DEPARTMENT OF RESOURCE MANAGEMENT

TERRY SCHMIDTBAUER
Director

JAMES BEZEK
Assistant Director

ALLAN CALDER
Planning Services Manager

SOLANO COUNTY

675 Texas Street, Suite 5500
Fairfield, CA 94533-6342
(707) 784-6765
Fax (707) 784-4805

www.solanocounty.com

Planning@solanocounty.com

Planning Services Division

ZONING ADMINISTRATOR
Staff Report
Lands of Abrew Minor Subdivision

Application No. MS-19-02 **Project Planner:** Nedzlene Ferrario	**Meeting of September 15, 2022** **Agenda Item No.** 1
Applicant/Owner: Joseph Abrew 712 Atchinson Drive Vacaville, CA 95687	**Engineer:** Foulk Engineering 4777 Mangels Blvd Fairfield, CA 94534

Action Requested
Approval of Minor Subdivision MS-19-02 to subdivide 82.9 acres into three (3) 20-acre parcels and one (1) 22.9-acre parcel for total of four (4) parcels in the Exclusive Agriculture 20-acre zoning district (A-20). The property is located north side of Brehme Lane, 4000 feet east of Pleasants Valley Road, within unincorporated Vacaville, California. APN 0102-090-140.

Property Information

Size: 82.9 acres	Location: north of Brehme Lane, east of Pleasants Valley Road
APN: 0102-090-140	
Zoning: A-20	Land Use: vacant
General Plan: Agriculture	Ag. Contract: N/A
Utilities: Septic and public water	Access: Pleasants Valley Road and Brehme Lane
State Responsibility Area (SRA): Very High-Risk Zone	

Adjacent General Plan Designation, Zoning District, and Existing Land Use

	General Plan	Zoning	Land Use
North	Agriculture	A-20	Agriculture
South	Agriculture	A-20	Agriculture
East	Agriculture	A-20	Agriculture
West	Agriculture	A-20	Agriculture

Environmental Analysis
Initial Study/Mitigated Negative Declaration was prepared and circulated for public review and comment, on April 30, 2022. The public comment period closed on May 9, 2022.

Motion to Approve
The Zoning Administrator does hereby APPROVE Minor Subdivision Application No. MS-19-02 and determines that the Initial Study/Mitigated Negative Declaration is adequate and complete, and ADOPTS

the mitigation monitoring plan, based on the findings and recommended conditions of approval in the attached resolution.

LOCATION MAP

PROJECT DESCRIPTION:

The subject property consists of approximately 83 acres of undeveloped land located on the northside of Brehme Road, 4,000 feet east of Pleasants Valley Road in the Pleasants Valley area, approximately 5 miles northwest of the center of the city of Vacaville, within unincorporated Solano County. The property consists of one legal parcel (Assessor Parcel Number [APN]: 0102-090-140).

The project applicant proposes to subdivide the 83-acre property into four parcels: three 20-acre parcels (Parcel 2A, Parcel 2D, and Parcel 2C), and one 22.9-acre parcel (Parcel 2B). The proposed tentative parcel map is shown on Attachment A. Access to the property is from Brehme Lane and a new private road is proposed off of Brehme Lane to serve the proposed parcels. Parcel 2A would be accessed from the new private road. The existing cul-de-sac turnaround at the terminus of Brehme Lane would be divided between Parcel 2A and Parcels 2B and 2D, with the property line running through the turnaround. A new private road is proposed to extend from the existing cul-de-sac, along the western boundary of Parcel 2D to the northern boundary of Parcel 2B. Driveways would extend from this private road, providing access to Parcel 2B, Parcel 2C, and Parcel 2D. The proposed private road would be contained within a 60-foot wide private access and utility easement and planned to be connected through the adjacent property on the west, to Cantelow Road. A subdivision application is currently under review for the adjacent property (MS-20-01, APN 102-090-070).

Land Use Consistency
The property is designated Agriculture to the General Plan and zoned Exclusive Agriculture 20 acre minimum (A-20). The proposed parcel sizes meet or exceed the minimum lot size and approval of the subdivision is consistent with General Plan and zoning.

Access:
Primary access to and from the subject property is via Brehme Lane, a private road which extends from Pleasant Valley Road, a County maintained roadway. The subdivider shall provide evidence to the County Surveyor, of legal rights to use Brehme Lane as access to Pleasants Valley Road prior to filing the Parcel Map.

The project proposes to utilize the existing paved road which terminates in a cul-de-sac and proposes to extend the road further east to serve the future parcels. The subdivider may post a financial security relative to roadway installation, subject to Public Works approval. A new road name and sign shall be installed for this roadway prior to issuance of a building permit. The private roadway is planned to connect to the parcel and proposed subdivision located to the west, and ultimately connect to Cantelow Road, and may serve as emergency access for the community during an evacuation.

Water supply:
The applicant proposed public water service connections by the Rural North Vacaville Water District for four (4) lots. The public water main is located on the south side of Parcel 2B and new 6-inch water line extensions through Parcel 2B would be required to serve the project.

Public water service connection would ensure adequate water supply for the project in a groundwater scarce area. The Rural North Vacaville Water District has approved the sale of four (4) water rights. The District requires that all improvements be designed, engineered and installed by the subdivider in accordance with the District Rules and Regulations prior to recording the Parcel Map or sale of individual lots. Preliminary public water system plans are attached to this report.

Sewage Disposal:
Individual on-site sewage disposal is proposed for the project. According to the Environmental Health Division, site and soil tests were conducted on the property by Dauwalder Engineering Company. Site testing allows for development of standard type onsite wastewater treatment systems. Design, construction, operations and maintenance of the system shall be in compliance with Solano County Code, Chapter 6.4 Sewage Disposal Standards.

ENVIRONMENTAL ANALYSIS (CEQA)
The Department of Resource Management completed an Initial Study/Mitigated Negative Declaration for the project which was released for a 30-day review and comment, on April 1, 2022 and ended on May 2, 2022. An extension was granted to May 9, 2022 per California Department of Fish and Wildlife (CDFW) request. The Initial Study/Mitigated Negative Declaration concludes that there could be significant adverse environmental impacts in the areas of air quality, biological resources, cultural resources, geology and hazards, hydrology/water quality, water supply, noise, and public services, and mitigation measures are proposed to reduce the impacts to less than significant levels.

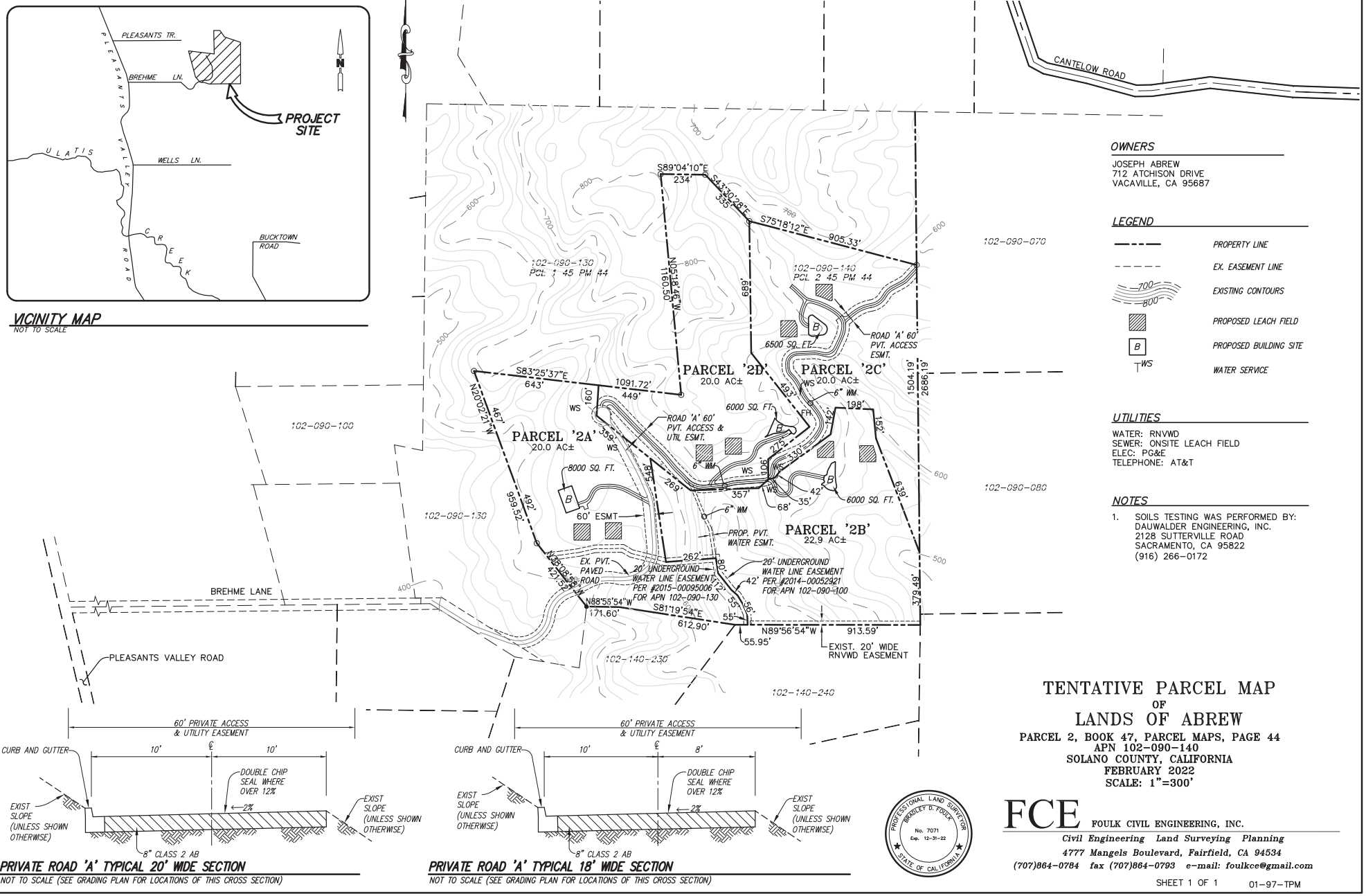
Public comments were received from CDFW and Central Valley Regional Water Quality Control Board, and all mitigation measures, including the monitoring responsibilities, have been incorporated into the project as recommended conditions of approval and in the mitigation monitoring plan. Each of the conditions has been listed under the County divisions and other agencies responsible for their implementation.

On May 18, 2022, Planning staff and Steve Fredericks, County Surveyor met with Susan Magliano, adjacent property owner (APN 0102-090-100) to discuss her concerns related to an accusation about an unpermitted dwelling, blocked access to hiking trails, use of Pleasant Trail Lane easement as access to the subdivision and installation of a water meter on a Solano Irrigation District (SID) water line. Review of aerial imaging did not show any house on the property, the blocked trail is private property and limited to use by the landowner, no access is proposed to the subdivision using Pleasant Trail, and Ms. Magliano was referred to SID regarding the water meter issue. Given this, no additional action is necessary regarding the map conditions.

Attachments:

A. Tentative Parcel Map
B. Preliminary Public Water System
C. Draft Resolution and conditions of approval
D. Initial Study/Mitigated Negative Declaration
E. Revised Mitigation and Monitoring Plan

ATTACHMENT A



OWNERS

JOSEPH ABREW
712 ATCHISON DRIVE
VACAVILLE, CA 95687

LEGEND

- PROPERTY LINE
- EX. EASEMENT LINE
- EXISTING CONTOURS
- PROPOSED LEACH FIELD
- PROPOSED BUILDING SITE
- WS WATER SERVICE

UTILITIES

WATER: RNVWD
SEWER: ONSITE LEACH FIELD
ELEC: PG&E
TELEPHONE: AT&T

NOTES

1. SOILS TESTING WAS PERFORMED BY:
   DAUWALDER ENGINEERING, INC.
   2128 SUTTERVILLE ROAD
   SACRAMENTO, CA 95822
   (916) 266-0172

TENTATIVE PARCEL MAP
OF
LANDS OF ABREW

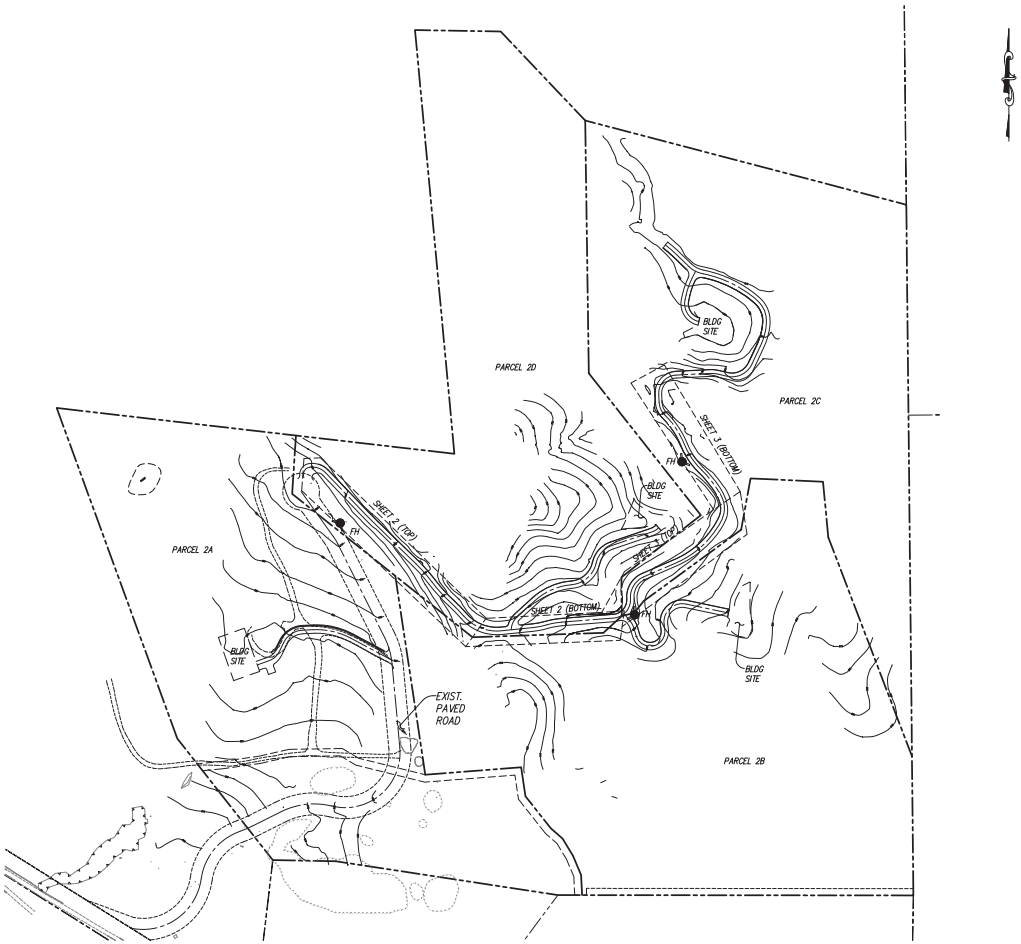
PARCEL 2, BOOK 47, PARCEL MAPS, PAGE 44
APN 102-090-140
SOLANO COUNTY, CALIFORNIA
FEBRUARY 2022
SCALE: 1"=300'

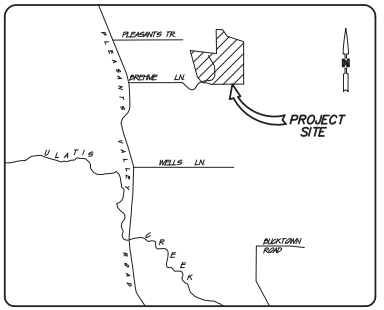
PROFESSIONAL LAND SURVEYOR
BRADLEY D. FOULK
No. 7071
Exp. 12-31-22
STATE OF CALIFORNIA

FCE FOULK CIVIL ENGINEERING, INC.
Civil Engineering Land Surveying Planning
4777 Mangels Boulevard, Fairfield, CA 94534
(707)864-0784 fax (707)864-0793 e-mail: foulkce@gmail.com

ATTACHMENT B

LANDS OF ABREW
PRELIMINARY WATER SYSTEM PLANS





VICINITY MAP
NOT TO SCALE

SHEET INDEX

ASSESSOR'S PARCEL NUMBER

0102-090-140

OWNER

JOSEPH ABREW
712 ATCHISON DRIVE
VACAVILLE, CA 95687
(707) 446-2036

CIVIL ENGINEER

FOULK CIVIL ENGINEERING, INC.
4777 MANGELS BOULEVARD
FAIRFIELD, CA 94534
P (707) 864-0784
F (707) 864-0793
CONTACT: BRAD FOULK

LEGEND

- RANDOM CONTROL FOR SURVEY
- 700 / 710 — EXISTING CONTOURS
- EXISTING PROPERTY LINE
- EXISTING ADJACENT PROPERTY LINE
- EXISTING CENTERLINE OF ROAD
- EXISTING EDGE OF PAVEMENT
- EXISTING DIRT ROAD
- PROPOSED RETAINING WALL

ABBREVIATIONS

A.D.	ANGULAR DEFLECTION
BLDG	BUILDING
ELEV	ELEVATION
EGR	EDGE OF GRAVEL ROAD
EXIST	EXISTING
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
SHT	SHEET
STA	STATION
VC	VERTICAL CURVE

DESIGNED BY:	BDF
DRAFTED BY:	NRF
CHECKED BY:	BDF
ISSUE DATE:	11/17/20

GRAPHIC SCALE
160 0 80 160 320 640
(IN FEET)
1 inch = 160 ft.

FCE FOULK CIVIL ENGINEERING, INC.
Civil Engineering Land Surveying Planning
4777 Mangels Blvd., Fairfield, CA 94534
(707)864-0784 fax (707)864-0793 e-mail: foulkce@gmail.com

REGISTERED PROFESSIONAL ENGINEER — BRADLEY D. FOULK — No. 47287 Exp. 12-31-21 — CIVIL — STATE OF CALIFORNIA

REV.	DATE	DESCRIPTION	BY	APPROVED

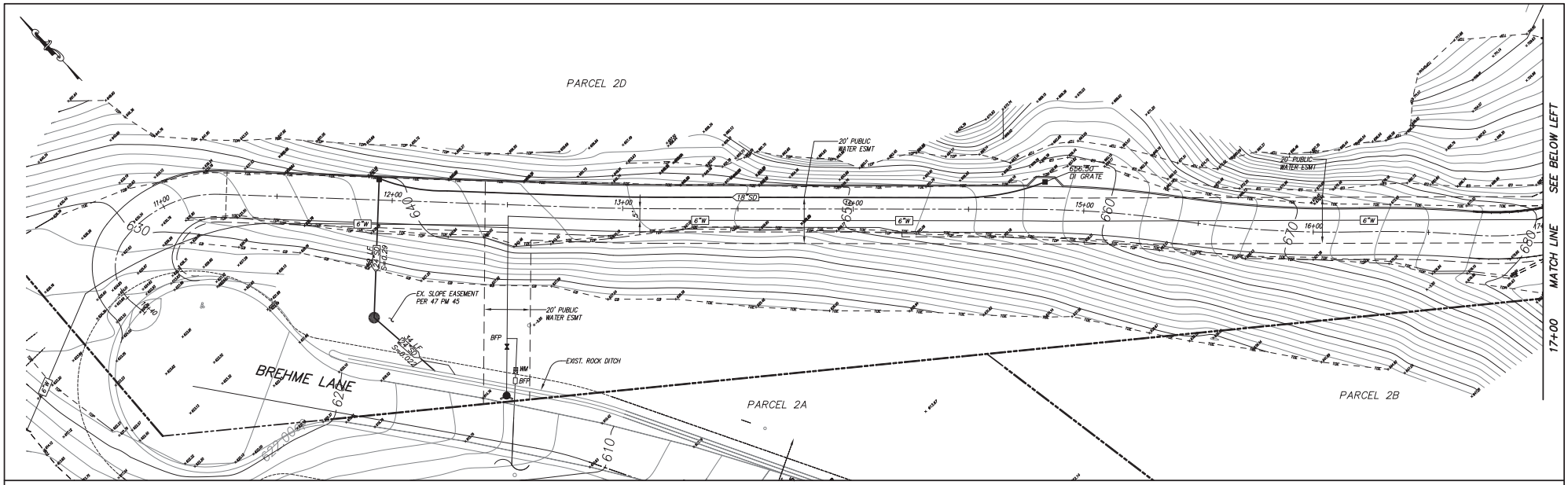
PROJECT: LANDS OF ABREW
PRELIMINARY WATER SYSTEM PLANS
SOLANO COUNTY, CALIFORNIA

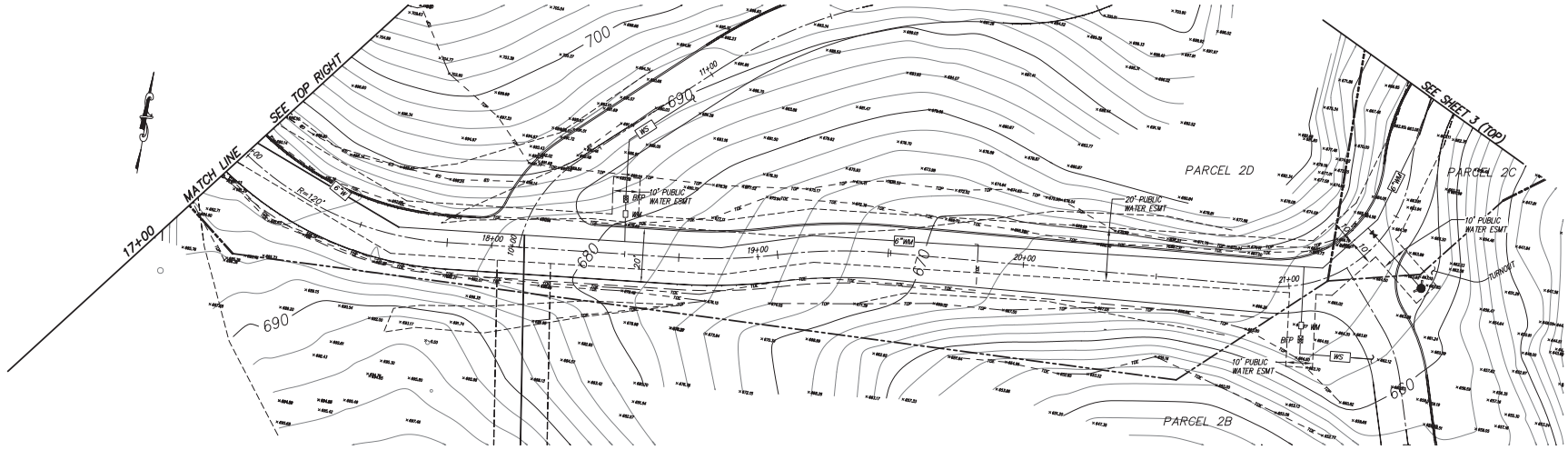
SHEET TITLE: COVER SHEET

SCALE: 1"=160' | DWG. NO: 01-97 | JOB NO: 01-97 | XREF: 01-097-TOPO

SHEET 1 OF 3

ATTACHMENT B





DESIGNED BY:	BDF
DRAFTED BY:	NRF
CHECKED BY:	BDF
ISSUE DATE:	11/17/20

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

FCE FOULK CIVIL ENGINEERING, INC.
Civil Engineering Land Surveying Planning
4777 Mangels Blvd., Fairfield, CA 94534
(707)864-0784 fax (707)864-0793 e-mail: foulkce@gmail.com

REGISTERED PROFESSIONAL ENGINEER — BRADLEY D. FOULK — No. 47287 — Exp. 12-31-21 — CIVIL — STATE OF CALIFORNIA

REV.	DATE	DESCRIPTION	BY	APPROVED

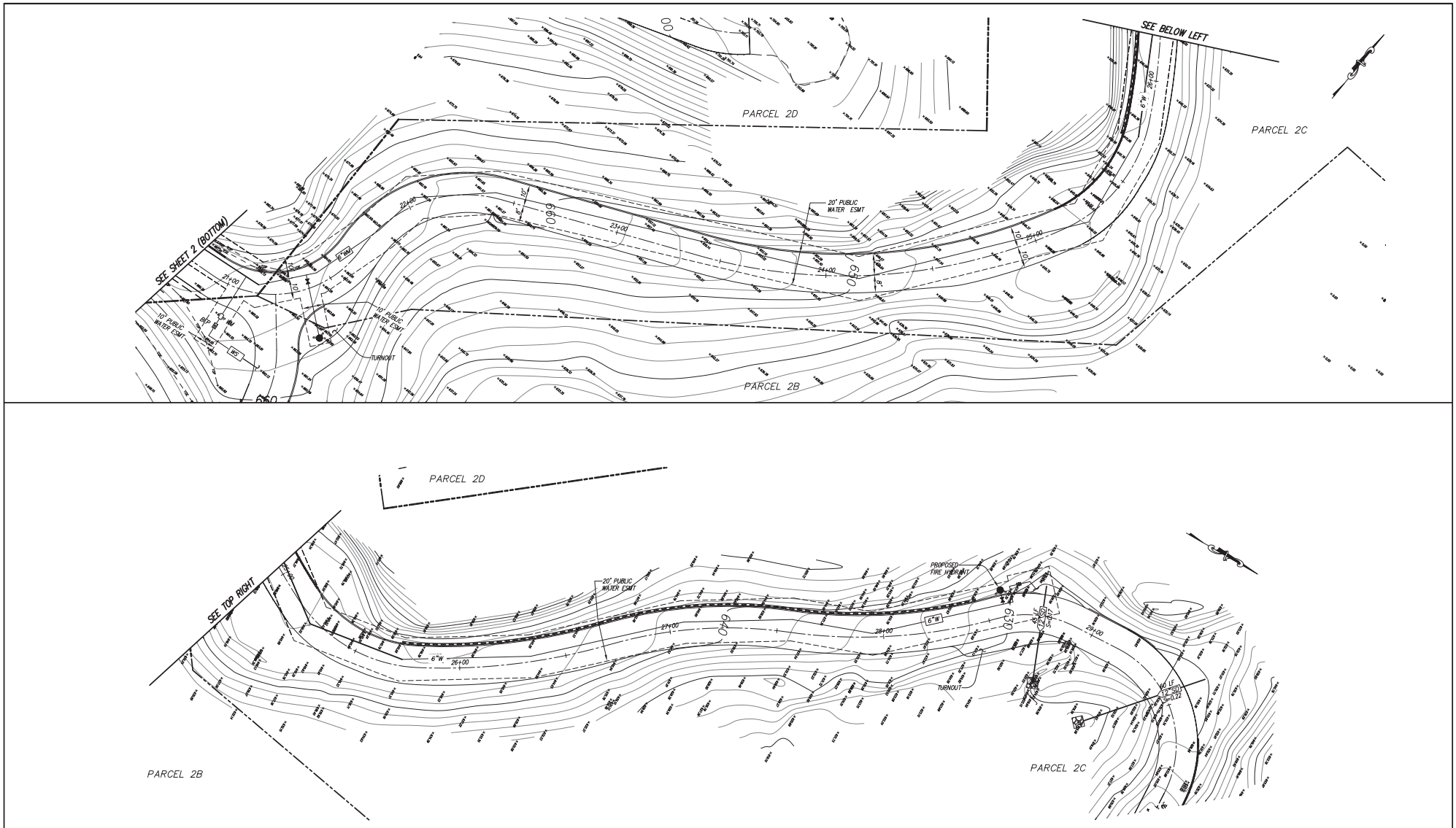
PROJECT: LANDS OF ABREW
PRELIMINARY WATER SYSTEM PLANS
SOLANO COUNTY, CALIFORNIA

SHEET TITLE: PRELIMINARY WATER PLAN STA 10+40 TO STA 21+00

SCALE: 1"=20' HORIZ / 1"=8' VERT | DWG. NO: 01-97 | JOB NO: 01-97 | XREF: 01-097-TOPO

SHEET 2 OF 3

ATTACHMENT B



DESIGNED BY: BDF	GRAPHIC SCALE	FCE FOULK CIVIL ENGINEERING, INC.	REGISTERED PROFESSIONAL ENGINEER BRADLEY D. FOULK No. 47287 Exp. 12-31-21 CIVIL STATE OF CALIFORNIA	REV.	DATE	DESCRIPTION	BY	APPROVED	PROJECT: LANDS OF ABREW PRELIMINARY WATER SYSTEM PLANS SOLANO COUNTY, CALIFORNIA	SHEET 3
DRAFTED BY: NRF	20 0 10 20 40 80	Civil Engineering Land Surveying Planning							SHEET TITLE: PRELIMINARY WATER PLAN STA 21+00 TO STA 30+00	
CHECKED BY: BDF	(IN FEET)	4777 Mangels Blvd., Fairfield, CA 94534							SCALE: 1"=20' HORIZ / 1"=8' VERT | DWG. NO: 01-97 | JOB NO: 01-97 | XREF: 01-097-TOPO	OF 3
ISSUE DATE: 11/17/20	1 inch = 20 ft.	(707)864-0784 fax (707)864-0793 e-mail: foulkce@gmail.com								

SOLANO COUNTY ZONING ADMINISTRATOR RESOLUTION NO. XX

WHEREAS, the Solano County Zoning Administrator has considered Minor Subdivision Application No. MS-19-02 of Joseph Abrew to subdivide 82.9 acres into three (3) 20-acre parcels and one (1) 22.9-acre parcel for total of four (4) parcels in the Exclusive Agriculture 20-acre zoning district (A-20). The property is located north side of Brehme Lane, 4000 feet east of Pleasants Valley Road, within unincorporated Vacaville, California. APN 0102-090-140;

WHEREAS, said Zoning Administrator has reviewed the report of the Department of Resource Management and heard testimony relative to the subject application at the duly noticed public hearing held on September 1, 2022, and;

WHEREAS, after due consideration, the Zoning Administrator has made the following findings in regard to said proposal:

1. The proposed map is consistent with applicable general and specific plans as specified in Section 65451 of the Government Code.

2. The design of the proposed subdivision is consistent with the Solano County General Plan.

3. The site is physically suitable for the proposed type of development.

4. The site is physically suitable for the proposed density of development.

5. The design of the subdivision is not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

6. The design of the subdivision will not cause serious public health problems.

7. The design of the subdivision and the type of improvements will not conflict with any public easements.

8. The discharge of waste from the proposed subdivision into an existing community sewer system would not result in, or add to, a violation of existing requirements prescribed by a California Regional Water Quality Control Board pursuant to Division 7 (commencing with Section 13000) of the Water Code. Each primary single-family residence would utilize on-site septic systems and would not affect any existing community sewer system.

9. The property does not front on any public waterway, public river, public stream, coastline, shoreline, publicly owned lake or publicly owned reservoir.

10. The proposed subdivision does not front along a public waterway, public river or public stream and does not provide for a dedication of a public easement along a portion of the bank of the waterway, river or stream bordering or lying within the subdivision, which easement is defined so as to provide reasonable public use and maintenance of the waterway, river or stream consistent with public safety.

11. The proposed subdivision is not entered into a contract pursuant to the California Land Conservation Act of 1965.

12. The proposed subdivision is consistent with applicable provisions of the County Hazardous Waste Management Plan in that the subdivision does not involve hazardous waste.

13. The proposed subdivision is not located within a special studies zone established pursuant to the Alquist-Priolo Special Studies Zone Act (Public Resources Code Section 2621 et seq.) and is in accordance with the policies and criteria established by the State Mining and Geology Board pursuant to that Act

    The proposed subdivision is not located within a special studies zone established pursuant to the Alquist-Priolo Special Studies Zone Act.

14. The proposed subdivision is located within the Very High Fire Risk Zone and the project is consistent with the requirements of the State Responsibility Area.

BE IT THEREFORE RESOLVED, that the Zoning Administrator has approved Minor Subdivision Application No. MS-19-02 subject to the following recommended conditions of approval:

1. Pursuant to Section 26-98.1 of the Solano County Subdivision Ordinance, a Parcel Map shall be recorded within twenty-four (24) months from the date of approval of the Tentative Subdivision Map. Failure to do so will result in the expiration of the approved Tentative Subdivision Map unless extended pursuant to Section 26-98.2 of the Solano County Subdivision Ordinance.

2. The Parcel Map to be recorded shall be in substantial compliance with the Tentative Parcel Map prepared by Foulk Engineering dated February 2022; on file with the Solano County Planning Division, except as modified herein.

3. The design of the subdivision and construction of subdivision improvements shall be substantially consistent with the following:
   a. Minor Subdivision Map (MS-19-02), prepared by FCE Foulk Civil Engineering, February 2022,
   b. Water System Plan, prepared by FCE Foulk Civil Engineering, November 17, 2020 as modified herein,
   c. These conditions of approval.

4. Prior to filing the Parcel Map, provide evidence to the Planning Services Division that water rights from the Rural North Vacaville Water District are secured for each lot.

5. Prior to filing Parcel Map, obtain improvement plan approval from the Department of Resource Management and install public improvements such as drainage and erosion control, stormwater drainage improvements, public water supply infrastructure subject to the Rural North Vacaville Water District's approval, fire hydrants and gated or locked connections subject to the approval of the Vacaville Fire Protection District. The Subdivider shall incur the costs for improvement plan approval and installation of the improvements.

Solano County Public Works – Engineering Services Division

6. A Parcel Map shall be filed with the Solano County Surveyor. The map shall conform to the requirements of the State Subdivision Map Act and the Solano County Subdivision

Ordinance. The map shall be prepared by a licensed surveyor or civil engineer. Upon the map being filed with the County Recorder the subdivision is valid

7. Prior to filing the Parcel Map, the subdivider shall provide evidence to the County Surveyor that the necessary legal access rights with a minimum width of 60 feet from Pleasants Valley Road to the subdivision is acquired or obtained. This subdivision was approved and a finding of site suitability was made based on the representation of the subdivider that he has, or is currently negotiating for and will acquire, the property rights necessary to provide legal access, with a minimum width of 60 feet from Pleasants Valley Road to the subdivision. Without this representation, the subdivision would not have been approved. If the subdivider is unable to provide such proof, he shall be deemed to have failed to meet the condition and no subdivision map shall be recorded. The subdivider understands and agrees that the County will not exercise its power of eminent domain to condemn any of the above-described property rights.

8. Prior to construction of any work within the public right of way, the subdivider shall apply for, secure and abide by the conditions of an encroachment permit for any work within the public right-of-way. Private roads must be maintained in such a manner as to prevent soil, rocks, and debris from tracking onto public roads.

9. Prior to construction of any work related to the private road, the subdivider shall apply for, secure and abide by the conditions of a grading permit for the construction of the private roads as shown on the Tentative Map, as well as any onsite grading.

10. Prior to the filing of the Parcel Map, a road maintenance agreement shall be recorded that requires participation from owners of all 4 lots within the subdivision. The maintenance agreement shall include all roadway improvements, culverts, drainage ditches and storm water detention ponds within the subdivision. The agreement shall be submitted and approved by Public Works Engineering prior to recordation. The agreement's existence shall be noted on the supplemental map sheet of the Parcel Map. This condition could be deemed to have been met if an existing maintenance agreement covers these terms.

11. NOTE ON MAP. The following note shall be placed on the supplemental map sheet. "Additional Fire Safe regulations may affect future construction on these parcels."

12. NOTE ON MAP. The following note will be placed on the supplemental map sheet. "A grading permit review will be required before the issuance of a building permit for dwellings or driveways."

13. NOTE ON MAP. The following note will be placed on the supplemental map sheet. All lots created by this map are included in a Road Maintenance Agreement. This agreement is recorded as Document Number _____."

14. Subdivider shall place a road name sign for proposed Road 'A' at Brehme Lane. The sign shall conform to the Solano County Road Standards, Chapter 30 of the Solano County Code and all applicable fire safe standards. No building permits shall be issued until the road sign is installed.

15. The subdivider shall retain a registered civil engineer to prepare road construction and drainage plans. The plans shall be submitted for review by the Public Works Engineering Office. The plans shall be in accordance with the Solano County Subdivision Ordinance and current adopted Fire Safe Standards. The plans shall show the following:

a. Construct a private road from Brehme Lane to the easterly line of proposed Parcels '2C' as shown on the tentative map dated November 2021. The road shall be 20 feet wide with 4 foot graded shoulders. The width and shoulder requirements may be waived in short sections at the discretion of Public Works Engineering Section. The road will be surfaced with a double chip seal. An upgrade to asphaltic concrete may be substituted.
b. Improve the existing Brehme Lane from Pleasants Valley Road to the private road proposed by this subdivision. This road shall be 24 feet wide with 4 foot graded shoulders. The road will be surfaced with a double chip seal. An upgrade to asphaltic concrete may be substituted.
c. Drainage facilities for the road and detention basins if required.
d. A turnaround facility at or near the common corner to proposed Parcels '2B', '2C' and '2D'.
e. Install road name signs.

16. Water lines and/or other underground utilities under roadways shall be constructed/installed prior to the final surfacing of the roads.

17. The private road easements shall be widened as necessary to contain the road base, all cuts and fills, and the required roadside drainage facilities.

18. The subdivider shall either complete all required private and public construction or enter into an improvement agreement and post security with the County of Solano, prior to the filing of the parcel map, agreeing to complete the required construction within 24 months after the preparation of the agreement.

Environmental Health Division

19. On-site sewage disposal shall be consistent with the standards specified in Chapter 6.4 of Solano County Code.

Rural North Vacaville Water District (District)

20. Prior to improvement plan approval and Parcel Map recordation, the Subdivider shall sign a District Work Order for processing the parcel map. The work order is the mechanism to which all fees and charges associated with District staff time and/or materials will be charged for reimbursement from the landowner(s).
    a. Prior to review of the Improvement Plans, the Subdivider must pay a plan review deposit to be determined by the District.
    b. Prior to approval of the Improvement Plans, the Subdivider must pay an inspection deposit for 7% of the Engineer's estimate.

21. Prior to approval of Improvement Plans the Subdivider shall supply the following Bonds:
    a. Performance Bond for 110% of the Engineer's estimate for the necessary water system improvements.
    b. Maintenance/Warranty Bond for 50% of the Engineer's estimate for the required warranty period of the new facilities.

22. Prior to Parcel Map recordation, the District shall review and approve all Improvement Plans.
    a. The Subdivider must have their Engineer design the necessary system improvements to accommodate service to each newly created parcel. The design

shall include, but is not limited to, new services, new water mains, upgrades of existing water mains, and/or upgrades to the District's pumping and storage facilities. New water services shall include construction of water service lateral(s) and setting meter boxes to each of the newly created parcels.

b. Water services shall be connected to water mains adjacent to property. Extending water services through neighboring properties will not be allowed.
c. The Subdivider shall upsize the existing 4" main (approximately 1,800 lineal feet) south of the project to a 6" main. Otherwise, the Subdivider's engineer shall provide evidence that water hammer caused by operation of the expanded system will not damage the existing 4" main or shall provide an engineering solution to mitigate the water hammer.
d. The water proposed water mains shall be extended to the west property line within the access and utility easements to allow for future extension by neighboring properties.
e. All water system improvements shall be designed and constructed in accordance with applicable Solano Irrigation Standard Drawings and Specifications.
f. All new water mains shall be located within minimum 20-foot wide easements with right-of-entry access.
g. All water services shall be equipped with reduced pressure principal backflow preventers and pressure regulating valves.
h. Fire hydrants shall be on separately valve pipe segments; at least two main line valves will be required where main tees and runs west and east.
i. Fire flow shall meet Fire District requirements.
j. Subdivider shall submit to the District two (2) full size sets of improvement plans, and one electronic copy (PDF) for each review.

23. Parcel Map shall include the District's Statement for District approval and shall not be approved until all District facilities have been constructed and accepted by the District.

24. The Parcel Map shall include a supplemental note that fences or other permanent or semi-permanent facilities shall not be constructed in water facility easements.

25. All improvements shall be constructed by the Subdivider's contractor and inspected by the District at Subdivider's expense:
    a. The Subdivider's contractor shall secure a District Encroachment Permit prior to beginning any construction activities.
    b. After approval of all plans and prior to construction, the Subdivider's Engineer shall provide the District with two (2) full sized improvement plan sets, and one (1) PDF copy of the plan sets.
    c. A preconstruction field meeting must be held with the Subdivider, the Subdivider's contractor, and District staff prior to beginning any construction.
    d. The Subdivider's contractor shall submit construction schedule, testing and disinfection plans, and material specification sheets for the proposed improvements. The District must review and approve the material submittals prior to material procurement and prior to the pre-construction meeting.
    e. The District will furnish, at the Subdivider's expense, the meter, pressure regulating valve, and backflow prevention assembly to be installed by the Subdivider's contractor.
    f. All costs for project administration, design, review, construction, inspection, and other work related to the project shall be bore by the Subdivider.
    g. Prior to approval of any plans or maps, the Subdivider(s) must be paid current on all accounts and assessments.
    h. District GIS files will be updated accordingly, by the District, and at the Subdivider's

expense.

i. Electronic AutoCAD files are required upon the completion of the project showing "as-builts" for electronic archiving.

Vacaville Fire Protection District

26. Prior to recordation of the Parcel Map, subdivider shall provide to the Solano County Department of Resource Management written verification from the Vacaville Fire Protection District that all required improvements have been installed pursuant to the Fire District's requirements.

27. Prior to recordation of the Parcel Map, the subdivider shall comply with the following:
    a. All roads shall be built and maintained to Public Road Standards as specified in the "Subdivision Ordinance". Sec. 26-75.2
        1) All roads and driveways shall be constructed prior to the issuance of any building permit. Section 8704.2, California Fire Code (CFC)
        2) If the interior roads are not publicly maintained, a road maintenance agreement that requires all lot owners in the subdivision to participate in the maintenance of the private roads shall be recorded. The maintenance agreement, which shall include a long-term maintenance program, funding mechanism, and budget, shall be approved by Public Works - Engineering prior to recordation of the Parcel Map. The maintenance agreement shall be incorporated into the project CC&Rs or a separately recorded road maintenance agreement prior to recordation of the Parcel Map.
        3) Cul-de-Sac - Wherever a dead-end road is permitted, an adequate turning area shall be provided. Sec 1-2.10 Road Improvement Standards and Land Development & Subdivision Requirements.

28. Vacaville Fire Protection District requirements regarding driveways:
    a. Fire apparatus access shall be provided and maintained in accordance with the provisions of the California Fire Code (CFC) as adopted by the Vacaville Fire Protection District.
    b. To provide year-round, all weather access for heavy fire engines and other emergency equipment to residential building sites that are not covered in the Solano County Road and Street Standards, these minimum access road specifications shall apply:
        1) Plans for access shall be submitted to the District for review and approval prior to construction.
        2) Driveways shall extend from each building site to a public or private roadway and shall have an unobstructed width of not less than 20 feet (6096 mm) with suitable base material.
        3) The maximum gradient is 16 percent. 503.2.7 CFC
        4) Surface designed and maintained to support a 75,000 lb. Load.
        5) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.
        6) Turnouts shall be a minimum of 12 feet wide and 30 feet long with a minimum 25-foot taper on each end.
        7) Minimum centerline curve radius of 40 feet.
        8) Necessary drainage improvements.
        9) Turn-around facilities shall be provided at all building sites on driveways over 300 feet in length and shall be within 50 feet of the building. The

minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

10) Any required culverts or bridges shall have a minimum load carrying capacity of 75, 000 lb. and certified by an engineer. Vehicle load limits shall be posted at both entrances to bridges.

11) Overhead clearance of limbs, trees etc. shall be a minimum of 15 feet. Title 14 CCR Div. 1.5, Chapter 7, Subchapter 2, Articles 1-5

29. Vacaville Fire Protection District requirements regarding fire hydrants and siting structures: Residences shall be no more than 1000 road feet from a fire hydrant. Hydrants shall be of approved type and contain two 2 ½" and one 4 ½' NHS external thread outlets.
    a. Fire hydrants shall be installed and operational prior to the issuance of any building permit. 8704.3 CFC
    b. Hydrant fire flow shall conform to Fire District standards.
    c. Fire hydrants shall be clearly identified in an approved manner to prevent obstruction by parking and other obstructions. 901.4.3 CFC.
    d. Fire hydrants shall be identified by the installation of blue reflective markers located in the center of the roadway. 901.4.3 CFC
    e. Fire hydrants subject to possible vehicular damage shall be adequately protected with guard posts in accordance with Section 8001.11.3 CFC
    f. A 3-foot (914.4 mm) clear space shall be maintained around the circumference of fire hydrants. 1001.7.2 CFC
    g. The center of a hose outlet shall not be less than 18 in. (457 mm) above final grade. NFPA 24

Environmental Mitigation Measures

30. **Mitigation Measure AIR-1:** Prior to issuance of a grading/improvement plan permit, building permit or Parcel Map recordation, the project applicant shall require its construction contractor to prepare and implement a Dust Control and Construction Exhaust Mitigation Plan subject to the satisfaction of the Public Works Division and Yolo Solano Air Quality Management District.

31. **Mitigation Measure BIO-1:** Prior to recordation of the Parcel Map, the Subdivider shall compensate for the loss of foraging habitat due to residential development, structures (houses, barns, out- buildings, roads, etc.) at a ratio of 1:1 (1 acre for every acre removed), for a total loss of 0.85 acres. Mitigation may be in the form of fee-title or a conservation easement or credits, held by a non-profit land management organization, on lands containing suitable Swainson's hawk foraging habitat and as approved by the California Department of Fish and Wildlife in Solano County. The purchase of Swainson's Hawk mitigation credits at a mitigation bank or conservation area located in Solano County is acceptable.

32. **Mitigation Measure BIO-2:** Removal of large riparian trees (trunk diameter of 15 inches or more measured at 54 inches above natural grade) shall be avoided to reduce potential impacts to the Yellow-breasted chat.

33. **Mitigation Measure BIO-2A Notification of Lake and Streambed Alteration:** For Project activities that may substantially alter the bed, bank, or channel of English Creek, the unnamed tributary to English Creek, or any other streams, including but not limited to road crossing activities or riparian vegetation disturbance, an LSA Notification shall be submitted to CDFW pursuant to Fish and Game Code section 1602 prior to Project

construction. If CDFW determines that an LSA Agreement is warranted, the Project shall comply with all required measures in the LSA Agreement, including but not limited to requirements to mitigate impacts to the streams and riparian habitat. Permanent impacts to the stream and associated riparian habitat shall be mitigated by restoration of riparian habitat at a 3:1 mitigation to impact ratio based on acreage and linear distance as close to the Project area as possible and within the same watershed and year as the impact. Temporary impacts shall be restored on-site in the same year as the impact.

34. **Mitigation Measure BIO-4:** All equipment should be thoroughly cleaned (washed) before entering the project site, if the equipment has been used in areas infested with weeds. Workers should inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and equipment. Stockpiled, un-infested material should be maintained in a weed-free condition. Retain native vegetation in and around project activity to the maximum extent possible. Avoid creating soil conditions that promote weed germination and establishment. Revegetate disturbed areas in a manner that optimizes plant establishment for that specific site. Revegetation may include planting, seeding, fertilization, liming, and weed-free mulching, as necessary. Use native material where appropriate and feasible. Use certified weed-free or weed-seed-free hay or straw for erosion control. Conduct weed control on roadways and in disturbed areas as needed. Re-seeding of the project site shall be accomplished within appropriate California native plant species that are adapted to the site. Suggested Erosion control seed mix consists of 15 pounds per acre (lbs/ac) of *Bromus carinatus*, 15 lbs/ac of *Elymus glaucus*, 10 lbs/ac of *Lupinus bicolor*, 10 lbs/ac of *Lupinus succulentus*, 10 lbs/ac of *Trifolium albopurpureum*, 10 lbs/ac of *Trifolium microcephalum*, and 5 lbs of *Clarkia pupurea*. Placement of seed shall be by hydromulch spray or other broadcast method as determined by owner to ensure germination prior to October 15th. If necessary, watering of the reseeded area must be ensured to enhance plant germination and survival.

35. **Mitigation Measure BIO-5:** In order to protect the riparian corridor and the tributaries, delineate on the Parcel Map a 100-foot wide setback, measured from the centerline of the tributaries or creek. No ancillary structures (barns, leach fields, corrals etc.) shall be placed within the setback.

36. **Mitigation Measure BIO-6:** To minimize the impact of development on wildlife movement, all perimeter fencing shall meet the following standards:
    - Fence heights shall be limited to average maximum of 5 feet above ground level (limited height variations based on topographic changes are allowable).
    - Welded wire or other mesh fences shall have a minimum 4 inch by 4-inch opening. Smaller opening in the lower 18 inches of the fence is allowable if needed to contain smaller domestic animals. No-climb horse fencing should be avoided as perimeter fencing.
    - Solid perimeter fences are prohibited.
    - Wood or metal picket fences shall have minimum spacing of 4 inches between pickets and shall not have sharp or pointed spikes or decorations along the top.

37. **Mitigation Measure BIO-7:** In order to protect and preserve Oak Woodlands and Heritage trees, prior to issuance of a grading permit/improvement plan permit, building permit or recordation of the Parcel Map, a qualified and certified Arborist shall prepare a tree inventory/resources report. All oak species 6-inches dbh or greater to be retained or removed and all heritage trees shall be identified on the grading/improvement plan. Consistent with General Plan policy RS. I-3, heritage trees are defined as (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California with a diameter of 10 inches above natural grade, or (c) any

tree or group of trees special significance in consultation with the Department of Resource Management. The Arborist shall recommend and monitor specific measures to protect oak trees 6-inches dbh or greater or heritage trees from construction impacts. This includes designating no work zones by exclusion fencing along the canopy dripline. Ground disturbance, grading, development, construction or trenching is prohibited within 5 feet of the dripline of any oak tree 6-inches dbh or greater or any heritage tree. If an oak tree or heritage tree cannot be protected from damage or removal, the loss of each mature tree shall be mitigated by planting 15 saplings at least 3 years old in areas where oak recruitment has been absent due to fire, grazing and weed competition. A qualified biologist shall designate potential planting areas and supervise the planting and installation of any necessary irrigation. The following guidelines for oak restoration shall be followed:

- Mitigation Planting: To compensate for the unavoidable loss of mature blue and live oaks, 15 saplings of the same species shall be planted for each mature tree removed. Oak saplings shall be sourced from a certified Phytophthora ramorum-free nursery. Saplings must be at least 3 years old and shall be spaced at least 15 feet from each other. Each sapling shall be staked with two wooden stakes and caged to a sufficient height that deer and cattle cannot damage the sapling. Saplings shall be planted in moist soil, after the first substantial rain. In the following summer, watering may be necessary to enhance survival.
- Performance and Success Criteria: Performance criteria for the revegetation area shall be assessed in 2024, or at least 3 years following the conclusion of grading activities. The oak planting site(s) shall have at least a 65 percent cover by native or naturalized plants (primarily grasses) and no more than 20 percent of the area shall be covered by non-native weeds. Survival of planted oak saplings until 2024 shall exceed 65% (i.e., 10 living oak saplings per mature tree removed).
- Monitoring Plan: The site shall be visited annually by a qualified biologist to visually assess herbaceous cover of the revegetation area and the survival of oak saplings. If revegetation success or sapling mortality falls below the above performance and success criteria during any of the 3 years following construction, adaptive management (reseeding, replanting) must be conducted, using the above species and methods.

38. Prior to any ground disturbance such as trenching or grading for public water system, issuance of encroachment, installation of the private road or building permit, a qualified biologist or botanist as applicable, shall conduct and prepare the following pre-construction surveys in condition 39-51; and submit copies of the report to the Department of Resource Management:

39. **Mitigation Measure BIO-3:** For construction activities that occur between February 1 and August 31, a preconstruction breeding bird survey shall be conducted by a qualified biologist familiar with bird behavior and knowledge of nest types prior to and within 10 days of any initial ground-disturbance activities. A copy of the preconstruction survey shall be submitted to the Department of Resource Management prior to construction. Surveys shall be of sufficient intensity (typically 2 to 3 surveys) to document nesting within a 0.25 mi (1,320 ft) buffer around planned work activities (consistent with current Solano HCP guidance). If a lapse in project-related construction work of 15 days or longer occurs, additional preconstruction surveys shall be required before project work may be reinitiated. A survey will consist of a pedestrian search by a qualified Biologist for both direct and indirect evidence of bird nesting. Direct evidence will include the visual search of an actual nest location. Indirect evidence will include observing birds for nesting behavior, such as copulation, carrying food or nesting materials, nest building, feeding chicks, and other characteristic behaviors that indicate the presence of an active nest. Surveys will be

conducted in accordance with the guidance in Martin and Guepel (1993). If nesting Swainson's hawks, white tailed kites, or other birds are detected, the qualified biologist shall establish no-disturbance buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers will be maintained until the qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

40. **Mitigation Measure BIO-9: Sensitive Natural Community Habitat Assessment and Mitigation**: A qualified botanist shall conduct vegetation classification and mapping of the Project site following the *Survey of California Vegetation Classification and Mapping Standards*[6] and *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*[7] during the appropriate period to identify the plants and natural communities that have the potential to occur on the Project site prior to the start of ground-disturbing activities and prepare a report documenting findings. If sensitive natural communities are mapped within the Project site, the Project shall be redesigned to avoid impacts to all sensitive natural communities. If sensitive natural communities cannot be avoided, then loss of sensitive natural communities shall be mitigated through permanent habitat protection at a 3:1 mitigation to impact ratio, through a conservation easement and implementing and funding a long-term management plan in perpetuity. Compensatory habitat shall be of equal or greater quality than the impacted habitat or a habitat enhancement plan shall be prepared and implemented by a qualified biologist to achieve at least equal habitat quality prior to Project construction. For any habitat enhancement, to ensure a successful planting effort, all plantings shall be monitored and maintained as necessary for a minimum of five years. Oak trees, other trees, and all other plantings shall each have a minimum of 80% survival at the end of the minimum monitoring period. If the planting survival is not meeting this goal, then the Project shall implement replacement planting, additional watering, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival requirements for five years after planting. Oak plantings shall come from nursery stock grown from locally sourced acorns, or from acorns gathered locally, preferably from the same watershed in which they are planted. The trees should be able to survive the last two years of a minimum five-year monitoring period without irrigation.

41. **Mitigation Measure BIO-10: Special-Status Plant Survey and Avoidance**: A qualified botanist shall conduct surveys during the appropriate blooming period for all special-status plants that have the potential to occur on or adjacent to the Project area prior to the start of ground-disturbing activities and prepare a report documenting survey findings. Habitat adjacent to the Project area should be surveyed if the Project may have indirect impacts off-site as a result of changes to hydrological conditions or other indirect impacts. More than one year of surveys may be necessary. Surveys and reporting shall be conducted following *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*. Surveys shall be submitted to CDFW for review and written acceptance. If special-status plants are found during surveys, the Project shall be re-designed to avoid impacts to special- status plants. If special-status plants listed as threatened or endangered under the federal Endangered Species Act (ESA), such as Keck's checkerbloom, are discovered on or adjacent to the Project site, the Project shall consult with USFWS prior to commencing Project activities. If impacts to any special-status plants cannot be avoided completely during the Project, the Project shall provide mitigation including on-site restoration including a restoration plan approved by CDFW, off-site habitat preservation at a 3:1 mitigation to impact ratio based on acreage or number of plants as appropriate, or another method accepted in writing by CDFW. The qualified botanist shall be knowledgeable about plant taxonomy,

familiar with plants of the region, and have experience conducting botanical field surveys according to vetted protocols.

42. **Mitigation Measure BIO-11A: Burrowing Owl Habitat Assessment, Surveys, and Avoidance**: Prior to Project activities, a qualified biologist shall conduct a habitat assessment following Appendix C: Habitat Assessment and Reporting Details of the CDFW *Staff Report on Burrowing Owl Mitigation*[8] (CDFW 2012 Staff Report). The habitat assessment shall extend at least 492 feet (150 meters) from the Project site boundary or more where direct or indirect effects could potentially extend offsite (up to 500 meters or 1,640 feet) and include burrows and burrow surrogates. If the habitat assessment identifies potentially suitable burrowing owl habitat, then a qualified biologist shall conduct surveys following the CDFW 2012 Staff Report survey methodology. Surveys shall encompass the Project site and a sufficient buffer zone to detect owls nearby that may be impacted commensurate with the type of disturbance anticipated, as outlined in the CDFW 2012 Staff Report, and include burrow surrogates such as culverts, piles of concrete or rubble, and other non-natural features, in addition to burrows and mounds. Time lapses between surveys or Project activities shall trigger subsequent surveys, as determined by a qualified biologist, including but not limited to a final survey within 24 hours prior to ground disturbance. The qualified biologist shall have a minimum of two years of experience implementing the CDFW 2012 Staff Report survey methodology resulting in detections. Detected nesting burrowing owls shall be avoided pursuant to the buffer zone prescribed in the CDFW 2012 Staff Report and any passive relocation plan for non-nesting owls shall be subject to CDFW review.

    Please be advised that CDFW does not consider exclusion of burrowing owls (i.e., passive removal of an owl from its burrow or other shelter) as a "take" avoidance, minimization, or mitigation measure for the reasons outlined below. Therefore, to mitigate the impacts of potentially evicting burrowing owls to less-than-significant, Mitigation Measure BIO-11B outlined below should require habitat compensation with the acreage amount identified in any eviction plan. The long-term demographic consequences of exclusion techniques have not been thoroughly evaluated, and the survival rate of excluded owls is unknown. Burrowing owls are dependent on burrows at all times of the year for survival or reproduction, therefore eviction from nesting, roosting, overwintering, and satellite burrows or other sheltering features may lead to indirect impacts or "take" which is prohibited under Fish and Game Code section 3503.5. All possible avoidance and minimization measures should be considered before temporary or permanent exclusion and closure of burrows is implemented to avoid "take."

43. **Mitigation Measure BIO-11B: Burrowing Owl Habitat Mitigation:** If the Project would impact an unoccupied nesting burrowing owl burrow or burrow surrogate (i.e., a burrow known to have been used in the past three years for nesting), or an occupied burrow (where a non-nesting owl would be evicted as described above), the following habitat mitigation shall be implemented prior to Project construction.

44. **Mitigation Measure BIO-12: Special-status Bee Habitat Assessment and Avoidance:** A qualified wildlife biologist shall conduct visual surveys of areas planned for ground disturbance, including but not limited to, installation of water main, new roads, leach fields, and building sites, and within a 100-foot buffer of ground-disturbing activities.

    Surveys shall be conducted to coincide with the blooming period of locally common nectar sources such as vetch (*Vicia* spp.) and California poppy (*Eschscholzia californica*) during the flight season for the western and Crotch's bumble bee (generally late February through late June). Between two and four evenly spaced surveys shall be conducted for

the highest detection probability, including surveys in early spring (late March/early April) and early summer (late June/July). Surveys shall take place when temperatures are above 60°F, preferably on sunny days with low wind speeds (e.g., less than 8 miles per hour) and at least 2 hours after sunrise and 3 hours before sunset. On warm days (e.g., over 85°F), bumble bees will be more active in the mornings and evenings. The qualified biologist shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as binoculars. If western or Crotch's bumble bee nests are identified within the ground disturbance area or 100-foot buffer area, a plan to protect bumble bee nests and individuals shall be developed and implemented in consultation with CDFW. The plan shall include, but not be limited to: 1) specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queens); 2) pre-construction surveys conducted within 30 days and consistent with any current available protocol standards prior to the start of ground-disturbing activities to identify active nests; 3) establishment of appropriate no-disturbance buffers for nest sites and construction monitoring by a qualified biologist to ensure compliance with buffers; 4) restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, measures to minimize the spread of invasive plant species); and 5) prescription of an appropriate restoration seed mix targeted for the bumble bees, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season for bumble bees (March to October).

45. **Mitigation Measure BIO-13: Valley Elderberry Longhorn Beetle Habitat Assessment and Avoidance:** A qualified biologist shall evaluate the Project site for VELB habitat following the USFWS 2017 Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle. Project activities shall avoid elderberry plants and a 165-foot buffer around each plant. Elderberry plants and the 165-foot avoidance buffer shall be clearly flagged prior to Project activities. If Project activities must occur within 165 feet of an elderberry plant, the Permittee shall consult with USFWS pursuant ESA and receive written approval from CDFW prior to the impact.

46. **Mitigation Measure BIO-14: American Badger Burrow Surveys and Avoidance***:* Within 48 hours prior to ground-disturbing activities, a qualified biologist shall survey the Project site for American badger burrows, including adjacent habitat within 50 feet. If potential badger burrows are identified, they shall be flagged for avoidance, including a sufficient buffer approved by CDFW. If badger burrows cannot be avoided, a qualified biologist shall prepare and implement a relocation and habitat improvement plan approved in writing by CDFW.

47. **Mitigation Measure BIO-15: Bat Tree Habitat Assessment and Surveys:** Prior to any tree removal, a qualified biologist shall conduct a habitat assessment for bats. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, and suitable canopy for foliage roosting species). If suitable habitat trees are found, they shall be flagged or otherwise clearly marked and tree trimming or removal shall not proceed unless the following occurs: a) in trees with suitable habitat, presence of bats is presumed, or documented during the surveys described below, and removal using the two-step removal process detailed below occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, or b) after a qualified biologist conducts night emergence surveys or completes a visual examination of roost features that establish

absence of roosting bats.

Two-step tree removal shall be conducted over two consecutive days, as follows: 1) the first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures shall be avoided; and 2) the second day the entire tree shall be removed.

48. **Mitigation Measure BIO-16: California Red-legged Frog Habitat Assessment and Surveys:** Within 48 hours prior to the commencement of ground-disturbing activities, the Project area and nearby vicinity, including a minimum 500-foot radius surrounding the Project area, shall be assessed by a qualified biologist for the presence of California red-legged frog individuals and habitat features. Habitat features include both aquatic habitat such as plunge pools and ponds and terrestrial habitat such as burrows. The results of the habitat feature assessment shall be submitted to CDFW for written acceptance prior to starting Project activities. Habitat features shall be flagged for avoidance to the extent feasible. If California red-legged frogs are encountered during the assessment or Project activities, the Project shall not proceed or all work shall cease, and CDFW shall immediately be notified. Work shall not proceed until the frog, through its own volition, moves out of harm's way and CDFW has provided permission in writing to proceed with the Project. If California red-legged frog is encountered or the qualified biologist believes that California red-legged frog is likely to occur in the Project area, the Project shall consult with USFWS pursuant to the federal Endangered Species Act.

49. **Mitigation Measure BIO-17A: Foothill Yellow-legged Frog Survey Methodology:** A CDFW-approved qualified biologist shall provide a foothill yellow-legged frog survey methodology to CDFW for review and written approval no less than 30 days prior to beginning Project activities, unless CDFW approves otherwise in writing. No Project activities shall begin until foothill yellow-legged frog surveys have been completed using a method approved by CDFW. Survey methodology shall target all life stages and shall have an adaptive management approach based on the stream conditions at the time of surveys (i.e., whether ponded or flowing water is present, or whether the stream has been completely dry for less than 30 days). Surveys within and adjacent to the Project area shall include searching suitable habitat including but not limited to cavities under rocks, within vegetation such as sedges and other clumped vegetation, and under undercut banks, no less than 50 feet from the streambed and 500 feet upstream and downstream of the Project area. Surveys should be conducted at different times of day and under variable weather conditions if possible.

50. **Mitigation Measure BIO-17B: Foothill Yellow-legged Frog Surveys:** Prior to starting Project activities, a CDFW-approved qualified biologist shall conduct surveys for foothill yellow-legged frog using a CDFW-approved methodology (Mitigation Measure BIO- 17A). If foothill yellow-legged frogs, or any other special-status species, are found, CDFW shall be notified immediately, and ground-disturbing activities shall not occur without written approval from CDFW allowing the Project to proceed. In this event, a temporary wildlife exclusion fence shall be installed, if requested by CDFW, to prevent frogs and/or other special-status species from entering the work site. Additionally, a qualified biologist shall be on site daily to monitor work and ensure impacts to foothill yellow-legged frogs are avoided and minimized. The results of the survey shall be submitted to CDFW for written acceptance prior to starting Project activities. If the stream has been completely dry for greater than 30 days prior to starting Project activities, and no water or moist areas within the streambed exist within 500 feet upstream and downstream of the Project site, then surveys for foothill yellow-legged frogs are not necessary.

51. **Mitigation measure Bio-18: Western Pond Turtle Survey:** For all Project activities that occur within 500 feet of stream or wetland habitat, prior to ground-disturbing activities, a qualified biologist shall conduct a pre-construction survey within 48 hours prior to the start of Project activities, focusing on the presence of western pond turtle and their nests. If western pond turtles are discovered during the survey, Project activities shall not begin until CDFW has been consulted and approved in writing measures to avoid and minimize impacts to western pond turtle, and the measures have been implemented.

52. **Mitigation Measure CUL-1:** In the event that presently undocumented buried archaeological deposits are encountered during any project-associated construction activity, work must cease within a 50-foot radius of the discovery. A qualified archaeologist must be retained to document the discovery, assess its significance, and recommend treatment.

53. **Mitigation Measure CUL-2:** If human remains or any associated funerary artifacts are discovered during construction, all work must cease within the immediate vicinity of the discovery. In accordance with the California Health and Safety Code (Section 7050.5), the Solano County Sheriff/Coroner must be contacted immediately. If the Coroner determines the remains to be Native American, the Coroner will notify the Native American Heritage Commission, which will in turn appoint a Most Likely Descendent (MLD) to act as a tribal representative. The MLD will work with the project applicant and a qualified archaeologist to determine the proper treatment of the human remains and any associated funerary objects. Construction activities will not resume until either the human remains are exhumed, or the remains are avoided via project construction design change.

54. **Mitigation Measure HAZ-1:** On the Parcel Map, delineate the 30-foot setback (defensible space) from the property lines as shown on the tentative map, required by Cal Fire Regulations and include a note that the property is located within the State Responsibility Area for wildfire. Compliance with the Cal Fire adopted regulations (Cal Code reg. Title 14 Sec 1270 et seq) could minimize the risk of loss, injury or death involving wildfire.

55. **Mitigation Measure WS-1:** Prior to the recordation of the Parcel Map, complete all engineering and construction related to the public water system, according to the terms of agreement with the Rural North Vacaville Water District, in compliance with the rules and regulations of the Rural North Vacaville District. Submit evidence to the Department of Resource Management that the engineering plans and necessary infrastructure installation are complete to the satisfaction of the Rural North Vacaville Water District.

56. **Mitigation Measure NOISE-1:** Construction activity is limited to weekdays during the hours of 8 a.m. to 5 p.m., Monday through Friday; and 9 a.m. to 4 p.m. on Saturdays, and no work should occur on Sundays and Federal holidays. In order to ensure future buyers are aware of the noise restrictions, the Parcel Map shall include a supplemental note statement regarding the noise restriction for construction activities.

* *

I hereby certify that the foregoing resolution was adopted at the regular meeting of the Solano County Zoning Administrator on September 15, 2022.

TERRY SCHMIDTBAUER, DIRECTOR
RESOURCE MANAGEMENT

Allan Calder
Planning Services Manager

Lands of Abrew Subdivision
Application No.: MS-19-02

Draft Initial Study and

Mitigated Negative Declaration

March 2022

Prepared By
Department of Resource Management
County of Solano

TABLE OF CONTENTS

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

Introduction

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

Project Title:	Lands of Abrew Subdivision
Application Number:	MS-19-02
Project Location:	Northside of Brehme Lane, 4000 feet east of Pleasants Valley Road
Assessor Parcel No.(s):	0102-090-140
Project Sponsor's Name and Address:	Joseph Abrew 712 Atchinson Drive Vacaville, California 95687

General Information

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

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

  Planning Services Division
  Resource Management Department
  Attn: Nedzlene Ferrario, Senior Planner
  675 Texas Street
  Fairfield, CA 94533

- ❑ Submit comments via fax to: (707) 784-4805
- ❑ Submit comments via email to: nnferrario@solanocounty.com
- ❑ **Submit comments by the deadline of: May 2, 2022**

Next Steps

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

ENVIRONMENTAL DETERMINATION

On the basis of this initial study:

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

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project proponent has agreed to revise the project to avoid any significant effect. **A MITIGATED NEGATIVE DECLARATION** will be prepared.

☐ I find the proposed project could have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.

☐ I find the proposed project could have a significant effect on the environment, but at least one effect has been (1) adequately analyzed in a previous document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the previous analysis as described in the attached initial study.

An EIR is required that analyzes only the effects that were not adequately addressed in a previous document.

☐ I find that although the proposed project could have a significant effect on the environment, no further environmental analysis is required because all potentially significant effects have been (1) adequately analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are included in the project, and further analysis is not required.

3-18-22
Date

Nedzlene Ferrario
Senior Planner

INCORPORATION OF MITIGATION MEASURES INTO THE PROPOSED PROJECT

By signature of this document, the project proponent amends the project description to include the mitigation measures as set forth in Section 2.

3-16-2022
Date

Joseph Abrew
Proponent/Owner

1.0 ENVIRONMENTAL SETTING and PROJECT DESCRIPTION

1.1 Environmental Setting:

The subject property ("property" or "project site") consists of approximately 83 acres of undeveloped land located on the northside of Brehme Road, 4,000 feet east of Pleasants Valley Road in the Pleasants Valley, approximately 5 miles northwest of the center of the city of Vacaville, within unincorporated Solano County. The property consists of one legal parcel (Assessor Parcel Number [APN]: 0102-090-140). The property consists of agricultural land that was previously used for grazing. Figures 1 and 2 show the regional location and project site location, respectively.

The site is located within the Pleasants Valley area, an area with predominantly single-family residences on large acreages and associated small-scale agricultural activities, such as ranches and hobby farms. The area consists primarily of grassland mixed with agriculture, bordered by oak savanna on the west and denser oak woodland on the north and at higher elevations along the ridge.

The overall landscape consists of grasslands dominated by annual grassland species, scattered stands of native and nonnative trees, and riparian corridors. The project area contains graveled roadways and ranch roads, undisturbed upland grasslands and woodlands and disturbed sites around buildings and roads. Wetland areas exist along English Creek, consisting of ephemeral streams and a stock pond located near the northern property boundary (Parcel 2C). The site recently burned in the Hennessy fire, a component of the LNU Lightning Complex fire, which burned from August 17 to October 2, 2020.

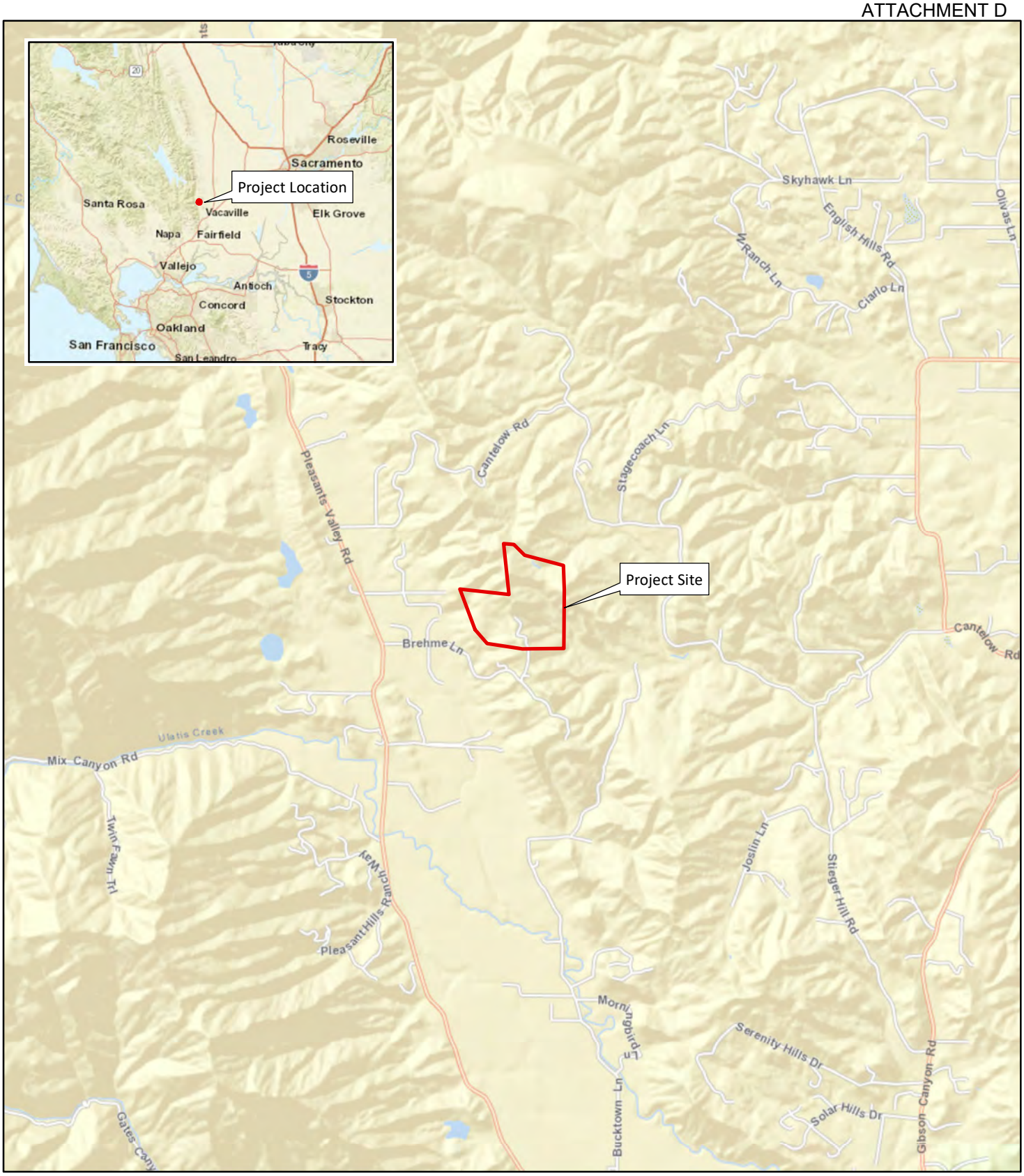
1.2 Project Description:

The project applicant proposes to subdivide the 82.9-acre property into four parcels: three 20-acre parcels (Parcel 2A, Parcel 2D, and Parcel 2C), and one 22.9-acre parcel (Parcel 2B). The proposed tentative parcel map is shown in Appendix C. Access to the property is from Brehme Lane and a new private road is proposed off of Brehme Lane to serve the proposed parcels. Parcel 2A would be accessed from the new private road. The existing cul-de-sac turnaround at the terminus of Brehme Lane would be divided between Parcel 2A and Parcels 2B and 2D, with the property line running through the turnaround. A new private road is proposed to extend from the existing cul-de-sac, along the western boundary of Parcel 2D to the northern boundary of Parcel 2B. Driveways would extend from this private road, providing access to Parcel 2B, Parcel 2C, and Parcel 2D. The proposed private road would be contained within a 60-foot wide private access and utility easement and extended through the adjacent property to Cantelow Road. A subdivision application is currently under review for the adjacent property (MS-20-01, APN 102-090-070).

The project applicant has designated one potential building site for each parcel on the tentative map.

Due to the hilly terrain, the proposed private road and access driveways would slope towards the uphill curb. Drainage for the proposed roadways would be provided by 3-foot-wide V-shaped rock-lined ditches. Where pipes provide storm drains, rock (rip-rap) energy dissipaters would be provided, consisting of a cobble-lined 9-inch deep depression. All on-site storm drains pipes would consist of 12-gauge corrugated metal pipe. Catch basins along the roadway would be approximately 4 square feet or larger and be topped with heavy-duty traffic-rated grates.

Wastewater for each parcel would be disposed of through new on-site sewage disposal systems. Two designated leach field alternatives have been identified on the tentative map for each parcel. Domestic water would be provided by Rural North Vacaville Water District. A water system would be installed consisting of approximately 795 feet of 6-inch water main, extending from the existing public water main along the southern property boundary to the central connection point within Parcel 2B. Two fire hydrant



LSA

LEGEND

Project Site

FIGURE 1

N

0 1500 3000

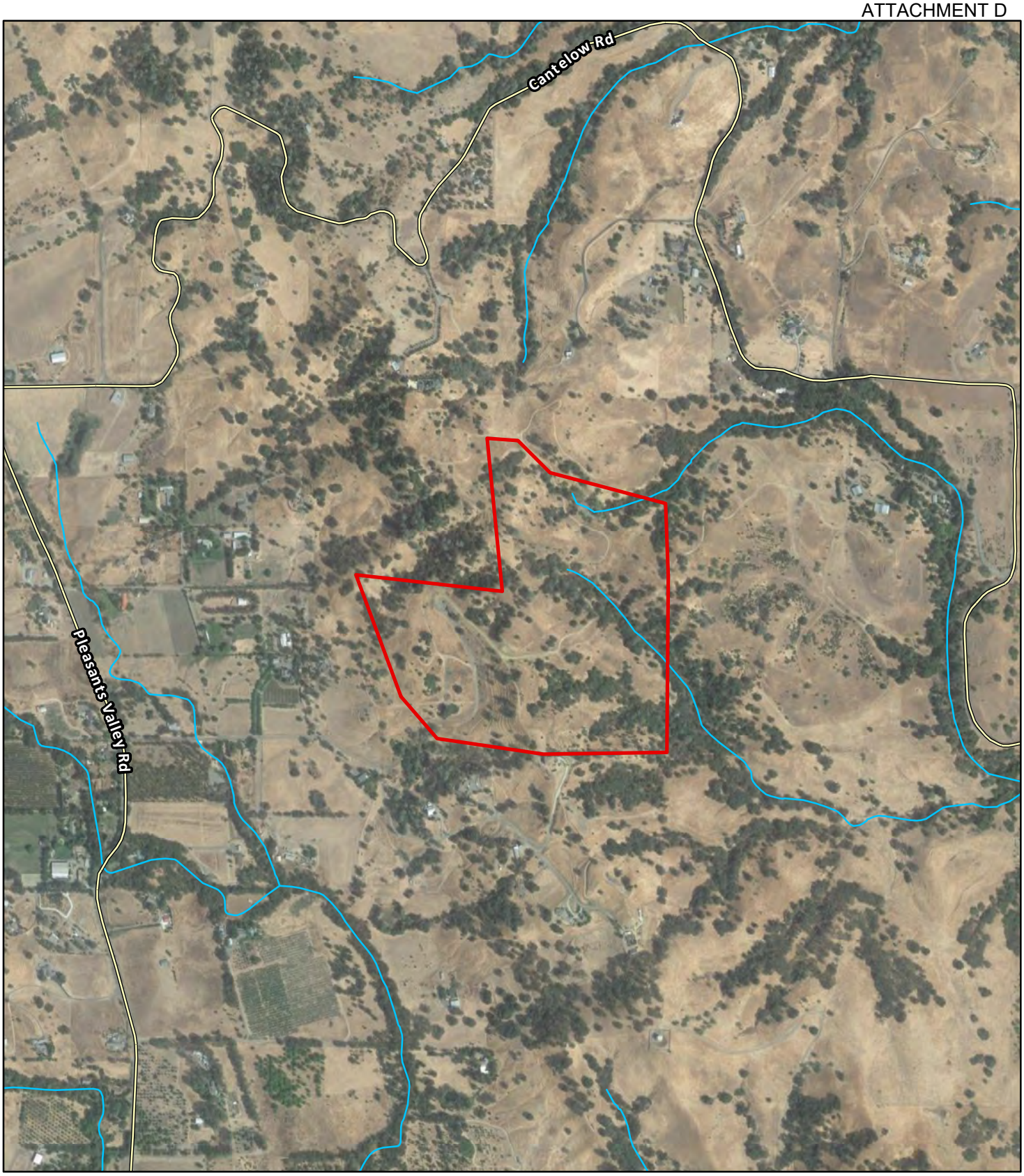
FEET

Lands of Abrew Subdivision
Solano County, California

General Project Location

SOURCE: ESRI World Street Maps (02/2020).

I:\JSP2001\GIS\Maps\Figure 1_General Project Location.mxd (2/14/2021)



LSA

LEGEND

Project Site

Stream/River

FIGURE 2

N

0 500 1000

FEET

Lands of Abrew Subdivision
Solano County, California

Project Site Location

SOURCE: Google Maps Sat (10/2020); National Hydrology Dataset (2018).

I:\JSP2001\GIS\Maps\Figure 2_Project Site Location.mxd (2/14/2021)

locations are currently proposed – one within 1,000 feet of the building site on Parcel 2A and the second within 1,000 feet of the building sites on Parcels 2B, 2C, and 2D.

1.2.1 Additional Data:

NRCS Soil Classification:	45%- DbF2 (Dibble Los Osos) – Class VIe, 20% - BrC (Brentwood clay loam) – Class IIe, 20% - MmE (Millsholm loam) – Class Vie, 15% - GaG2 (Gaviota sandy loam) – Class VIIe
Agricultural Preserve Status/Contract No.:	N/A
Non-renewal Filed (date):	N/A
Airport Land Use Referral Area:	N/A
Alquist Priolo Special Study Zone:	N/A
Primary or Secondary Management Area of the Suisun Marsh:	N/A
Primary or Secondary Zone identified in the Delta Protection Act of 1992:	N/A
Other:	None

1.2.2 Surrounding General Plan, Zoning and Land Uses

	General Plan	Zoning	Land Use
Property	Agriculture	A-20	Agriculture
North	Agriculture	A-20	Agriculture
South	Agriculture	A-20	Agriculture
East	Agriculture	A-20	Agriculture
West	Agriculture	A-20	Agriculture

1.3 Consistency with Existing General Plan, Zoning, and Other Applicable Land Use Controls:

1.3.1 General Plan

The General Plan Land Use Diagram designates the parcel as Agriculture, which provides for the practice of agriculture as the primary use, and allows for secondary uses that support the economic viability of agriculture. Uses include both irrigated and dryland farming and grazing activities. Agriculture-related housing is also permitted within areas designated for agriculture to provide farm residents and necessary residences for farm labor housing. The soil onsite consists of mostly Class VI soils, which have been previously determined by the County to be unsuitable for supporting high intensity crops. According to the Agriculture Element of the General Plan, the project site is located within the Pleasants/Vaca/Lagoon Valleys Agricultural Region, with a minimum lot size of 20 acres. All of the proposed parcels are greater than 20 acres in size. As such, the proposed subdivision is consistent with the County General Plan.

1.3.2 Zoning

The project site is zoned Exclusive Agricultural (A-20), which permits parcels with a minimum lot size of 20 acres. All of the proposed parcels are greater than 20 acres in size. As such, the proposed subdivision is consistent with the County Zoning Regulations.

1.3.3 Solano County Code

Chapter 26 of the Solano County Code, entitled "Solano County Subdivision Ordinance," states that agricultural parcels proposed for subdivision must be provided adequate access as defined in the Road Improvement Standards and Land Division and Subdivision Requirements and that the subdivider shall be responsible for reasonable improvements, including right-of-way and road dedication. Chapter 26 also states that where sewage disposal will be on-site, there is a minimum parcel size of 2.5 acres if water is supplied by a public agency or utility district. The 83-acre project site is proposed to be subdivided into four parcels, all of which would be at least 20 acres in size. Access would be provided via a private road extension from Brehme Lane. The proposed parcels would be served by the Rural North Vacaville Water District and would meet the minimum requirements for sewage disposal. Therefore, the proposed project would be consistent with Chapter 26 of the Solano County Code.

1.4 Permits and Approvals Required from Other Agencies (Responsible, Trustee and Agencies with Jurisdiction): None

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

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

Findings of SIGNIFICANT IMPACT

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

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

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

- ❑ Air Quality
- ❑ Biological Resources
- ❑ Cultural Resource
- ❑ Hazards and Hazardous Materials
- ❑ Hydrology and Water Quality
- ❑ Noise

Findings of LESS THAN SIGNIFICANT IMPACT

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

- ❑ Geology and Soils
- ❑ Greenhouse Gas Emissions
- ❑ Public Services
- ❑ Transportation and Traffic
- ❑ Utilities and Service Systems

Findings of NO IMPACT

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

- ❑ Aesthetics
- ❑ Agricultural Resources
- ❑ Land Use
- ❑ Mineral Resources
- ❑ Population and Housing
- ❑ Recreation

2.1 Aesthetics

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

Environmental Setting

The project site is located within an area with predominantly single residences on large acreages and associated small-scale agricultural activities, such as ranches and hobby farms. The area consists primarily of grassland mixed with agriculture, bordered by oak savanna on the west and denser oak woodland on the north and at higher elevations along the ridge.

The project site is located off Brehme Lane, which is not identified as a scenic roadway in the General Plan. The nearest scenic roadway to the project site is Pleasants Valley Road, located approximately 0.5-mile to the west of the project site.[1] No designated State scenic highways are located within the viewshed of the project site.

Impacts

2.1.a, c) The only physical change associated with the proposed project would be the possible addition of four dwelling units and associated infrastructure (e.g., roadways, utilities) on the project site. Proposed development would be consistent in scale and density to existing development surrounding the project site. Due to the location and topography of the proposed building sites and the density of development proposed (e.g., one dwelling unit per 20 acres or more), the proposed project would not have a substantial adverse effect on a scenic vista, nor would it substantially degrade the existing visual character or its surroundings. **No impact** would occur.

2.1.b) The project site is not located in close proximity to a State scenic highway or a County-designated scenic roadway. Due to its distance from Pleasants Valley Road and intervening topographic features, the project site and proposed improvements would not be visible from this designated scenic roadway. Therefore, the proposed project would not substantially damage scenic resources within a state scenic highway. **No impact** would occur.

[1] Solano, County of. 2008. Solano County General Plan.

2.1.d, e) The potential addition of four residences on the project site would not create a substantial amount of light or glare that would adversely affect day or nighttime views in the area. The project site is not located in proximity to any public open space areas; therefore, the proposed project would not increase the amount of shading on public open space (e.g. parks, plazas, and/or school yards). **No impact** would occur.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.2 Agricultural Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	■

Environmental Setting

The project site is classified as "Grazing Land" on maps prepared by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).[2] Grazing Land includes land on which the existing vegetation is suited to the grazing of livestock. The soil onsite consists of mostly Class VI soils, which have been previously determined by the County to be unsuitable for supporting high intensity crops. The project site is not under a Williamson Act contract.

Impacts

2.2.a-c) The proposed subdivision would create four lots larger than 20 acres in an agricultural zoning district. As described above, no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is mapped at the project site nor does the site support prime soils. Therefore, **no impacts** related to agricultural resources would occur.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

[2] California Department of Conservation (DOC). California Farmland Conservancy. California Important Farmland Finder. Website: maps.conservation.ca.gov/dlrp/ciff/ (accessed March 17, 2021).

2.3 Air Quality

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	■	☐	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is classified as non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	■
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	■
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

Environmental Setting

The project site is located within the Sacramento Valley Air Basin (SVAB), which comprises the northeastern portion of Solano County, and all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties and the western portion of Placer County. The project site is located within the jurisdiction of the Yolo Solano Area Air Quality Management District (YSAQMD), which regulates air quality in the project area. All projects in the northeastern portion of Solano County are subject to YSAQMD rules and regulations in effect at the time of construction.

Impacts

2.3.a) The proposed project would have no impact on implementation of the YSAQMD's 2019 Triennial Assessment and Plan Update,[3] which is the applicable air quality plan established by YSAQMD. The proposed project would result in the subdivision of land and allow the addition of four new residences on the project site, which would be well below the YSAQMD screening size for residential project. Therefore, operational emissions associated with the proposed project would be **less than significant** and the project would not conflict with implementation of an applicable air quality plan.

2.3.b) The proposed project would result in the subdivision of land and allow the addition of four new residences on the project site. The YSAQMD has developed screening criteria to provide lead agencies with a conservative indication of whether the proposed project would result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency would not need to perform a detailed air quality assessment of the proposed project's emissions. For single-

[3] Yolo – Solano Air Quality Management District. 2019. 2019 Triennial Assessment and Plan Update. Available online at: http://www.ysaqmd.org/wp-content/uploads/2021/01/2015-17-Triennial-Plan-Final-Board-Approved.pdf (accessed March 17, 2021).

family residential uses, the YSAQMD screening size for operational criteria pollutants is 325 dwelling units.[4] As identified above, the proposed project would allow the development of four residential units and associated improvements, which would be well below the screening size. Therefore, operational emissions associated with the proposed project would **be less than significant**.

During construction of proposed improvements, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include carbon monoxide (CO), nitrogen oxide (NO_x), reactive organic gas emissions (ROG), directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and toxic air contaminants (TACs), such as diesel exhaust particulate matter. Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. Construction equipment exhaust can be mitigated by implementing strategies such as restricting unnecessary vehicle idling to 5 minutes, using reformulated and emulsified fuels, incorporating catalyst and filtration technologies, and modernizing the equipment fleet with cleaner repower and newer engines. Implementation of Mitigation Measure AIR-1, described below, would reduce potential impacts related to construction emissions to **less than significant with mitigation**.

2.3.c-e) The proposed project would not generate a significant number of vehicle trips or household emissions that would result in a cumulatively considerable net increase of any criteria pollutant or expose sensitive receptors to significant pollutant concentrations. The proposed project is not anticipated to generate objectionable odors. **No impacts** would occur.

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure AIR-1: Prior to issuance of a grading/improvement plan permit, building permit or Parcel Map recordation, the project applicant shall require its construction contractor to prepare and implement a Dust Control and Construction Exhaust Mitigation Plan subject to the satisfaction of the Public Works Division and Yolo Solano Air Quality Management District.

Verification: The Solano County Department of Resource Management shall verify that a Dust Control and Construction Exhaust Mitigation Plan has been prepared and approved prior to issuance of grading/improvement plan permit, building permit or Parcel Map recordation.

[4] Yolo – Solano Air Quality Management District. 2007. Handbook for Assessing and Mitigating Air Quality Impacts. Available online at: http://www.ysaqmd.org/wp-content/uploads/Planning/CEQAHandbook2007.pdf (accessed March 17, 2021)

2.4 Biological Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b.	Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	■	☐	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act including, but not limited to, marsh, vernal pool, coastal, etc., through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
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?	☐	☐	☐	■

Environmental Setting

According to the Biological Assessment Report[5] prepared for the proposed project, the project site is typical of the Inner Coast Range hills in Solano County and vegetation that is adapted to or associated with the dry conditions on hillsides, slopes, ridges, and foothill terraces. The overall landscape consists of grasslands dominated by annual grassland species, scattered stands of native and nonnative trees, and riparian corridors. The project area contains graveled roadways and ranch roads, undisturbed upland grasslands and woodlands and disturbed sites around buildings and roads. Wetland areas exist along English Creek, consisting of ephemeral streams and a stock pond (dry at the time of the field visit). The stock pond is located within the northeastern quadrant of the property (Parcel 2C).

[5] LSA. 2021. Lands of Abrew Subdivision, Biological Assessment Report and Environmental Documentation. March 17.

At the project site, oak dominated communities have been reduced by former orchards (dryland stone fruit and walnuts) and possibly disturbance from grazing and increased seedling mortality from competition with nonnative grasses. The oak woodlands at the project site are a multi-layered mosaic of trees, shrubs and grass patches. Thus, there is a wide range of variation in the species composition, ranging from pure grasslands to dense woodlands. The dominant species within the tree layer throughout most of the project site is blue oak (*Quercus douglasii*). Blue oak savanna occurs with interspersed patches of manzanita and annual grassland. Oak savannah occurs on drier hillslopes and includes scattered individuals of foothill pine (*Pinus sabiniana*). The shrub layer is dominated by manzanita, but coyote bush (*Baccharis pilularis*) also occurs in deeper alluvial soils.

The project site has two primary drainages forming tributaries to English creek; one is trending northeast, the other is trending southeast. The streambed is gravel, cobble and bedrock and the channel sides are steep. Trees within the riparian corridor are typically very large, mature individuals. The primary species that are found along the drainages and within the riparian zine of the drainages include valley oak (*Quercus lobata*), coast live oak (*Q. agrifolia*), Interior live oak (*Q. wislezenii*), black oak (*Q. kelloggii*), California bay (*Umbellularia californica*), and walnut (*Juglans* spp.). Several large individuals of Cottonwood (*Populus fremontii*) were found along the dam of the stock pond near the northern property boundary. California buckeye (*Aesculus californica*) provides an important nectar source for butterflies and hummingbirds. The shrubby understory in these riparian oak woodlands typically consists of poison oak (*Toxicodendron diversalobum*), gooseberries (*Ribes* spp.), and/or toyon (*Heteromales arbutifolia*). However, the study area was severely burned in a recent fire and many individual shrubs or trees were completely consumed by the fire; therefore, the composition of this vegetation community at the project site is presently difficult to assess accurately.

Mammal species observed during the site visit were black-tailed deer (*Odocoileous hemionus*) and black-tailed jack rabbits (*Lepus californicus*). Birds observed included California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), California scrub jay (*Aphelocoma californica*), acorn woodpecker (*Melanerpes formicivorus*), oak titmouse (*Baelophus inornatus*), and California towhee (*Melozone crissalis*). No amphibians were observed within the streambed of English Creek. No ground squirrel (Otospermophilus beecheyi) individuals or their burrows were observed. No American badger (*Taxidea taxus*) burrows were found.

Impacts

2.4.a.) As described in the Biological Assessment Report prepared for the proposed project, special-status wildlife species that are likely to occur within or immediately adjacent to the project site consist of: Swainson's hawk (Buteo swainsoni; State Threatened), burrowing owl (Athene cunicularia; California Species of Special Concern [SSC]), yellow-breasted chat (Icteria virens; SSC), and American badger (Taxidea taxus; SSC). These species are described further below.

Swainson's Hawk. Three to five known or suspected active Swainson's hawk nests are located within 5 miles of the project site. The Swainson's hawk is highly mobile and can forage up to 18 miles from the nest; therefore, the project site lies within the normal foraging radius of these nests. The site currently offers marginal foraging habitat due to the steep slopes and lack of grazing, which reduces prey availability. There are no ground squirrels on the site, further reducing the habitat quality for Swainson's hawk. The proposed project would result in a minor loss of foraging habitat for this species. Road construction would occur on existing ranch roads and would not have an appreciable impact on Swainson's hawk foraging habitat. Residential buildings, gardens and other residential features would reduce the available foraging habitat by less than 5 percent. Compliance with recommended Mitigation Measure BIO-1 below, will compensate for the loss of foraging habitat for Swainson's hawk.

Burrowing Owl. The absence of burrowing mammals precludes the use of the site as breeding or wintering habitat for burrowing owl. The natural grasslands at the site are marginal foraging habitat for burrowing owl.

Yellow-Breasted Chat. The shrubs and dense vegetation along English Creek could provide suitable habitat for yellow-breasted chat. The species has been verified to occur in the Pleasant Creek drainage, approximately 3.75 miles north of the property. However, no development associated with the proposed project (e.g., roadways, building sites) would be located along English Creek. Implementation of Mitigation Measure BIO-2 below would ensure no impacts to riparian trees along English Creek could impact yellow-breasted chat.

American Badger. American badger could be present on the site, although no badgers or their burrows were observed during field surveys conducted for the proposed project. Badger require friable, sandy soils for burrowing. The soil types with the highest sand percentage (Gaviota sandy loam, 4 percent) and soils of the Millsholm series (36 percent) provide suitable badger habitat. Similar to the Swainson's hawk, the proposed subdivision of the site would maintain large patches of grassland, which would benefit this species, if present within the project site.

Nesting Birds. Vegetation on or adjacent to the project site could provide nesting habitat for some species of birds protected under the federal Migratory Bird Treaty Act and the California Fish and Game Code. If the project requires removal and/or trimming of trees during the nesting bird season (February 15 to August 31), impacts to the active nests of protected bird species could occur. Implementation of Mitigation Measure BIO-3 would reduce the potential project impacts to protected nesting birds to a less-than-significant level.

As described above, the proposed subdivision and limited development on the site would benefit special-status species by preserving large patches of habitat and no development would occur within or along English Creek, which provides habitat for yellow-breasted chat. Mitigation Measures BIO-1 will compensate for the loss of Swainson Hawk foraging habitat and BIO-2, below, would ensure sufficient habitat is preserved. In addition, Mitigation Measures BIO-3 and BIO-4 would ensure construction activities would not affect nesting birds or introduce invasive species that could impact native habitat. With incorporation of Mitigation Measures BIO-1 through BIO-4, described below, impacts to special-status species would be reduced to **less than significant with mitigation incorporated**.

2.4.b.) Riparian habitat exists along a 0.5-mile section of English Creek and its tributaries. The riparian habitat would not be affected by the subdivision, roads and the proposed buildings, which are located on hillslopes at least 100 feet away from the edge of the riparian habitat. No other sensitive natural communities are present on the project site. Implementation of Mitigation Measure BIO-3 would ensure no structures are placed within the riparian zone. With incorporation of Mitigation Measure BIO-5, described below, impacts to riparian habitat would be reduced to **less than significant with mitigation incorporated**.

2.4.c.) English Creek is a seasonal, intermittent creek in its upper reaches. It was dry during the field visit on February 3, 2021. Likewise, the pond at the upper end of the English Creek drainage was dry at that time. No buildings, roads or other features are planned within the channel or banks of English Creek and no stream crossings are currently proposed. Therefore, the proposed project would not impact federally protected wetlands or other waters. **No impact** would occur.

2.4.d.) The California Department of Fish and Wildlife (CDFW) Biogeographic Information & Observation System was reviewed to determine if the project is located within an Essential Connectivity Area. The project does not occur within an Essential Connectivity Area. However, the Solano Habitat Conservation Plan (HCP) has identified the site to fall within the "Jepson Prairie-Vaca Mountains/Inner Coast Range" key corridor. This corridor represents the portion of the English Hills north of the rural residential areas in northern Vacaville. This area provides an important transition between the Vaca Mountains, Pleasants Valley, and the Valley Floor Grassland and Vernal Pool habitats near Vacaville. This corridor contains high value oak savanna and oak woodland habitat within the English Hills. There are no wildlife nursery sites on the property.

The project site currently has no interior barriers to wildlife movement. It is fenced with wildlife permeable fencing on the perimeter although the quality of the fences is poor. The relatively large size of the project site and its position along a major creek drainage makes it a suitable corridor for mobile species. The oak woodlands and riparian habitat of the project site are heavily used by highly mobile species such as deer and turkey, which have been observed at the project site. Subdivision of the parcels could have a minor impact on the movement of wildlife species along the creek and through the property due to the presence of new fences, buildings, and general disturbance. Implementation of Mitigation Measure BIO-6 would minimize the impact of development on wildlife movement. With incorporation of Mitigation Measure BIO-6, described below, impacts to wildlife movement would be reduced to **less than significant with mitigation incorporated**.

2.4.e) Policy RS.P-6 of the Solano County General Plan addresses oak woodlands and heritage tree protection, through the adoption of an ordinance to protect oak woodlands as defined in Senate Bill (SB) 1334 and heritage oak trees. The Solano County General Plan defines heritage trees as the following: (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California, with a diameter of 10 inches above natural grade, or (c) any tree or group of trees specifically designated by the County for protection because of its historical significance, special character or community benefit. An Oak Woodland and Heritage Tree ordinance has yet to be adopted; however, implementation of the General Plan policies is recommended to **mitigate impacts to a less-than-significant level.**

The project site has an abundance of native trees that meet the definitions of Policy RS.P-6 (oak woodlands and heritage tree protection) and SB 1334. Heritage oak trees could be affected by the proposed widening of roads, construction of the water lines, installation of leach fields and grading of building sites. From field observations and examination of aerial imagery, it can be estimated that project elements may impact up to 22 native trees, primarily blue oak either through direct removal or indirect impacts (e.g., grading within the tree's dripline, change of grade or other root impacts). With incorporation of Mitigation Measure BIO-7, described below, impacts to protected trees would be reduced to **less than significant with mitigation incorporated**.

2.4.f) Solano County is not a participant in the Solano HCP and the HCP has not yet been adopted. This project will not conflict with the provisions of the Solano HCP nor interfere with the implementation of this plan once it is adopted. **No impact** would occur.

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure BIO-1: Prior to recordation of the Parcel Map, the Subdivider shall compensate for the loss of foraging habitat due to residential development, structures (houses, barns, out- buildings, roads, etc.) at a ratio of 1:1 (1 acre for every acre removed), for a total loss of 0.85 acres. Mitigation may be in the form of fee-title or a conservation easement or credits, held by a non-profit land management organization, on lands containing suitable Swainson's hawk foraging habitat and as approved by the California Department of Fish and Wildlife in Solano County. The purchase of Swainson's Hawk mitigation credits at a mitigation bank or conservation area located in Solano County is acceptable.

Mitigation Measure BIO-2: Removal of large riparian trees (trunk diameter of 15 inches or more measured at 54 inches above natural grade) shall be avoided to reduce potential impacts to yellow-breasted chat.

Mitigation Measure BIO-3: For construction activities that occur between February 1 and August 31, a preconstruction breeding bird survey shall be conducted by a qualified biologist familiar with bird behavior and knowledge of nest types prior to and within 10 days of any initial ground-disturbance activities. A copy of the preconstruction survey shall be submitted to the Department of Resource

Management prior to construction. Surveys shall be of sufficient intensity (typically 2 to 3 surveys) to document nesting within a 0.25 mi (1,320 ft) buffer around planned work activities (consistent with current Solano HCP guidance). If a lapse in project-related construction work of 15 days or longer occurs, additional preconstruction surveys shall be required before project work may be reinitiated. A survey will consist of a pedestrian search by a qualified Biologist for both direct and indirect evidence of bird nesting. Direct evidence will include the visual search of an actual nest location. Indirect evidence will include observing birds for nesting behavior, such as copulation, carrying food or nesting materials, nest building, feeding chicks, and other characteristic behaviors that indicate the presence of an active nest. Surveys will be conducted in accordance with the guidance in Martin and Guepel (1993). If nesting Swainson's hawks, white tailed kites, or other birds are detected, the qualified biologist shall establish no-disturbance buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers will be maintained until the qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Mitigation Measure BIO-4: All equipment should be thoroughly cleaned (washed) before entering the project site, if the equipment has been used in areas infested with weeds. Workers should inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and equipment. Stockpiled, un-infested material should be maintained in a weed-free condition. Retain native vegetation in and around project activity to the maximum extent possible. Avoid creating soil conditions that promote weed germination and establishment. Revegetate disturbed areas in a manner that optimizes plant establishment for that specific site. Revegetation may include planting, seeding, fertilization, liming, and weed-free mulching as necessary. Use native material where appropriate and feasible. Use certified weed-free or weed-seed-free hay or straw for erosion control. Conduct weed control on roadways and in disturbed areas as needed. Re-seeding of the project site shall be accomplished within appropriate California native plant species that are adapted to the site. Suggested Erosion control seed mix consists of 15 pounds per acre (lbs/ac) of *Bromus carinatus*, 15 lbs/ac of *Elymus glaucus*, 10 lbs/ac of *Lupinus bicolor*, 10 lbs/ac of *Lupinus succulentus*, 10 lbs/ac of *Trifolium albopurpureum*, 10 lbs/ac of *Trifolium microcephalum*, and 5 lbs of *Clarkia pupurea*. Placement of seed shall be by hydromulch spray or other broadcast method as determined by owner to ensure germination prior to October 15th. If necessary, watering of the reseeded area must be ensured to enhance plant germination and survival.

Mitigation Measure BIO-5: In order to protect the riparian corridor and the tributaries, delineate on the Parcel Map a 100-foot wide setback, measured from the centerline of the tributaries or creek. No ancillary structures (barns, leach fields, corrals etc.) shall be placed within the setback.

Mitigation Measure BIO-6: To minimize the impact of development on wildlife movement, all perimeter fencing shall meet the following standards:

- Fence heights shall be limited to average maximum of 5 feet above ground level (limited height variations based on topographic changes are allowable).

- Welded wire or other mesh fences shall have a minimum 4 inch by 4 inch opening. Smaller opening in the lower 18 inches of the fence is allowable if needed to contain smaller domestic animals. No-climb horse fencing should be avoided as perimeter fencing.

- Solid perimeter fences are prohibited.

- Wood or metal picket fences shall have minimum spacing of 4 inches between pickets and shall not have sharp or pointed spikes or decorations along the top.

Mitigation Measure BIO-7: In order to protect and preserve Oak Woodlands and Heritage trees, prior to issuance of a grading permit/improvement plan permit, building permit or recordation of the Parcel Map, a qualified and certified Arborist shall prepare a tree inventory/resources report. All oak species

6-inches dbh or greater to be retained or removed and all heritage trees shall be identified on the grading/improvement plan. Consistent with General Plan policy RS. I-3, heritage trees are defined as (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California with a diameter of 10 inches above natural grade, or (c) any tree or group of trees special significance in consultation with the Department of Resource Management. The Arborist shall recommend and monitor specific measures to protect oak trees 6-inches dbh or greater or heritage trees from construction impacts. This includes designating no work zones by exclusion fencing along the canopy dripline. Ground disturbance, grading, development, construction or trenching is prohibited within 5 feet of the dripline of any oak tree 6-inches dbh or greater or any heritage tree. If an oak tree or heritage tree cannot be protected from damage or removal, the loss of each mature tree shall be mitigated by planting 15 saplings at least 3 years old in areas where oak recruitment has been absent due to fire, grazing and weed competition. A qualified biologist shall designate potential planting areas and supervise the planting and installation of any necessary irrigation. The following guidelines for oak restoration shall be followed:

- Mitigation Planting: To compensate for the unavoidable loss of mature blue and live oaks, 15 saplings of the same species shall be planted for each mature tree removed. Oak saplings shall be sourced from a certified Phytophthora ramorum-free nursery. Saplings must be at least 3 years old and shall be spaced at least 15 feet from each other. Each sapling shall be staked with two wooden stakes and caged to a sufficient height that deer and cattle cannot damage the sapling. Saplings shall be planted in moist soil, after the first substantial rain. In the following summer, watering may be necessary to enhance survival.

- Performance and Success Criteria: Performance criteria for the revegetation area shall be assessed in 2024, or at least 3 years following the conclusion of grading activities. The oak planting site(s) shall have at least a 65 percent cover by native or naturalized plants (primarily grasses) and no more than 20 percent of the area shall be covered by non-native weeds. Survival of planted oak saplings until 2024 shall exceed 65% (i.e., 10 living oak saplings per mature tree removed).

- Monitoring Plan: The site shall be visited annually by a qualified biologist to visually assess herbaceous cover of the revegetation area and the survival of oak saplings. If revegetation success or sapling mortality falls below the above performance and success criteria during any of the 3 years following construction, adaptive management (reseeding, replanting) must be conducted, using the above species and methods.

Verification: The Solano County Department of Resource Management shall verify that the impacts to native trees are mitigated consistent with the above requirements, including ongoing monitoring to ensure revegetation success.

2.5 Cultural Resources

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

Environmental Setting

A Cultural Resources Study, which included background research, Native American community outreach, and a pedestrian field survey of the project site, was prepared for the proposed project. The following summarizes the results of the study.

On March 22, 2021, a letter and a map depicting the project area were emailed to the Native American Heritage Commission (NAHC). The letter requested a Sacred Lands File (SLF) search for the project area, and a list of Native American community representatives who might have knowledge concerning cultural resources in the project area or that might have an interest in or concerns with the proposed project. On April 1, 2021, Ms. Sarah Fonseca, Cultural Resources Analyst for the NAHC, replied in an emailed letter that the Sacred Lands File search was completed and that no cultural sites or properties were known to be present within or near the project area. Ms. Fonseca also provided a list of local Native American contacts. On April 2, 2021, letters were mailed to the Native American representatives identified by the NAHC. To date, no responses to the letters have been received.

A records search request was submitted to the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) at Sonoma State University on March 29, 2021. The NWIC reviewed the CHRIS archives for records of previously known and recorded cultural resources, studies, and isolates in and within 0.5-mile of the project site. According to the record search results, one previously recorded archaeological site (P-48-000784) is known to be present within the project area. An additional six previously recorded sites have been documented within a 0.5-mile radius of the project site. According to the NWIC record search no historic properties (per Section 106 of the National Historic Preservation Act criteria) or historical resources (per California Register of Historic Resources criteria) have been recorded in the project area or within the 0.5-mile search area.

A pedestrian field survey of the project area was conducted on April 8, 2021. During the field survey, the project area was dominated by low ruderal vegetation, seasonal grasses, and periodic oak trees and bushy plants. Overall, ground surface visibility was highly variable. A single previously documented historic-era resource, P-48-000784, consisting of an earthen dam and adjacent livestock pond is documented on the site. The dam is approximately 100 feet in length, 20 feet in width, and about 15 feet in height above the surrounding ground surface. The dam was constructed to capture run-off from a nearby seasonal drainage. Due to a lack of significant historical associations and characteristics, and a lack of data potential, P-48-000784 does not appear eligible for listing on the CRHR.

Impacts

2.5.a-d.) As described above, the NAHC search did not indicate the presence of any documented Native American cultural resources in the project area and no Native American community representatives have expressed an interest in or concerns with the proposed project. An intensive survey resulted in the updating of information of a single cultural resource - a stock pond and dam dating to the mid-20th century (P-48-000784). As described above, this resource does not appear to be eligible for listing on the CRHR. Consequently, the project would have no impact on documented cultural resources. In the event that presently undocumented buried archaeological deposits or human remains are encountered during any ground-disturbing activities associated with the proposed project, work must cease and appropriate actions taken, as specified in Mitigation Measures CUL-1 and CUL-2, below. With incorporation of Mitigation Measures CUL-1 and CUL-2, described below, impacts to cultural resources would be reduced to **less than significant with mitigation incorporated**.

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure CUL-1: In the event that presently undocumented buried archaeological deposits are encountered during any project-associated construction activity, work must cease within a 50-foot radius of the discovery. A qualified archaeologist must be retained to document the discovery, assess its significance, and recommend treatment.

Mitigation Measure CUL-2: If human remains or any associated funerary artifacts are discovered during construction, all work must cease within the immediate vicinity of the discovery. In accordance with the California Health and Safety Code (Section 7050.5), the Solano County Sheriff/Coroner must be contacted immediately. If the Coroner determines the remains to be Native American, the Coroner will notify the Native American Heritage Commission, which will in turn appoint a Most Likely Descendent (MLD) to act as a tribal representative. The MLD will work with the project applicant and a qualified archaeologist to determine the proper treatment of the human remains and any associated funerary objects. Construction activities will not resume until either the human remains are exhumed, or the remains are avoided via project construction design change.

Verification: The Solano County Department of Resource Management shall verify that the above measures are implemented throughout the construction period.

2.6 Geology and Soils

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.					
1)	Rupture of a known earthquake fault, as described on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	■	☐
2)	Strong seismic ground shaking?	☐	☐	■	☐
3)	Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4)	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, differential settlement, liquefaction or collapse?	☐	☐	■	☐
d.	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	■	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	■	☐

Environmental Setting

No portion of the project site is located with an Alquist-Priolo Special Studies Zone. The closest known fault is the Midland Fault Zone, located approximately 6 miles to the east. However, according to the Solano County General Plan (Figure HS-6, Seismic Shaking Potential), the project site is located in the area of the County with the highest potential for earthquake damage. In addition, the project site is located within Area 4, as designated on Figure HS-8, Landslide Stability in the Solano County General Plan. Area 4 includes lands that are most susceptible to landslides. The project site is not located in an area that is susceptible to liquefaction.

Impacts

2.6.a.) As described above, the project site is located in an identified geologic hazard area due to potential for strong seismic ground shaking and landslides. As part of the proposed project, the project applicant proposes to subdivide the existing parcel and construct one single-family dwelling on each of the four new parcels. Proposed development would be required to conform with the California Building

Code (CBC), which would help to ensure potential adverse effects associated with geologic hazards would be reduce to the extent feasible. In addition, as required by County code, prior to issuance of any building permit for the proposed project, the applicant will be required to submit a geotechnical report and all construction will have to be carried out in accordance with the recommendation of a California licensed civil engineer. Therefore, seismic-related impacts would be **less than significant.**

2.6.b.) Grading and earthmoving during construction of proposed improvements has the potential to result in erosion and loss of topsoil. Exposed soils could be entrained in stormwater runoff and transported off the project site. However, this impact would be reduced to a less-than-significant level through compliance with water quality control measures, which include preparation of a Stormwater Pollution Prevention Plan (SWPPP). Although designed primarily to protect stormwater quality, the SWPPP would incorporate Best Management Practices (BMPs) to minimize erosion. In addition, the proposed project would be required to comply with Chapter 31, Grading, Drainage, Land Leveling, and Erosion Control, of the Solano County Code, which includes preparation and implementation of an engineered erosion, sediment and runoff control plan to minimize soil erosion, sedimentation and rate of water runoff. With compliance with these regulatory requirements, impacts related to erosion would be **less than significant.**

2.6.c.) The buildings would be designed in conformance with the CBC and the County's current building code, which requires preparation of a soils and geologic report and foundation and structural engineering be prepared and designed to prevent any impacts from on- or off-site landslide, lateral spreading, subsidence, differential settlement, liquefaction or collapse. Compliance with regulatory requirements would reduce impacts to **less than significant**.

2.6.d.) According to the Solano County General Plan (Figure HS-10, Shrink-Swell Potential), the project site is located in an area with moderate potential for expansive soils. As described above, Proposed development would be required to conform with the California Building Code (CBC), which would help to ensure potential adverse effects associated with geologic hazards would be reduce to the extent feasible. In addition, as required by County code, prior to issuance of any building permit for the proposed project, the applicant will be required to submit a geotechnical report and all construction will have to be carried out in accordance with the recommendation of a California licensed civil engineer. Therefore, impacts related to expansive soils would be **less than significant**.

2.6.e) According to the Environmental Health Division, site and soil tests were conducted on the property by Dauwalder Engineering Company. Site testing allows for development of standard type onsite wastewater treatment systems. Compliance with Chapter 6 of the County Code to the satisfaction of the Environmental Health Division would ensure impacts associated with septic systems would be **less than significant**. .

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.7 Greenhouse Gas Emissions

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

Environmental Setting

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as carbon dioxide (CO_2), methane, and nitrous oxide (N_2O), some gases, like hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) are completely new to the atmosphere.

Impacts

2.7.a-b) Construction of the proposed project would require energy for the manufacture and transportation of building materials, preparation of the site for grading activities, and building construction. Petroleum fuels (e.g., diesel and gasoline) would be the primary sources of energy for these activities. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. Therefore, impacts related to energy and GHG emissions during construction activities would be **less than significant**.

The proposed project would subdivide the site to allow for the development of four new housing units, as well as associated roadway and street improvements. The expected energy consumption during operation of the proposed project would be consistent with typical usage rates for single-family residential uses. Long-term operation of the proposed project would generate GHG emissions from mobile sources and indirect emissions from sources associated with energy consumption. Mobile-source emissions of GHGs would include vehicle trips generated by the four new residential units at the project site. As discussed in Section 2.16, Transportation of the Initial Study, the trip generation for four new households would not be significant; therefore, the additional trips for this project are not expected to significantly increase vehicle emissions or GHG emissions. Proposed development would be required to comply with the CBC, including the California Green Building Standards (Cal Green), which would help to reduce energy and natural gas consumption, as well as, associated GHG emissions. As such , the proposed project would not result in the wasteful, inefficient or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design, equipment use, and transportation.

As proposed, the project would not conflict with any goals or policies of the Solano County General Plan, which are intended to reduce or indirectly reduce GHG emissions. In addition, the proposed project would not conflict with the County's Climate Action Plan (June 2011). Therefore, impacts related to greenhouse gas emissions or energy consumption would be **less than significant**.

Avoidance, Minimization Measures and/or Mitigation Measures
None required

2.8 Hazards and Hazardous Materials

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	■
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d.	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would 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 for people residing or working in the project area?	☐	☐	☐	■
f.	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g.	Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
h.	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	■	☐	☐

Environmental Setting

The proposed project site consists of approximately 83 acres of agricultural land that was previously used for grazing. The project site contains graveled roadways and ranch roads, undisturbed upland grasslands and woodlands and disturbed sites around buildings and roads. The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and no identified hazardous materials sites are located within 1,000 feet of the project site.

Impacts

2.8.a-d) Although small quantities of commercially-available hazardous materials could be used during project construction activities (e.g., oil, gasoline, paint) and for routine household use within the project site, these materials would not be used in sufficient quantities to pose a threat to human or environmental health. No schools are located within 0.25-mile of the project site. Further, the project site is not located on a list of hazardous materials sites. Therefore, **no impacts related to hazardous materials would occur**.

2.8.e-f) The project site is not located near or within an airport land use plan area. **No impact would occur.**

2.8.g) The project site is not located along within an adopted emergency response plan area or along an emergency evacuation route. The proposed subdivision would not alter or block adjacent roadways; therefore, implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. As described below, the applicant is proposing an 18- to 20-foot wide access road, which would provide access to all parcels and would connect to Cantelow Road through the neighboring property. **No impacts would occur.**

2.8.h) According to the Solano County General Plan (Figure HS-12 Very High Fire Hazard Severity Zones and State Responsibility Areas), the project site is located in a State Responsibility Area and designated as a Very High Fire Hazard Severity Zone. The project applicant would be required to comply with CalFire and Vacaville Fire Protection District standards for development within the State Responsibility Area. As outlined in the Project Description, the applicant is proposing several measures, which would minimize impacts during wildfire, including an access road, which would provide through connection between Pleasants Valley and Cantelow Road through a neighboring property and could serve as an access route during an emergency. Two fire hydrants are proposed for fire suppression. Thirty-foot wide setbacks or defensible space between any structures and property lines are required to comply with State Responsibility Area requirements. With incorporation of Mitigation Measure HAZ-1 described below, impacts related to wildfire would be reduced to **less than significant with mitigation incorporated**.

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure HAZ-1: On the Parcel Map, delineate the 30-foot setback (defensible space) from the property lines as shown on the tentative map, required by Cal Fire Regulations and include a note that the property is located within the State Responsibility Area for wildfire. Compliance with the Cal Fire adopted regulations (Cal Code reg. Title 14 Sec 1270 et seq) could minimize the risk of loss, injury or death involving wildfire.

Verification: The Solano County Department of Resource Management shall verify that the above measure is implemented prior to Parcel Map recordation.

2.9 Hydrology and Water

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

Environmental Setting

The State Water Resources Control Board and nine Regional Water Quality Control Boards regulate water quality of surface water and groundwater bodies throughout California. The project site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (Water Board), which is responsible for implementation the Water Quality Control Plan (Basin Plan). The Basin Plan establishes beneficial water uses for waterways and water bodies within the region.
Runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to surface water bodies. Compliance with NPDES permits is mandated by State and federal statutes and regulations. Locally, the NPDES Program is administered by the Water Board. According to the water quality control plans of the Water Board, any construction activities, including grading, that would result in the disturbance of 1 acre or more or smaller sites that are part of larger plan of development would require compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity (Construction General Permit).

Since the project would create and/or replace 5,000 square feet or more of impervious surface, it would be required to comply with Section E.12 of the Small MS4 Phase II General Permit (Phase II General Permit)[6] that requires implementation of measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification[7] management. The Phase II General Permit also requires implementation of Low Impact Development (LID) standards. LID uses design techniques such as harvest and reuse, infiltration, evapotranspiration to mimic a site's pre-development hydrology.

Impacts

2.9.a) Most of the land uses and improvements proposed are relatively low-intensity and would not have the potential to substantially increase the discharge of pollutants to surface water. However, the project would include construction of new paved roads and building pads, which would create new impervious surfaces at the project site.

During the construction period, excavation and grading activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. Soil stockpiles and excavations on the project site would be exposed to runoff and, if not managed properly, the runoff could cause erosion and increased sedimentation in water courses outside of the project site.
Consistent with the requirements of the Statewide Construction General Permit, the project applicant would be required to prepare and implement a SWPPP designed to reduce potential adverse impacts to surface water quality through the project construction period. The SWPPP shall be prepared by a Qualified SWPPP Practitioner (QSP) and include Best Management Practices (BMPs) for erosion and sediment control, site management/ housekeeping /waste management, management of non-stormwater discharges, run-on and runoff controls, and BMP inspection/maintenance/repair activities. The QSP shall be responsible for implementing the BMPs at the site and for performing all required monitoring, and BMP inspection, maintenance and repair activities.

In addition, in compliance with Chapter 31, Grading, Drainage, Land Leveling, and Erosion Control, of the Solano County Code, the project applicant would be required to prepare and implement an engineered erosion, sediment and runoff control plan to minimize soil erosion, sedimentation and rate

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6 NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems (Small MS4 Permit), Order No. 2013-0001-DWQ

7 Hydromodification is the alteration of the natural flow of water through a landscape, and often takes the form of creek channel erosion. Hydromodification is one of the leading sources of impairment in streams, lakes, and estuaries.

of water runoff. With compliance with these regulatory requirements, potential impacts to water quality during construction **would be less than significant.**

Operational activities may involve common urban pollutants such as surface litter, oil, gasoline, grease, paint, fertilizers, pesticides, and herbicides, which could result in an increase in pollutant discharges at the project site. As described above, the project would be required to comply with Section E.12 of the Phase II General Permit that requires implementation of LID standards. One of the main goals of LID design measures is to treat post-construction stormwater runoff so that receiving water quality is protected. Compliance with the existing regulations that require compliance with Phase II General Permit post-construction stormwater management requirements would ensure that potential impacts to water quality during the operation period are **less than significant**.

2.9.b) The entire property is located in the “A” zone for water bearing rocks in the San Francisco Bay Area by D.A. Webster 1972 - US Department of Interior of Geological Survey. The “A” water zone has the lowest probability of success when attempting to develop a domestic drinking water well with a minimum sustained yield of 3 gallons per minute, when compared to water bearing rock zones with higher probability such as “B, C and D”.

The Subdivision Ordinance allows well water to serve as the water supply for lots 5 acres or more; however, the low probability of success raises the risk of water availability and concern for domestic use and project approval. The applicant has proposed public water service connections by the Rural North Vacaville Water District for four (4) lots. The public water main is located on the south side of Parcel 2B and new 6-inch water line extensions through Parcel 2B would be required to serve the project site.

Public water service connection would ensure adequate water supply for the project in a groundwater scarce area. The Rural North Vacaville Water District has approved the sale of four (4) water rights. The District requires that all improvements be designed, engineered and installed by the subdivider in accordance with the District Rules and Regulations prior to recording the Parcel Map or sale of individual lots.

Individual well water usage for four (4) additional lots in a groundwater scarce area has the potential to cause a significant impact; therefore, Mitigation Measure WS-1, described below, is recommended to minimize impacts to a less than significant level. With incorporated of Mitigation Measure WS-1 impacts related to groundwater would be **less than significant with mitigation incorporated**. :

2.9.c-f) Construction of proposed improvements, including roads, and building pads would include the placement of new impervious surfaces at the project site, which could increase the potential for erosion and surface runoff and alter the existing drainage pattern of the project site. However, new impervious surfaces would not be continuous, but would be surrounded by unimproved lands where runoff from the new impervious surface can infiltrate. The applicant would be required to comply with Solano County’s Stormwater Pollution Prevention Small Municipalities Program (NPDES Phase II Municipal Permit). Section E.12 of the Phase II Municipal Permit requires implementation of measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management. The Phase II Municipal Permit requires regulated projects to include facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the hydraulic sizing design criteria included in the Phase II Municipal Permit. To comply with the Phase II Municipal Permit, a Stormwater Control Plan that describes the project specific measures must be prepared and implemented. Compliance with these regulatory requirements, would reduce potential impacts related to stormwater runoff to a **less than significant level**.

2.9.g-i) According to the Solano County General Plan (Figure HS-1 100-Year Floodplain Zone, HS-3 Dam Inundation, and HS-4 Levee Flood Projection Zones), the project site is not located within a 100-year floodplain, dam inundation area or levee flood protection zone. Therefore, the proposed project

would not expose people or structures to a significant risk of loss, injury, or death involving flooding. **No impacts would occur**.

2.9.j) The project site is inland and is not threatened by potential seiche or tsunami. **No impacts would occur**.

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure WS-1: Prior to the recordation of the Parcel Map, complete all engineering and construction related to the public water system, according to the terms of agreement with the Rural North Vacaville Water District, in compliance with the rules and regulations of the Rural North Vacaville District. Submit evidence to the Department of Resource Management that the engineering plans and necessary infrastructure installation are complete to the satisfaction of the Rural North Vacaville Water District.

Verification: The Solano County Department of Resource Management shall verify that the above measure is implemented prior to Parcel Map recordation.

2.10 Land Use and Planning

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

Environmental Setting

The proposed project site consists of approximately 83 acres of agricultural land that was previously used for grazing. The project site contains graveled roadways and ranch roads, undisturbed upland grasslands and woodlands and disturbed sites around buildings and roads. The project site is zoned Exclusive Agricultural (A-20), which permits parcels with a minimum lot size of 20 acres. The project site is surrounded by agricultural lands.

Impacts

2.10.a-b) The proposed project would not physically divide an established community. The project site is zoned Exclusive Agricultural (A-20), which permits parcels with a minimum lot size of 20 acres. All of the proposed parcels are greater than 20 acres in size. As such, the proposed subdivision is consistent with the County General Plan and the County's Zoning Ordinance. **No impacts would occur.**

2.10.c) Solano County is not a participant in the Solano HCP and the HCP has not yet been adopted. This project will not conflict with the provisions of the Solano HCP nor interfere with the implementation of this plan once it is adopted. **No impact would occur.**

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.11 Mineral Resources

Checklist Items: Would the project		Significant Impact	Less Than Significant Impact With Mitigation	Less Than Significant Impact	No Impact
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the 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?	☐	☐	☐	■

Environmental Setting

According to the Solano County General Plan, known mineral resource zones (MRZs) are located to the northeast of Vallejo, to the south and southeast of Green Valley, in areas south and east of Travis Air Force Base, and in pockets located within both Vacaville and Fairfield. Stone, gravel, sand, and clay mines are spread out around the County. MRZs are classified by the State Geologist on the basis of geologic factors and may fall into one of four general classifications (MRZ-1 through MRZ-4). MRZ-3 zones occur throughout the County while only one MRZ-2 zone is mapped near Vallejo and Benicia. MRZ-2 zones have the highest probability of having significant mineral deposits, while MRZ-3 zones are likely to have mineral deposits which may or may not be significant.

Impacts

2.11.a-b) As shown on Figure RS-4, Mineral Resources, in the Solano County General Plan, no known no known mineral resources are located within the vicinity of the project site that would be of value to the region or to the State. Further, no locally-important mineral resources have been identified within or adjacent to the project site. **No impacts would occur**.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.12 Noise

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

Environmental Setting

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a ten-fold increase in acoustic energy, while 20 dB is 100 times more intense and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements which better represent how humans are more sensitive to sound at night. These measurements include the day/night sound level (Ldn) and the Community Noise Equivalent Level (CNEL).

The Solano County General Plan Noise includes guidelines for normally acceptable noise levels for types of land uses as established by the California Office of Planning and Research. These guidelines enforce a normally acceptable noise level of 65 dB Ldn for low-density residential uses.

Primary noise sources within the project area include traffic along neighboring roadways, airplanes flying overhead, and construction noise (if present at nearby properties).

Impacts

2.12.a-d) Construction of four new single-family residences and associated improvements on the proposed parcels would be compatible with the existing surrounding residential and agricultural development. However, the proposed project would result in short-term noise level increases due to construction activities and long-term noise levels increases due to normal residential and road noises.

Short term:
Construction activities associated with the proposed project could result in a substantial temporary increase in ambient noise levels associated with construction of roadways, infrastructure and residential structures. Due to the location within the valley, the project could add ambient noise levels during construction and post construction. The addition of additional residences could potentially raise the temporary ambient noise levels in the neighborhood. In order to mitigate for construction level noise, **Mitigation Measure NOISE-1 is recommended to minimize impacts to less than significant**.

Long term:
Long-term noise levels would increase slightly due to the addition of four new residences. However, these uses would not result in a substantial increase in daily traffic trips in the project area. Noise generated from proposed residential uses would be similar to existing conditions and would not increase the existing ambient noise level above normal noise levels for an agricultural neighborhood. **Less than significant impacts are anticipated**.

2.12.e-f) The project site is not located near or within an airport land use plan area. **No impact would occur.**

Avoidance, Minimization Measures and/or Mitigation Measures

Mitigation Measure NOISE-1: Construction activity is limited to weekdays during the hours of 8 a.m. to 5 p.m., Monday through Friday; and 9 a.m. to 4 p.m. on Saturdays, and no work should occur on Sundays and Federal holidays. In order to ensure future buyers are aware of the noise restrictions, the Parcel Map shall include a supplemental note statement regarding the noise restriction for construction activities.

Verification: The Solano County Department of Resource Management shall verify that the above measure is implemented prior to parcel map recordation and during construction activities.

2.13 Population and Housing

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

Environmental Setting

The project site consists of approximately 83 acres of agricultural land that was previously used for grazing. No existing housing or population currently exists on the project site.

Impacts

2.13.a-d) The proposed project would result in the subdivision of land to allow the development of four residential units at the project site. Based on the County's average household size of 2.88 persons[8], the proposed project would increase the local population by approximately 12 persons. The current population of the County is estimated to be approximately 447,643. The anticipated population growth associated with the proposed project represents less than a 1 percent increase to the County's current population. Therefore, the proposed project would not result in substantial unplanned population growth in the area. **No impact would occur**.

2.13.b-c) The project site is currently undeveloped. Therefore, the proposed project would not result in the displacement of people or housing and would not require the construction of replacement housing elsewhere. **No impact would occur.**

Avoidance, Minimization Measures and/or Mitigation Measures

None required

[8] United States Census Bureau. 2019. QuickFacts Solano County. Available online at: www.census.gov/quickfacts/fact/table/solanocountycalifornia/INC110219 (Accessed March 24, 2021)

2.14 Public Services

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

Environmental Setting

The project site is located in unincorporated Solano County, in an area served by existing public services.

Fire Protection. Fire protection and emergency response services in the unincorporated areas of the County are provided by six fire districts and CalFire. The project site is served by the Vacaville Fire Protection District. The closest fire station to the project site is located at 4135 Cantelow Road.

Police Protection. Police protection in the County is provided by the Solano County Office of the Sheriff, a State constitutional office headed by an elected sheriff. The Solano County Sheriff's office is located at 530 Union Ave #100 in the City of Fairfield.

Schools. The project site is served by the Vacaville Unified School District (VUSD). VUSD currently operates 10 elementary schools, three middle schools, four high schools, an adult school and one charter school.

Parks. No parks are located in the vicinity of the project site.

Impacts

2.14.a.1) The proposed project would result in the addition of four new residential units at the project site, which would incrementally increase the demand for emergency fire services and emergency medical services. However, the increase in demand would not be substantial. The Vacaville Fire Protection District would continue providing services to the project site and would not require additional firefighters to serve the proposed project. The construction of a new or expanded fire station would also not be required. The proposed project would be required to comply with all applicable codes for fire safety and emergency access, including installation of fire hydrants. Compliance with the applicable

CalFire State Responsibility Area Fire Safe Regulations and Vacaville Fire Protection District rules and regulations would ensure impacts related to fire protection would be **less than significant.**

2.14.a.2) As described above, the proposed project would result in the addition of four residential units at the project site, which would incrementally increase the demand for police services. However, the increase in demand would not be substantial and the Solano County Sheriff's Department has adequate facilities and staff to serve the project site. Therefore, impacts to police protection would be **less than significant.**

2.14.a.3) Individual property owners are required to pay fees prior to issuance of building permits which would help pay for new schools or additional facilities in the Vacaville Unified School District. Therefore, impacts related to schools would be **less than significant**.

2.14.a.4) The project site is located in a rural, agricultural area and would result in minimal development compared to the size of the site. The addition of four residences is not anticipated to result in a substantial increase in demand for park facilities, such that new park facilities would be required. Therefore, impacts related to parks would be **less than significant**.

2.14.a.5) Development of the proposed project could also increase demand for other public services, including libraries, community centers, and public health care facilities. However, due to the minimal increase in population, the proposed project would not result in a substantially increase the use of these facilities. Therefore, impacts to other public facilities would be **less than significant.**

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.15 Recreation

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

Environmental Setting

No parks or other recreational facilities are located in the vicinity of the project site.

Impacts

2.15.a) The proposed project would result in the addition of four new residential units at the project site, which would incrementally increase the demand for parks and recreational facilities. However, the increase in use at existing parks and recreational facilities would not be substantial, such that physical deterioration of these facilities would occur. **No impact to existing parks and recreational facilities would occur**.

2.15.b-c) The proposed project would subdivide an existing property to create four new parcels, with associated residential uses. The proposed project would not include the construction of any recreational facilities nor would the project require the construction or expansion of recreational facilities. The proposed project would not eliminate or physically degrade any existing recreational resources. **No impacts would occur**.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.16 Transportation and Traffic

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

Environmental Setting

The proposed parcels would be accessed from Brehme Lane, which is a rural road with limited traffic volumes. Pleasants Valley Road, which provides access to Brehme Lane is classified as a Collector in the Solano County General Plan. Collector roads link local and collector roads with arterials, freeways, and other collector roads and usually have moderate but not congested volume.

Impacts

2.16.a-b) The proposed project would result in the addition of four new residential units at the project site. According to the Institute of Transportation Engineers Trip Generation Manual, the trip generation rate for a single-family residence is 9.6 trips per day; therefore, the proposed project is anticipated to generate a total of 38 vehicle trips per day, with 3 trips in the AM peak hour and 4 trips in the PM peak hour. Because the proposed project would generate fewer than 100 trips during the PM peak hours, a full traffic impact study is not necessary per Solano Transportation Authority's 2019 Congestion Management Program (CMP). Therefore, it can be assumed that the proposed project would not generate enough new trips such that a conflict with the CMP for Solano County would occur. The small

increase in traffic generated by these parcels would not have significant impacts on the circulation system. This impact would be **less than significant**.

The California Office of Planning and Research guidelines for Vehicle Miles Traveled (VMT) analyses state that projects that generate fewer than 110 trips per day may be assumed to cause less than significant VMT impacts. The project would generate approximately 38 vehicle trips per day; therefore, impacts are **less than significant**.

2.16.c) Three international airports are located within 60 miles from the project site: San Francisco International, Oakland International and Sacramento International Airports. Three airports operate in Solano County – Nut Tree Airport (approximately 5 miles from the project site), Rio Vista Airport (Baumann Field, approximately 20 miles from the project site), and Travis Air Force Base (AFB, approximately 10 miles from the project site). The proposed project would result in subdivision of an existing property to create four parcels with associated residential units. The proposed project would not alter or change existing air traffic patterns. **No impacts would occur**.

2.16.d-e) The proposed project proposes to construct a new private road, extending from the existing cul-de-sac, along the western boundary of Parcel 2D to the northern boundary of Parcel 2B. Driveways would extend from this private road, providing access to Parcel 2B, Parcel 2C, and Parcel 2D. In addition, a secondary emergency access road would be provided, connecting to Cantelow Road. The proposed roadway and access driveways would be required to comply with the County's Subdivision Ordinance, the County Road Improvement Standards and Land Development Requirements and Vacaville Fire Protection District standards. In addition, the Vacaville Fire Protection District would also review the proposed site plan and would provide input on final design in relation to emergency access prior to issuance of a building permit. Therefore, impacts related to design hazards and emergency access **would be less than significant.**

2.16.f) The proposed subdivision would have no impact on existing public transit, bicycle or pedestrian facilities nor would it conflict with adopted policies, plans, or programs supporting alternative transportation. **No impact would occur**.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

2.17 Utilities and Service Systems

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

Environmental Setting

Water service at the project site would be provided by the Rural North Vacaville Water District (RNVWD), which provides a public water distribution system for properties within the rural north Vacaville area. RNVWD provides potable water for residential use and water for fire protection by supplying water to a series of fire hydrants serving properties in the area. The water system was designed to provide enough water capacity to supply potable water to a maximum of 533 parcels within that area.[9]

Lands in the unincorporated area of the County operate on stand-alone septic tanks. A permit is required in Solano County to install, repair, or modify a septic system.

As described in Section 2.9, Hydrology and Water Quality, runoff water quality is regulated by the National Pollutant Discharge Elimination System (NPDES) Program (established through the federal Clean Water Act). The NPDES program objective is to control and reduce pollutant discharges to

[9] Rural North Vacaville Water District. Website: rnvwd.com/ (Accessed March 25, 2021)

surface water bodies. Compliance with NPDES permits is mandated by State and federal statutes and regulations.

Solid wastes generated in the unincorporated County are disposed of in one of two privately-owned landfills – the Potrero Hills Landfill and the Hay Road Landfill. The Potrero Hills Landfill will reach its capacity in 2048.[10] The Hay Road Landfill has until 2070 before it reaches capacity.

Impacts

2.17.a) The four new residences that could be constructed with implementation of the proposed subdivision would be served by on-site septic systems. No additional wastewater treatment would be required. Prior to issuance of a building permit, proposed sewage disposal plans would be reviewed and approved by the Environmental Health Division consistent with Chapter 6.4 Sewage Standards of the County Code. Therefore, the proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. **No impacts would occur**.

2.17.b, d, e) Wastewater generated by proposed residences at the project site would be treated by new on-site septic systems on the four new parcels, as permitted through the Environmental Health Division. The proposed project would increase demand for wastewater treatment at any wastewater treatment facility.

Water for the project would be provided by the RNVWD. The RNVWD would need to provide Will Serve letters prior to issuance of each building permit. With compliance with these County requirements, impacts related to water supply and water infrastructure **would be less than significan**t.

2.17.c) As described in Section 2.9, Hydrology and Water Quality, the proposed project would include the placement of new impervious surfaces at the project site; however, new impervious surfaces would not be continuous, but would be surrounded by unimproved lands where runoff from the new impervious surface can be infiltrated. Therefore, the proposed project would not require the construction of new stormwater drainage facilities or the expansion of existing facilities. **No impact would occur**.

2.17.f-g) Solid waste generated by the four residences proposed at the project site would not be substantial. As described above, both of the landfills that serve Solano County have sufficient capacity to accommodate the solid waste generated as a result of the proposed project. The proposed project would comply with all federal, State, and local statutes and regulations related to solid waste. **No impact would occur**.

Avoidance, Minimization Measures and/or Mitigation Measures

None required

[10] California Department of Resources Recycling and Recovery (CalRecycle). 2019. SWIS Facility/Site Activity Details, Potrero Hills Landfill (48-AA-0075). Available online at: www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1194?siteID=3591 (Accessed March 25, 2021).

2.18 Mandatory Findings of Significance

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

The Solano County General Plan has designated this area for agricultural purposes and impacts associated with agricultural activities and residences, is to be expected and anticipated. Any environmental effects from the project would not cause substantial adverse effects on human beings, wildlife or major periods of California history or prehistory. Implementation of Mitigation Measure BIO-1 would ensure that potential impacts to oak trees/heritage trees are reduced to a less-than-significant level. Further, the proposed project would not result in impacts that are individually limited, but cumulatively considerable, as any similar development in the vicinity of the project site would be of similar character and scale. Therefore, the proposed project would not impact the quality of the environment, result in cumulative impacts, or result in substantial adverse effects on human beings. With implementation of mitigation measures provided herein, impacts would be **less than significant.**

3.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

3.1 Consultation and Coordination with Public Agencies

The Initial Study is being circulated for public comment and referred to the State Clearinghouse for coordinated review by state agencies. In addition, it will be sent to the Department of Conservation and the Solano County Agriculture Commissioner and other local agencies for review and comment. (See Section 5.0 Distribution List)

3.2 Public Participation Methods

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

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

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

Nedzlene Ferrario, Senior Planner
Planning Services Division
Resource Management Department
675 Texas Street
Fairfield, CA 94533

PHONE: (707) 784-6765
FAX: (707) 784-4805
EMAIL: nnferrario@solanocounty.com

4.0 LIST OF PREPARERS

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

Solano County Department of Resource Management

Other Preparers

LSA Associates, Inc.
Theresa Wallace, AICP/Principal Environmental Planner
Shanna Guiler, AICP/Associate Environmental Planner
Steve Kohlmann, PhD, CWB, Associate/Senior Wildlife Biologist

5.0 DISTRIBUTION LIST

State Agencies
Cal Fire
CA Department of Fish and Wildlife

Local Agencies
Rural North Vacaville Water District
Vacaville Fire Protection District

6.0 APPENDICES

A. Application Form
B. Assessor's Parcel Number
C. Tentative Parcel Map
D. Preliminary Public Water System Plan
E. Vacaville Fire Protection District
F. Rural North Vacaville Water District Will Serve
G. Biological Assessment Report
H. Cultural Resources Report
I. Mitigation Monitoring Plan

LANDS OF ABREW MINOR SUBDIVISION
APPLICATION NO. MS-19-02
MITIGATION MONITORING AND REPORTING PROGRAM

When an agency makes a finding that potentially significant impacts have been mitigated to less than significant levels, the agency must also adopt a program for reporting on or monitoring the efficacy of the mitigation measures that were adopted (Public Resources Code 21081.6). This document consists of a proposed Mitigation Monitoring and Reporting Program for Lands of Abrew Minor Subdivision Application. The monitoring and reporting measures included in this program are the responsibility of the Project Sponsor/Applicant/Subdivider.

The Mitigation Monitoring and Reporting Program includes the confirmation of, or review and approval of, the implementation of specific mitigation actions in the form of reports and plans. The mitigation measures included in this monitoring program will be completed at various stages of the Project, including future document submittals for Building and Grading Permit approvals, actions or approvals linked to other Responsible Agencies if applicable, as well as during project construction and implementation. Solano County will provide documentation that the Mitigation Monitoring and Reporting Program has been fully adhered to and completed. This Mitigation Monitoring and Reporting Program applies to all activities evaluated by the Lands of Abrew Initial Study.

Solano County remains responsible for ensuring that the implementation of these mitigation measures occurs to the extent noted in this Mitigation Monitoring and Reporting Program and, where it is noted, Solano County will be responsible for reviewing and monitoring the required mitigation measures to ensure compliance (CEQA Guidelines 15097).

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Air Quality				
Mitigation Measure AIR-1: Prior to issuance of a grading/improvement plan permit, building permit or Parcel Map recordation, the project applicant shall require its construction contractor to prepare and implement a Dust Control and Construction Exhaust Mitigation Plan subject to the satisfaction of the Public Works Division and Yolo Solano Air Quality Management District.	Subdivider/Applicant	Department of Resource Management	Prior to construction	Less than significant
Biological Resources				
Mitigation Measure BIO-1: Prior to recordation of the Parcel Map, the Subdivider shall compensate for the loss of foraging habitat due to residential development, structures (houses, barns, out- buildings, roads, etc.) at a ratio of 1:1 (1 acre for every acre removed), for a total loss of 0.85 acres. Mitigation may be in the form of fee-title or a conservation easement or credits, held by a non-profit land management organization, on lands containing suitable Swainson's hawk foraging habitat and as approved by the California Department of Fish and Wildlife in Solano County. The purchase of Swainson's Hawk mitigation credits at a mitigation bank or conservation area located in Solano County is acceptable.	Applicant/Subdivider	Department of Resource Management	Prior to Parcel Map recordation	Less than significant

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Mitigation Measure BIO-2: Removal of large riparian trees (trunk diameter of 15 inches or more measured at 54 inches above natural grade) shall be avoided to reduce potential impacts to Yellow-breasted chat. **Mitigation Measure BIO-3:** For construction activities that occur between February 1 and August 31, a preconstruction breeding bird survey shall be conducted by a qualified biologist familiar with bird behavior and knowledge of nest types prior to and within 10 days of any initial ground-disturbance activities. A copy of the preconstruction survey shall be submitted to the Department of Resource Management prior to construction. Surveys shall be of sufficient intensity (typically 2 to 3 surveys) to document nesting within a 0.25 mi (1,320 ft) buffer around planned work activities (consistent with current Solano HCP guidance). If a lapse in project-related construction work of 15 days or longer occurs, additional preconstruction surveys shall be required before project work may be reinitiated. A survey will consist of a pedestrian search by a qualified Biologist for both direct and indirect evidence of bird nesting. Direct evidence will include the visual search of an actual nest location. Indirect evidence will include observing birds for nesting behavior, such as copulation, carrying food or nesting materials, nest building, feeding chicks, and other characteristic behaviors that indicate the presence of an active nest. Surveys will be conducted in accordance with the guidance in Martin and Guepel (1993). If nesting Swainson's hawks, white tailed kites, or other birds are detected, the qualified biologist shall establish no-	Applicant/Subdivider	Department of Resource Management	Prior or during construction	Less than significant

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
disturbance buffers around nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely impacted by construction. Buffers will be maintained until the qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. **Mitigation Measure BIO-4:** All equipment should be thoroughly cleaned (washed) before entering the project site, if the equipment has been used in areas infested with weeds. Workers should inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and equipment. Stockpiled, un-infested material should be maintained in a weed-free condition. Retain native vegetation in and around project activity to the maximum extent possible. Avoid creating soil conditions that promote weed germination and establishment. Revegetate disturbed areas in a manner that optimizes plant establishment for that specific site. Revegetation may include planting, seeding, fertilization, liming, and weed-free mulching, as necessary. Use native material where appropriate and feasible. Use certified weed-free or weed-seed-free hay or straw for erosion control. Conduct weed control on roadways and in disturbed areas as needed. Re-seeding of the project site shall be accomplished within appropriate California native plant species that are adapted to the site. Suggested Erosion control seed mix consists of 15 pounds per acre (lbs/ac) of *Bromus carinatus*, 15 lbs/ac of *Elymus glaucus*, 10 lbs/ac of *Lupinus bicolor*, 10 lbs/ac of *Lupinus succulentus*, 10 lbs/ac of *Trifolium albopurpureum*, 10 lbs/ac of *Trifolium microcephalum*,				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
and 5 lbs of *Clarkia pupurea*. Placement of seed shall be by hydromulch spray or other broadcast method as determined by owner to ensure germination prior to October 15th. If necessary, watering of the reseeded area must be ensured to enhance plant germination and survival. **Mitigation Measure BIO-5:** In order to protect the riparian corridor and the tributaries, delineate on the Parcel Map a 100-foot wide setback, measured from the centerline of the tributaries or creek. No ancillary structures (barns, leach fields, corrals etc.) shall be placed within the setback. **Mitigation Measure BIO-6:** To minimize the impact of development on wildlife movement, all perimeter fencing shall meet the following standards: • Fence heights shall be limited to average maximum of 5 feet above ground level (limited height variations based on topographic changes are allowable). • Welded wire or other mesh fences shall have a minimum 4 inch by 4 inch opening. Smaller opening in the lower 18 inches of the fence is allowable if needed to contain smaller domestic animals. No-climb horse fencing should be avoided as perimeter fencing. • Solid perimeter fences are prohibited.			Prior to Parcel Map recordation	

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
• Wood or metal picket fences shall have minimum spacing of 4 inches between pickets and shall not have sharp or pointed spikes or decorations along the top. **Mitigation Measure BIO-7:** In order to protect and preserve Oak Woodlands and Heritage trees, prior to issuance of a grading permit/improvement plan permit, building permit or recordation of the Parcel Map, a qualified and certified Arborist shall prepare a tree inventory/resources report. All oak species 6-inches dbh or greater to be retained or removed and all heritage trees shall be identified on the grading/improvement plan. Consistent with General Plan policy RS. I-3, heritage trees are defined as (a) trees with a trunk diameter of 15 inches or more measured at 54 inches above natural grade, (b) any oak tree native to California with a diameter of 10 inches above natural grade, or (c) any tree or group of trees special significance in consultation with the Department of Resource Management. The Arborist shall recommend and monitor specific measures to protect oak trees 6-inches dbh or greater or heritage trees from construction impacts. This includes designating no work zones by exclusion fencing along the canopy dripline. Ground disturbance, grading, development, construction or trenching is prohibited within 5 feet of the dripline of any oak tree 6-inches dbh or greater or any heritage tree. If an oak tree or heritage tree cannot be protected from damage or removal, the loss of each mature tree shall be mitigated by planting 15 saplings at least 3 years old in areas where oak recruitment has been absent due to				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
fire, grazing and weed competition. A qualified biologist shall designate potential planting areas and supervise the planting and installation of any necessary irrigation. The following guidelines for oak restoration shall be followed: • Mitigation Planting: To compensate for the unavoidable loss of mature blue and live oaks, 15 saplings of the same species shall be planted for each mature tree removed. Oak saplings shall be sourced from a certified Phytophthora ramorum-free nursery. Saplings must be at least 3 years old and shall be spaced at least 15 feet from each other. Each sapling shall be staked with two wooden stakes and caged to a sufficient height that deer and cattle cannot damage the sapling. Saplings shall be planted in moist soil, after the first substantial rain. In the following summer, watering may be necessary to enhance survival. • Performance and Success Criteria: Performance criteria for the revegetation area shall be assessed in 2024, or at least 3 years following the conclusion of grading activities. The oak planting site(s) shall have at least a 65 percent cover by native or naturalized plants (primarily grasses) and no more than 20 percent of the area shall be covered by non-native weeds. Survival of planted oak saplings until 2024 shall exceed 65% (i.e., 10 living oak saplings per mature tree removed). • Monitoring Plan: The site shall be visited annually by a qualified biologist to visually assess				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
herbaceous cover of the revegetation area and the survival of oak saplings. If revegetation success or sapling mortality falls below the above performance and success criteria during any of the 3 years following construction, adaptive management (reseeding, replanting) must be conducted, using the above species and methods. **Mitigation Measure BIO-9: Sensitive Natural Community Habitat Assessment and Mitigation**: A qualified botanist shall conduct vegetation classification and mapping of the Project site following the *Survey of California Vegetation Classification and Mapping Standards*[6] and *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*[7] during the appropriate period to identify the plants and natural communities that have the potential to occur on the Project site prior to the start of ground-disturbing activities and prepare a report documenting findings. If sensitive natural communities are mapped within the Project site, the Project shall be redesigned to avoid impacts to all sensitive natural communities. If sensitive natural communities cannot be avoided, then loss of sensitive natural communities shall be mitigated through permanent habitat protection at a 3:1 mitigation to impact ratio, through a conservation easement and implementing and funding a long-term management plan in perpetuity. Compensatory habitat shall be of equal or greater quality than the impacted habitat or a habitat enhancement plan shall be prepared and implemented by a qualified biologist to				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
achieve at least equal habitat quality prior to Project construction. For any habitat enhancement, to ensure a successful planting effort, all plantings shall be monitored and maintained as necessary for a minimum of five years. Oak trees, other trees, and all other plantings shall each have a minimum of 80% survival at the end of the minimum monitoring period. If the planting survival is not meeting this goal, then the Project shall implement replacement planting, additional watering, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival requirements for five years after planting. Oak plantings shall come from nursery stock grown from locally sourced acorns, or from acorns gathered locally, preferably from the same watershed in which they are planted. The trees should be able to survive the last two years of a minimum five-year monitoring period without irrigation. **Mitigation Measure BIO-10: Special-Status Plant Survey and Avoidance**: A qualified botanist shall conduct surveys during the appropriate blooming period for all special- status plants that have the potential to occur on or adjacent to the Project area prior to the start of ground-disturbing activities and prepare a report documenting survey findings. Habitat adjacent to the Project area should be surveyed if the Project may have indirect impacts off-site as a result of changes to hydrological conditions or other indirect impacts. More than one year of surveys may be necessary. Surveys and reporting shall be conducted following *Protocols for Surveying and Evaluating*				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities. Surveys shall be submitted to CDFW for review and written acceptance. If special-status plants are found during surveys, the Project shall be re-designed to avoid impacts to special- status plants. If special-status plants listed as threatened or endangered under the federal Endangered Species Act (ESA), such as Keck's checkerbloom, are discovered on or adjacent to the Project site, the Project shall consult with USFWS prior to commencing Project activities. If impacts to any special-status plants cannot be avoided completely during the Project, the Project shall provide mitigation including on-site restoration including a restoration plan approved by CDFW, off-site habitat preservation at a 3:1 mitigation to impact ratio based on acreage or number of plants as appropriate, or another method accepted in writing by CDFW. The qualified botanist shall be knowledgeable about plant taxonomy, familiar with plants of the region, and have experience conducting botanical field surveys according to vetted protocols. **Mitigation Measure BIO-11A: Burrowing Owl Habitat Assessment, Surveys, and Avoidance**: Prior to Project activities, a qualified biologist shall conduct a habitat assessment following Appendix C: Habitat Assessment and Reporting Details of the CDFW *Staff Report on Burrowing Owl Mitigation*[8] (CDFW 2012 Staff Report). The habitat assessment shall extend at least 492 feet (150 meters) from the Project site boundary or more where direct or indirect effects could potentially extend offsite (up to 500				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
meters or 1,640 feet) and include burrows and burrow surrogates. If the habitat assessment identifies potentially suitable burrowing owl habitat, then a qualified biologist shall conduct surveys following the CDFW 2012 Staff Report survey methodology. Surveys shall encompass the Project site and a sufficient buffer zone to detect owls nearby that may be impacted commensurate with the type of disturbance anticipated, as outlined in the CDFW 2012 Staff Report, and include burrow surrogates such as culverts, piles of concrete or rubble, and other non-natural features, in addition to burrows and mounds. Time lapses between surveys or Project activities shall trigger subsequent surveys, as determined by a qualified biologist, including but not limited to a final survey within 24 hours prior to ground disturbance. The qualified biologist shall have a minimum of two years of experience implementing the CDFW 2012 Staff Report survey methodology resulting in detections. Detected nesting burrowing owls shall be avoided pursuant to the buffer zone prescribed in the CDFW 2012 Staff Report and any passive relocation plan for non-nesting owls shall be subject to CDFW review. Please be advised that CDFW does not consider exclusion of burrowing owls (i.e., passive removal of an owl from its burrow or other shelter) as a “take” avoidance, minimization, or mitigation measure for the reasons outlined below. Therefore, to mitigate the impacts of potentially evicting burrowing owls to less-than-significant, Mitigation Measure BIO-11B outlined below should require habitat compensation with the				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
acreage amount identified in any eviction plan. The long-term demographic consequences of exclusion techniques have not been thoroughly evaluated, and the survival rate of excluded owls is unknown. Burrowing owls are dependent on burrows at all times of the year for survival or reproduction, therefore eviction from nesting, roosting, overwintering, and satellite burrows or other sheltering features may lead to indirect impacts or "take" which is prohibited under Fish and Game Code section 3503.5. All possible avoidance and minimization measures should be considered before temporary or permanent exclusion and closure of burrows is implemented to avoid "take." **Mitigation Measure BIO-11B: Burrowing Owl Habitat Mitigation:** If the Project would impact an unoccupied nesting burrowing owl burrow or burrow surrogate (i.e., a burrow known to have been used in the past three years for nesting), or an occupied burrow (where a non-nesting owl would be evicted as described above), the following habitat mitigation shall be implemented prior to Project construction: **Mitigation Measure BIO-12: Special-status Bee Habitat Assessment and Avoidance:** A qualified wildlife biologist shall conduct visual surveys of areas planned for ground disturbance, including but not limited to, installation of water main, new roads, leach fields, and building sites, and within a 100-foot buffer of ground-disturbing activities. Surveys shall be conducted to coincide with the blooming period of locally common nectar sources				

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Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
such as vetch (*Vicia* spp.) and California poppy (*Eschscholzia californica*) during the flight season for the western and Crotch's bumble bee (generally late February through late June). Between two and four evenly spaced surveys shall be conducted for the highest detection probability, including surveys in early spring (late March/early April) and early summer (late June/July). Surveys shall take place when temperatures are above 60°F, preferably on sunny days with low wind speeds (e.g., less than 8 miles per hour) and at least 2 hours after sunrise and 3 hours before sunset. On warm days (e.g., over 85°F), bumble bees will be more active in the mornings and evenings. The qualified biologist shall conduct transect surveys focusing on detection of foraging bumble bees and underground nests using visual aids such as binoculars. If western or Crotch's bumble bee nests are identified within the ground disturbance area or 100-foot buffer area, a plan to protect bumble bee nests and individuals shall be developed and implemented in consultation with CDFW. The plan shall include, but not be limited to: 1) specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queens); 2) pre-construction surveys conducted within 30 days and consistent with any current available protocol standards prior to the start of ground- disturbing activities to identify active nests; 3) establishment of appropriate no- disturbance buffers for nest sites and construction monitoring by a qualified biologist to ensure compliance with buffers; 4) restrictions associated with construction practices,				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, measures to minimize the spread of invasive plant species); and 5) prescription of an appropriate restoration seed mix targeted for the bumble bees, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season for bumble bees (March to October). **Mitigation Measure BIO-13: Valley Elderberry Longhorn Beetle Habitat Assessment and Avoidance:** A qualified biologist shall evaluate the Project site for VELB habitat following the USFWS 2017 Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle. Project activities shall avoid elderberry plants and a 165-foot buffer around each plant. Elderberry plants and the 165-foot avoidance buffer shall be clearly flagged prior to Project activities. If Project activities must occur within 165 feet of an elderberry plant, the Permittee shall consult with USFWS pursuant ESA and receive written approval from CDFW prior to the impact. **Mitigation Measure BIO-14: American Badger Burrow Surveys and Avoidance***:* Within 48 hours prior to ground-disturbing activities, a qualified biologist shall survey the Project site for American badger burrows, including adjacent habitat within 50 feet. If potential badger burrows are identified, they shall be flagged for avoidance, including a sufficient buffer approved by CDFW. If badger burrows cannot be avoided, a qualified biologist shall prepare and				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
implement a relocation and habitat improvement plan approved in writing by CDFW. **Mitigation Measure BIO-15: Bat Tree Habitat Assessment and Surveys:** Prior to any tree removal, a qualified biologist shall conduct a habitat assessment for bats. The habitat assessment shall be conducted a minimum of 30 to 90 days prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark, and suitable canopy for foliage roosting species). If suitable habitat trees are found, they shall be flagged or otherwise clearly marked and tree trimming or removal shall not proceed unless the following occurs: a) in trees with suitable habitat, presence of bats is presumed, or documented during the surveys described below, and removal using the two-step removal process detailed below occurs only during seasonal periods of bat activity, from approximately March 1 through April 15 and September 1 through October 15, or b) after a qualified biologist conducts night emergence surveys or completes a visual examination of roost features that establish absence of roosting bats. Two-step tree removal shall be conducted over two consecutive days, as follows: 1) the first day (in the afternoon), under the direct supervision and instruction by a qualified biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only; limbs with cavities, crevices or deep bark fissures shall be				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
avoided; and 2) the second day the entire tree shall be removed. **Mitigation Measure BIO-16: California Red-legged Frog Habitat Assessment and Surveys:** Within 48 hours prior to the commencement of ground-disturbing activities, the Project area and nearby vicinity, including a minimum 500-foot radius surrounding the Project area, shall be assessed by a qualified biologist for the presence of California red- legged frog individuals and habitat features. Habitat features include both aquatic habitat such as plunge pools and ponds and terrestrial habitat such as burrows. The results of the habitat feature assessment shall be submitted to CDFW for written acceptance prior to starting Project activities. Habitat features shall be flagged for avoidance to the extent feasible. If California red-legged frogs are encountered during the assessment or Project activities, the Project shall not proceed or all work shall cease, and CDFW shall immediately be notified. Work shall not proceed until the frog, through its own volition, moves out of harm's way and CDFW has provided permission in writing to proceed with the Project. If California red-legged frog is encountered or the qualified biologist believes that California red-legged frog is likely to occur in the Project area, the Project shall consult with USFWS pursuant to the federal Endangered Species Act. **Mitigation Measure BIO-17A: Foothill Yellow-legged Frog Survey Methodology:** A CDFW-approved qualified biologist shall provide a foothill yellow-legged frog survey methodology to CDFW for				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
review and written approval no less than 30 days prior to beginning Project activities, unless CDFW approves otherwise in writing. No Project activities shall begin until foothill yellow-legged frog surveys have been completed using a method approved by CDFW. Survey methodology shall target all life stages and shall have an adaptive management approach based on the stream conditions at the time of surveys (i.e., whether ponded or flowing water is present, or whether the stream has been completely dry for less than 30 days). Surveys within and adjacent to the Project area shall include searching suitable habitat including but not limited to cavities under rocks, within vegetation such as sedges and other clumped vegetation, and under undercut banks, no less than 50 feet from the streambed and 500 feet upstream and downstream of the Project area. Surveys should be conducted at different times of day and under variable weather conditions if possible. **Mitigation Measure BIO-17B: Foothill Yellow-legged Frog Surveys:** Prior to starting Project activities, a CDFW-approved qualified biologist shall conduct surveys for foothill yellow-legged frog using a CDFW-approved methodology (Mitigation Measure BIO- 17A). If foothill yellow-legged frogs, or any other special-status species, are found, CDFW shall be notified immediately, and ground-disturbing activities shall not occur without written approval from CDFW allowing the Project to proceed. In this event, a temporary wildlife exclusion fence shall be installed, if requested by CDFW, to prevent frogs and/or other special-status species from entering the work site.				

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Additionally, a qualified biologist shall be on site daily to monitor work and ensure impacts to foothill yellow-legged frogs are avoided and minimized. The results of the survey shall be submitted to CDFW for written acceptance prior to starting Project activities. If the stream has been completely dry for greater than 30 days prior to starting Project activities, and no water or moist areas within the streambed exist within 500 feet upstream and downstream of the Project site, then surveys for foothill yellow-legged frogs are not necessary. **Mitigation measure Bio-18: Western Pond Turtle Survey:** For all Project activities that occur within 500 feet of stream or wetland habitat, prior to ground-disturbing activities, a qualified biologist shall conduct a pre-construction survey within 48 hours prior to the start of Project activities, focusing on the presence of western pond turtle and their nests. If western pond turtles are discovered during the survey, Project activities shall not begin until CDFW has been consulted and approved in writing measures to avoid and minimize impacts to western pond turtle, and the measures have been implemented.				
Mitigation Measure CUL-1: In the event that presently undocumented buried archaeological deposits are encountered during any project-associated construction activity, work must cease within a 50-foot radius of the discovery. A qualified archaeologist must be retained to document the	Applicant/Subdivider	Department of Resource Management	During construction	Less than significant

Lands of Abrew Minor Subdivision MS-19-02 Mitigation Monitoring and Reporting Program				
Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
discovery, assess its significance, and recommend treatment. **Mitigation Measure CUL-2:** If human remains or any associated funerary artifacts are discovered during construction, all work must cease within the immediate vicinity of the discovery. In accordance with the California Health and Safety Code (Section 7050.5), the Solano County Sheriff/Coroner must be contacted immediately. If the Coroner determines the remains to be Native American, the Coroner will notify the Native American Heritage Commission, which will in turn appoint a Most Likely Descendent (MLD) to act as a tribal representative. The MLD will work with the project applicant and a qualified archaeologist to determine the proper treatment of the human remains and any associated funerary objects. Construction activities will not resume until either the human remains are exhumed, or the remains are avoided via project construction design change.				
Hazards				
Mitigation Measure HAZ-1: On the Parcel Map, delineate the 30-foot setback (defensible space) from the property lines as shown on the tentative map, required by Cal Fire Regulations and include a note that the property is located within the State Responsibility Area for wildfire. Compliance with the Cal Fire adopted regulations (Cal Code reg. Title 14	Applicant/Subdivider	Department of Resource Management	Prior to Parcel Map recordation process	Less than significant

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Mitigation Measures	**Party Responsible for Implementation**	**Party Responsible for Monitoring**	**Monitoring Action**	**Significance After Mitigation**
Sec 1270 et seq) could minimize the risk of loss, injury or death involving wildfire.				
Water Supply				
Mitigation Measure WS-1: Prior to the recordation of the Parcel Map, complete all engineering and construction related to the public water system, according to the terms of agreement with the Rural North Vacaville Water District, in compliance with the rules and regulations of the Rural North Vacaville District. Submit evidence to the Department of Resource Management that the engineering plans and necessary infrastructure installation are complete to the satisfaction of the Rural North Vacaville Water District.	Applicant/Subdivider	Department of Resource Management	Prior to Parcel Map recordation	Less than significant
Noise				
Mitigation Measure NOISE-1: Construction activity is limited to weekdays during the hours of 8 a.m. to 5 p.m., Monday through Friday; and 9 a.m. to 4 p.m. on Saturdays, and no work should occur on Sundays and Federal holidays. In order to ensure future buyers are aware of the noise restrictions, the Parcel Map shall include a supplemental note statement regarding the noise restriction for construction activities.	Applicant/Subdivider	Department of Resource Management	Prior to Parcel Map recordation and continuous	Less than significant