	21
04:00			0	0	0	16:00			9	12	21
04:15			2	2	4	16:15			9	8	17
04:30			1	1	2	16:30			5	14	19
04:45			0	2	2	16:45			13	8	21
05:00			6	4	10	17:00			9	12	21
05:15			3	3	6	17:15			7	7	14
05:30			9	7	16	17:30			11	4	15
05:45			1	2	3	17:45			8	9	17
06:00			4	3	7	18:00			11	3	14
06:15			2	3	5	18:15			7	9	16
06:30			6	7	13	18:30			10	5	15
06:45			3	3	6	18:45			4	4	8
07:00			4	8	12	19:00			2	14	16
07:15			3	3	6	19:15			4	2	6
07:30			4	5	9	19:30			11	6	17
07:45			10	8	18	19:45			6	5	11
08:00			7	4	11	20:00			6	7	13
08:15			8	7	15	20:15			8	6	14
08:30			10	7	17	20:30			4	3	7
08:45			11	8	19	20:45			8	3	11
09:00			2	8	10	21:00			7	9	16
09:15			8	9	17	21:15			4	6	10
09:30			5	4	9	21:30			4	6	10
09:45			8	8	16	21:45			3	5	8
10:00			13	12	25	22:00			3	3	6
10:15			14	19	33	22:15			2	4	6
10:30			11	8	19	22:30			7	8	15
10:45			8	21	29	22:45			1	3	4
11:00			8	7	15	23:00			2	0	2
11:15			12	11	23	23:15			4	2	6
11:30			16	8	24	23:30			2	4	6
11:45			21	15	36	23:45			1	2	3
TOTALS			229	226	**455**	**TOTALS**			396	355	**751**
SPLIT %			50.3%	49.7%	**37.7%**	**SPLIT %**			52.7%	47.3%	**62.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	625	581	1,206

AM Peak Hour			11:15	11:45	**11:45**	**PM Peak Hour**			15:00	12:00	**14:45**
AM Pk Volume			59	65	**120**	**PM Pk Volume**			63	57	**103**
Pk Hr Factor			0.702	0.813	**0.833**	**Pk Hr Factor**			0.750	0.713	**0.805**
7 - 9 Volume	0	0	57	50	**107**	**4 - 6 Volume**	0	0	71	74	**145**
7 - 9 Peak Hour			08:00	07:45	**08:00**	**4 - 6 Peak Hour**			16:45	16:00	**16:00**
7 - 9 Pk Volume	0	0	36	26	**62**	**4 - 6 Pk Volume**	0	0	40	42	**78**
Pk Hr Factor	0.000	0.000	0.818	0.813	**0.816**	**Pk Hr Factor**	0.000	0.000	0.769	0.750	**0.929**

Growth Factors

ADT: PM Weekday

Segment	2017	2020	Growth Factor
Chiles Valley Pope Road	974	1117	N/A
Howell Mountain Road	N/A	**1690**	N/A

ADT: PM Weekend

Segment	2017	2020	Growth Factor
Chiles Valley Pope Road	1141	873	1.307
Howell Mountain Road	**1604**	1227	1.307

Intersection

Study Intersection	PM 2015	PM 2040	PM Growth Factor	Adjusted for 2020
Silverado Trail/Deer Park Rd	5471	8018	1.47	1.06

Use the PM Growth Factors to calculate Future volumes from Existing Volumes.

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Appendix B

Collision Rate Calculations

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Intersection Collision Rate Worksheet

Howell Mountain Conservation Cementery TIS

Intersection # 1: Silverado Trail & Deer Park Road
Date of Count: Tuesday, October 24, 2017

Number of Collisions: 7
Number of Injuries: 1
Number of Fatalities: 0
Average Daily Traffic (ADT): 14400
Start Date: October 1, 2014
End Date: September 30, 2019
Number of Years: 5

Intersection Type: Four-Legged
Control Type: 4 Way Stop
Area: Suburban

$$\text{Collision Rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x Days per Year x Number of Years}}$$

$$\text{Collision Rate} = \frac{7 \times 1{,}000{,}000}{14{,}400 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.27 c/mve**	**0.0%**	**14.3%**
Statewide Average*	**0.27 c/mve**	**1.8%**	**32.9%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2016 Collision Data on California State Highways, Caltrans

Roadway Segment Collision Rate Worksheet

Howell Mountain Conservation Cemetery TIS

Location: Howell Mountain Road: White Cottage Rd S to Chiles Pope Valley Rd
Date of Count: Friday, July 10, 2020
Average Daily Traffic (ADT): 1,700

Number of Collisions: 15
Number of Injuries: 8
Number of Fatalities: 0
Start Date: October 1, 2014
End Date: September 30, 2019
Number of Years: 5

Highway Type: Conventional 2 lanes or less
Area: Rural
Design Speed: ≤55
Terrain: Mountain

Segment Length: 5.9 miles
Direction: North/South

$$\text{Collision Rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times \text{Days per Year} \times \text{Segment Length} \times \text{Number of Years}}$$

$$\text{Collision Rate} = \frac{15 \times 1{,}000{,}000}{1{,}700 \times 365 \times 5.9 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Segment	**0.82 c/mvm**	**0.0%**	**53.3%**
Statewide Average*	**1.58 c/mvm**	**2.4%**	**47.4%**

Notes
ADT = average daily traffic volume
c/mvm = collisions per million vehicle miles
* 2016 Collision Data on California State Highways, Caltrans

Appendix C

Intersection Level of Service Calculations

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Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	25.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	172	139	254	109	29	12	246	10	76	202	164
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	44	36	65	28	7	3	63	3	20	52	42
Total Analysis Volume [veh/h]	28	177	143	262	112	30	12	254	10	78	208	169
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	437	482	441	507	440	484	443	495
Degree of Utilization, x	0.47	0.30	0.85	0.06	0.60	0.02	0.65	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.45	1.23	8.37	0.19	3.89	0.06	4.46	1.50
95th-Percentile Queue Length [ft]	61.29	30.72	209.22	4.70	97.28	1.58	111.41	37.51
Approach Delay [s/veh]	16.09		39.73		22.18		20.47	
Approach LOS	C		E		C		C	
Intersection Delay [s/veh]	25.01							
Intersection LOS	D							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	16.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.710

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	145	55	207	156	48	34	139	12	68	145	94
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	37	14	53	40	12	9	36	3	18	37	24
Total Analysis Volume [veh/h]	18	149	57	213	161	49	35	143	12	70	149	97
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	513	576	527	617	499	561	506	576
Degree of Utilization, x	0.33	0.10	0.71	0.08	0.36	0.02	0.43	0.17

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.40	0.33	5.66	0.26	1.60	0.07	2.16	0.60
95th-Percentile Queue Length [ft]	35.05	8.20	141.48	6.45	40.01	1.64	54.00	15.03
Approach Delay [s/veh]	12.19		22.72		13.57		13.63	
Approach LOS	B		C		B		B	
Intersection Delay [s/veh]	16.68							
Intersection LOS	C							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	83.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.351

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	238	193	353	151	40	16	341	13	106	281	228
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	60	48	88	38	10	4	85	3	27	70	57
Total Analysis Volume [veh/h]	37	238	193	353	151	40	16	341	13	106	281	228
Pedestrian Volume [ped/h]	0			0			0			0		

Generated with PTV VISTRO
Version 7.00-08

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	382	416	504	421	396	429	396	434
Degree of Utilization, x	0.72	0.46	1.35	0.10	0.90	0.03	0.98	0.52

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	5.47	2.39	24.18	0.31	9.41	0.09	11.53	2.97
95th-Percentile Queue Length [ft]	136.71	59.86	604.59	7.83	235.27	2.34	288.18	74.30
Approach Delay [s/veh]	27.02		187.44		53.00		51.67	
Approach LOS	D		F		F		F	
Intersection Delay [s/veh]	83.12							
Intersection LOS	F							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.101

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	201	76	287	216	66	47	193	16	94	201	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	50	19	72	54	17	12	48	4	24	50	33
Total Analysis Volume [veh/h]	24	201	76	287	216	66	47	193	16	94	201	131
Pedestrian Volume [ped/h]	0			0			0			0		

Generated with PTV VISTRO
Version 7.00-08

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	443	487	503	523	436	481	446	498
Degree of Utilization, x	0.51	0.16	1.10	0.13	0.55	0.03	0.66	0.26

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.81	0.55	16.93	0.43	3.24	0.10	4.69	1.05
95th-Percentile Queue Length [ft]	70.34	13.73	423.15	10.76	81.01	2.57	117.24	26.19
Approach Delay [s/veh]	17.07		89.53		19.95		21.26	
Approach LOS	C		F		C		C	
Intersection Delay [s/veh]	45.26							
Intersection LOS	E							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	Signalized	Delay (sec / veh):	43.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Generated with PTV VISTRO
Version 2023 (SP 0-5)

Volumes

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	238	193	353	151	40	16	341	13	106	281	228
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	60	48	88	38	10	4	85	3	27	70	57
Total Analysis Volume [veh/h]	37	238	193	353	151	40	16	341	13	106	281	228
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	11	26	0	20	35	0	9	9	0	25	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	22	16	35	2	20	6	24
g / C, Green / Cycle	0.04	0.28	0.20	0.44	0.02	0.25	0.08	0.31
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.20	0.11	0.01	0.19	0.06	0.29
s, saturation flow rate [veh/h]	1781	1733	1781	1803	1781	1858	1781	1733
c, Capacity [veh/h]	63	480	356	796	34	457	138	528
d1, Uniform Delay [s]	38.03	27.86	31.93	13.95	38.86	28.10	36.21	27.40
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11	0.11	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.58	22.35	20.14	0.71	10.17	2.84	8.71	22.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.90	0.99	0.24	0.48	0.77	0.77	0.96
d, Delay for Lane Group [s/veh]	46.61	50.21	52.07	14.67	49.03	30.94	44.92	49.89
Lane Group LOS	D	D	D	B	D	C	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	9.90	8.15	2.00	0.38	5.92	2.19	11.52
50th-Percentile Queue Length [ft/ln]	20.19	247.55	203.75	50.05	9.55	148.07	54.78	288.12
95th-Percentile Queue Length [veh/ln]	1.45	15.06	12.83	3.60	0.69	9.91	3.94	17.09
95th-Percentile Queue Length [ft/ln]	36.34	376.57	320.80	90.09	17.18	247.85	98.61	427.31

Movement, Approach, & Intersection Results

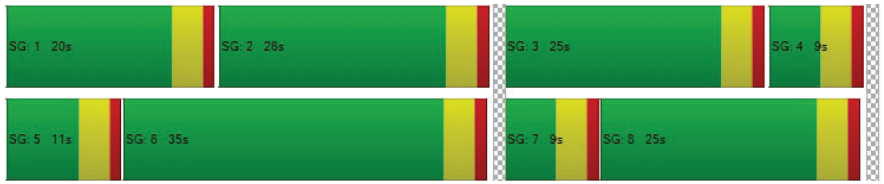
d_M, Delay for Movement [s/veh]	46.61	50.21	50.21	52.07	14.67	14.67	49.03	30.94	30.94	44.92	49.89	49.89
Movement LOS	D	D	D	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	49.92			38.94			31.73			49.04		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	43.28											
Intersection LOS	D											
Intersection V/C	0.750											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	775	125	525
d_b, Bicycle Delay [s]	21.03	15.01	35.16	21.76
l_b,int, Bicycle LOS Score for Intersection	2.332	2.457	2.170	2.574
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

Intersection Setup

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	201	76	287	216	66	47	193	16	94	201	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	50	19	72	54	17	12	48	4	24	50	33
Total Analysis Volume [veh/h]	24	201	76	287	216	66	47	193	16	94	201	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	12	0	15	18	0	9	10	0	23	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	17	11	26	3	12	4	14
g / C, Green / Cycle	0.03	0.28	0.18	0.43	0.05	0.20	0.07	0.23
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.16	0.16	0.03	0.11	0.05	0.19
s, saturation flow rate [veh/h]	1781	1784	1781	1796	1781	1845	1781	1748
c, Capacity [veh/h]	53	494	327	774	85	372	128	395
d1, Uniform Delay [s]	28.76	18.65	23.95	11.59	28.08	21.66	27.41	22.29
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.84	4.54	7.49	1.33	5.49	1.33	7.78	4.83
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.56	0.88	0.36	0.55	0.56	0.73	0.84
d, Delay for Lane Group [s/veh]	34.60	23.19	31.44	12.92	33.57	22.99	35.19	27.12
Lane Group LOS	C	C	C	B	C	C	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	3.26	4.05	2.18	0.70	2.34	1.42	4.19
50th-Percentile Queue Length [ft/ln]	9.59	81.41	101.27	54.57	17.62	58.40	35.48	104.72
95th-Percentile Queue Length [veh/ln]	0.69	5.86	7.29	3.93	1.27	4.20	2.55	7.54
95th-Percentile Queue Length [ft/ln]	17.26	146.54	182.28	98.23	31.71	105.12	63.87	188.49

Generated with PTV VISTRO
Version 2023 (SP 0-5)

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.60	23.19	23.19	31.44	12.92	12.92	33.57	22.99	22.99	35.19	27.12	27.12
Movement LOS	C	C	C	C	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	24.10			22.26			24.93			28.90		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.88											
Intersection LOS	C											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	266	466	200	665
d_b, Bicycle Delay [s]	22.61	17.70	24.37	13.40
l_b,int, Bicycle LOS Score for Intersection	2.056	2.498	1.982	2.263
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	25.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.865

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	6	0	3	2	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	172	139	260	109	32	14	246	10	76	202	167
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	44	36	67	28	8	4	63	3	20	52	43
Total Analysis Volume [veh/h]	28	177	143	268	112	33	14	254	10	78	208	172
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	433	479	439	505	437	480	440	491
Degree of Utilization, x	0.47	0.30	0.87	0.07	0.61	0.02	0.65	0.35

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.48	1.24	8.80	0.21	4.00	0.06	4.52	1.56
95th-Percentile Queue Length [ft]	62.00	31.05	219.94	5.23	99.98	1.59	112.92	38.90
Approach Delay [s/veh]	16.26		41.94		22.68		20.76	
Approach LOS	C		E		C		C	
Intersection Delay [s/veh]	25.91							
Intersection LOS	D							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	17.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.751

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600	1.0600
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	7	7	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	17	145	55	222	156	55	41	139	12	68	145	111
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	37	14	57	40	14	11	36	3	18	37	29
Total Analysis Volume [veh/h]	18	149	57	229	161	57	42	143	12	70	149	114
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	502	562	519	606	489	550	497	565
Degree of Utilization, x	0.33	0.10	0.75	0.09	0.38	0.02	0.44	0.20

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.44	0.34	6.47	0.31	1.75	0.07	2.22	0.75
95th-Percentile Queue Length [ft]	36.12	8.42	161.82	7.75	43.63	1.67	55.52	18.71
Approach Delay [s/veh]	12.49		25.34		14.16		13.86	
Approach LOS	B		D		B		B	
Intersection Delay [s/veh]	17.93							
Intersection LOS	C							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	85.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.370

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	6	0	3	2	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	238	193	359	151	43	18	341	13	106	281	231
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	60	48	90	38	11	5	85	3	27	70	58
Total Analysis Volume [veh/h]	37	238	193	359	151	43	18	341	13	106	281	231
Pedestrian Volume [ped/h]	0			0			0			0		

Generated with PTV VISTRO
Version 7.00-08

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	382	415	510	420	395	428	395	434
Degree of Utilization, x	0.72	0.47	1.37	0.10	0.91	0.03	0.98	0.53

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	5.49	2.40	24.90	0.34	9.57	0.09	11.56	3.05
95th-Percentile Queue Length [ft]	137.16	60.04	622.50	8.50	239.22	2.35	289.07	76.30
Approach Delay [s/veh]	27.12		193.88		54.16		51.89	
Approach LOS	D		F		F		F	
Intersection Delay [s/veh]	85.59							
Intersection LOS	F							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	All-way stop	Delay (sec / veh):	50.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.145

Intersection Setup

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
Speed [mph]	50.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	7	7	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	201	76	302	216	73	54	193	16	94	201	148
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	50	19	76	54	18	14	48	4	24	50	37
Total Analysis Volume [veh/h]	24	201	76	302	216	73	54	193	16	94	201	148
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	439	482	518	518	434	480	444	495
Degree of Utilization, x	0.51	0.16	1.15	0.14	0.57	0.03	0.66	0.30

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.85	0.56	18.64	0.49	3.45	0.10	4.73	1.24
95th-Percentile Queue Length [ft]	71.36	13.88	466.05	12.21	86.32	2.59	118.33	31.08
Approach Delay [s/veh]	17.30		102.41		20.73		21.29	
Approach LOS	C		F		C		C	
Intersection Delay [s/veh]	50.45							
Intersection LOS	F							

Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.756

Intersection Setup

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Generated with PTV VISTRO
Version 2023 (SP 0-5)

Volumes

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	6	0	3	2	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	238	193	359	151	43	18	341	13	106	281	231
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	60	48	90	38	11	5	85	3	27	70	58
Total Analysis Volume [veh/h]	37	238	193	359	151	43	18	341	13	106	281	231
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	10	26	0	20	36	0	9	9	0	25	25	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Generated with PTV VISTRO
Version 2023 (SP 0-5)

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	22	16	35	2	20	6	24
g / C, Green / Cycle	0.04	0.28	0.20	0.44	0.02	0.25	0.08	0.30
(v / s)_i Volume / Saturation Flow Rate	0.02	0.25	0.20	0.11	0.01	0.19	0.06	0.30
s, saturation flow rate [veh/h]	1781	1733	1781	1800	1781	1858	1781	1732
c, Capacity [veh/h]	63	480	356	795	37	457	138	524
d1, Uniform Delay [s]	38.03	27.86	32.01	13.98	38.76	28.10	36.21	27.62
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11	0.11	0.30
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.58	22.35	24.41	0.73	9.64	2.84	8.71	25.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.59	0.90	1.01	0.24	0.49	0.77	0.77	0.98
d, Delay for Lane Group [s/veh]	46.61	50.20	56.42	14.71	48.39	30.94	44.92	52.75
Lane Group LOS	D	D	F	B	D	C	D	D
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.81	9.90	8.64	2.04	0.42	5.92	2.19	11.99
50th-Percentile Queue Length [ft/ln]	20.19	247.55	216.08	50.96	10.54	148.07	54.78	299.69
95th-Percentile Queue Length [veh/ln]	1.45	15.06	13.52	3.67	0.76	9.91	3.94	17.67
95th-Percentile Queue Length [ft/ln]	36.34	376.57	337.95	91.74	18.96	247.85	98.61	441.64

Movement, Approach, & Intersection Results

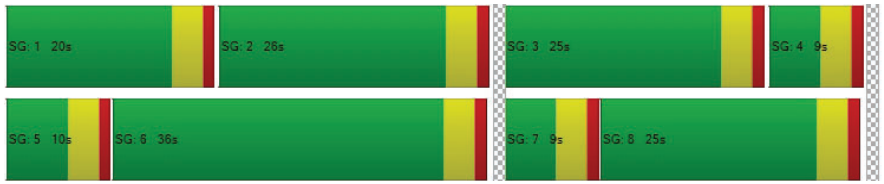
d_M, Delay for Movement [s/veh]	46.61	50.20	50.20	56.42	14.71	14.71	48.39	30.94	30.94	44.92	52.75	52.75
Movement LOS	D	D	D	F	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	49.92			41.79			31.79			51.41		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	44.79											
Intersection LOS	D											
Intersection V/C	0.756											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	550	800	125	525
d_b, Bicycle Delay [s]	21.03	14.40	35.16	21.76
l_b,int, Bicycle LOS Score for Intersection	2.332	2.472	2.173	2.579
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 1: Silverado Trail/Deer Park Rd

Control Type:	Signalized	Delay (sec / veh):	25.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.556

Intersection Setup

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	Deer Park Rd			Deer Park Rd			Silverado Trail			Silverado Trail		
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700	1.4700
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	15	0	7	7	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	201	76	302	216	73	54	193	16	94	201	148
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	50	19	76	54	18	14	48	4	24	50	37
Total Analysis Volume [veh/h]	24	201	76	302	216	73	54	193	16	94	201	148
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	12	0	15	18	0	9	10	0	23	24	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	16	11	25	3	13	4	14
g / C, Green / Cycle	0.03	0.26	0.18	0.42	0.05	0.22	0.07	0.24
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.17	0.16	0.03	0.11	0.05	0.20
s, saturation flow rate [veh/h]	1781	1784	1781	1790	1781	1845	1781	1740
c, Capacity [veh/h]	53	468	327	745	92	399	128	412
d1, Uniform Delay [s]	28.76	19.42	24.19	12.25	27.95	20.87	27.41	21.98
k, delay calibration	0.11	0.50	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.84	5.41	10.88	1.52	5.72	1.06	7.78	4.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.59	0.92	0.39	0.58	0.52	0.73	0.85
d, Delay for Lane Group [s/veh]	34.60	24.83	35.08	13.78	33.67	21.94	35.19	26.89
Lane Group LOS	C	C	D	B	C	C	D	C
Critical Lane Group	No	Yes	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	3.42	4.57	2.35	0.81	2.26	1.42	4.38
50th-Percentile Queue Length [ft/ln]	9.59	85.43	114.26	58.86	20.16	56.47	35.48	109.55
95th-Percentile Queue Length [veh/ln]	0.69	6.15	8.08	4.24	1.45	4.07	2.55	7.82
95th-Percentile Queue Length [ft/ln]	17.26	153.78	201.92	105.95	36.29	101.65	63.87	195.38

Generated with PTV VISTRO
Version 2023 (SP 0-5)

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.60	24.83	24.83	35.08	13.78	13.78	33.67	21.94	21.94	35.19	26.89	26.89
Movement LOS	C	C	C	D	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	25.61			24.66			24.35			28.65		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.89											
Intersection LOS	C											
Intersection V/C	0.556											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
l_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	266	466	200	665
d_b, Bicycle Delay [s]	22.61	17.70	24.37	13.40
l_b,int, Bicycle LOS Score for Intersection	2.056	2.535	1.994	2.291
Bicycle LOS	B	B	A	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Option 1: Restripe SB approach to a LT lane and T/RT lane

Number	1											
Intersection	Silverado Trail/Deer Park Rd											
Control Type	All-way stop											
Analysis Method	HCM 6th Edition											
Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	25	162	131	240	103	27	11	232	9	72	191	155
Total Analysis Volume [veh/h]	37	238	193	359	151	43	18	341	13	106	281	231

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	382	415	376	403	387	419	387	419

Movement, Approach, & Intersection Results

Average Lane Delay [s/veh]	32.98	18.73	66.85	19.65	60.10	11.58	81.98	21.37
95th-Percentile Queue Length [veh]	5.48	2.41	10.57	2.54	9.98	0.10	12.46	3.24
95th-Percentile Queue Length [ft]	136.99	60.13	264.33	63.45	249.54	2.40	311.61	81.06
Approach Delay [s/veh]	27.10		50.29		58.41		59.32	
Approach LOS	D		F		F		F	
Intersection Delay [s/veh]	49.17							
Intersection LOS	E							

Generated with PTV VISTRO
Version 7.00-08

Option 1: Restripe SB approach to a LT lane and T/RT lane

Number	1											
Intersection	Silverado Trail/Deer Park Rd											
Control Type	All-way stop											
Analysis Method	HCM 6th Edition											
Name	Deer Park Rd						Silverado Trail			Silverado Trail		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	16	137	52	195	147	45	32	131	11	64	137	89
Total Analysis Volume [veh/h]	24	201	76	302	216	73	54	193	16	94	201	148

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	442	487	443	484	439	487	447	501

Movement, Approach, & Intersection Results

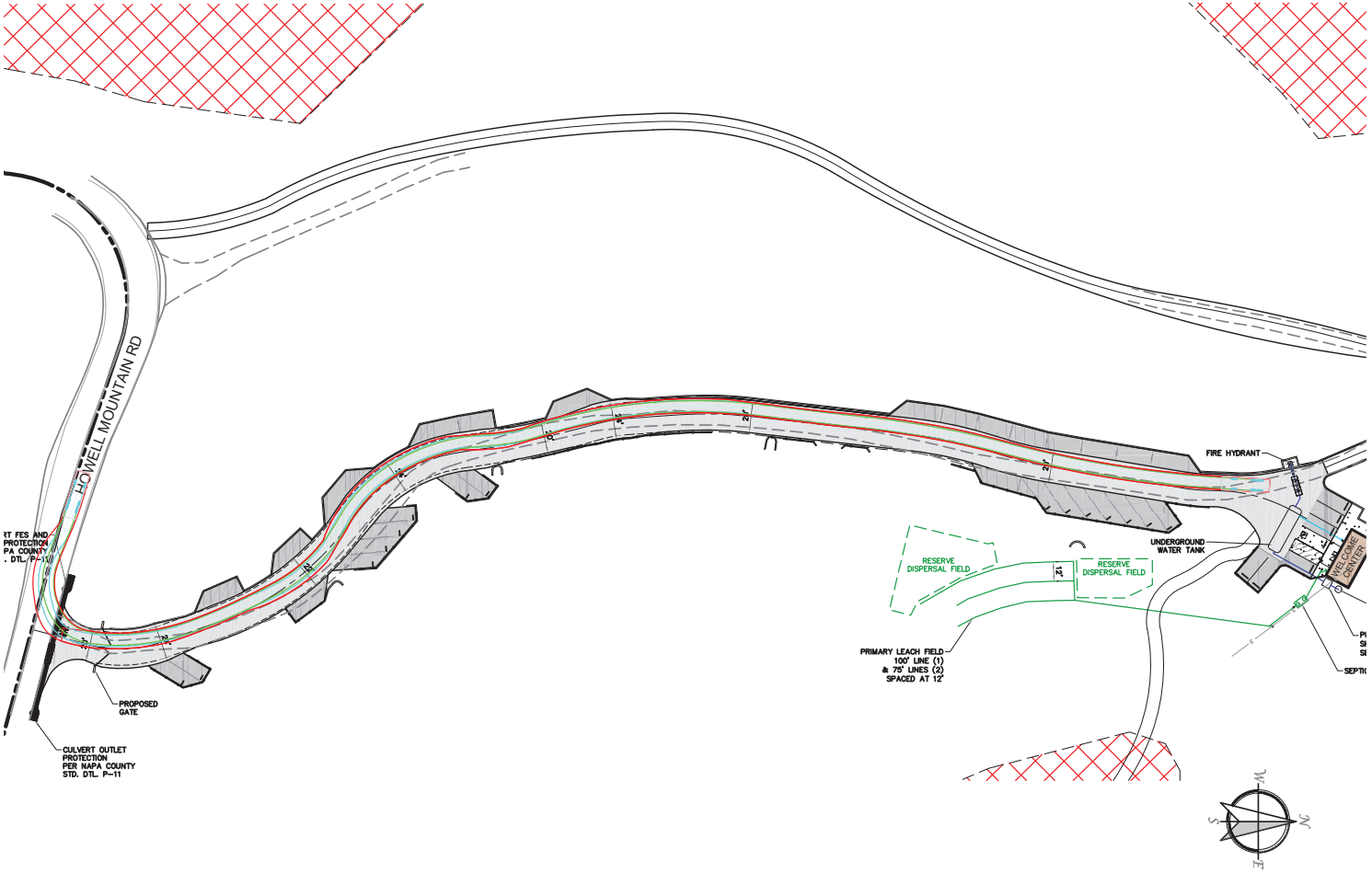
Average Lane Delay [s/veh]	19.04	11.46	26.55	20.61	20.94	10.34	25.07	12.87
95th-Percentile Queue Length [veh]	2.83	0.55	5.01	3.85	3.38	0.10	4.68	1.22
95th-Percentile Queue Length [ft]	70.64	13.73	125.26	96.25	84.58	2.54	116.91	30.60
Approach Delay [s/veh]	17.13		23.65		20.30		20.99	
Approach LOS	C		C		C		C	
Intersection Delay [s/veh]	21.13							
Intersection LOS	C							

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Appendix D

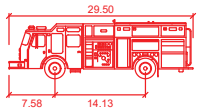
Access Exhibits

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LEGEND

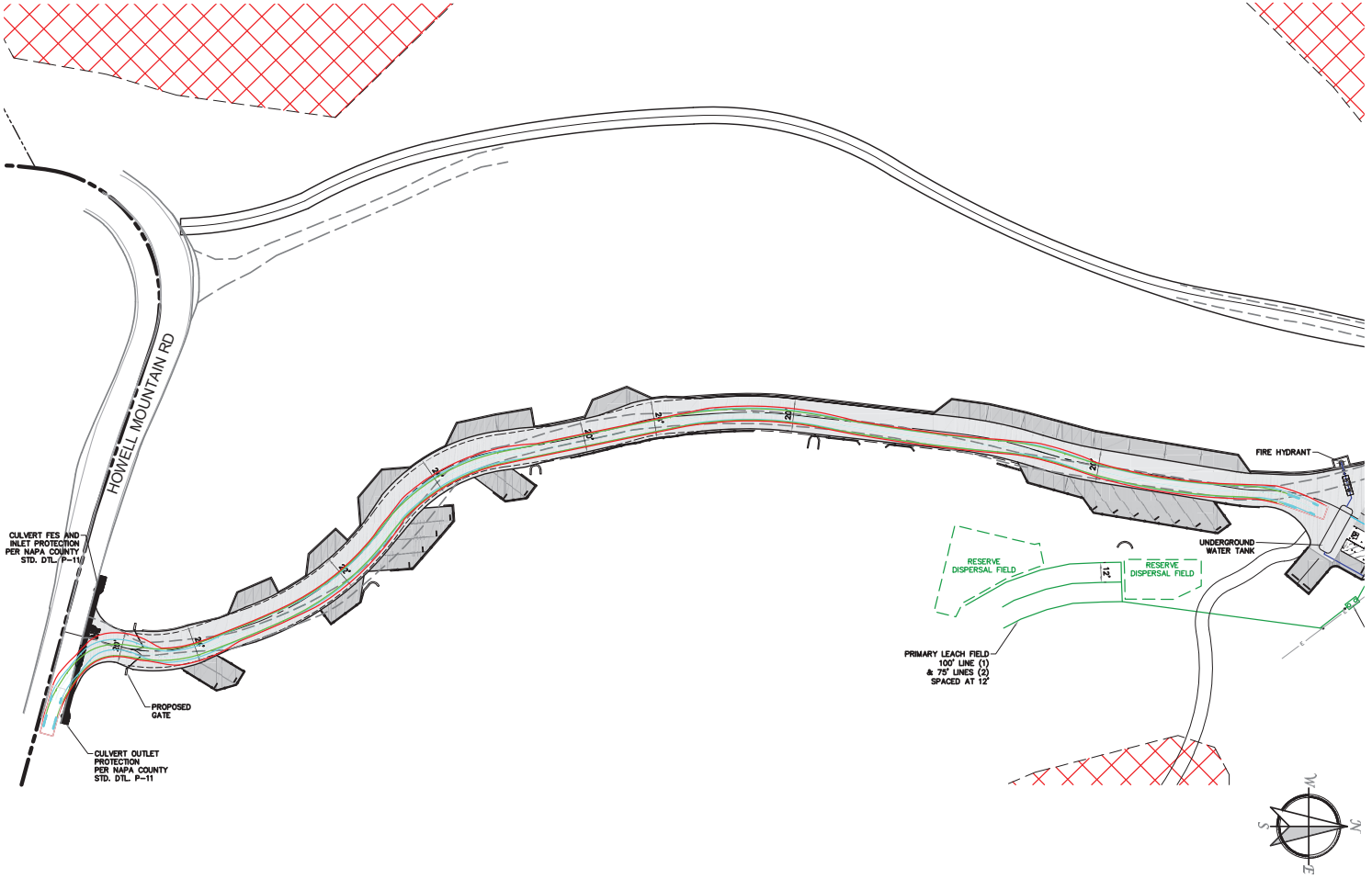
- Vehicle Body
- Front Tires
- Rear Tires



Napa County Fire Truck

	feet
Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 38.8

Exiting the Project Site

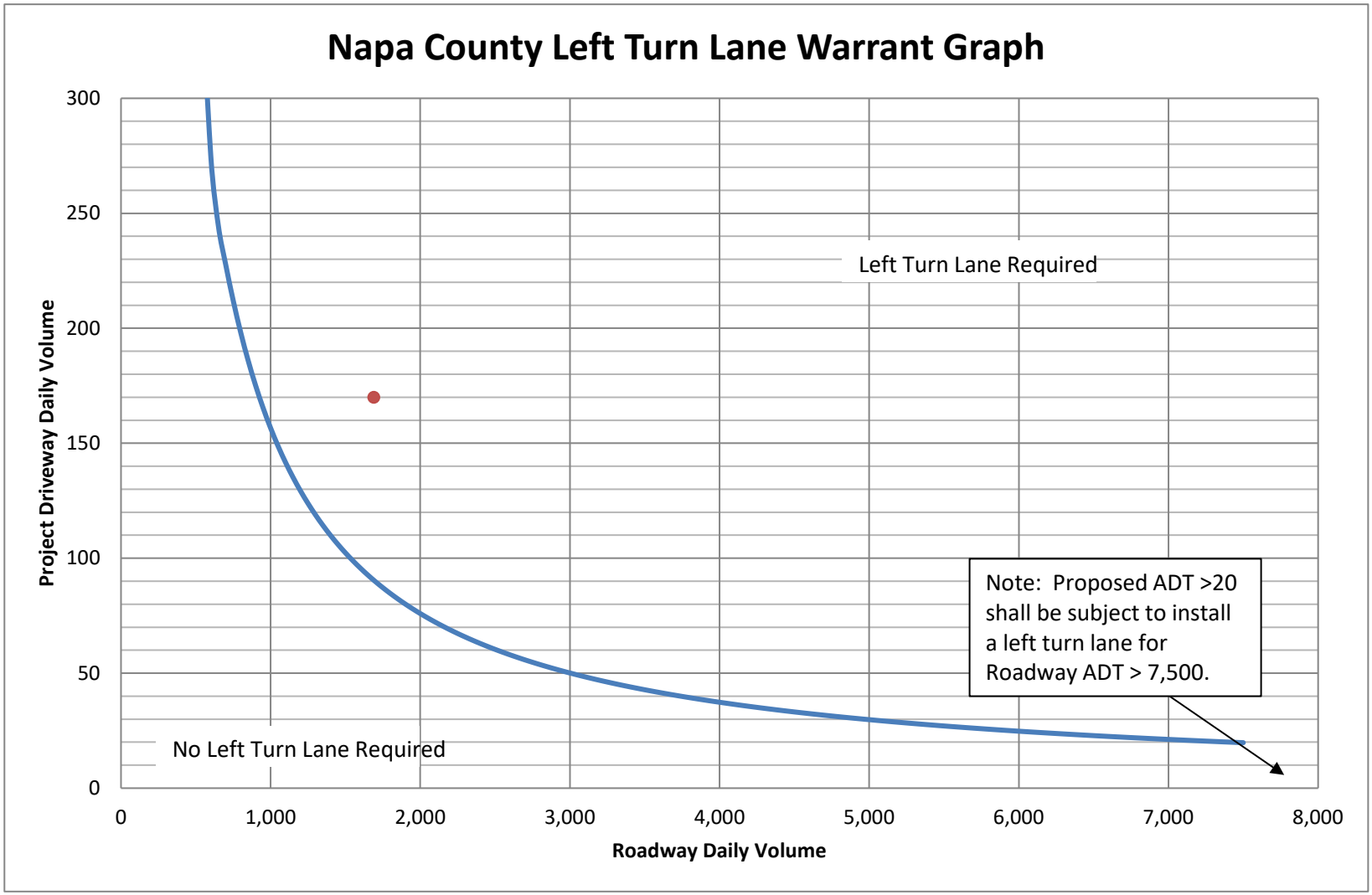


Entering the Project Site

Appendix E

Left-Turn Lane Warrant Graph

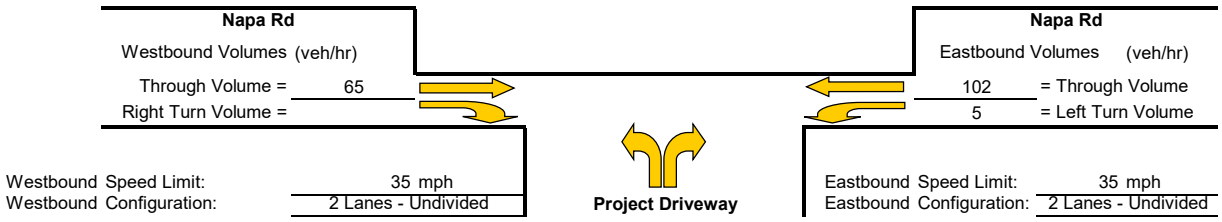
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Napa County Left Turn Lane Warrant Graph
Project Driveway Daily Volume
300
250
200
150
100
50
0
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
8,000
Roadway Daily Volume
Left Turn Lane Required
No Left Turn Lane Required
Note: Proposed ADT >20 shall be subject to install a left turn lane for Roadway ADT > 7,500.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Howell Mountain Road/Project Driveway
Study Scenario: Friday PM

Direction of Analysis Street: East/West
Cross Street Intersects: From the North



Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1050.1
Advancing Volume	Va =	65
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

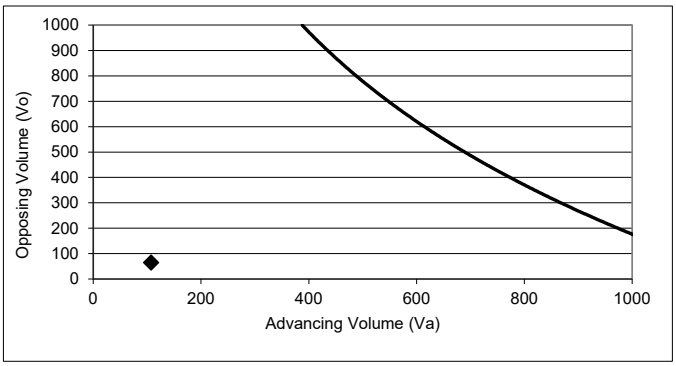
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	65
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns	%lt	4.7 %
Advancing Volume Threshold	AV	1137 veh/hr

If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 35 mph
Turn lane warranted if point falls to right of warrant threshold line

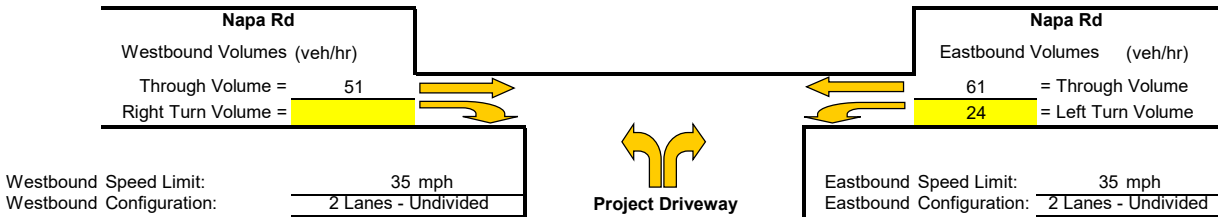
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements* , January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Howell Mountain Road/Project Driveway
Study Scenario: Saturday PM

Direction of Analysis Street: East/West
Cross Street Intersects: From the North



Westbound Speed Limit: 35 mph
Westbound Configuration: 2 Lanes - Undivided

Eastbound Speed Limit: 35 mph
Eastbound Configuration: 2 Lanes - Undivided

Westbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	1050.1
Advancing Volume	Va =	51
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Westbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

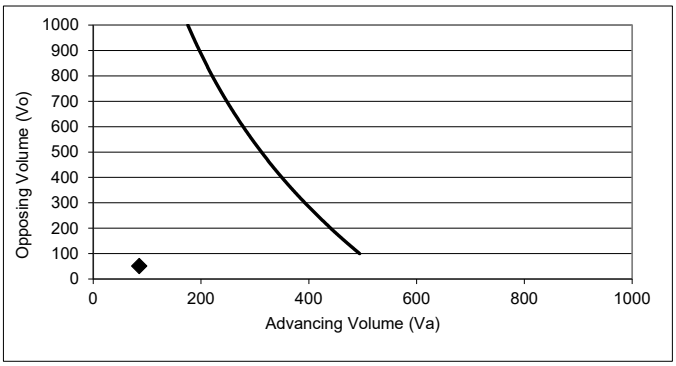
2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	51
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Eastbound Left Turn Lane Warrants

Percentage Left Turns %lt 28.2 %
Advancing Volume Threshold AV 523 veh/hr
If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 35 mph
Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements* , January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

“G”

Historical Building Evaluation

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

Historical Evaluation Study of the
Bade Cabins
1225 Howell Mountain Road
Angwin, Napa County, California

Eileen Barrow, MA/RPA

July 7, 2025

Eileen Barrow
& Associates

Historical Evaluation Study of the Bade Cabins 1225 Howell Mountain Road Angwin, Napa County, California

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ABSTRACT

Eileen Barrow & Associates completed an historical evaluation of the Bade cabins, which consists of two buildings located on the property at 1225 Howell Mountain Road, Angwin, Napa County, California. The Bade cabins were originally mentioned in a cultural resources survey report completed in 2017 but were not formally documented. The Bade Cabins consist of two buildings, a small cabin and a larger cabin. The buildings are proposed to be demolished; as the two cabins exceed the 50-year recommendation for evaluation, they were evaluated per criteria for inclusion on the California Register of Historical Resources. This study was conducted to meet the requirements of the California Environmental Quality Act and those of the County of Napa.

After conducting archival research, developing an historical context, and examining the two Bade cabins, they do not meet criteria for inclusion on the California Register of Historical Resources, and the cabins may be released for demolition.

This report contains confidential information about the locations of archaeological sites. For the protection of these resources, this report and such location information should not be publicly circulated.

Synopsis

Project Name:	Bade Cabins
Location:	1225 Howell Mountain Road, Angwin, Napa County
APN:	018-120-016
Quadrangles:	St. Helena 7.5' series
EBA #:	2025-030
Results:	The cabins do not meet California Register criteria.

Key Personnel

Eileen Barrow has been working in the field of cultural resources management in California since 2005. She holds a Master of Arts in cultural resources management from Sonoma State University and a graduate certificate in Historic Preservation from the University of Kentucky. Ms. Barrow's experience includes work that has been completed in compliance with local ordinances, the California Environmental Quality Act, the National Environmental Policy Act, and Section 106 of the National Historic Preservation Act requirements. Her professional affiliations include the Society for American Archaeology, the Society for California Archaeology, the Sonoma County Historical Society, the California Historical Society, the Society for Architectural Historians, and the Register of Professional Archaeologists (#989269).

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INTRODUCTION

Eileen Barrow & Associates completed an historical evaluation of the Bade Cabins located at 1225 Howell Mountain Road, Angwin, Napa County, California (see Figures 1, 2, and 3). This study was conducted to meet the requirements of the California Environmental Quality Act (CEQA) and those of the County of Napa.

In 2017, two cabins were identified on the property at 1225 Howell Mountain Road during a cultural resources study of the property. Though at the time the authors did not believe the cabins rose to a level of significance under CEQA, it was recommended that they be formally evaluated by a qualified architectural historian (Alshuth and Origer 2017). Because the cabins are proposed to be demolished, they are the subject of this study. This report serves as documentation of the historical evaluation of the two cabins under California Register of Historical Resources significance criteria.

Based on a title search conducted at the Napa County Recorder's Office, the cabins were likely constructed by William F. Bade. Though the cabins do not appear on historical maps until 1942 (and only one is shown present), the materials and style of the buildings suggest they were constructed earlier. Bade purchased the property in 1924 from Douglas Aiken (Napa County Recorder's Office 1924). Aiken owned the property for twelve years prior to selling it; however, Aiken was five years old at the time he acquired the property, and census records show he was living in San Francisco (USBC 1910). These circumstances suggest it is unlikely that Aiken constructed the cabins and it is a safe leap to assume they were constructed during Bade's ownership.

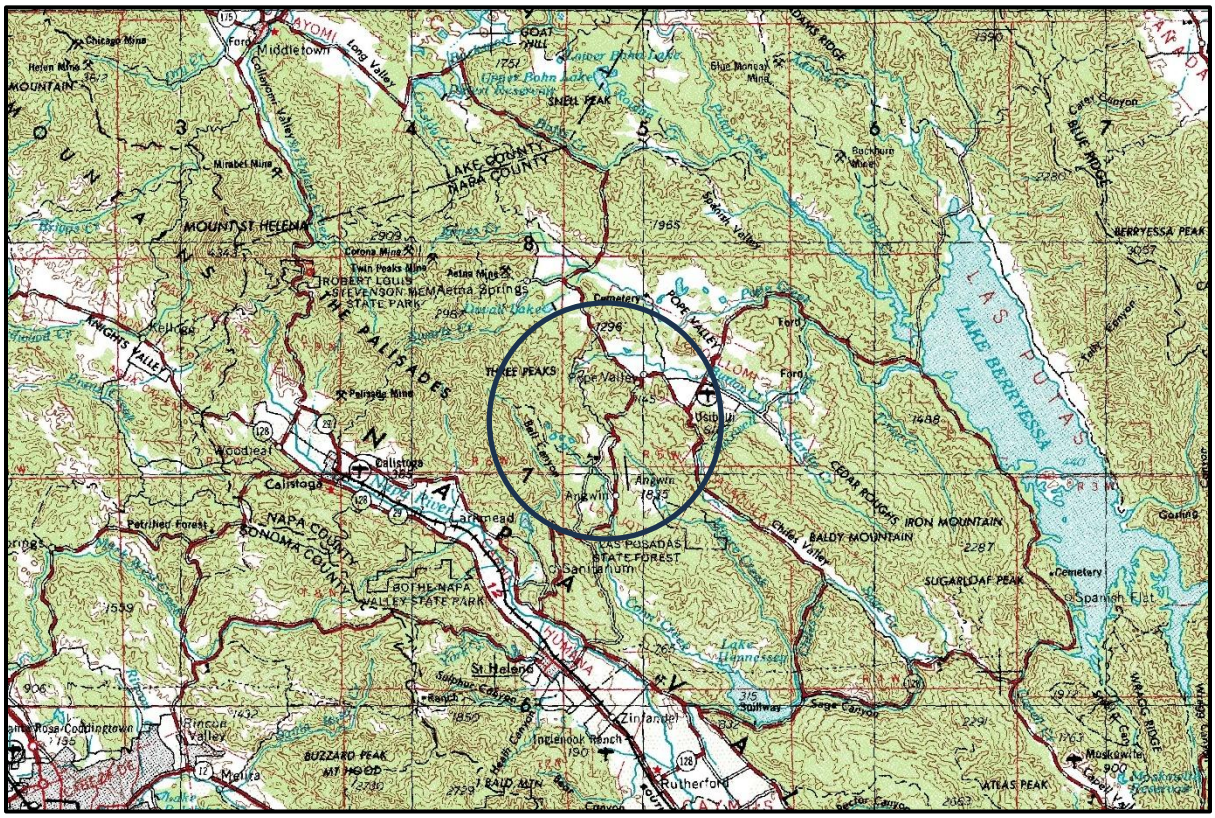


Figure 1. Study vicinity (adapted from the 1980 Santa Rosa 1:250,000-scale USGS map).

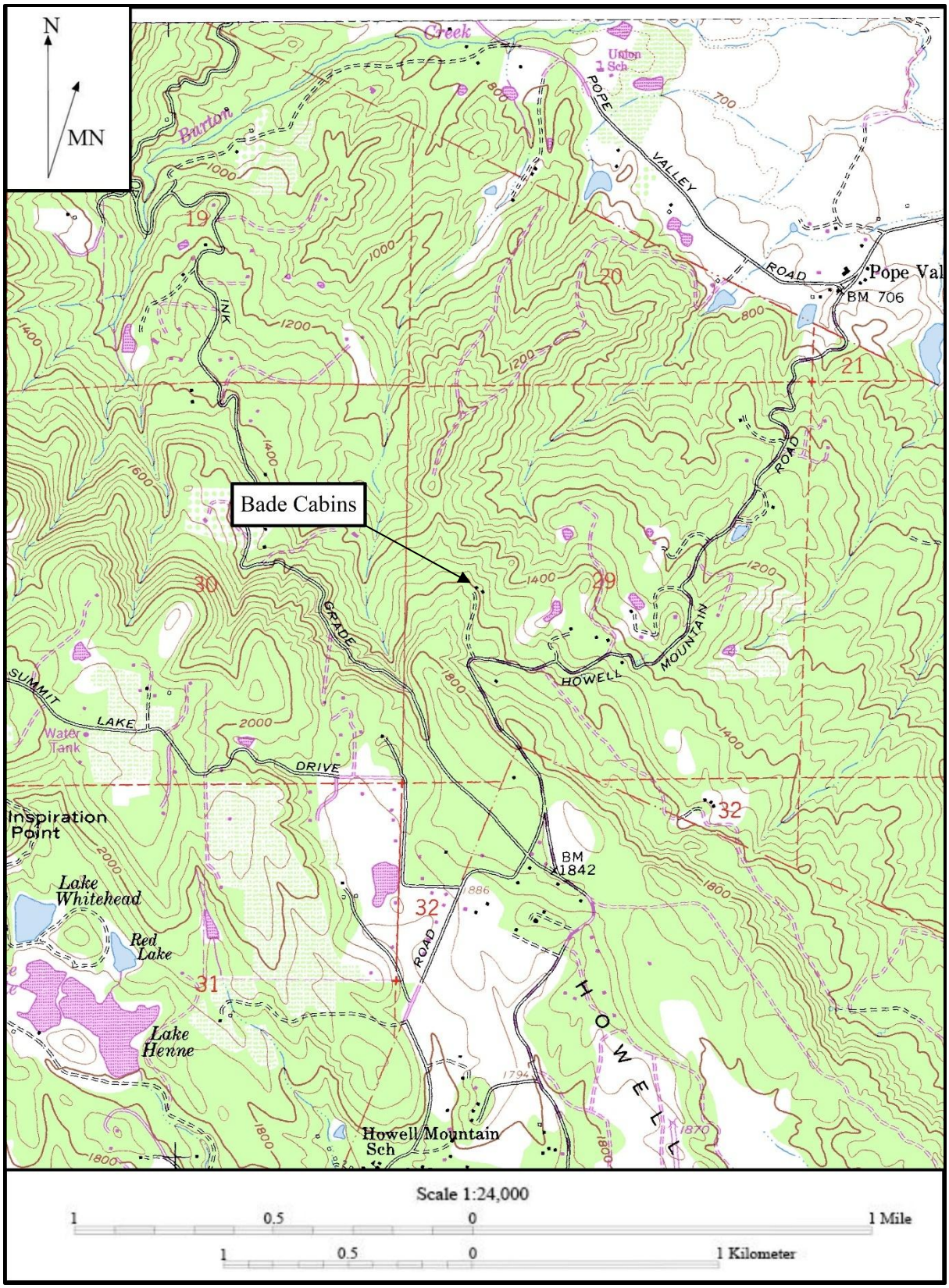


Figure 2. Bade Cabins location (adapted from the 1993 St. Helena 7.5′ USGS topographic map).



Figure 3. View of the Bade Cabins, facing northeast.

REGULATORY CONTEXT

Following the enactment of the National Environmental Policy Act in 1969, the State of California enacted CEQA the following year which included the requirement that cultural resources be considered during the environmental review process. This process is outlined in CEQA and begins with completing a study that identifies potential historical resources within a study area.

The term "historical resources" encompasses all forms of cultural resources including prehistoric and historical archaeological sites and built environment resources (e.g., buildings, bridges, canals) that meet the eligibility criteria for inclusion on the California Register of Historical Resources (California Register) as well as the required integrity criteria.

It is the goal of this cultural resources study to (1) identify potential historical resources within the project area; (2) offer a preliminary assessment of the potential significance of identified cultural resources; (3) assess the cultural resources' vulnerability to significant impacts that could arise from the proposed project's activities; and (4) offer suggestions designed to protect potential historical resources integrity, as warranted meets the requirements of CEQA and the State of California's PCRs.

Resource Definitions

Historical resources are classified by the State Office of Historic Preservation (OHP) as sites, buildings, structures, objects, and districts, and each is described by OHP (1995) as follows:

> **Site.** A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

Building. A building, such as a house, barn, church, hotel, or similar construction, is created principally to shelter any form of human activity. "Building" may also be used to refer to a historically and functionally related unit, such as a courthouse and jail, or a house and barn.

Structure. The term "structure" is used to distinguish from buildings those functional constructions made usually for purposes other than creating human shelter.

Object. The term "object" is used to distinguish from buildings and structures those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed. Although it may be, by nature or design, movable, an object is associated with a specific setting or environment.

District. A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.

Significance Criteria

When a project could have a significant impact on a potential historical resource, then the potential historical resource must be subjected to a formal evaluation. The importance of a potential historical resource is measured in terms of criteria for inclusion on the California Register. A potential historical resource is important if it meets one or more of the criteria, or if it is already listed on the California Register or a local register (Title 14 CCR, §4852).

An historical resource as defined in Section 15064.5 of the CEQA Guidelines is one that:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, a potential historical resource must retain sufficient integrity to convey its importance for it to meet eligibility requirements for the California Register. The integrity elements that are considered include location, design, setting, materials, workmanship, feeling, and association.

The OHP advocates that potential historical resources over 45 years old be recorded for inclusion in the OHP filing system. However, OHP recognizes that it is not reasonable or appropriate to document all evidence of human activities that is older than 45 years. Because of this, OHP encourages professional judgment when determining recordation is warranted (OHP 1995:2).

DESCRIPTION OF THE BADE CABINS

There are two cabins located on the property at 1225 Howell Mountain Road. The following is a description of each of the cabins.

Small Cabin Description

The small cabin is a single-story wood-framed building on an L-shaped plan (see Figure 4). The long part of the "L" consists of the living quarters, while the short part of the "L" is a small attached garage. The building has a hillside foundation; the garage sits on the ground surface with a concrete slab foundation, while the living space is set on posts on piers. Under the living space is a small, open basement where a water heater is located. This area is protected by a mortared stone retaining wall. The basement is only partially enclosed with wood framing. The framing of the floor consists of unhewn interlocking poles (see Figures 5 and 6).



Figure 4. View of the small cabin facing east.



Figure 5. View of the basement area underneath the small cabin showing the retaining wall and foundation supports.



Figure 6. View of the east elevation of the small cabin showing the unhewn interlocking log foundation.

The roof is cross-gabled and covered with composite shingles. The cladding consists of board-on-batten. There are several windows, comprising a mixture of fixed single-pane (see Figure 7), fixed three-by-three lights (see Figure 8), and two-by-four light casements (see Figure 9). All the windows are wood-framed. There is a single pane of glass in the top part of the wooden door.



Figure 7. View of the ribbon of single-paned windows in the small cabin.



Figure 8. Example view of the three-by-three light windows in the small cabin.

The interior consists of two rooms, one of which may have been a water closet, but there is no plumbing present. The other room contains all the other functions of the building, including a small kitchen area, a place for a woodstove, and likely living quarters. The floor is covered with vinyl. The living area contains a ribbon of fixed single-pane windows, which provide beautiful views of Pope Valley. This building

reportedly served as a cookhouse, which makes sense as no kitchen infrastructure was observed in the larger cabin (Rieffel and Sarason 2013).



Figure 9. View of the two-by-four light window in the small cabin.

Large Cabin Description

The large cabin is a single-story wood-framed building on a rectangular plan (see Figure 10). The building has a hillside foundation. Under the west end of the building, there is a small, open basement. This area is protected by a mortared stone retaining wall. The basement is only partially enclosed with wood framing and wire mesh (see Figure 11). Some of the posts are unhewn poles, while others are milled (see Figure 12). It is possible that the milled posts are recent repairs to the building.

There is a screened porch at the west end of the building, which provides a beautiful view of Pope Valley (see Figure 13). There is no porch over the front door, but there is a small wooden deck that provides a single step and handrail up to it.

The roof is cross-gabled and covered with composite shingles. The building is clad with wood shingles. There are several windows, primarily comprising wood-framed two-by-four-light casements (see Figure 14). The door is wood and has five panels (see Figure 15).

The interior consists of a large room which serves as the living area, a bathroom, and two bedrooms. The framing is exposed throughout the house. Some of the fixtures appear to be modern additions (such as much of the plumbing), and it appears there may have been two doors to the screened porch at one time, but one has been closed off.



Figure 10. View of the large cabin facing north.



Figure 11. View of a portion of the basement and foundation of the large cabin.

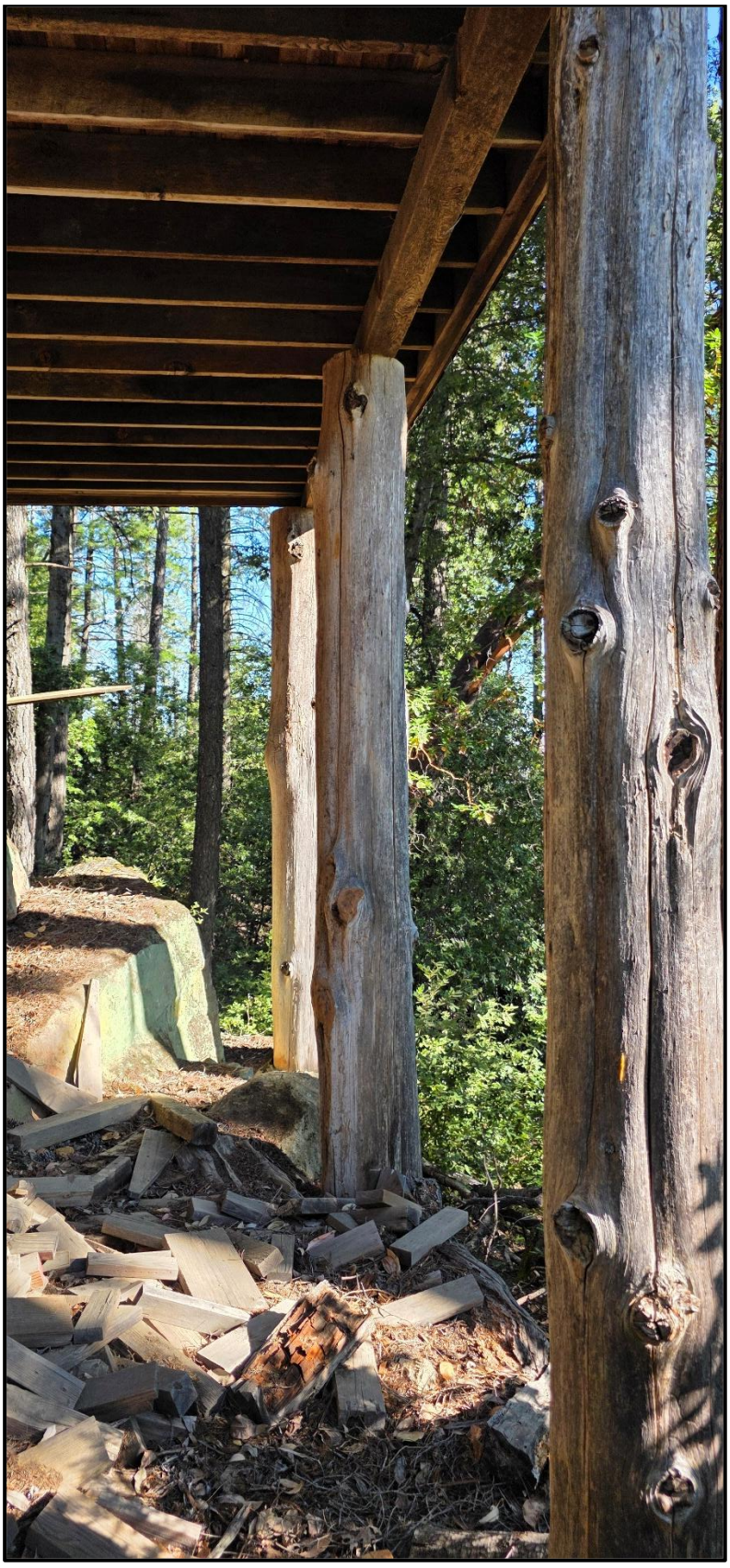


Figure 12. View of the pole foundation posts.



Figure 13. View of the screened portion.



Figure 14. Example view of the windows on the large cabin.

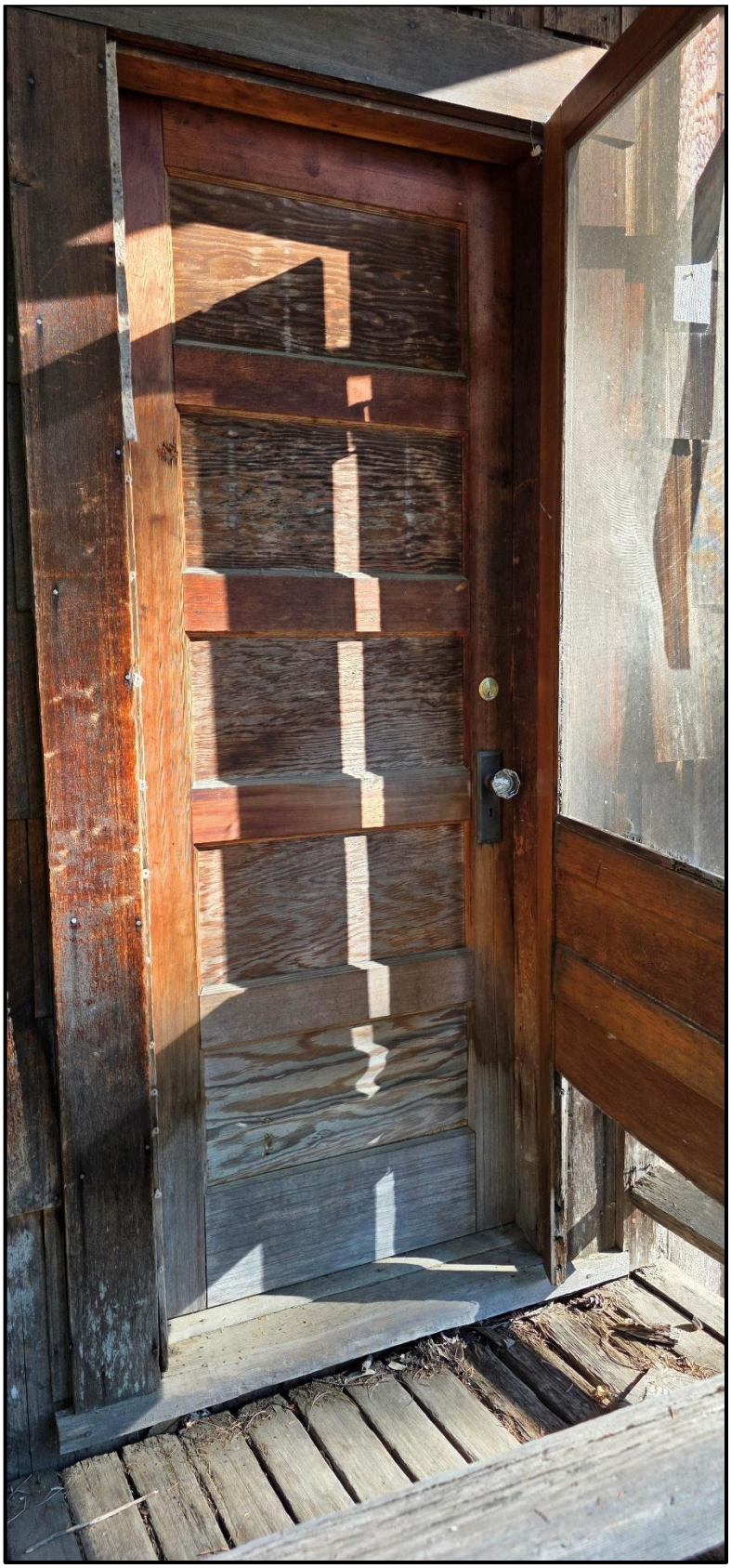


Figure 15. View of the front door to the large cabin.

BRIEF HISTORY OF THE BADE FAMILY

William F. Bade was born in 1871 in Carver, Minnesota to parents William Bade (sometimes spelled Bruns) and Anna Voight Bade. Both of his parents were German immigrants who had arrived separately but found each other and married in 1870 (USBC 1880). William Bruns was a scholar, so it is no surprise that William had an aptitude for study. William's parents were even able to hire a private tutor for him and he became multi-lingual, learning both Greek and Latin in addition to German and English.

William attended Moravian College, then Yale Divinity School. At Yale Divinity School, William studied ancient languages as well as Arabic. After graduating in 1895, William returned to Moravian College as an instructor, teaching Greek and German. All while fulfilling his teaching obligations, William studied and earned his Ph.D in 1898 with his thesis on the Assyrian flood legends (Colby 2025).

Upon receiving his Ph.D, Moravian College appointed William professor of Hebrew and Old Testament Literature, which he taught until 1902. Later that same year, William was appointed the professor of Old Testament Literature and Semitic Languages at what is now known as the Pacific School of Religion in Berkeley, California (Colby 2025).

After arriving in California, William met and eventually married Evelyn Marianne Ratcliff in 1906. Ms. Ratcliff was a graduate of the University of California in the mathematics and physics departments. Sadly, she died the following year, but not before producing their daughter, Evelyn Mary. William mourned for 10 years until he met and married Elizabeth Le Breton Marston. They had two children, Elizabeth and William George (Billy) (Colby 2025).

William met both of his wives through his work with the Sierra Club (Wampler 1977). William served on the Board of the Sierra Club from 1907 until his death in 1936. He served as president for several years as well as editor of the Sierra Club Bulletin, but what is probably most interesting was his work with John Muir himself (Bade 1977). Muir had published during his life, but upon his death, his family recognized that he had taken copious notes, made sketches, and had written about his travels throughout the United States and beyond. The Muir family asked William if he would compile and publish his notes, to which he agreed. Taking a year's sabbatical, William and his wife Elizabeth traveled in the steps of Muir, journeying to many of the beautiful places Muir had written about. Though the book ended up taking more than a year to complete, William produced *A Thousand-Mile Walk to the Gulf* in 1916. William spent the next few years editing more of Muir's notes and letters for publication (Marston Bade 1977; Wampler 1977).

Through all of this, William also began work as an archaeologist in the Middle East. He had planned to do fieldwork in Syria in 1914, but World War I and his obligations with Muir's work prevented him from going, so he focused on work in the American Southwest for a time. In 1925, William went to Palestine to plan out fieldwork and held excavations for five seasons in 1926, 1927, 1929, 1932, and 1935 (Wampler 1977). William died of a stroke in 1936. Upon his death, his son Bill (sometimes Billy), inherited the property at 1225 Howell Mountain Road.

William's wife, Elizabeth, wrote up the work that William had left unfinished. She ensured that all of Muir's possessions (many of which the Bades still had in their care) were returned to the Muir family or the appropriate depository at the behest of the Muir family. Elizabeth and the children also had the Palestine Institute constructed on the Pacific School of Religion's campus in Berkeley in honor of William and his archaeological work in Palestine (Wampler 1977).

William and Elizabeth's son, Bill, was born in 1924 in Oakland (Rieffel and Sarason 2013). Bill was unable to travel with his father to the Middle East for his earliest excavations, but was able to attend in 1935 for his last expedition. After his father's death, Bill, his mother, and his older sister moved back to San Diego where his mother was from.

Bill joined the Navy in 1943. He passed the test to become a V-12 student and was sent to the California Institute of Technology where he earned his B.S. in Physics in 1945. With the war nearly over, the Navy sent Bill to Columbia University and then to Harvard Business School to become a Disbursing Officer. Bill served in this position in the war until he was released from active duty in 1947. Bill served in the U.S. Navy Reserve until he was honorably discharged in 1955 (Rieffel and Sarason 2013).

In 1947, Bill became a student at UCLA and received his Ph.D. in Mathematics in 1951. Angus Taylor, Bill's professor and friend, wrote the chair of Mathematics at UC Berkeley and recommended Bill for an Instructorship for the 1951-1952 year and Berkeley acted on the recommendation. Bill was hired and he moved that year. At that time, Bill had been dating Eleanor Barry and they married the following year (Rieffel and Sarason 2013).

Bill's time at Berkeley was only one year and he was soon appointed as a research assistant at Yale University. Bill and Robert Bartle's task was to support the writing of Part I of Linear Operators, a three-volume set written by Nelson Dunford and Jacob Schwartz. Bill and Robert Bartle's work was acknowledged in the set by the authors, who they had aided in editing and revising each chapter so that it was complete (Rieffel and Sarason 2013).

Bill's time at Yale ended in 1955, and Bill was again appointed as an Assistant Professor at Berkeley. By this time, Bill and his wife Eleanor (Elly) had two children, Sarah and Michael. The family remained in Berkeley for the remainder of Bill's career through 1991 (Rieffel and Sarason 2013).

Bill had also inherited his father's and mother's love of the outdoors. His obituary mentions that his professor, Angus Taylor, shared his interest in mountaineering. It also mentions the family cabin in Angwin: "Bill's love of nature infused his entire life. When his father died, Bill inherited a property in Angwin, California, northeast of Berkeley, on which had been erected a cookhouse and a two-bedroom cabin. The Bades made various improvements in the property, and visited it often in the summer, where, in particular, it served as a base for exploratory hikes" (Rieffel and Sarason 2013).

Bill passed away in 2012, leaving behind his wife, Ely, and six children. The family sold the property the following year.

HISTORY OF RECREATION

Though the history of recreation has many subtopics and a long history, this discussion will be restricted to the history of recreation in the United States as it pertains to outdoor recreation such as hiking, camping, and mountaineering.

As the world became more industrialized and urbanized in the 1500s, people sought to escape the hustle and bustle of urban centers for the calm of nature. Over the years, this has sparked several types of reactions, ranging from hunting trips by European elite during the Renaissance, to the development

of the City Beautiful movement in the late 19th and early 20th centuries, which was an urban planning strategy to incorporate more parks into urban centers, to the rise of Romanticism in arts and literature in the late 1800s.

American geographer and writer Yi-fu Tuan discusses the reasons people feel the need to escape the city and return to nature in his book, *Topophila: A Study of Environmental Perception, Attitudes, and Values* (1990). Topophilia is derived from the Greek words "topos" (place) and "philia" (love), and Tuan uses this word to describe the emotional connections that people feel with certain places. Tuan cites the Epic of Gilgamesh, which dates to the third millennium B.C. where Gilgamesh had all the wealth and power in the city of Uruk, but nothing made him completely happy and so he sought the friendship of Enkidu, a man who lived in the hills, ate grass, and "knew nothing of the cultivated land". Though Enkidu is the embodiment of the wilds of nature, this romanticization of wild, rural nature, removed from the stresses and responsibilities of life, even when you are king and have everything at your fingertips, makes nature seem peaceful and attractive (Tuan 1990:103). To this end, Tuan asserts that this romantic appreciation of nature is born out of privilege and wealth.

In the 1700s, European philosophers, poets, and others equated nature with wisdom, spiritual comfort, and holiness; therefore, people were morally good when they were more connected with nature (Tuan 1990:107). Gentlemen were encouraged to travel to the countryside to study and contemplate. North Americans viewed Europe as being too urbanized; therefore, it was corrupt, degenerate, and decadent, while North America was viewed as a pristine, pure, and uncorrupted place (Tuan 1990:108).

It is with this mindset and history that we arrive at post-Civil War America. As previously mentioned, both Europe and North America were influenced by the ideals of the Romantic movement, which influenced many aspects of life. Though the movement technically ended prior to the Civil War, the movement's ideals of appreciation of nature in society, individualism, and overthrowing urbanization and industrialization in favor of nature were ideals that appealed to many Americans at the time.

In 1869, William H. H. Murray published the book *Adventures in the Wilderness*. Murray's book sparked, "a throng of pleasure-seekers into the lake region", as one reporter described (Young 2017:41). Murray's book described the lakes and mountains of the Adirondack Mountains located in northeastern New York state. Murray, from Connecticut, was a lover of the outdoors. After attending college, marrying his wife, Isadora, and becoming a well-known and respected church leader, he became the pastor of Park Street Church in Boston. In 1864, Murray first vacationed in the Adirondack Mountains and returned over the subsequent 14 years (Young 2017:45-46).

Enamored with the Adirondack Mountains, Murray began writing a series of essays about his love of the area and his outdoor pursuits. Though he did not intend these essays to be published, or even to be viewed by others, eventually, Murray's works were published. Though reviews were originally mixed, the book was immensely successful. Soon, the Adirondack Mountains became such a popular destination that a "Tourist's Edition" was published with information on train timetables and maps. Railroads offered a free copy of the book for every round-trip to the Adirondack Mountains (Young 2017:46-51).

The popularity of Murray's book is considered a watershed moment in the history of American camping. Young notes that the publication of this book coincided with a few societal events that may have contributed to the book's success. First, the book was published within four years of the conclusion of the Civil War, a period of time when many men participated in the war and would have been familiar

with camping and camp life as a soldier. Second, the population of the New England area increased by more than 40 percent between 1850 and 1870. Third, the year prior to Murray's book publication, two railroads and a telegraph line had been constructed in the Adirondack region, adding ease to thetravel and communication to the area. Last, Murray was a middle-class, Protestant clergyman who asserted that he was stressed and overworked. In his book, he stated, "In the wilderness [others like him] would find that perfect relaxation which all jaded minds require," the implication being that visits to nature would help alleviate the stresses of the world from overworked middle-class America (Young 2017:55-57). Murray's book timed perfectly with an increased population and urbanization of the New England area, and was marketed toward and popularized by middle-class families who were craving the romanticized escape to the wilds of the Adirondack Mountains. On the coattails of Murray's success came a series of books which provided information on how to camp, where to camp, and guides to different places (Young 2017).

In the 1870s, several hiking clubs were founded, including the Alpine Club, the Rocky Mountain Club, the White Mountain Club, and the Appalachian Mountain Club (to name a few) (Doran 2018). In his description of the formation of the Appalachian Mountain Club, Silas Chamberlin points out that the members met at the Massachusetts Institute of Technology (MIT) and were comprised of "white collar" workers who would have could have afforded the fares for and used the trolley and omnibuses of Boston (2014:57-58). Chamberlin argues that these men and women would have felt so removed from the basic act of walking that they formed a hiking club where hikes were organized by its members. Though it started much later than the clubs listed above, the Sierra Club was formed in 1892 and has become what many would argue is the largest of these clubs, spanning all 50 states.

During the 1920s through 1940s, the Sierra Club was marked by social and racial prejudices, which precluded people from joining unless they were white and of high social standing. The Sierra Club was also filled with businessmen who had ties to developers or were some themselves, and so advocating for environmental justice meant going against themselves or their peers. During this time, the Sierra Club functioned largely as a social and recreational society (Wyss 2016:40).

Born out of the development of these clubs and the rising interest in camping and returning to nature was the push to preserve nature. Yellowstone National Park was the first National Park created by the United States in 1872. Galen Clark and others had pushed to protect Yosemite Valley from development, which was protected by Abraham Lincoln in 1864. Years later, John Muir and Robert Underwood Johnson campaigned to create a larger park surrounding Yosemite Valley. In what became one of the most famous camping trips in the United States, John Muir and Theodore Roosevelt made a trip through Yosemite Valley in 1903, and following this trip, the Sierra Club succeeded in lobbying to create the second National Park after Yellowstone.

It was also during this time that the automobile became more available to the average consumer (though still nowhere as widely as today). Elon Jessup, early editor of both *Adventure* and *Outing* magazines, noted that the automobile made camping more widely available to all and observed a shift from primarily men camping to entire families camping (Young 2017:150).

RUSTIC ARCHITECTURE OR PARKITECTURE

Rustic Architecture or Parkitecture is the style of architecture formed by the National Park Service through the early and mid-1900s (Tweed *et al.* 1977). Several National Parks were created without any

type of cohesive management for years until 1916. Up to that point, many of the buildings that were constructed were influenced by the architecture of the times, the location of the park, and locally available materials. The Arts & Crafts movement was most influential, especially on Western parks, as its tenets included the use of natural materials, hand craftsmanship, simplicity, and functionality of design. The following is a description of the character-defining features of Rustic Architecture, or Parkitecture.

Character-Defining Features of Rustic Architecture or Parkitecture

Roof

Rooflines can vary depending on the conditions. Where snow is not as much an issue, rooflines are low-pitched and are hipped or gabled, creating triangular peaks with shallow slopes. In places where snow is abundant, rooflines are more sharply peaked to force snow off.

A common roofline feature includes extended overhangs with exposed rafters. This design is both practical and decorative in nature. The long overhang works to shade windows from the sun, adding to the efficiency of the home. The exposed rafters allow these buildings to showcase more detailing of handiwork, adding to the charming embellishment of the exterior.

False beams or braces were very commonly added under the gables. Dormer windows were also common.

Porches

Buildings typically feature a covered front porch, adding charm and an additional place to gather outside the home. Porches can either be full- or partial-width. While this feature is picturesque, the front porch also provides the practical value of shading front windows and offering a covered entryway. More elaborate buildings have porches supported by columns that can taper as they reach the roof. They can also be decorated to match the building's cladding, or they could consist of columns set on pillars of rock or brick (though more likely locally accessible rock). Less elaborate buildings have supports that are simple wood pillars.

Cladding

In some instances, there was no cladding. Simpler buildings were constructed of unhewn or hewn poles. Some buildings were constructed of locally available rock, and the rock was left exposed. Both of these methods gave nods to the Arts & Crafts movement, which called for a return to hand craftsmanship and using natural materials. Wood-framed buildings were clad with shingles, stucco, board-on-batten, or lapped siding.

Chimneys

Chimneys were almost always constructed of local field stone. Chimneys often played a decorative element of the building itself, and were often massive structures, or the rocks could be arranged in a decorative manner.

Doors

Doors were not particularly decorative in most instances. They often had windows to allow views of the surroundings.

Windows

Windows consist of smaller panes set in multiple assemblies. Windows were important as they provided a view of the outside landscape, which was often the point of people's visits to parks. Windows were often multi-paned, typically consisting of at least 6 or 9 lights, but the number varied depending on the size and shape of the window.

SIGNIFICANCE EVALUATION

The Bade family had a long history of a love of the great outdoors. William and Elizabeth's service to the Sierra Club is a testament to their devotion to preserving and honoring the natural landscape. William's work kept him in the urban center of Oakland, and one can imagine how he yearned daily to be in the mountains and trees he loved. It is no wonder he purchased the land at 1225 Howell Mountain Road to use as an escape from the congestion and cacophony of city life. Though William is a very important member of the Sierra Club and important for his work with John Muir and his collection of notes and letters, most of that work was conducted before William purchased the property at 1225 Howell Mountain Road. The acquisition of the cabin does coincide with William's archaeological work in the Middle East. While he did publish books related to his archaeological work while he owned the cabin, based on this research, it does not appear that he used the cabin as a place to write, and it was more likely used as a time to escape work and to enjoy time in nature.

The same holds true after William died and the property was passed to his son, Bill. Bill was a professor of Mathematics at UC Berkeley for several years. Based on this research, the cabin was used for family vacations.

The cabins themselves are in good physical shape and retain many of the original materials from the time of construction. William would have been familiar with the Sierra Club's construction of various buildings on National Park lands (at the time, primarily in Yosemite). During his excursions into the Sierra Nevada, through his association with the Sierra Club, William would have become familiar with the various types of cabins and buildings constructed in the mountains. Though the subject cabins are emulations of mountain cabins, they are simple structures with few distinctive characteristics.

The following is a discussion of whether the cabins meet each of the California Register's criteria. The importance of a resource is measured in terms of criteria for inclusion on the California Register of Historical Resources (Title 14 CCR, §4852). Refer back to the Regulatory Context section of the report for a description of the criteria.

Criterion 1

Under the theme of hiking/camping, the location of the cabin is at a scenic view from which one can rest, relax, and enjoy the view of Pope Valley to the east. The Bade family utilized this property for hiking and enjoying nature for 93 years. However, the location is not an organized camp where the Bades brought friends or groups to camp, but a family vacation home. The Angwin area is not known as a vacation destination. Though there is no information about the reasons why William purchased the property, it appears it was a beautiful and rural piece of land that was not too far from where the Bades lived in Oakland. Though the Bades are heavily associated with the Sierra Club, there does not appear

to be any association between the property and the club. Given these factors, the cabins do not meet Criterion 1 for their association with hiking and camping.

Criterion 2

William Bade is a very important person for his association with the Sierra Club, his work with John Muir and John Muir's collection of notes and letters, and for his archaeological work in the Middle East. However, William's work with the Sierra Club and John Muir took place prior to the purchase of the property at 1225 Howell Mountain Road. Though his archaeological work in the Middle East coincided with his ownership of the property, there is no evidence that these cabins are associated with that work. Given this, the cabins are not important for their association with William Bade.

Bill Bade, who inherited the cabins from his father, was a Mathematics professor at UC Berkeley. Though Bill helped with the publication of Mathematics books, his work was in an editing capacity. While he was a beloved professor at UC Berkeley, his time there did not raise him to a level of fame, and even if it did, it does not appear that Bill did any mathematics work at the cabins. Given this, the cabins are not important for their association with Bill Bade and do not meet Criterion 2.

Criterion 3

Though the cabins have rustic architecture or parkitecture elements, these are simple and few. Overall, the buildings themselves are of simple construction. Though the buildings are well-constructed and still retain many original materials, they are of simple design and are not great examples of parkitecture and do not qualify for inclusion on the California Register under Criterion 3.

Criterion 4

Generally, Criterion 4 applies to archaeological sites and to resources where the study of physical construction could yield important analytical data. The Bade cabins do not meet Criterion 4. These cabins do not qualify for inclusion on the California Register under Criterion 4.

Integrity Discussion

As the cabins do not meet criteria for inclusion on the California Register, a discussion of their integrity is not necessary.

SUMMARY

Eileen Barrow & Associates completed an historical building evaluation of the Bade Cabins. In short, the Bade Cabins did not meet criteria for inclusion on the California Register of Historical Resources As this resource was found to be unimportant, no further recommendations are warranted.

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APPENDIX A

Documentation of the Historical Evaluation
On appropriate DPR523 forms

PRIMARY RECORD

Primary #:
HRI #:
Trinomial:
Other Listings:
NRHP Status Code:
Review Code: **Reviewer:** **Date:** **Resource Name or #:** Bade Cabins

P1. Other Identifier:

P2. Location: Unrestricted **a. County:** Napa
b. USGS 7.5' Quad: St. Helena **Date:** 1993
T 9 **N**/**R** 5 **W**; NW **1/4 of** SW **1/4 of Sec.** 29; **MDBM**
c. Address: 1225 Howell Mountain Road **City:** Angwin **Zip:** 95408
d. UTM: Zone: 10 548335**mE** 4272980**mN** (WGS 84)
e. Other Locational Information: From the community of Angwin, take Howell Mountain Road north for 2.2 miles. The driveway for the property will be at a sharp bend in the road.

P3a. Description: There are two cabins located on the property at 1225 Howell Mountain Road. The following is a description of each of the cabins. (See Continuation Sheet for further description)

P3b. Resource Attributes: AP2. Single-family property

P4. Resources Present: Building

P5. Photograph or Drawing:

P5b. Description of Photo: View of the cabins facing north.



P6. Date Constructed/Age and Sources: Circa 1925

P7. Owner and Address:
Eternal Preserve Holdings, LLC
6558 Lonetree Blvd.
Rocklin, CA 95765

P8. Recorded by:
Eileen Barrow
Eileen Barrow & Associates
1007b West College Avenue, #534
Santa Rosa, CA 95401

P9. Date Recorded:
July 2025

P10. Type of Survey:
Intensive

P11. Report Citation:
Barrow, E.
2025 Historical Evaluation Study of the Bade Cabins, 1225 Howell Mountain Road, Angwin, Napa County, California

P12. Attachments: Building, Structure, and Object Record, Continuation Sheets (14)

P3a. Description (Continued from the Primary Record)
Small Cabin Description

The small cabin is a single-story wood-framed building on an L-shaped plan (see Figure 1). The long part of the "L" consists of the living quarters, while the short part of the "L" is a small attached garage. The building has a hillside foundation; the garage sits on the ground surface with a concrete slab foundation, while the living space is set on posts on piers. Under the living space is a small, open basement where a water heater is located. This area is protected by a mortared stone retaining wall. The basement is only partially enclosed with wood framing. The framing of the floor consists of unhewn interlocking poles (see Figures 2 and 3).



Figure 1. View of the small cabin facing east.



Figure 2. View of the basement area underneath the small cabin showing the retaining wall and foundation supports.



Figure 3. View of the east elevation of the small cabin showing the unhewn interlocking log foundation.

The roof is cross-gabled and covered with composite shingles. The cladding consists of board-on-batten. There are several windows, comprising a mixture of fixed single-pane (see Figure 4), fixed three-by-three lights (see Figure 5), and two-by-four light casements (see Figure 6). All the windows are wood-framed. There is a single pane of glass in the top part of the wooden door.

The interior consists of two rooms, one of which may have been a water closet, but there is no plumbing present. The other room contains all the other functions of the building, including a small kitchen area, a place for a woodstove, and likely living quarters. The floor is covered with vinyl. The living area contains a ribbon of fixed single-pane windows, which provide beautiful views of Pope Valley. This building reportedly served as a cookhouse, which makes sense as no kitchen infrastructure was observed in the larger cabin (Rieffel and Sarason 2013).



Figure 4. View of the ribbon of single-paned windows in the small cabin.



Figure 5. Example view of the three-by-three light windows in the small cabin.



Figure 6. View of the two-by-four light window in the small cabin.

Large Cabin Description

The large cabin is a single-story wood-framed building on a rectangular plan (see Figure 7). The building has a hillside foundation. Under the west end of the building, there is a small, open basement. This area is protected by a mortared stone retaining wall. The basement is only partially enclosed with wood framing and wire mesh (see Figure 8). Some of the posts are unhewn poles, while others are milled (see Figure 9). It is possible that the milled posts are recent repairs to the building.



Figure 7. View of the large cabin facing north.



Figure 8. View of a portion of the basement and foundation of the large cabin.



Figure 9. View of the pole foundation posts.

There is a screened porch at the west end of the building, which provides a beautiful view of Pope Valley (see Figure 10). There is no porch over the front door, but there is a small wooden deck that provides a single step and handrail up to it.

The roof is cross-gabled and covered with composite shingles. The building is clad with wood shingles. There are several windows, primarily comprising wood-framed two-by-four-light casements (see Figure 11). The door is wood and has five panels (see Figure 12).

The interior consists of a large room which serves as the living area, a bathroom, and two bedrooms. The framing is exposed throughout the house. Some of the fixtures appear to be modern additions (such as much of the plumbing), and it appears there may have been two doors to the screened porch at one time, but one has been closed off.



Figure 10. View of the screened portion.



Figure 11. Example view of the windows on the large cabin.

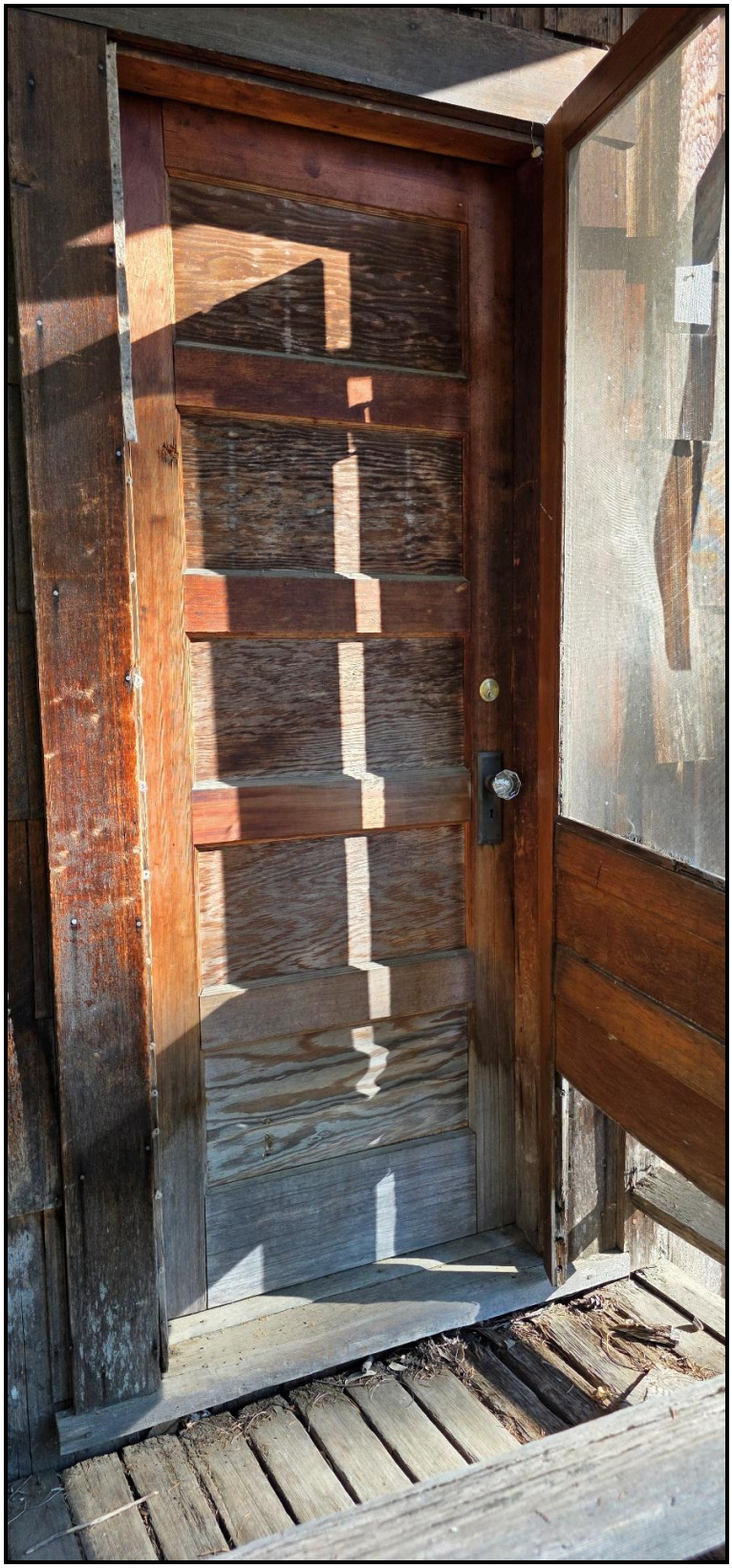


Figure 12. View of the front door to the large cabin.

B1. Historic Name: None

B2. Common Name: None

B3. Original Use: Cabin

B4. Present Use: Cabin

B5. Architectural Style: Rustic Architecture or Parkitecture (see Continuation Sheets 11-12 for a description)

B6. Construction History: William F. Bade purchased the property in 1924 and it is likely that the cabins were constructed around this date.

B7. Moved? No **Date:** NA **Original Location:** NA

B8. Related Features: See the description on the Primary Record and Continuation Sheets (pages 1-8).

B9a. Architect: None

B9b. Builder: Unknown

B10. Significance: **Theme:** Recreation – Camping/Hiking **Area:** Angwin, Napa County
Period of Significance: 1924-2017
Property Type: Cabin
Applicable Criteria: None
Context Statement (see Continuation Sheet 10 and 11)

B11. Additional Resource Attributes:

B12. References:
See Continuation Sheets pages 15 through 16.

B13. Remarks:

B14. Evaluator: E. Barrow
Date of Evaluation: July 2025

Context Statement continued from Building, Structure, and Object Record

History of Recreation

Though the history of recreation has many subtopics and a long history, this discussion will be restricted to the history of recreation in the United States as it pertains to outdoor recreation such as hiking, camping, and mountaineering.

As the world became more industrialized and urbanized in the 1500s, people sought to escape the hustle and bustle of urban centers for the calm of nature. Over the years, this has sparked several types of reactions, ranging from hunting trips by European elite during the Renaissance, to the development of the City Beautiful movement in the late 19th and early 20th centuries, which was an urban planning strategy to incorporate more parks into urban centers, to the rise of Romanticism in arts and literature in the late 1800s.

American geographer and writer Yi-fu Tuan discusses the reasons people feel the need to escape the city and return to nature in his book, *Topophila: A Study of Environmental Perception, Attitudes, and Values* (1990). Topophilia is derived from the Greek words "topos" (place) and "philia" (love), and Tuan uses this word to describe the emotional connections that people feel with certain places. Tuan cites the Epic of Gilgamesh, which dates to the third millennium B.C. where Gilgamesh had all the wealth and power in the city of Uruk, but nothing made him completely happy and so he sought the friendship of Enkidu, a man who lived in the hills, ate grass, and "knew nothing of the cultivated land". Though Enkidu is the embodiment of the wilds of nature, this romanticization of wild, rural nature, removed from the stresses and responsibilities of life, even when you are king and have everything at your fingertips, makes nature seem peaceful and attractive (Tuan 1990:103). To this end, Tuan asserts that this romantic appreciation of nature is born out of privilege and wealth.

In the 1700s, European philosophers, poets, and others equated nature with wisdom, spiritual comfort, and holiness; therefore, people were morally good when they were more connected with nature (Tuan 1990:107). Gentlemen were encouraged to travel to the countryside to study and contemplate. North Americans viewed Europe as being too urbanized; therefore, it was corrupt, degenerate, and decadent, while North America was viewed as a pristine, pure, and uncorrupted place (Tuan 1990:108).

It is with this mindset and history that we arrive at post-Civil War America. As previously mentioned, both Europe and North America were influenced by the ideals of the Romantic movement, which influenced many aspects of life. Though the movement technically ended prior to the Civil War, the movement's ideals of appreciation of nature in society, individualism, and overthrowing urbanization and industrialization in favor of nature were ideals that appealed to many Americans at the time.

In 1869, William H. H. Murray published the book *Adventures in the Wilderness.* Murray's book sparked, "a throng of pleasure-seekers into the lake region", as one reporter described (Young 2017:41). Murray's book described the lakes and mountains of the Adirondack Mountains located in northeastern New York state. Murray, from Connecticut, was a lover of the outdoors. After attending college, marrying his wife, Isadora, and becoming a well-known and respected church leader, he became the pastor of Park Street Church in Boston. In 1864, Murray first vacationed in the Adirondack Mountains and returned over the subsequent 14 years (Young 2017:45-46).

Enamored with the Adirondack Mountains, Murray began writing a series of essays about his love of the area and his outdoor pursuits. Though he did not intend these essays to be published, or even to be viewed by others, eventually, Murray's works were published. Though reviews were originally mixed, the book was immensely successful. Soon, the Adirondack Mountains became such a popular destination that a "Tourist's Edition" was published with information on train timetables and maps. Railroads offered a free copy of the book for every round-trip to the Adirondack Mountains (Young 2017:46-51).

The popularity of Murray's book is considered a watershed moment in the history of American camping. Young notes that the publication of this book coincided with a few societal events that may have contributed to the book's success. First, the book was published within four years of the conclusion of the Civil War, a period of time when many men participated in the war and would have been familiar with camping and camp life as a soldier. Second, the population of the New England area increased by more than 40 percent between 1850 and 1870. Third, the year prior to Murray's book publication, two railroads and a telegraph line had been constructed in the Adirondack region, adding ease to the travel and communication to the area. Last, Murray was a middle-class, Protestant clergyman who asserted that he was stressed and overworked. In his book, he stated, "In the wilderness [others like him] would find that perfect relaxation which all jaded minds require," the implication being that visits to nature would help

alleviate the stresses of the world from overworked middle-class America (Young 2017:55-57). Murray's book timed perfectly with an increased population and urbanization of the New England area, and was marketed toward and popularized by middle-class families who were craving the romanticized escape to the wilds of the Adirondack Mountains. On the coattails of Murray's success came a series of books which provided information on how to camp, where to camp, and guides to different places (Young 2017).

In the 1870s, several hiking clubs were founded, including the Alpine Club, the Rocky Mountain Club, the White Mountain Club, and the Appalachian Mountain Club (to name a few) (Doran 2018). In his description of the formation of the Appalachian Mountain Club, Silas Chamberlin points out that the members met at the Massachusetts Institute of Technology (MIT) and were comprised of "white collar" workers who would have could have afforded the fares for and used the trolley and omnibuses of Boston (2014:57-58). Chamberlin argues that these men and women would have felt so removed from the basic act of walking that they formed a hiking club where hikes were organized by its members. Though it started much later than the clubs listed above, the Sierra Club was formed in 1892 and has become what many would argue is the largest of these clubs, spanning all 50 states.

During the 1920s through 1940s, the Sierra Club was marked by social and racial prejudices, which precluded people from joining unless they were white and of high social standing. The Sierra Club was also filled with businessmen who had ties to developers or were some themselves, so advocating for environmental justice meant going against themselves or their peers. During this time, the Sierra Club functioned largely as a social and recreational society (Wyss 2016:40).

Born out of the development of these clubs and the rising interest in camping and returning to nature was the push to preserve nature. Yellowstone National Park was the first National Park created by the United States in 1872. Galen Clark and others had pushed to protect Yosemite Valley from development, which was protected by Abraham Lincoln in 1864. Years later, John Muir and Robert Underwood Johnson campaigned to create a larger park surrounding Yosemite Valley. In what became one of the most famous camping trips in the United States, John Muir and Theodore Roosevelt made a trip through Yosemite Valley in 1903, and following this trip, the Sierra Club succeeded in lobbying to create the second National Park after Yellowstone.

It was also during this time that the automobile became more available to the average consumer (though still nowhere as widely as today). Elon Jessup, early editor of both *Adventure* and *Outing* magazines, noted that the automobile made camping more widely available to all and observed a shift from primarily men camping to entire families camping (Young 2017:150).

B5. Architectural Style: Rustic Architecture or Parkitecture Description Continued from the Building, Structure, and Object Record

Rustic Architecture or Parkitecture is the style of architecture formed by the National Park Service through the early and mid-1900s (Tweed *et al.* 1977). Several National Parks were created without any type of cohesive management for years until 1916. Up to that point, many of the buildings that were constructed were influenced by the architecture of the times, the location of the park, and locally available materials. The Arts & Crafts movement was most influential, especially on Western parks, as its tenets included the use of natural materials, hand craftsmanship, simplicity, and functionality of design.

The following is a description of the character-defining features of Rustic Architecture, or Parkitecture.

Character-Defining Features of Rustic Architecture or Parkitecture

Roof - Rooflines can vary depending on the conditions. Where snow is not as much an issue, rooflines are low-pitched and are hipped or gabled, creating triangular peaks with shallow slopes. In places where snow is abundant, rooflines are more sharply peaked to force snow off.

A common roofline feature includes extended overhangs with exposed rafters. This design is both practical and decorative in nature. The long overhang works to shade windows from the sun, adding to the efficiency of the home. The exposed rafters allow these buildings to showcase more detailing of handiwork, adding to the charming embellishment of the exterior.

False beams or braces were very commonly added under the gables. Dormer windows were also common.

Porches - Buildings typically feature a covered front porch, adding charm and an additional place to gather outside the home. Porches can either be full- or partial-width. While this feature is picturesque, the front porch also provides the practical value of shading front windows and offering a covered entryway. More elaborate buildings have porches supported by columns that can taper as they reach the roof. They can also be decorated to match the building's cladding, or they could consist of columns set on pillars of rock or brick (though more likely locally accessible rock). Less elaborate buildings have supports that are simple wood pillars.

Cladding - In some instances, there was no cladding. Simpler buildings were constructed of unhewn or hewn poles. Some buildings were constructed of locally available rock, and the rock was left exposed. Both of these methods gave nods to the Arts & Crafts movement, which called for a return to hand craftsmanship and using natural materials. Wood-framed buildings were clad with shingles, stucco, board-on-batten, or lapped siding.

Chimneys - Chimneys were almost always constructed of local field stone. Chimneys often played a decorative element of the building itself, and were often massive structures, or the rocks could be arranged in a decorative manner.

Doors - Doors were not particularly decorative in most instances. They often had windows to allow views of the surroundings.

Windows - Windows consist of smaller panes set in multiple assemblies. Windows were important as they provided a view of the outside landscape, which was often the point of people's visits to parks. Windows were often multi-paned, typically consisting of at least 6 or 9 lights, but the number varied depending on the size and shape of the window.

Brief History of the Bade Family

William F. Bade was born in 1871 in Carver, Minnesota to parents William Bade (sometimes spelled Bruns) and Anna Voight Bade. Both of his parents were German immigrants who had arrived separately but found each other and married in 1870 (USBC 1880). William Bruns was a scholar, so it is no surprise that William had an aptitude for study. William's parents were even able to hire a private tutor for him and he became multi-lingual, learning both Greek and Latin in addition to German and English.

William attended Moravian College, then Yale Divinity School. At Yale Divinity School, William studied ancient languages as well as Arabic. After graduating in 1895, William returned to Moravian College as an instructor, teaching Greek and German. All while fulfilling his teaching obligations, William studied and earned his Ph.D in 1898 with his thesis on the Assyrian flood legends (Colby 2025).

Upon receiving his Ph.D, Moravian College appointed William professor of Hebrew and Old Testament Literature, which he taught until 1902. Later that same year, William was appointed the professor of Old Testament Literature and Semitic Languages at what is now known as the Pacific School of Religion in Berkeley, California (Colby 2025).

After arriving in California, William met and eventually married Evelyn Marianne Ratcliff in 1906. Ms. Ratcliff was a graduate of the University of California in the mathematics and physics departments. Sadly, she died the following year, but not before producing their daughter, Evelyn Mary. William mourned for 10 years until he met and married Elizabeth Le Breton Marston. They had two children, Elizabeth and William George (Billy) (Colby 2025).

William met both of his wives through his work with the Sierra Club (Wampler 1977). William served on the Board of the Sierra Club from 1907 until his death in 1936. He served as president for several years as well as editor of the Sierra Club Bulletin, but what is probably most interesting was his work with John Muir himself (Bade 1977). Muir had published during his life, but upon his death, his family recognized that he had taken copious notes, made sketches, and had written about his travels throughout the United States and beyond. The Muir family asked William if he would compile and publish his notes, to which he agreed. Taking a year's sabbatical, William and his wife Elizabeth traveled in the steps of Muir, journeying to many of the beautiful places Muir had written about. Though the book ended up taking more than a year to complete, William produced *A Thousand-Mile Walk to the Gulf* in 1916. William spent the next few years editing more of Muir's notes and letters for publication (Marston Bade 1977; Wampler 1977).

Through all of this, William also began work as an archaeologist in the Middle East. He had planned to do fieldwork in Syria in 1914, but World War I and his obligations with Muir's work prevented him from going, so he focused on work in the American Southwest for a time. In 1925, William went to Palestine to plan out fieldwork and held excavations for five seasons in 1926, 1927, 1929, 1932, and 1935 (Wampler 1977). William died of a stroke in 1936. Upon his death, his son Bill (sometimes Billy), inherited the property at 1225 Howell Mountain Road.

William's wife, Elizabeth, wrote up the work that William had left unfinished. She ensured that all of Muir's possessions (many of which the Bades still had in their care) were returned to the Muir family or the appropriate depository at the behest of the Muir family. Elizabeth and the children also had the Palestine Institute constructed on the Pacific School of Religion's campus in Berkeley in honor of William and his archaeological work in Palestine (Wampler 1977).

William and Elizabeth's son, Bill, was born in 1924 in Oakland (Rieffel and Sarason 2013). Bill was unable to travel with his father to the Middle East for his earliest excavations, but was able to attend in 1935 for his last expedition. After his father's death, Bill, his mother, and his older sister moved back to San Diego where his mother was from.

Bill joined the Navy in 1943. He passed the test to become a V-12 student and was sent to the California Institute of Technology where he earned his B.S. in Physics in 1945. With the war nearly over, the Navy sent Bill to Columbia University and then to Harvard Business School to become a Disbursing Officer. Bill served in this position in the war until he was released from active duty in 1947. Bill served in the U.S. Navy Reserve until he was honorably discharged in 1955 (Rieffel and Sarason 2013).

In 1947, Bill became a student at UCLA and received his Ph.D. in Mathematics in 1951. Angus Taylor, Bill's professor and friend, wrote the chair of Mathematics at UC Berkeley and recommended Bill for an Instructorship for the 1951-1952 year and Berkeley acted on the recommendation. Bill was hired and he moved that year. At that time, Bill had been dating Eleanor Barry and they married the following year (Rieffel and Sarason 2013).

Bill's time at Berkeley was only one year and he was soon appointed as a research assistant at Yale University. Bill and Robert Bartle's task was to support the writing of Part I of Linear Operators, a three-volume set written by Nelson Dunford and Jacob Schwartz. Bill and Robert Bartle's work was acknowledged in the set by the authors, who they had aided in editing and revising each chapter so that it was complete (Rieffel and Sarason 2013).

Bill's time at Yale ended in 1955, and Bill was again appointed as an Assistant Professor at Berkeley. By this time, Bill and his wife Eleanor (Elly) had two children, Sarah and Michael. The family remained in Berkeley for the remainder of Bill's career through 1991 (Rieffel and Sarason 2013).

Bill had also inherited his father's and mother's love of the outdoors. His obituary mentions that his professor, Angus Taylor, shared his interest in mountaineering. It also mentions the family cabin in Angwin: "Bill's love of nature infused his entire life. When his father died, Bill inherited a property in Angwin, California, northeast of Berkeley, on which had been erected a cookhouse and a two-bedroom cabin. The Bades made various improvements in the property, and visited it often in the summer, where, in particular, it served as a base for exploratory hikes" (Rieffel and Sarason 2013).

Bill passed away in 2012, leaving behind his wife, Ely, and six children. The family sold the property the following year.

Statement of Significance

The Bade family had a long history of a love of the great outdoors. William and Elizabeth's service to the Sierra Club is a testament to their devotion to preserving and honoring the natural landscape. William's work kept him in the urban center of Oakland, and one can imagine how he yearned daily to be in the mountains and trees he loved. It is no wonder he purchased the land at 1225 Howell Mountain Road to use as an escape from the congestion and cacophony of city life. Though William is a very important member of the Sierra Club and important for his work with John Muir and his collection of notes and letters, most of that work was conducted before William purchased the property at 1225 Howell Mountain Road. The acquisition of the cabin does coincide with William's archaeological work in the Middle East. While he did publish books related to his archaeological work while he owned the cabin, based on this research, it does not appear that he used the cabin as a place to write, and it was more likely used as a time to escape work and to enjoy time in nature.

Statement of Significance (Continued)

The same holds true after William died and the property was passed to his son, Bill. Bill was a professor of Mathematics at UC Berkeley for several years. Based on this research, the cabin was used for family vacations.

The cabins themselves are in good physical shape and retain many of the original materials from the time of construction. William would have been familiar with the Sierra Club's construction of various buildings on National Park lands (at the time, primarily in Yosemite). During his excursions into the Sierra Nevada, through his association with the Sierra Club, William would have become familiar with the various types of cabins and buildings constructed in the mountains. Though the subject cabins are emulations of mountain cabins, they are simple structures with few distinctive characteristics.

The following is a discussion of whether the cabins meet each of the California Register's criteria. The importance of a resource is measured in terms of criteria for inclusion on the California Register of Historical Resources (Title 14 CCR, §4852). The California Register criteria are listed below.

The quality of significance is present in properties that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

1. Are associated with events that have made a significant contribution to the broad patterns of our history; or

2. Are associated with the lives of persons significant in our past; or

3. Embody the distinct characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4. Have yielded or may be likely to yield, information important in prehistory or history.

Criterion 1 – Under the theme of hiking/camping, the location of the cabin is at a scenic view from which one can rest, relax, and enjoy the view of Pope Valley to the east. The Bade family utilized this property for hiking and enjoying nature for 93 years. However, the location is not an organized camp where the Bades brought friends or groups to camp, but a family vacation home. The Angwin area is not known as a vacation destination. Though there is no information about the reasons why William purchased the property, it appears it was a beautiful and rural piece of land that was not too far from where the Bades lived in Oakland. Though the Bades are heavily associated with the Sierra Club, there does not appear to be any association between the property and the club. Given these factors, the cabins do not meet Criterion 1 for their association with hiking and camping.

Criterion 2 – William Bade is a very important person for his association with the Sierra Club, his work with John Muir and John Muir's collection of notes and letters, and for his archaeological work in the Middle East. However, William's work with the Sierra Club and John Muir took place prior to the purchase of the property at 1225 Howell Mountain Road. Though his archaeological work in the Middle East coincided with his ownership of the property, there is no evidence that these cabins are associated with that work. Given this, the cabins are not important for their association with William Bade.

Bill Bade, who inherited the cabins from his father, was a Mathematics professor at UC Berkeley. Though Bill helped with the publication of Mathematics books, his work was in an editing capacity. While he was a beloved professor at UC Berkeley, his time there did not raise him to a level of fame, and even if it did, it does not appear that Bill did any mathematics work at the cabins. Given this, the cabins are not important for their association with Bill Bade and do not meet Criterion 2.

Criterion 3 – Though the cabins have rustic architecture or parkitecture elements, these are simple and few. Overall, the buildings themselves are of simple construction. Though the buildings are well-constructed and still retain many original materials, they are of simple design and are not great examples of parkitecture and do not qualify for inclusion on the California Register under Criterion 3.

Criterion 4 - Generally, Criterion 4 applies to archaeological sites and to resources where the study of physical construction could yield important analytical data. The Bade cabins do not meet Criterion 4. These cabins do not qualify for inclusion on the California Register under Criterion 4.

Integrity Discussion

As the cabins do not meet criteria for inclusion on the California Register, a discussion of their integrity is not necessary.

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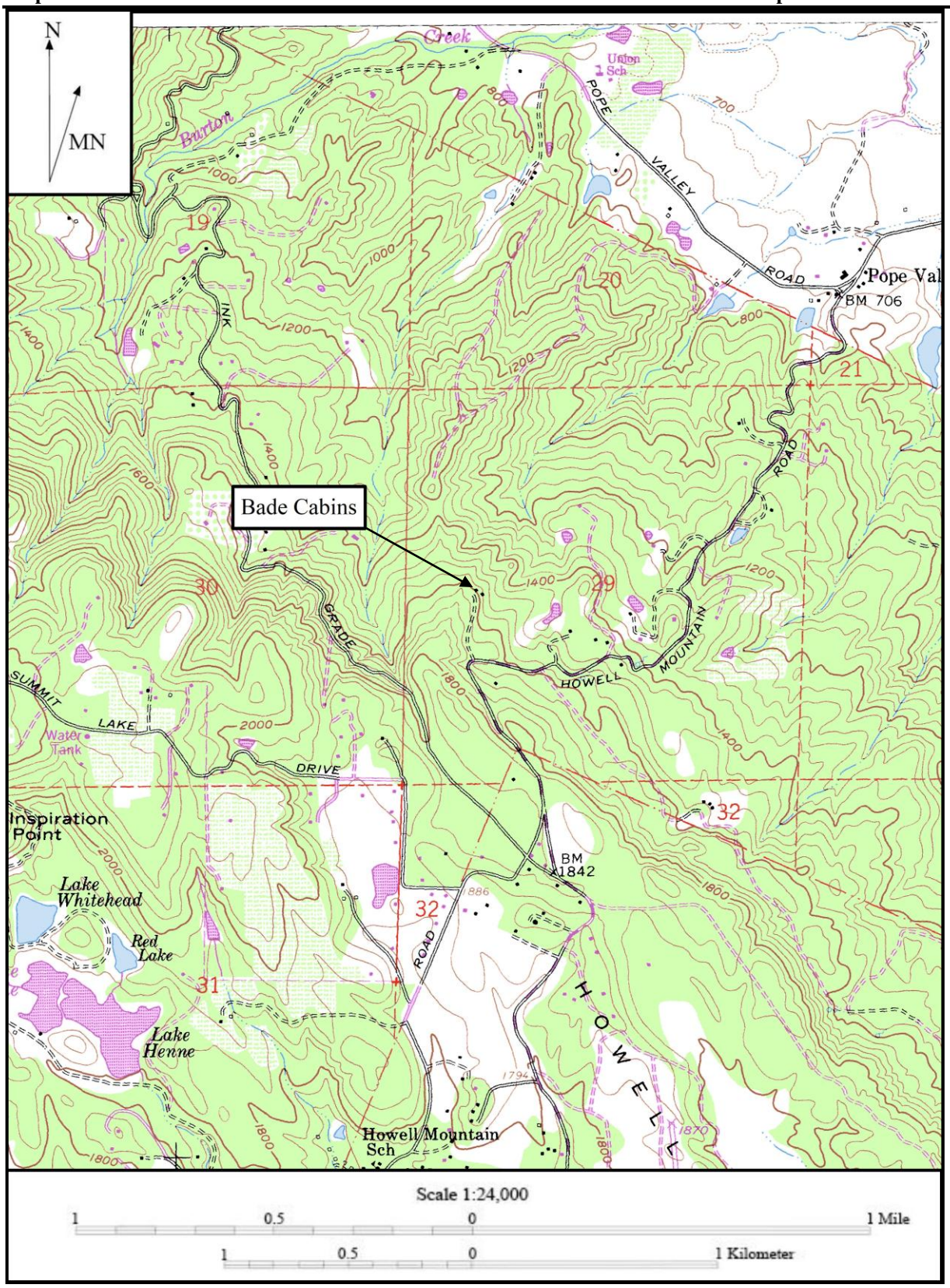
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LOCATION MAP

Primary #:
HRI #:
Trinomial:

Resource Name or #: Bade Cabins
Map Name: St. Helena **Scale:** 7.5’ **Date of Map:** 1993



“H”

Biological Resources Reconnaissance Survey

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

Biological Resources Reconnaissance Survey

1225 Howell Mountain Road (018-120-016, 018-120-027)
Napa County, California









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EXECUTIVE SUMMARY

This report details the regulatory background, methods, results, and recommendations of a Biological Resources Reconnaissance Survey (BRRS) for the proposed development of facilities to provide for a natural burial site located at 1225 Howell Mountain Road, Napa County. These facilities include the construction and update of new and existing roads and parking areas; construction of 10-foot-wide gravel walking paths; construction of a new office and conference building with public bathrooms; update to existing buildings; and excavation of a waterline and electrical line and construction of a 10,000-gallon water tank and pump. The Project Area is composed of California black oak woodland, tanoak forest, Douglas fir forest, and ephemeral streams.

The Study Area (entire parcel, 112 acres) contains 27.7 acres, 17.45 acres, and 64.51 acres of California black oak woodland, tanoak forest, and Douglas fir forest, respectively. The proposed Project will incur 0.95 acre, 0.64 acre, and 1.26 acres to these land cover types, respectively; these represent 3.4 percent, 3.6 percent, and 1.9 percent of the total cover, respectively. Importantly, these impacts are entirely on the forest/woodland floor, with only nine trees scheduled for removal. Napa County requires a ratio of 3:1 preservation of similar canopy; therefore, the project is in compliance.

A protocol-level rare plant survey resulted in the detection of four special-status plants: narrow-anthered brodiaea (*Brodiaea leptandra*, CRPR 1B), redwood lily (*Lilium rubescens*, CRPR 4), Cobb Mountain lupine (*Lupinus sericatus*, CRPR 1B), green monardella (*Monardella viridis*, CRPR 4), and dark-mouthed Triteleia (*Triteleia lugens*, CRPR 4). Only a small portion of the dark-mouthed triteleia population will be permanently impacted by the Project, but recommendations are provided herein to minimize these impacts.

Three special-status bats and five special-status birds, as well as non-status birds with baseline legal protections, have the potential to occur in the Project Area. Mitigation measures and best management practices have been developed and provided herein to avoid potential impacts to these resources from the removal of nine trees.

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Definitions

Study Area: The area composing the two adjoining parcels of APN: 018-120-016 and 018-120-027, totaling 112.23 acres.

Project Area: The area encompassing the proposed project (internment areas, access, infraastructure); the area evaluated for potential impacts to sensitive biological resources, totaling approximately 23.85 (includes both temporary and permanent impacts

List of Abbreviations & Acronyms

BGEPA	Bald and Golden Eagle Protection Act
BIOS	Biogeographic Information and Observation System
BRRS	Biological Resources Reconnaissance Survey
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CECP	California Essential Connectivity Project
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
County	Napa County
Corps	U.S. Army Corps of Engineers
CRPR	California Rare Plant Ranks
CSRL	California Soils Resources Lab
CWA	Clean Water Act
EFH	Essential Fish Habitat
ESA (Federal)	Endangered Species Act
MBTA	Migratory Bird Treaty Act
NCBDR	Napa County Baseline Data Report
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
NWPL	National Wetland Plant List
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
SFP	State Fully Protected Species
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WRA	WRA, Inc.

1.0 INTRODUCTION

On August 25, 2017, April 26 and June 22, 2018; and April 14, May 18, and June 29, 2023, WRA, Inc. (WRA) performed an assessment of biological resources and protocol-level rare plant surveys at 1225 Howell Mountain, Napa County (hereafter Study Area) (Figure 1, Appendix A). The purpose of this study was to gather the information necessary to complete a review of biological resources under the California Environmental Quality Act (CEQA) to meet the guidelines outlined by Napa County in *Guidelines for Preparing Biological Resources Reconnaissance Surveys* (Napa County 2016a) and *Guidelines for Preparing Special-status Plant Studies* (Napa County 2016b).

A biological resources reconnaissance survey (BRRS) provides general information on the presence, or potential presence, of sensitive species and habitats. These survey(s) contain the results of a focused protocol-level survey for listed plant species in the Study Area; however, protocol-level surveys for wildlife may or may not be included as part of the survey. This survey is not a formal wetland delineation; in instances where such a delineation may be required for project approval by local, state, or federal agencies, results would be reported herein, but may be presented elsewhere in separate reports. This survey is based on information available at the time of the study and on-site conditions that were observed on the date(s) the site was visited.

This report describes the results of the site visits, which assessed the Project Area for (1) the presence of sensitive land cover types, (2) the potential for land cover types on the site to support special-status plant and wildlife species, and (3) the presence of any other sensitive natural resources protected by local, state, or federal laws and regulations. Special-status species observed during the site assessment were documented and their presence is discussed herein. Specific findings on the habitat suitability or presence of special-status species or sensitive habitats may require that protocol-level surveys or other studies be conducted; recommendations for additional studies are provided, if necessary.

The overall proposed project (Project) is to create Howell Mountain Cemetery, a green burial cemetery and managed as a conservation property. Project activities are two-fold: (1) construction activities to build out infrastructure and buildings and (2) on-going, intermittent internments.

Construction activities include:

- Update of existing dirt roads
- Construction of a new paved road and parking areas
- Update of two existing buildings (storage, maintenance garage)
- Construction of a new building (office/conference room)
- Construction of 10-foot-wide gravel walking paths
- Installation of a sign at the public roadway
- Installation of 10,000-gallon water tank; buried waterline from existing well to the proposed tank and buried waterline from proposed water tank to existing and proposed buildings
- Installation of buried electrical line to power the waterline

2.0 REGULATORY BACKGROUND

This report is intended to facilitate conformance of the Project with the standards outlined in the Napa County Code and General Plan. In addition to the requirements of Napa County, the Project may also be subject to several federal and state regulations designed to protect sensitive natural resources. Full analysis of these requirements in the context of the Project is addressed herein.

2.1 Federal and State Regulatory Setting

2.1.1 Sensitive Land Cover Types

Land cover types are herein defined as those areas of a particular vegetation type, soil or bedrock formation, aquatic features, and/or other distinct phenomena. Typically, land cover types have identifiable boundaries that can be delineated based on changes in plant assemblages, soil or rock types, soil surface or near-surface hydroperiod, anthropogenic or natural disturbance, topography, elevation, etc. Many land cover types are not considered sensitive or otherwise protected under the environmental regulations discussed here. However, these land cover types typically provide essential ecological and biological functions for plants and wildlife, including, frequently, special-status species. Those land cover types that are considered or protected under one or more environmental regulations are discussed below.

Waters of the United States: The United States Army Corps of Engineers (Corps) regulates "Waters of the United States" under Section 404 of the Clean Water Act (CWA). Waters of the United States are defined in the Code of Federal Regulations (CFR) as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Potential wetland areas, according to the three criteria used to delineate wetlands as defined in the Corps Wetlands Delineation Manual (Environmental Laboratory 1987), are identified by the presence of (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high water mark (OHWM). Other waters, for example, generally include lakes, rivers, and streams. The placement of fill material into Waters of the United States generally requires an individual or nationwide permit from the Corps under Section 404 of the CWA.

Waters of the State: The term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The Regional Water Quality Control Board (RWQCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. RWQCB jurisdiction includes "isolated" wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the State are regulated by the RWQCB under the State Water Quality Certification Program which regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State, are required to comply with the terms of the Water Quality Certification determination. If a project does not require a federal permit but does involve dredge or fill activities that may result

in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activities under its state authority in the form of Waste Discharge Requirements. The San Francisco Bay RWQCB, which has jurisdiction over projects in the Napa River watershed, recently adopted the General Permit for Vineyard Properties in the Napa River and Sonoma Creek Watersheds to comply with the WDRs for sediment and nutrient discharge from vineyards.

Streams, Lakes, and Riparian Habitat: Streams and lakes, as habitat for fish and wildlife species, are subject to jurisdiction by CDFW under Sections 1600-1616 of California Fish and Game Code (CFGC). Alterations to or work within or adjacent to streambeds or lakes generally require a 1602 Lake and Streambed Alteration Agreement. The term "stream", which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life [including] watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG 1994). "Riparian" is defined as "on, or pertaining to, the banks of a stream." Riparian vegetation is defined as "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFW.

Sensitive Natural Communities: Sensitive natural communities not discussed above include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" (CDFG 2010, CDFW 2018a) and keeps records of their occurrences in its California Natural Diversity Database (CNDDB; CDFW 2018a). CNDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2018) methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW or U.S. Fish and Wildlife Service (USFWS) must be considered and evaluated under CEQA (CCR Title 14, Div. 6, Chap. 3, Appendix G). The Napa County Baseline Data Report (NCBDR) identifies sensitive Napa County natural communities, discussed further in Section 2.2 below (Napa County 2005).

2.1.2 Special-status Species

Plants: Special-status plants include taxa that have been listed as endangered or threatened, or are formal candidates for such listing, under the federal Endangered Species Act (ESA) and/or California Endangered Species Act (CESA). The California Native Plant Protection Act (CNPPA) lists 64 "rare" or "endangered" and prevents "take", with few exceptions, of these species. Plant species on the California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (Inventory) with California Rare Plant Ranks (Rank) of 1, 2, and 3 are also considered special-status plant species and must be considered under CEQA. Rank 4 species are typically only afforded protection under CEQA when such species are particularly unique to the locale (e.g., range limit, low abundance/low frequency, limited habitat) or are otherwise considered locally rare. A description of the CNPS Ranks is provided below in Appendices B and C. Additionally, any plant

species listed as sensitive within the Napa County General Plan or NCBDR are likewise considered sensitive.

Wildlife: As with plants, special-status wildlife includes species/taxa that have been listed or are formal candidates for such under ESA and/or CESA. The federal Bald and Golden Eagle Protection Act provides relatively broad protections to both of North America's eagle species (bald [*Haliaeetus leucocephalus*] and golden eagle [*Aquila chrysaetos*)] that in some regards are similar to those provided by ESA. The CFGC designates some species as Fully Protected (SFP), which indicates that take of that species cannot be authorized through a state permit. Additionally, CDFW Species of Special Concern (species that face extirpation in California if current population and habitat trends continue) are given special consideration under CEQA and therefore considered special-status species. In addition to regulations for special-status species, most native birds in the United States, including non-status species, have baseline legal protections under the Migratory Bird Treaty Act of 1918 and CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws/codes, the intentional harm or collection of adult birds as well as the intentional collection or destruction of active nests, eggs, and young is illegal. For bat species, the Western Bat Working Group (WBWG) designates conservation status for species of bats, and those with a high or medium-high priority are typically given special consideration under CEQA. Finally, wildlife species/taxa named as "locally rare" in the NCBDR (Napa County 2005) are also treated as special-status for purposes of this assessment.

Critical Habitat, Essential Fish Habitat, and Wildlife Corridors: Critical Habitat is a term defined in the ESA as a specific and formally designated geographic area that contains features essential for the conservation of a threatened or endangered species, and that may require special management and protection. The ESA requires federal agencies to consult with the USFWS to conserve listed species on their lands and to ensure that any activities or projects they fund, authorize, or carry out will not jeopardize the survival of a threatened or endangered species. In consultation for those species with Critical Habitat, federal agencies must also ensure that their activities or projects do not adversely modify Critical Habitat to the point that it will no longer aid in the species' recovery. Note that designated Critical Habitat areas that are currently unoccupied by the species but which are deemed necessary for the species' recovery are also protected by the prohibition against adverse modification.

The Magnuson-Stevens Fishery Conservation and Management Act ("Magnuson-Stevens Act") provides for conservation and management of fishery resources in the U.S. This Act establishes a national program intended to prevent overfishing, rebuild overfished stocks, ensure conservation, and facilitate long-term protection through the establishment of Essential Fish Habitat (EFH). EFH consists of aquatic areas that contain habitat essential to the long-term survival and health of fisheries, which may include the water column, certain bottom types, vegetation (e.g. eelgrass (*Zostera* spp.)), or complex structures such as oyster beds. Any federal agency that authorizes, funds, or undertakes action that may adversely affect EFH is required to consult with NMFS.

Movement and migratory corridors for native wildlife (including aquatic corridors) as well as wildlife nursery sites are given special consideration under CEQA. Additionally, the NCBDR (Napa County 2005) outlines important corridor resources within the County and encourages protection of these resources via Policy CON-18 (see section 2.2 below).

2.2 Napa County Regulatory Setting

Napa County General Plan and Napa County Code: Natural resource use in Napa County is regulated by the Napa County General Plan (Napa County 2008). Below are relevant policies from the General Plan pertaining to wetlands and biological resources which may be applicable to the Project.

Napa County Baseline Data Report

Specific sensitive Land Cover Types are identified in the NCBDR (Napa County 2005). In addition to those Land Cover Types identified by CDFW, the NCBDR also identifies biotic communities of limited distribution that "encompass less than 500 acres of cover within the County and are considered by local biological experts to be worthy of conservation" (Napa County 2005).

Natural Resource Goals and Policies

Policy CON-13: The County shall require that all discretionary residential, commercial, industrial, recreation, agricultural, and water development projects consider and address impacts to wildlife habitat and avoid impacts to fisheries and habitat supporting special-status species to the extent feasible. Where impacts to wildlife and special-status species cannot be avoided, projects shall include effective mitigation measures and management plans including provisions to:

a) Maintain the following essentials for fish and wildlife resources:
    a. Sufficient dissolved oxygen in the water.
    b. Adequate amounts of proper food.
    c. Adequate amounts of feeding, escaping, and nesting habitat.
    d. Proper temperature through maintenance and enhancement of streamside vegetation volume flows, and velocity of water.
b) Employ supplemental planting and maintenance of grasses, shrubs and trees of like quality and quantity to provide adequate vegetation cover to enhance water quality, minimize sedimentation and soil transport, and provide adequate shelter and food for wildlife and special-status species and maintain the watersheds, especially streams side areas, in good condition.
c) Provide protection for habitat supporting special-status species through buffering or other means.
d) Provide replacement habitat of like quantity and quality on- or off-site for special-status species to mitigate impacts to special-status species.
e) Enhance existing habitat values, particularly for special-status species, through restoration and replanting of native plant species as part of discretionary permit review and approval.
f) Require temporary or permanent buffers of adequate size (based on the requirements of the special-status species) to avoid nest abandonment of birds and raptors associated with construction and site development activities.
g) Demonstrate compliance with applicable provisions and regulations of recovery plans for listed species.

Policy CON-17: Preserve and protect native grasslands, serpentine grasslands, mixed serpentine chaparral, and other sensitive biotic communities and habitats of limited distribution. The County, in its discretion, shall require mitigation that results in the following standards:

a) Prevent removal or disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species.
b) In other areas, avoid disturbances to or removal of sensitive natural plant communities and mitigate potentially significant impacts where avoidance is infeasible.
c) Promote protection from overgrazing and other destructive activities.
d) Encourage scientific study and require monitoring and active management where biotic communities and habitats of limited distribution or sensitive natural plant communities are threatened by the spread of invasive non-native species.
e) Require no net loss of sensitive biotic communities and habitats of limited distribution through avoidance, restoration, or replacement where feasible. Where avoidance, restoration, or replacement is not feasible, preserve like habitat at a 2:1 ratio or greater within Napa County to avoid significant cumulative loss of valuable habitats.

Policy CON-18: To reduce impacts on habitat conservation and connectivity:

a) In sensitive domestic water supply drainages[1] where new development is required to retain between 40 and 60 percent of the existing (as of June 16, 1993) vegetation onsite, the vegetation selected for retention should be in areas designed to maximize habitat value and connectivity.
b) Outside of sensitive domestic water supply drainages, streamlined permitting procedures should be instituted for new vineyard projects that voluntarily retain valuable habitat and connectivity, including generous setbacks from streams and buffers around ecologically sensitive areas.
c) Preservation of habitat and connectivity of adequate size, quality and configuration to support special-status species should be required within the project area. The size of habitat and connectivity to be preserved shall be determined based on the specific needs of the species.
d) The County shall require discretionary projects to retain movement corridors of adequate size and habitat quality to allow for continued wildlife use based on the needs of the species occupying the habitat.
e) The County shall require new vineyard development to be designed to minimize the reduction of wildlife movement to the maximum extent feasible. In the event the County concludes that such development will have a significant impact on wildlife movement, the County may require the applicant to relocate or remove existing perimeter fencing installed on or after February 16, 2007 to offset the impact cause by the new vineyard development.

Policy CON-19: The County shall encourage the preservation of critical habitat areas and habitat connectivity through the use of conservation easements or other methods as well as through

[1] Sensitive Domestic Water Supply Drainages: (1) Kimball Reservoir; (2) Rector Reservoir; (3) Milliken Reservoir; (4) Bell Canyon Reservoir; (5) Lake Hennessey and Friesen Lakes; (6) Lake Curry; (7) Lake Madigan

continued implementation of the Napa County Conservation Regulations associated with vegetation retention and setbacks from waterways.

Policy CON-24: Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat through appropriate measures including one or more of the following:

a) Preserve, to the extent feasible, oak trees and other significant vegetation that occur near the heads of drainages or depressions to maintain diversity of vegetation type and wildlife habitat as part of agriculture projects.
b) Comply with the Oak Woodlands Preservation Act regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of the residential, commercial, and industrial approvals.
c) Provide replacement of lost oak woodlands or preservation of like habitat at a 2:1 ratio [effectively 3:1 ratio[2]] when retention of existing vegetation is found to be infeasible. Removal of oak species limited in distribution shall be avoided to the maximum extent feasible.
d) Support hardwood cutting criteria that require retention of adequate stands of oak trees sufficient for wildlife, slope stabilization, soil production be left standing.
e) Maintain, to the extent feasible, a mixture of oak species which is needed to ensure acorn production. Black, canyon, live, and brewer oaks as well as blue, white, scrub and live oaks are common associations.

Policy CON-48: Proposed developments shall implement project-specific sediment and erosion control measures (e.g., erosion control plans and/or stormwater pollution prevention plans) that maintain pre-development sediment erosion conditions or at a minimum comply with state water quality pollution control (i.e., Basin Plan) requirements and are protective of the County's sensitive domestic supply watersheds. Technical reports and/or erosion control plans that recommend site-specific erosion control measures shall meet the requirements of the County Code and provide detailed information regarding site-specific geologic, soil, and hydrologic conditions and how the proposed measure will function.

Policy CON-50(c): The County shall require discretionary projects to meet performance standards designed to ensure peak runoff in 2-, 10-, 50-, and 100-year events following development is not greater than predevelopment conditions.

Soil loss and Hydrologic Studies are required to demonstrate a given project meets the County's no net increase in erosion and runoff standards are met. The Universal Soil Loss Equation (USLE) is the model used to measure and quantify pre- and post-project soil loss rates. Similarly, pre- and post-project changes in runoff are measured using Technical Release 55 (TR-55). The procedures related to the application of hydrologic modeling are fairly standard. Guidance documents for the preparation of these analyses are currently being drafted.

[2] Amendments to Napa County Ordinance 18.108 require a 3:1 ratio for preservation/replacement; see "Water Quality and Tree Protection Ordinance" on page 8.

General Provisions – Stream and Wetland Setbacks

Napa County Code 18.108.025 requires stream setbacks for new land clearings for agricultural purposes. "Stream" is defined by Napa County (18.108.030) as: (1) a watercourse designated by a solid line or dash and three dots symbol on the largest scale of the United State Geological Survey (USGS) maps most recently published, or any replacement to that symbol (i.e., USGS "blue-line"); (2) any watercourse which has a well-defined channel with a depth greater than four feet and banks steeper than 3:1 and contains hydrophilic vegetation, riparian vegetation or woody-vegetation including tree species greater than ten feet in height; or (3) those watercourses listed in Resolution No. 94-19. No clearing of land for new agricultural uses as defined by Section 18.08.040 shall take place within the following setbacks from streams:

Table 1. Napa County Stream Setbacks

Slope (Percent)	Required Setback
< 1	35 feet
1--5	45 feet
5--15	55 feet
15--30	65 feet
30--40	85 feet
40--50	105 feet
50--60	125 feet
60--70	150 feet

In 2019, Napa County added to Code Section 18.108.025 the requirement of a 35-foot setback for ephemeral or intermittent streams not meeting Napa County's criteria for a stream. Likewise, 18.108.026 was added to the Napa County Code to include the requirement of a 50-foot setback from the delineated edge of wetland boundaries. Ordinance No. 1438 adopted by the Board of Supervisors allowed for a one-time exemption from the Ordinance (and therefore the updated stream and wetland setbacks) for projects that are less than 15 percent slope and less than 5 acres.

Vegetation Preservation and Replacement

Napa County Code 18.108.100 requires the following conditions when granting a discretionary permit for activities within an erosion hazard area (slopes greater than 5 percent):

a) Existing vegetation shall be preserved to the maximum extent consistent with the project. Vegetation shall not be removed if it is identified as being necessary for erosion control in the approved erosion control plan or if necessary for the preservation of threatened or endangered plant or animal habitats as designated by state or federal agencies with jurisdiction and identified on the County's environmental sensitivity maps.

b) Existing trees six inches in diameter or larger, measured at diameter breast height (DBH), or tree stands of trees six inches DBH or larger located on a site for which either an administrative or discretionary permit is required shall not be removed until the required permits have been approved by the decision-making body and tree removal has been specifically authorized.
c) Trees to be retained or designated for retention shall be protected through the use of barricades or other appropriate methods to be placed and maintained at their outboard drip line during the construction phase. Where appropriate, the director may require an applicant to install and maintain construction fencing around the trees to ensure their protection during earthmoving activities. Where removal of vegetation is necessitated or authorized, the director or designee may require the planting of replacement vegetation of an equivalent kind, quality and quantity.

Water Quality and Tree Protection Ordinance

In 2019, the Napa County Board of Supervisors adopted the Water Quality and Tree Protection Ordinance (WQTPO) modifying Chapter 18.108 Conservation Regulations to provide additional protections to trees and water quality. As noted above, additional setbacks were added for ephemeral and intermittent drainages and wetlands (Chapters 18.108.025 and 18.108.026). In addition, the tree retention required by Chapter 18.108.027 in sensitive domestic water supply drainages was increased from 60 percent to 70 percent based on vegetation that existed within the parcel in 1993. For areas within the Agricultural Watershed zoning district (outside of sensitive water supply drainages), Chapter 18.108.020 subsections C and D were added that require a minimum of 70 percent canopy retention based on vegetation that existed within the parcel in 2016, and the preservation or mitigation of trees (within oak woodland/forest and/or coniferous forest land covers) at a minimum 3:1 ratio. However, Properties zoned Agricultural Preservation are exempt from these requirements. Ordinance No. 1438 allowed for a one-time exemption from the Ordinance (and therefore the updated stream setbacks, wetland setbacks, and vegetation retention requirements) for projects that are less than 30 percent slope and less than 5 acres.

3.0 ENVIRONMENTAL SETTING

The approximately 112-acre Study Area is set across a portion of two parcels (Appendix A). It is in northwestern Napa County, approximately eight aerial miles east of downtown Calistoga and two aerial miles north of Angwin. It is situated on an overall north slope of the northern extent of the Howell Mountains, located near the ridgeline between the Napa Valley and Pope Valley. Detailed descriptions of the local setting are below.

3.1 Topography and Soils

The overall topography of the Study Area gently- to steeply sloped (5 to 75 percent), ranging from approximately 1,100 to 1,900 feet above sea level. According to the *Soil Survey of Napa County* (USDA 1978), the Study Area is underlain by four soil mapping units: Forward gravelly loam, 2 to 9 percent slopes; Forward gravelly loam, 9 to 30 percent slopes; Forward gravelly loam, 30 to 75

percent slopes; and Aiken loam, 30 to 50 percent slopes. The parent soil series of all the Study Area's mapping units are summarized below.

Aiken Series: This series consists of very deep loamy soils that formed in residuum weathered from volcanic rock situated on upland hillsides at elevations ranging from 1,200 to 5,000 feet (CSRL 2020, USDA 1978). These soils are not hydric, and are well drained with slow to rapid runoff, and moderately slow permeability (USDA 2014, USDA 1978). Native and naturalized vegetation associated with this series consists of coniferous and hardwood forests of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), white fir (*Abies concolor*), California black oak (*Quercus kelloggii*), and Pacific madrone (*Arbutus menziesii*). Typical land uses are timber, orchards, watershed protection, and open space (USDA 1978).

Forward Series: This series consists of moderately deep sandy loam soils of residuum weathered from rhyolitic tuff on hillslopes at elevations ranging from 400 to 4,500 feet (CSRL 2020, USDA 1978). These soils are not considered hydric, and are well drained, with medium runoff and moderately rapid permeability above the tuff bedrock (USDA 2014, USDA 1978). Native vegetation consists of coniferous forest composed of ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), incense cedar (*Calocedrus decurrens*), California black oak (*Quercus kelloggii*), manzanitas (*Arctostaphylos* spp.), and pine mat (*Ceanothus prostratus*). Typical land uses include timbering, watershed protection, and open space (USDA 1978).

3.2 Climate and Hydrology

The Study Area is located above the valley fog incursion zone of Napa County. The average monthly maximum temperature of Angwin is 86.4 degrees Fahrenheit, while the average monthly minimum temperature is 52.8 degrees Fahrenheit. Predominantly, precipitation falls as rainfall with an annual average of 41.06 inches. Precipitation-bearing weather systems are predominantly from the west and south with the majority of rain falls between November and March, with a combined average of 34.45 inches (USDA 2020).

The local watershed is Maxwell Creek (HUC 12: 180201620203) and the regional watershed is Pope Creek (HUC 8: 180201620203). There are no mapped blue-line streams on the USGS 7.5-minute quadrangle within the Study Area (USGS 2012), or other aquatic resources mapped in the National Wetland Inventory (NWI; USFWS 2020a) and California Aquatic Resources Inventory (CARI; SFEI 2020). There are seven ephemeral-intermittent drainages that run through the Study Area, which are detailed in Section 5.1.2 below.

3.3 Land Cover and Land Use

The vegetation of the Study Area is typical of the middle elevations of the northern Howell Mountains of Napa County. The property is dominated by a conifer forest and broadleaf forest, with patches of chaparral. The high summer temperatures, moderate winter temperatures, and winter precipitation/summer drought regime supports a preponderance of xerophytes. Section 5 provides detailed descriptions of the vegetation and flora, as well as those special-status plant and wildlife species with the potential to occur within the Study Area.

Historically, the Study Area was logged for conifer timber; however, there is no evidence of recent timber activities. Contemporary regional uses include open space, recreation, private hunting, vineyards, and expansive rural residential. Currently, the property contains only minimal infrastructure (e.g., gravel/dirt roads, border fencing, cabins, wellhead), and modern, intensive development is lacking (e.g., residences, paved roads). There is no evidence of historic residences, orchards, vineyards, quarrying, or mining anywhere on the investigated property; however, the property has evidence of historic timbering (e.g., old conifer stumps).

4.0 ASSESSMENT METHODS

Prior to the site visits, WRA biologists reviewed the following literature and performed database searches to assess the potential for sensitive natural communities (e.g., wetlands) and special-status species (e.g., endangered plants):

- *Soil Survey of Napa County, California* (USDA 1978)
- Yountville 7.5-minute quadrangle (USGS 2015)
- Contemporary aerial photographs (Google Earth 2024)
- Historical aerial photographs (Historical Aerials 2024)
- National Wetlands Inventory (NWI; USFWS 2024a)
- California Aquatic Resources Inventory (CARI; SFEI 2024)
- California Natural Diversity Database (CNDDB; CDFW 2024a)
- California Native Plant Society Electronic Inventory (CNPS 2024a)
- Consortium of California Herbaria (CCH 2024)
- USFWS Information for Planning and Consultation (USFWS 2024b)
- *eBird* Online Database (eBird 2024)
- CDFW Publication, *California Bird Species of Special Concern in California* (Shuford and Gardali 2008)
- CDFW and University of California Press publication *California Amphibian and Reptile Species of Special Concern* (Thomson et al. 2016)
- *Breeding Birds of Napa County, California* (Smith 2003)
- *A Field Guide to Western Reptiles and Amphibians* (Stebbins 2003)
- *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009)
- *A Manual of California Vegetation Online* (CNPS 2024b)
- *Preliminary Descriptions of the Terrestrial Natural Communities* (Holland 1986)
- Napa County Land Cover (NCLC) map (Thorne et al. 2004)
- *California Natural Community List* (CDFW 2018a)

Database searches (i.e., CNDDB, CNPS) focused on the Detert Reservoir, Aetna Springs, Walter Springs, Calistoga, St. Helena, Chiles Valley, Kenwood, Rutherford, and Yountville USGS 7.5-minute quadrangles for special-status plants. The special-status wildlife evaluation was based on database searches for the entirety of Napa County.

Following the remote assessment, a botanist with 40-hour Corps wetland delineation and wildlife biologist training traversed the entire Study Area on foot to document: (1) land cover types (e.g., terrestrial communities, aquatic resources), (2) if and what type of aquatic natural communities (e.g., wetlands) are present, (3) existing conditions and to determine if such provide suitable habitat for any special-status plant or wildlife species, and (4) if special-status species are present[3].

4.1 Land Cover Types

4.1.1 Terrestrial Land Cover Types

Terrestrial land cover types were mapped and evaluated across the entire Study Area. In most instances, communities are delineated based on distinct shifts in plant assemblage (vegetation) and follow the *California Natural Community List* (CDFW 2018a), *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and *A Manual of California Vegetation, Online Edition* (CNPS 2024b). In some cases, it may be necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature; should an undescribed variant be used, it will be noted in the description.

Vegetation alliances (natural communities) with a CDFW Rank of 1 through 3 (globally critically imperiled (S1/G1), imperiled (S2/G2), or vulnerable (S3/G3), were evaluated as sensitive as part of this evaluation.[4] Additionally, any sensitive natural communities as described in the Napa County Baseline Data Report (NCBDR; Napa County 2005) or General Plan (Napa County 2008) were considered.

4.1.2 Aquatic Resources

Aquatic resources include Waters of the U.S., Waters of the State, and Streams, Lakes, and Riparian Habitat as defined in the CWA, Porter-Cologne Act, and CFGC, respectively. Napa County mandates setbacks from these aquatic resources, and therefore requires mapping of the outward extent of such features. This site assessment does not constitute a formal wetland delineation; however, the surveys looked for superficial indicators of wetlands such as hydrophytic vegetation (i.e., plant communities dominated by wetland species), evidence of inundation or flowing water, saturated soils and seepage, and topographic depressions/swales. If sample points were taken, WRA followed the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008).

If streams potentially jurisdictional under the CWA and/or the CFGC are noted on a site, they are delineated using a mix of surveyed topography data, high resolution aerial photographs, and a sub-meter GPS unit. The OHWM would be used to determine the extent of potential Section 404 jurisdiction, while the top-of-bank would be used to determine the extent of CFGC Section 1602 and 401. Streams with associated woody vegetation were assessed to determine if these areas would be considered riparian habitat by the CDFW following *A Field Guide to Lake and Streambed*

[3] Due to the timing of the assessment, it may or may not constitute protocol-level species surveys; see Section 4.2 if the site assessment would constitute a formal or protocol-level species survey.
[4] Ranking of CDFW List of Vegetation Alliances is based on NatureServe Rankings (NatureServe 2018).

Alteration Agreements, Section 1600-1607, California Fish and Game Code (CDFG 1994). Finally, all streams were assessed to determine if they meet the Napa County definition of "stream" pursuant to Napa County Code 18.108.030.

4.2 Special-status Species

4.2.1 General Assessment

Potential occurrence of special-status species in the Study Area was evaluated by first determining which special-status species occur in the greater vicinity through a literature and database review. Database searches for known occurrences of special-status species focused on the 7.5-minute USGS quadrangles mentioned above for special-status plants and the entirety of Napa County for special-status wildlife.

A preliminary site visit was made on August 25, 2017 to evaluate the presence of suitable habitat for special-status species. Suitable habitat conditions are based on physical and biological conditions of the site, as well as the professional expertise of the investigating biologists. The potential for each special-status species to occur in the Study Area was then determined according to the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- Present. Species is observed on the site or has been recorded (i.e. CNDDB, other reports) on the site in the recent past.

If a more thorough assessment was warranted, a targeted or protocol-level assessment or survey was conducted or recommended as a future study. Methods for the assessments are described below. If a special-status species was observed during the site visit, its presence was recorded and discussed below in Section 5.2.

4.2.2 Special-status Plants

To determine the presence or absence of special-status plant species, focused surveys were conducted within Study Area on August 25, 2017; April 26 and June 22, 2018; April 14, May 18, and June 29, 2023. The surveys correspond to the period sufficient to observe and identify those special-status plants determined to have the potential to occur. The field surveys were conducted by botanists familiar with the flora of Napa and surrounding counties. The surveys were performed

in accordance with those outlined by Napa County (2016b), which follow those described by resource experts and agencies (CNPS 2001, CDFW 2018b, USFWS 1996). Plants were identified using *The Jepson Manual, 2nd Edition* (Baldwin et. al. 2012) and Jepson Flora Project (eFlora 2024), to the taxonomic level necessary to determine if they were sensitive. Plant names follow those of Jepson Flora Project (eFlora 2024), unless otherwise noted.

4.2.3 Special-status Wildlife

An initial general wildlife assessment was performed on August 25, 2017, with incidental observations and continued assessment throughout the survey period. This assessment consisted of traversing the entirety of the Study Area. Habitat elements required or associated with certain species (e.g., California red-legged frog) or species groups (e.g., bats, anadromous fish) were searched for and noted. Such habitat elements include, but are not limited to plant assemblages and vegetation structure; stream depth, width, hydro-period, slope, and bed-and-bank structure; rock outcrops, caves, cliffs, overhangs, and substrate texture and rock content; history of site alteration and contemporary disturbances; etc.

4.2.4 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

Prior to the site visit the USFWS Critical Habitat Mapper (USFWS 2024c) and the NMFS Essential Fish Habitat Mapper (NMFS 2024) were queried to determine if critical habitat for any species or EFH, respectively, occurs within the Study Area. To account for potential impacts to wildlife movement/migratory corridors, biologists reviewed maps from the California Essential Connectivity Project (CECP) by Caltrans (2010) and CDFW's Biogeographic Information and Observation System (BIOS) (CDFW 2024b), as well as the NCBDR (Napa County 2005). The CECP maps both 1) "Natural Landscape Blocks," or discrete areas of mostly natural land covers that support biodiversity, and 2) "Essential Connectivity Areas" that provide ecological connectivity between the former. Additionally, aerial imagery (Google 2024) for the local area was referenced to assess if local core habitat areas were present within or connected to the Study Area. This assessment was refined based on observations of on-site physical and/or biological conditions.

5.0 ASSESSMENT RESULTS

5.1 Land Cover Types

Land cover types observed by WRA within the Study Area are shown in Figure A-3 (Appendix A). Five land cover types are present: common manzanita chaparral, California black oak forest, tanoak forest, Douglas fir forest, and ephemeral streams.

5.1.1 Terrestrial Land Cover Types

Stanford's Manzanita Chaparral (*Arctostaphylos stanfordiana* Provisional Shrubland Alliance). CDFW Rank: G3 S3. Stanford's manzanita chaparrals, or something similar, have been documented from Napa County (Thorne et al. 2014). These chaparrals typically occur on south-facing slopes on volcanic substrates, including rhyolites. Presumably, these chaparrals are restricted to the North

Coast Range in Mendocino, Sonoma, Lake, and Napa counties (Calflora 2024, eFlora 2024). There are no recommended membership rules; however, presumably, these provisional stands are dominated by Stanford's manzanita (*Arctostaphylos stanfordiana* ssp. *stanfordiana*) in the shrub layer (Sawyer et al. 2009, CNPS 2024b).

Within the Study Area, the tree cover of this community is less than 20 percent absolute cover and composed of individual ponderosa pine (*Pinus ponderosa*), Douglas fir (*Pseudotsuga menziesii*), California black oak (*Quercus kelloggii*), and Pacific madrone (*Arbutus menziesii*). The dominant layer is the shrub layer, which is dominated by a combination of Stanford's manzanita (*A. stanfordiana* ssp. *stanfordiana*), chamise (*Adenostoma fasciculatum*), common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), and wedge-leaf ceanothus (*Ceanothus cuneatus*). The herbaceous layer is sparse and situated entirely in the openings between shrubs. Species include Idaho fescues (*Festuca idahoensis*), annual fescue (*F. microstachys*), Eastwood's bellflower (*Campanula angustiflora*), dogtail grass (*Cynosurus echinatus*), nit grass (*Gastridium phleoides*), and gold wire (*Hypericum concinnum*).

The Study Area contains 2.57 acres of Stanford's manzanita chaparral, and it is entirely outside of the Project Area. This land cover type is synonymous with the Mixed Manzanita (Interior Live Oak-California Bay-Chamise) West County NFD Alliance biotic community in the NCLC (Sawyer et al. 2009, Thorne et al. 2004). These chaparrals provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status species associated with volcanic substrate scrubs. The CDFW and Napa County consider these chaparrals as sensitive natural communities.

California Black Oak Woodland (*Quercus kelloggii* Woodland Alliance). CDFW Rank: G4 S4. California black oak woodlands are known from the Coast Ranges, Transverse Range, Peninsular Ranges, Klamath Range, Cascade Range, west and east slopes of the Sierra Nevada, and Modoc Plateau. These woodlands typically occur on all aspects and topographic gradients with sites underlain by moderately to excessively drained soils. To meet the membership of California black oak woodland, the cover of black oak (*Quercus kelloggii*) constitutes 50 percent or greater in the canopy without substantial cover of conifers, particularly ponderosa pine (*Pinus ponderosa*) (Sawyer et al. 2009).

Within the Study Area, the canopy of this community is dominated (greater than 50 percent relative cover) of California black oak (*Quercus kelloggii*). Secondary tree species are intermittent, constitute less than 20 percent cover per species, and include Oregon white oak (*Quercus garryana*), blue oak (*Quercus douglasii*), Douglas fir (*Pseudotsuga menziesii*), ponderosa pine (*Pinus ponderosa*), gray pine (*Pinus sabiniana*), and Pacific madrone (*Arbutus menziesii*). The understory is interspersed with dense thickets of native shrubs and an open herbaceous layer. Understory shrubs include common manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), toyon (*Heteromeles arbutifolia*), and poison oak (*Toxicodendron diversilobum*). The herbaceous layer is dominated by a mix of grasses and forbs, including California fescue (*Festuca californica*), Idaho fescue (*F. idahoensis*), dogtail grass (*Cynosurus echinatus*), blue dicks (*Dichelostemma capitatum*), common yarrow (*Achillea millefolium*), purple Chinese houses (*Collinsia heterophylla* var. *heterophylla*), and Pacific pea (*Lathyrus vestitus*).

The Study Area contains 27.7 acres of California black oak woodland, of which 8.73 acres is within the Project Area, including 0.95 acres of permanently impacted area. This land cover type is synonymous with the California Black Oak Alliance biotic community in the NCLC (Thorne et al. 2004). These woodlands provide habitat for numerous common native plants and wildlife, as well as have the potential to support several special-status species associated with oak woodlands. Napa County considers these woodlands to be sensitive natural communities.

Tanoak Forest (*Notholithocarpus densiflorus* Forest Alliance). CDFW Rank: G4 S3. Tanoak forests are known from the Coast Ranges, western Klamath Mountains, and the western slope of the Sierra Nevada. These forests typically occur on raised stream benches, terraces, slopes, and ridges of all aspects underlain by deep, well-drained soils derived from a variety of parent materials. To meet the membership rule, the cover of tanoak (*Notholithocarpus densiflorus*) constitutes 50 to 60 percent of relative cover in the canopy (Sawyer et al. 2009).

Within the Study Area, the canopy of this community is dominated (greater than 60 percent cover) by tanoak (*Notholithocarpus densiflorus*). Secondary tree species are infrequent, typically constituting less than 20 percent relative cover, and include Douglas fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), coast redwood (*Sequoia sempervirens*), and ponderosa pine (*Pinus ponderosa*). The stand is even-aged with notable regeneration of tanoak (*Notholithocarpus densiflorus*) in the understory. Consequently, the understory is depauperate with few species, but those include poison oak (*Toxicodendron diversilobum*), western sword fern (*Polystichum munitum*), and common bedstraw (*Galium aparine*).

The Study Area contains 17.45 acres of tanoak forest, of which 6.31 acres is within the Project Area, including 0.64 acres of permanently impacted area. This land cover type is synonymous with the Tanbark Oak Alliance biotic community in the NCLC (Thorne et al. 2004). These forests provide habitat for some native plants and wildlife, including a few special-status species closely associated with broadleaf forests. Napa County considers these forests to be sensitive natural communities.

Douglas Fir Forest (*Pseudotsuga menziesii* Forest Alliance). CDFW Rank: G5 S4. Douglas fir forests are known from the Coast Ranges, Klamath Mountains, Cascade Range, and the western slope of the Sierra Nevada (CNPS 2024b). These forests occur on all topographic positions and aspects, and variety of substrates including volcanics and serpentine (CNPS 2024b, Sawyer et al. 2009). To meet the membership rule, the cover of Douglas fir (*Pseudotsuga menziesii*) constitutes 50 percent of relative cover in the canopy (Sawyer et al. 2009).

Within the Study Area, the canopy of this community is dominated (greater than 50 percent cover) Douglas fir (*Pseudotsuga menziesii*). Secondary tree species are frequent, but constituting less than 50 percent relative cover collectively, and include coast redwood (*Sequoia sempervirens*), Pacific madrone (*Arbutus menziesii*), tanoak (*Notholithocarpus densiflorus*) and ponderosa pine (*Pinus ponderosa*). The stand is even-aged with a few older trees in the overstory and notable regeneration of Douglas fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*) in the understory. Other understory species include poison oak (*Toxicodendron diversilobum*), sweet cicely (*Osmorhiza berteroi*), common bedstraw (*Galium aparine*), western sword fern (*Polystichum munitum*), and California wood fern (*Dryopteris arguta*).

The Study Area contains 64.51 acres of Douglas fir forest, of which 8.81 acres is within the Project Area, including 1.26 acres of permanently impacted area. This land cover type is synonymous with the Douglas Fir Alliance biotic community in the NCLC (Thorne et al. 2004). These forests provide habitat for numerous common native plants and wildlife, including several special-status species.

5.1.2 Aquatic Resources

Ephemeral Streams. CWA Section 404/401. CDFW Rank: None. The Study Area contains seven drainages. The flows in these streams are ephemeral, which means they only run during and immediately following substantial precipitation. The bed-and-banks are a mix of finer sediments, with large cobble and occasional bedrock, and the banks are of fine sediments (clays, loams). The banks are vegetated and shaded, but the vegetation is composed of not composed of characteristically riparian species. All the streams are likely jurisdictional under Section 404/401 of the CWA and Section 1602 of the CFGC; therefore, it is considered a sensitive aquatic resource. These drainages do not meet the Napa County stream definition pursuant to Napa County Code 18.108.030.

5.2 Special-status Species

5.2.1 Special-status Plant Species

Based upon a review of the resource databases listed in Section 4.0, 105 special-status plant species have been documented in the vicinity of the Study Area. As outlined in Appendix C, twenty-eight of these plants have the potential to occur in the Study Area.[5] The remaining 77 special-status plants documented from the greater vicinity are unlikely or have no potential to occur for one or more of the following:

- Hydrologic conditions (e.g., tidal, riverine) necessary to support the special-status plant species are not present in the Study Area.
- Edaphic (soil) conditions (e.g., volcanic tuff, serpentine) necessary to support the special-status plant species are not present in the Study Area.
- Topographic conditions (e.g., north-facing slope, montane) necessary to support the special-status plant species are not present in the Study Area.
- Unique pH conditions (e.g., alkali scalds, acidic bogs) necessary to support the special-status plant species are not present in the Study Area.
- Associated natural communities (e.g., interior chaparral, tidal marsh) necessary to support the special-status plant species are not present in the Study Area.
- The Study Area is geographically isolated (e.g., below elevation, coastal environ) from the documented range of the special-status plant species.
- Land use history and contemporary management (e.g., absence of mowing or grazing) has degraded the localized habitat necessary to support the special-status plant species.

[5] As per these databases, there are no documented occurrences of special-status mosses, bryophytes or lichens in Napa County.

WRA biologists conducted several site visits during a period sufficient to identify all 28 special-status plant species with the potential to occur within the Study Area. Five special-status plants were observed within the Study Area: narrow-anthered brodiaea (*Brodiaea leptandra*; CRPR 1B), redwood lily (*Lilium rubescens*; CRPR 4), Cobb Moutain lupine (*Lupinus sericatus*; CRPR 1B), green monardella (*Monardella viridis*; CRPR 4), and dark-mouthed triteleia (*Triteleia lugens*; CRPR 4, LR). All species with the potential to occur are listed below and described in Appendix C.

The following five special-status plants were observed within the Study Area during the 2017, 2018, and 2023 surveys.

Narrow-anthered brodiaea (*Brodiaea leptandra*) CRPR 1B. High Potential (Present). Narrow-anthered California Brodiaea is a perennial herb in the brodiaea family (Themidaceae) that blooms from May to July. It typically occurs in broadleaf upland forest, chaparral, and lower montane coniferous forest habitat at elevations ranging from 360 to 3,000 feet (CDFW 2020a, CNPS 2020a). Soil survey data from documented locations suggest this species is closely associated with gravelly loam and clay loam substrates derived from rhyolites, metavolcanics, and serpentine (CSRL 2020, CDFW 2020a). This species has a serpentine affinity rank of weak indicator (2.0) (Safford et al. 2005). One hundred fifty-six individuals were observed in 2023 within the chaparral in the southern portion of the Study Area; this is an increase of nine individuals between 2018 and 2023. These individuals were located interstitial to shrubs in the chaparral.

Redwood lily (*Lilium rubescens*). CRPR 4. High Potential (Present). Redwood lily is a bulbiferous perennial forb in the lily family (Liliaceae) that blooms from April through September. It typically occurs in openings, roadsides, and trails, often on serpentine and volcanic substrates in broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, and North Coast coniferous forest habitat at elevations ranging from 95 to 6,210 feet (CNPS 2020a, Baldwin et al. 2012, Best et al. 1996). This species has a serpentine affinity rank of weak indicator (2.0) (Safford et al. 2005). Twenty-seven individuals were observed in 2023 on the central-western edge of the Study Area in tanoak forest; this is an increase of six individuals between 2018 and 2023. These individuals were located on a rocky gentle to moderate slope in a relatively open understory.

Cobb Mountain lupine (*Lupinus sericatus*). CRPR 1B. High Potential (Present). Cobb Mountain lupine is a perennial forb in the pea family (Fabaceae) that blooms from March through July. It typically occurs in openings in wooded slopes underlain by gravelly, often serpentine or volcanic, substrate in chaparral, cismontane woodland (knobcone pine woodland, blue oak woodland), and lower montane coniferous forest at elevations ranging from 890 to 4,960 feet (CDFW 2024a, CNPS 2024a). Seventy-one individuals were observed in 2023 in the central portion of the Study Area on a fire break that was installed during the 2020 Glass Fire; this species was not observed in 2018 likely because of the closed canopy of the site.

Green Monardella (*Monardella viridis*). CRPR 4. Moderate Potential (Present). Green Monardella is a perennial forb in the mint family (Lamiaceae) that blooms from June through September. It typically occurs on serpentine substrates in chaparral, cismontane woodland, and broadleaf upland forest habitat at elevations ranging from 325 to 3,285 feet (CNPS 2020a). This species has a serpentine affinity rank of broad endemic/strict indicator (4.3) (Safford et al. 2005). Twenty-seven individuals were observed in both 2018 and 2023 in the southern portion of the Study Area. These individuals were located interstitial and beneath the canopy of large shrubs.

Dark-mouthed Triteleia (*Triteleia lugens*). CRPR 4. Moderate Potential (Present). Dark-mouthed Triteleia is a perennial bulbiferous forb in the brodiaea family (Themidaceae) that blooms from April through June. It typically occurs in chaparral, coastal scrub, broadleaf upland forest, and lower montane coniferous forest habitat at elevations ranging from 325 to 3,250 feet (CNPS 2020a). An estimated (and partially counted) 721 individuals were observed in 2023 within the California black oak and Douglas fir forests in the central and northern portions of the Study Area; this is an estimated increase of 121 individuals between 2018 and 2023. Generally, populations were situated in the understory with low cover of shrubs and higher cover of herbaceous species.

The following 23 special-status plants have the potential to occur within the Study Area but were not observed during protocol-level rare plant surveys conducted in 2018 and 2023:

- Franciscan onion (*Allium peninsulare* var. *franciscanum*); CRPR 1B
- Napa false indigo (*Amorpha californica* var. *napensis*); CRPR 1B
- Konocti manzanita (*Arctostaphylos manzanita* ssp. e*legans*); CRPR 1B
- Rincon manzanita (*Arctostaphylos stanfordiana* ssp. *decumbens*); CRPR 1B
- Small-flowered calycadenia (*Calycadenia micrantha*); CRPR 1B
- Rincon ridge ceanothus (*Ceanothus confuses*); CRPR 1B
- Calistoga ceanothus (*Ceanothus divergens*); CRPR 1B
- Point Reyes ceanothus (*Ceanothus gloriosus* var. *exaltatus*); CRPR 1B
- Holly-leaved ceanothus (*Ceanothus purpureus*); CRPR 1B
- Sonoma ceanothus (*Ceanothus sonomensis*); CRPR 1B
- Beaked cryptantha (*Cryptantha rostellata*); CRPR 4
- Mountain lady's-slipper (*Cypripedium montanum*); CRPR 4
- Streamside daisy (*Erigeron biolettii*); CRPR 3
- Green's narrow-leaved daisy (*Erigeron greenei*); CRPR 1B
- St. Helena fawn lily (*Erythronium helenae*); CRPR 4
- Nodding harmonia (*Harmonia nutans*); CRPR 4
- Bristly leptosiphon (*Leptosiphon aureus*); CRPR 4
- Jepson's leptosiphon (*Leptosiphon jepsonii*); CRPR 1B
- Broad-lobed leptosiphon (*Leptosiphon latisectus*); CRPR 4
- Napa lomatium (*Lomatium repostum*); CRPR 4
- Mt. Diablo cottonweed (*Micropus amphibolus*); CRPR 3
- Napa checkerbloom (*Sidalcea hickmanii* ssp. *napensis*); CRPR 1B
- Oval-leaved viburnum (*Viburnum ellipticum*); CRPR 2B

5.2.2 Special-status Wildlife Species

A total of 60 special-status wildlife species have been documented in Napa County (CDFW 2024a, Napa County 2005). As outlined in Appendix C none of these species were observed during WRA's site visits to the Study Area, though eight have the potential to occur there. The remaining 52 species are unlikely or have no potential to occur due to one or more of the following reasons:

- Aquatic habitats (e.g., rivers, estuaries, ponds) necessary to support the special-status wildlife species are not present in the Study Area.
- Vegetation habitats (e.g., coast redwood forest, coastal prairie, emergent marsh) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present in the Study Area.
- Physical structures and vegetation (e.g., mines/caves, riparian forest) necessary to provide nesting, cover, and/or foraging habitat to support the special-status wildlife species are not present in the Study Area.
- Host plants (e.g., dog violet, harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Study Area
- The Study Area is outside (e.g., north of, west of) of the special-status wildlife species documented nesting range.

The following eight special-status wildlife species have the potential to occur within the Study Area; the presence of each of these species within the Study Area is unknown.

Pallid bat (*Antrozous pallidus*). CDFW Species of Special Concern, WBWG High Priority. Moderate Potential (Presence Unknown). Pallid bats are distributed from southern British Columbia and Montana to central Mexico, and east to Texas, Oklahoma, and Kansas. This species occurs in a number of habitats ranging from rocky arid deserts to grasslands, and into higher elevation coniferous forests. Roosts are typically in rock crevices, tree hollows, mines, caves, and a variety of man-made structures, including vacant and occupied buildings. Tree roosting has been documented within snags and basal hollows of conifers, and within bole cavities in oak trees. Pallid bats are primarily insectivorous, feeding on large prey that is usually taken on the ground but sometimes in flight. Prey items include arthropods such as scorpions, ground crickets, and cicadas (WBWG 2024). Trees within the Study Area (primarily oaks) may contain cavities or snags suitable for roosting by this species, and there are CNDDB occurrences in the vicinity (CDFW 2024a). A targeted bat habitat assessment was not performed under this biological assessment.

Fringed myotis (*Myotis thysanodes*). WBWG High Priority. Moderate Potential (Presence Unknown). The fringed myotis ranges through much of western North America from southern British Columbia, Canada, south to Chiapas, Mexico and from Santa Cruz Island in California, east to the Black Hills of South Dakota. This species is found in desert scrubland, grassland, sage-grass steppe, old-growth forest, and subalpine coniferous and mixed deciduous forest. These bats most frequently utilize oak and pinyon-juniper woodlands. The fringed myotis roosts in colonies from 10 to 2,000 individuals, although large colonies are rare. Caves, buildings, underground mines, rock crevices in cliff faces, and bridges are used for maternity and night roosts, while hibernation has only been documented in buildings and underground mines. Tree-roosting has also been documented in Oregon, New Mexico, and California (WBWG

2024). The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A targeted bat habitat assessment was not performed under this biological assessment.

Long-legged myotis (*Myotis volans*). WBWG High Priority. Moderate Potential. (Presence Unknown). The long-legged myotis ranges across western North America from southeastern Alaska to Baja California and east to the Great Plains and central Texas. This species is usually found in coniferous forests, but also occurs seasonally in riparian and desert habitats. They use abandoned buildings, cracks in the ground, cliff crevices, exfoliating tree bark and hollows within snags as summer day roosts. Caves and mines are used as hibernation roosts. Long-legged myotis forage in and around the forest canopy and feed on moths and other soft-bodies insects (WBWG 2024). A targeted bat habitat assessment was not performed under this biological assessment.

Golden eagle (*Aquila chrysaetos*). Bald & Gold Eagle Protection Act Species, CDFW Fully Protected Species. Moderate Potential (Presence Unknown). This species ranges throughout western North America, from British Columbia to the central Mexico. They are typically associated with caves, but are also found in man-made structures, including mines and buildings. While many bats wedge themselves into tight cracks and crevices, big-eared bats hang from walls and ceilings in the open. Males roost singly during the spring and summer months while females aggregate in the spring at maternity roosts to give birth. Females roost with their young until late summer or early fall, until young become independent, flying and foraging on their own. Hibernation roosts tend to be made up of small aggregations of individuals in central and southern California (Pierson and Rainey 1998). A general nesting bird survey was not performed under this biological assessment.

Olive-sided flycatcher (*Contopus cooperi*). CDFW Species of Special Concern. High Potential (Presence Unknown). This passerine bird is known from across Canada into the West Coast, Rocky Mountains, and Great Lake Area. They typically nest in coniferous or mixed forests, particularly lower montane forest. These birds forage for flying insects in forest openings, burns, edges, and other mixed open area in greater forest habitats. Nests are well-hidden in dense branches of large trees, preferentially conifer trees (Altman 2000). The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A general nesting bird survey was not performed under this biological assessment.

Purple martin (*Progne subis*). CDFW Species of Special Concern. Moderate Potential (Presence Unknown). Purple martin is an uncommon summer resident in California, occurring in woodlands and low-elevation hardwood and coniferous forest. It usually feeds on insects captured in flight approximately 100 to 200 feet above ground. These birds nest in cavities of tall, old, isolated trees or snags in open forest or woodland. The trees within the Study Area may contain cavities or exfoliating bark suitable for roosting. A general nesting bird survey was not performed under this biological assessment.

Black-chinned sparrow (*Spizella atrogularis*). Local Rare. Moderate Potential (Presence Unknown). The black-chinned sparrow is a locally common summer resident in dry brushlands and mountain slopes up to 8800 feet in elevation. This species breeds in California in the inner north and south Coast Ranges, Transverse Range, Peninsular Range, the western slopes of the

Sierra Nevada from Kern to Mariposa Counties, irregularly in Tehama County, and locally on mountains of southeastern California (Tenney 1997). This species inhabits scrub, chaparral, and sagebrush habitats and prefers sloping, dense, xeric environments, often with ceanothus, manzanita, sagebrush, and chamise. Pairs nest in the interior of dense shrubs (Tenney 1997). A general nesting bird survey was not performed under this biological assessment.

Northern Spotted Owl (NSO; *Strix occidentalis caurina*). Federal Threatened, CDFW Species of Special Concern. High Potential (Presence Unknown). NSO is a subspecies of spotted owl (*Strix occidentalis*) found in Western North America. It is a medium-sized (16 to 20 inches) dark brown owl with a wingspan of approximately forty inches; females are larger than males. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California); however, trees are old and contain structures suitable for nesting (e.g., epicormics branching, large cavities, platforms). NSO is primarily nocturnal; its diet consists mainly of wood rats (*Neotoma* sp.) and squirrels, as well as other small mammals, reptiles, birds and insects. It is intolerant of habitat disturbance and highly territorial; each nesting pair requires a large territory for hunting and raising young. No surveys were conducted for NSO by WRA.

5.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

The Study Area does not contain any designated Critical Habitat (USFWS 2024b, NMFS 2024) or Essential Fish Habitat (NMFS 2024). As per mapping by the CECP, the Study Area is not within either a Natural Landscape Block or an Essential Connectivity Area. The Study Area's streams have an ephemeral hydro-period, are high gradient, are very narrow and shallow, and do not have run-riffle-pool complexes; therefore, anadromous fish will not utilize these streams. Likewise, amphibians are unlikely to utilize these streams extensively. The Study Area is not within a designated wildlife corridor (CalTrans 2010, Napa County 2005). The site is located within a much larger tract of forest and very lightly developed land within a rural portion of Napa County. While common wildlife species presumably utilize the site to some degree for movement at a local scale, the Study Area itself does not provide corridor functions beyond connecting similar forested and heavily wooded land parcels in surrounding areas.

6.0 PROJECT ANALYSIS AND RECOMMENDATIONS

6.1 Land Cover Types

6.1.1 Terrestrial Land Cover Types

California Black Oak Woodlands and Tanoak Forests

California black oak woodlands are considered sensitive by CDFW or included as sensitive in the NCBDR; however, the Napa County General Plan Conservation Element Policy CON-24 requires that oak woodland be maintained and/or improved to the extent feasible to provide for oak woodland and wildlife habitat, slope stabilization, soil protection, and species diversity. Tanoak

forest is considered sensitive by CDFW, and likewise is protected under the Conservation Element Policy CON-24. Policy CON-24c specifically calls for the preservation of oak woodland (on an acreage basis) at a 2:1 ratio. Code Section 18.108.020(C) requires that 70 percent of canopy cover be retained based on the on-site canopy present on June 16, 2016. Code Section 18.108.020(D) requires that the removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio (which is equivalent to 75 percent retention) where the areas to be preserved must generally occur on slopes less than 50 percent and outside of stream and wetland setbacks. The project was designed to be in compliance with both the 70 percent retention and the 3:1 tree preservation requirements, and therefore no further recommendations are needed to ensure compliance with the County Code.

The Study Area contains 27.7 acres of California black oak woodland and 17.45 acres of tanoak forest; in order to ensure that a 3:1 ratio is maintained of 3 acres of oak woodland preserved for each 1 acre impacted, only 6.93 acres and 4.36 acres can be converted, respectively. The Project Area currently contains 8.73 acres of California black oak woodland and 6.31 acres of tanoak forest; however, only 0.95 acre and 0.64 acre will be permanently impacted, respectively. This permanent impact is entirely on the woodland/forest floor with no trees, within these mapped land cover types, scheduled for removal.

The remaining 7.78 acres of California black oak woodland and 5.67 acres of tanoak forest within the Project Area are within internment areas that will receive only temporary impacts (installation of waterlines, excavation of burial plots). These plots should revert to the understory vegetation within a few years. Therefore, the Project complies with the 3:1 preservation ratio. The following recommendation is made to protect California black oak woodland and tanoak forest:

> Recommendation 1: Where feasible avoid excavation of internment plots near the boles of trees. Excavation should be with hand tools and small power tools, whenever feasible. Topsoil, including the root wads of any large perennial herbs and small shrubs, should be diligently set aside to resurface the internment plot. All tools, quads, and other equipment should be regularly cleaned and decontaminated to prevent the spread of invasive plants and soil borne pathogens.

Douglas Fir Forests

Douglas fir forest is neither considered sensitive by CDFW nor included as sensitive in the NCBDR; however, the General Provisions of Napa County Code (18.108.020) requires varying levels of canopy retention and preservation. Code Section 18.108.020(C) requires that 70 percent of canopy cover be retained based on the on-site canopy present on June 16, 2016. Code Section 18.108.020(D) requires that the removal of tree canopy on an acreage basis be mitigated at a 3:1 ratio (which is equivalent to 75 percent retention) where the areas to be preserved must generally occur on slopes less than 50 percent and outside of stream and wetland setbacks.

There has been no appreciable change in canopy cover since 2016; therefore, the use of Napa County's 2016 GIS Vegetation Public Habitat Mapping is appropriate for both analyses. The project was designed to comply with both the 70 percent retention and the 3:1 tree preservation requirement, and therefore no further recommendations are needed to ensure compliance with the County Code.

The Study Area contains 64.51 acres of Douglas fir forest; to ensure that a 3:1 ratio is maintained of 3 acres of oak woodland preserved for each 1 acre impacted, only 16.13 acres can be converted. The Project Area currently contains 8.81 acres; however, only 1.26 acres will be permanently impacted. This impact is primarily on the forest floor with only nine trees total scheduled for removal to install the proposed paved access road.

The remaining 7.55 acres of Douglas fir forest within the Project Area is within internment areas that will receive only temporary impacts (digging of burial plots). These plots should revert to the understory vegetation within a few years. Therefore, the Project complies with the 3:1 preservation ratio. The preservation of the remainder of Douglas fir forest will offset the loss of the nine trees removed. The following recommendation is made to protect Douglas fir forest:

Recommendation 2: *Same as Recommendation 1*

6.1.2 Aquatic Resources

The site's streams will be entirely avoided by the Project, except for three minor stream crossings of the gravel access paths. Ground-breaking occurring during the dry season and protective setbacks will buffer effects to the on-site aquatic resources. The following recommendations are put forward to protect aquatic resources.

Recommendation 3: The Applicant shall obtain all required permits for the impacts of Waters of the U.S. and Waters of the State prior to construction of the crossing of the ephemeral stream.

Setbacks of 35 feet are provided in compliance with Napa County Code 18.108.025 for streams not meeting the County's definition. Grading shall occur during the dry season (April 1 through October 15) and should be suspended during unseasonable rainfalls of greater than one-half inch over a 24-hour period. If rainfall is in the forecast, standard erosion control measures (e.g., straw waddles, bales) should be deployed on the vineyard block edge paralleling the aquatic feature. Fence posts shall be located above the top-of-bank of the Study Area's streams.

Construction personnel should be informed of the location of the site's aquatic resources with high visibility flagging or staking prior to construction. No materials or equipment shall be laid down or near the aquatic resources, and spill prevention materials shall be deployed for all construction equipment.

6.2 Special-status Species

6.2.1 Special-status Plants

Five special-status plants occur within the Study Area, with two, situated in the Project Area. Dark-mouthed triteleia (*Triteleia lugens*) is known from 24 Calfora records in Napa County, and 15 records and three records in neighboring Sonoma and Lake counties, respectively (Calflora 2024). Napa County is the center of distribution of this species. This plant was estimated to occupy approximately 11.26 acres in roughly four populations, with approximately 2.94 acres within the Project Area of which 0.35 acre will be permanently impacted (three percent of total population

area). The diffuse nature of the on-going project (i.e., internment plots) over such a sizable area, is unlikely to pose a significant impact to this species in the immediate and long term.

Similarly, Cobb Mountain lupine (*Lupinus sericatus*) is known from 23 CNDDB records in Napa County, and 11 and 13 records in neighboring Sonoma and Lake counties, respectively (CDFW 2024a). Approximately five of a total of 71 individuals (seven percent of total population) of this species are situated in a proposed internment area; due to the diffuse nature of the project, this species can be avoided.

The following recommendation is forwarded regarding these special-status plants:

> Recommendation 4: As part of the management and conservation of the property, periodic surveys (every five to ten years) for this (and other) special-status plant to determine an estimated census, distribution, and management effects. Provide informative materials (photographs, descriptions) of all on-site special-status plants to internment staff to avoid direct impacts to such to the greatest extent feasible.

6.2.2 Special-status Wildlife

The Project Area has the potential to support eight special-status wildlife species (three bats and five birds), as well as non-status birds protected under the MBTA. The following measures are recommended to avoid or otherwise minimize potential impacts to these species.

Bat Species: Three special-status bats have the potential to occur within the Study Area (pallid bat, fringed myotis). Removal and trimming of trees during the bat maternity season (generally, April through August) could impact bat breeding and potentially result in the take of bats. On-going activities (i.e., ground maintenance, internments) will not pose a significant risk to roosting bats. Because a targeted bat habitat assessment was not conducted as part of this biological assessment, pre-construction surveys for bat habitat and recommendations for tree removal to avoid impacts to bat species are provided below.

> Recommendation 5: WRA recommends that any tree removal be performed from September through March, outside of the general bat maternity season. If tree removal during this period is not feasible, it is recommended that a bat habitat assessment and survey effort (the latter if needed) be performed by a qualified biologist prior to tree removal to determine if bats are present in the trees. If no suitable roosting habitat for bats is found, then no further study is warranted. If special-status bat species or bat maternity roosts are detected, then roost trees should be avoided until the end of the maternity roosting season. If this avoidance is not feasible, appropriate species- and roost-specific mitigation measures should be developed in consultation with CDFW. Irrespective of time of year, all felled trees should remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats present within the felled trees to escape.

All Bird Species (including non-special-status): In addition to the two special-status bird species discussed above (olive-sided flycatcher and purple martin), a variety of non-status bird species with baseline protections under the MBTA and CFGC may use vegetation within the Project Areas for nesting. On-going activities (i.e., ground maintenance, internments) will not pose a significant risk to nesting birds. Pre-construction surveys are recommended to ensure that the implementation of the Proposed Project would not impact any nesting birds.

> Recommendation 6: WRA recommends that tree/vegetation removal and initial ground disturbance occur from August 16 to January 31, outside of the general bird nesting season. If tree/vegetation removal during this time is not feasible, a pre-construction nesting bird survey should be performed by a qualified biologist no more than 14 days prior to the initiation of tree removal or ground disturbance is recommended. The survey should cover the Project Area (including tree removal areas) and surrounding areas within 500 feet. If active bird nests are found during the survey, an appropriate no-disturbance buffer should be established by the qualified biologist. Once it is determined that the young have fledged (left the nest) or the nest otherwise becomes inactive (e.g., due to predation), the buffer may be lifted and work may be initiated within the buffer.

6.2.3 Critical Habitat, Essential Fish Habitat, and Wildlife Corridors

The Study Area's streams and most of the terrestrial land cover types will remain intact, which will allow for continued wildlife movement. The minimal development and internment use within the Study Area are in and of themselves unlikely to result in any significant impacts to local wildlife movement. Preservation of most of the Study Area's woodlands and forest will also allow for continued localized movement of wildlife. There are no fences or other barriers proposed as part of the project to substantively alter localized wildlife movement; therefore, there are no further recommendations for wildlife movement.

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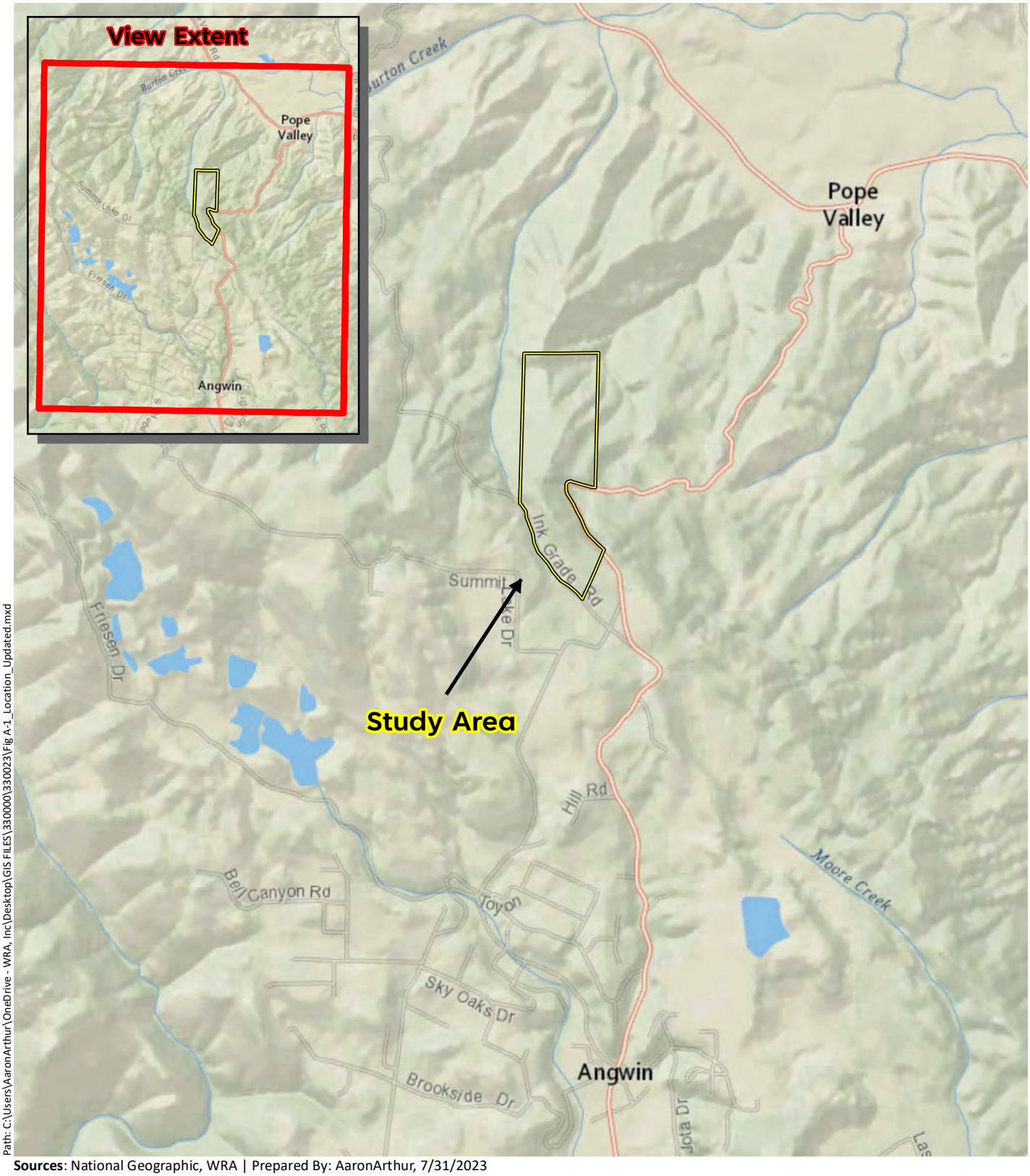
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Appendix A

Figures



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Sources: National Geographic, WRA | Prepared By: AaronArthur, 7/31/2023

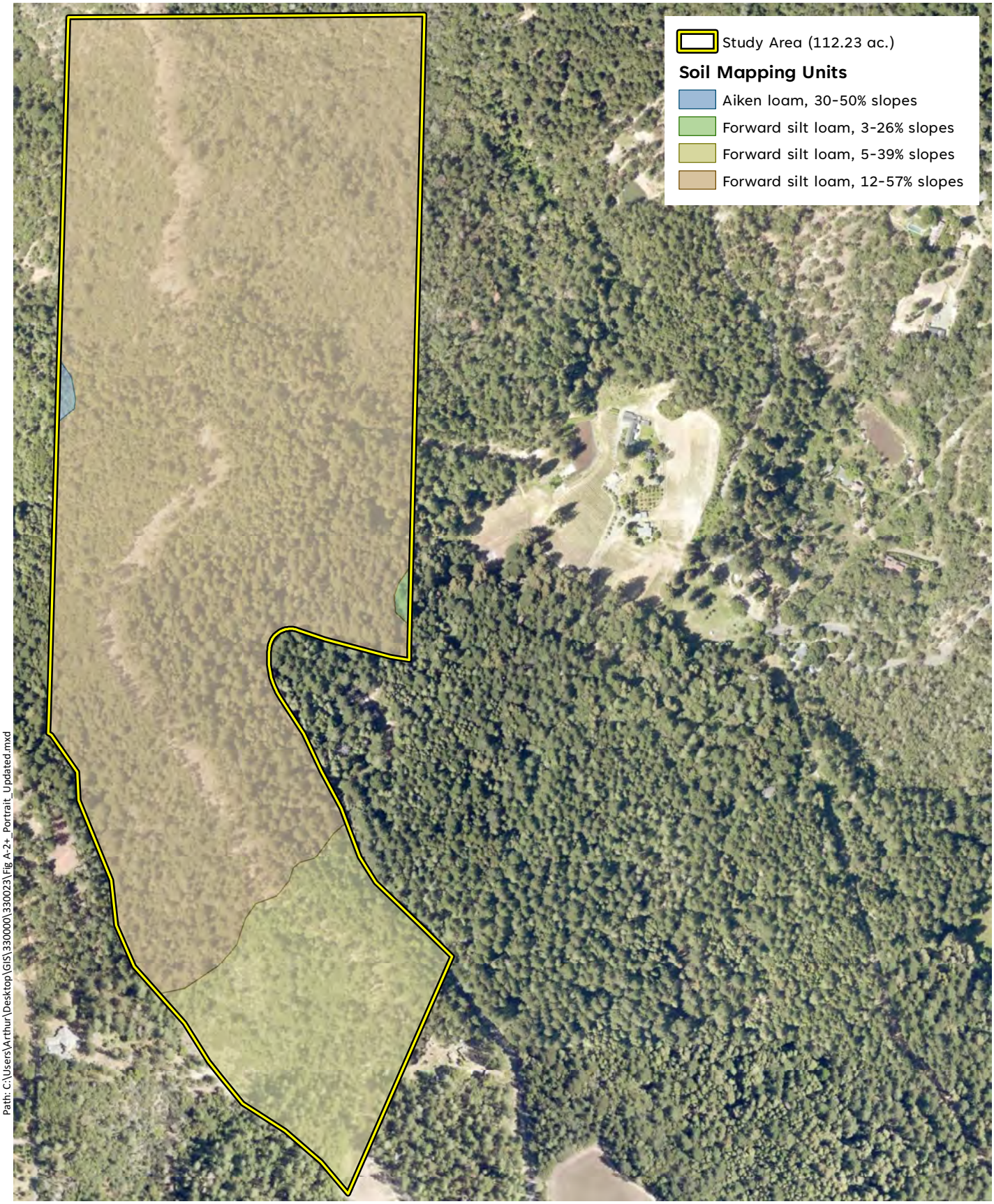
Figure A-1. Study Area Location

Howell Mtn. Cemetery
Napa County, CA

0 0.5 1 Miles

N

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/3/2023

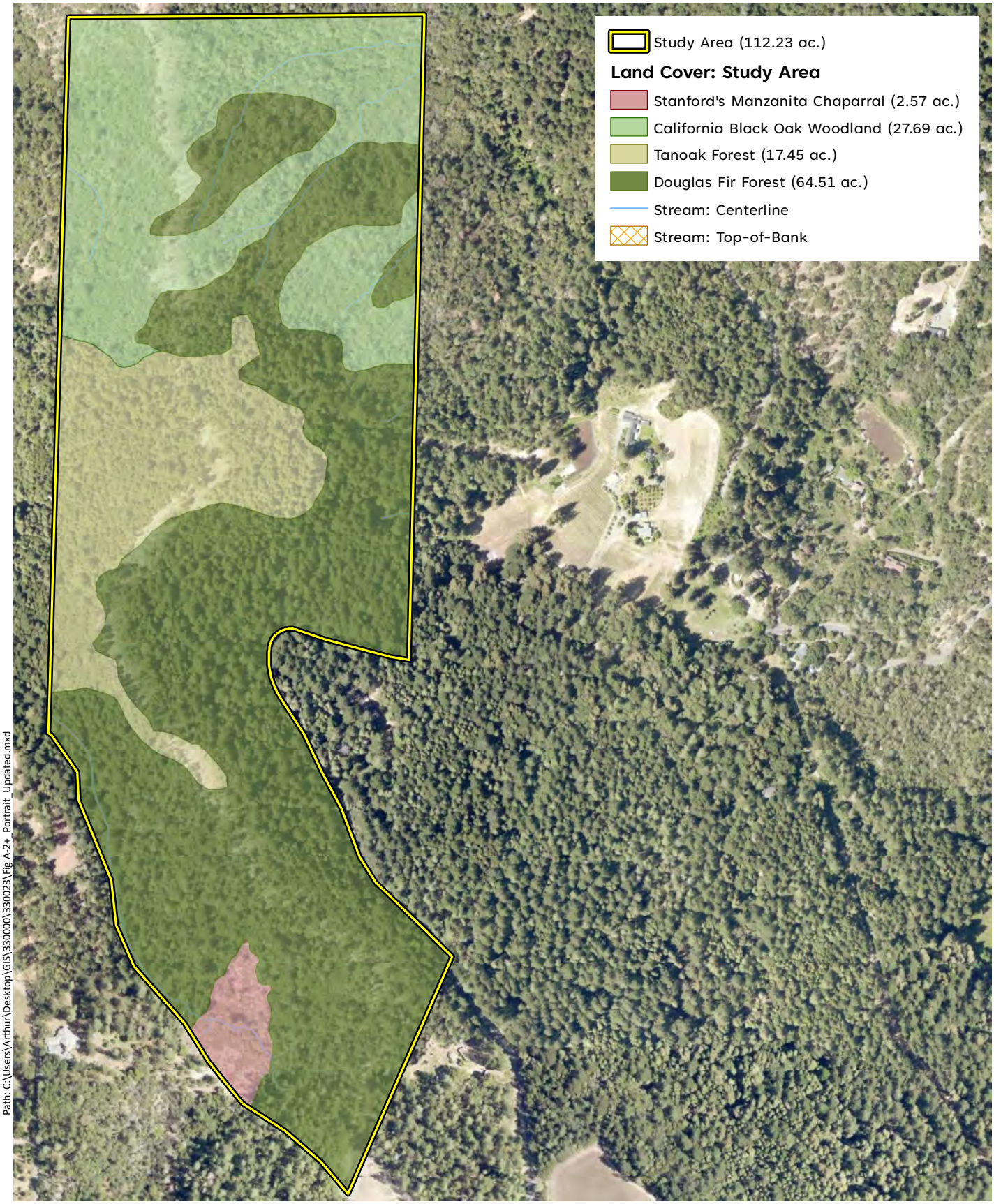
Figure A-2. Soil Mapping Units

Howell Mtn. Cemetery
Napa County, CA

0 100 200
Feet

N

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Path: C:\Users\Arthur\Desktop\GIS\330000\330023\Fig A-2+_Portrait_Updated.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/3/2023

Figure A-3. Land Cover: Study Area

Howell Mtn. Cemetery
Napa County, CA

0 100 200
Feet

N

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Figure A-5

Figure A-6

Study Area (112.2 ac.)

Special-status Plants

Dark-mouthed Triteleia (x721; 12.94 ac.)

Green Monardella (x27; 0.02 ac.)

Mt. Cobb Lupine (x71; 0.38 ac.)

Narrow-anthered Brodiaea (x165; 0.15 ac.)

Redwood Lily (x27; 0.16 ac.)

Path: C:\Users\Arthur\Desktop\GIS\330000\330023\Fig X_Field.mxd

Sources: 2016 DigitalGlobe Aerial, WRA | Prepared By: Arthur, 8/3/2023

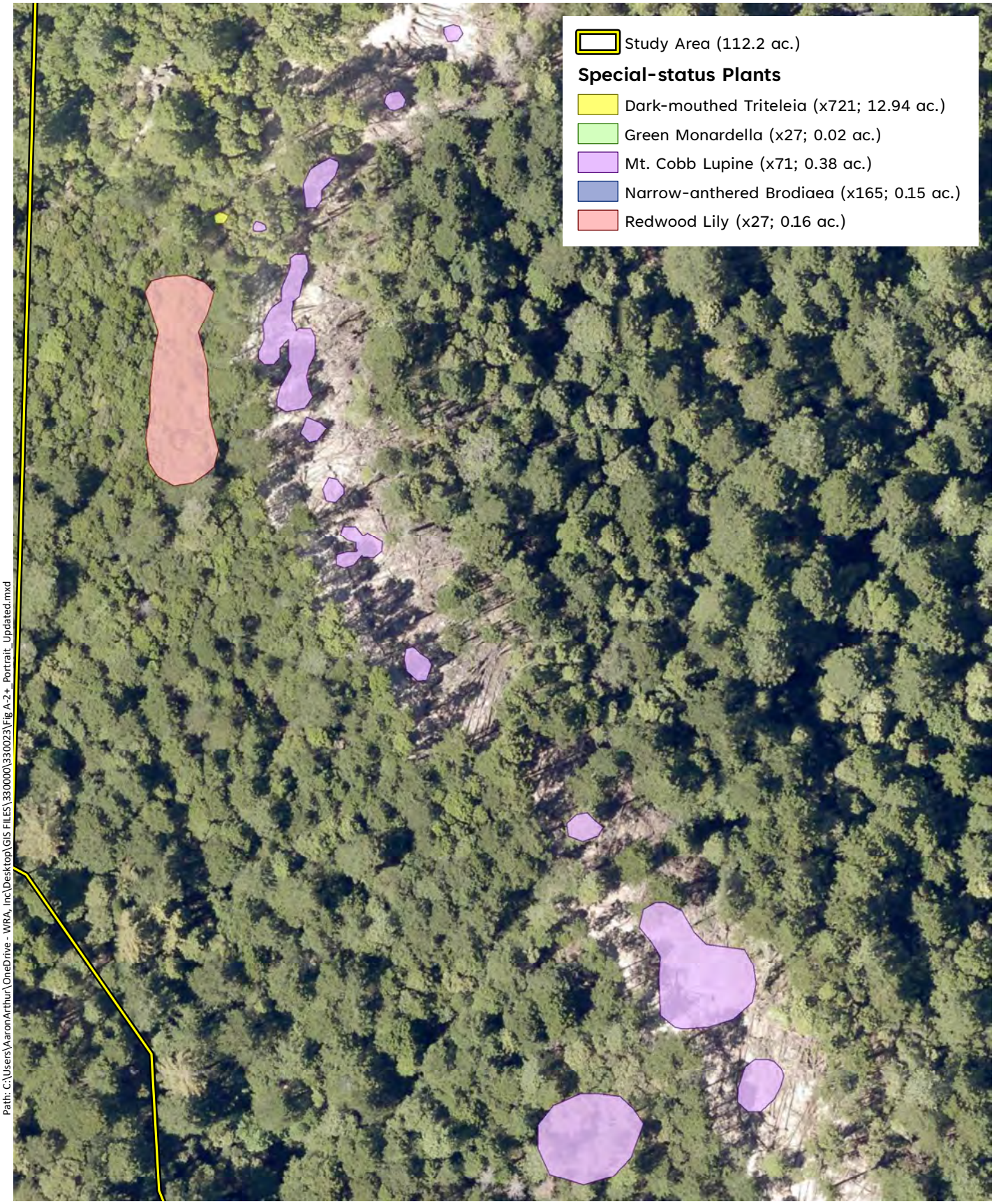
Figure A-4. Special-status Plants: Overview

Howell Mtn. Cemetery
Napa County, CA

0 250 500 Feet

N

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 7/11/2023

Figure A-5. Special-status Plants: Close-up

Howell Mtn. Cemetery
Napa County, CA

0 100 200 Feet

N

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Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: AaronArthur, 7/11/2023

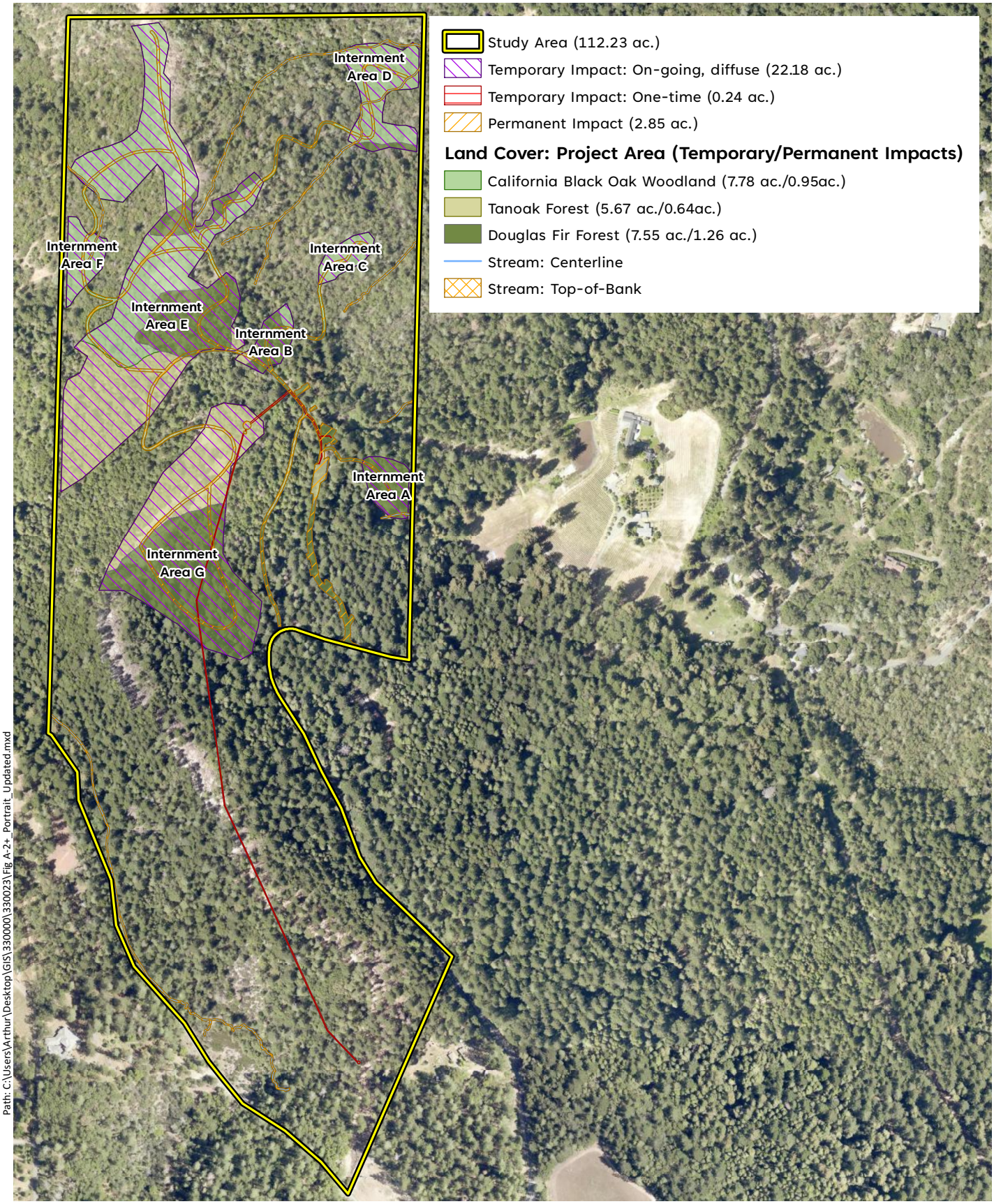
Figure A-4. Special-status Plants: Close-up

Howell Mtn. Cemetery
Napa County, CA

0 100 200 Feet

N

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Path: C:\Users\Arthur\Desktop\GIS\330000\330023\Fig A-2+_Portrait_Updated.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/3/2023

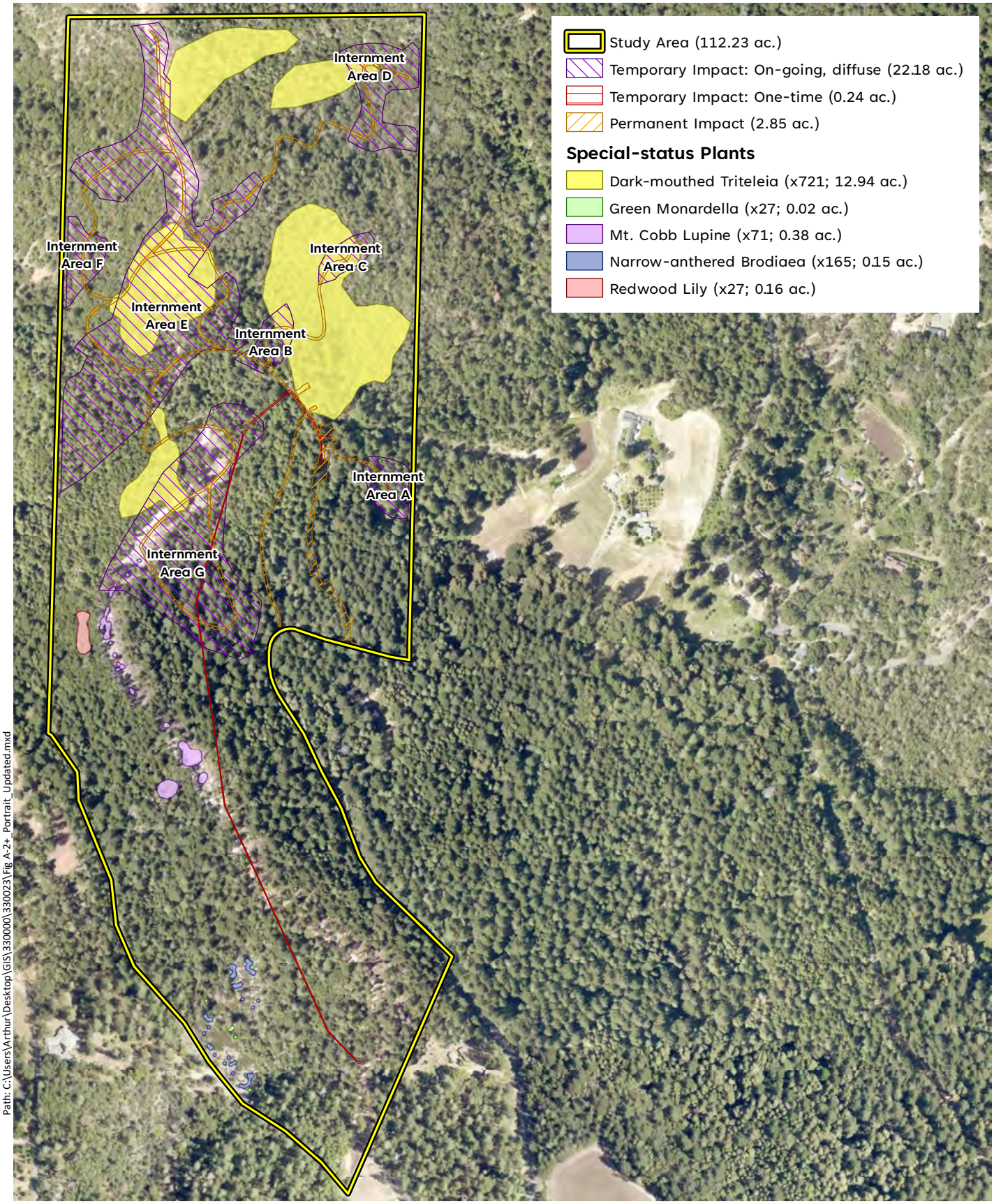
Figure A-7. Land Cover: Project Area

Howell Mtn. Cemetery
Napa County, CA

0 100 200
Feet

N

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Path: C:\Users\Arthur\Desktop\GIS\330000\330023\Fig A-2+_Portrait_Updated.mxd

Sources: DigitalGlobe 2016 Aerial, WRA | Prepared By: Arthur, 8/3/2023

Figure A-8. Special-status Plants: Project Area

Howell Mtn. Cemetery
Napa County, CA

0 100 200
Feet

N

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Appendix B

Species Observed in the Study Area

Table B-1. Plant species observed in the Study Area: August 25, 2017; April 26 and June 22, 2018; April 14, May 18, and June 29, 2023

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Agavaceae	*Chlorogalum pomeridianum* var. *pomeridianum*	common soap plant	perennial forb	native	--	--	NL
Alliaceae	*Allium serra*	jeweled onion	perennial forb	native	--	--	NL
Anacardiaceae	*Toxicodendron diversilobum*	poison oak	deciduous shrub	native	--	--	FACU
Apiaceae	*Osmorhiza berteroi*	sweet cicely	perennial forb	native	--	--	FACU
Apiaceae	*Sanicula bipinnatifida*	purple sanicle	perennial forb	native	--	--	NL
Apiaceae	*Sanicula crassicaulis*	Pacific sanicle	perennial forb	native	--	--	NL
Apiaceae	*Torilis arvensis*	hedge parsley	annual forb	non-native	--	moderate	NL
Asteraceae	*Achillea millefolium*	common yarrow	perennial forb	native	--	--	FACU
Asteraceae	*Agoseris grandiflora* var. *grandiflora*	large-flowered agoseris	perennial forb	native	--	--	NL
Asteraceae	*Agoseris retrorsa*	spearleaf agoseris	perennial forb	native	--	--	NL
Asteraceae	*Anisocarpus madioides*	woodland madia	perennial forb	native	--	--	NL
Asteraceae	*Baccharis pilularis* ssp. *consanguinea*	coyote brush	evergreen shrub	native	--	--	NL
Asteraceae	*Carduus pycnocephalus*	Italian thistle	annual forb	non-native	--	moderate	NL
Asteraceae	*Centaurea solstitialis*	yellow star thistle	annual forb	non-native	--	high	NL
Asteraceae	*Eurybia radulina*	rough aster	perennial forb	native	--	--	NL
Asteraceae	*Hieracium albiflorum*	white hawkweed	perennial forb	native	--	--	NL
Asteraceae	*Hypochaeris radicata*	rough cat's-ear	perennial forb	non-native	--	moderate	FACU
Asteraceae	*Leontodon saxatilis* ssp. *longirostris*	hawkbit	annual forb	non-native	--	--	FACU
Asteraceae	*Logfia gallica*	narrowleaf cottonrose	annual forb	non-native	--	--	NL
Asteraceae	*Madia exigua*	meager tarweed	annual forb	native	--	--	NL
Asteraceae	*Microseris douglasii*	Douglas' silverpuffs	annual forb	native	--	--	FACU
Asteraceae	*Pseudognaphalium californicum*	ladies' tobacco	perennial forb	native	--	--	NL
Asteraceae	*Senecio vulgaris*	old-man-of-spring	annual forb	non-native	--	--	FACU
Asteraceae	*Sonchus asper*	prickly sow thistle	annual forb	non-native	--	assessed	FAC
Asteraceae	*Sonchus oleraceus*	common sow thistle	annual forb	non-native	--	--	NL
Boraginaceae	*Adelinia grandis*	Pacific hound's tongue	perennial forb	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Boraginaceae	*Nemophila heterophylla*	white baby blue eyes	annual forb	native	--	--	NL
Boraginaceae	*Nemophila parviflora*	small-flower nemophila	annual forb	native	--	--	NL
Brassicaceae	*Barbarea orthoceras*	erect-pod wintercress	perennial forb	native	--	--	FACW
Brassicaceae	*Brassica nigra*	black mustard	annual forb	non-native	--	moderate	NL
Brassicaceae	*Cardamine californica*	milk maids	perennial forb	native	--	--	NL
Calycanthaceae	*Calycanthus occidentalis*	spice bush	evergreen shrub	native	--	--	FAC
Campanulaceae	*Campanula angustiflora*	Eastwood's bellflower	annual forb	native	--	--	NL
Caprifoliaceae	*Lonicera hispidula*	pink honeysuckle	evergreen shrub	native	--	--	FACU
Caprifoliaceae	*Lonicera interrupta*	chaparral honeysuckle	evergreen shrub	native	--	--	NL
Caprifoliaceae	*Symphoricarpos albus* var. *laevigatus*	upright snowberry	deciduous shrub	native	--	--	FACU
Cornaceae	*Cornus nuttallii*	Pacific dogwood	evergreen shrub	native	--	--	FACU
Cupressaceae	*Sequoia sempervirens*	coast redwood	evergreen tree	native	--	--	NL
Cyperaceae	*Carex multicaulis*	forest sedge	perennial graminoid	native	--	--	NL
Cyperaceae	*Cyperus eragrostis*	tall flat-sedge	perennial graminoid	native	--	--	FACW
Dennstaedtiaceae	*Pteridium aquilinum* var. *pubescens*	bracken fern	perennial fern	native	--	--	FACU
Dryopteridaceae	*Dryopteris arguta*	California wood fern	perennial fern	native	--	--	NL
Dryopteridaceae	*Polystichum munitum*	western swordfern	perennial fern	native	--	--	FACU
Ericaceae	*Allotropa virgata*	candy-striped allotropa	perennial forb	native	--	--	NL
Ericaceae	*Arctostaphylos manzanita* ssp. *manzanita*	common manzanita	evergreen shrub	native	--	--	NL
Ericaceae	*Arctostaphylos stanfordiana* ssp. *stanfordiana*	Stanford's manzanita	evergreen shrub	native	--	--	NL
Ericaceae	*Pyrola picta*	wintergreen	perennial forb	native	--	--	NL
Euphorbiaceae	*Croton setiger*	turkey mullein	annual forb	native	--	--	NL
Fabaceae	*Acmispon brachycarpus*	hairy lotus	annual forb	native	--	--	NL
Fabaceae	*Acmispon parviflorus*	small flowered lotus	annual forb	native	--	--	NL
Fabaceae	*Genista monspessulana*	French broom	evergreen shrub	non-native	--	high	NL
Fabaceae	*Lathyrus vestitus* var. *vestitus*	common Pacific pea	perennial forb	native	--	--	NL

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Fabaceae	*Lupinus bicolor*	miniature lupine	annual forb	native	--	--	NL
Fabaceae	*Lupinus nanus*	sky lupine	annual forb	native	--	--	NL
Fabaceae	*Lupinus sericatus*	Cobb Mountain lupine	perennial forb	native	CRPR 1B	--	NL
Fabaceae	*Pickeringia montana* var. *montana*	chaparral pea	evergreen shrub	native	--	--	NL
Fabaceae	*Trifolium bifidum*	notch leaf clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium ciliolatum*	tree clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium dubium*	shamrock clover	annual forb	non-native	--	--	UPL
Fabaceae	*Trifolium glomeratum*	clustered clover	annual forb	non-native	--	--	NL
Fabaceae	*Trifolium microcephalum*	maiden clover	annual forb	native	--	--	FAC
Fabaceae	*Trifolium microdon*	thimble clover	annual forb	native	--	--	NL
Fabaceae	*Trifolium subterraneum*	subterranean clover	annual forb	non-native	--	--	NL
Fabaceae	*Trifolium willdenovii*	tomcat clover	annual forb	native	--	--	FACW
Fabaceae	*Vicia sativa*	garden vetch	annual forb	non-native	--	--	FACU
Fabaceae	*Vicia villosa*	woolly-pod vetch	annual forb	non-native	--	--	NL
Fagaceae	*Notholithocarpus densiflorus*	tanoak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus chrysolepis*	canyon live oak	evergreen tree	native	--	--	NL
Fagaceae	*Quercus douglasii*	blue oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus garryana*	Oregon white oak	deciduous tree	native	--	--	UPL
Fagaceae	*Quercus kelloggii*	California black oak	deciduous tree	native	--	--	NL
Fagaceae	*Quercus wislizeni* var. *wislizeni*	interior live oak	evergreen tree	native	--	--	NL
Hypericaceae	*Hypericum concinnum*	goldwire	perennial forb	native	--	--	NL
Hypericaceae	*Hypericum perforatum*	Klamath weed	perennial forb	non-native	--	moderate	FACU
Iridaceae	*Iris macrosiphon*	long-tube iris	perennial forb	native	--	--	NL
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	perennial forb	native	--	--	FACW
Juncaceae	*Juncus effusus* ssp. *pacificus*	Pacific rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus occidentalis*	western rush	perennial graminoid	native	--	--	FACW
Juncaceae	*Juncus patens*	common rush	perennial graminoid	native	--	--	FACW

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Juncaceae	*Luzula comosa*	Pacific woodrush	perennial graminoid	native	--	--	FAC
Lamiaceae	*Monardella villosa* ssp. *franciscana*	coyote mint	perennial forb	native	--	--	NL
Lamiaceae	*Monardella viridis*	green monardella	perennial forb	native	CRPR 4	--	NL
Lamiaceae	*Stachys rigida* var. *quercetorum*	rough hedgenettle	perennial forb	native	--	--	FACW
Lauraceae	*Umbellularia californica*	California bay	evergreen tree	native	--	--	FAC
Liliaceae	*Calochortus amabilis*	golden globelily	perennial forb	native	--	--	NL
Liliaceae	*Lilium rubescens*	redwood lily	perennial forb	native	CRPR 4	--	NL
Liliaceae	*Prosartes hookeri*	drops of gold	perennial forb	native	--	--	NL
Montiaceae	*Claytonia parviflora*	spring beauty	annual forb	native	--	--	FACU
Montiaceae	*Claytonia perfoliata*	miner's lettuce	annual forb	native	--	--	FAC
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	annual forb	non-native	--	--	NL
Orchidaceae	*Piperia elongata*	dense-flower rein orchid	perennial forb	native	--	--	NL
Orchidaceae	*Piperia transversa*	royal rein orchid	perennial forb	native	--	--	NL
Phrymaceae	*Diplacus aurantiacus*	sticky monkey	evergreen shrub	native	--	--	NL
Pinaceae	*Pinus ponderosa*	ponderosa pine	evergreen tree	native	--	--	FACU
Pinaceae	*Pinus sabiniana*	digger pine	evergreen tree	native	--	--	NL
Pinaceae	*Pseudotsuga menziesii*	Douglas fir	evergreen tree	native	--	--	FACU
Plantaginaceae	*Collinsia heterophylla*	purple Chinese houses	annual forb	native	--	--	NL
Poaceae	*Aira caryophyllea*	silver hairgrass	annual graminoid	non-native	--	assessed	FACU
Poaceae	*Avena barbata*	wild oat	annual graminoid	non-native	--	moderate	NL
Poaceae	*Brachypodium distachyon*	false brome	perennial graminoid	non-native	--	moderate	NL
Poaceae	*Bromus carinatus*	California brome	perennial graminoid	native	--	--	NL
Poaceae	*Bromus catharticus*	Chilean brome	perennial graminoid	non-native	--	--	NL
Poaceae	*Bromus diandrus*	rip-gut brome	annual graminoid	non-native	--	moderate	NL
Poaceae	*Bromus hordeaceus*	soft chess	annual graminoid	non-native	--	limited	FACU
Poaceae	*Cynosurus echinatus*	dogtail grass	annual graminoid	non-native	--	moderate	NL
Poaceae	*Danthonia californica*	California oat grass	perennial graminoid	native	--	--	FAC

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Poaceae	*Elymus glaucus*	blue wildrye	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca bromoides*	brome fescue	perennial graminoid	non-native	--	--	FACU
Poaceae	*Festuca californica*	California fescue	perennial graminoid	native	--	--	FACU
Poaceae	*Festuca idahoensis*	Idaho fescue	perennial graminoid	native	--	--	NL
Poaceae	*Festuca microstachys*	Pacific fescue	annual graminoid	native	--	--	NL
Poaceae	*Festuca myuros*	rattail fescue	perennial graminoid	non-native	--	moderate	FACU
Poaceae	*Festuca perennis*	Italian rye grass	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Gastridium phleoides*	nit grass	annual graminoid	non-native	--	--	FACU
Poaceae	*Hordeum marinum*	Mediterranean barley	annual graminoid	non-native	--	moderate	FAC
Poaceae	*Hordeum murinum*	mouse barley	annual graminoid	non-native	--	moderate	FACU
Poaceae	*Melica californica*	California onion grass	perennial graminoid	native	--	--	NL
Poaceae	*Melica geyeri*	Geyer's onion grass	perennial graminoid	native	--	--	NL
Poaceae	*Melica torreyana*	Torrey's onion grass	perennial graminoid	native	--	--	NL
Poaceae	*Poa bulbosa*	bulbous bluegrass	perennial graminoid	non-native	--	--	NL
Poaceae	*Poa secunda*	one-sided bluegrass	perennial graminoid	native	--	--	FACU
Polemoniaceae	*Collomia heterophylla*	variable leaf collomia	annual forb	native	--	--	NL
Polemoniaceae	*Leptosiphon androsaceus*	false babystars	annual forb	native	--	--	NL
Polemoniaceae	*Leptosiphon parviflorus*	variable linanthus	annual forb	native	--	--	NL
Polygalaceae	*Polygala californica*	California milkwort	perennial forb	native	--	--	NL
Polypodiaceae	*Polypodium californicum*	California polypody	perennial fern	native	--	--	NL
Pteridaceae	*Adiantum jordanii*	maidenhair fern	perennial fern	native	--	--	FAC
Pteridaceae	*Pellaea mucronata*	bird's foot fern	perennial fern	native	--	--	NL
Pteridaceae	*Pentagramma triangularis*	gold back fern	perennial fern	native	--	--	NL
Rhamnaceae	*Ceanothus foliosus* var. *foliosus*	wavy-leaf ceanothus	evergreen shrub	native	--	--	NL
Rhamnaceae	*Ceanothus oliganthus* var. *oliganthus*	hairy ceanothus	evergreen shrub	native	--	--	NL
Rosaceae	*Adenostoma fasciculatum*	chamise	evergreen shrub	native	--	--	NL
Rosaceae	*Drymocallis glandulosa*	sticky cinquefoil	perennial forb	native	--	--	FAC

FAMILY	SCIENTIFIC NAME	COMMON NAME	LIFE FORM	ORIGIN	RARE STATUS[1]	INVASIVE STATUS[2]	WETLAND INDICATOR[3]
Rosaceae	*Heteromeles arbutifolia*	toyon	evergreen shrub	native	--	--	NL
Rosaceae	*Rosa gymnocarpa*	dwarf rose	evergreen shrub	native	--	--	FACU
Rubiaceae	*Galium aparine*	common bedstraw	annual forb	native	--	--	FACU
Rubiaceae	*Galium californicum*	California bedstraw	perennial forb	native	--	--	NL
Rubiaceae	*Galium porrigens*	graceful bedstraw	perennial forb	native	--	--	NL
Rubiaceae	*Sherardia arvensis*	blue fieldmadder	annual forb	non-native	--	--	NL
Sapindaceae	*Acer macrophyllum*	big leaf maple	deciduous tree	native	--	--	FAC
Sapindaceae	*Aesculus californica*	California buckeye	deciduous tree	native	--	--	NL
Saxifragaceae	*Lithophragma heterophyllum*	hillside woodland star	perennial forb	native	--	--	NL
Scrophulariaceae	*Verbascum thapsus*	woolly mullein	perennial forb	non-native	--	limited	FACU
Taxaceae	*Torreya californica*	California torreya	evergreen tree	native	--	--	NL
Themidaceae	*Brodiaea elegans* ssp. *elegans*	harvest brodiaea	perennial forb	native	--	--	FACU
Themidaceae	*Brodiaea leptandra*	narrow-anthered brodiaea	perennial forb	native	CRPR 1B	--	NL
Themidaceae	*Dichelostemma congestum*	ookow	perennial forb	native	--	--	NL
Themidaceae	*Dipterostemon capitatum*	blue dicks	perennial forb	native	--	--	FACU
Themidaceae	*Triteleia lugens*	Coast Range triteleia	perennial forb	native	CRPR 4	--	NL
Violaceae	*Viola lobata ssp. lobata*	pine violet	perennial forb	native	--	--	NL

All species identified using the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), *The Jepson Flora Project* (eFlora 2024), and *A Flora of Napa County* (Ruygt 2020); nomenclature follows *The Jepson Flora Project* (eFlora 2024) unless otherwise noted

Sp.: “species”, intended to indicate that the observer was confident in the identity of the genus but uncertain which species
Cf.: “*confer*” or “compared with”, intended to indicate a species appeared to the observer to be specific, but was not identified based on diagnostic characters

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2024a)

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
LR	Locally Rare
CRPR 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B:	Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A:	Plants presumed extirpated in California, but more common elsewhere
CRPR 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3:	Plants about which we need more information – a review list
CRPR 4:	Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

High:	Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate:	Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited moderate distribution ecologically
Limited:	Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed:	Assessed by Cal-IPC and determined to not be an existing current threat

[3]Wetland Status: National List of Plant Species that Occur in Wetlands, Arid West Region (Corps 2022)

OBL:	Almost always a hydrophyte, rarely in uplands
FACW:	Usually a hydrophyte, but occasionally found in uplands
FAC:	Commonly either a hydrophyte or non-hydrophyte
FACU:	Occasionally a hydrophyte, but usually found in uplands
UPL:	Rarely a hydrophyte, almost always in uplands
NL:	Rarely a hydrophyte, almost always in uplands
NI:	No information; not factored during wetland delineation

Table B-2. Wildlife species observed in and around the Study Area: August 25, 2017; April 26 and June 22, 2018; April 14, May 18, and June 29, 2023

SCIENTIFIC NAME	COMMON NAME
Mammals	
Odocoileus hemionus columbianus	black-tailed deer
Sciurus griseus	western gray squirrel
Birds	
Baeolophus inornatus	oak titmouse
Buteo lineatus	red-shouldered hawk
Cathartes aura	turkey vulture
Certhia americana	brown creeper
Colaptes auratus	northern flicker
Corvus corax	common raven
Cyanocitta stelleri	Steller's jay
Dryocopus pileatus	pileated woodpecker
Empidonax difficilis	Pacific-slope flycatcher
Falco peregrinus	peregrine falcon
Junco hyemalis	dark-eyed junco
Melanerpes formicivorus	acorn woodpecker
Pheucticus melanocephalus	black-headed grosbeak
Pipilo maculatus	spotted towhee
Polioptila caerulea	blue-gray gnatcatcher
Sayornis nigricans	black phoebe
Setophaga coronata	yellow-rumped warbler
Sitta carolinensis	white-breasted nuthatch
Turdus migratorius	American robin
Reptiles and Amphibians	
Sceloporus occidentalis	western fence lizard

Appendix C

Potential for Special-status Species to Occur in the Study Area

Table C. Potential for Special-status Species to Occur in the Study Area. List compiled from the CDFW BIOS database (CDFW 2024a), USFWS IPaC Report (USFWS 2024b), and CNPS Electronic Inventory (CNPS 2024a) searches. For plants, the Detert Reservoir, Aetna Springs, Walter Springs, Calistoga, St. Helena, Chiles Valley, Kenwood, Rutherford, and Yountville USGS 7.5' quadrangles were included in the search. For wildlife, the entirety of Napa County was considered.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
PLANTS				
Allium peninsulare var. *franciscanum* Franciscan onion	CRPR 1B	Cismontane woodland, valley and foothill grassland; on clay substrate, often derived from volcanics or serpentine; serpentine indicator: WI. Elevation range: 170 – 985 feet. Blooms: May – June.	**Moderate Potential.** The Study Area contains rocky woodland that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Alopecurus aequalis var. *sonomensis* Sonoma alopecurus	FE, CRPR 1B	Freshwater marshes and swamps, riparian scrub; closely associated with other wetland species; wetland indicator: OBL/OBL. Elevation range: 15 – 1200 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain riparian, marsh, or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Amorpha californica var. *napensis* Napa false indigo	CRPR 1B	Openings in broadleaf upland forest, chaparral, cismontane woodland. Elevation range: 395 – 6560 feet. Blooms: April – July.	**High Potential.** The Study Area contains forest and shrubby areas that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Amsinckia lunaris bent-flowered fiddleneck	CRPR 1B	Cismontane woodland, valley and foothill grassland, coastal bluff scrub; situated on rocky soils. Elevation range: 10 – 1625 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain coastal scrub, grasslands, or open oak woodland to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Antirrhinum virga twig-like snapdragon	CRPR 4	Chaparral, lower montane coniferous forest; located on rocky openings often derived from serpentine; serpentine indicator: SI. Elevation range: 325 – 6550 feet. Blooms: June – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Arctostaphylos manzanita ssp. *elegans* Konocti manzanita	CRPR 1B	Chaparral, cismontane woodland, lower montane coniferous forest; located on volcanic substrates. Elevation range: 1280 – 5250 feet. Blooms: March – July.	**Moderate Potential.** The Study Area contains volcanic (rhyolitic) substrate and scrubby areas that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Arctostaphylos stanfordiana ssp. decumbens Rincon manzanita	CRPR 1B	Chaparral, cismontane woodland; highly restricted to red rhyolite soils. Elevation range: 245 – 1215 feet. Blooms: February – April.	**Moderate Potential.** The Study Area contains volcanic (rhyolitic) substrate and scrubby areas that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Asclepias solanoana serpentine milkweed	CRPR 4, LR	Chaparral, cismontane woodland, lower montane coniferous forest; located on serpentine substrate; serpentine indicator: SE. Elevation range: 745 – 6045 feet. Blooms: May – August.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Astragalus breweri Brewer's milk-vetch	CRPR 4	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland; located on open, gravelly serpentine or volcanic substrate; serpentine indicator: SI. Elevation range: 290 – 2375 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Astragalus claranus Clara Hunt's milk-vetch	FE; ST; CRPR 1B	Cismontane woodland, valley and foothill grassland, chaparral; on open grassy hillsides, especially exposed shoulders with thin, volcanic or serpentine clay soils; serpentine indicator: SI. Elevation range: 245 – 900 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Astragalus clevelandii Cleveland's milk-vetch	CRPR 4	Chaparral, cismontane woodland, riparian forest; located on serpentine seeps; serpentine indicator: SE. Elevation range: 650 – 4875 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Astragalus rattanii var. *jepsonianus* Jepson's milk-vetch	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; typically situated on serpentine substrate in openings or grasslands; often on roadsides; serpentine indicator: BE/SI. Elevation range: 955 – 2275 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Brodiaea leptandra narrow-anthered brodiaea	CRPR 1B	Broadleaf upland forest, chaparral, lower montane coniferous forest; situated on gravelly soils derived from volcanics, particularly rhyolitic tuff, sometimes serpentine; serpentine indicator: WI. Elevation range: 360 – 3000 feet. Blooms: May – July.	**High Potential.** The Study Area contains volcanic (rhyolitic) substrate and scrubby areas that may support this species.	**Present.** One hundred fifty-six individuals were observed within the southern portion of the Study Area in chaparral. See Section 6.0 for further actions regarding this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Calamagrostis ophitidis serpentine reed grass	CRPR 4	Chaparral, lower montane coniferous forest, meadows and seeps, valley and foothill grassland; located in openings, often north-facing, underlain by rocky serpentine substrate; serpentine indicator: SE. Elevation range: 290 – 3465 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Calandrinia breweri Brewer's Calandrinia	CRPR 4	Chaparral, coastal scrub; located on sandy or loamy substrate in areas often recently disturbed or burned. Elevation range: 30 – 3965 feet. Blooms: March – June.	**Unlikely.** Although the Study Area contains chaparral, the substrate is gravelly loamy and clayey soils.	**Not Present.** No further actions are recommended for this species.
Calochortus uniflorus large-flowered mariposa lily	CRPR 4, LR	Coastal prairie, coastal scrub, meadows and seeps, North Coast coniferous forest; infrequently situated on serpentine substrate; serpentine indicator: WI. Elevation range: 30 – 3480 feet. Blooms: April – June.	**Unlikely.** Although the Study Area contains forested habitat, this species is closely associated with open (grassland or meadow), mesic areas.	**Not Present.** No further actions are recommended for this species.
Calycadenia micrantha small-flowered Calycadenia	CRPR 1B	Chaparral, meadows and seeps, valley and foothill grassland; located on volcanic or serpentine substrate in sparsely vegetated rocky, talus, or scree areas. Elevation range: 15 – 4875 feet. Blooms: June – September.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Calyptridium quadripetalum four-petaled pussypaws	CRPR 4	Chaparral, lower montane coniferous forest; located on sandy or gravelly substrate, typically derived from serpentine; serpentine indicator: BE. Elevation range: 1020 – 6630 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Calystegia collina ssp. *oxyphylla* Mt. Saint Helena morning-glory	CRPR 4	Chaparral; located on serpentine barrens, slopes, and hillsides; serpentine indicator: SE. Elevation range: 815 – 3315 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Calystegia collina ssp. *venusta* South Coast Range morning-glory	CRPR 4	Chaparral, cismontane woodland, valley and foothill grassland; typically on serpentine or sedimentary substrate. Elevation range: 1380 – 4845 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species. Reported occurrences from Napa County are widely regarded as erroneous.	**Not Present.** No further actions are recommended for this species.
Castilleja ambigua var. *ambigua* Johnny-nip	CRPR 4	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins. Elevation range: 0 – 1415 feet. Blooms: March – August.	**No Potential.** The Study Area does not contain open, herbaceous habitats (grasslands, meadows, marshes) to support this species.	**Not Present.** No further actions are recommended for this species.
Castilleja ambigua var. *meadii* mead's owl's-clover	CRPR 1B	Meadows and seeps, vernal pools; located in mesic areas or wetlands underlain by gravelly clay soils derived from volcanics. Elevation range: 1460 – 1545 feet. Blooms: April – May.	**No Potential.** The Study Area does not contain open, herbaceous habitats (grasslands, meadows, marshes) to support this species.	**Not Present.** No further actions are recommended for this species.
Ceanothus confusus Rincon Ridge ceanothus	CRPR 1B	Closed-cone coniferous forest, chaparral, cismontane woodland; known from volcanic and serpentine substrate; typically situated on dry shrubby slopes; serpentine indicator: WI/IN. Elevation range: 245 – 3495 feet. Blooms: February – April.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Ceanothus divergens Calistoga ceanothus	CRPR 1B	Chaparral, cismontane woodland; on rocky, serpentine sites; serpentine indicator: WI. Elevation range: 560 – 3115 feet. Blooms: February – March.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Ceanothus gloriosus var. *exaltatus* Point Reyes ceanothus	CRPR 4	Chaparral. Elevation range: 95 – 1985 feet. Blooms: March – June, sometimes August.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Ceanothus purpureus holly-leaved ceanothus	CRPR 1B	Chaparral, cismontane woodland; located on rocky, volcanic slopes. Elevation range: 395 – 3000 feet. Blooms: February – June.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Ceanothus sonomensis Sonoma ceanothus	CRPR 1B	Chaparral; located on sandy serpentine or volcanic substrates; serpentine indicator: WI/IN. Elevation range: 705 – 2625 feet. Blooms: February – April.	**Moderate Potential.** The Study Area contains chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Centromadia parryi ssp. *parryi* pappose tarplant	CRPR 1B	Coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland; in vernally mesic sites, often with alkali substrate. Elevation range: 5 – 1380 feet. Blooms: May – November.	**No Potential.** The Study Area does not contain marsh, grassland, or other herbaceous dominated habitats to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Clarkia breweri Brewer's clarkia	CRPR 4	Chaparral, cismontane woodland, coastal scrub; frequently on serpentine substrate; serpentine indicator: BE/SI. Elevation range: 695 – 3625 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Clarkia gracilis ssp. *tracyi* Tracy's clarkia	CRPR 4	Chaparral; located in openings and situated on substrates often derived from serpentine; serpentine indicator: BE. Elevation range: 210 – 2115 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Collomia diversifolia serpentine collomia	CRPR 4	Chaparral, cismontane woodland; situated on rocky to gravelly serpentine substrates; serpentine indicator: SE. Elevation range: 975 – 1950 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Cordylanthus tenuis ssp. *brunneus* serpentine bird's-beak	CRPR 4	Closed-cone coniferous forest, chaparral, cismontane woodland; typically located serpentine substrate; serpentine indicator: BE. Elevation range: 1540 – 2975 feet. Blooms: July – August.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Cryptantha dissita serpentine cryptantha	CRPR 1B	Chaparral; located on serpentine outcrops; serpentine indicator: BE/SI. Elevation range: 1280 – 1885 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Cryptantha rostellata red-stemmed cryptantha	CRPR 4	Cismontane woodland, valley and foothill grassland; found on gravelly, volcanic soils in openings and roadsides. Elevation range: 120 – 2400 feet. Blooms: April-June.	**Moderate Potential.** The Study Area contains gravelly volcanic opens that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Cuscuta howelliana Boggs Lake dodder	LR	Vernal pool; situated on the margins; hosts on *Eryngium* spp., *Navarretia* spp., *Polygonum polygaloides*, and *Epilobium campestre*. Elevation range: 455 – 5365 feet. Blooms: August – September.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Cypripedium montanum mountain lady's-slipper	CRPR 4	Broadleaf upland forest, cismontane woodland, lower montane coniferous forest, North Coast coniferous forest. Elevation range: 600 – 7235 feet. Blooms: March – August.	**Moderate Potential.** The Study Area contains forest habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Delphinium uliginosum swamp larkspur	CRPR 4	Chaparral, valley and foothill grassland; located in seeps and wet meadows underlain by serpentine substrate; serpentine indicator: SE. Elevation range: 1105 – 1985 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Downingia pusilla dwarf downingia	CRPR 2B	Valley and foothill grassland, vernal pools; located in mesic grassy sites, pool and lake margins. Elevation range: 3 – 1450 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Eleocharis parvula small spikerush	CRPR 4	Marshes and swamps. Elevation range: 5 – 9815 feet. Blooms: sometimes April, June – August, sometimes September.	**No Potential.** The Study Area does not contain riparian, marsh, or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Erigeron biolettii Streamside daisy	CRPR 3	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest; on rocky, mesic. Elevation range: 95 – 3610 feet. Blooms: June – October.	**Moderate Potential.** The Study Area contains forest habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Erigeron greenei Greene's narrow-leaved daisy	CRPR 1B	Chaparral; located on volcanic or serpentine substrate. Elevation range: 260 – 3270 feet. Blooms: May – September.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Eriogonum umbellatum var. *bahiiforme* bay buckwheat	CRPR 4	Cismontane woodland, lower montane coniferous forest; situated on rocky substrates often derived from serpentine; serpentine indicator: BE/SI. Elevation range: 2275 – 7150 feet. Blooms: July – September.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Eryngium constancei Loch Lomond coyote thistle	FE; SE; CRPR 1B	Vernal pools; located on volcanic ash flow vernal pools. Elevation range: 1495 – 2780 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Eryngium jepsonii Jepson's coyote thistle	CRPR 1B	Valley and foothill grassland, vernal pools; situated on clay substrate that is vernally saturated. Elevation range: 10 – 975 feet. Blooms: April – August.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Erythronium helenae St. Helena fawn lily	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland; located on volcanic or serpentine substrate; serpentine indicator: BE. Elevation range: 1135 – 3965 feet. Blooms: March – May.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Fritillaria liliacea fragrant fritillary	CRPR 1B	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine; serpentine indicator: WI. Elevation range: 10 – 1335 feet. Blooms: February – April.	**No Potential.** The Study Area does not contain clay substrate and open grassland or woodland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Fritillaria pluriflora adobe lily	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; typically located on adobe clays, often derived from serpentine; serpentine indicator: WI. Elevation range: 195 – 2295 feet. Blooms: February – April.	**No Potential.** The Study Area does not contain clay substrate and open grassland or woodland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Fritillaria purdyi Purdy's fritillary	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest; usually situated on serpentine substrates; serpentine indicator: BE. Elevation range: 565 – 7330 feet. Blooms: March – June.	**Unlikely.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Harmonia hallii Hall's harmonia	CRPR 1B	Chaparral, rock outcrops; situated on rocky serpentine subtrates; often roadsides and roadcuts; serpentine indicator: SE. Elevation range: 1625 – 3170 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Harmonia nutans nodding harmonia	CRPR 4	Chaparral, cismontane woodland; located on rocky to gravelly substrates derived from volcanics. Elevation range: 240 – 3170 feet. Blooms: March – May.	**High Potential.** The Study Area contains openings in volcanic chaparral that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Helianthus exilis serpentine sunflower	CRPR 4	Chaparral, cismontane woodland; located along serpentine seeps; serpentine indicator: SE. Elevation range: 485 – 4960 feet. Blooms: June – November.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Hesperolinon bicarpellatum Two-carpellate western flax	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 195 – 3270 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Hesperolinon sharsmithiae Sharsmith's western flax	CRPR 1B	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 875 – 975 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Iris longipetala coast iris	CRPR 4	Coastal prairie, lower montane coniferous forest, meadows and seeps; located on mesic sites. Elevation range: 0 – 1950 feet. Blooms: March – May.	**Unlikely.** Although the Study Area contains forest, this species is typically near the coast in fog-prone areas.	**Not Present.** No further actions are recommended for this species.
Juncus luciensis Santa Lucia dwarf rush	CRPR 1B	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Elevation range: 975 – 6630 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lasthenia burkei Burke's goldfields	FE; SE; CRPR 1B	Vernal pools, meadows and seeps; typically located in pools and swales. Elevation range: 45 – 1950 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Lasthenia conjugens Contra Costa goldfields	FE, CRPR 1B	Valley and foothill grassland, vernal pools, cismontane woodland; located in pools, swales, and depressions in mesic grassy sites underlain by alkaline substrate. Elevation range: 0 – 1530 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Layia septentrionalis Colusa layia	CRPR 1B	Chaparral, cismontane woodland, valley and foothill grassland; on sandy, serpentine substrate; typically occurs in fields, grassy slopes; serpentine indicator: SI. Elevation range: 330 – 3595 feet. Blooms: April – May.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Leptosiphon aureus bristly leptosiphon	CRPR 4, LR	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland; often located on shallow, rocky substrate in foothill positions. Elevation range: 175 – 4875 feet. Blooms: April – July.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Leptosiphon jepsonii Jepson's leptosiphon	CRPR 1B	Chaparral, cismontane woodland; on open to partially shaded grassy slopes on volcanic or the periphery of serpentine substrate. Elevation range: 330 – 1640 feet. Blooms: April – May.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Leptosiphon latisectus broad-lobed leptosiphon	CRPR 4	Broadleaf upland forest, cismontane woodland; frequently situated on serpentine substrate; serpentine indicator: WI. Elevation range: 550 – 4875 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Lessingia arachnoidea Crystal Springs lessingia	CRPR 1B	Coastal sage scrub, valley and foothill grassland, cismontane woodland; typically on grassy serpentine slopes; serpentine indicator: SE. Elevation range: 60 – 200 feet. Blooms: July – October.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Lessingia hololeuca woolly-headed lessingia	CRPR 3, LR	Broadleaf upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland; typically on clay, serpentine substrate; serpentine indicator: SI. Elevation range: 3 – 2885 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Lilium bolanderi Bolander's lily	CRPR 4	Chaparral, lower montane coniferous forest; typically situated on serpentine substrate; serpentine indicator: SE. Elevation range: 95 – 5200 feet. Blooms: June – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Lilium rubescens redwood lily	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, upper montane coniferous forest, North Coast coniferous forest; often located on serpentine substrates, and along roadcuts; serpentine indicator: WI. Elevation range: 95 – 6210 feet. Blooms: April – September.	**High Potential.** The Study Area contains conifer forest habitat that may support this species.	**Present.** Twenty-seven individuals were observed within the central portion of the Study Area in tanoak forest. See Section 6.0 for further actions regarding this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Limnanthes floccosa ssp. *floccosa* woolly meadowfoam	CRPR 4	Chaparral, cismontane woodland, valley and foothill grassland, vernal pools; situated in vernally mesic settings. Elevation range: 195 – 4340 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Limnanthes vinculans Sebastopol meadowfoam	FE, SE, CRPR 1B	Mesic meadows, valley and foothill grassland, vernal pools; located in swales, wet meadows, depressions, and pools in the oak savanna of the Santa Rosa Plain on heavy adobe clay substrate. Elevation range: 3 – 2885 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Lomatium repostum Napa Lomatium	CRPR 4	Chaparral, cismontane woodland; located on serpentine or volcanic substrates; serpentine indicator: SI. Elevation range: 290 – 2700 feet. Blooms: March – June.	**Moderate Potential.** The Study Area contains volcanic chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Lupinus sericatus Cobb Mountain lupine	CRPR 1B	Broadleaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest; typically located in stands of knobcone pine-oak woodland, on open wooded slopes in gravelly substrate typically derived from volcanics, sometimes serpentine. Elevation range: 890 – 4960 feet. Blooms: March – June.	**High Potential.** The Study Area contains chaparral and woodland habitat that may support this species. Documented occurrences from adjacent property.	**Present.** Seventy-one individuals were observed within the central portion of the Study Area in tanoak forest. See Section 6.0 for further actions regarding this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Lythrum californicum California loosestrife	LR	Yellow pine forest, cismontane woodland, chaparral, valley and foothill grassland, meadows and seeps; located in wetlands. Elevation range: 0 – 7150 feet. Blooms: April – September.	**No Potential.** The Study Area does not contain perennial wetland (e.g., riparian wetland, marsh) habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Micropus amphibolus Mt. Diablo cottonweed	CRPR 3	Broadleaf upland forest, chaparral, cismontane woodland, valley and foothill grassland; typically on thin, rocky soils; serpentine indicator: WI. Elevation range: 145 – 2710 feet. Blooms: March – May.	**Moderate Potential.** The Study Area contains some open, bare ground in the chaparral habitat that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.
Monardella viridis green monardella	CRPR 4	Broadleaf upland forest, chaparral, cismontane woodland; situated on serpentine or volcanic soils; serpentine indicator: BE/SI. Elevation range: 325 – 3285 feet. Blooms: June – September.	**Moderate Potential.** The Study Area contains volcanic chaparral that may support this species.	**Present.** Twenty-seven individuals were observed within the southern portion of the Study Area in chaparral habitat. See Section 6.0 for further actions regarding this species.
Navarretia cotulifolia cotula navarretia	CRPR 4, LR	Chaparral, cismontane woodland, valley and foothill grassland; located on adobe substrate. Elevation range: 10 – 5950 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain adobe clay substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia heterandra Tehama navarretia	CRPR 4	Valley and foothill grasslands, vernal pools; situated in pools and mesic grasslands. Elevation range: 95 – 3285 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Navarretia jepsonii Jepson's navarretia	CRPR 4	Chaparral, cismontane woodland, valley and foothill grassland; situated on serpentine substrates; serpentine indicator: SE. Elevation range: 565 – 2780 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *bakeri* Baker's navarretia	CRPR 1B	Wet, mesic sites underlain by adobe and/or alkaline substrate in cismontane woodland, meadows, seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Elevation range: 15 – 5710 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *pauciflora* few-flowered navarretia	FE, ST, CRPR 1B	Vernal pools; located on volcanic ash flow and volcanic substrate pools. Elevation range: 1300 – 2780 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia leucocephala ssp. *plieantha* many-flowered navarretia	FE, SE, CRPR 1B	Vernal pools underlain by substrate derived from volcanic ash flows. Elevation range: 95 – 3120 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia myersii ssp. *deminuta* Myer's navarretia	CRPR 1B	Vernal pool; underlying substrate is clay loam. Elevation range: undocumented. Blooms: April – May.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Navarretia paradoxinota Porter's navarretia	CRPR 1B	Meadow and seep; typically situated in vernally mesic openings underlain by serpentine substrate; serpentine indicator: SE. Elevation range: 535 – 2730 feet. Blooms: May – June, sometimes July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Navarretia rosulata Marin County navarretia	CRPR 1B	Closed-cone coniferous forest, chaparral; located on dry, rocky sites often formed from serpentine; serpentine indicator: SE. Elevation range: 650 – 2065 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Penstemon newberryi var. *sonomensis* Sonoma beardtongue	CRPR 1B	Chaparral; crevices in rock outcrops and talus slopes on ridgelines and mountain peaks. Elevation range: 2295 – 4495 feet. Blooms: April – August.	**Unlikely.** The Study Area does not contain large outcrops within chaparral habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Plagiobothrys strictus Calistoga popcornflower	FE, ST, CRPR 1B	Broadleaf upland forest, meadows and seeps, valley and foothill grassland, vernal pools; located on heavy dark adobe alkali clay substrate near hot springs and vernal pools. Elevation range: 290 – 520 feet. Blooms: March – June.	**No Potential.** The Study Area does not contain alkali or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Poa napensis Napa bluegrass	FE, SE, CRPR 1B	Meadows and seeps, valley and foothill grassland; located in moist alkaline substrate near hot springs. Elevation range: 325 – 650 feet. Blooms: May – August.	**No Potential.** The Study Area does not contain alkali or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Pogogyne douglasii Douglas' mesamint	LR	Valley and foothill grassland, cismontane woodland, yellow pine forest, mixed evergreen forest, vernal pool; situated in vernal pools, swales, and similar seasonal wetlands. Elevation range: 0 – 2925 feet. Blooms: March – July.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Puccinellia simplex California alkali grass	CRPR 1B	Chenopod scrub, meadow and seep, valley and foothill grassland, vernal pool; situated vernally mesic alkaline substrate in sinks, flats, and lake margins. Elevation range: 5 – 3025 feet. Blooms: March – May.	**No Potential.** The Study Area does not contain alkali or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Ranunculus lobbii Lobb's buttercup	CRPR 4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools; located in mesic, vernally wet areas. Elevation range: 45 – 1530 feet. Blooms: February – May.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Sagittaria sanfordii Sanford's arrowhead	CRPR 1B	Marshes and swamps; located in assorted shallow freshwater habitats including canals and perennial drainage ditches. Elevation range: 0 – 2115 feet. Blooms: May – October, sometimes November.	**No Potential.** The Study Area does not contain perennial wetland (e.g., riparian wetland, marsh) habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Senecio clevelandii var. *clevelandii* Cleveland's ragwort	CRPR 4	Chaparral; situated on serpentine seeps; serpentine indicator: SE. Elevation range: 1185 – 2925 feet. Blooms: June – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Sidalcea hickmanii ssp. *napensis* Napa checkerbloom	CRPR 1B	Chaparral; located on rhyolitic substrates. Elevation range: 1345 – 1985 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains volcanic (rhyolitic) substrate and scrubby areas that may support this species.	**Not Observed.** This species was not observed during protocol-level rare plant surveys. No further actions for recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Sidalcea oregana ssp. *hydrophila* marsh checkerbloom	CRPR 1B	Meadows and seeps, riparian forest; located on wet soils along streambanks and meadows. Elevation range: 3575 – 7475 feet. Blooms: July – August.	**No Potential.** The Study Area does not contain perennial wetland (e.g., riparian wetland, marsh) habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Sidalcea oregana ssp. *valida* Kenwood Marsh checkerbloom	FE, SE, CRPR 1B	Freshwater marshes and swamps, on the edges of marshes. Elevation range: 375 – 495 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain perennial wetland (e.g., riparian wetland, marsh) habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Spergularia macrotheca var. *longistyla* long-styled sand-spurry	CRPR 1B	Meadow and seep, marshes and swamps; located in alkaline marshes, pools, mud flats, meadows, and hot springs. Elevation range: 0 – 830 feet. Blooms: February – March.	**No Potential.** The Study Area does not contain alkali or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus barbiger bearded jewel-flower	CRPR 4, LR	Chaparral; located on serpentine substrate; serpentine indicator: SE. Elevation range: 485 – 3480 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus batrachopus Tamalpais jewel-flower	CRPR 1B	Closed-cone coniferous forest, chaparral; located on serpentine talus slopes; serpentine indicator: SE. Elevation range: 990 – 2115 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus brachiatus ssp. *brachiatus* Socrates Mine jewel-flower	CRPR 1B	Chaparral, closed-cone coniferous forest; located on serpentine substrates; serpentine indicator: SE. Elevation range: 1770 – 3250 feet. Blooms: May – June.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Streptanthus hesperidis green jewelflower	CRPR 1B	Chaparral, cismontane woodland; located in openings in brushy/wooded sites on rocky serpentine substrate; serpentine indicator: SE. Elevation range: 420 – 2470 feet. Blooms: May – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus morrisonii ssp. *elatus* Three Peaks jewel-flower	CRPR 1B	Serpentine chaparral; serpentine indicator: SE. Elevation range: 90 – 815 feet. Blooms: June – September.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Streptanthus vernalis early jewel-flower	CRPR 1B	Closed-cone coniferous forest, chaparral; situated on serpentine; serpentine indicator: ?. Elevation range: undocumented. Blooms: March – May.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Toxicoscordion fontanum marsh zigzag	CRPR 4	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps; located in vernally mesic sites underlain by serpentine; serpentine indicator: BE/SI. Elevation range: 45 – 3250 feet. Blooms: April – July.	**No Potential.** The Study Area does not contain serpentine substrate to support this species.	**Not Present.** No further actions are recommended for this species.
Trichostema ruygtii Napa bluecurls	CRPR 1B, LR	Cismontane woodland, chaparral, valley and foothill grassland, vernal pools, lower montane coniferous forest; located in open, sunny locations, and dried vernal pools. Elevation range: 95 – 2210 feet. Blooms: June – October.	**Unlikely.** The Study Area does not contain open flats that are seasonally inundated to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Trifolium amoenum showy rancheria clover	FE, CRPR 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine; serpentine indicator: WI/IN. Elevation range: 15 – 1365 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain grassland habitat to support this species.	**Not Present.** No further actions are recommended for this species.
Trifolium hydrophilum saline clover	CRPR 1B	Marshes and swamps, mesic portions of alkali vernal pools; mesic, alkali valley and foothill grassland. Elevation range: 0 – 985 feet. Blooms: April – June.	**No Potential.** The Study Area does not contain vernal pools or other wetlands to support this species.	**Not Present.** No further actions are recommended for this species.
Triteleia lugens dark-mouthed triteleia	CRPR 4, LR	Broadleaf upland forest, chaparral, lower montane coniferous forest, coastal scrub. Elevation range: 325 – 3250 feet. Blooms: April – June.	**Moderate Potential.** The Study Area contains shrubby areas that may support this species.	**Present.** Seven hundred twenty-one individuals were observed within the northern portion of the Study Area in California black oak woodland and Douglas fir forest. See Section 6.0 for further actions regarding this species.
Viburnum ellipticum oval-leaved viburnum	CRPR 2B	Chaparral, cismontane woodland, lower montane coniferous forest. Elevation range: 705 – 4595 feet. Blooms: May – June.	**Moderate Potential.** The Study Area contains shrubby areas and woodland habitat that may support this species.	**Not Observed.** This species was not observed during the protocol-level survey. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
WILDLIFE				
Mammals				
Antrozous pallidus pallid bat	SSC, WBWG High	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, forages along river channels. Roost sites include crevices in rocky outcrops and cliffs, caves, mines, trees and various manmade structures such as bridges, barns, and buildings (including occupied buildings). Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Moderate Potential.** Oak woodland within the Study Area provides trees suitable for roosting; there are several CNDDB occurrences in the greater vicinity (CDFW 2024a). Targeted bat assessment (i.e., close inspection of trees) was not performed.	**Presence Unknown.** Any tree removal outside of maternity roosting season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.
Bassariscus astutus ringtail (ringtail cat)	SFP	Widely distributed throughout much of California. Found in a variety of habitats including riparian areas, semi-arid country, deserts, chaparral, oak woodlands, pinyon pine woodlands, juniper woodlands and montane conifer forests usually under 4,600 ft. elevation. Typically uses cliffs or large trees for shelter.	**Unlikely.** The Study Area lacks cliffs and large tree cavities/hollows typical of dens for this species.	**Presumed Absent.** No further actions are recommended for this species.
Corynorhinus townsendii townsendii Townsend's western big-eared bat	SSC, WBWG High	Humid coastal regions of northern and central California. Roosts in limestone caves, lava tubes, mines, buildings etc. Will only roost in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to disturbance	**Moderate Potential.** The Study Area contains buildings (cabins) that may be suitable for roosting. CNDDB occurrences in Napa County are all located in the northern portion of the County (CDFW 2024a).	**Presence Unknown.** Any tree removal outside of maternity roosting season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Eumops perotis californicus western mastiff bat	SSC, WBWG High	Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures which provide suitable roosting sites, including cliff crevices and cracks in boulders.	**Unlikely.** The Study Area lacks large rock structures that are suitable for roosting. There are no CNDDB occurrences of this species in Napa County.	**Presumed Absent.** No further actions are recommended for this species.
Lasiurus blossevillii western red bat	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. It is associated with broad-leaved tree species including cottonwoods, sycamores, alders, and maples. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Unlikely.** The Study Area lacks large, broadleaved trees of the type typically used for roosting (maples, sycamores, etc.).	**Presumed Absent.** No further actions are recommended for this species.
Myotis thysanodes fringed myotis	WBWG High	Associated with a wide variety of habitats including dry woodlands, desert scrub, mesic coniferous forest, grassland, and sage-grass steppes. Building, mines, and large trees and snags are important day and night roosts.	**Moderate Potential.** Oak woodland within the Study Area provides trees suitable for roosting. Targeted bat assessment (i.e., close inspection of trees) was not performed.	**Presence Unknown.** Any tree removal outside of maternity roosting season or conduct pre-construction roost habitat assessment. See Section 6.0 for details.
Myotis volans long-legged myotis	WBWG High	Primarily found in coniferous forests, but also occurs seasonally in riparian and desert habitats. Large hollow trees, rock crevices, buildings, mines, and caves are important day roosts.	**Unlikely.** The Study Area lacks caves, buildings or similar refugia and does not contain coniferous forest.	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Reithrodontomys raviventris salt marsh harvest mouse	FE, SE, SFP	Endemic to emergent salt and brackish wetlands of the San Francisco Bay Estuary. Pickleweed marshes are primary habitat; also occurs in various other wetland communities with dense vegetation. Does not burrow, builds loosely organized nests. Requires higher areas for dryland refugia during high tides.	**No Potential.** The Study Area contains no tidal or brackish marsh and is outside of this species' Napa County range.	**Not Present.** No further actions are recommended for this species.
Sorex ornatus sinuosus Suisun shrew	SSC	Tidal marshes of the northern shores of San Pablo and Suisun bays. Require dense low-lying vegetation cover, driftwood, and other litter above the mean high tide line for nesting and foraging.	**No Potential.** The Study Area contains no tidal or brackish marsh and is outside of this species' Napa County range.	**Not Present.** No further actions are recommended for this species.
Taxidea taxus American badger	SSC	Most abundant in drier open stages of most shrub, woodland, and herbaceous vegetation types. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	**No Potential.** The Study Area does not contain open scrub and grassland to support this species. Not documented from this part of Napa County (CDFW 2024a).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Birds				
Agelaius tricolor tricolored blackbird	ST, SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**No Potential.** The Study Area does not provide vegetated ponds or emergent marsh suitable for nesting.	**Not Present.** No further actions are recommended for this species.
Ammodramus savannarum grasshopper sparrow	SSC, LR	Summer resident. Breeds in open grasslands in lowlands and foothills, generally with low- to moderate-height grasses and scattered shrubs. Well-hidden nests are placed on the ground.	**No Potential.** The Study Area does not contain grasslands to support this species.	**Not Present.** No further actions are recommended for this species.
Aquila chrysaetos golden eagle	BGEPA, SFP	Occurs year-round in rolling foothills, mountain areas, sage-juniper flats, and deserts. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in large trees, usually within otherwise open areas.	**Moderate Potential.** The Study Area contains large trees that could provide nesting substrate.	**Presence Unknown.** Any tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Ardea alba great egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially, usually in trees, occasionally on the ground or elevated platforms. Breeding sites are usually near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The Study Area is not within close proximity to suitable waters to support a breeding colony.	**Presumed Absent.** No further actions are recommended for this species.
Ardea herodias great blue heron	LR (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequestered terrestrial substrates. Breeding sites are typically near foraging areas: marshes, lake margins, tidal flats, and rivers. Forages primarily on fishes and other aquatic prey, also smaller terrestrial vertebrates.	**Unlikely.** The Study Area is not within close proximity to suitable waters to support a breeding colony.	**Presumed Absent.** No further actions are recommended for this species.
Asio flammeus short-eared owl	SSC	Occurs year-round, but primarily as a winter visitor; breeding is highly restricted in most of California. Found in open, treeless areas (e.g., marshes, grasslands) with elevated sites for foraging perches and dense herbaceous vegetation for roosting and nesting. Preys mostly on small mammals, particularly voles.	**Unlikely.** Known distribution (wintering) is restricted to the Napa Baylands; breeding in the County has never been documented (Smith 2003).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Asio otus long-eared owl	SSC	Occurs year-round in California. Nests in trees in a variety of woodland habitats, including oak and riparian, as well as tree groves. Requires adjacent open land with rodents for foraging, and the presence of old nests of larger birds (hawks, crows, magpies) for breeding.	**Unlikely.** Rare in Napa County, with the nearest observations located on the Napa Valley floor (eBird 2024).	**Presumed Absent.** No further actions are recommended for this species.
Athene cunicularia burrowing owl	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	**No Potential.** Breeding and wintering distribution within Napa County are restricted to the vicinity of Lake Berryessa and southern Baylands (Smith 2003, CDFW 2024a).	**Presumed Absent.** No further actions are recommended for this species.
Buteo swainsoni Swainson's hawk	ST	Summer resident in Central Valley and limited portions of the southern California interior. Nests in tree groves and isolated trees in riparian and agricultural areas, including near buildings. Forages in grasslands and scrub habitats as well as agricultural fields, especially alfalfa. Preys on arthropods year-round as well as smaller vertebrates during the breeding season.	**No Potential.** Napa County's very small breeding population is restricted to the Napa Valley floor in association with the Napa River and Baylands (CDFW 2024a).	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Charadrius nivosus nivosus western snowy plover	FT, SSC	Federal listing applies only to the Pacific coastal population. Year-round resident and winter visitor. Occurs on sandy beaches, salt pond levees, and the shores of large alkali lakes. Nests on the ground, requiring sandy, gravelly or friable soils.	**No Potential.** The Study Area does not contain beaches or other suitable barren habitat near water.	**Not Present.** No further actions are recommended for this species.
Circus hudsonius northern harrier	SSC	Year-round resident and winter visitor. Found in open habitats including grasslands, prairies, marshes and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Preys on small vertebrates.	**No Potential.** The Study Area does not contain open grassland or other herbaceous habitats to support this species.	**Not Present.** No further actions are recommended for this species.
Contopus cooperi olive-sided flycatcher	SSC	Summer resident. Typical breeding habitat is montane coniferous forests. At lower elevations, also occurs in wooded canyons and mixed forests and woodlands. Often associated with forest edges. Arboreal nest sites located well off the ground.	**High Potential.** The Study Area contains coniferous forest habitat. There are numerous reports in the immediate vicinity of the Study Area (eBird 2024).	**Presence Unknown.** Any tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Cypseloides niger black swift	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas. No modern nesting records in Napa County.	**Unlikely.** The Study Area does not contain large cliffs or bluff faces to provide nesting for this species.	**Presumed Absent.** No further recommendations for this species.
Egretta thula snowy egret	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees, at times in sequestered beds of dense emergent vegetation (e.g., tules). Rookery sites usually situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	**Unlikely.** The Study Area is not within close proximity to suitable waters to support a breeding colony.	**Presumed Absent.** No further recommendations for this species.
Elanus leucurus white-tailed kite	SFP	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	**Unlikely.** The Study Area does not contain open areas for foraging.	**Presumed Absent.** No further recommendations for this species.
Falco peregrinus anatum American peregrine falcon	SE, SFP	Year-round resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. Usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	**Unlikely.** The Study Area does not contain large cliffs or suitable man-made structures for nesting.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Geothlypis trichas sinuosa San Francisco (saltmarsh) common yellowthroat	SSC	Resident of the San Francisco Bay region, in fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	**No Potential.** No marsh vegetation or other open, herbaceous habitat is present within the Study Area.	**Not Present.** No further recommendations for this species.
Haliaeetus leucocephalus bald eagle	BGEPA, SE, SFP	Occurs year-round in California, but primarily a winter visitor; breeding population is growing. Nests in large trees in the vicinity of larger lakes, reservoirs, and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	**Unlikely.** Larger water bodies are not within or in close proximity to the Study Area. As per Smith (2003) and CDFW (2024a), nesting within Napa County is known only from the immediate vicinity of Lake Berryessa.	**Presumed Absent.** No further recommendations for this species.
Icteria virens yellow-breasted chat	SSC, LR	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow (*Salix* ssp.), blackberry (*Rubus* spp.), and wild grape (*Vitis californicus*).	**No Potential.** The Study Area does not contain stands of dense riparian understory favored by this species for nesting. There are no recent observations in the vicinity (eBird 2024).	**Not Present.** No further recommendations for this species.
Lanius ludovicianus loggerhead shrike	SSC, LR	Year-round resident in open woodland, grasslands, savannah, and scrub. Prefers areas with sparse shrubs, trees, posts, and other suitable perches for foraging. Preys upon large insects and small vertebrates. Nests are well-concealed in densely foliated shrubs or trees.	**Unlikely.** The Study Area does not contain open woodlands, grasslands, or other open habitats to support this species.	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Laterallus jamaicensis coturniculus California black rail	ST, SFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes that have an extensive upper zone and are close to a major water source. Extremely secretive and cryptic.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to Baylands and the lower Napa River.	**Not Present.** No further recommendations for this species.
Melospiza melodia samuelis San Pablo song sparrow	SSC	Year-round resident of tidal marshes along the north side of San Francisco and San Pablo Bays. Typical habitat is dominated by pickleweed, with gumplant and other shrubs present in the upper zone for nesting. May forage in areas adjacent to marshes.	**No Potential.** The Study Area contains no tidal or brackish marsh and is outside of this species' limited Napa County range.	**Not Present.** No further recommendations for this species.
Nycticorax nycticorax black-crowned night heron	no status (breeding sites protected by CDFW)	Year-round resident. Nests colonially, usually in trees but also in patches of emergent vegetation. Rookery sites are often on islands and usually located adjacent to foraging areas: margins of lakes and bays.	**No Potential.** The Study Area and adjacent lands lack aquatic foraging habitat.	**Not Present.** No further recommendations for this species.
Passerculus sandwichensis alaudinus Bryant's savannah sparrow	SSC	Year-round resident associated with the coastal fog belt, primarily between Humboldt and northern Monterey Counties. Occupies low tidally influenced habitats and adjacent areas, including grasslands. Also uses drier, more upland coastal grasslands. Nests near the ground in taller vegetation, including along levees and canals.	**No Potential.** The Study Area does not contain grassland habitat to support this species.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Progne subis purple martin	SSC, LR	Summer resident. Inhabits woodlands and low-elevation coniferous forests. Nests in old woodpecker cavities and man-made structures (bridges, utility towers). Nest is often located in tall, isolated tree or snag.	**Moderate Potential.** Mixed or coniferous forest habitat is present. Likewise, this species' Napa County range is restricted to the forested, northwestern portion of the County such as the Angwin and Calistoga areas (Smith 2003, CDFW 2024a).	**Presence Unknown.** Any tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Rallus obsoletus obsoletus California Ridgway's (clapper) rail	FE, SE, SFP	Year-round resident in tidal marshes of the San Francisco Bay estuary. Requires tidal sloughs and intertidal mud flats for foraging, and dense marsh vegetation for nesting and cover. Typical habitat features abundant growth of cordgrass and pickleweed. Feeds primarily on mollusks and crustaceans.	**No Potential.** The Study Area does not contain tidal or brackish marsh. Within Napa County, this species is restricted to Baylands and the lower Napa River.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Riparia riparia bank swallow	ST	Summer resident in riparian and other lowland habitats near rivers, lakes, and the Pacific Ocean in northern California. Nests colonially in excavated burrows on vertical cliffs and bank cuts (natural and manmade) with fine-textured soils. Historical nesting ranges in southern and central areas of California have been eliminated by habitat loss. Currently known to breed in Siskiyou, Shasta, and Lassen counties; portions of the North Coast; and along the Sacramento River.	**No Potential.** The Study Area does not contain cliffs or cuts with fine-textured soils or any other potentially suitable nesting substrate. Not known to nest in Napa County as per Smith (2003).	**Not Present.** No further recommendations for this species.
Setophaga petechia brewsteri (Brewster's) yellow warbler	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting is variable, but dense willow growth is typical. Occurs widely on migration.	**No Potential.** The Study Area does not contain riparian habitat with dense, mature thickets of willows.	**Not Present.** No further recommendations for this species.
Spizella atrogularis black-chinned sparrow	LR	Summer resident. Typically occurs on arid, rocky slopes with brushy vegetation, e.g. mixed chaparral, and sagebrush.	**Moderate Potential.** The Study Area contains chaparral that may support this species. There are several documented occurrences from the Howell Mountain area (eBird 2024).	**Presence Unknown.** Any tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Strix occidentalis caurina northern spotted owl	FT, ST, SSC	Year-round resident in dense, structurally complex forests, primarily those with stands of mature conifers. In Napa County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on platform-like substrates in the forest canopy, including in tree cavities. Preys on mammals.	**High Potential.** The Study Area contains conifer forest with numerous trees of the size and characteristic to providing nesting for this species. There are documented activity centers immediately adjacent to the Study Area (CDFW 2024a).	**Presence Unknown.** Any tree/vegetation removal and initial ground disturbance should occur outside of nesting season or conduct pre-construction surveys and avoid any active nests found. See Section 6.0 for details.
Xanthocephalus xanthocephalus yellow-headed blackbird	SSC, LR	Summer resident. Breeds colonially in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Requires abundant large insects such as dragonflies; nesting is timed for maximum emergence of insect prey.	**No Potential.** The Study Area does not provide vegetated ponds or emergent marsh suitable for nesting.	**Not Present.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Reptiles and Amphibians				
Dicamptodon ensatus California giant salamander	SSC	Occurs in the north-central Coast Ranges. Moist coniferous and mixed forests are typical habitat; also uses woodland and chaparral. Adults are terrestrial and fossorial, breeding in cold, permanent or semi-permanent streams. Larvae usually remain aquatic for over a year.	**Unlikely.** The Study Area's ephemeral stream courses lack perennial pools and other necessary habitat elements.	**Presumed Absent.** No further recommendations for this species.
Emys marmorata western pond turtle	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**No Potential.** The Study Area does not contain lakes, ponds, or other perennial aquatic features to support this species.	**Not Present.** No further recommendations for this species.
Rana boylii foothill yellow-legged frog	SSC	Found in or near rocky streams in a variety of habitats; highly aquatic. Prefers partially sunlit, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on invertebrates (aquatic and terrestrial).	**Unlikely.** The streams on-site are ephemeral without a hydro-period sufficient to support this species. The nearest occurrence in CNDDB is three miles south of the Study Area (CDFW 2024a).	**Presumed Absent.** No further recommendations for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Rana draytonii California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense emergent and/or overhanging riparian vegetation. Favors perennial to intermittent ponds, marshes, and stream pools. Requires 11 to 20 weeks of continuous inundation for larval development. Disperses through upland habitats during and after rains.	**Unlikely.** The Study Area does not contain aquatic features sufficient to support this species. The nearest occurrence in CNDDB is one mile north of the Study Area (CDFW 2024a).	**Presumed Absent.** No further recommendations for this species.
Taricha rivularis red-bellied newt	SSC	Inhabits coastal forests from southern Sonoma County northward, with an isolated population in Santa Clara County. Redwood forest provides typical habitat, though other forest types (e.g., hardwood) are also occupied. Adults are terrestrial and fossorial. Breeding occurs in streams, usually with relatively strong flows.	**No Potential.** The Study Area does not contain perennial streams to support this species.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Fishes				
Acipenser medirostris green sturgeon	FT, SSC	Spawns in the Sacramento River and Klamath Rivers, at temperatures between 8 and 14 degrees Celsius. Preferred spawning substrate is large cobble but can range from clean sand to bedrock.	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Eucyclogobius newberryi tidewater goby	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches. Requires still but not stagnant water and high oxygen levels.	**No Potential.** The Study Area does not contain brackish or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Hypomesus transpacificus Delta smelt	FT, ST	Endemic to the Sacramento-San Joaquin estuary in areas where salt and freshwater systems meet. Occurs seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 ppt; most often at salinities < 2 ppt.	**No Potential.** The Study Area does not contain estuarine waters.	**Not Present.** No further actions are recommended for this species.
Lampetra ayresi river lamprey	SSC	Lower Sacramento River, San Joaquin River and Russian River. May occur in coastal streams north of San Francisco Bay. Adults need clean, gravelly riffles, Ammocoetes need sandy backwaters or stream edges, good water quality and temps less than 25 degrees Celsius.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Mylopharodon conocephalus hardhead	SSC	Known from mid-elevation streams in the Sacramento, San Joaquin, Napa River, and Russian River drainages. Prefer clear, deep pools with sand-gravel-boulder bottoms and slow water velocity.	**No Potential.** The Study Area does not contain riverine waters.	**Not Present.** No further actions are recommended for this species.
Oncorhynchus mykiss irideus steelhead - central CA coast DPS	FT	Occurs from the Russian River south to Soquel Creek and Pajaro River. Also, in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Oncorhynchus tshawytscha Chinook salmon – Central Valley Fall/Late Fall Run and Central Coastal Chinook Salmon ESUs	FT	These ESUs includes all naturally spawned populations of Chinook salmon from rivers and streams south of the Klamath River (exclusive) to the Russian River (inclusive), as well as Napa River. Adult numbers depend on pool depth and volume, amount of cover, and proximity to gravel. Water temps >27 degrees C lethal to adults.	**No Potential.** The Study Area does not contain suitable anadromous or estuarine waters.	**Not Present.** No further actions are recommended for this species.
Spirinchus thaleichthys longfin smelt	FC, ST, SSC	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15 to 30 ppt but can be found in completely freshwater to almost pure seawater.	**No Potential.** The Study Area does not contain riverine or estuarine waters.	**Not Present.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Invertebrates				
Bombus crotchii Crotch bumblebee	SC	Range largely restricted to California. Favors grassland and scrub habitats. Typical of bumblebees, nests are usually constructed underground. Visits a variety of plants.	**Unlikely.** The Study Area does not contain grasslands with abundant floral resources.	**Presumed Absent.** No further actions are recommended for this species.
Bombus occidentalis western bumblebee	SC	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared (Xerces 2015). Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g., mammal burrows). Many plants are visited and pollinated.	**Unlikely.** The Study Area does not contain grasslands with abundant floral resources.	**Presumed Absent.** No further actions are recommended for this species.
Branchinecta lynchi vernal pool fairy shrimps	FT	Endemic to the grasslands of the Central Valley, central coast mountains, and south coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**No Potential.** The Study Area does not contain vernal pools or other suitable seasonal aquatic features (e.g., swales deep and ponded enough to support this species).	**Not Present.** No further actions are recommended for this species.
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT	Known from the Central Valley and adjacent foothills, in riparian and oak savannah where elderberry (*Sambucus* sp.), the host plant, is present.	**No Potential.** Elderberry (*Sambucus* spp.) was not observed within the Study Area. Likewise, this species is known only from the southeastern portion of Napa County (CDFW 2024a).	**Presumed Absent.** No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN THE STUDY AREA	RESULTS AND RECOMMENDATIONS
Speyeria callippe callippe Callippe silverspot butterfly	FE	Two populations are recognized, on San Bruno Mountain and the Cordelia Hills. Host plant is Johnny jump-up (*Viola pedunculata*), which is found on serpentine soils. Most adults found on east-facing slopes; males congregate on hilltops in search of females.	**No Potential.** Johnny jump-up (*Viola pedunculata*) or other violets (*Viola* sp.) was not observed in the Study Area during the site visits. This species' known range with Napa County is restricted to the immediate vicinity of the Cordelia Hills (CDFW 2024a).	**Not Present.** No further actions are recommended for this species.
Syncaris pacifica California freshwater shrimp	FE, SE	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient streams where riparian cover is moderate to heavy. Shallow pools away from main stream flow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	**No Potential.** Although the Study Area contains ephemeral streams; this species is known from perennial streams only. Additionally, the only documented occurrence in Napa County is from Huichica Creek in the southwest portion of the county (Marin and Wicksten 2004, CDFW 2024a).	**Not Present.** No further actions are recommended for this species.

***Key to status codes:**
FC Federal Candidate for Listing
FE Federal Endangered
BGEPA Bald and Golden Eagle Protection Act Species
FT Federal Threatened
SC (E/T) State Candidate for Listing (Endangered/Threatened)
SE State Endangered
SFP State Fully Protected Animal
SR State Rare
SSC State Species of Special Concern
ST State Threatened
LR Locally Rare as per Napa County Baseline Report
CRPR 1A CNPS CRPR 1A: Plants presumed extinct in California
CRPR 1B CNPS CRPR 1B: Plants rare, threatened or endangered in California and elsewhere
CRPR 2A CNPS CRPR 2A: Plants presumed extirpated in California, but more common elsewhere
CRPR 2B CNPS CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 3 CNPS CRPR 3: Plants about which CNPS needs more information (a review list)
CRPR 4 CNPS CRPR 4: Plants of limited distribution (a watch list)
WBWG Western Bat Working Group High or Medium-high Priority Species

Potential to Occur:
No Potential: Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
Unlikely: Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
Moderate Potential: Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
High Potential: All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

Results and Recommendations:
Present: Species was observed on the site or has been recorded (i.e. CNDDB, other reports) on the site recently.
Assumed Present: Species is assumed to be present on-site based on the presence of key habitat components.
Assumed Present without Impact: Species assumed present; however, project activities will not have an impact on the species.
Presumed Absent: Species is presumed to not be present due to a lack of key habitat components.
Not Present: Species is considered not present due to a clear lack of any suitable habitat and/or local range limitations.
Not Observed: Species was not observed during dedicated/formal surveys.
Presence Unknown: Species has the potential to be present, but no dedicated surveys to determine absence/presence were performed.

Appendix D

Representative Photographs



Existing cabins in the Study Area within Douglas fir forest in the central portions of the Study Area



Existing cabins in the Study Area within the Douglas fir forest in the central portion of the Study Area



Informal patch within Douglas fir forest and tanoak forest in the central-southern portion of the Study Area



Understory of tanoak forest in the central portion of the Study Area



California black oak woodland understory in the northern portion of the Study Area



California black oak woodland understory in the northern portion of the Study Area



Ephemeral stream in the northern portion of the Study Area



Stanford's manzanita chaparral in the southern portion of the Study Area



Cobb Mountain lupine (*Lupinus sericatus*; CRPR 1B); on a firebreak in Douglas fir forest



Redwood lily (*Lilium rubescens*; CRPR 4); in tanoak forest



Narrow-anthered brodiaea (*Brodiaea leptandra*; CRPR 1B); in Stanford's manzanita chaparral



Dark-mouthed triteleia (*Triteleia lugens*; CRPR 4); in California black oak woodland

Appendix E

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

WRA is an environmental consulting firm with over 30 years of experience conducting biological resources assessments, wetland delineations, protocol-level rare plant surveys, special-status wildlife assessments and species-specific surveys, as well as preparing applications with state and federal natural resource agencies for avoiding, minimizing, and mitigating impacts to sensitive natural resources. Other services and products with which WRA has expertise include preparation of CEQA/NEPA documents, habitat mitigation and monitoring plans, natural resource management plans, mitigation and conservation bank enabling instruments, grazing management plans, and wetland and other natural resources restoration plans.

Aaron Arthur, MS, Associate Plant Biologist with WRA, has nearly 20 years performing vegetation & habitat mapping, rare plant surveys, botanical assessments, vegetation change analysis, and wetland delineations. His project focus is vineyard development, timber resources, coastal development permits, habitat mitigation and monitoring plans, conservation and mitigation banking, and long-term management plans in Sonoma, Marin, Napa, and Mendocino counties. Mr. Arthur's technical training includes the flora of Northern California, the flora of the Pacific Northwest, agrostology, aquatic botany, plant ecology, forest ecology, and soil science. Additionally, he has completed the 40-hour Corps wetland delineation course, holds 2081(a) Plant Voucher Permit, and is Certified California Consulting Botanist #0016 from the California Native Plant Society. Mr. Arthur received his Bachelor of Arts in Geography and received his Master of Science in Physical Geography from Oregon State University, where his research focused on forest floristics and vegetation change.

Jason Yakich, MS, Associate Wildlife Biologist with WRA, has nearly 20 years of experience performing wildlife habitat assessments, biological monitoring for special-status wildlife species, breeding bird and other avian surveys, and protocol-level surveys for several special-status wildlife species. He prepares and oversees a variety of biological assessments and technical reports and assures permit compliance for a wide array of public and private projects. Mr. Yakich has respective permit authorizations from the USFWS and CDFW to conduct active (call-playback) surveys for California clapper rail and California black rail. Mr. Yakich received his Bachelor of Arts in Biology from U.C. Santa Cruz, and received his Master of Science in Biology from San Francisco State University with a focus in marine biology.

Rhiannon Korhummel, BS, Biologist with WRA, has nearly ten years of experience performing special-status plant surveys, land cover mapping, aquatic resource delineation, wildlife habitat assessments, biological monitoring for special-status wildlife species, and nesting bird surveys. She prepares a variety of biological assessments and technical reports and supports project management staff at WRA for a variety of public and private projects. Ms. Korhummel received his Bachelor of Arts in Biology from Humboldt State University with a focus in botany and vegetation ecology.

“I”

Water Availability Analysis and Water Feasibility Study

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

PPI ENGINEERING
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MEMORANDUM

Date: May 11, 2026

To: Enrique Torres, Napa County PBES

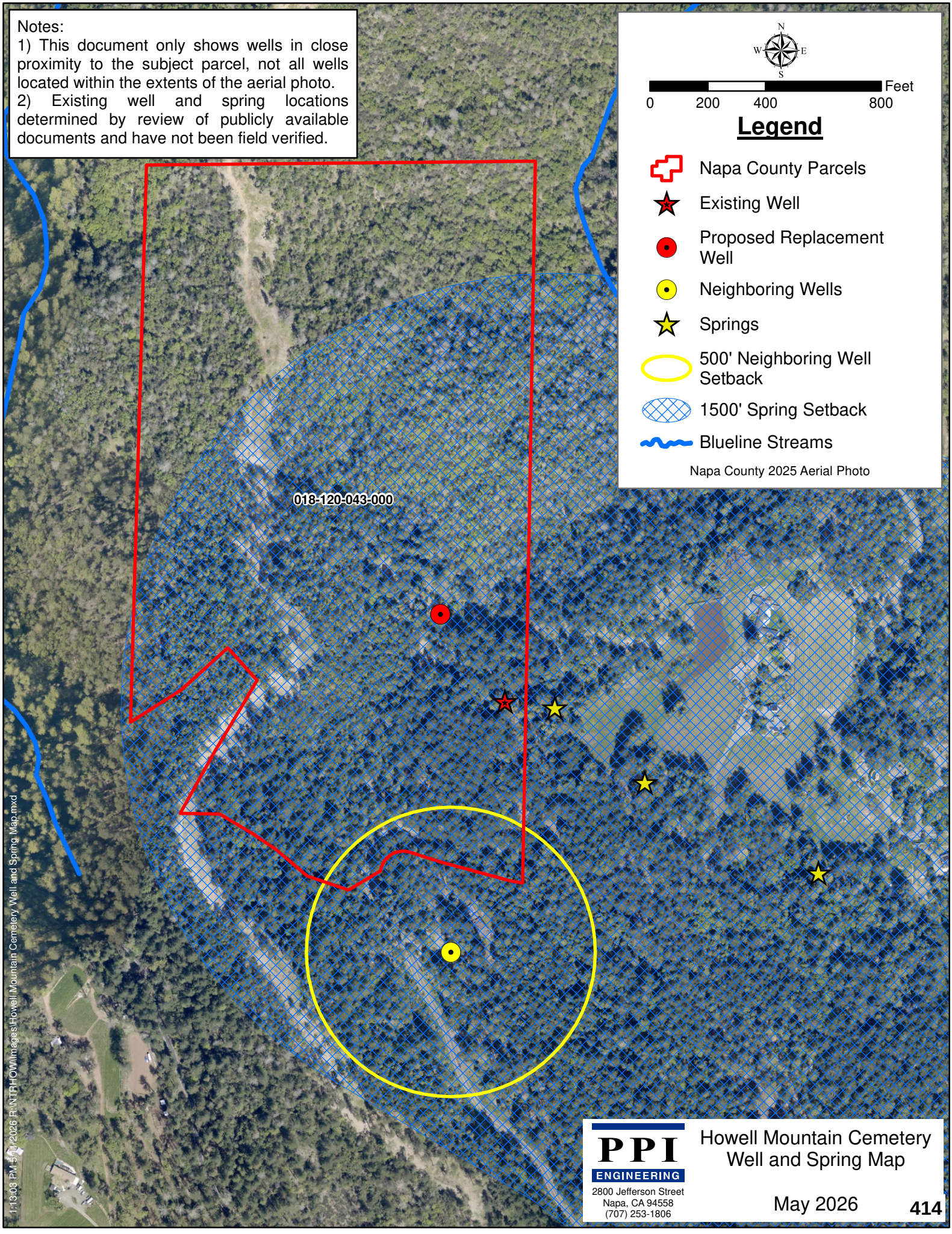
From: James R. Bushey, P.E.

Subject: Howell Mountain Cemetery (P20-00030)

This memo provides additional information regarding construction of a replacement well to serve the referenced Project. During preparation of a map to support the application for a well permit it was discovered that there are existing springs on adjacent parcels that appear to be used for domestic and/or agricultural purposes. Plotting the location of these springs revealed that they are within 1500 feet of the proposed location for the well. The Interim Napa County Well Permit Standards and WAA Requirements, January 2024, shows that a replacement well proposed within 1500 feet of a spring requires a Tier 2 Water Availability Analysis (WAA) unless two conditions are met. The document states that the analysis is not required if: 1) the proposed replacement well is located further away from the neighboring spring than the existing well and 2) there is no increase in groundwater use.

The attached map shows that the proposed location of the replacement well is substantially further from the springs than the existing well and that no other springs or existing wells are known to exist in the vicinity of the proposed well. The WAA prepared by RSA+ dated January 31, 2020, shows that proposed groundwater use will be approximately 18% less than existing use. The actual reduction in groundwater use will be somewhat greater as the project has since been modified based on County comments to eliminate employees at the project site and the projected reduction in groundwater use will be at least 20%.





PPI ENGINEERING
2800 Jefferson Street
Napa, CA 94558
(707) 253-1806

Howell Mountain Cemetery
Well and Spring Map

May 2026

414

PPI ENGINEERING

VINEYARD DESIGN
EROSION CONTROL
WATER DEVELOPMENT
DRAINAGE
PERMITTING
GPS/GIS

2800 Jefferson Street
Napa, California 94558
707-253-1806
www.ppiengineering.com

MEMORANDUM

Date: July 1, 2025

To: Mr. Ray Zucker
Heron Pacific
Sent via email (rzucker@heronpacific.com)

From: Jim Bushey
Sam Lowthorp



Subject: Groundwater Recharge
P20-00030 Howell Mountain Cemetery
1225 Howell Mountain Road, Angwin, California
APN 018-120-016 & 018-120-027

Introduction

The Howell Mountain Cemetery property (referred to herein as "subject parcels") is located on parcels 018-120-016 and 018-120-027. The subject parcels are located east of Angwin and consist of ±109.3 acres per the Napa County Assessor's office. This analysis presents the calculation of parcel-specific groundwater recharge for the subject parcels.

The projected annual water demands presented in this memorandum have been prepared as directed by Napa County in accordance with the Water Availability Analysis Guidance Document (Napa County, 2015). The average annual groundwater recharge for the subject parcel was calculated using parcel-specific recharge based on Napa County's guidance for parcels located outside of the Napa Valley Floor and groundwater deficient areas.

Groundwater Recharge

All groundwater in Napa Valley, apart from salt water intrusion, is derived from the infiltration of precipitation on the alluvial plains and adjacent mountains (Kunkel and Upson, 1960). There is limited data that includes the subject parcels and no prior water budgets calculating groundwater recharge percentages for nearby parcels could be located.

Luhdorff & Scalmanini Consulting Engineers (LSCE) and MBK Engineers (MBK) previously conducted a water budget analysis for Napa County that covered eight subwatersheds and tributary

watersheds (LSCE and MBK, 2013). The LSCE and MBK report created water balances for the subwatersheds using the following factors:

Inflows – Outflows = Change in Storage

Typical Inflows and Outflows are summarized below (DWR, 2003):

Inflows

- Natural recharge from precipitation;
- Seepage from surface water channels;
- Intentional recharge via ponds, ditches, and injection wells;
- Net recharge of applied water for agricultural and other irrigation uses;
- Unintentional recharge from leaky conveyance pipelines; and
- Subsurface inflows from outside basin boundaries.

Outflows

- Groundwater extraction by wells;
- Groundwater discharge to surface water bodies and springs;
- Evapotranspiration; and
- Subsurface outflow across basin or subbasin boundaries.

The water balance data presented for each watershed spanned eight years and included a range of data including average, dry, and wet year data to estimate an overall average water balance. From this water balance the precipitation recharge potential of the watersheds was extrapolated.

The study areas in LSCE and MBK's report encompassed roughly 446 square miles of Napa County. The subject parcels are not located within any of the study areas but fall within 1 mile of the "Conn Creek Watershed" which includes part of Angwin, Chiles Valley, and Lake Hennessy. Given the proximity to the subject parcels, the groundwater recharge for the "Conn Creek Watershed", calculated at 21%, was taken into consideration.

Since the subject parcels lie outside of the watersheds identified by LSCE and MBK, the average recharge rate across all study areas was calculated. Using a weighted average function comparing the size of each watershed outlined in the report and their calculated recharge rates, it was determined that the average recharge rate across all 446 square miles was 15.6%. While this method is a more general approach, its results were taken into consideration.

To better assess geologic similarities, the Santa Rosa Sheet of the Geologic Map of California, prepared by James B. Koenig, was consulted. It was determined that the subject parcels most closely resemble the geologic characteristics of the Redwood Creek and Napa Creek Watersheds, which exhibit recharge rates of 10% and 11%, respectively. These watersheds, like the subject parcels, are largely composed of Cretaceous-era marine sediments. In contrast, other study areas are primarily underlain by Sonoma Volcanics with interspersed alluvial deposits and various marine sediments.

For the purposes of this report, a baseline groundwater recharge rate of 10–11%, consistent with the Redwood and Napa Creek Watersheds, was used. However, due to more sloped terrain, denser vegetation, and a higher proportion of Cretaceous-era marine sediments within the subject parcels—

all factors that can limit recharge—the recharge estimate was further adjusted to a more conservative, site-specific rate of 8%.

The subject parcels are made up of 109.3 acres and receive an average annual rainfall of 33.65 inches per the Napa County PRISM data (MeanPrecip_WY_2012_2021_PRISM). The PRISM grid data was overlayed with current parcel boundaries in ArcGIS to find the approximate number of acres that fall within each overlaid PRISM grid. By doing this, a weighted average is calculated to find the average annual rainfall within the boundaries of a specific parcel. From this data, an average annual rainfall of 33.65 inches was calculated for water years 2012 through 2021 and will serve as the parcel's "normal" water year conditions. By multiplying the size of the subject parcel by the average annual rainfall, it is estimated that the subject parcel received a total of 3677.95 acre-inches of rain per annum between 2012 and 2021. The 3677.95 acre-inches is then converted to acre-feet for a total of 306.50 acre-feet. Average annual recharge during this period is therefore 8% of the 306.50 acre-feet total annual precipitation or ±24.52 acre-feet of recharge.

Conclusion

The location of the subject parcels offers limited groundwater-related data and no existing water-balance analyses could be located that provide site specific recharge estimates. Since the proposed water demands for the project are below 1 acre-foot per annum, we believe an estimation of groundwater recharge based on publicly available data will suffice in meeting the requirements of this project. A conservative estimate of 8% groundwater recharge was assigned to the subject parcels and groundwater recharge is estimated at 24.52 acre-feet per annum.

References

Koenig, James B., 1963. Geologic Map of California, Santa Rosa Sheet, 1:250,000: California Division of Mines and Geology, Olaf P. Jenkins Edition.

Kunkel, F. and Upson, J.E.. (1960). Geology and Ground Water in Napa and Sonoma Valleys, Napa and Sonoma Counties, California: U.S. Geol. Survey Water-Supply Paper 1495, 252p., with illustrations.

LSCE and MBK Engineers. (2013). Updated hydrogeologic conceptualization and characterization of conditions. Prepared on behalf of Napa County.

Napa County. (2015). Water Availability Analysis (WAA) – Guidance Document: Adopted May 12, 2015, 42p.

Napa County. (2022). Napa County and GSA Response to the Governor's Emergency Executive Order N-&-22: Draft document dated June 2, 2022, 56p.

PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu, published10 July 2012.

WATER AVAILABILITY ANALYSIS

HOWELL MOUNTAIN CONSERVATION CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA, CA

APN 018-120-16 and 018-120-027



PROPERTY OWNER:

Eternal Preserve Holding LLC
3301 Industrial Avenue
Rocklin, CA 94508

Project# 4117026.0
January 31, 2020

I. Executive Summary

The proposes to develop a conservation cemetery at APN 018-120-016 and 018-120-027. The parcel has an existing 3-bedroom cabin and garage which will be converted to storage. An office with visitor bathroom is proposed. Below is a summary of the existing and proposed water use. Detailed calculations can be found on the next page. A groundwater recharge rate of 0.5 af/yr/acre was adopted for the 105-acre parcel to give a total groundwater recharge of 52.5 af/yr.

Usage Type	Existing Usage [af/yr]	Proposed Usage [af/yr]
Residential	0.50	0.00
Landscape	0.00	0.25
Employees	0.00	0.02
Visitors	0.00	0.13
Totals (Acre-ft per Year)	**0.50**	**0.41**
Estimated Groundwater Recharge (Acre-ft per Year)	**52.5**	**52.5**

The proposed modifications for Howell Mountain Conservation Cemetery project will decrease groundwater use by 0.09 af/yr for the property. The proposed water use for the Howell Mountain Conservation Cemetery of 0.41 af/yr is significantly less than the estimated groundwater recharge rate of 52.5 af/yr.

II. Groundwater Use Calculation

Existing Residential Domestic Water Demand					
House – (150 gal/bedroom x	3	bedrooms) =		0.50	af/yr
Existing Landscape Water Demand					
Landscape Irrigation – (1 af/ac-yr x	0	acres) =		0.00	af/yr
Total Existing Water Demand			**Total =**	**0.50**	**af/yr**
Proposed Cemetery Domestic Water Demand					
FT Employees – (15 gal/person/day x 260 days/yr x	2	employees/day) =		0.02	af/yr
Average Visitors – (3 gal/person/day x 365 days/yr x	40	visitors/day) =		0.13	af/yr
			Total =	0.16	af/yr
Proposed Landscape Water Demand					
Landscape Irrigation – (1 af/ac-yr x	0.25	acres) =		0.25	af/yr
Total Proposed Water Demand			**Total =**	**0.41**	**af/yr**

WASTEWATER FEASIBILITY REPORT

HOWELL MOUNTAIN CONSERVATION CEMETERY
1225 HOWELL MOUNTAIN ROAD
ANGWIN, CALIFORNIA

APN 018-120-016 & 027



PROPERTY OWNER:
ETERNAL PRESERVE HOLDING LLC
3301 INDUSTRIAL AVE
ROCKLIN, CA 94508

Project# 4117026.0

January 31, 2020

1515 Fourth Street, Napa, CA 94559 www.rsacivil.com 707.252.3301.v 707.252.4966.f

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OPERATION AND MAINTENANCE 2

CONCLUSION 2

APPENDICES

1. VICINITY MAP, USGS SITE MAP, AND SITE EVALUATION

INTRODUCTION

The applicant proposes to develop a conservation cemetery with a visitor's restroom and office. The parcel also has an existing 3-bedroom cabin and garage which will be converted to storage. Howell Mountain Conservation Cemetery is located at 1225 Howell Mountain Road, Napa, California 94558. The APNs are 018-120-016 and 018-120-027 with areas of 105 and 4.3 acres, respectively.

The property has steep slopes on the majority of the parcel with slopes ranging from 5% to 30%. Appendix 1 contains a Site Location Map and a USGS Site Map showing the parcel topography, features and boundary.

This report evaluates the disposal of the domestic wastewater.

DOMESTIC WASTEWATER CHARACTERISTICS

The domestic wastewater system has been sized to accommodate the unit values in Table 1 below. The projected flow is based on Napa County Environmental Management guidelines. The following is a summary of the estimated flows from the proposed site.

Table 1

Source	Number	Projected Flow (gpd)	Total Flow (gpd)
Employees	2	15	30
Visitors	40	3	120
Total Peak Flow			150

DOMESTIC WASTEWATER TREATMENT AND DISPERSAL

For the treatment and dispersal of the domestic wastewater a conventional system is proposed. Wastewater will flow from the visitor's bathroom and office to a 1,200-gallon septic tank, then to a standard dispersal field.

The dispersal field will use underground perforated pipe with a 1-foot deep rock filled trench with 3 feet of acceptable soil below and 1 foot of cover above.

The dispersal field is sized to meet Napa County Environmental Management guidelines for a standard system. The soil in the area for the dispersal field has 60 inches of moderate granular loam with a hydraulic loading rate of 0.33 gal/ft^2/day. With a trench depth of 1 foot, the effective infiltrative rate is 2 ft^2/LF. The peak daily domestic wastewater flow is 150 gal/day.

$$Linear\ Feet = \frac{150\ gal/day}{2\frac{ft^2}{LF}\left(0.33\frac{gal}{sf * day}\right)} = 227.3\ LF$$

The two feet wide trenches will be spaced 12 ft apart because of the 12% slope in the dispersal field area. The system will consist of three lines total, one of 100 ft and two of 65 ft.

A 100% reserve area will be provided.

OPERATION AND MAINTENANCE

The domestic wastewater system will be a standard, gravity-flow system designed so minimal input from cemetery staff is required.

CONCLUSION

This report demonstrates that Howell Mountain Conservation Cemetery can treat and disperse domestic wastewater on site meeting Napa County Environmental Management Design standards for the treatment of domestic wastewater.

Appendix 1

Vicinity Map, USGS Site Map, and Site Evaluation

HOWELL MOUNTAIN CEMETERY
VICINITY MAP

ANGWIN CALIFORNIA



VICINITY MAP

SCALE: 1" = 4000'

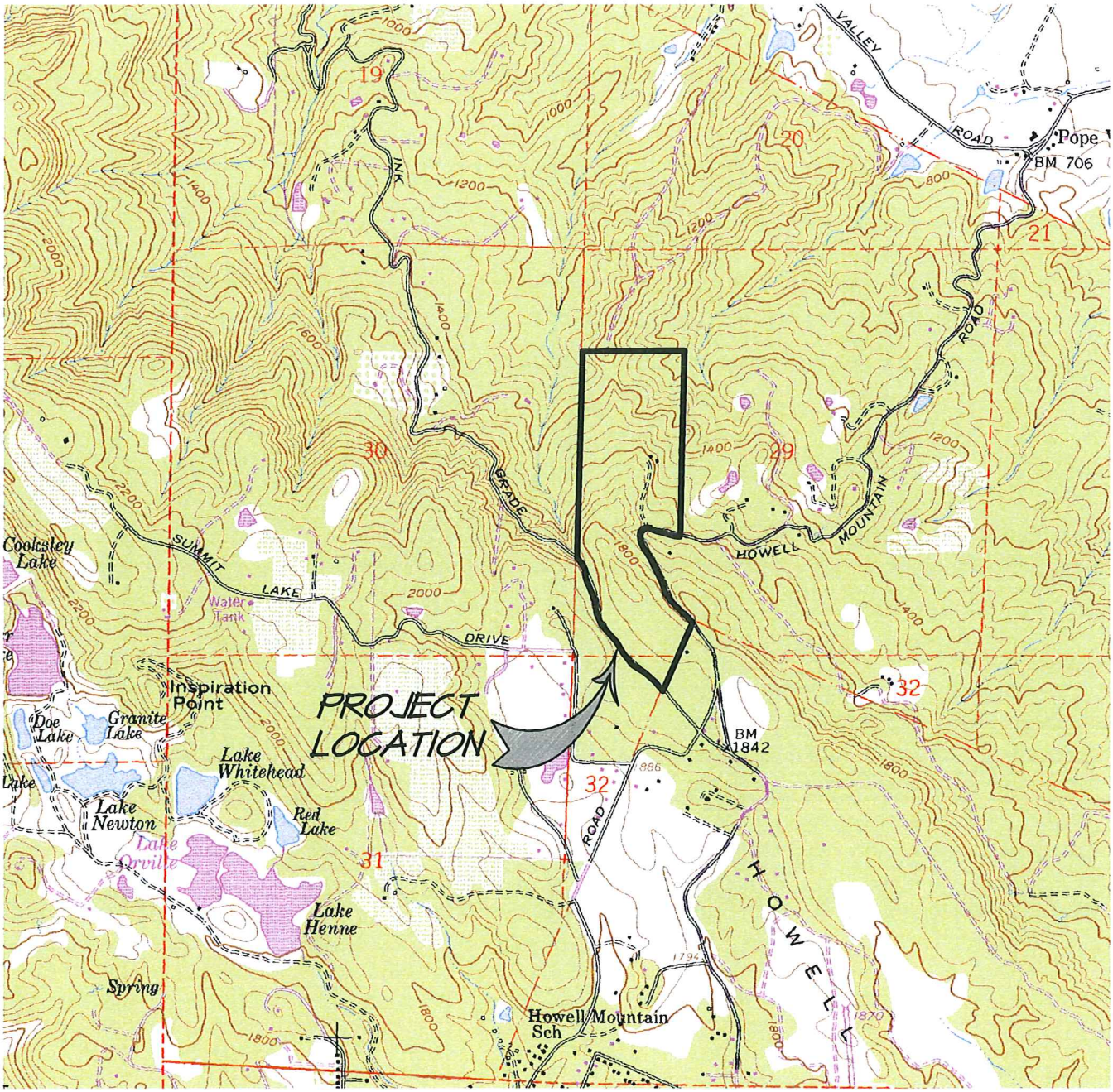
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HOWELL MOUNTAIN CONSERVATION CEMETERY
USGS QUAD MAP

NAPA COUNTY CALIFORNIA



GRAPHIC SCALE

2000 0 2000 4000

(IN FEET)
1 Inch = 2000 FT

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JAN. 27, 2020 4117026.0 Exh-USGS.dwg

RSA+ Project Number: 4117026.0
Date: August 30, 2017

Napa County Department of Environmental Management

SITE EVALUATION REPORT

Please attach an 8.5" x 11" plot map showing the locations of all test pits triangulated from permanent landmarks or known property corners. The map must be drawn to scale and include a North arrow, surrounding geographic and topographic features, direction and % slope, distance to drainages, water bodies, potential areas for flooding, unstable landforms, existing or proposed roads, structures, utilities, domestic water supplies, wells, ponds, existing wastewater treatment systems and facilities.

Permit #: E17-00467
APN: 018-120-016
(County Use Only) Reviewed by: Date:

PLEASE PRINT OR TYPE ALL INFORMATION

Property Owner Eternal Preserve Holdings, LLC	☒ New Construction ☐ Addition ☐ Remodel ☐ Relocation ☐ Other:
Property Owner Mailing Address 3301 Industrial Ave	☐ Residential - # of Bedrooms: Design Flow : gpd
City State Zip Rocklin CA 95765	☒ Commercial – Type: Cemetery Sanitary Waste: 360 gpd Process Waste: gpd
Site Address/Location 1225 Howell Mountain Rd N Angwin CA, 94508	☐ Other: Sanitary Waste: gpd Process Waste: gpd

Evaluation Conducted By:

Company Name RSA+	Evaluator's Name Donal O'Briain	Signature (Civil Engineer, R.E.H.S., Geologist, Soil Scientist)
Mailing Address: 1515 Fourth Street		Telephone Number 707-252-3301
City State Zip Napa CA 94559		Date Evaluation Conducted 08/30/2017

Primary Area	Expansion Area
Acceptable Soil Depth: 60 in. Test pit #'s: 1,2,3	Acceptable Soil Depth: 36 in. Test pit #'s: 4,6,7
Soil Application Rate (gal. /sq. ft. /day): 0.33	Soil Application Rate (gal. /sq. ft. /day): 0.8
System Type(s) Recommended: Chamber	System Type(s) Recommended: Subsurface drip with pretreatment.
Slope: 12 % Distance to nearest water source: >100'	Slope: 12 % Distance to nearest water source: >100'
Hydrometer test performed? No ☐ Yes ☒ (attach results)	Hydrometer test performed? No ☒ Yes ☐ (attach results)
Bulk Density test performed? No ☒ Yes ☐ (attach results)	Bulk Density test performed? No ☒ Yes ☐ (attach results)
Percolation test performed? No ☒ Yes ☐ (attach results)	Percolation test performed? No ☒ Yes ☐ (attach results)
Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)	Groundwater Monitoring Performed? No ☒ Yes ☐ (attach results)

Site constraints/Recommendations:
17,628 sf proven suitable by site evaluation and Bouyoucous Hydrometer test for subsurface drip with pretreatment.
8,950 sf proven suitable for conventional dispersal system over pits 1, 2, 3.
At 12% slope, a chamber system requires 12' spacing between 2' trenches. 360gpd requires 360 LF of chamber system.
A primary system of 4 lines of 90 LF or 6 lines of 60 LF could potentially be installed over pits 1, 2 and 3.
900 sf required for 200% subsurface drip with pretreatment reserve.

RSA+ Project Number: 4117026.0
Date: August 30, 2017

Test Pit # 1

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-36	C	45%	L	MG	H	FRB	S	CF	CC	
	36-72		35%	L	MG	H	FRB	S	FF	FF	
X	72										

Notes: Samples collected from below 36" and from 0-36" for laboratory testing. Bouyoucous Hydrometer testing determined soil type Loam. Limiting condition was bottom of pit. Pit good.

Test Pit # 2

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-36	C	45%	L	MG	H	FRB	S	CF	CM	
	36-60	-	35%	L	MG	H	FRB	S	FF	FF	
X	60										

Notes: Hard to form a ball/create ribbon. Limiting condition was bottom of pit. Pit good.

Test Pit # 3

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-36	C	45%	L	MG	H	FRB	S	CF	CM	
	0-60		35%	L	MG	H	FRB	S	CF	FF	
X	60										

Notes: Limiting condition was bottom of pit. Pit good.

RSA+ Project Number: 4117026.0
Date: August 30, 2017

Test Pit # 4

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-30	-	45%	L	MSB	L	FRB	S	CF	CM	
X			35%								

Notes: Hit bedrock @ 30". Pit good.

Test Pit # 5

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
X	-		>50%								

Notes: Rock close to surface. Pit no good. (15' from disconnected faucet)

Test Pit # 6

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-24	C	45%	L	MG	H	FRB	S	CF	CM	
	24-56		35%	L	MG	H	FRB	S	CF	FF	
X	56										

Notes: Limiting condition was bottom of pit. Pit good.

RSA+ Project Number: 4117026.0
Date: August 30, 2017

Test Pit # 7

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			
	0-36	C	30%	L	MG	H	FRB	S	CF	CM	
	36-60		<20%	L	MG	H	FRB	S	CF	FF	
X	60										

Notes: Limiting condition was bottom of pit. Pit good.

Test Pit #

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			

Notes:

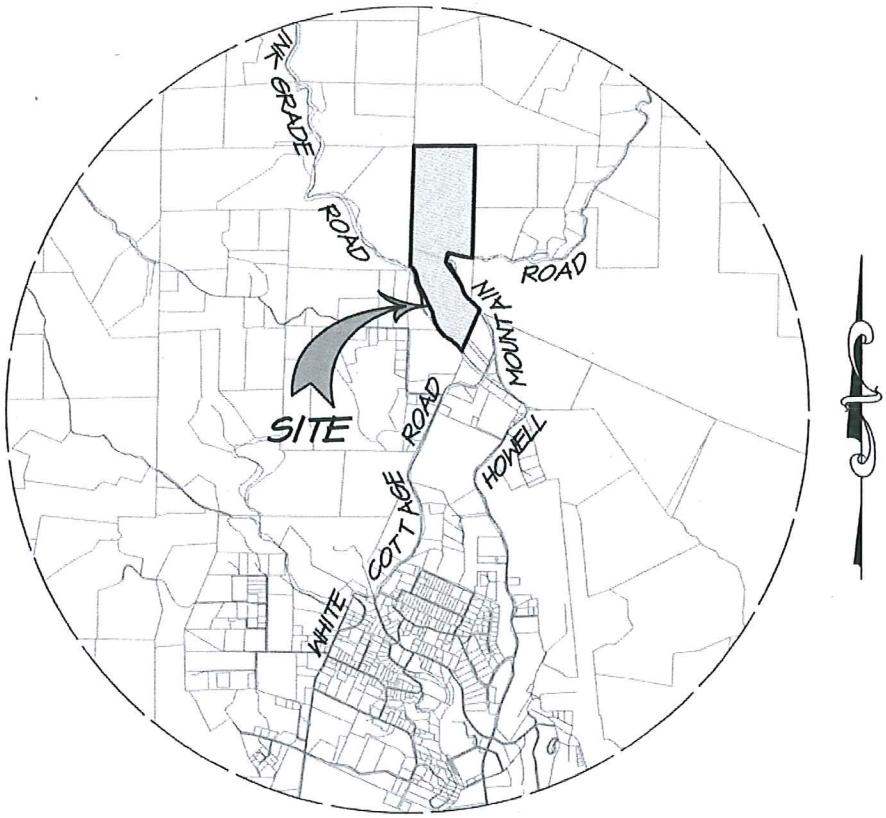
Test Pit #

X = Limiting Horizon	Horizon Depth (Inches)	Boundary	%Rock	Texture	Structure (Grade / Shape)	Consistence			Pores (QTY / Size)	Roots (QTY / Size)	Mottling (QTY / Size/ Contrast)
						Side Wall	Ped	Wet			

Notes:

HOWELL MOUNTAIN CEMETERY
VICINITY MAP

ANGWIN CALIFORNIA



VICINITY MAP

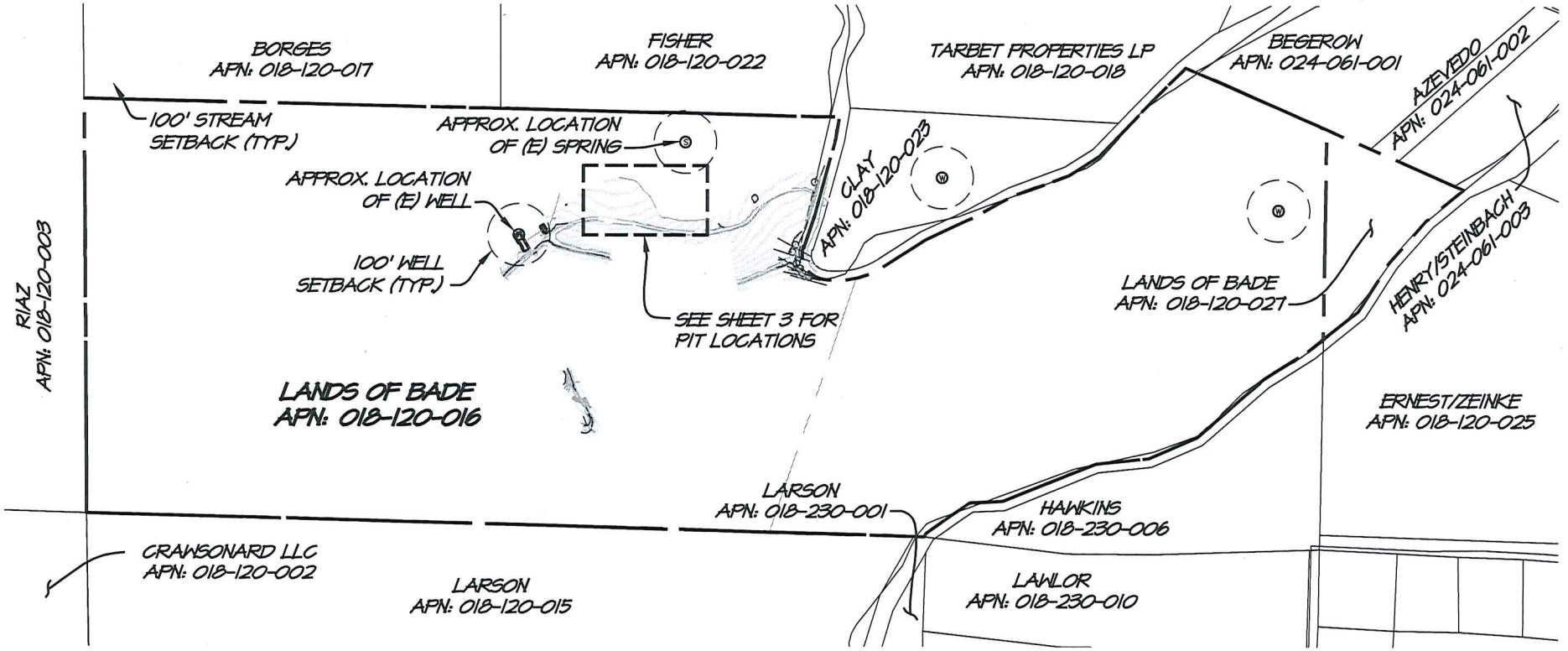
SCALE: 1" = 4000'

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HOWELL MOUNTAIN CEMETERY
PIT MAP



SITE EVALUATION DATE:	AUGUST 30, 2017
APN:	030-180-016
ADDRESS:	1225 HOWELL MTN RD N, ANGWIN, CA 94508
ENV. HEALTH INSPECTOR:	MAUREEN SHIELDS-BOWN

GRAPHIC SCALE

500 0 500

(IN FEET)

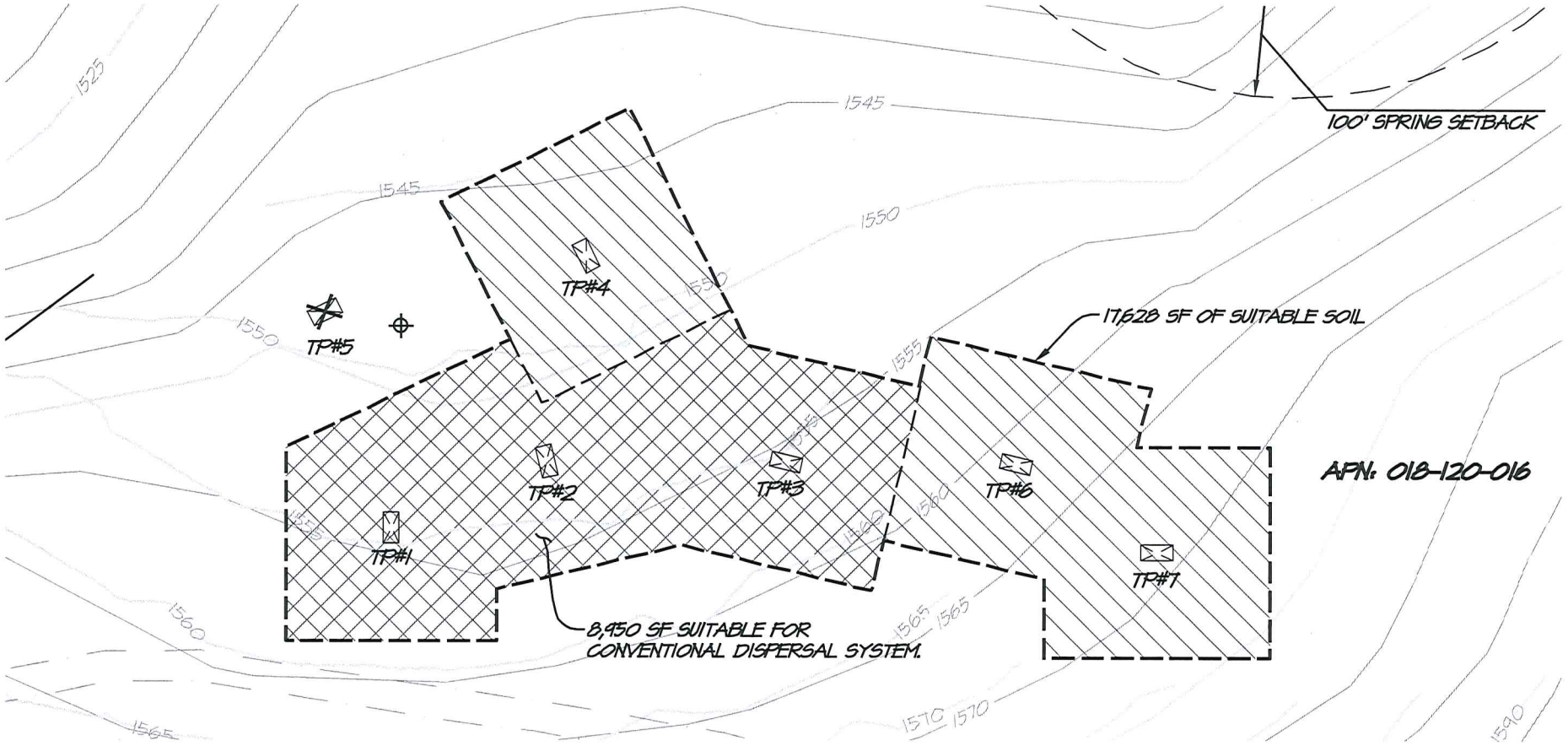
1 inch = 500 FT

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HOWELL MOUNTAIN CEMETERY
PIT LOCATIONS



LEGEND

TP#1 TEST PIT

TP#1 NOT GOOD

GRAPHIC SCALE

40 0 40 80

(IN FEET)

1 inch = 40 FT

SITE EVALUATION DATE:	AUGUST 30, 2017
APN:	030-180-016
ADDRESS:	1225 HOWELL MTN RD N, ANGWIN, CA 94508
ENV. HEALTH INSPECTOR:	MAUREEN SHIELDS-BOWN

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NOV. 10, 2017 4117026.0 Exh-Pit Map.dwg 3 of 3

WATER SYSTEM FEASIBILITY STUDY FOR A REGULATED SYSTEM

HOWELL MOUNTAIN CONSERVATION CEMETERY
1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA

APN 018-120-016 & 027

Prepared for:

Eternal Preserve Holding LLC
3301 Industrial Avenue
Rocklin, CA 94508



Project #4117026.0

January 31, 2020

TECHNICAL CAPACITY

System Description

The proposed Howell Mountain Conservation Cemetery is located at 1225 Howell Mountain Road. The existing well on the subject parcel will serve the proposed office and restrooms.

A Transient-Noncommunity water system is proposed to serve the Howell Mountain Conservation Cemetery.

The well on the parcel has a 53' seal. This well will be used for the public water system for the Howell Mountain Conservation Cemetery. No chemical or biological treatment will be performed on the well water unless quarterly testing results deem further treatment is necessary. Water for the Public Water System will be stored in the proposed tank. See the Use Permit-Utility Plan for system layout.

Twenty-Year Evaluation of Projected Water Demand

Based on the Tier 1 Water Use Calculations, the annual public water demand (employees and visitors) is 0.16-acre feet per year (52,200 gallons per year). The average daily public water demand is 143 gallons per day. Peak daily public water demand is estimated at 286 gallons per day, being 200% of average daily demand.

Twenty-Year Evaluation of Water Supply Capacity

Additional non-public water demand for the site includes landscape irrigation. The proposed non-public water use for the parcel is 0.25-acre feet per year or 81,500 gallons per year or 223 gallons per day.

The existing water source is capable of supporting the proposed peak daily groundwater demand of 509 gal/day. The existing well has a capacity of 30 gpm. When pumped on a 50% operational basis (pumping 12 hours per day), the daily projected well yield is 21,600 gallons per day. This exceeds the peak daily demand on the public well.

$$30\ gpm * 720\ min/day = 21{,}600$$
$$21{,}600\ gal/day \geq 509\ gal/day\ (peak\ public\ daily\ demand)$$

Source Adequacy

The existing well has a 53-ft annular seal that complies with Napa County Code 13.12.380 as Class IA wells for a Public Water System. The Application and Permit to Construct a Water Well document outlines the well construction and inspection by the Department of Environmental Management Application and Permit is on file at Napa County.

Water Quality

Water sampling will be conducted prior to operation of the system. Water quality is expected to meet or exceed all requirements of Chapter 15 of Title 22, California Code of Regulations (CCR).

CONSOLIDATION

An investigation of the adjacent Public Water Systems within 3 miles of the project has been performed using the map viewer provided on the California Environmental Health Tracking Program website. The Howell Mountain Water Distribution System is within 3 miles but does not have the infrastructure to provide service to the Howell Mountain Conservation Cemetery.

MANAGERIAL

General

The owner of the water system will be the property owner of the parcel. The costs of operation will be covered in the cemetery operation costs. The owner will also hold the responsibility of water system manager for the property.

Operation and Maintenance

The following is a summary of the required Operations and Maintenance schedule:

Tasks	Frequency	Action
System Water Level	Daily	Visual Inspection
System Pressure and Conveyance	Daily	Visual Inspection
Water Tanks	Quarterly	Visual Inspection
Manually Operate Valves and Pumps	Quarterly	Operation
Water Quality Test & Reporting	Quarterly	Unit Samples Taken & Reported to Napa Co.

A certified distribution operator or treatment operator (T1 level or above) as specified by Chapter 13 of Title 22 CCR contracted by the owner will be responsible for system repairs.

Monitoring and Testing

Water quality testing will be conducted to comply with Chapter 15 of Title 22 of CCR. Samples will be taken to Caltest or an approved laboratory for testing.

FINANCIAL

Below is a brief summary of the system's annual estimated financial capacity. Capital improvement costs and installation of the distribution system are estimated to be a one-time expense of $30,000.

Capital Improvements
Equipment: $30,000

Annual Operating Cost
Power: $2,000
Maintenance: $1,500
Water Quality Testing: $1,500
Total: $5,000

Projected Annual Gross Revenue: $1,750,000
Annual Operating Costs: $1,400,000 (20% profit)
Percent of Total Operating Costs: 0.4%

“J”

Stormwater Control Plan

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

Stormwater Control Plan For
Howell Mountain Cemetery
1225 Howell Mountain Road
Napa County, CA

August 20, 2024

Wildlands
Attn: Ray Zucker
6558 Lonetree Boulevard
Rocklin, CA 95765

prepared by:

TSD Engineering, Inc.
Casey Feickert
785 Orchard Drive, Suite 110
Folsom, CA 95630

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Stormwater Control Plan Exhibit

Appendices

This Stormwater Control Plan was prepared using the template dated October 2018.

I. Project Data

Table 1. Project Data Form

Project Name/Number	Howell Mountain Cemetery
Project Location	1225 Howell Mountain Road Napa County, CA APNs: 018-120-016, 018-120-027
Project Phase No.	N/A
Project Type and Description	A green burial cemetery associated with paving and grading of existing road, parking, a small Welcome Center, and an entry gate.
Total Project Site Area (acres)	69.55 AC
Total New and Replaced Impervious Surface Area	1,405 SF
Total Pre-Project Impervious Surface Area	9,838 SF
Total Post-Project Impervious Surface Area	11,243 SF

II. Setting

II.A.1. Project Location and Description

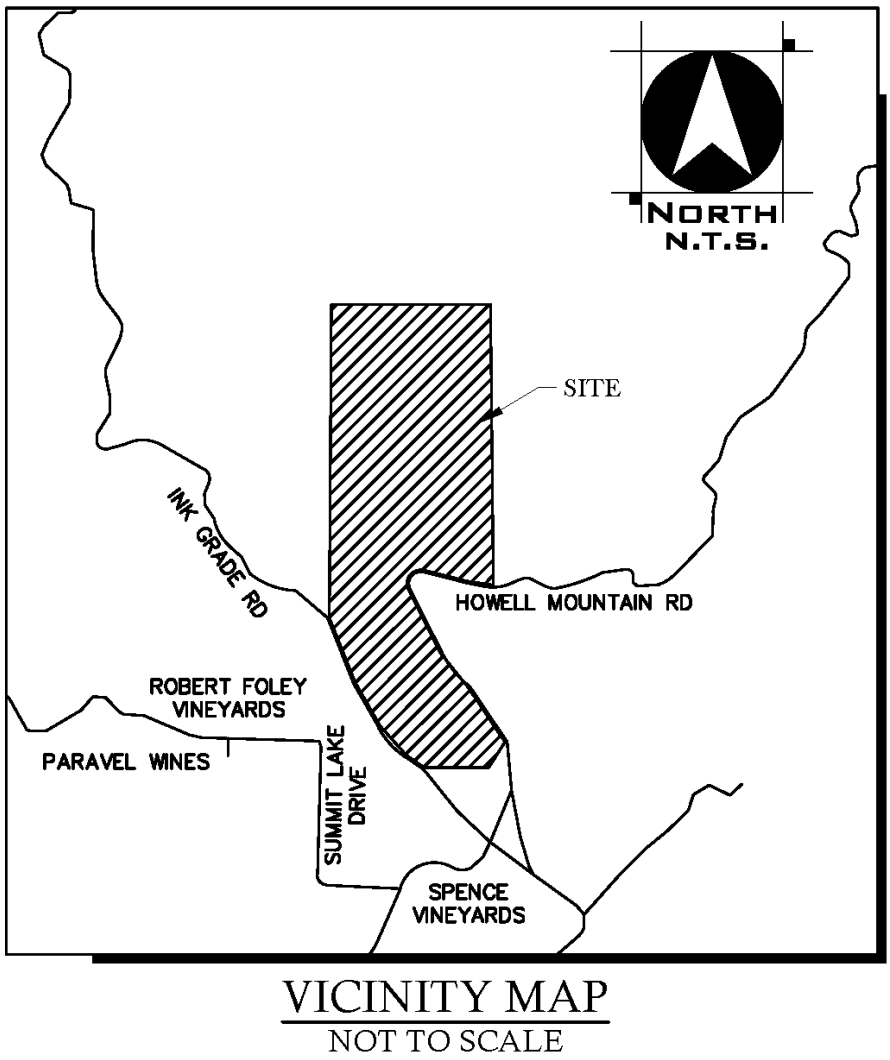
The project site is located at 1225 Howell Mountain Road in Napa, County (See Vicinity Map, Figure 1). The property covers approximately 109.30 acres that will be subdivided into two parcels, Parcel A & Parcel B (See the Preliminary Overall Site Plan in the Attachments). The subject project will be constructed on Parcel A, covering approximately 69.55 acres. Currently Parcel A is undeveloped.

The project proposes to construct a green burial cemetery with approximately 15.43 acres of interment space and the following items:

1. Paving and grading of existing road with porous pavement and parking along meandering roadway.
2. A small (16' x 33') Welcome Center will be located East of the Howell Mountain Road Entrance. The Welcome Center will be staffed to monitor parking and serve visitors and customers.
3. Parking striping for designations and fire turnaround at Welcome Center.

4. An entry gate and identification sign on Howell Mountain Road to identify Howell Mountain Conservation Cemetery and the street address.

Figure 1. Vicinity Map



II.B. Existing Site Features and Conditions

The project site, located on Parcel A, covers approximately 0.67 acres of currently undeveloped land. The existing site contains approximately 9,838 square feet of impervious surface from what appears to be a pump treatment shed, gallon concrete holding tank, a single private dwelling, a separate garage northwest of the proposed Welcome Center, and a portion of Howell Mountain Road.

The site's soil falls under hydrologic soil group C. The existing site is covered by dense vegetation consisting of different species of trees and brush, and ephemeral streams. The site currently drains from west to east with run-off sheet flowing onto natural open space. The existing drainage patterns will be maintained.

II.C. Opportunities and Constraints for Stormwater Control

Porous pavement will be used as a Low Impact Development (LID) facility in the driveway and parking areas, and the existing disconnected natural open space located east of the development will be used as a self-treating area. The grading of the site has been designed to allow stormwater runoff to surface drain to the existing disconnected natural open space to help slow, capture, and filter. A small portion of the site will be covered with impervious surfaces once developed. The impervious surfaces include concrete sidewalk, ADA parking, and roof at the Welcome Center which drains to the porous pavement.

III. Low Impact Development Design Strategies

III.A. Optimization of Site Layout

III.A.1. Limitation of development envelope

There are no known limitations of development onsite.

III.A.2. Preservation of natural drainage features

The site contains ephemeral streams that will need to be avoided.

III.A.3. Setbacks from creeks, wetlands, and riparian habitats

A 35-foot setback is required for the ephemeral streams located within the site.

III.A.4. Minimization of imperviousness

III.A.5. Use of drainage as a design element

III.B. Use of Permeable Pavements

Porous pavement will be used in the driveway and parking stalls onsite, (See Stormwater Control Plan, Figure 2). The porous pavement has been designed in accordance with the criteria stated in the *BASMAA Post-Construction Manual, "Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa, and Solano Counties."*

III.C. Dispersal of Runoff to Pervious Areas

Runoff will be dispersed to existing disconnected natural open space which will be used as a self-treating area**.**

III.D. Stormwater Control Measures

Porous pavement will be used in the driveway and parking stalls onsite for stormwater to infiltrate into the underlying soils and reduce pollutants.

IV. Documentation of Drainage Design

IV.A. Descriptions of Each Drainage Management Area

IV.A.1. Table of Drainage Management Areas

Table 2. Drainage Management Areas

DMA Name	Surface Type	Area (square feet)
DMA 1	Porous Pavement / Concrete	29,330

IV.A.2. Drainage Management Area Descriptions

DMA 1, totaling 29,330 square feet, drains 27,925 square feet of porous pavement in the driveway and parking stalls, 830 square feet of concrete sidewalk and ADA parking, 575 square feet of roof from the Welcome Center. Runoff from DMA 1 drains to the existing disconnected natural open space located east of the development.

IV.B. Tabulation and Sizing Calculations

IV.B.1. Information Summary for Bioretention Facility Design

IV.B.2. Self-Treating Areas

Table 3. Self-Treating Areas

DMA Name	Area (square feet)
DMA 1	29,330 square feet

IV.B.3. Self-Retaining Areas

IV.B.4. Areas Draining to Self-Retaining Areas

IV.B.5. Areas Draining to Bioretention Facilities

V. Source Control Measures

V.A. Site activities and potential sources of pollutants

V.B. Source Control Table

Table 4. Source Control BMPs

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Need for future indoor & structural pest control.	Note building design features that discourage entry of pests.	Provide Integrated Pest Management information to owners, lessees, and operators.
Landscape/Outdoor Pesticide Use/Building and Grounds Maintenance	Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.	See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.casqa.org/resources/bmp-handboooks Provide IPM information to new owners, lessees and operators.
Driveway & Parking Areas	Porous Pavement	Sweep driveway and parking areas regularly to prevent accumulation of litter and debris.

VI. Stormwater Facility Maintenance

VI.A. Ownership and Responsibility for Maintenance in Perpetuity

The applicant agrees to execute all necessary agreements associated with drainage and stormwater control. The applicant accepts responsibility for interim operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner.

VI.B. Summary of Maintenance Requirements for Each Stormwater Facility

Once completed, the property will be managed by a property management agency, yet to be determined. The property management agency will be responsible for operation and maintaining the storm water facilities, which include:

- Porous Pavement

Maintenance activities are listed below.

Porous Pavement

- Monthly
    - Inspect and remove debris as needed.
- Annually
    - Inspect the surface for deterioration or spalling.

VII. Construction Checklist

Table 5. Stormwater Control Plan/Construction Documents Cross-Checklist

Stormwater Control Plan Page #	Source Control or Treatment Control Measure	See Plan Sheet #s
5	Porous Pavement	Detail A / Sheet 2

VIII. Certifications

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA *Post-Construction Manual* [Check with local staff regarding other certification requirements.]

Attachments

Figure 2. Preliminary Drainage Management Area Map

Preliminary Overall Site Plan

PRELIMINARY DRAINAGE MANAGEMENT AREA MAP

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA

HOWELL MOUNTAIN RD

DMA 1
Area = 0.67-Acres
= 29,330-SF

SELF-TREATING AREA
Area = 6.26-Acres
= 272,845-SF

INTERMENT AREA A
0.72 AC

EPHEMERAL STREAMS

35' SETBACK

EPHEMERAL STREAMS

35' SETBACK

PROJECT BOUNDARY (P)

WELCOME CENTER

EX GARAGE

EX HOUSE

018-120-022
FISHER JOHN C &
LOUISE K TR

N

W

E

S

scale: 1"=30'

30 0 15 30 60

DMA ANALYSIS

DMA	DMA AREA (SF)	DMA TYPE	SURFACE TYPE	RUNOFF FACTOR[1]	EISA[2] (SF)	SELF-TREATING AREA: SELF-TREATING DMA	SELF-TREATING AREA: SURFACE AREA RATIO
1	29,330	DRAINS TO SELF-TREATING AREA	POROUS PAVEMENT	0.1	2,933	-	-
				DMA 2 TOTAL EISA=	2,933	272,845	1.1%

NOTES:
(1) RUNOFF FACTOR PER TABLE 4-1 (STORMWATER TECHNICAL GUIDE FOR LOW IMPACT DEVELOPMENT - CITY OF KING PUBLIC WORKS)
(2) EQUIVALENT IMPERVIOUS SURFACE AREA (EISA) = SURFACE AREA x RUNOFF FACTOR
(3) BIO-RETENTION SURFACE AREA RATIO = EISA / BIO-RETENTION SURFACE AREA (4% MINIMUM REQUIRED)
(4) SELF RETAINING SURFACE AREA RATIO = EISA / SELF RETAINING SURFACE AREA (2:1 MAXIMUM)

KEY FEATURES LEGEND:

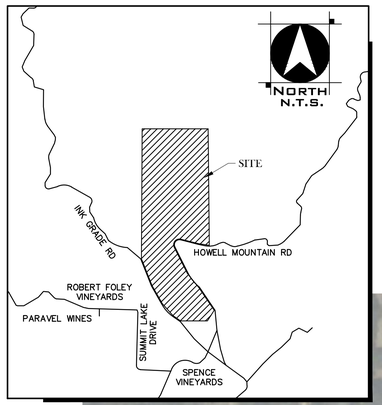
- DEVELOPED DMA BOUNDARY
- 170 EXISTING CONTOUR (MAJOR)
- 168 EXISTING CONTOUR (MINOR)
- 170 PROPOSED CONTOUR (MAJOR)
- 168 PROPOSED CONTOUR (MINOR)
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

PRELIMINARY DRAINAGE MANAGEMENT AREA MAP
AUGUST 20, 2024

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

P:\Projects\408-003\03 REPORTS\STORMWATER CONTROL PLAN\Entitlements\Appendix B – Site Plan\HMC_Preliminary DMA Map.dwg, Fernando Ochoa, 13:50:27, 08-21-24

PRELIMINARY OVERALL SITE PLAN
HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



VICINITY MAP
NOT TO SCALE

PROJECT SUMMARY

OWNER/DEVELOPER/APPLICANT
ETERNAL PRESERVE HOLDINGS, LLC.
3301 INDUSTRIAL AVE
ROCKLIN, CA
95765

ENGINEER
TSD ENGINEERING, INC
785 ORCHARD DRIVE
FOLSOM, CA 95630
ATTN: CASEY FEICKERT
cfeickert@tsdeng.com

PROPOSED USE
GREEN BURIAL CEMETERY

ZONING
AW (AGRICULTURAL WATERSHED)

SCALE
1" = 150'

CONTOUR INTERVAL
2' CONTOUR INTERVAL

TOPOGRAPHY
AERIAL TOPOGRAPHIC SURVEY
CONDUCTED JULY, 2017

ASSESSORS PARCEL NO
018-120-016, 018-120-027

AREA
PARCEL A = 69.55 AC
PARCEL B = 39.75 AC
TOTAL = 109.300 AC

NUMBER OF PARCELS
(2) TWO

WATER SUPPLY
PRIVATE WELL

SEWAGE DISPOSAL
PRIVATE SEPTIC SYSTEM

FIRE PROTECTION
NAPA COUNTY FIRE DEPARTMENT

PARK DISTRICT
NAPA COUNTY

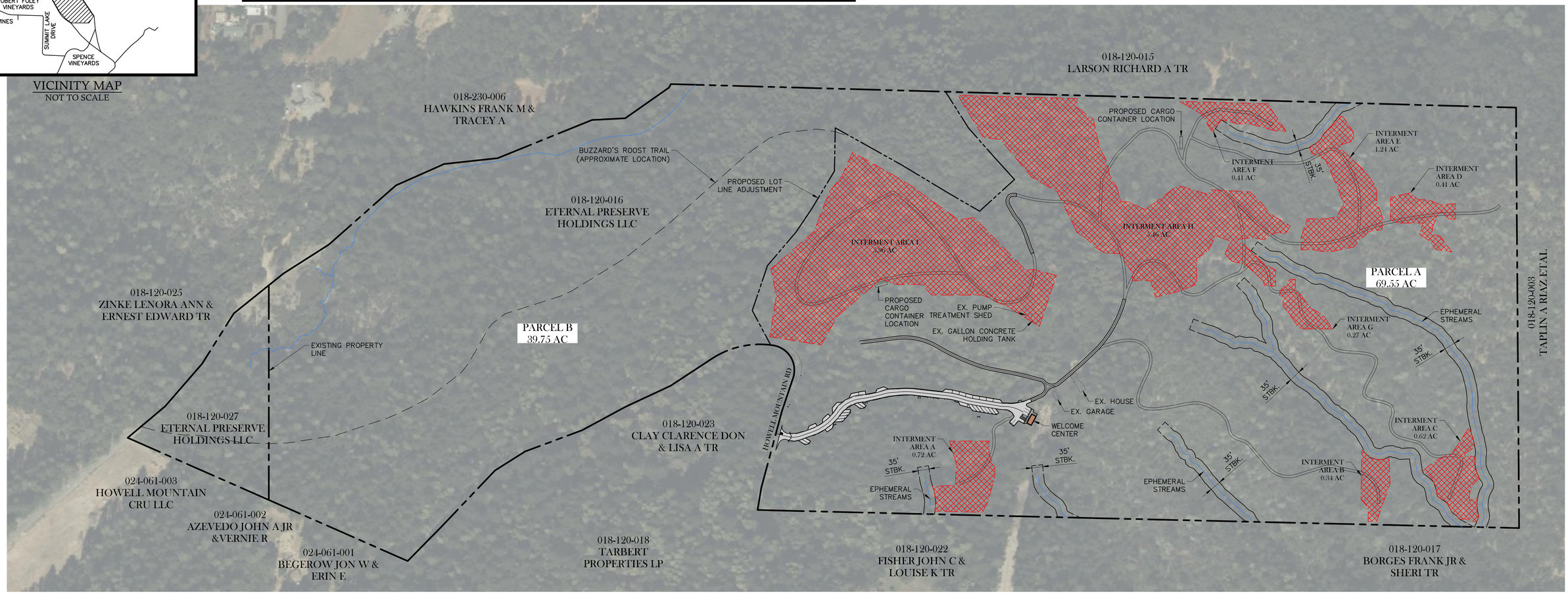
SCHOOL DISTRICT
HOWELL MOUNTAIN ELEMENTARY SCHOOL DISTRICT

GAS & ELECTRIC
PG&E

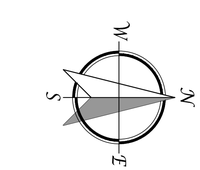
TELEPHONE
AT&T

PARKING SUMMARY

STANDARD PARKING STALL (9'x20'):	37
ACCESSIBILE PARKING (9'x20'):	1
TOTAL STALLS:	38



PRELIMINARY OVERALL
SITE PLAN
AUGUST 20, 2024



scale: 1"=150'
150 0 75 150 300

SHEET 1/7

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

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TSD ENGINEERING, INC.
expect more.

DRAINAGE MEMO

To: Curtis Sawyer; Napa County Planning, Building & Environmental Services Dept.

From: Casey Feickert, PE; TSD Engineering, Inc.

CC:

Date: September 29, 2023

Re: P20-00030; Howell Mountain Cemetery
1225 Howell Mountain Road; APN 018-120-016

INTRODUCTION

This memo presents a brief project description for the **Howell Mountain Cemetery** project and discusses drainage, stormwater quality measures, and best management practices (BMP's) recommended for implementation for this project.

PROJECT DESCRIPTION

The project consists of the construction of the following items:

1) Paving and grading of existing road with porous pavement and parking along meandering roadway.

2) A small (16' x 33') Welcome Center will be located East of the Howell Mountain Road Entrance. The Welcome Center will be staffed to monitor parking and serve visitors and customers.

3) Parking striping for designations and fire turnaround at Welcome Center.

4) An entry gate and identification sign on Howell Mountain Road to identify Howell Mountain Conservation Cemetery and the street address.

BACKGROUND & EXISTING CONDITIONS

The Site is located along the west side of Howell Mountain Road and north of the intersection between Howell Mountain Road and White Cottage Road in the Angwin area of Napa County. It is comprised of approximately ±109.30 acres of undeveloped land identified by Napa County Assessor's Parcel Numbers (APNs) 018-120-016 and 018-120-027. The Site is covered by dense vegetation consisting of different species of trees and brush. It currently has a single private dwelling, a separate garage west of the proposed Welcome Center, and a pump treatment shed. Once the proposed improvements have been completed, approximately 1,340 sf. of new impervious surfaces are introduced which comprises roughly 0.03% of the total site area (±109.30 AC). The soil in this area falls under Type C Hydrologic Soil Group.

DRAINAGE

The site currently sheds from west to east with run-off sheet-flowing onto natural open space. The existing drainage patterns will be maintained, and porous pavement (See Appendix A - Porous Pavement Detail) will be utilized to manage runoff. Excluding the pervious surfaces, 1,340 sf of new impervious surface has been created, qualifying this project as a small project (See Appendix B – Project Data Form and Runoff Reduction Measure Selection). No underground drainage system is proposed for this site.

WATER QUALITY CONTROL MEASURES

Stormwater quality design measures will include stream setback and buffer, permeable pavement will be used in the driveway and parking area. Pollution source control measures to be implemented on-site include the following (with CASQA Fact Sheet references):

1) To prevent accidental spills or leaks, materials will be stored indoors away from storm drains or sensitive areas. (CASQA-11)

2) For parking/storage areas and maintenance, trash receptacles will be provided, "No Litter" signs posted and surface sweeping shall be conducted regularly. (CASQA-43)

3) Indoor and structural pest control: Federal, State and local laws and regulations for the use, storage and disposal of pesticides shall be followed. (CASQA-41)

4) Landscape/outdoor pesticide use: Federal, State and local laws and regulations for the use, storage and disposal of pesticides shall be followed. (CASQA-41)

5) Outdoor storage of equipment or materials: Limit exposure to rainfall whenever possible (CASQ SC-30, SC-31. SC-32)

6) Building and grounds maintenance: Encourage proper lawn management and landscaping. (SC-41)

The proposed source control measures are sufficient to capture and treat the proposed impervious areas created once the development is complete.

BEST MANAGEMENT PRACTICES (BMP's)

A. SEDIMENT CONTROL

1. Implement the use of silt fence, bio-filter bags, and/or fiber rolls along the perimeter of the project and below the toe or down slope of exposed and erodible slopes. (See SE-1, SE-5, and SE-14 of the *CASQA Stormwater BMP Handbook).*

2. This project will implement the use of porous paving for the ±27,923-SF driveway and *parking area (See Appendix A for attached Porous Pavement Detail).*

B. PAVING & GRINDING OPERATIONS (See CASQA Stormwater BMP Handbook NS-3)

1. For paving involving asphaltic cement concrete, do not allow sand or gravel placed over new asphalt to wash into storm drains, streets, or creeks. Vacuum or sweep loose sand and gravel and properly dispose of this waste by referring to WM-5, Solid Waste Management.

2. Leaks and spills from paving equipment can contain toxic levels of heavy metals and oil and grease. Place drip pans or absorbent materials under paving equipment when not in use. Clean up spills with absorbent materials and dispose of in accordance with the applicable regulations. See NS-10, Vehicle and Equipment Maintenance, WM-4, Spill Prevention and Control, and WM-10, Liquid Waste Management.

3. Substances used to coat asphalt transport trucks and asphalt spreading equipment should not contain soap and should be non-foaming and non-toxic.

4. Paving equipment parked onsite should be parked over plastic to prevent soil contamination.

5. Clean asphalt coated equipment offsite whenever possible. When cleaning dry, hardened asphalt from equipment, manage hardened asphalt debris as described in WM-5, Solid Waste Management. Any cleaning onsite should follow NS-8, Vehicle and Equipment Cleaning.

C. WASTE MANAGEMENT

The following steps will help keep a clean site and reduce storm water collection (See CASQA Stormwater BMP Handbook WM-5, WM-9):

1. Select designated waste collection areas onsite. Inspect waste totes for leaks and repair any tote that is not watertight. Locate containers in a covered area or in a secondary containment. Provide an adequate number of containers with lids or covers

that can be placed over the container to keep rain out or to prevent loss of wastes when it is windy.

2. Collect site trash daily, especially during rainy and windy conditions. Remove this solid waste promptly since erosion and sediment control devices tend to collect litter. Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris. Do not hose out dumpsters on the construction site. Leave dumpster cleaning to the trash hauling contractor. Arrange for regular waste collection before containers overflow.

3. Clean up immediately if a container does spill. Make sure that construction waste is collected, removed, and disposed of only at authorized disposal areas.

4. Proper sanitary and septic waste management prevent the discharge of pollutants to stormwater from sanitary and septic waste by providing convenient, well-maintained facilities, and arranging for regular service and disposal.

For the complete list of BMP's please refer to the CASQA Stormwater Handbook.

VECTOR CONTROL

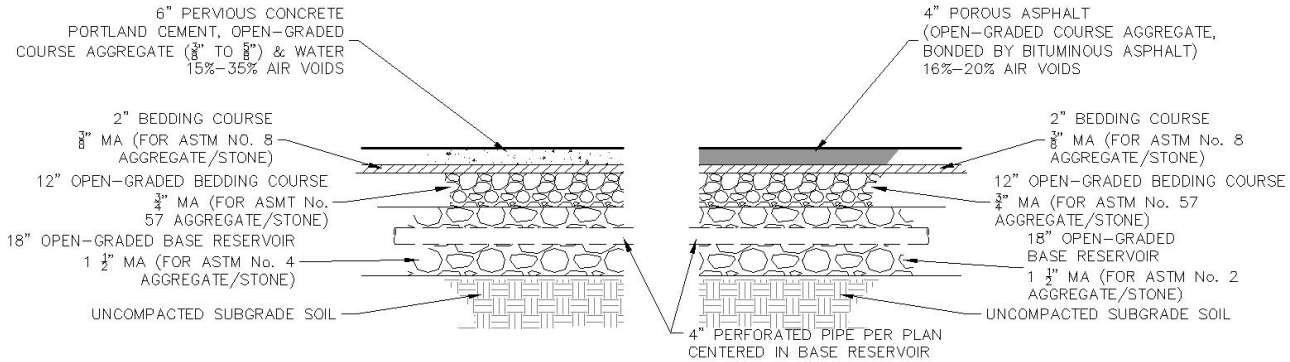
This project will be designed to prevent storm water ponding on any disturbed area to control vector population. Buildings will divert storm water out through rain leaders. No underground utilities will be installed, which may be conducive for vector production. Proper pest control and pesticide use will also be implemented as mentioned above.

Sincerely,



Casey Feickert, P.E., CE#58930
TSD Engineering, Inc.
Vice President

APPENDIX A



PERVIOUS CONCETE OPTION

POROUS ASPHALT OPTION

APPENDIX B

3. Complete your submittal, which will include:
    - Project Data Form
    - Site Plan or Sketch
    - Completed checklist for each Runoff Reduction Measure selected

Step 1: Project Data Form and Runoff Reduction Measure Selection

Complete all fields.

Project Name/Number	
Application Submittal Date [to be verified by municipal staff]	September 29, 2023
Project Location [Street Address if available, or intersection and/or APN]	1125 Howell Mountain Road Napa County, CA
Name of Owner or Developer	Eternal Preserve Holdings, LLC
Project Type and Description [Examples: "Single Family Residence," "Parking Lot Addition," "Retail and Parking"]	Cemetery
Total Project Site Area (acres)	109.30 AC
Total New or Replaced Impervious Surface Area (square feet) [Sum of impervious area that will be constructed as part of the project]	1,340 SF
Total Pre-Project Impervious Surface Area	1,487 SF
Total Post-Project Impervious Surface Area	2,827 SF
Runoff Reduction Measures Selected (Check one or more)	☐ 1. Disperse runoff to vegetated area ☒ 2. Pervious pavement ☐ 3. Cisterns or Rain Barrels ☐ 4. Bioretention Facility or Planter Box

Step 2: Delineate impervious areas and locations of runoff reduction measures

Delineate the impervious area. On a site plan or sketch, show the impervious area—for example, a roof, or portion of a roof, or a paved area—that will drain to your runoff reduction measure. Typically, these delineations follow roof ridge lines or grade breaks. Alternatively, show the type and extent of pervious paving. An example sketch is attached.

Indicate the location and kind of runoff reduction measure you've selected. At least one option, designed to manage runoff from some amount of impervious area—or to avoid creating runoff—is required.

“K”

Geologic Hazard Report

Howell Mountain Cemetery P20-00030
Planning Commission Hearing Date (June 17, 2026)

Experience is the difference

GEOLOGIC HAZARD REPORT

HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
ANGWIN, CALIFORNIA

Project Number:

7775.01.01.2

Prepared For:
Wildlands
Attn: Ray Zucker

Prepared By:

RGH Consultants

Santa Rosa Office
3501 Industrial Drive, Suite A
Santa Rosa, CA 95403
707-544-1072

Napa Office
1041 Jefferson Street, Suite 4
Napa, CA 94559
707-252-8105

Ryan E. Padgett
Senior Engineering Geologist
Project Manager

Jared J. Pratt
Principal Engineering Geologist

CERTIFIED ENGINEERING GEOLOGIST
RYAN ERIC PADGETT
No. 2620
STATE OF CALIFORNIA

October 25, 2023

CERTIFIED ENGINEERING GEOLOGIST
JARED JACKSON PRATT
No. 2453
STATE OF CALIFORNIA

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INTRODUCTION

This report presents the results of our geologic hazard study for the proposed driveway and welcome center for the Howell Mountain Cemetery to be constructed at 1225 Howell Mountain Road in Angwin, California. The site location is shown on Plate 1.

We understand it is planned to construct a new driveway and welcome center in the south-central portion of the project site. The purpose of our study as outlined in our proposal dated October 5, 2023, was to evaluate the geologic hazards within the property and comment on the geotechnical feasibility of the project in accordance with Napa County Code, section 15.08.050.

SCOPE

Our scope of work was limited to a brief site reconnaissance, a review of selected published geologic data and LIDAR imagery pertinent to the site, and preparation of this report. Site-specific subsurface exploration was not requested, authorized, or performed for this phase of our services.

SERVICES PROVIDED

We reviewed LIDAR imagery of the site and select published geologic information pertinent to the site. A list of the geologic references reviewed is presented at the end of this report. On October 11, 2023, our Certified Engineering Geologist conducted a surficial reconnaissance of the property to observe exposed topographic features, surface soils, rock outcroppings and cut banks. A topographic map of the property showing the location/alignment of proposed improvements is presented on Plate 2.

Based on the geologic literature review and site reconnaissance, we were to develop the following information:

1. A brief description of surface soil, geologic exposures and spring or seepage conditions observed during our reconnaissance
2. A discussion of geologic hazards that may affect the proposed project
3. Our opinions regarding the feasibility of the project
4. Preliminary conclusions and recommendations concerning:
    a. Primary geotechnical engineering concerns and possible mitigating measures, as applicable
    b. Suitable foundation systems for the structures and retaining walls
    c. Stability and feasibility of stable building envelopes and access routes
    d. Preliminary recommendations for drainage systems and other requirements for soil stability
    e. Supplemental geotechnical engineering services including recommendations for site-specific subsurface exploration

SITE CONDITIONS

General

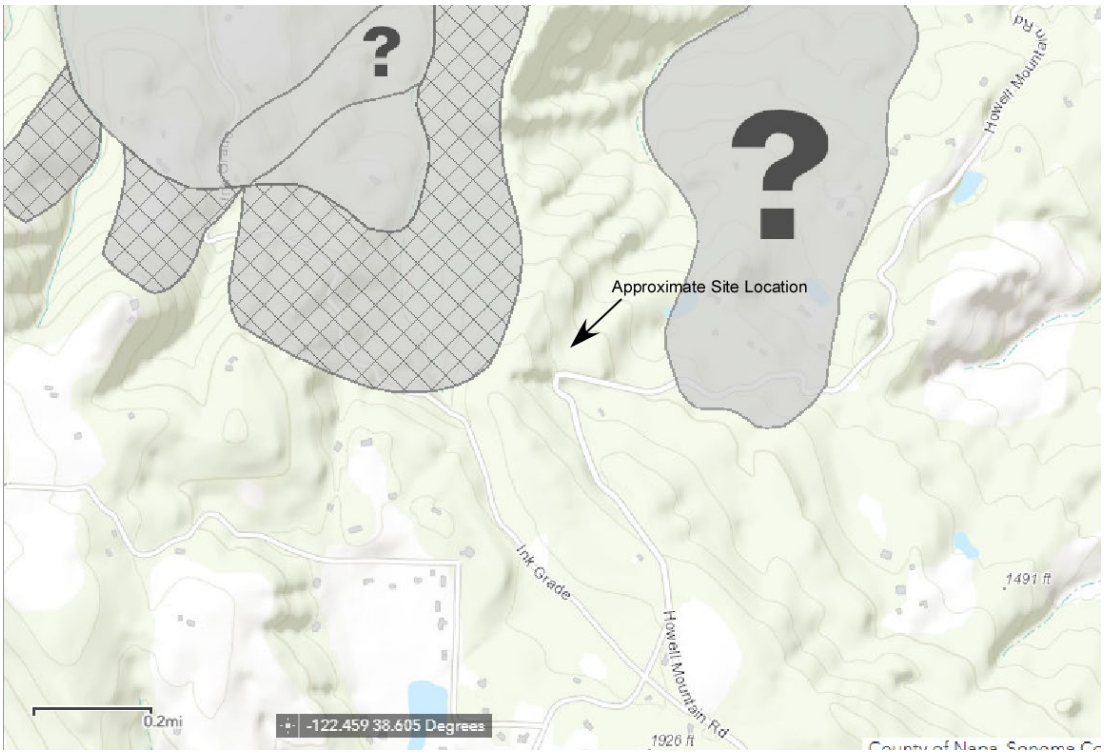
Napa County is located within the California Coast Range geomorphic province. This province is a geologically complex and seismically active region characterized by sub-parallel northwest-trending faults, mountain ranges and valleys. The oldest bedrock units are the Jurassic-Cretaceous Franciscan Complex and Great Valley sequence sediments originally deposited in a marine environment. Subsequently, younger rocks such as the Tertiary-age Sonoma Volcanics group, the Plio-Pleistocene-age Clear Lake Volcanics and sedimentary rocks such as the Guinda, Domengine, Petaluma, Wilson Grove, Cache, Huichica and Glen Ellen formations were deposited throughout the province. Extensive folding and thrust faulting during late Cretaceous through early Tertiary geologic time created complex geologic conditions that underlie the highly varied topography of today. In valleys, the bedrock is covered by thick alluvial soils. The site is located along a western facing slope above Pope Valley.

Geology

Published geologic maps (Fox et al., 1973) indicate the property is underlain by pumicious ash-flow tuff of the Tertiary age Sonoma Volcanics. This unit is described as locally welded or partly welded with intercalated bedded agglomeratic tuff, andesitic or basaltic lava flows, tuff breccia, bedded tuff and pumicitic tuff.

Landslides

The California Landslide Inventory (CGS, 2023) does not indicate large-scale slope instability at the portion of the site to be developed. However, large-scale landslides are mapped downslope of the project site and on the opposite side of the ridge to the northwest of the development area (see below). Although not shown on the CGS map, the scarp of the landslide downslope of the project site extends upwards toward the project site. The scarp of this large-scale feature exposes undisturbed lithic tuff bedrock. The observed landslide scarp is mapped on Plate 2.



Faulting

We did not observe landforms within the area that would indicate the presence of active faults and the site is not within a current Alquist-Priolo Earthquake Fault Zone (Bryant and Hart, 2007). Therefore, we believe the risk of fault rupture at the site is low. However, the site is within an area affected by strong seismic activity and future seismic shaking should be anticipated at the site. It will be necessary to design and construct the proposed improvements in strict adherence with current standards for earthquake-resistant construction.

Surface

The property extends primarily over gently sloping to steeply sloping terrain. The vegetation consists of mature stands of fir and oak. The proposed building site is located in the southern central portion of the property and extends to the northwest off Howell Mountain Road.

In general, the ground surface is soft and spongy. This is a condition generally associated with weak, porous surface souls. Natural drainage consists of overland flow over the ground surface that concentrates on a natural drainage element such as swales and ravines. The drainage trends toward Pope Valley.

DISCUSSION AND CONCLUSIONS

Geologic Hazards

Landslides

As discussed previously, the scarp of a large scale landslide feature was mapped and observed at the project site. The observed landslide features are mapped on Plate 2. We understand that the planned development will not encroach into the landslide features, but the welcome center will be constructed adjacent to the scarp of a large landslide feature. We did observe undisturbed bedrock outcrops exposed in the scarp feature. The welcome center planned adjacent to the scarp feature should gain support in undisturbed bedrock and should have adequate lateral confinement based on the slope geometry and bedrock joint and/or bedding orientations should be considered in the foundation construction. The final geotechnical study should address these issues in detail.

Fault Rupture

We did not observe landforms within the area that would indicate the presence of active faults and the site is not within a current Alquist-Priolo Earthquake Fault Zone. Therefore, we believe the risk of fault rupture at the site is low.

Strong Ground Shaking

Data presented by the Working Group on California Earthquake Probabilities (2002) estimates the chance of one or more large earthquakes (Magnitude 6.7 or greater) in the San Francisco Bay region within the next 30 years to be approximately 62 percent. Therefore, future seismic shaking should be anticipated at the site. It will be necessary to design and construct the proposed improvements in strict adherence with current standards for earthquake-resistant construction.

Liquefaction

Liquefaction is a rapid loss of shear strength experienced in saturated, predominantly granular soils below the groundwater level during strong earthquake ground shaking due to an increase in pore water pressure. The occurrence of this phenomenon is dependent on many complex factors including the intensity and duration of ground shaking, particle size distribution and density of the soil. The site is not located within an area delineated by the California Geological Survey as being susceptible to liquefaction (Knudsen, et al, 2000). Therefore, we judge that there is a low potential for liquefaction at the site.

Densification

Densification is the settlement of loose, granular soils above the groundwater level due to earthquake shaking. Densification typically occurs in old fills and in soils that if saturated would be susceptible to liquefaction. Provided foundations are installed as discussed herein, we judge the potential for densification to impact structures at the site is low.

Lurching

Seismic slope failure or lurching is a phenomenon that occurs during earthquakes when slopes or man-made embankments yield and displace in the unsupported direction. Provided the improvements are located outside areas of identified slope instability and the foundations are installed as recommended herein, and the proposed fills are adequately keyed into underlying bedrock material, as subsequently discussed, we judge the potential for impact to the proposed improvements from the occurrence of these phenomena at the site is low. However, some of these secondary earthquake effects are unpredictable as to location and extent, as evidenced by the 1989 Loma Prieta Earthquake.

Geotechnical Issues

Based upon the results of our geologic data review and reconnaissance, we judge that it is geotechnically feasible to construct the planned driveway and welcome center. The primary geotechnical considerations and potential mitigating measures are discussed in the following sections of the report. These conclusions are preliminary and will need to be verified or modified during final design following detailed site-specific subsurface exploration, laboratory testing and geotechnical engineering evaluations, as recommended herein.

Welcome Center Location

The proposed building envelope for the welcome center must be located outside unstable areas and steep slopes in order to reduce the risks associated with slope instability. The location of the building envelop in relation to such areas is shown on Plate 2. A site-specific study should finalize recommended structural set back and foundation design for the welcome center.

Downslope Creep

Weak, creep-prone surface soils, such as those found at the site, tend to naturally consolidate and settle on sloping terrain that is 5:1 (horizontal to vertical) or steeper. Fills and foundations deriving support from these materials will be susceptible and contribute to the downslope creep and settlement unless properly embedded in bedrock or buttressed (keyed, benched, drained and compacted), respectively. The settlement causes cracks in the slabs and structural distress in the form of cracked plaster, and sticky doors and windows. Therefore, it will be necessary to obtain fill and/or foundation support below the creeping soils and design the foundations to resist stresses imposed by the creeping soils.

Fill Support

Hillside fills need to be constructed on level keyways and benches excavated entirely on rock. However, regardless of the care used during grading, buttressed fills of uneven thickness such as those typically built on hillsides, will settle differentially. Satisfactory performance of structural elements constructed on hillside fills, such as houses, pools, pool decks, garage slabs and driveways, will require the use of specialized grading techniques discussed in the following sections of this report. These include excavating all creeping soils, and replacing said materials as a buttressed fill of even thickness or constructing said improvements entirely on cut.

Foundation Support

Satisfactory foundation support on sloping terrain can be obtained from spread footings that bottom at minimum depth on firm bedrock exposed by planned excavations, or in bedrock reached by footings excavated through the creeping soils, or from spread footings supported on buttressed fills of equal thickness. Where the creeping soils are not buttressed or removed by grading the residential footings must be designed to resist creep forces.

As an alternative, drilled piers gaining support in bedrock and designed to resist creeping forces, as needed, can be used for foundation support either under all parts of the structure or within areas of deep soils or buttressed fill of even thickness. Criteria for the design of such systems should be developed by a site-specific geotechnical study as recommended in the supplemental services section of this report.

Access Driveway

The proposed roadway alignment does not traverse across mapped or observed unstable areas. Therefore, we judge its geotechnically feasible to construct the driveway as shown. Final roadway design should include a site-specific study of the alignment, particularly areas of inherent weakness such as steep slopes, swales and ravines. In general, new driveways should be aligned to avoid steep slopes and areas of potential instability in order to reduce construction costs and future maintenance. Since slopes from the existing road to the proposed building site are level to moderate, we anticipate driveway grading to be geotechnically feasible.

Erosion and Site Drainage

The long-term satisfactory performance of roadways and structural development constructed on hillsides results primarily from strict control of surface runoff and subsurface seepage. The site's surface soils have a moderate erosion potential depending on slope inclination. Uncontrolled erosion could induce sloughing or landsliding. Downspouts from the future structure should discharge into closed glued pipes that empty away from unstable areas and into nearby roadway or natural drainages. Discharge for roadway culverts and ditches need to be protected against erosion and sloughing by energy dissipators such as rip-rap and gabions, or equivalent protective and energy dissipation measures, as appropriate.

Groundwater

Free groundwater seeps or springs were not observed during our reconnaissance. On hillsides, rainwater typically percolates through the porous topsoil and migrates downslope in the form of seepage at the interface of the topsoil and bedrock, and through cracks in the bedrock. Fluctuations in the seepage rates typically occur due to variations in rainfall and other factors such as periodic irrigation.

Supplemental Services

We should perform a detailed geotechnical study prior to the construction of the improvements and roadway. The study should include test borings or backhoe pits, laboratory testing and engineering analyses. The geotechnical study should address specific design and locating aspects of each planned residential location and the access road, and the data generated should be incorporated into project plans. The plans should then be reviewed by the geotechnical engineer and /or engineering geologist prior to receiving bids for planned work.

LIMITATIONS

This report has been prepared by RGH for the exclusive use of the property owner and their consultants to evaluate the geotechnical feasibility of residential development within the proposed subdivision.

Our services consist of professional opinions and conclusions developed in accordance with generally accepted geotechnical engineering principles and practices. We provide no warranty, either expressed or implied. Our conclusions and recommendations are based on the information provided to us regarding the proposed parcel split: the results of our field reconnaissance, data review: and professional judgment. As such, our conclusions and recommendations should be considered preliminary and for feasibility and planning purposes only. A subsurface study, such as recommended herein, may reveal conditions different from those inferred by surface observation and data review only. Such subsurface study may warrant a revision to our preliminary conclusions.

Site conditions and cultural features described in the text of this report are those existing at the time of our field exploration, and may not necessarily be the same or comparable at other times.

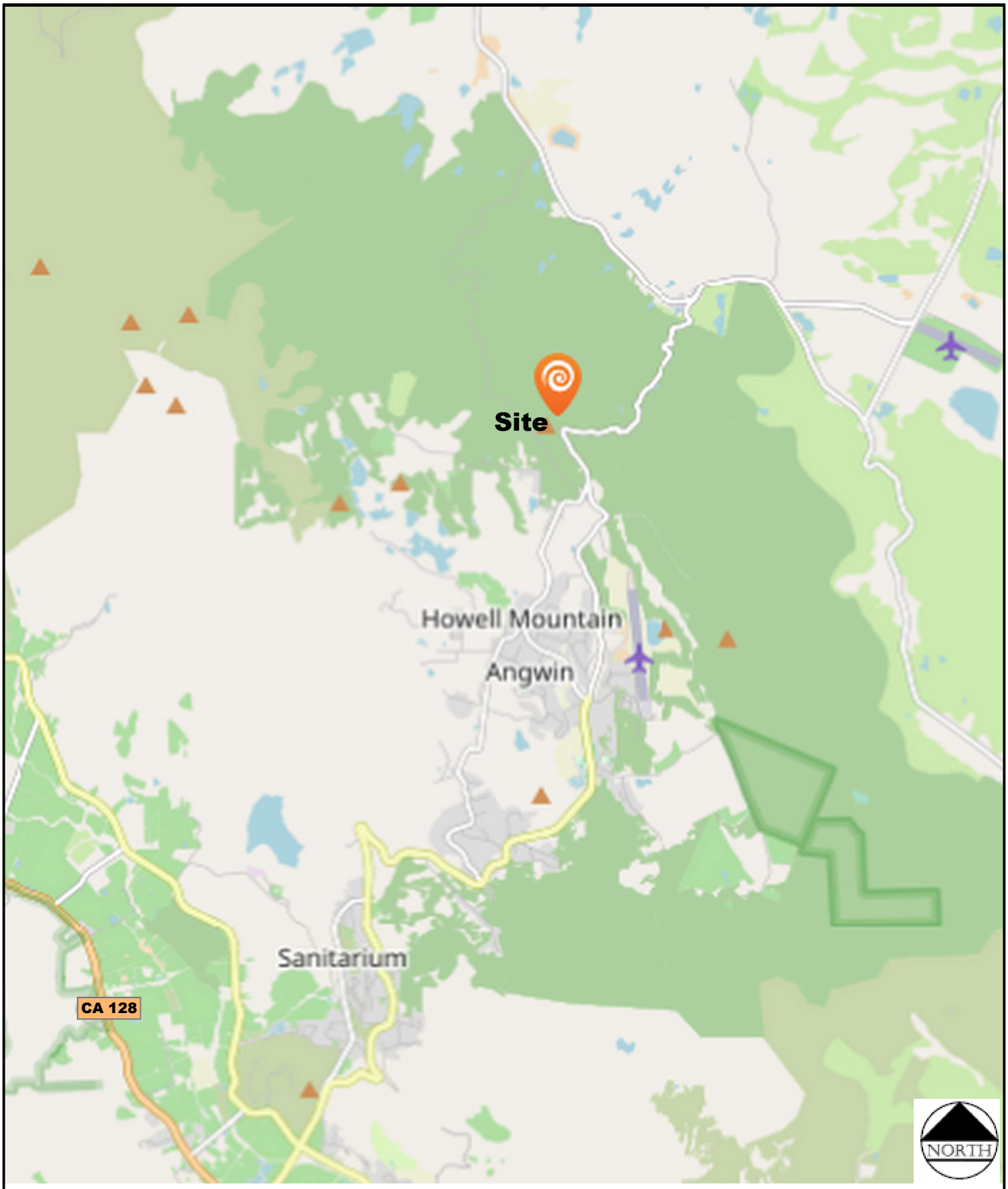
It should be understood that slope failures including landslides, debris flows and erosion are on-going natural processes which gradually wear away the landscape. Residual soils and weathered bedrock can be susceptible to downslope movement, even on apparently stable sites. Such inherent hillside and slope risks are generally more prevalent during periods of intense and prolonged rainfall, which occasionally occur in northern California and/or during earthquakes. Therefore, it must be accepted that occasional slope failure and erosion and deposition of the residual soils and weathered bedrock materials are irreducible risks and hazards of building upon or near the base of any hillside or steep slope throughout northern California. By accepting this report, the client and other recipients acknowledge their understanding and acceptance of these risks and hazards.

The scope of our services did not include an environmental assessment or a study of the presence or absence of hazardous, toxic or corrosive materials in the soil, surface water, groundwater or air on, below, or around this site, nor did it include an evaluation or study for the presence or absence of wetlands.

APPENDIX A - PLATES

LIST OF PLATES

Plate 1	Site Location Map
Plate 2	Site Reconnaissance Plan
Plate 3	Landslide Identification Chart



Reference: Mapline

Scale: 1" = 1 Mile

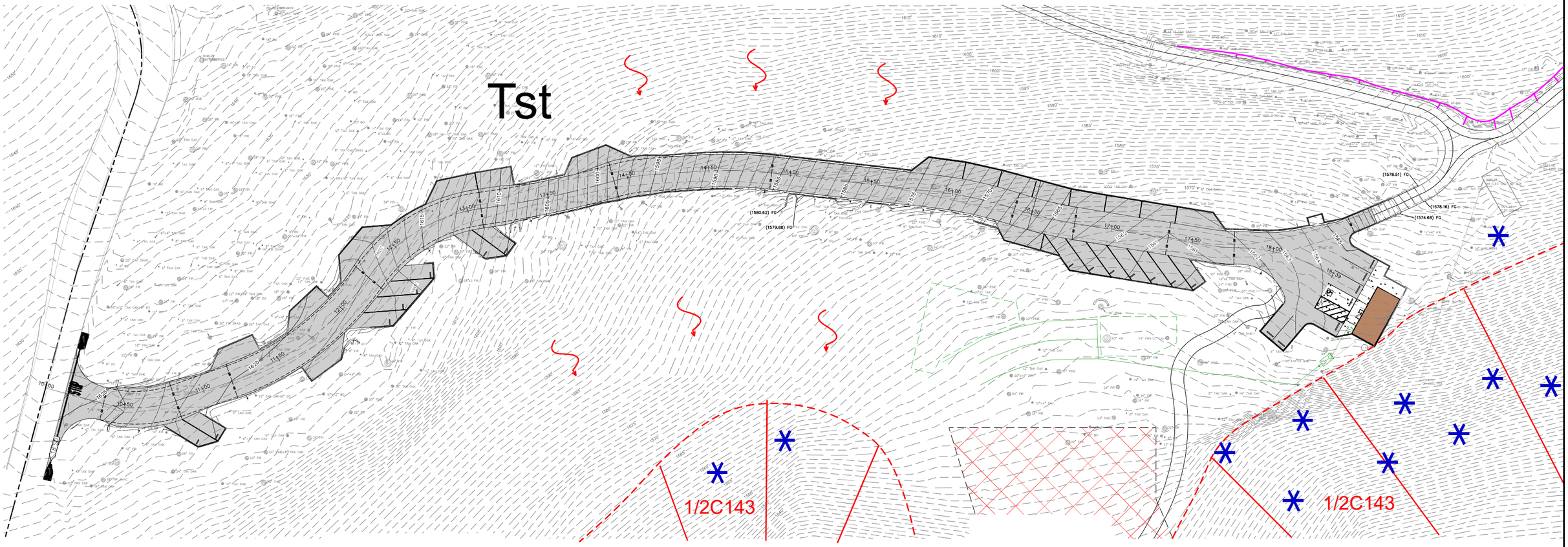
RGH CONSULTANTS

Job No: 7775.01.01.2 | Date: OCT 2023

SITE LOCATION MAP

Howell Mountain Cemetery
1225 Howell Mountain Road
Angwin, California

PLATE 1



EXPLANATION

Tst	Sonoma Volcanics Ash-Flow Tuff
*	Bedrock Outcrop Area
	Creeping Soil
1/2C143	Landslide, Dashed Where Approximate, Hatchures Indicate Scarp Area, Nomenclature Indicates Type, Certainty, Estimated Thickness and State of Activity, Described on Plate 3
	Cutslope

N

60 0 60 feet

Scale: 1" = 60'

Reference: Preliminary Grading Plan, Howell Mountain Cemetery, TSD Engineering, Inc. September 29, 2023

RGH CONSULTANTS

Job No: 7775.01.01.2 Date: OCT 2023

SITE RECONNAISSANCE PLAN
Howell Mountain Cemetery
1225 Howell Mountain Road
Angwin, California

PLATE
2

Landslide Identification Nomenclature *

Type of Landslide Movement

1	Rotational (Earth Slump)	Movement due to forces that cause a turning moment about a point above the center of gravity of the unit.
2	Translational	Movement predominantly along more or less planar or gently undulatory surfaces.
3	Debris Flow	Rapid movement (50 to 80 kph) within displaced mass such that the form taken by moving material or the apparent distribution of velocities and displacements resemble those of viscous fluids.
4	Earth Flow	Downslope viscous flow of fine grained materials that have been saturated and moves under the pull of gravity. Typically slow moving (a few meters per day or less).
5	Debris Slide	Unconsolidated rock and soil moved downslope along a relatively shallow failure plane
6	Rock Fall	Fragments of rock detached by toppling or falling that falls along a vertical or sub-vertical cliff.
C	Many landslides consist of one or more type of movement. The listed type of movement is modified with a "C" to indicate a Complex of landslides.	

Certainty of Landslide Identification

1	Definite
2	Probable
3	Questionable

Estimated Thickness of Landslide Deposits

1	Less than 5 feet
2	5 to 20 feet
3	20 to 50 feet
4	Greater than 50 feet

State of Landslide Activity

1	Recently Active	Currently moving or estimated movement within recent years.
2	Dormant	Marginally stable with mature and subdued expression of the landslide. Mostly re-vegetated.
3	Ancient	Most landslide features are eroded. Heavily vegetated.

* The landslide identification mapping is designed for planning purposes only and should not be used in lieu of a detailed site specific investigation. Our mapping should be considered preliminary and for feasibility and planning purposes only. A subsurface study may reveal conditions different from those inferred by surface observations and data review only. Such subsurface study may warrant a revision to our preliminary mapping.

RGH CONSULTANTS

Job No: 7775.01.01.2 | Date: OCT 2023

LANDSLIDE IDENTIFICATION NOMENCLATURE
Howell Mountain Cemetery
1225 Howell Mountain Road
Angwin, California

PLATE
3

APPENDIX B - REFERENCES

Bryant, W.A., and Hart, E.W., Interim Revision 2007, Fault-Rupture Zones in California; California Geological Survey, Special Publication 42, p. 21 with Appendices A through F.

California Geological Survey, BETA Landslide Inventory and Deep-Seated Landslide Susceptibility Map, https://maps.conservation.ca.gov/cgs/lsi

Knudsen, K.L., Sowers, J.M., Witter, R.C., Wentworth, C.M., and Helley, E.J., 2000, Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California, U.S. Geological Survey, Open File Report 00-444.

NCALM, Open Topography, Napa Watershed, CA, 2003, https://portal.opentopography.org/lidarDataset?jobId=pc1695110545785

Fox, K.F., Jr., et al., 1973, Preliminary Geology Map of Eastern Sonoma County and Western Napa County, California: U.S. Geological Survey, Miscellaneous Field Studies Map MF-483, Basic Data Contribution 56, Scale 1:62,500.

APPENDIX C - DISTRIBUTION

Wildlands (e)
Attn: Ray Zucker
rzucker@heronpacific.com

PPI Engineering (e)
Attn: Jim Bushey
jbushey@PPIEngineering.com

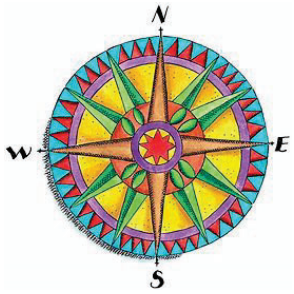
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https://rghgeo.sharepoint.com/sites/shared/shared documents/project files/7501-7999/7775/7775.01.01.2 howell mountain cemetery/.01 - geologic hazard study/7775.01.01.2 geologic hazard report.docx

“L”

Graphics



Napa County
Lot Line Adjustment - Complete

Lot Line Adjustment Number : LLA 2116

400 Scale Map Number: 11D

Lands of Eternal Preserve Holdings LLC

Documents Recorded: October 15, 2025

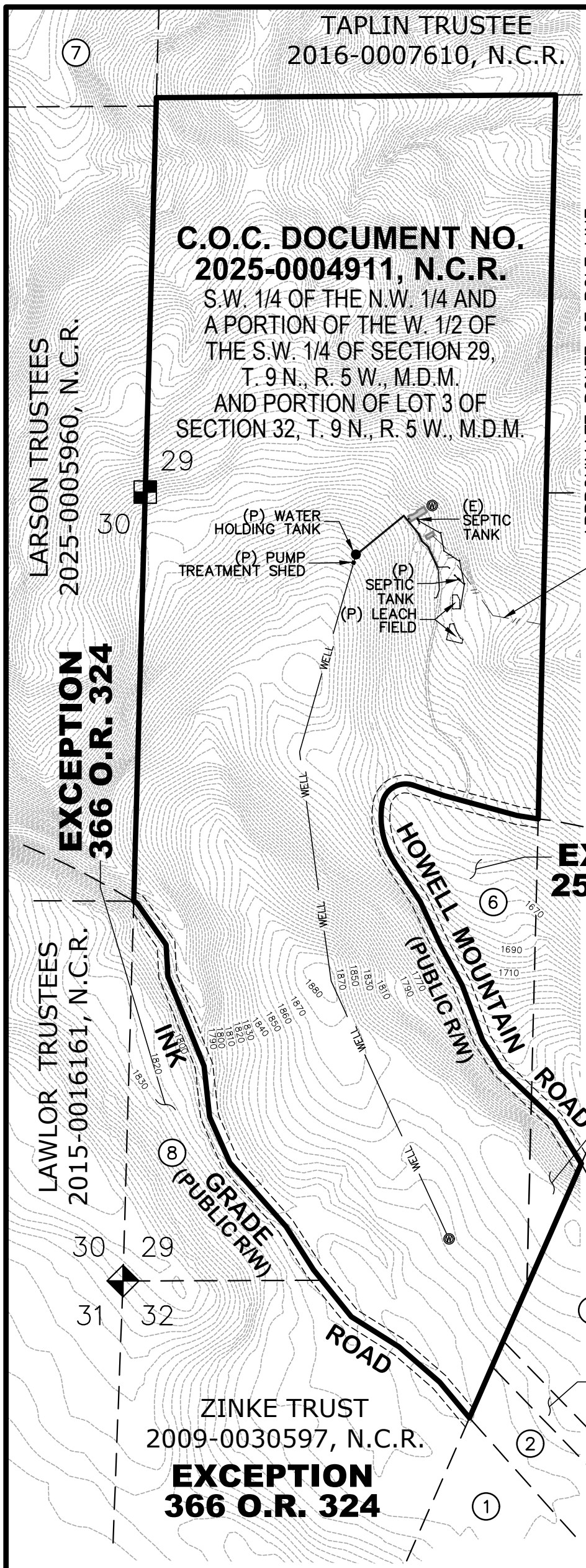
Document Numbers: 2025-0014367 through 2025-0014371

Agent/Title Co.: Placer Title Co.

by: Julia Rock Engineering Technician III

Date: October 16, 2025

Print Form



ASSESSOR PARCEL NUMBERS:
018–120–016–000 & 018–120–027–000

PROPERTY OWNER / APPLICANT:
ETERNAL PRESERVE HOLDINGS, LLC
6558 LONETREE BOULEVARD
ROCKLIN, CA 95765
(916) 435–3555
ATTN: RAY ZUCKER
rzucker@heronpacific.com

SURVEYOR:
TSD ENGINEERING, INC.
785 ORCHARD DRIVE, #110
FOLSOM, CA 95630
(916) 390–5746
ATTN: JOHN E. KLAMM
jklamm@tsdeng.com

EXISITNG LAND USE:
018–120–016–000: RECREATION
018–120–027–000: VACANT

PROPOSED LAND USE:
018–120–016–000: CONSERVATION CEMETERY
018–120–027–000: VACANT

EXISITNG WATER SOURCE:
WELL (SEE MAP)

PROPOSED WATER SOURCE:
WELL (SEE MAP)

EXISTING SEWER SYSTEM:
SEPTIC (SEE MAP)

PROPOSED SEWER SYSTEM:
SEPTIC (SEE MAP)

LEGEND:

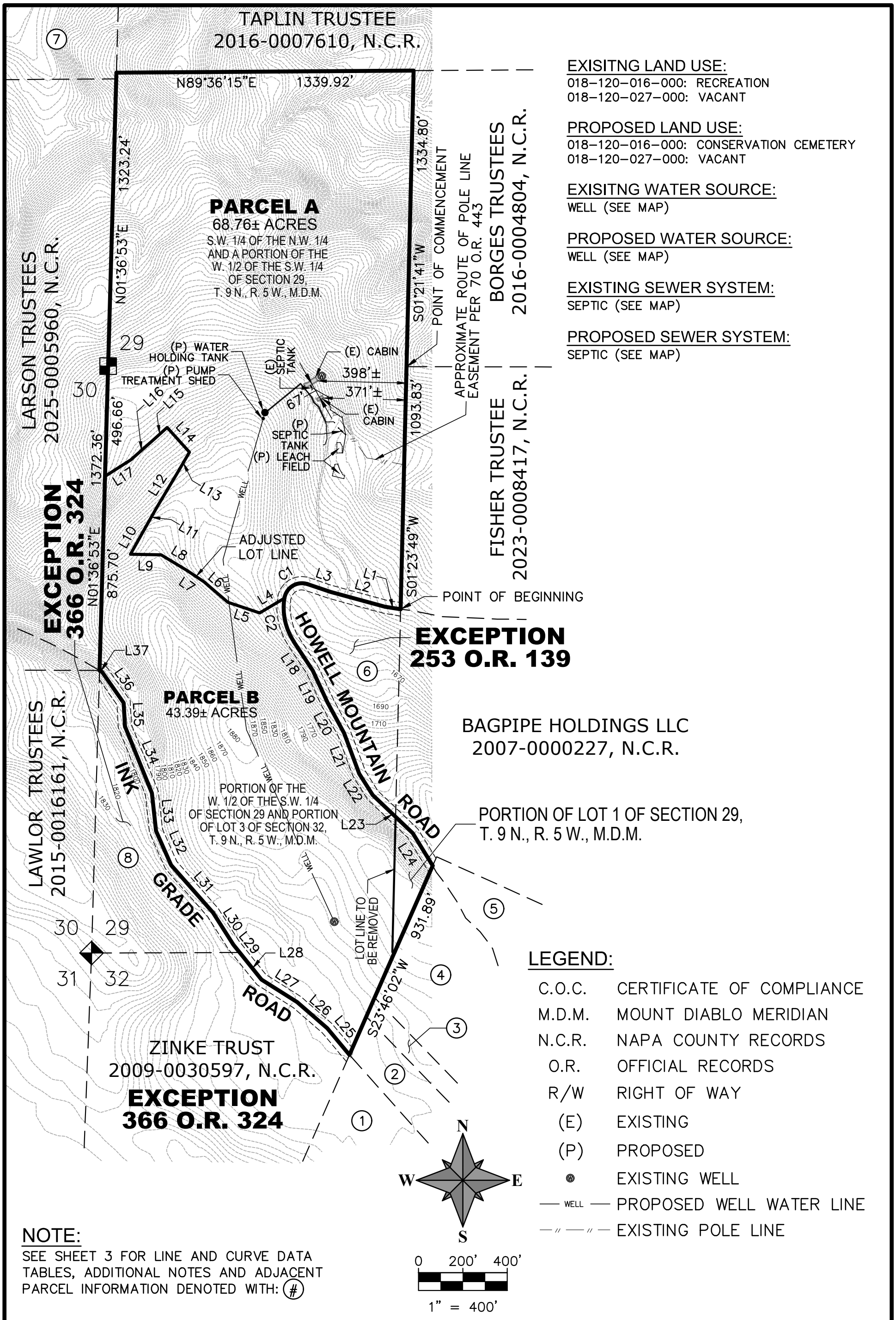
C.O.C.	CERTIFICATE OF COMPLIANCE
M.D.M.	MOUNT DIABLO MERIDIAN
N.C.R.	NAPA COUNTY RECORDS
O.R.	OFFICIAL RECORDS
R/W	RIGHT OF WAY
(E)	EXISTING
(P)	PROPOSED
Ⓦ	EXISTING WELL
— WELL —	PROPOSED WELL WATER LINE
—//—//—	EXISTING POLE LINE

NOTE:
SEE SHEET 3 FOR ADJACENT PARCEL
INFORMATION DENOTED WITH: (#)

785 Orchard Drive, Suite #110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701
TSD ENGINEERING, INC.
expect more.

EXISTING PLOT PLAN
TENTATIVE LOT LINE ADJUSTMENT MAP
PORTIONS OF SECTIONS 29 & 32, T. 9 N., R. 5 W., M.D.M.
COUNTY OF NAPA, STATE OF CALIFORNIA

SCALE: 1" = 400'
DATE: 06/12/2025
SHEET 1 OF 3



EXISITNG LAND USE:
018–120–016–000: RECREATION
018–120–027–000: VACANT

PROPOSED LAND USE:
018–120–016–000: CONSERVATION CEMETERY
018–120–027–000: VACANT

EXISITNG WATER SOURCE:
WELL (SEE MAP)

PROPOSED WATER SOURCE:
WELL (SEE MAP)

EXISTING SEWER SYSTEM:
SEPTIC (SEE MAP)

PROPOSED SEWER SYSTEM:
SEPTIC (SEE MAP)

LEGEND:

C.O.C.	CERTIFICATE OF COMPLIANCE
M.D.M.	MOUNT DIABLO MERIDIAN
N.C.R.	NAPA COUNTY RECORDS
O.R.	OFFICIAL RECORDS
R/W	RIGHT OF WAY
(E)	EXISTING
(P)	PROPOSED
Ⓦ	EXISTING WELL
— WELL —	PROPOSED WELL WATER LINE
—//—//—	EXISTING POLE LINE

NOTE:
SEE SHEET 3 FOR LINE AND CURVE DATA TABLES, ADDITIONAL NOTES AND ADJACENT PARCEL INFORMATION DENOTED WITH: (#)

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Fax: (916) 608-0701
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expect more.

PROPOSED PLOT PLAN
TENTATIVE LOT LINE ADJUSTMENT MAP
PORTIONS OF SECTIONS 29 & 32, T. 9 N., R. 5 W., M.D.M.
COUNTY OF NAPA, STATE OF CALIFORNIA

SCALE: 1" = 400'
DATE: 06/12/2025
SHEET 2 OF 3

LINE TABLE					
LINE #	BEARING	LENGTH	LINE #	BEARING	LENGTH
L1	N80°37'42"W	71.54'	L20	S28°25'18"E	156.75'
L2	N74°53'34"W	253.67'	L21	S20°24'27"E	194.82'
L3	N71°17'44"W	110.45'	L22	S32°11'02"E	113.22'
L4	S59°08'09"W	129.11'	L23	S46°22'02"E	249.98'
L5	N71°14'52"W	150.99'	L24	S31°42'35"E	171.78'
L6	N49°34'21"W	141.26'	L25	N39°58'52"W	156.17'
L7	N56°05'24"W	93.63'	L26	N48°59'15"W	179.78'
L8	N59°02'23"W	135.65'	L27	N57°44'49"W	189.98'
L9	N88°51'51"W	137.61'	L28	N38°43'56"W	130.74'
L10	N29°13'28"E	140.64'	L29	N38°43'56"W	71.49'
L11	N29°13'28"E	102.59'	L30	N32°27'43"W	171.59'
L12	N31°01'52"E	177.12'	L31	N41°26'31"W	285.40'
L13	N30°09'00"E	110.94'	L32	N23°49'39"W	168.49'
L14	N42°09'21"W	150.39'	L33	N06°12'30"W	171.50'
L15	S47°50'39"W	89.90'	L34	N21°59'48"W	324.27'
L16	S48°27'23"W	129.41'	L35	N03°02'45"W	106.30'
L17	S57°36'12"W	137.77'	L36	N34°57'50"W	169.94'
L18	S33°16'01"E	156.59'	L37	N60°20'23"W	13.12'
L19	S24°57'00"E	158.71'			

CURVE TABLE			
CURVE #	RADIUS	DELTA	LENGTH
C1	79.99'	100°07'48"	139.79'
C2	279.97'	41°50'29"	204.45'

ADJACENT PARCELS

1. SOPER
   2020–0001644, N.C.R.
2. HOWELL MOUNTAIN CRU LLC
   2018–0010845, N.C.R.
3. AZEVEDO
   642 O.R. 62, N.C.R.
4. BEGEROW
   1999–0036196, N.C.R.
5. BAGPIPE HOLDINGS LLC
   2007–0000227, N.C.R.
6. CLAY TRUSTEES
   2010–0022232, N.C.R.
7. SALVESTRIN TRUSTEES
   2022–0008365, N.C.R.
8. HAWKINS
   2022–0000025, N.C.R.

NOTE:

1. PARCEL A SHOWN HEREON IS A PORTION OF THE PARCEL DESCRIBED IN THE CERTIFICATE OF COMPLIANCE, RECORDED AS DOCUMENT NO. 2025–0004911, N.C.R.
2. PARCEL B SHOWN HEREON IS A PORTION OF THE PARCEL DESCRIBED IN THE CERTIFICATE OF COMPLIANCE, RECORDED AS DOCUMENT NO. 2025–0004911, N.C.R. AND ALL OF THE PARCEL DESCRIBED IN THE CERTIFICATE OF COMPLIANCE, RECORDED AS DOCUMENT NO. 2025–0003182, N.C.R.
3. THE BASIS OF BEARINGS FOR THE COURSES SHOWN HEREON IS THE RECORD OF SURVEY FILED ON JUNE 11, 2014 IN BOOK 43 OF SURVEYS, AT PAGE 97–98, N.C.R. DISTANCES SHOWN ARE GROUND DISTANCES. TO OBTAIN GRID DISTANCES, DIVIDE DISTANCES SHOWN BY 0.99988819.

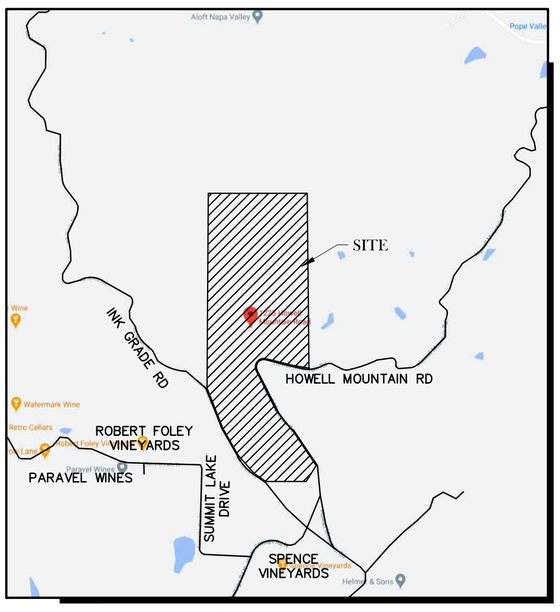
785 Orchard Drive, Suite #110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701
TSD ENGINEERING, INC.
expect more.

TENTATIVE LOT LINE ADJUSTMENT MAP

PORTIONS OF SECTIONS 29 & 32, T. 9 N., R. 5 W., M.D.M.
COUNTY OF NAPA, STATE OF CALIFORNIA

DATE: 06/12/2025

SLOPE MAP
HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



VICINITY MAP
NOT TO SCALE

018-120-003
TAPLIN A RIAZ ETAL

(E) PROPERTY LINE (P)

018-120-017
BORGES FRANK JR & SHERI TR

(E) PROPERTY LINE (P)

018-120-015
LARSON RICHARD A TR

(E) PROPERTY LINE (P)

PARCEL A
69.55 AC

018-120-022
FISHER JOHN C & LOUISE K TR

HOWELL MOUNTAIN RD

(P) LOT LINE ADJUSTMENT

018-120-023
CLAY CLARENCE DON & LISA A TR

018-120-018
TARBERT PROPERTIES LP

PARCEL B
39.75 AC

018-230-006
HAWKINS FRANK M & TRACEY A

(E) PROPERTY LINE (P)

018-120-027
ETERNAL PRESERVE HOLDINGS LLC

024-061-002
AZEVEDO JOHN A JR &VERNIE R

018-120-025
ZINKE LENORA ANN & ERNEST EDWARD TR

024-061-003
HOWELL MOUNTAIN CRU LLC

024-061-001
BEGEROW JON W & ERIN E

N
W E
S

scale: 1"=150'

150 0 75 150 300

LEGEND:

- SLOPE: 0% - 30%
- SLOPE: 31% - 49%
- SLOPE: 50% ≤
- INTERMENT AREA (TOTAL: 16.19±)
- PROPOSED ACCESS TRAIL CORRIDOR
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)

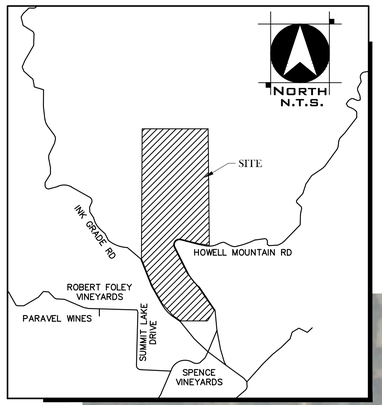
HOWELL MOUNTAIN CEMETERY
SLOPE MAP
MAY 13, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 1/1

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PRELIMINARY OVERALL SITE PLAN
HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



VICINITY MAP
NOT TO SCALE

PROJECT SUMMARY

OWNER/DEVELOPER/APPLICANT
ETERNAL PRESERVE HOLDINGS, LLC.
3301 INDUSTRIAL AVE
ROCKLIN, CA
95765

ENGINEER
TSD ENGINEERING, INC
785 ORCHARD DRIVE
FOLSOM, CA 95630
ATTN: CASEY FEICKERT
cfeickert@tsdeng.com

PROPOSED USE
GREEN BURIAL CEMETERY

ZONING
AW (AGRICULTURAL WATERSHED)

SCALE
1" = 150'

CONTOUR INTERVAL
2' CONTOUR INTERVAL

TOPOGRAPHY
AERIAL TOPOGRAPHIC SURVEY
CONDUCTED JULY, 2017

ASSESSORS PARCEL NO
018-120-016, 018-120-027

AREA
PARCEL A = 69.55 AC
PARCEL B = 39.75 AC
TOTAL = 109.300 AC

NUMBER OF PARCELS
(2) TWO

INTERMENT AREA
TOTAL = 16.19 AC

WATER SUPPLY
PRIVATE WELL

SEWAGE DISPOSAL
PRIVATE SEPTIC SYSTEM

FIRE PROTECTION
NAPA COUNTY FIRE DEPARTMENT

PARK DISTRICT
NAPA COUNTY

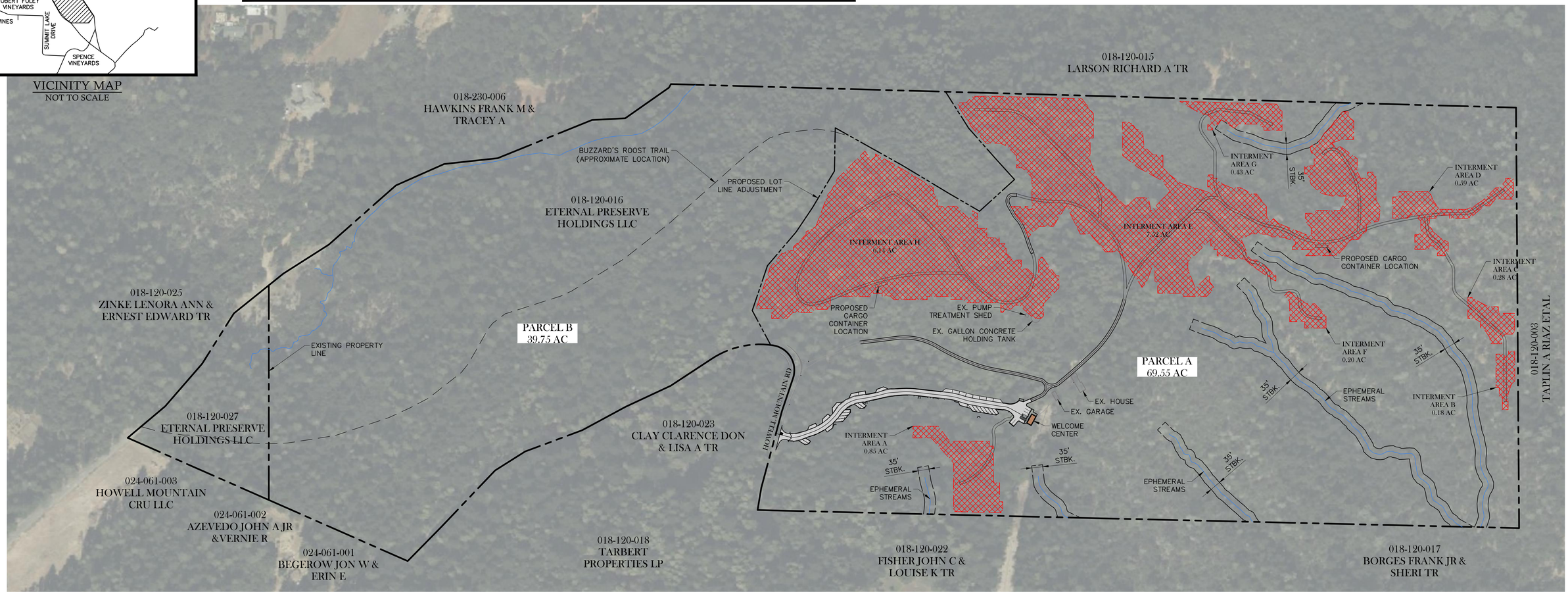
SCHOOL DISTRICT
HOWELL MOUNTAIN ELEMENTARY SCHOOL DISTRICT

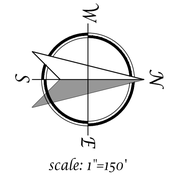
GAS & ELECTRIC
PG&E

TELEPHONE
AT&T

PARKING SUMMARY

STANDARD PARKING STALL (9'x20'):	37
ACCESSIBILE PARKING (9'x20'):	1
TOTAL STALLS:	38





scale: 1"=150'

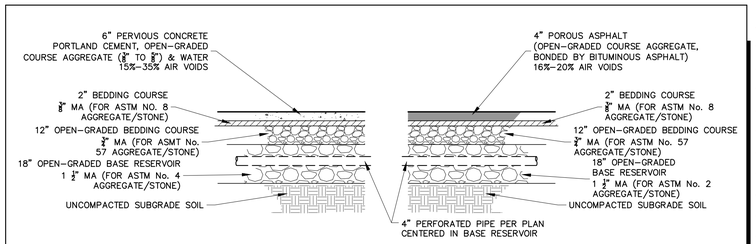
150 0 75 150 300

SHEET 1/12

PRELIMINARY OVERALL SITE PLAN
APRIL 1, 2025

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expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

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A
-

POROUS PAVEMENT DETAIL

NOT TO SCALE

PRELIMINARY SITE PLAN
HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

PROPOSED CARGO CONTAINER LOCATION

PROPOSED ACCESS TRAIL CORRIDOR

EX. PUMP TREATMENT SHED TO BE REMOVED

EX. GALLON CONCRETE HOLDING TANK TO BE REMOVED

PROPOSED "NO PARKING ANY TIME" SIGN R-26 (CA)

PROPOSED TRAIL CORRIDOR TO CONNECT TO EXISTING TRAIL CORRIDOR

EXISTING TRAIL CORRIDOR

ACCESS TRAIL TO BE USED BY MAINTENANCE PERSONNEL AND CALFIRE ONLY. NO PUBLIC ACCESS.

HOWELL MOUNTAIN RD

EXISTING DRIVEWAY

PROVIDE 1' SHOULDER AT LOCATIONS WHERE THERE IS NO RETAINING WALL

54" WROUGHT IRON FENCE (TYP)

WELL ACCESS ALONG THIS PROPOSED TRAIL CORRIDOR

EX. HOUSE

EX. GARAGE

FIRE HYDRANT

UNDERGROUND WATER TANK

WELCOME CENTER

RESERVE DISPERSAL FIELD

PROPOSED WELL LOCATION

PUMP TREATMENT SHED (UNDER SEPARATE PERMIT)

SEPTIC TANK

PRIMARY LEACH FIELD
100' LINE (1)
& 75' LINES (2)
SPACED AT 12'

PROPOSED GATE

SITE & PAVEMENT LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

- POROUS PAVEMENT (STRUCTURAL SECTION WILL SUPPORT LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS) [DRIVEWAY & PARKING STALLS] — A/2
- 4" PCC (2,500 PSI) ON 6" CLASS II AB W/ #3 REBAR 24" O.C. EACH WAY [SIDEWALK & ACCESSIBLE PARKING STALLS]
- CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.
- EXISTING DRIVEWAY
- DRIVEWAY & PARKING STALLS PROPOSED TO BE IMPROVED

PARKING SUMMARY

STANDARD PARKING STALL (9'x20'):	37
ACCESSIBILE PARKING (9'x20'):	1
TOTAL STALLS:	38

N W S E

scale: 1"=30'

30 0 15 30 60

PRELIMINARY SITE PLAN
APRIL 1, 2025

SHEET 2/12

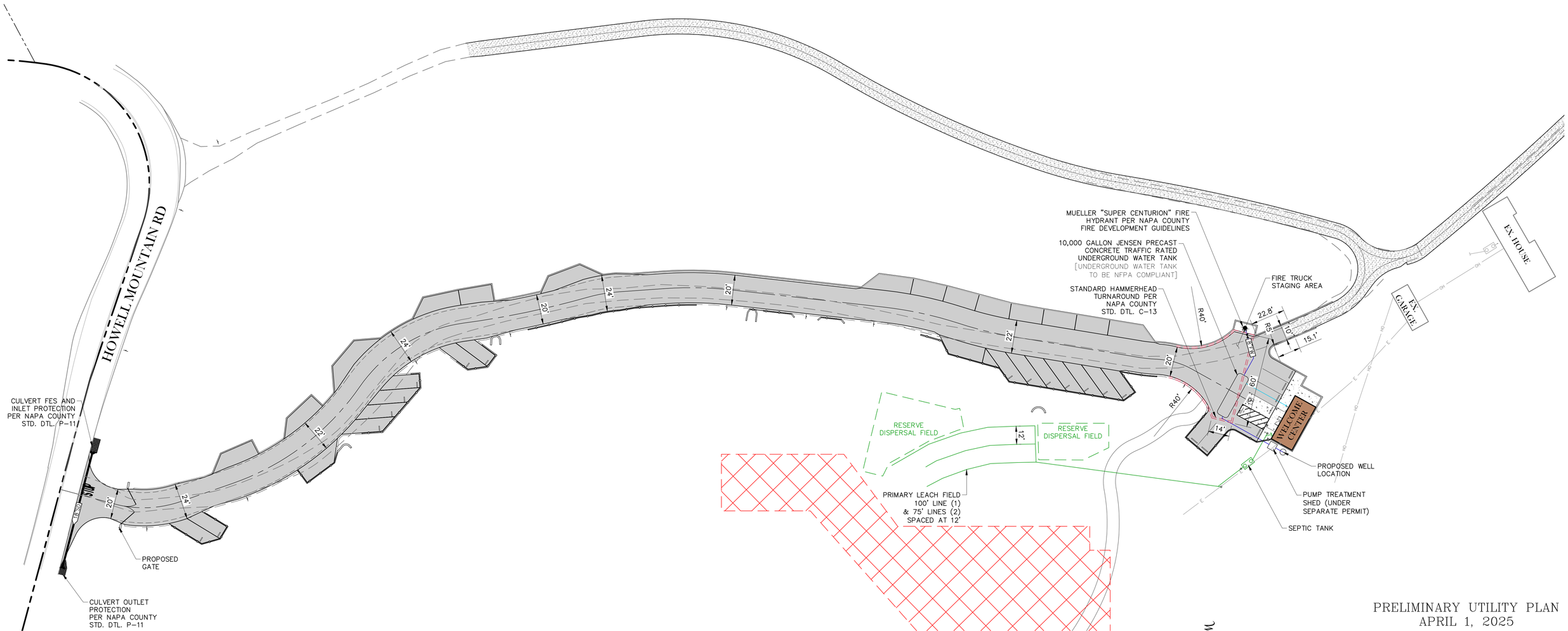
TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

P:\Projects\408-003\02 DWG\B- Planning\PIC\2_Preliminary Site Plan.dwg, Intent 3, 15:03:55, 04-01-25

PRELIMINARY UTILITY PLAN

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



PRELIMINARY UTILITY PLAN
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

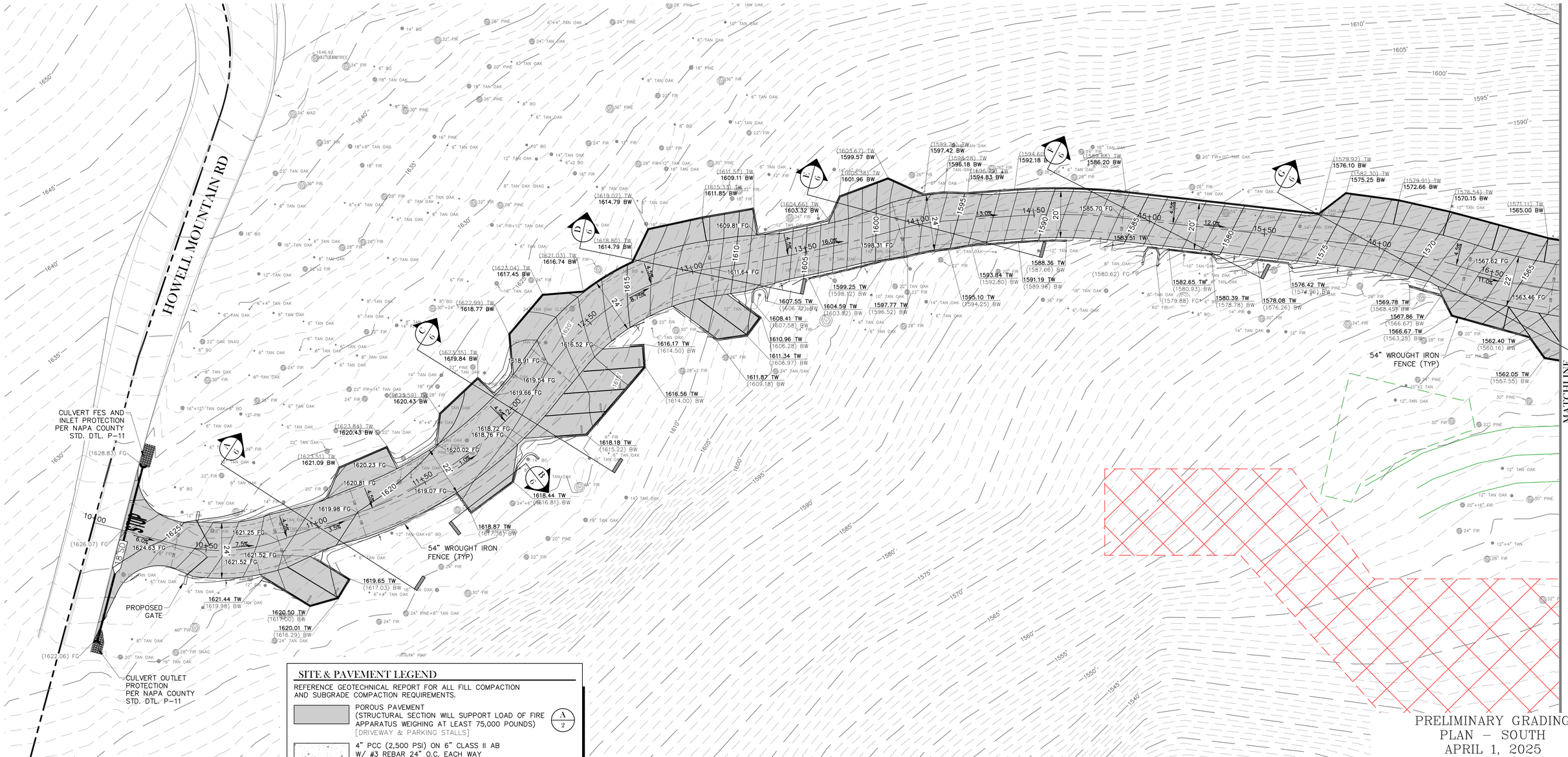
SHEET 3/12

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PRELIMINARY GRADING PLAN - SOUTH

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



SITE & PAVEMENT LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

- POROUS PAVEMENT (STRUCTURAL SECTION WILL SUPPORT LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS) [DRIVEWAY & PARKING STALLS] — A/2
- 4" PCC (2,500 PSI) ON 6" CLASS II AB W/ #3 REBAR 24" O.C. EACH WAY [SIDEWALK & ACCESSIBLE PARKING STALLS]
- CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.
- EXISTING DRIVEWAY
- DRIVEWAY & PARKING STALLS PROPOSED TO BE IMPROVED
- —170— EXISTING CONTOUR (MAJOR)
- —168— EXISTING CONTOUR (MINOR)
- 170 PROPOSED CONTOUR (MAJOR)
- 168 PROPOSED CONTOUR (MINOR)

W N S E

scale: 1"=20'

20 0 10 20 40

EARTHWORK CALCULATIONS

(FOLLOWING NUMBERS ARE FOR PERMITTING PURPOSES ONLY CONTRACTOR IS RESPONSIBLE FOR THEIR OWN EARTH WORK QUANTITIES)

CUT: ±4,239 CU.YD.
FILL: ±717 CU.YD.
NET: ±3,522 CU.YD. (EXPORT)

PRIOR TO SITE GRADING; CONTRACTOR SHALL PROVIDE COUNTY INSPECTOR THE LOCATION OF THE IMPORT (OR EXPORT) SITE AND THE ASSOCIATED GRADING PERMIT FOR THE CORRESPONDING SITE.

PARKING SUMMARY

STANDARD PARKING STALL (9'x20'):	37
ACCESSIBILE PARKING (9'x20'):	1
TOTAL STALLS:	38

NOTES

TOPOGRAPHIC DATA IS BASED A FIELD SURVEY BY RSA+ IN NOVEMBER 2017 AND AMENDED IN JANUARY 2018 COMBINED WITH CONTOUR DATA FROM NAPA COUNTY GIS. CONTOURS SHOWN AT ONE FOOT (1') INTERVALS.

PRELIMINARY GRADING PLAN – SOUTH
APRIL 1, 2025

SHEET 4/12

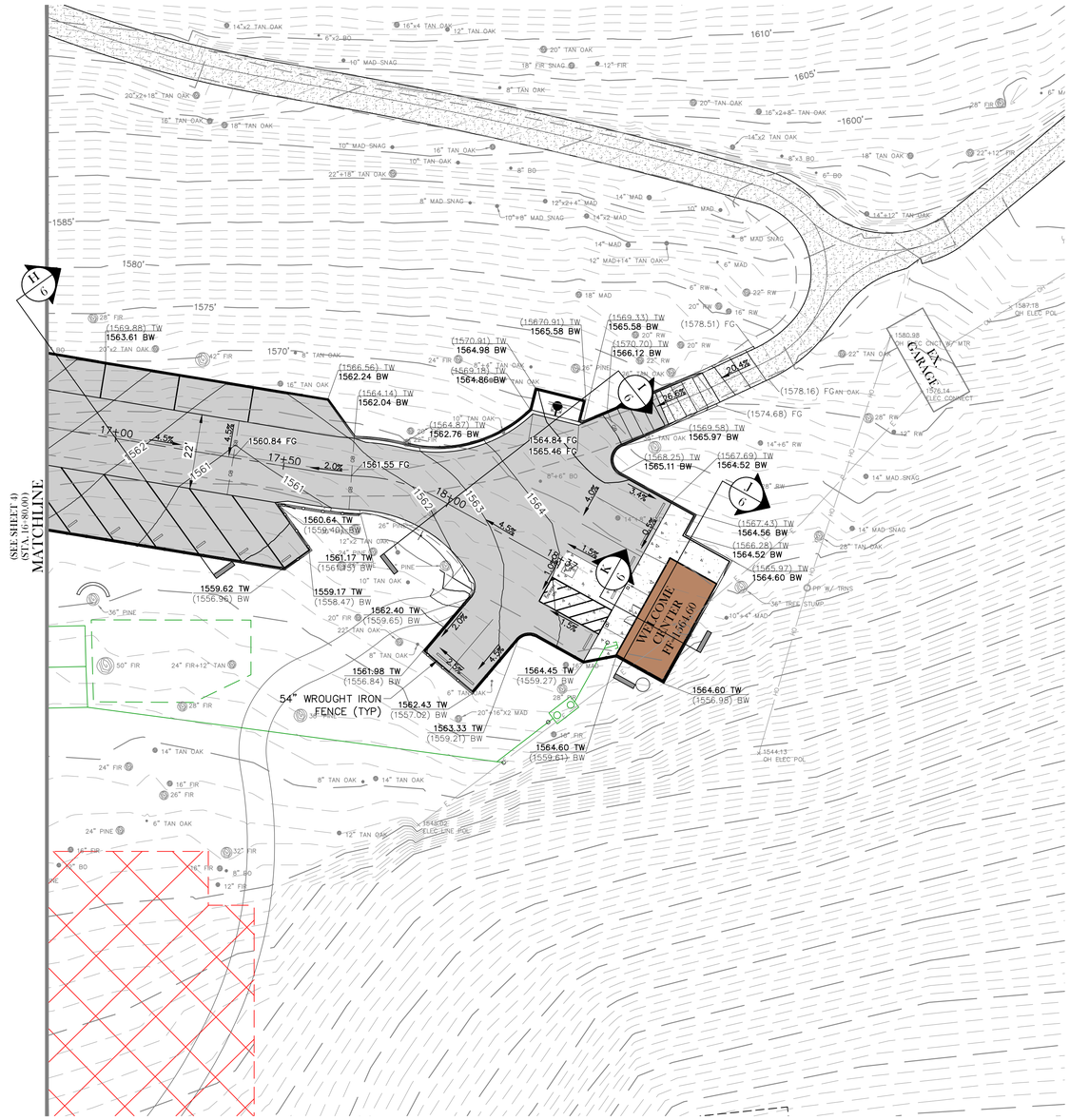
TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

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PRELIMINARY GRADING PLAN - NORTH

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



SITE & PAVEMENT LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

- POROUS PAVEMENT (STRUCTURAL SECTION WILL SUPPORT LOAD OF FIRE APPARATUS WEIGHING AT LEAST 75,000 POUNDS) [DRIVEWAY & PARKING STALLS] — A/2
- 4" PCC (2,500 PSI) ON 6" CLASS II AB W/ #3 REBAR 24" O.C. EACH WAY [SIDEWALK & ACCESSIBLE PARKING STALLS]
- CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.
- EXISTING DRIVEWAY
- DRIVEWAY & PARKING STALLS PROPOSED TO BE IMPROVED
- —170— EXISTING CONTOUR (MAJOR)
- —168— EXISTING CONTOUR (MINOR)
- 170 PROPOSED CONTOUR (MAJOR)
- 168 PROPOSED CONTOUR (MINOR)

PARKING SUMMARY

STANDARD PARKING STALL (9'x20'):	37
ACCESSIBILE PARKING (9'x20'):	1
TOTAL STALLS:	38

NOTES

TOPOGRAPHIC DATA IS BASED A FIELD SURVEY BY RSA+ IN NOVEMBER 2017 AND AMENDED IN JANUARY 2018 COMBINED WITH CONTOUR DATA FROM NAPA COUNTY GIS. CONTOURS SHOWN AT ONE FOOT (1') INTERVALS.

W N S E

scale: 1"=20'

20 0 10 20 40

PRELIMINARY GRADING PLAN – NORTH
APRIL 1, 2025

SHEET 5/12

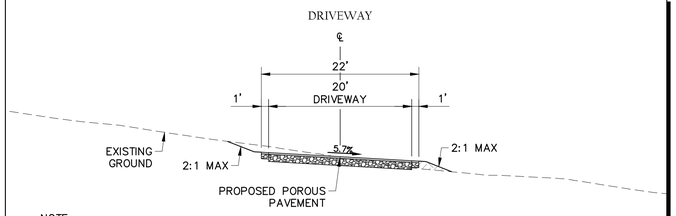
TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
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PRELIMINARY SECTIONS

HOWELL MOUNTAIN CEMETERY

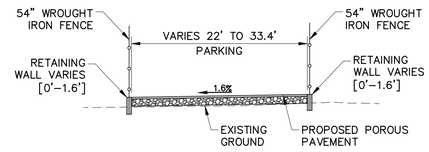
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 13.6%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

A - DRIVEWAY SECTION

PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'

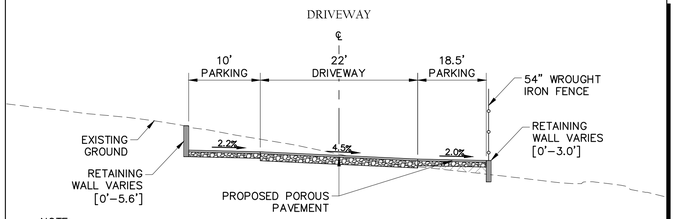


NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 2.2%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

B - PARALLEL PARKING SECTION

PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'

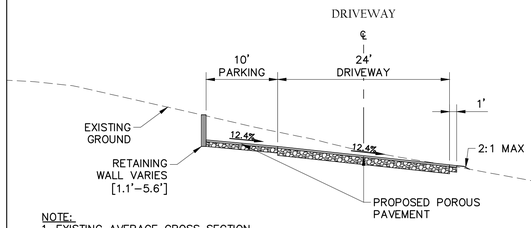
NOTE:
AVERAGE CROSS SLOPE OF THE DRIVEWAY, EXCLUDING THOSE MEASURED AT LESS THAN 5%, IS 10.2%.



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 16.0%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

C - DRIVEWAY SECTION

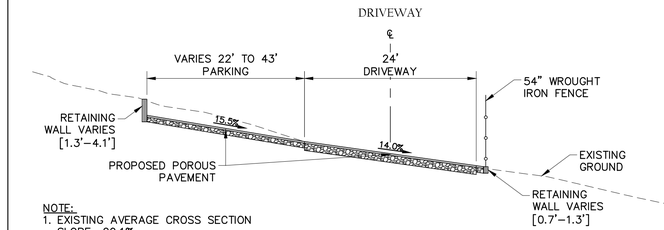
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 20.3%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

D - DRIVEWAY SECTION

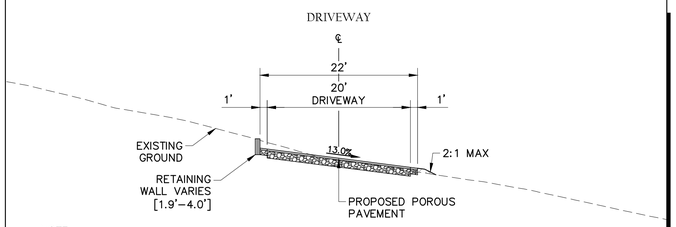
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 20.1%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

E - DRIVEWAY SECTION

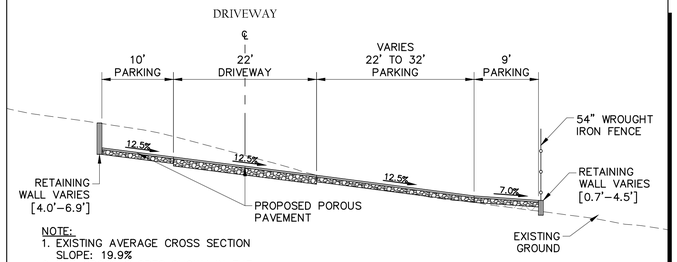
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 19.9%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

F - DRIVEWAY SECTION

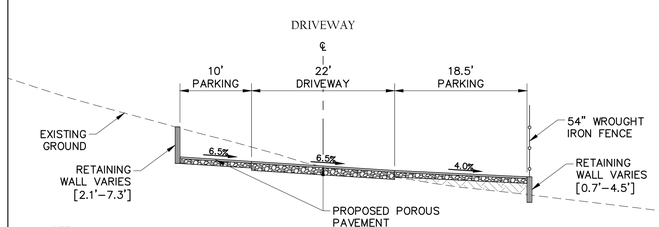
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 19.9%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

G - DRIVEWAY SECTION

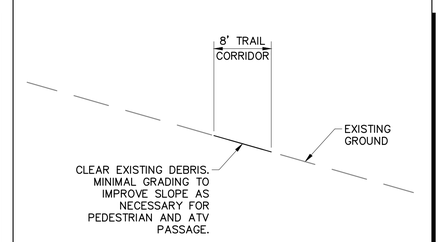
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 19.2%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

H - BUILDING PADS SECTION

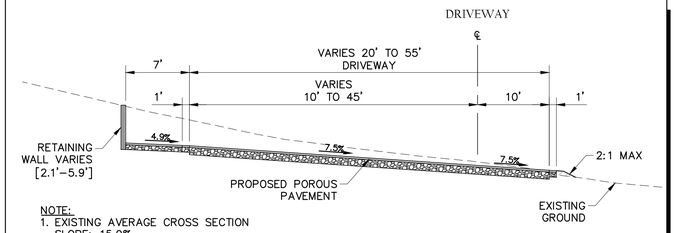
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTES:
1. MAXIMUM CROSS SLOPE 15%, MAXIMUM LONGITUDINAL SLOPE 28%, 12.5' VERTICAL CLEARANCE REQUIRED.

L - WALKING TRAIL TYP. SECTION

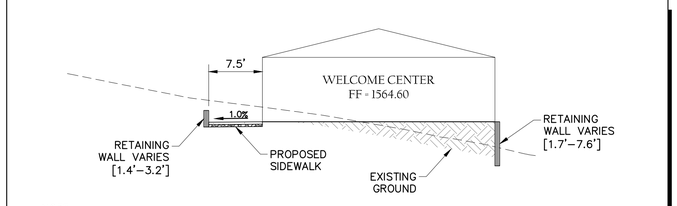
PRIVATE ONSITE USE ONLY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 15.9%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

I - OFFICE PAD SECTION

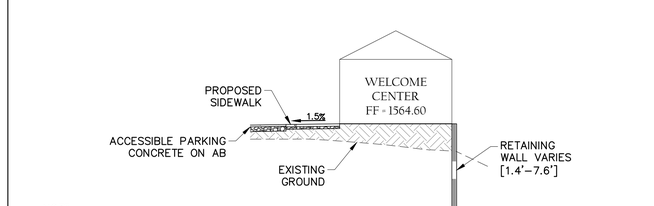
PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 16.3%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

J - BUILDING PAD SECTION

PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'



NOTE:
1. EXISTING AVERAGE CROSS SECTION SLOPE: 6.0%
2. THE CROSS SLOPES SHOWN IN THE CROSS SECTION IS THE AVERAGE SLOPE FOR THE DESIGNATED AREA.

K - BUILDING PAD SECTION

PRIVATE COMMERCIAL DRIVEWAY
SCALE: 1" = 10'

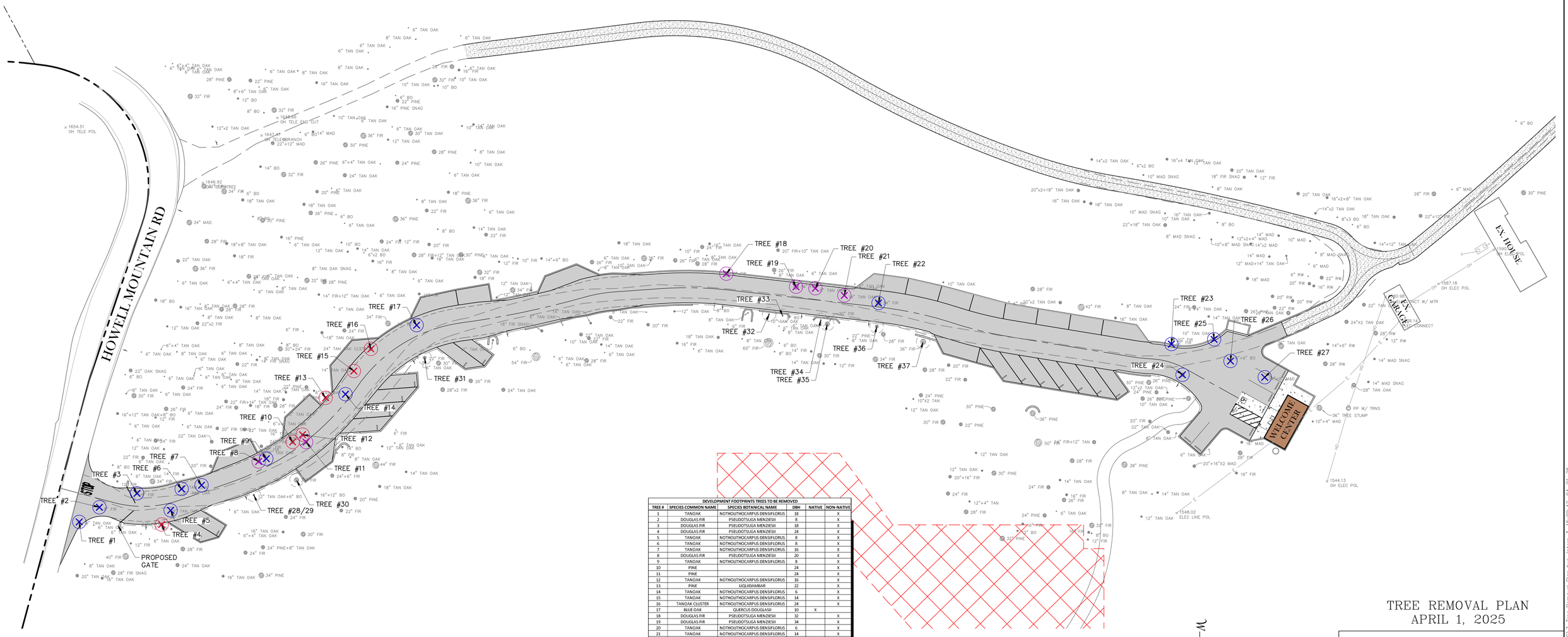
PRELIMINARY SECTIONS
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 6/12

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TREE REMOVAL PLAN
HOWELL MOUNTAIN CEMETERY
1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA



DEVELOPMENT FOOTPRINTS TREES TO BE REMOVED

TREE #	SPECIES COMMON NAME	SPECIES BOTANICAL NAME	DBH	NATIVE	NON-NATIVE
1	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	18		X
2	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	8		X
3	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	18		X
4	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	24		X
5	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	8		X
6	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	8		X
7	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	16		X
8	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	20		X
9	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	8		X
10	PINE		24		X
11	PINE		24		X
12	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	16		X
13	PINE	LIQUIDAMBAR	22		X
14	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	6		X
15	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	14		X
16	TANOAK CLUSTER	NOTHOLITHOCARPUS DENSIFLORUS	24		X
17	BLUE OAK	QUERCUS DOUGLASII	10	X	
18	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	32		X
19	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	34		X
20	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	6		X
21	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	14		X
22	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	34		X
23	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	22		X
24	PINE		26		X
25	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	10		X
26	BLUE OAK	QUERCUS DOUGLASII	8+6	X	
27	MADRONE	ARBUTUS MENZIESII	14+8		X

DEVELOPMENT FOOTPRINT TREES TO BE PRESERVED

TREE #	SPECIES COMMON NAME	SPECIES BOTANICAL NAME	DBH	NATIVE	NON-NATIVE
28	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	12		X
29	BLUE OAK	QUERCUS DOUGLASII	6	X	
30	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	32		X
31	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	22		X
32	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	10		X
33	BLUE OAK	QUERCUS DOUGLASII	8	X	
34	TANOAK	NOTHOLITHOCARPUS DENSIFLORUS	6		X
35	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	30		X
36	PINE		22		X
37	PINE		36		X

TREE SUMMARY

- TREES TO BE PROTECTED (10)
- BUTLER APPROVED TREES TO BE REMOVED (15)
- ADD. BUTLER APPROVED TREES TO BE REMOVED (6)
- ADDITIONAL TREES TO BE REMOVED (6)

scale: 1"=30'

30 0 15 30 60

TREE REMOVAL PLAN
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 7/12

P:\Projects\408-003\02 DWG\B- Planning\Fig\7_Tree Removal Plan.dwg, Intern 3, 15:09:42, 04-01-25

PRELIMINARY OVERALL ACCESS TRAIL CORRIDOR PLAN

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

SITE LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

PROPOSED ACCESS TRAIL CORRIDOR

CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.

AREAS WITH SLOPE OVER 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.

TRAIL CORRIDOR EARTHWORK CALCULATIONS

(FOLLOWING NUMBERS ARE FOR PERMITTING PURPOSES ONLY CONTRACTOR IS RESPONSIBLE FOR THEIR OWN EARTH WORK QUANTITIES)
CUT: ±900 CU.YD.
FILL: ±2,650 CU.YD.
NET: ±1,750 CU.YD. (IMPORT)

PRIOR TO SITE GRADING; CONTRACTOR SHALL PROVIDE COUNTY INSPECTOR THE LOCATION OF THE IMPORT (OR EXPORT) SITE AND THE ASSOCIATED GRADING PERMIT FOR THE CORRESPONDING SITE.

018-120-015
LARSON RICHARD A TR

PROJECT BOUNDARY (P)

PROPOSED LOT LINE ADJUSTMENT

SHEET 9

SHEET 10

SHEET 11

SHEET 12

PARCEL B

PARCEL A

INTERMENT AREA G 0.43 AC

INTERMENT AREA E 7.52 AC

INTERMENT AREA H 6.14 AC

INTERMENT AREA D 0.59 AC

INTERMENT AREA C 0.28 AC

INTERMENT AREA F 0.20 AC

INTERMENT AREA B 0.18 AC

INTERMENT AREA A 0.85 AC

018-120-003
TAPLIN A RIAZ ETAL

EX. HOUSE

EX. GARAGE

WELCOME CENTER

HOWELL MOUNTAIN RD

AREAS WITH SLOPE LESS THAN 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.

018-120-022
FISHER JOHN C & LOUISE K TR

018-120-017
BORGES FRANK JR & SHERI TR

W S N E

scale: 1"=90'

90 0 45 90 180

PRELIMINARY OVERALL ACCESS TRAIL CORRIDOR PLAN
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 8/12

P:\Projects\408-003\02 DWG\B- Planning\FIG\B_Preliminary Access Trail Corridor Plan.dwg, Fernando Ochoa, 16:48:25, 04-28-25

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN - SWC

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

SITE LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

PROPOSED ACCESS TRAIL CORRIDOR

CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.

AREAS WITH SLOPE OVER 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.

018-120-015
LARSON RICHARD A TR

PROJECT BOUNDARY (P)

BUZZARD'S ROOST TRAIL (APPROXIMATE LOCATION)

PARCEL B

PROPOSED LOT LINE ADJUSTMENT

INTERMENT AREA H 6.14 AC

INTERMENT AREA E 7.52 AC

PROPOSED ACCESS TRAIL CORRIDOR

PROPOSED ACCESS TRAIL CORRIDOR

PROPOSED CARGO CONTAINER LOCATION

PARCEL A

EX. GALLON CONCRETE HOLDING TANK TO BE REMOVED

EX. PUMP TREATMENT SHED TO BE REMOVED

MATCH LINE (SEE SHEET 10)

MATCH LINE (SEE SHEET 12)

W N S E

scale: 1"=50'

50 0 25 50 100

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN – SWC
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 9/12

P:\Projects\408-003\02 DWG\B- Planning\VIC\8_Preliminary Access Trail Corridor Plan.dwg, Fernando Ochoa, 16:48:36, 04-28-25

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN - NWC

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

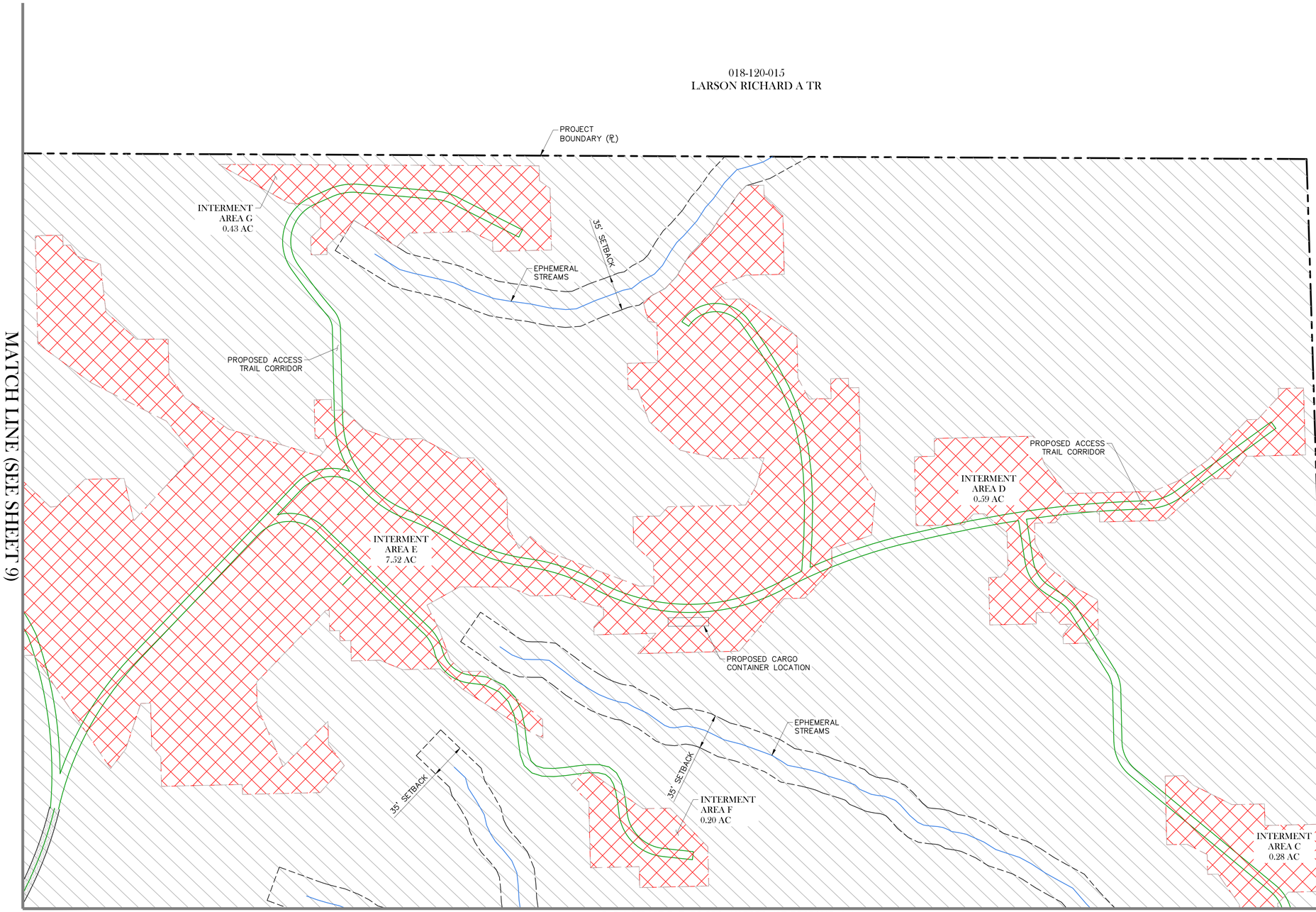
SITE LEGEND

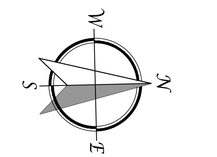
REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

PROPOSED ACCESS TRAIL CORRIDOR

CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.

AREAS WITH SLOPE OVER 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.





scale: 1"=50'

50 0 25 50 100

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN – NWC
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 10/12

P:\Projects\408-003\02 DWG\B- Planning\F\G\B_Preliminary Access Trail Corridor Plan.dwg, Fernando Ochoa, 16:48:51, 04-28-25

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN - NEC

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

SITE LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

PROPOSED ACCESS TRAIL CORRIDOR

CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.

AREAS WITH SLOPE OVER 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.

MATCH LINE (SEE SHEET 10)

MATCH LINE (SEE SHEET 12)

INTERMENT AREA F 0.20 AC

EPHEMERAL STREAMS

35' SETBACK

PROPOSED ACCESS TRAIL CORRIDOR

INTERMENT AREA C 0.28 AC

35' SETBACK

EPHEMERAL STREAMS

PROJECT BOUNDARY (P.L.)

INTERMENT AREA B 0.18 AC

018-120-003
TAPLIN A RIAZ ETAL

35' SETBACK

EPHEMERAL STREAMS

AREA WITH SLOPE LESS THAN 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.

PROJECT BOUNDARY (P.L.)

018-120-017
BORGES FRANK JR & SHERI TR

W
S
N
E

scale: 1"=50'

50 0 25 50 100

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN – NEC
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 11/12

P:\Projects\408-003\02 DWG\B- Planning\Vic\8_Preliminary Access Trail Corridor Plan.dwg, Fernando Ochoa, 16:48:57, 04-28-25

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN - SEC

HOWELL MOUNTAIN CEMETERY

1225 HOWELL MOUNTAIN ROAD
NAPA COUNTY, CA

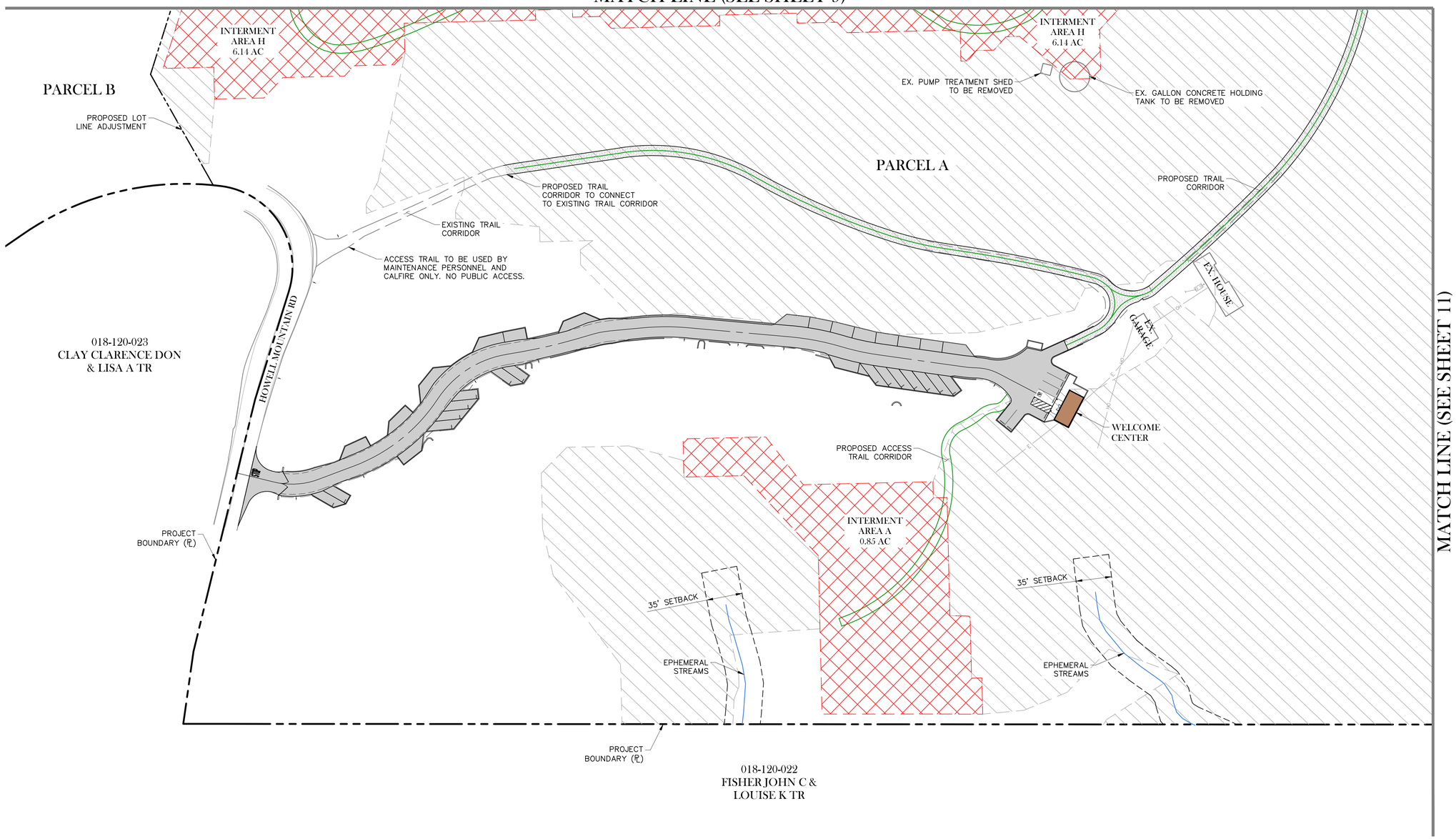
SITE LEGEND

REFERENCE GEOTECHNICAL REPORT FOR ALL FILL COMPACTION AND SUBGRADE COMPACTION REQUIREMENTS.

PROPOSED ACCESS TRAIL CORRIDOR

CLEAR EXISTING DEBRIS. MINIMAL GRADING TO IMPROVE SLOPE AS NECESSARY FOR PEDESTRIAN AND ATV PASSAGE.

AREAS WITH SLOPE OVER 30% PER ANAMOSA INC. – VINEYARD SOIL TECHNOLOGIES SLOPE MAP.



W
S
N
E

scale: 1"=50'

50 0 25 50 100

PRELIMINARY ACCESS TRAIL CORRIDOR PLAN – SEC
APRIL 1, 2025

TSD ENGINEERING, INC.
expect more.
785 Orchard Drive, Suite 110
Folsom, CA 95630
Phone: (916) 608-0707
Fax: (916) 608-0701

SHEET 12/12

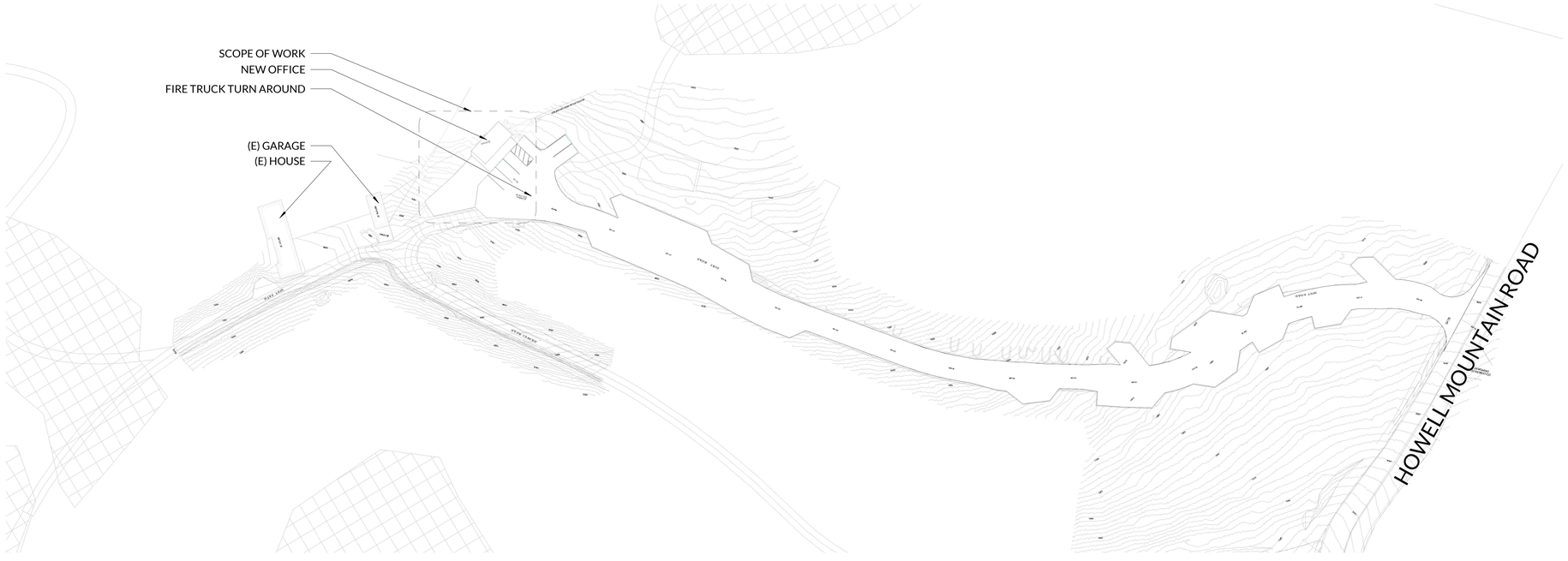
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HOWELL MOUNTAIN CEMETERY

NEW OFFICE

1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA 94508





1 MAGNIFIED SITE PLAN
SCALE: 1" = 50'-0"

1"=50'-0"
0' 10' 20' 30' 50' 100' 150'
90.00°
N

INDEX OF DRAWINGS

01 CIVIL	
1/8	PRIMARY OVERALL SITE PLAN
2/8	PRELIMINARY SITE PLAN
3/8	PRELIMINARY UTILITY PLAN
4/8	PRELIMINARY GRADING PLAN
5/8	PRELIMINARY GRADING PLAN
6/8	PRELIMINARY SECTIONS
7/8	TREE REMOVAL PLAN
ARCHITECTURAL	
A1	COVER SHEET
A2	PARTITION PLANS
A3	EXTERIOR ELEVATIONS
A4	PERSPECTIVES

PROJECT DIRECTORY

OWNER:
ETERNAL PRESERE HOLDINGS, LLC.
3301 INDUSTRIAL AVENUE
ROCKLIN, CA 95765
PHONE: (916) 435-3555
CONTACT: Ray Zucker
EMAIL: rzucker@heronpacific.com

ARCHITECT:
DOMUM
6532 LONETREE BLVD., SUITE 102
ROCKLIN, CA 95765
PHONE: (888) 352-2721
CONTACT: Tim Alatorre
EMAIL: tim@domum.design

CIVIL ENGINEER:
TSD ENGINEERING, INC.
785 ORCHARD DRIVE SUITE 110
FOLSOM, CA 95630
PHONE: (916) 608-0707 x 103
CONTACT: Casey Feickert
EMAIL: cfeickert@tsdeng.com

STRUCTURAL ENGINEER:

PROJECT INFORMATION

PROJECT SUMMARY:

NEW CONCRETE OFFICE WITH EXTERIOR ACCESS BATHROOMS, AND CUSTOMER AND VISITOR PARKING FOR GREEN BURIAL CEMETERY.

AREA SUMMARY

PROPOSED BUILDING AREA

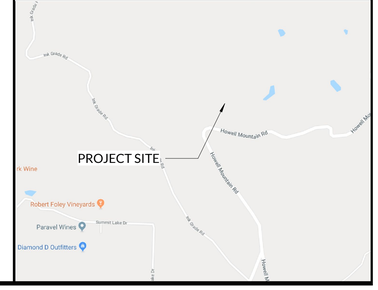
OFFICE	398 SF
RESTROOMS	119 SF
	517 SF
TOTAL AREA	517 SF

ZONING:	F-B-X 20 AC. MIN.
TOTAL NEW CONDITIONED:	517 SF
LOT COVERAGE RATIO	517 SF /12,000 SF = 0.05
FLOOR AREA RATIO	517 SF /12,000 SF = 0.05

F.A.R.
ALLOWABLE = 8560 SF X 0.45 = 3,852 SF
PROPOSED = 517 SF

BUILDING COVERAGE
ALLOWABLE = 2,568 SF
PROPOSED = 517 SF

VICINITY MAP



DOMUM
info@domum.design 888-352-ARC1
6532 Lonetree Blvd. Suite 102, Rocklin, CA 95765

1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA 94508
018-120-027

HOWELL MOUNTAIN CEMETERY
NEW OFFICE

Proj. No: 2019.479
Drawn By: CKI
Reviewed TEA

Issue / Revision Schedule:

No.	Date	Description

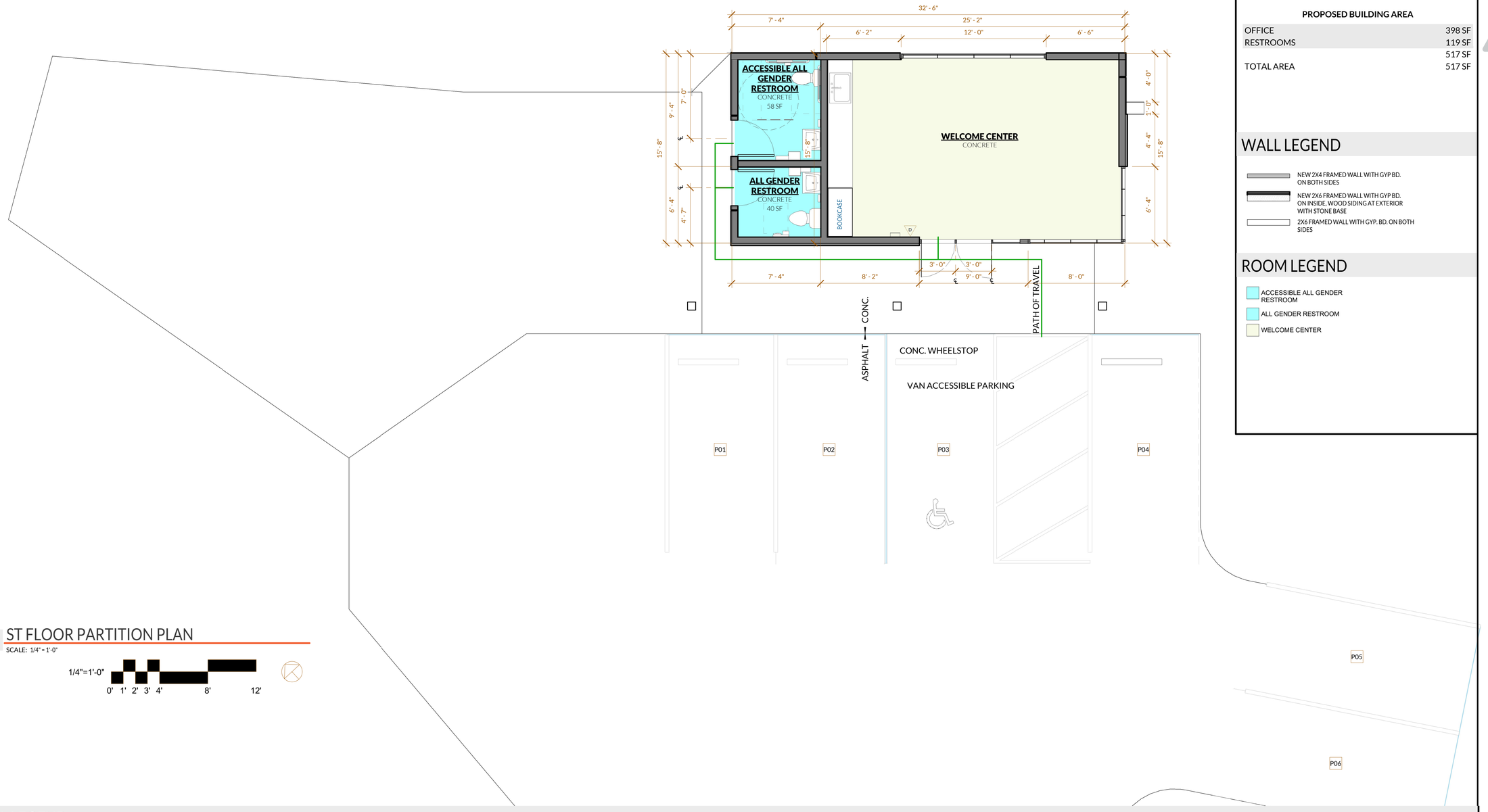
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COVER SHEET

A1

12/6/2022 1:14:55 PM

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1 ST FLOOR PARTITION PLAN

SCALE: 1/4" = 1'-0"

1/4"=1'-0"

0' 1' 2' 3' 4' 8' 12'

AREA SUMMARY

PROPOSED BUILDING AREA

OFFICE	398 SF
RESTROOMS	119 SF
	517 SF
TOTAL AREA	517 SF

WALL LEGEND

- NEW 2X4 FRAMED WALL WITH GYP BD. ON BOTH SIDES
- NEW 2X6 FRAMED WALL WITH GYP BD. ON INSIDE, WOOD SIDING AT EXTERIOR WITH STONE BASE
- 2X6 FRAMED WALL WITH GYP. BD. ON BOTH SIDES

ROOM LEGEND

- ACCESSIBLE ALL GENDER RESTROOM
- ALL GENDER RESTROOM
- WELCOME CENTER

MATERIAL LEGEND



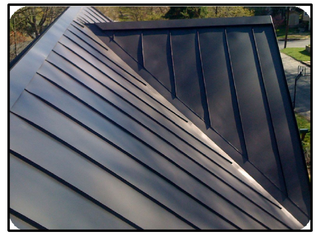
M4 - TRIM
- CHARCOAL GRAY



M3 - BODY
CONCRETE TILT UP



M2 - ACCENT
EL DORADO STONE - STONE VENEER
CLIFFSTONE - WHITEBARK OR BANFF SPRINGS



M1 - ROOFING
STANDING SEAM METAL ROOF
P1 - CHARCOAL GRAY

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018-120-027

HOWELL MOUNTAIN CEMETERY NEW OFFICE

Proj. No: 2019.479
Drawn By: CKI
Reviewed TEA

Issue / Revision Schedule:

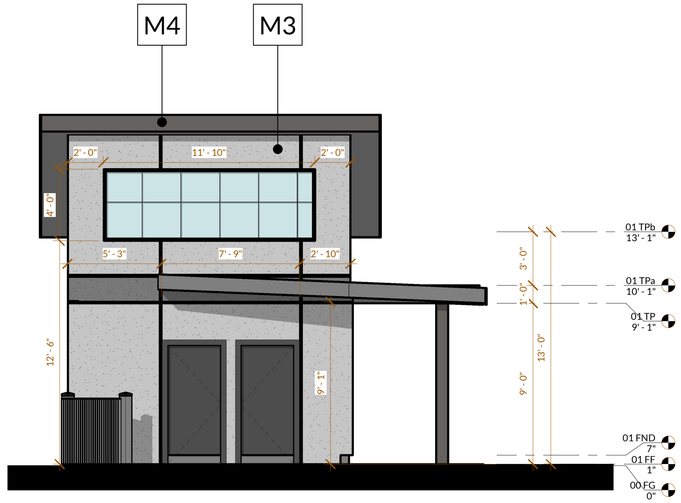
No.	Date	Description

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PARTITION PLANS

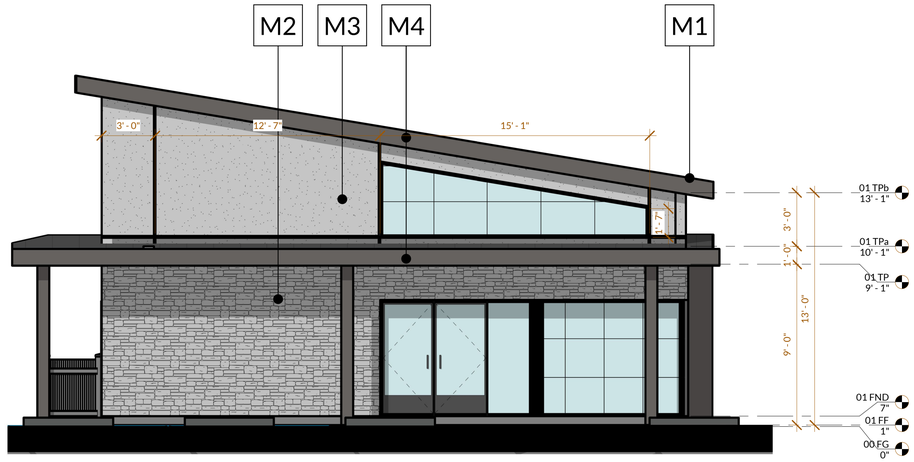
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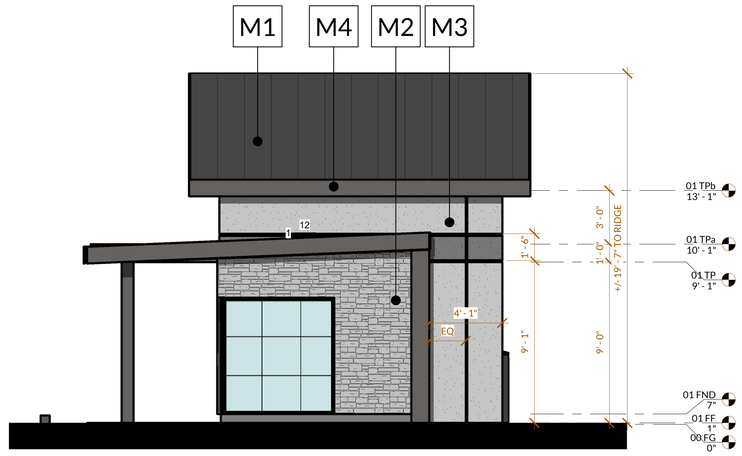
3 ELEVATION - WEST

SCALE: 1/4" = 1'-0"



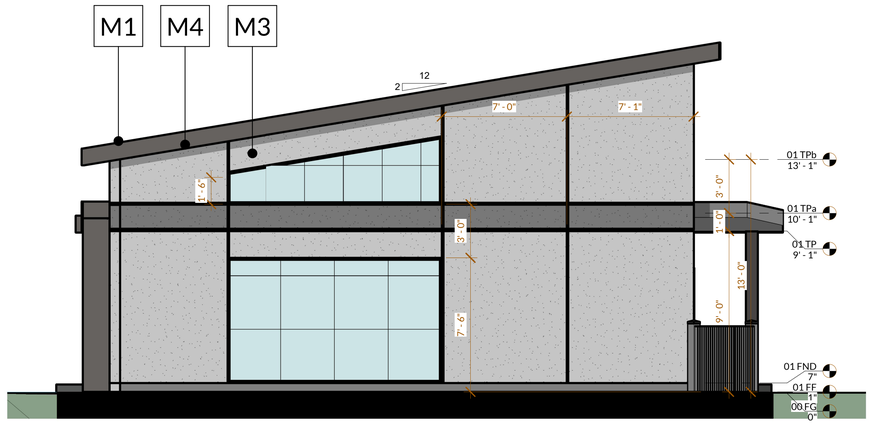
1 ELEVATION - SOUTH

SCALE: 1/4" = 1'-0"



4 ELEVATION - EAST

SCALE: 1/4" = 1'-0"



2 ELEVATION -NORTH

SCALE: 1/4" = 1'-0"

MATERIAL LEGEND



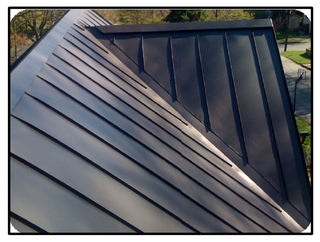
M4 - TRIM
- CHARCOAL GRAY



M3 - BODY
CONCRETE TILT UP



M2 - ACCENT
EL DORADO STONE - STONE VENEER
CLIFFSTONE - WHITEBARK OR
BANFF SPRINGS



M1 - ROOFING
STANDING SEAM METAL ROOF
P1 - CHARCOAL GRAY

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HOWELL MOUNTAIN CEMETERY NEW OFFICE

1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA 94508
018-120-027

Proj. No: 2019.479
Drawn By: CKI
Reviewed TEA

Issue / Revision Schedule:

No.	Date	Description

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EXTERIOR ELEVATIONS

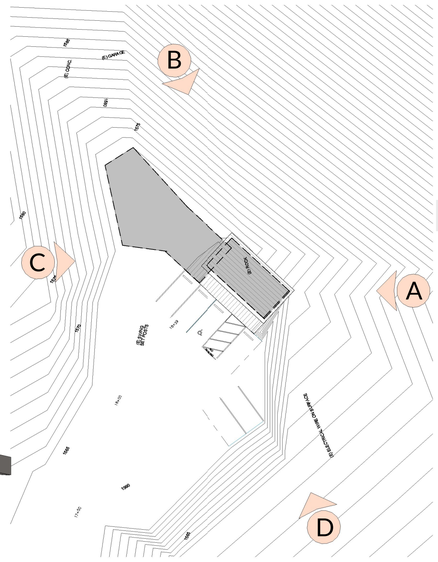
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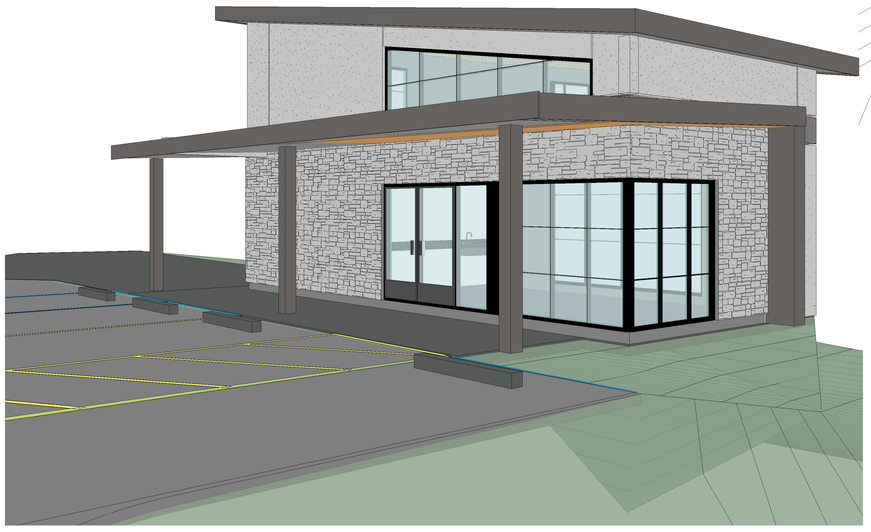


C AERIAL PERSPECTIVE - WEST
SCALE:





A AERIAL PERSPECTIVE - EAST
SCALE:



D AERIAL PERSPECTIVE - SOUTH
SCALE:



B AERIAL PERSPECTIVE - NORTH
SCALE:

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HOWELL MOUNTAIN CEMETERY NEW OFFICE

1225 HOWELL MOUNTAIN ROAD
ANGWIN, CA 94508
018-120-027

Proj. No: 2019.479
Drawn By: CKI
Reviewed TEA

Issue / Revision Schedule:

No.	Date	Description

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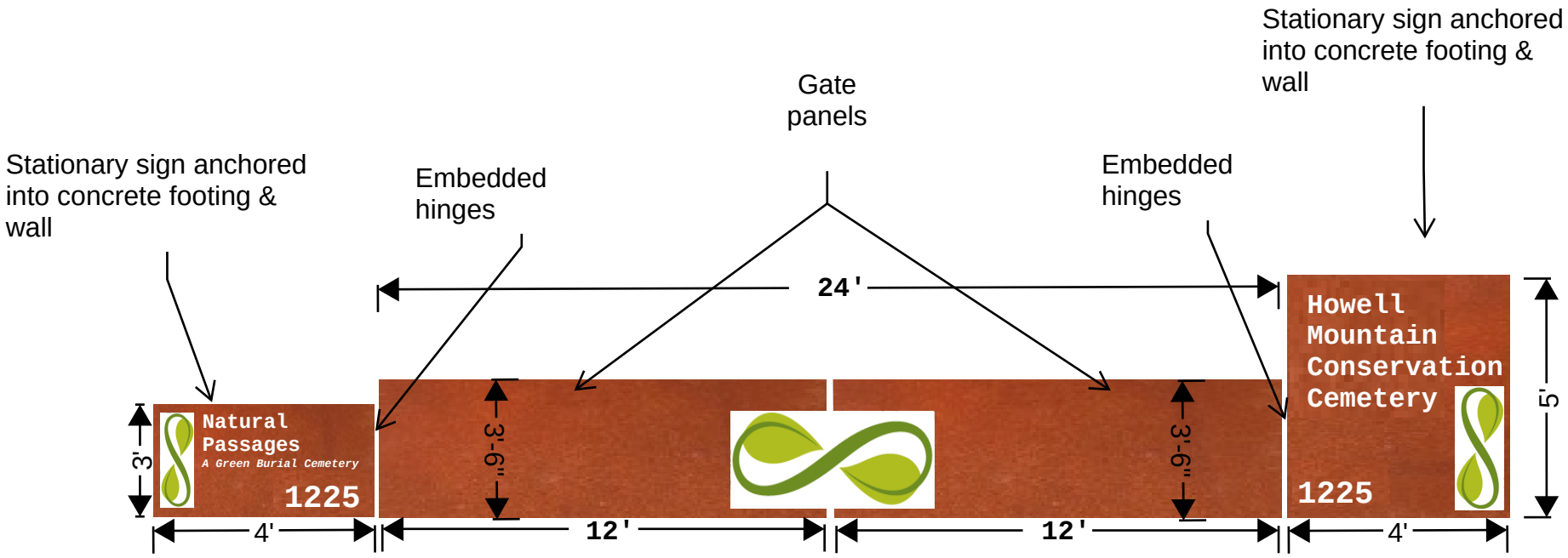
PERSPECTIVES

A4

12/6/2022 1:15:08 PM

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Howell Mountain Road Entry Gate



Sign #6

Quantity: 1

Size: See dimensions listed above

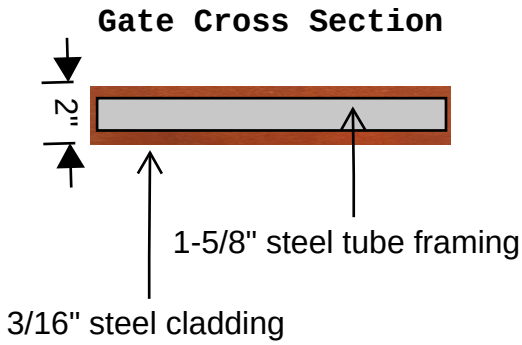
Material: Tube steel framing with 3/16" steel sheets welded to frame. Laser cut text and infinity logo with backdrop pocket for seasonal color options

Operation: Manual in-swing toward property with caster wheels on each **12'** gate panel

Color: Weathered steel

Lighting: None

Location: Main entrance/**Howell Mountain Road**



1195 THIRD STREET
SUITE 310
NAPA, CA 94559
www.napacounty.gov

Main: (707) 253-4580

Planning Commission | **Agenda Date:** 6/17/2026 | **File ID #:** 26-848

TO: Napa County Planning Commission

FROM: Brian Bordona; Director of Planning, Building and Environmental Services

REPORT BY: Trevor Hawkes; Supervising Planner

SUBJECT: Amendments to Titles 17 & 18 of the Napa County Code related to Urban Lot Splits and Two-Unit Development

RECOMMENDATION

Proposed Napa County Code Amendments Related to Urban Lot Splits and Two-Unit Development

Request: This is a County-initiated amendment to the Napa County Code for Titles 17 (Subdivisions) and 18 (Zoning), to bring the Code into alignment with current State law regarding Urban Lot Splits and Two-Unit Development.

Staff Recommendation: Hold a public hearing and recommend the Board of Supervisors adopt the proposed Ordinance amendment to the Napa County Code.

Staff Contact: Trevor Hawkes, Supervising Planner, 707-253-4388 or trevor.hawkes@countyofnapa.org

EXECUTIVE SUMMARY

Proposed Action:

Staff recommend that the Planning Commission hold a public hearing and recommend the Board of Supervisors approve the proposed ordinance amending the County Code for compliance with State housing law.

Discussion:

This is a County-initiated amendment to bring County Code in alignment with State housing law. The proposed draft ordinance would update code sections related to Urban Lot Splits (NCC Sections 17.17.020 and 17.17.040) and Two-Unit Development (NCC Section 18.104.440), bringing them into compliance with State law through the 2025 State legislative session.

ENVIRONMENTAL IMPACT

ENVIRONMENTAL DETERMINATION: Adoption of an ordinance to implement provisions of SB 9 (Government Code Sections 65852.21 and 66411.7) is not a project under CEQA. (Government Code Sections 65852.21(k) and 66411.7(n).)

BACKGROUND AND DISCUSSION

Proposed amendment to Napa County Code (NCC) sections due to current State housing law concerning Urban Lot Splits and Two-Unit Developments (Senate Bill 9 of 2021):

Planning, Building, and Environmental Services (PBES) Staff, County Counsel and outside legal consultants have prepared the draft ordinance under consideration for advisory recommendation to the Board of Supervisors (BOS) to amend NCC Chapter 18.104 (Two-unit Developments) and NCC Chapter 17.17 (Urban Lot Splits), due to amendments to the Government Code through legislative session 2025. All proposed amendments to the NCC are intended to bring the code up to date with the minimum required standards of the statute. Please refer to the Executive Summary in Attachment C for a summary of modifications to each individual section.

Primarily the draft ordinance proposes amendments to the NCC due to Senate Bill 450 (2024). SB 450 made the following amendments to Government Code sections 65852.21 and 66411.7, the core statute governing Two-Unit Development and Urban Lot Splits, summarized as follows:

- Objective standards imposed on SB 9 projects must generally also apply uniformly to the underlying single-family zone. Counties cannot create special restrictive standards aimed only at SB 9 projects unless they are more permissive.
- The County's review must remain ministerial and generally be completed within 60 days of receipt of a complete application.
- Applications may not be denied based on generalized "physical environmental" impacts except under the narrower statutory health and safety exceptions.
- The State's Department of Housing and Community Development (HCD) enforcement authority over SB 9 compliance was strengthened.
- Local objective subdivision and design standards must be tied to parcel design/improvements and cannot effectively preclude SB 9 projects.

The draft ordinance also proposes amendments in response to AB 1061 which narrowed historic

district exemptions under SB 9.

Finally, revisions to NCC Sections 17.17.020, 17.17.040 and 18.104.440 are recommended to add clarity to the code in line with HCD's recommended guidance on SB 9.

Decision-Making Options:

Upon consideration of public comment and close of the public hearing, the Commission may take one of the following actions:

Option 1: Recommend Approval of the Draft Ordinance (Staff Recommendation)

Discussion - With this option the Planning Commission would make an advisory recommendation to the Board of Supervisors to adopt the proposed draft ordinance, amending the County Code to reflect state legislative changes to housing law. Staff support this option because it brings the County into compliance with State requirements for Two-Unit Developments and Urban Lot Splits.

Action Required - Follow the proposed action listed in the Executive Summary. If any modifications to the draft ordinance are recommended, specify these modifications at the time the motion and recommendation are made.

Option 2: Recommend Denial of the Draft Ordinance

Discussion - With this option the Planning Commission would make an advisory recommendation to the Board of Supervisors to deny the proposed draft ordinance. Denial of the draft ordinance would not correct existing inconsistencies and omissions in the County Code regarding current state requirements for Two-Unit Developments and Urban Lot Splits. As State law preempts the County Code for these land uses, without the proposed update the County risks inconsistency in project review and Staff may need to default to State standards without the benefit of a tailored local code. Failure to comply with State housing law may result in additional review of County code regarding housing by HCD and/or Attorney General. For these reasons, Staff does not recommend this option.

In the event the Commission determines that the proposed draft ordinance should not be adopted, the Commissioners should articulate their reasons for the recommendation. This recommendation will be transmitted to the BOS at a future public hearing date to be determined.

Action Required - The Commission would indicate its intent to make an advisory recommendation of denial to the Napa County Board of Supervisors and articulate their reasons for the recommendation to Staff.

Option 3: Continuance

The Commission may continue the item to a future hearing date

“A”

Proposed Ordinance (Clean)

Planning Commission Hearing – June 17, 2026

ORDINANCE NO.

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF NAPA COUNTY, STATE OF CALIFORNIA, AMENDING SECTIONS 17.17.020 (APPROVAL OF MAP) AND 17.17.040 (SPECIFIC ADVERSE IMPACT) OF CHAPTER 17.17 (URBAN LOT SPLITS) OF TITLE 17 (SUBDIVISIONS) AND SECTION 18.104.440 (TWO UNIT DEVELOPMENTS) OF CHAPTER 18.104 (ADDITIONAL ZONING DISTRICT REGULATIONS) OF TITLE 18 (ZONING) OF THE NAPA COUNTY CODE TO BRING THE CODE INTO ALIGNMENT WITH LEGISLATIVE CHANGES IN STATE LAW AND THE COUNTY'S RECENTLY CERTIFIED 2023-2031 HOUSING ELEMENT

WHEREAS, on September 16, 2021, Senate Bill 9 (Chapter 162, Statutes of 2021) was approved by the Governor of the State of California and filed with the Secretary of State, adding to the Government Code Sections 65852.21 and 66411.7, allowing additional housing units on properties within single-family zones and providing for parcel map approval of an Urban Lot Split ("SB 9"); and

WHEREAS, the Napa County Board of Supervisors adopted Ordinance Number 1495 on September 24, 2024, to add Chapter 17.17 (Urban Lot Splits) and Section 18.104.440 (Two Unit Developments) to the Napa County Code, implementing the provisions of SB 9; and

WHEREAS, Senate Bill 450 (Chapter 286, Statutes of 2024) which went into effect January 1, 2025, and Assembly Bill 1061 (Chapter 505, Statutes of 2025) which went into effect January 1, 2026, amended SB 9; and

WHEREAS, on December 19, 2023, the Napa County Board of Supervisors adopted the 2023-2031 Housing Element; and

WHEREAS, the California Department of Housing and Community Development notified Napa County in July, 2024, that the County's Housing Element is in substantial compliance with Housing Element law; and

WHEREAS, the Housing Element contains programs requiring amendments to the Napa County

Code that would implement programs and requirements related to affordable housing; and

WHEREAS, the Board of Supervisors has found that the provisions of this ordinance are consistent with the Housing Element and would like to amend the Napa County Code to reflect recent legislative changes to State housing law; and

WHEREAS, the proposed code amendments are intended to implement SB 9 and are not considered a project under Division 13 (commencing with Section 21000) of the Public Resources Code, as provided in Government Code Sections 65852.21(k) and 66411.7(n).

NOW, THEREFORE, the Napa County Board of Supervisors, State of California, ordains as follows:

SECTION 1. Section 17.17.020 (Approval of map) of Chapter 17.17 (Urban Lot Splits) of the Napa County Code is amended to read in full as follows:

17.17.020 – Approval of map.

As provided by Government Code Section 66411.7 and this section, urban lot splits that meet the qualifying criteria for ministerial approval under this section shall be processed in accordance with Title 17 and approved by the director without a hearing. Within sixty days of the county's receipt of a complete urban lot split application, the director shall determine if a parcel map for the urban lot split meets all the requirements of this Chapter 17.17 and ministerially approve or deny the urban lot split application. If the urban lot split application is denied, the director will provide, within the sixty-day review period, a complete list of the application's deficiencies and describe how the applicant can remedy the application.

A. The parcel being subdivided meets the location requirements specified in Section 18.104.440.B.

B. Both resulting parcels are no smaller than one thousand two hundred square feet.

C. Neither resulting parcel shall be smaller than forty percent of the lot area of the parcel proposed for the subdivision.

D. The proposed lot split would not require demolition or alteration of any of the following types of housing:

1. Housing that is subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of moderate-, low- or very low-income.

2. Housing that is subject to any form of rent or price control through a public entity's valid exercise of its police power.

3. A parcel or parcels on which an owner of residential real property has exercised the owner's rights under Government Code Chapter 12.75 (commencing with Section 7060) of Division 7 of

Title 1 to withdraw accommodations from rent or lease within fifteen years before the date that the development proponent submits an application.

4. Housing that has been occupied by a tenant in the last three years.

5. A contributing structure located within either a historic district that is included on the California Register of Historical Resources or within a historic district listed or designated pursuant to a Napa County ordinance.

6. An existing exterior structural wall of a structure located within either a historic district that is included on the California Register of Historical Resources or within a historic district listed or designated pursuant to a Napa County ordinance.

E. The parcel is not located within a historical landmark included on the State Historic Resources Inventory, as defined in Public Resources Code Section 5020.1, or within a site that is designated or listed as a Napa County landmark pursuant to a Napa County ordinance.

F. The parcel being subdivided was not created by an urban lot split as provided in this chapter.

G. Neither the owner of the parcel being subdivided nor any person acting in concert with the owner has previously subdivided an adjacent parcel using an urban lot split as provided in this section.

H. The development proposed on the parcels complies with all objective zoning standards, objective subdivision standards (including Chapter 13.32), and objective design review standards applicable to the parcel and that are related to the design or to improvements of a parcel as provided in the zoning district in which the parcel is located, and all applicable objective Napa County ordinances; provided, however, that:

1. The application of such standards shall be modified if the standards would have the effect of physically precluding the construction of two units on either of the resulting parcels created pursuant to this chapter or would result in a unit size of less than eight hundred square feet. Any modifications of development standards shall be the minimum modification necessary to avoid physically precluding two units of eight hundred square feet each on each parcel.

2. Notwithstanding subsection (H)(1) above, required rear and side yard setbacks shall equal four feet, except that no setback shall be required for an existing legally created structure or a structure constructed in the same location and to the same dimensions as an existing legally created structure.

3. The standards do not otherwise conflict with this Chapter 17.17.

I. Each resulting parcel shall have access to, provide access to, or adjoin the public right-of-way.

J. Proposed adjacent or connected dwelling units shall be permitted if they meet building code safety standards and are designed sufficient to allow separate conveyance. The proposed dwelling units shall provide a separate gas, electric and water utility connection directly between each dwelling unit and the utility.

K. Parking. One parking space shall be required per unit constructed on a parcel created pursuant to the procedures in this section, except that no parking may be required where:

1. The parcel is located within one-half mile walking distance of either a stop located in a high-quality transit corridor, as defined in Public Resources Code Section 21155(b), or a major transit stop, as defined in Public Resources Code Section 21064.3; or

2. There is a designated parking area for one or more car-share vehicles within one block of the parcel.

L. Compliance with Subdivision Map Act. The urban lot split shall conform to all applicable objective requirements of the Subdivision Map Act (commencing with Government Code Section 66410)), except as otherwise expressly provided in Government Code Section 66411.7. Notwithstanding Government Code Section 66411.1, no dedications of rights-of-way or the construction of offsite improvements may be required as a condition of approval for an urban lot split, although easements may be required for the provision of public services and facilities.

M. The correction of nonconforming zoning conditions may not be required as a condition of approval.

N. Parcels created by an urban lot split may be used for residential uses only and may not be used for rentals of less than thirty days. No more than two dwelling units may be located on any lot created through an urban lot split, including primary dwelling units, accessory dwelling units, junior accessory dwelling units, density bonus units, and units created as a two-unit development.

O. If any existing dwelling unit is proposed to be demolished, the applicant will comply with the replacement housing provisions of Government Code Section 66300.5 et seq.

SECTION 2. Section 17.17.040 (Specific adverse impact) of Chapter 17.17 (Urban Lot Splits) of the Napa County Code is amended to read as in full as follows:

17.17.040 – Specific adverse impact.

In addition to the criteria listed in this chapter, a proposed urban lot split may be denied if the building official makes a written finding, based on a preponderance of the evidence, that the proposed housing development project would have a specific, adverse impact upon public health and safety, for which there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. A "specific adverse impact" is a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete. Inconsistency with the zoning ordinance or general plan land use designation and eligibility to claim a welfare exemption are not specific health or safety impacts.

SECTION 3. Section 18.104.440 (Two-unit developments) of Chapter 18.104 (Additional Zoning District Regulations) of the Napa County Code is amended to read as in full as follows:

18.104.440 – Two-unit developments.

This section provides objective zoning standards for two-unit developments within single-family residential zones to implement the provisions of Government Code Section 65852.21, to facilitate the development of new residential housing units consistent with the County's Housing Element, and to ensure sound standards of public health and safety.

A. Definitions: As used in this chapter.

1. A person "acting in concert with the owner," means a person that has common ownership or control of the subject parcel with the owner of the adjacent parcel, a person acting on behalf of, acting for the predominant benefit of, acting on the instructions of, or actively cooperating with, the owner of the parcel being subdivided.

2. "Adjacent parcel" means any parcel of land that is (a) touching the parcel at any point; (b) separated from the parcel at any point only by a public right-of-way, private street or way, or public or private utility, service, or access easement; or (c) separated from another parcel only by other real property which is in common ownership or control of the applicant.

3. "Car share vehicle" means a motor vehicle that is operated as part of a regional fleet by a public or private care sharing company or organization and provides hourly or daily service.

4. "Common ownership or control" means property owned or controlled by the same person, persons, or entity, or by separate entities in which any shareholder, partner, member, or family member of an investor of the entity owns ten percent or more of the interest in the property.

5. "Sufficient for separate conveyance," means that each attached or adjacent dwelling unit is constructed in a manner adequate to allow for the separate sale of each unit in a common interest development as defined in Civil Code Section 1351 (including a residential condominium, planned development, stock cooperative, or community apartment project), or into any other ownership type in which the dwelling units may be sold individually.

6. "Two-unit development" means a development that proposes no more than two new units or proposes to add one new unit to one existing unit.

7. "Urban lot split" means a subdivision of an existing parcel into no more than two separate parcels pursuant to Chapter 17.17.

B. Location Requirements: As provided by Government Code Section 65852.21, and this section, the parcel proposed for a two-unit development must meet the following requirements:

1. The parcel is zoned Residential Single or Residential Country and is located entirely within the boundaries of an urban area as defined by the United States Census Bureau's Urban-Rural Classification.

2. The parcel does not contain or include any of the conditions listed in Government Code Section 65913.4(a)(6)(B) - (K) as that section read on September 16, 2021 and is not located within any of the following:

a. Land zoned or designated for agricultural protection or preservation by local ballot Measure J or Measure P approved by the voters of Napa County.

b. Land designated as a Groundwater Deficient Area, as defined and mapped under Napa County Code Chapter 13.15, unless:

1. Pursuant to Napa County Code Chapter 13.15, the applicant is able to secure a groundwater permit or modify an existing groundwater permit, as applicable, for the parcel, or in the case of an urban lot split, parcels.

2. The applicant is able to provide documentation that the two-unit development or the future dwelling units from an urban lot split will be directly plumbed to receive potable water from a groundwater well outside of the Groundwater Deficient Area or from an approved public water system. Hauled water is not approved to serve the domestic use of a dwelling and cannot be approved in lieu or a directly plumbed potable source of water.

C. Two-Unit Development: The director, without a hearing, shall ministerially approve or deny a complete permit application for a two-unit development within sixty days from the date the county receives the complete application. As provided by Government Code Section 65852.21 and this section, two-unit developments that meet the qualifying criteria for ministerial approval under this section shall be approved by the director without a hearing. If the application is denied, the director will provide, within the sixty day review period, a complete list of the application's deficiencies and describe how the applicant can remedy the application. The director shall determine if an application for a two-unit development meets the locational criteria prescribed in subsection B above and meets the follow requirements:

1. The proposed two-unit development would not require the demolition or alteration of any of the following types of housing:

a. Housing that is subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of moderate-, low-, or very low-income.

b. Housing that is subject to any form of rent or price control through a public entity's valid exercise of its police power.

c. Housing that has been occupied by a tenant in the last three years.

2. The parcel is not a parcel on which an owner of residential real property has exercised the owner's right under Government Code Chapter 12.75 (commencing with Section 7060) of Division 7 of Title 1 to withdraw accommodations from rent or lease within the last 15 years before the date that the development proponent submits an application.

3. (Reserved.)

4. The parcel is not located in either of the following:

a. A contributing structure within a historic district included on the State Historic Resources Inventory, as defined in Section 5020.1 of the Public Resources Code, or historic property or historic district pursuant to a Napa County ordinance.

b. A parcel individually listed as a historical resource included in the State Historic Resources Inventory, as defined in Section 5020.1 of the Public Resources Code, or within a property individually designated or listed as a county landmark under Napa County ordinance.

5. The two-unit development complies with all objective zoning standards, objective subdivision standards, and objective design review standards applicable to the parcel as provided in the zoning district in which the parcel is located, and all applicable objective Napa County ordinances; provided, however, that:

a. The application of such standards shall be modified if the standards would have the effect of physically precluding the construction of two units on the parcel or would result in a unit size of less than eight hundred square feet. Any modifications of development standards shall be the minimum modification necessary to avoid physically precluding two units of eight hundred square feet each on each parcel.

b. Notwithstanding subsection (5)(a) above, required rear and side yard setbacks shall equal four feet, except that no setback shall be required for an existing legally created structure, or a structure constructed in the same location and to the same dimensions as an existing legally created structure.

c. For a two-unit development connected to an onsite wastewater treatment system, the applicant must provide a percolation test completed within the last five years, or if the

percolation test has been recertified, within the last ten years.

d. The standards do not otherwise conflict with this Section 18.104.440.

6. Proposed adjacent or connected dwelling units shall be permitted if they meet building code safety standards and are designed sufficient to allow separate conveyance. The two-unit development shall provide a separate gas, electric and water utility connection directly between each dwelling unit and the utility.

7. Parking. One parking space shall be required for each unit constructed on the site, except that no parking is required where:

a. The parcel is located within one-half mile walking distance of either a stop located in a high-quality transit corridor, as defined in Public Resources Code Section 21155(b), or a major transit stop, as defined in Public Resources Code Section 21064.3; or

b. There is a designated parking area for one or more car-share vehicles within one block of the parcel.

8. Dwelling units created by a two-unit development may be used for residential uses only and may not be used for rentals of less than thirty days.

9. No more than two dwelling units may be located on any lot created through an urban lot split pursuant to Chapter 17.17, including primary dwelling units, accessory dwelling units, junior accessory dwelling units, density bonus units, and units created as a two-unit development.

10. If any existing dwelling unit is proposed to be demolished, the applicant must comply with the replacement housing provisions of Government Code Section 66300(d).

D. Application Requirements. An application for a two-unit development shall include the following:

1. Declaration of Prior Tenancies. If any existing housing is proposed to be altered or demolished, the owner of the property proposed for a two- unit development shall sign an affidavit, in a form approved by county counsel, stating that none of the conditions listed in Section 18.104.440.C.1 and 18.104.440.C.2 above exist and shall provide a comprehensive history of the occupancy of the units to be altered or demolished for the past three years (five years if an existing unit is to be demolished).

2. No Subdivision. At the time of application for a two-unit development where there is no urban lot split, the property owner shall acknowledge in writing that neither of the two units may be sold separately unless a subdivision is recorded.

3. Recorded Covenant. Prior to the issuance of a building permit for a two-unit development, the owner shall record a covenant in the form approved by county counsel to notify future owners of the prohibition on non-residential uses of any units constructed on the site, including a prohibition against renting or leasing the units for fewer than thirty consecutive calendar days. requirements of this subsection.

E. Specific Adverse Impacts. In addition to the criteria listed in this section, a proposed two-unit development may be denied if the building official makes a written finding, based on a preponderance of the evidence, that the proposed housing development project would have a specific, adverse impact upon public health and safety, for which there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. A "specific adverse impact" is a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete. Inconsistency with the zoning ordinance or

general plan land use designation and eligibility to claim a welfare exemption are not specific health or safety impacts.

F. Enforcement. County counsel shall be authorized to abate violations of this chapter and to enforce the provisions of this chapter and all implementing agreements and affidavits by civil action, injunctive relief, and any other proceeding or method permitted by law. Remedies provided for in this chapter shall not preclude the county from any other remedy or relief to which it otherwise would be entitled under law or equity.

SECTION 4. The proposed code amendments are intended to implement SB 9 and are not considered a project under Division 13 (commencing with Section 21000) of the Public Resources Code, as provided in Government Code Sections 65852.21(k) and 66411.7(n).

SECTION 5. Pursuant Chapter 4, Title 7, commencing with Section 65800, of the California Government Code, this Ordinance is consistent with the following policies of the 2008 General Plan Update: AG/LU-22, AG/LU-23, AG/LU-28, and AG/LU-30, and with the following policies and programs of the 2023-2031 Housing Element: policies H-2b, H-2g, H-4a, H-4e, H-5b, and programs H-5b and H-5f.

SECTION 6. If any section, subsection, sentence, clause, phrase or word of this ordinance is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The Napa County Board of Supervisors hereby declares it would have passed and adopted this ordinance and each and all provisions hereof irrespective of the fact that any one or more of said provisions be declared invalid.

SECTION 7. This ordinance shall be effective thirty (30) days from and after the date of its passage.

SECTION 8. A summary of this ordinance shall be published at least once five (5) days before adoption and at least once before the expiration of fifteen (15) days after its passage in the Napa Valley Register, a newspaper of general circulation published in Napa County, together with the names of members voting for and against the same.

The foregoing Ordinance was recommended for adoption and public hearing held thereon before the Napa County Planning Commission on the ___ day of ___ 2026. The Planning Commission's recommendation was considered by the Board of Supervisors and this Ordinance was introduced and passed at a regular meeting of the Napa County Board of Supervisors ("the Board"), State of California, held on ___ day of ____ 2026, by the following vote:

AYES: SUPERVISORS _____

_____

NOES: SUPERVISORS _____

ABSTAIN: SUPERVISORS _____

ABSENT: SUPERVISORS _____

NAPA COUNTY, a political subdivision of the State of California

_____
AMBER MANFREE, Chair of the Board of Supervisors

APPROVED AS TO FORM Office of County Counsel	APPROVED BY THE NAPA COUNTY BOARD OF SUPERVISORS	ATTEST: NEHA HOSKINS Clerk of the Board of Supervisors
By: *Silva Darbinian* Deputy County Counsel By: *McKayla McMahon* Code Services Date: 6 / 3 / 2 0 2 6	Date: _____ Processed By: _____ Deputy Clerk of the Board	By: _____

I HEREBY CERTIFY THAT THE ORDINANCE ABOVE WAS POSTED IN THE OFFICE OF THE CLERK OF THE BOARD IN THE ADMINISTRATIVE BUILDING, 1195 THIRD STREET ROOM 310, NAPA, CALIFORNIA ON _____.

_____, DEPUTY
NEHA HOSKINS, CLERK OF THE BOARD

“B”

Proposed Ordinance (Redline)

Planning Commission Hearing – June 17, 2026

Additions are underlined.
Deletions are ~~struck through.~~
Revision markers are noted in left or right margins as vertical lines.

ORDINANCE NO.

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF NAPA COUNTY, STATE OF CALIFORNIA, AMENDING SECTIONS 17.17.020 (APPROVAL OF MAP) AND 17.17.040 (SPECIFIC ADVERSE IMPACT) OF CHAPTER 17.17 (URBAN LOT SPLITS) OF TITLE 17 (SUBDIVISIONS) AND SECTION 18.104.440 (TWO UNIT DEVELOPMENTS) OF CHAPTER 18.104 (ADDITIONAL ZONING DISTRICT REGULATIONS) OF TITLE 18 (ZONING) OF THE NAPA COUNTY CODE TO BRING THE CODE INTO ALIGNMENT WITH LEGISLATIVE CHANGES IN STATE LAW AND THE COUNTY'S RECENTLY CERTIFIED 2023-2031 HOUSING ELEMENT

WHEREAS, on September 16, 2021, Senate Bill 9 (Chapter 162, Statutes of 2021) was approved by the Governor of the State of California and filed with the Secretary of State, adding to the Government Code Sections 65852.21 and 66411.7, allowing additional housing units on properties within single-family zones and providing for parcel map approval of an Urban Lot Split ("SB 9"); and

WHEREAS, the Napa County Board of Supervisors adopted Ordinance Number 1495 on September 24, 2024, to add Chapter 17.17 (Urban Lot Splits) and Section 18.104.440 (Two Unit Developments) to the Napa County Code, implementing the provisions of SB 9; and

WHEREAS, Senate Bill 450 (Chapter 286, Statutes of 2024) which went into effect January 1, 2025, and Assembly Bill 1061 (Chapter 505, Statutes of 2025) which went into effect January 1, 2026, amended SB 9; and

WHEREAS, on December 19, 2023, the Napa County Board of Supervisors adopted the 2023-2031 Housing Element; and

WHEREAS, the California Department of Housing and Community Development notified Napa County in July, 2024, that the County's Housing Element is in substantial compliance with Housing Element law; and

WHEREAS, the Housing Element contains programs requiring amendments to the Napa County Code that would implement programs and requirements related to affordable housing; and

WHEREAS, the Board of Supervisors has found that the provisions of this ordinance are consistent with the Housing Element and would like to amend the Napa County Code to reflect recent legislative changes to State housing law; and

WHEREAS, the proposed code amendments are intended to implement SB 9 and are not considered a project under Division 13 (commencing with Section 21000) of the Public Resources Code, as provided in Government Code Sections 65852.21(k) and 66411.7(n).

NOW, THEREFORE, the Napa County Board of Supervisors, State of California, ordains as follows:

SECTION 1. Section 17.17.020 (Approval of map) of Chapter 17.17 (Urban Lot Splits) of the Napa County Code is amended to read in full as follows:

17.17.020 – Approval of map.

As provided by Government Code Section 66411.7 and this section, urban lot splits that meet the qualifying criteria for ministerial approval under this section shall be processed in accordance with Title 17 and approved by the director ~~of planning~~ without a hearing. Within ~~the time required by the Subdivision Map Act and Title 17~~sixty days of the county's receipt of a complete urban lot split application, the director ~~of planning~~ shall determine if a parcel map for the urban lot split meets all the ~~following~~ requirements~~:~~ of this Chapter 17.17 and ministerially approve or deny the urban lot split application. If the urban lot split application is denied, the director will provide, within the sixty-day review period, a complete list of the application's deficiencies and describe how the applicant can remedy the application.

A. The parcel being subdivided meets the location requirements specified in Section 18.104.440.B.

B. Both resulting parcels are no smaller than one thousand two hundred square feet.

C. Neither resulting parcel shall be smaller than forty percent of the lot area of the parcel proposed for the subdivision.

D. The proposed lot split would not require demolition or alteration of any of the following types of housing:

1. Housing that is subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of moderate-, low- or very low-income.

2. Housing that is subject to any form of rent or price control through a public entity's valid exercise of its police power.

3. A parcel or parcels on which an owner of residential real property has exercised the owner's rights under Government Code Chapter 12.75 (commencing with Section 7060) of Division 7 of Title 1 to withdraw accommodations from rent or lease within fifteen years before the date that the development proponent submits an application.

4. Housing that has been occupied by a tenant in the last three years.

5. A contributing structure located within either a historic district that is included on the California Register of Historical Resources or within a historic district listed or designated pursuant to a Napa County ordinance.

6. An existing exterior structural wall of a structure located within either a historic district that is included on the California Register of Historical Resources or within a historic district listed or designated pursuant to a Napa County ordinance.

E. The parcel is not located within a ~~historic district or on property~~historical landmark included on the State Historic Resources Inventory, as defined in Public Resources Code Section 5020.1, or within a site that is designated or listed as a Napa County landmark ~~or historic property or historic district~~ pursuant to a Napa County ordinance.

F. The parcel being subdivided was not created by an urban lot split as provided in this chapter.

G. Neither the owner of the parcel being subdivided nor any person acting in concert with the owner has previously subdivided an adjacent parcel using an urban lot split as provided in this section.

H. The development proposed on the parcels complies with all objective zoning standards, objective subdivision standards (including Chapter 13.32), and objective design review standards applicable to the parcel and that are related to the design or to improvements of a parcel as provided in the zoning district in which the parcel is located, and all applicable objective Napa County ordinances; provided, however, that:

1. The application of such standards shall be modified if the standards would have the effect of physically precluding the construction of two units on either of the resulting parcels created pursuant to this chapter or would result in a unit size of less than eight hundred square feet. Any modifications of development standards shall be the minimum modification necessary to avoid physically precluding two units of eight hundred square feet each on each parcel.

2. Notwithstanding subsection (H)(1) above, required rear and side yard setbacks shall equal four feet, except that no setback shall be required for an existing legally created structure or a structure constructed in the same location and to the same dimensions as an existing legally created structure.

3. The standards do not otherwise conflict with this Chapter 17.17.

I. Each resulting parcel shall have access to, provide access to, or adjoin the public right-of-way.

J. Proposed adjacent or connected dwelling units shall be permitted if they meet building code safety standards and are designed sufficient to allow separate conveyance. The proposed dwelling units shall provide a separate gas, electric and water utility connection directly between each dwelling unit and the utility.

K. Parking. One parking space shall be required per unit constructed on a parcel created pursuant to the procedures in this section, except that no parking may be required where:

1. The parcel is located within one-half mile walking distance of either a stop located in a high-quality transit corridor, as defined in Public Resources Code Section 21155(b), or a major transit stop, as defined in Public Resources Code Section 21064.3; or

2. There is a designated parking area for one or more car-share vehicles within one block of the parcel.

L. Compliance with Subdivision Map Act. The urban lot split shall conform to all applicable objective requirements of the Subdivision Map Act (commencing with Government Code Section 66410)), except as otherwise expressly provided in Government Code Section 66411.7. Notwithstanding Government Code Section 66411.1, no dedications of rights-of-way or the construction of offsite improvements may be required as a condition of approval for an urban lot split, although easements may be required for the provision of public services and facilities.

M. The correction of nonconforming zoning conditions may not be required as a condition of approval.

N. Parcels created by an urban lot split may be used for residential uses only and may not be used for rentals of less than thirty days. No more than two dwelling units may be located on any lot created through an urban lot split, including primary dwelling units, accessory dwelling units, junior accessory dwelling units, density bonus units, and units created as a two-unit development.

O. If any existing dwelling unit is proposed to be demolished, the applicant will comply with the replacement housing provisions of Government Code Section 66300.5 et seq.

SECTION 2. Section 17.17.040 (Specific adverse impact) of Chapter 17.17 (Urban Lot Splits) of the Napa County Code is amended to read as in full as follows:

17.17.040 – Specific adverse impact.

In addition to the criteria listed in this chapter, a proposed urban lot split may be denied if the building official makes a written finding, based on a preponderance of the evidence, that the proposed housing development project would have a specific, adverse impact upon public health and safety ~~or the physical environment~~, for which there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. A "specific adverse impact" is a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete. Inconsistency with the zoning ordinance or general plan land use designation and eligibility to claim a welfare exemption are not specific health or safety impacts.

SECTION 3. Section 18.104.440 (Two-unit developments) of Chapter 18.104 (Additional Zoning District Regulations) of the Napa County Code is amended to read as in full as follows:

18.104.440 – Two-unit developments.

This section provides objective zoning standards for two-unit developments within single-family residential zones to implement the provisions of Government Code Section 65852.21, to facilitate the development of new residential housing units consistent with the County's Housing Element, and to ensure sound standards of public health and safety.

A. Definitions: As used in this chapter.

1. A person "acting in concert with the owner," means a person that has common ownership or control of the subject parcel with the owner of the adjacent parcel, a person acting on behalf of, acting for the predominant benefit of, acting on the instructions of, or actively cooperating with, the owner of the parcel being subdivided.

2. "Adjacent parcel" means any parcel of land that is (a) touching the parcel at any point; (b) separated from the parcel at any point only by a public right-of-way, private street or way, or public or private utility, service, or access easement; or (c) separated from another parcel only by other real property which is in common ownership or control of the applicant.

3. "Car share vehicle" means a motor vehicle that is operated as part of a regional fleet by a public or private care sharing company or organization and provides hourly or daily service.

4. "Common ownership or control" means property owned or controlled by the same person, persons, or entity, or by separate entities in which any shareholder, partner, member, or family member of an investor of the entity owns ten percent or more of the interest in the property.

5. "Sufficient for separate conveyance," means that each attached or adjacent dwelling unit is constructed in a manner adequate to allow for the separate sale of each unit in a common interest development as defined in Civil Code Section 1351 (including a residential condominium, planned development, stock cooperative, or community apartment project), or into any other ownership type in which the dwelling units may be sold individually.

6. "Two-unit development" means a development that proposes no more than two new units or proposes to add one new unit to one existing unit.

7. "Urban lot split" means a subdivision of an existing parcel into no more than two separate parcels pursuant to Chapter 17.17.

B. Location Requirements: As provided by Government Code Section 65852.21, and this section, the parcel proposed for a two-unit development must meet the following requirements:

1. The parcel is zoned Residential Single or Residential Country and is located entirely within the boundaries of an urban area as defined by the United States Census Bureau's Urban-Rural Classification.

2. The ~~building site, as defined under Napa County Code Section 17.02.080, for a two-unit development,or includes~~parcel does not contain or include any of the conditions listed in Government Code Section 65913.4(a)(6)(B) - (K) ~~or~~as that section read on September 16, 2021 and is not located within any of the following:

a. Land zoned or designated for agricultural protection or preservation by local ballot Measure J or Measure P approved by the voters of Napa County.

b. Land designated as a Groundwater Deficient Area, as defined and mapped under Napa County Code Chapter 13.15, unless:

1. ~~The applicant is able to secure a groundwater permit,~~ Ppursuant to

Napa County Code Chapter 13.15, ~~for the proposed two-unit development. or in the case of an urban lot split,~~ the applicant is able to secure a groundwater permit ~~for all potential future dwelling units allowed under this section.~~ or modify an existing groundwater permit, as applicable, for the parcel, or in the case of urban lot split, parcels.

2. The applicant is able to provide documentation that the two-unit development or the future dwelling units from an urban lot split will be directly plumbed to receive potable water from a groundwater well outside of the Groundwater Deficient Area or from an approved public water system. Hauled water is not approved to serve the domestic use of a dwelling and cannot be approved in lieu or a directly plumbed potable source of water.

C. Two-Unit Development: The director, without a hearing, shall ministerially approve or deny a complete permit application for a two-unit development within sixty days from the date the county receives the complete application. As provided by Government Code Section 65852.21 and this section, two-unit developments that meet the qualifying criteria for ministerial approval under this section shall be approved by the director without a hearing. If the application is denied, the director will provide, within the sixty day review period, a complete list of the application's deficiencies and describe how the applicant can remedy the application. The director shall determine if an application for a two-unit development meets the locational criteria prescribed in subsection B above and meets the follow requirements:

1. The proposed two-unit development would not require the demolition or alteration of any of the following types of housing:

a. Housing that is subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of moderate-, low-, or very low-income.

b. Housing that is subject to any form of rent or price control through a public entity's valid exercise of its police power.

c. Housing that has been occupied by a tenant in the last three years.

2. The parcel is not a parcel on which an owner of residential real property has exercised the owner's right under Government Code Chapter 12.75 (commencing with Section 7060) of Division 7 of Title 1 to withdraw accommodations from rent or lease within the last 15 years before the date that the development proponent submits an application.

3. (Reserved.) ~~The two-unit development does not include the demolition of more than twenty-five percent of the existing exterior structural walls unless the site has not been occupied by a tenant in the last three years.~~

4. The parcel is not located in either of the following:

a. A contributing structure within a historic district ~~or property~~ included on the State Historic Resources Inventory, as defined in Section 5020.1 of the Public Resources Code, or ~~within a site that is designated or listed as a Napa County landmark or~~ historic property or historic district pursuant to a Napa County ordinance.

b. A parcel individually listed as a historical resource included in the State Historic Resources Inventory, as defined in Section 5020.1 of the Public Resources Code, or within a property individually designated or listed as a county landmark under Napa County ordinance.

5. The two-unit development complies with all objective zoning standards, objective subdivision standards, and objective design review standards applicable to the parcel as provided in the zoning district in which the parcel is located, and all applicable objective Napa County ordinances;

provided, however, that:

a. The application of such standards shall be modified if the standards would have the effect of physically precluding the construction of two units on the parcel or would result in a unit size of less than eight hundred square feet. Any modifications of development standards shall be the minimum modification necessary to avoid physically precluding two units of eight hundred square feet each on each parcel.

b. Notwithstanding subsection (5)(a) above, required rear and side yard setbacks shall equal four feet, except that no setback shall be required for an existing legally created structure, or a structure constructed in the same location and to the same dimensions as an existing legally created structure.

c. For a two-unit development connected to an onsite wastewater treatment system, the applicant must provide a percolation test completed within the last five years, or if the percolation test has been recertified, within the last ten years.

d. The standards do not otherwise conflict with this Section 18.104.440.

6. Proposed adjacent or connected dwelling units shall be permitted if they meet building code safety standards and are designed sufficient to allow separate conveyance. The two-unit development shall provide a separate gas, electric and water utility connection directly between each dwelling unit and the utility.

7. Parking. One parking space shall be required for each unit constructed on the site, except that no parking is required where:

a. The parcel is located within one-half mile walking distance of either a stop located in a high-quality transit corridor, as defined in Public Resources Code Section 21155(b), or a major transit stop, as defined in Public Resources Code Section 21064.3; or

b. There is a designated parking area for one or more car-share vehicles within one block of the parcel.

8. Dwelling units created by a two-unit development may be used for residential uses only and may not be used for rentals of less than thirty days.

9. No more than two dwelling units may be located on any lot created through an urban lot split pursuant to Chapter 17.17, including primary dwelling units, accessory dwelling units, junior accessory dwelling units, density bonus units, and units created as a two-unit development.

10. If any existing dwelling unit is proposed to be demolished, the applicant must comply with the replacement housing provisions of Government Code Section 66300(d).

D. Application Requirements. An application for a two-unit development shall include the following:

1. Declaration of Prior Tenancies. If any existing housing is proposed to be altered or demolished, the owner of the property proposed for a two- unit development shall sign an affidavit, in a form approved by county counsel, stating that none of the conditions listed in Section 18.104.440.C.1 and 18.104.440.C.2 above exist and shall provide a comprehensive history of the occupancy of the units to be altered or demolished for the past three years (five years if an existing unit is to be demolished).

2. No Subdivision. At the time of application for a two-unit development where there is no urban lot split, the property owner shall acknowledge in writing that neither of the two units may be sold

separately unless a subdivision is recorded.

3. Recorded Covenant. Prior to the issuance of a building permit for a two-unit development, the owner shall record a covenant in the form approved by county counsel to notify future owners of the prohibition on non-residential uses of any units constructed on the site, including a prohibition against renting or leasing the units for fewer than thirty consecutive calendar days. requirements of this subsection.

E. Specific Adverse Impacts. In addition to the criteria listed in this section, a proposed two-unit development may be denied if the building official makes a written finding, based on a preponderance of the evidence, that the proposed housing development project would have a specific, adverse impact upon public health and safety ~~or the physical environment~~, for which there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. A "specific adverse impact" is a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete. Inconsistency with the zoning ordinance or general plan land use designation and eligibility to claim a welfare exemption are not specific health or safety impacts.

F. Enforcement. County counsel shall be authorized to abate violations of this chapter and to enforce the provisions of this chapter and all implementing agreements and affidavits by civil action, injunctive relief, and any other proceeding or method permitted by law. Remedies provided for in this chapter shall not preclude the county from any other remedy or relief to which it otherwise would be entitled under law or equity.

SECTION 4. The proposed code amendments are intended to implement SB 9 and are not considered a project under Division 13 (commencing with Section 21000) of the Public Resources Code, as provided in Government Code Sections 65852.21(k) and 66411.7(n).

SECTION 5. Pursuant Chapter 4, Title 7, commencing with Section 65800, of the California Government Code, this Ordinance is consistent with the following policies of the 2008 General Plan Update: AG/LU-22, AG/LU-23, AG/LU-28, and AG/LU-30, and with the following policies and programs of the 2023-2031 Housing Element: policies H-2b, H-2g, H-4a, H-4e, H-5b, and programs H-5b and H-5f.

SECTION 6. If any section, subsection, sentence, clause, phrase or word of this ordinance is for any reason held to be invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The Napa County Board of Supervisors hereby declares it would have passed and adopted this ordinance and each and all provisions hereof irrespective of the fact that any one or more of said provisions be declared invalid.

SECTION 7. This ordinance shall be effective thirty (30) days from and after the date of its passage.

SECTION 8. A summary of this ordinance shall be published at least once five (5) days before adoption and at least once before the expiration of fifteen (15) days after its passage in the Napa Valley Register, a newspaper of general circulation published in Napa County, together with the names of members voting for and against the same.

The foregoing Ordinance was recommended for adoption and public hearing held thereon before the Napa County Planning Commission on the ___ day of ___ 2026. The Planning Commission's recommendation was considered by the Board of Supervisors and this Ordinance was introduced and passed at a regular meeting of the Napa County Board of Supervisors ("the Board"), State of California, held on ___ day of ____ 2026, by the following vote:

AYES:	SUPERVISORS	_____
		_____
NOES:	SUPERVISORS	_____
ABSTAIN:	SUPERVISORS	_____
ABSENT:	SUPERVISORS	_____

NAPA COUNTY, a political subdivision of the
State of California

_____
AMBER MANFREE, Chair of the
Board of Supervisors

APPROVED AS TO FORM Office of County Counsel	APPROVED BY THE NAPA COUNTY BOARD OF SUPERVISORS	ATTEST: NEHA HOSKINS Clerk of the Board of Supervisors
By:_____ Deputy County Counsel By: /S/ Code Services Date: _____	Date: _____ Processed By: _____ Deputy Clerk of the Board	By:_____

I HEREBY CERTIFY THAT THE ORDINANCE ABOVE WAS POSTED IN THE OFFICE OF THE CLERK OF THE BOARD IN THE ADMINISTRATIVE BUILDING, 1195 THIRD STREET ROOM 310, NAPA, CALIFORNIA ON _____.

_____, DEPUTY
NEHA HOSKINS, CLERK OF THE BOARD

“C”

Executive Summary

EXECUTIVE SUMMARY

Section 17.17.020 – Approval of map

This section is amended to adopt changes made to Government Code 65852.21 and 66411.7 governing the ministerial process and timeline that must be applied to qualifying applications for Urban Lot Splits and includes requirements for the Director of PBES to identify and provide an applicant with a list of the deficiencies should an application be denied. Additionally, this section is amended to narrow historic district exemptions to Urban Lot Splits.

Section 17.17.040 – Specific adverse impact

This section is amended to remove 'physical environment' as a qualifying specific adverse impact under which the County could consider denial of an application for Urban Lot Split.

Section 18.104.440 – Two-unit developments

This section is amended to revise language, concerning how the conditions listed in Government Code Section 65913.4(a)(6)(B) – (K) impacts the identification of parcels qualifying for Urban Lot Split or Two-Unit Development, to more closely resemble Department of Housing and Community Development guidance on SB9. Additionally, the section is amended to revise language concerning groundwater permitting for qualifying projects. Finally, the section is amended similarly to proposed amendments to Section 17.17.020 and 17.17.040, outlining the ministerial process and timeline applied to Two-Unit Developments, narrowing historic district exemptions and removing the County's ability to deny an application due to adverse impacts to the physical environment.