

MULAS WETLAND MITIGATION PROJECT

funded by the

State of California Department of Transportation (SHC 126.1 Mitigation Agreement No. 04-3073)

sponsored by the

SONOMA RESOURCE CONSERVATION DISTRICT

REQUEST FOR COST PROPOSAL

Solicitation Issue Date: August 10, 2026

Responses Due: September 18, 2026

Please submit proposals electronically to sfry@sonomarcdd.org

Hard copy proposals will not be accepted



1221 Farmers Lane, Suite F

Santa Rosa, CA 95405

(707) 569-1448

MULAS WETLAND MITIGATION PROJECT

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Exhibits

- Exhibit A: Project Documents: Habitat Mitigation and Monitoring Plan, Mulas Ranch
Long-term Management Plan, Concept Plans: Mulas Wetland Mitigation
Project, 2/14/2024, by Foulk Civil Engineering, Inc., and Suggested Plan List
- Exhibit B: Sample Contract and Master Contract Documents

MULAS WETLAND MITIGATION PROJECT

INSTRUCTIONS TO BIDDERS

INTRODUCTION

The design and construction of this project, Mulas Wetland Mitigation Project, is being managed by the Sonoma Resource Conservation District (SRCD) funded by the State of California Department of Transportation (SHC 126.1 Mitigation Agreement No. 04-3073). Resource Conservation Districts are established under Division 9 of the California Public Resources Code. Since 1946, the SRCD has facilitated natural resource conservation through community involvement, education, technical expertise and scientific research. Organized to provide non-regulatory natural resource management solutions through partnerships with individuals, organizations and agencies.

A proposal is invited to provide civil engineering plans, specifications, cost estimate, permit support, and construction oversight to construct a 4.75-acre mitigation pond/wetland which meets the specifications as outlined in the attached exhibits.

For the purposes of the bid documents, "Owner" shall mean the SRCD Board of Directors, "Project Manager" shall mean Sonoma Resource Conservation District, 1221 Farmers Lane, Suite F, Santa Rosa, CA 95405. "Landowner" shall refer to the landowner on whose property the project is being implemented. "Consultant" shall refer to the selected consultant providing engineering design and construction oversight services for the Project. Project Manager will review and approve all work for payment and provide daily management and project supervision as representatives of the SRCD.

SCOPE OF WORK

The project, Mulas Wetland Mitigation Project, hereinafter known as "Project," consists of the design and construction oversight of a 4.75 acre mitigation pond/wetland at a mitigation site with a conservation easement managed by the Golden State Land Conservancy, in Sonoma County, California. The project is funded by the California Department of Transportation (CALTRANS) to mitigate the impacts associated with the SON-116/121 Intersection Improvement Project on Route 121.

LOCATION

The project is located in the Sonoma Creek watershed outside of Sonoma, California. The address will be provided prior to the bid walk.

SUBMISSION OF COST PROPOSAL

The submission of a Cost Proposal shall constitute certification by the bidder that they have:

- A. Visited the site to familiarize themselves with all local conditions that in any manner affect cost, progress, or performance of the work.
- B. Familiarized themselves with all federal, state and local laws, ordinances, rules, and regulations that in any manner affect the cost, progress, or performance of the work.
- C. Have thoroughly examined and understand the concept design documents, Sample Contract and Master Contract documents attached herein.

A Cost Proposal shall be submitted to SRCD by Friday, **September 18 by 5:00PM** (Pacific Standard time zone) on the forms attached hereto. Submit the entire Request for Cost Proposal (RFCP) package with the Cost Proposal forms completely filled out and a design schedule.

A bid tour will be scheduled to take place on Monday, August 31, 2026 at 9:00am – 11:00am. Please contact Steven Fry, Watershed Restoration Program Manager, (707) 569-1448 x 106, sfry@sonomarc.org to RSVP and get details on the location of the tour.

Proposal submissions should be submitted electronically to Steven Fry – sfry@sonomarc.org. Hard copy proposals will not be accepted.

CONTRACT DOCUMENTS

Attached to this Request for Cost Proposal package is Exhibit B: Sample Contract and Master Contract Documents. Bidders are expected to thoroughly examine and understand the contents of each of these documents, which contain pertinent and specific information regarding every aspect of project design and construction oversight. These contract documents will be included in the final contract made between the successful bidder and the SRCD.

LICENSES

This job requires a California State Civil Engineering License.

Project Timeline

Date	Item	Notes
August 31, 2026	Bid Tour	You must RSVP by calling Steven Fry at (707) 569-1448 x 106 or email sfry@sonomarc.d.org
September 9, 2026	Questions Due	All questions regarding the Cost Proposal must be in by 5:00pm. Questions shall be emailed to sfry@sonomarc.d.org
September 14, 2026	Questions Answered	All questions shall be answered and sent to all Contractors at bid tour via email by 5:00pm.
September 18, 2026	Proposals Due	Cost Proposals and construction schedules are due by 5:00pm.
October 16 th , 2026	Contract Executed	Consultant enters into a bona fide contract with SRCD: contract signed, insurance provided, W-9 paperwork submitted and performance bond issued.
January 31 st , 2027	Design and Permit Applications	Submittal of 65% Civil Engineering Plans and Assistance with applicable permit applications
March 31 st , 2027	Design Completion Deadline	Deadline for completion of design work, March 31, 2027, and includes 100% Civil Engineering Plans, Specifications, and Construction Cost estimate
March 2028	Construction Oversight	Consultant will provide construction oversight to ensure implementation constructor adheres to project design. Construction is intended to occur between Summer 2027 and Spring 2028
September 2028	As-Built Plans	Consultant will submit as-built plans following construction completion.

The Consultant shall complete finalized engineering design plans, specifications, and construction cost estimates by March 31, 2027. Consultant is to submit 65% engineering design

plans by January 31, 2027 for permit submittal. Consultant shall incorporate permit and project team comments by March 31, 2027 with final design package. Consultant will provide construction oversight during project implementation (forecasted for Summer 2027-Spring 2008) and submit as-built plans post-implementation. Consultant will be responsible for communicating project delays and potential problems to the Project Manager, Steven Fry at (707) 569-1448 immediately. A pre-design meeting will be held with the successful bidder, the landowner, and the SRCD agent prior to start of work.

PERMITS

Consultant will support the SRCD and CALTRANS to obtain the following permits needed for implementation or associated with finalized designs:

- California Department of Fish and Wildlife Lake and Streambed Alteration Agreement - 1600
- Regional Water Quality Control Board Water Quality Certification - 401
- U.S. Army Corps of Engineer 404
- County of Sonoma - Grading permit exemption
- County of Sonoma - Zoning Permit

PRE-CONTRACTUAL EXPENSES

No reimbursement will be made by the SRCD for costs incurred in the preparation of the response to this Request for Proposal. Submitted materials will not be returned and become the property of the SRCD. The SRCD shall not, under any circumstances, be liable for any pre-contractual expenses incurred by Respondents in the preparation of their Proposals.

Respondents shall not include any such expenses as part of their Proposals. Pre-contractual expenses are defined as expenses incurred by the Respondent in preparing its Proposal in response to this solicitation, submitting the Proposal to the SRCD, negotiating with the SRCD on any matter related to the Proposal, and any other expenses incurred by the Respondent prior to the date of award and execution of an Agreement.

GENERAL CONDITIONS

The SRCD reserves the right to:

- Reject any or all Proposals as described further below;
- Select the Proposal most advantageous to the SRCD;
- Verify all information submitted in the Proposal;

- Withdraw this solicitation at any time without prior notice and furthermore, makes no representation that any Agreement will be awarded to any Respondent responding to this solicitation;
- Award its total requirements to one Respondent or to apportion those requirements among two or more Respondents as the SRCD may deem to be in its best interests;
- Negotiate the final Agreement with any Respondent(s) as necessary to serve the best interests of the SRCD;
- Amend this solicitation;
- Amend the first Agreement to incorporate necessary attachments and exhibits or to reflect negotiations between the SRCD and the successful Respondent.

RIGHT TO REJECT PROPOSALS

Submission of a proposal indicates acceptance by the firm or individual of the conditions contained in this request for proposal unless clearly and specifically noted in the proposal submitted and confirmed in the agreement between the SRCD and the firm selected. The SRCD reserves the right without prejudice to reject any or all proposals.

COST PROPOSAL

To: Executive Committee, Sonoma Resource Conservation District

From: (Name of Contractor): _____

We, the undersigned, having familiarized ourselves with local conditions affecting the cost of work to be done, along with the cost proposal and contract documents, hereby propose to provide and furnish all design services to complete all work as specified and outlined in the Concept Plans: Mulas Ranch Mitigation Project, 2/14/2024, by *Foulk Civil Engineering, Inc*, and as are described below in the Description of the Work section.

We, the undersigned, agree to perform all of the above work to its completion and to the satisfaction of the SRCD for the rates and prices for said work as indicated below.

We, the undersigned, understand that the contract is a lump sum contract. The Consultant cannot be paid over the sum not to exceed without a change order from the Project Manager. The Consultant must bid on all parts of this project. The SRCD will not be responsible for any loss of anticipated profits due to reductions in the size of the contract.

The project involves all of the work indicated on the attached plans and specifications. Please provide cost estimates for the following work:

Deliverables	Est. Amt.	Total
1. Project Design		
Project Coordination Meetings and Site Visits		
65% Civil Engineering Design Plans		
Assistance with Permit Application Submission and Comments		
100% Civil Engineering Design Plans, Specifications, and Cost Estimate		
Hydrologic Analysis		
Basin of Design Report		
2. Construction Oversight		
Support for Construction contractor bid process		
Construction oversight for design adherence		
Biological Monitoring		
Submittal of as-built plans following construction implementation		
TOTAL BID:		\$

Total Bid

\$ _____ (in words)

Estimated Work Timeline: Attach a sheet to the Cost Proposal that indicates approximately by date when Project milestones are expected to be started and completed. This is for SRCD initial planning purposes only and is not a schedule to which Consultant will be held.

EXHIBIT A: PROJECT DOCUMENTS
MULAS WETLAND MITIGATION PROJECT

The engineered design plans must meet the specifications outlined by the Habitat Mitigation and Monitoring Plan and Mulas Ranch Long Term Management Plan and included as part of Exhibit A: Project Documents. CALTRANS intends to meet the requirements by implementing the creation of 3.85 acres of California Red-legged frog upland habitat and 0.9 acres of wetlands. Initial project designs provided by Foulk Civil Engineering are a basis for the project intent but are not required to be incorporated by Design Contractor in design documents. Suggested plant list to be used in project design and project implementation are included within Exhibit A.

Mitigation and Monitoring Plan



State Route 116/121 Intersection Improvement Project

STATE OF CALIFORNIA
Department of Transportation

SONOMA COUNTY, CALIFORNIA SON-116 PM 46.5/46.8
SON-121 PM 6.5/7.0
EA 04-3G900 / Project ID: # 0412000557

n 2025



For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Rebecca Carson, Office of Biological Sciences and Permits, California Department of Transportation, District 4, 111 Grand Avenue, Oakland, CA 94612; (510) 715-9112 (Voice), or use the California Relay Service: 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice), or 711.

Mitigation and Monitoring Plan

State Route 116/121 Intersection Improvement Project

STATE OF CALIFORNIA
Department of Transportation

SONOMA COUNTY, CALIFORNIA SON-116 PM 46.5/46.8
SON-121 PM 6.5/7.0
EA 04-3G900 / Project ID: # 0412000557

June 2025

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Date: 06/13/2025

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Executive Summary

The California Department of Transportation (Caltrans) will construct the State Route (SR) 116/121 Intersection Improvement Project (Project) which includes a hybrid multi-lane roundabout with 180 degrees of the circulatory roadway having two lanes, a full right-turn bypass lane in the northbound direction, and a partial right-turn bypass lane (yield control at the exit) in the eastbound direction. The purpose of this Project is to improve operations for all modes of transportation at a high volume, four-way stop where SR 116 and SR 121 intersect, consequently reducing congestion and the occurrence of accidents for all modes of transportation, while maintaining and enhancing where possible access to adjacent properties and parking for public transit and carpool users.

The purpose of this Mitigation and Monitoring Plan (MMP) is to outline the strategy for onsite restoration and offsite mitigation of temporary and permanent impacts to creeks, riparian zones, and habitat for special status species due to the roundabout construction and Park-and-Ride lot relocation at the SR 116/121 intersection pursuant to the following regulatory agency permits:

- San Francisco Bay Regional Water Quality Control Board (RWQCB) Clean Water Act (CWA) Section 401 Water Quality Certification (Place ID 881749);
- U.S. Army Corps of Engineers (USACE) CWA Section 404 Regional General Permit (RGP) 33 (SPN-2020-00219); and
- U.S. Fish and Wildlife Service (USFWS) Biological Opinion (BO; 0SESMF00-2020-F-2392)

Temporary and permanent impact acreages resulting from Project implementation are presented in Table ES-1. Regulatory agency requirements for onsite restoration and offsite mitigation are presented in Table ES-2. Table ES-3 illustrates how Caltrans will meet or exceed restoration and mitigation agency requirements

Table ES-1 Project Impacts

Permit	Habitat Type(s)/ Species	Temporary Impacts		Permanent Impacts	
		Acres	Linear Feet	Acres	Linear Feet ¹
RWQCB 401 WQC	Drainage channels, emergent wetlands, other waters	0.009	-	0.1584	2694
USACE NWP	Seasonal wetlands, jurisdictional wetlands, other waters of the US	0.01	-	0.16	-
USFWS BO	CRLF habitat	1.54	-	3.71	-

Table ES-2 Onsite Restoration and Offsite Mitigation Requirements

Permit	Habitat Type(s)	Agency Requirements	Onsite Restoration Amount	Offsite Mitigation Amount
RWQCB 401 WQC	Drainage channels, emergent wetlands, other waters	Onsite restoration of disturbed area and linear feet of drainage channels and riparian zones, as practicable 1.1 mitigation for temporary drainage channel and riparian zone impact acreage and linear feet of creek 3:1 offsite mitigation for permanent drainage channel and riparian zone impact acreage and linear feet of creek	Restore revegetate emergent wetland with native hydroseed mix: 0.009 acres Construct 2816 LF of unlined drainage ditches to mitigate for loss of 2685 LF Restore waters of the state to pre project conditions Construct bio filtration swale to mitigate for 3.6 acres of new impervious area	Create seasonal wetlands to compensate for loss of 0.1584 acres: 0.475 acres total
USACE NWP	Seasonal wetlands, jurisdictional wetlands, other waters of the US, drainage channels (OHWM to OHWM)	Onsite restoration of disturbed drainage channel area (OHWM to OHWM), jurisdictional wetlands, waters of the US	Restore, revegetate temporarily impacted seasonal wetlands: 0.01 acres	Create seasonal wetlands to compensate for loss of 0.1584 acres: 0.475 acres total
USFWS BO	CRLF habitat (drainage channels, riparian zones, other upland areas)	Onsite restoration of temporarily disturbed areas, as well as reseeding bare ground with native grasses and shrubs and replanting native species where disturbance includes the removal of trees and woody shrubs	Restore, revegetate temporarily impacted CRLF upland habitat: 1.54 acres	CRLF habitat mitigation: 3.71 acres

Table ES-3 Onsite Restoration and Offsite Mitigation Fulfillment

Impacted Resource	Temporary Impacts (acres)^a	Permanent Impacts (acres)	Minimum Offsite Mitigation Area Required (acres)	Proposed Offsite Mitigation Area (acres)
Jurisdictional wetland	0.009	0.1580	0.4740 (3:1)	-
Other OWUS and State	-	0.0004	0.0012 (3:1)	-
<i>Aquatic Resource Subtotal</i>		<i>0.1584</i>	<i>0.4752</i>	<i>0.90</i>
CRLF habitat	1.540	3.7100	3.7100 (1:1)	3.85
Total	1.549	3.8684	4.1852	4.75

^a temporary impacts will be restored onsite at a 1:1 ratio

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List of Abbreviations

BSA	Biological Study Area
Caltrans	California Department of Transportation
CRLF	California red-legged frog
MMP	Mitigation and Monitoring Plan
PM	post mile
Project	State Route 116/121 Intersection Improvement Project
ROW	right-of-way
RWQCB	San Francisco Bay Regional Water Quality Control Board
SR	State Route
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WOUS	Waters of the U.S.
WQC	Clean Water Act Section 401 Water Quality Certification

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Chapter 1. Introduction

This Mitigation and Monitoring Plan (MMP) outlines the strategy that the California Department of Transportation (Caltrans) will use to implement the required onsite and offsite restoration and mitigation for impacts associated with the State Route (SR) 116/121 Intersection Improvement Project (Project). It provides a discussion of agency requirements, information on the existing habitat that will be impacted during construction, mitigation design and schedule, success criteria, maintenance and monitoring methods, reporting requirements, and proposed contingency measures.

1.1. Project Description

The Project includes construction of a hybrid multi-lane roundabout with 180 degrees of the circulatory roadway having two lanes, a full right-turn bypass lane in the northbound direction, and a partial right-turn bypass lane (yield control at the exit) in the eastbound direction. The Project extends approximately 1,120 feet on SR 116/Arnold Drive (north of the intersection), approximately 1,940 feet on SR 121/Fremont Drive (east of the intersection), approximately 800 feet on SR 121/Arnold Drive (south of the intersection), and approximately 375 feet on Bonneau Road (west of the intersection).

The purpose of this Project is to improve operations for all modes of transportation at a high volume, four-way stop where SR 116 and SR 121 intersect, consequently reducing congestion and the occurrence of accidents for all modes of transportation, while maintaining and enhancing where possible access to adjacent properties and parking for public transit and carpool users.

1.1.1. Construction Activities

Pedestrian and Bicycle Facilities

A shared-use 10-foot-wide path for pedestrians and bicyclists would be constructed to surround the roundabout at each roadway crossing. No bicycle lanes are proposed on Bonneau Road because the roadway terminates at a dead end approximately 1 mile east of the intersection.

A 5-foot-wide strip separating the sidewalk from the roundabout traffic lanes would be constructed along all four legs of the intersection to provide a division between the traffic lanes and bicyclists and the shared-use path.

Park-and-Ride Lot

The existing Park-and-Ride lot, located in the southeast quadrant of the intersection, would be relocated to the northeast quadrant of the roundabout, which would require right-of-way (ROW) acquisition in this area. Traffic ingress and egress to the Park-and-Ride lot would be provided off of SR 116/Arnold Drive and SR 121/Fremont Drive and would be set back from the highway and shared-use path from the proposed roundabout to accommodate traffic flow.

Landscaping, Drainage and Access

Existing landscape, drainage systems, and access would be redesigned to support the roundabout. Utility relocations would be required for utility poles and underground storm drain facilities; no other underground utilities have been identified. A total area of

approximately 100 square feet would be excavated for utility pole relocation, and the depth of these excavations would range from about 5 to 13 feet below grade. Of the 100 square feet, about 20 square feet would be excavated for light poles. Utility boxes would also be required at each curb return. They would be a maximum of 3-feet-deep. New and extended storm drains would tie into the existing storm drain system, and the depth of these excavations would generally be at the same depth as existing storm drain facilities. The Project has been designed to avoid impacts to Yellow Creek Bridge, a concrete bridge supporting SR 121/Arnold Drive over Yellow Creek.

Construction Activities

Staging Location. The anticipated construction staging areas available include areas within the existing roadway ROW construction limits, primarily inside the Park-and-Ride lot. It is anticipated that no staging areas outside of the existing roadway right-of-way and Park-and-Ride lot would be required.

Construction Equipment. Equipment, including but not limited to an auger drill rig, backhoe, compactor, concrete pump, crane, dozer, excavator, front end loader, grader, heavy duty dump truck, jackhammer, vibratory roller, and pavement breaker, could be used during construction.

Chapter 2. Environmental Setting

2.1. Project Location

The Project is located in Sonoma County at the intersection of Arnold Drive/Bonneau Road/SR 116/SR 121 (SR 116 Post Miles [PM] 46.5 to 46.8 and SR 121 PMs 6.5 to 7.0). Within the limits of the proposed Project, SR 116 and SR 121 are conventional two-lane highways with 10- to 12-foot-wide lanes and 0- to 8-foot-wide shoulders. Bonneau Road is a two-lane county road with 10-foot-wide lanes and no shoulders. The Project location map is provided in Figure 1.

The Project site lies within the Sonoma Creek watershed, which covers approximately 170 square miles and includes all of Sonoma Valley. Sonoma Valley is bound by the Mayacamas Mountains to the east, Sonoma Mountains to the west, San Pablo Bay and associated wetlands to the south, and the City of Santa Rosa to the north. Immediately surrounding the Project site, uncultivated fields with grazing, vineyards, and a winery tasting room are located to the north. To the west, south, and east, there is a mix of low-density commercial and retail businesses, residences, and vineyards.

The Project area and surrounding region contain numerous watercourses. The majority of runoff in the Project vicinity is collected and conveyed along the shoulders and under SR 121, SR 116, and Bonneau Road through various drainage ditches, underdrains, pipes, and culverts. The general drainage pattern west and south of the Project is to convey flow into Yellow Creek, which then flows into Sonoma Creek approximately 1.19 miles southeast of the Project area, and ultimately to San Pablo Bay.

2.2. Existing Biological Resources

The biological study area (BSA) is the area in which biological surveys, as discussed in the *Revised Natural Environment Study* prepared for the Project, have been conducted (Figure 2). For this Project, the BSA consists of approximately 44.6 acres. The BSA comprises of Caltrans' ROW and adjacent commercial and private properties, including a portion of a private parcel northeast of the SR 116/121 intersection, which has since been acquired by Caltrans.

There are seven vegetation communities within the BSA: urban, landscaped, vineyard, grassland, eucalyptus, wetland, and riverine. Although there are oak trees lining the roads in the BSA, California Wildlife Habitat Relationships System habitat characteristics for oak woodlands (e.g., canopy and shrub structure) are not present.

The urban habitat is almost completely paved. A roughly triangular Park-and-Ride lot with approximately 35 parking spaces lies to the southeast of the SR 116/121 intersection. To the southwest, a gas station, a delicatessen, and a couple of residences sit atop pavement or compacted dirt.

Landscaped areas include roadsides and planted strips in front of the businesses to the southwest of the intersection. Landscaped environments are generally unlikely to provide suitable habitat for special-status plants due to disturbed soil conditions, use of pesticides, hardscape development, and the predominance of exotic landscape species



Figure 1: Project Location

that out-compete native vegetation for resources.

Vineyards are present in and adjacent to the BSA. During the surveys, no cover crops were observed between the rows. Plants on the ground beneath and between rows, if any, consisted of non-native annual grasses. Special-status plant species are unlikely to occur in the vineyards due to intensive management practices and proximity to active roadways and other urban habitat.

Two areas of grassland habitat are present within the BSA: one as part of a larger field to the northeast of the intersection, and one adjacent to vineyards to the southwest of the intersection. Both areas were uncultivated during field surveys; cattle have been observed periodically grazing in the northeastern field. A mound associated with a septic system is present in the southwestern field.

Numerous eucalyptus trees grow within the BSA and, in some cases, are associated with small eucalyptus groves beyond the BSA. There were sparse non-native grasses and forbs. A few coast live oak (*Quercus agrifolia*) were present in some areas. Pampas grass (*Cortaderia* spp.) and English ivy (*Hedera helix*) were also observed.

The field southwest of the intersection contains a roughly horseshoe-shaped area associated with a septic system that was delineated as a wetland. The field is bounded by Yellow Creek to the west, a residential house to the north, SR 121 to the east, and vineyards to the south. This area primarily receives water through roadside runoff, and potential flood waters from Yellow Creek during high-rain events. Native and non-native vegetation were observed, including winged water starwort (*Callitriche marginata*), common spikerush (*Eleocharis palustris*), hyssop loosestrife (*Lythrum hyssopifolia*), and watercress (*Nasturtium officinale*). The field northeast of the intersection also contains several potential wetlands, some of which, connect to wetlands that run parallel and adjacent to SR 121.

It was determined that 123 linear feet of Yellow Creek within the BSA meet the criteria for other waters of the U.S. (WOUS). Riverine habitat was also identified through a small roadside channel situated along the north side of Bonneau Road, which flows west to east and is a tributary to Yellow Creek. Although this drainage feature may have been installed to function initially as a roadside ditch, erosion has caused it to widen, and a distinct bed, bank, and channel has formed. The tributary was delineated as 694 linear feet of other WOUS within the BSA. Yellow Creek and the roadside channel are both outside of the Project footprint. The WOUS in the BSA receive water throughout the year from agricultural runoff, as well as from rain events. Figure 2, delineated aquatic resources map, provides a map of the wetlands and waters within the BSA.

USFWS-designated critical habitats for California red-legged frog (*Rana draytonii*) (CRLF) critical habitat are outside of the BSA. The nearest occurrences are at least 2 miles from the Project site.

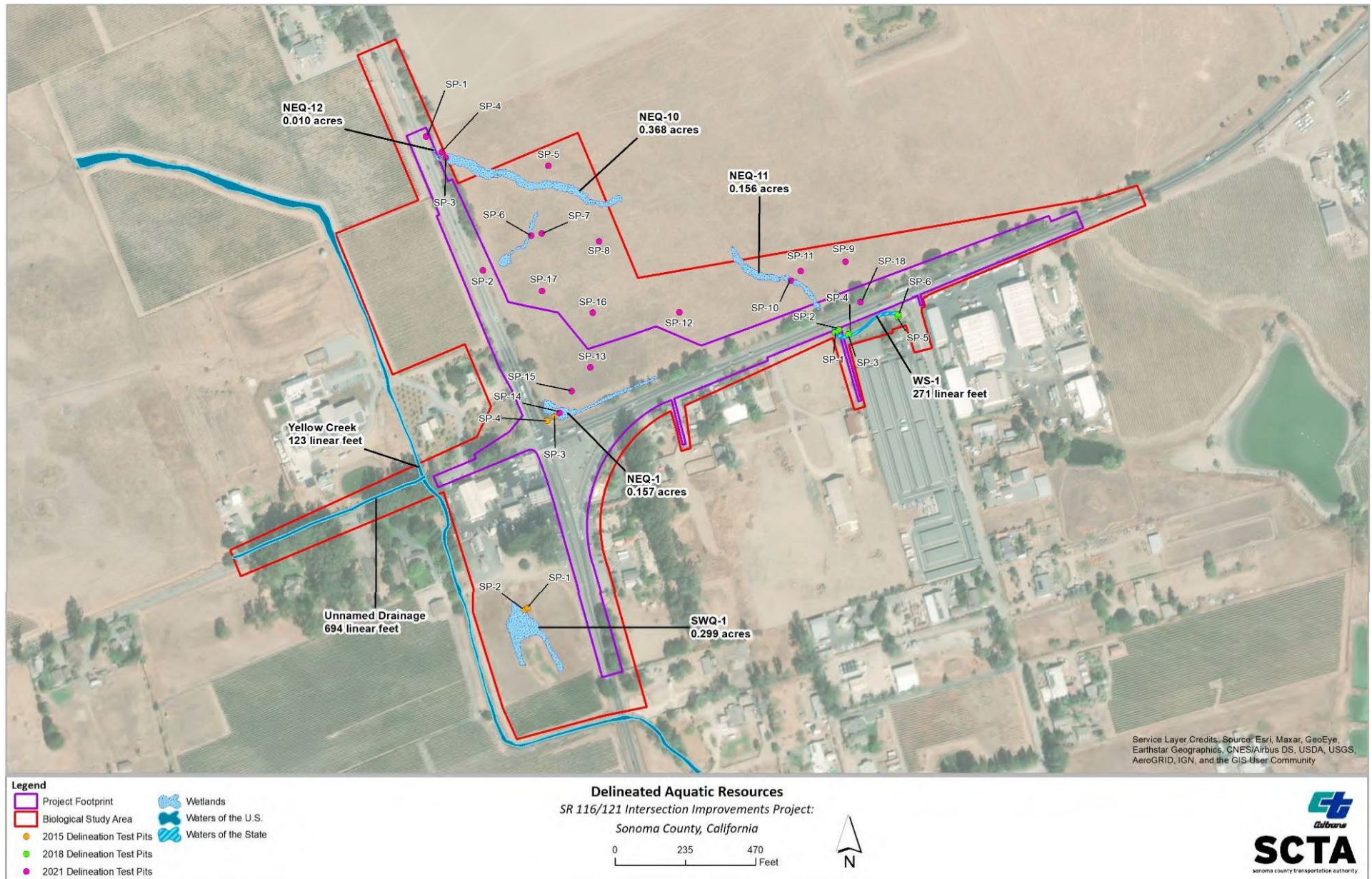


Figure 2: Delineated Aquatic Resources

Mitigation and Monitoring Plan

State Route 116/121 Intersection Improvement Project

Chapter 3. Restoration and Mitigation for Project Impacts

The proposed Project will result in temporary and permanent impacts to CRLF habitat, WOUS (i.e., jurisdictional wetlands), and other WOUS and State. The purpose of the proposed onsite restoration and mitigation is to compensate for temporary and permanent impacts of these resources resulting from the Project. The remaining permanent impacts will be mitigated offsite at the Mulas Ranch (Appendix C). The goal of this MMP is to restore and enhance wetland, other WOUS and State and CRLF habitat within the Caltrans right of way and at the offsite mitigation site.

3.1. Restoration and Mitigation Requirements

This MMP is intended to comply with the requirements of the USFWS BO, WQC 401 and the USACE Nationwide permit.

3.2. Impact Areas

The proposed Project impacts to jurisdictional wetlands, and other WOUS and State as shown in Figure 3. The impacts to all jurisdictional wetlands, other WOUS and State, and CRLF are listed below:

- 0.009 acre of temporary impacts to jurisdictional wetlands
- 0.158 acre of permanent impacts to jurisdictional wetlands
- 0.0004 acre (9 linear feet) of permanent impacts to other WOUS and State
- 1.54 acre of temporary impacts to CRLF upland habitat
- 3.71 acre of permanent impacts to CRLF upland habitat

The Project will also permanently impact 2,658 linear feet of roadside ditches that will be reconstructed within the project totaling 2816 linear feet. The locations of the impacted roadside ditches are shown in Appendix A. Table 1 demonstrates how Caltrans will meet or exceed their restoration and mitigation requirements for temporary and permanent impacts due to the Project.

Table 1. Onsite Restoration and Offsite Mitigation Fulfillment

Impacted Resource	Temporary Impacts (acres) ^a	Permanent Impacts (acres)	Minimum Offsite Mitigation Area Required (acres)	Proposed Offsite Mitigation Area (acres)
Jurisdictional wetland	0.009	0.1580	0.4740 (3:1)	-
Other OWUS and State	-	0.0004	0.0012 (3:1)	-
Aquatic Resource Subtotal		0.1584	0.4752	0.90
CRLF habitat	1.540	3.7100	3.7100 (1:1)	3.85
Total	1.549	3.8684	4.1852	4.75

^a temporary impacts will be restored onsite at a 1:1 ratio

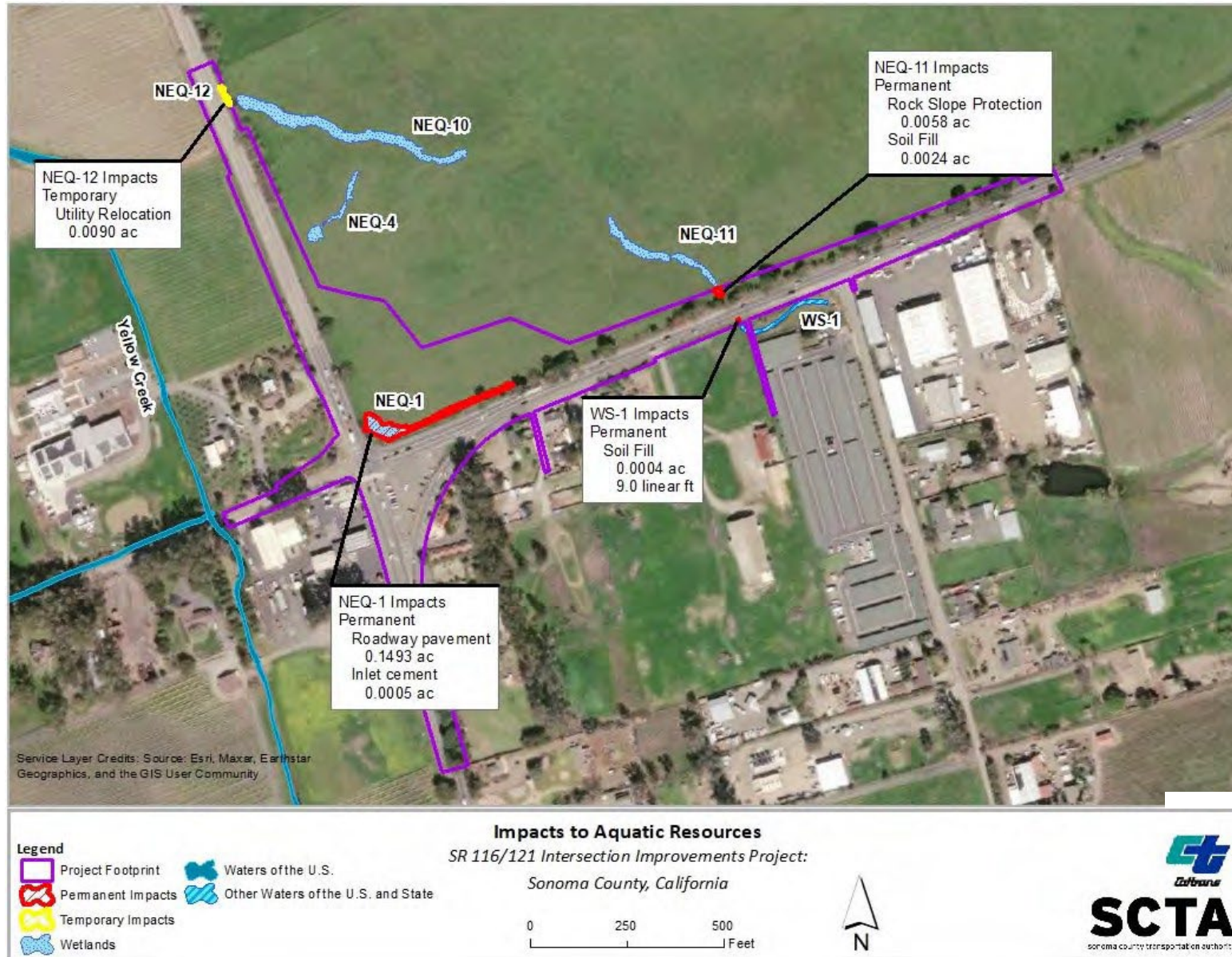


Figure 3. Impacts to Aquatic Resources

Chapter 4. Onsite Restoration Design

Onsite restoration for temporary Project impacts to jurisdictional wetlands will be accomplished with a wetland seed mix. Onsite restoration for impacts to roadside ditches will be accomplished through construction of 2,816 linear feet of new roadside ditches, installation of rolled erosion control product (RECP) blanket, and hydroseeding with a native seed mix. Onsite restoration will be accomplished through hydroseeding with a native seed mix. Other activities, such as noxious/invasive plant species control and selective vegetation management, will be implemented to restore the Project area to pre-construction conditions. These activities will also restore CRLF habitat.

4.1. Location and Size of Onsite Restoration Site

The onsite mitigation site is approximately 0.5 acre and 0.009 acre (392 square feet) will be revegetated with a wetland seed mix and 2,816 linear feet of constructed roadside ditches will be revegetated via hydroseeding with a native seed mix. 0.49 acre of RECP blanket will also be installed for the roadside ditches (Tables 1-3 and Figures 4-5).

4.2. Ownership Status

The onsite restoration site is located within Caltrans' ROW. There are no conflicts with access to the Project area.

4.3. Onsite Restoration of Temporarily Impacted Areas

Following the completion of the Project, the jurisdictional wetland will be restored with a wetland seed mix (Table 3), and the roadside ditches and other construction-related disturbed or bare soil areas will be restored through hydroseeding with two types of native seed mixes (Tables 2 and 4). RECP blanket will also be installed in the roadside ditches to reduce erosion concerns. Noxious/ invasive plant species will be controlled. Temporarily impacted areas will either be scheduled for end of construction.

Restoration activities will begin as described in Chapter 5. It is also anticipated restoration will be enhanced through the natural recruitment of native species, such as wetland plants, grasses, and forbs. Maintenance activities, such as weeding, will reduce competition from noxious/invasive plant species and encourage native species recruitment.

Table 2. Seed Mix (Native Seed Mix)

Plant Species	Pounds per acre
<i>Bromus carinatus</i> California brome	4.0
<i>Deschampsia elongate</i> Slender hairgrass	0.5
<i>Stipa cernua</i> Nodding needlegrass	2.0
<i>Vulpia microstachys</i> Small fescue	4.0
<i>Achillea millefolium</i> Common yarrow	0.1
<i>Eschscholzia californica</i> California poppy	2.0
<i>Linum lewisii</i> Lewis flax	2.0

Table 3. Seed Mix (Wetland)

Plant Species	Pounds per acre
<i>Bromus carinatus</i> California brome	10.0
<i>Hordeum californicum</i> California meadow barley	7.5
<i>Juncus effusus</i> Bog rush	4.0
<i>Elymus triticoides</i> Beardless wild rye	5.0
<i>Carex barbarae</i> Valley sedge	2.0
<i>Danthonia californica</i> California oatgrass	7.0
<i>Stipa pulchra</i> Purple needlegrass	7.0
<i>Carex aurea</i> Golden sedge	6.5
<i>Deschampsia elongate</i> Slender hairgrass	6.0
<i>Hordeum brachyantherum</i> California barley	6.0
<i>Juncus effusus</i> Common rush	4.0

Table 4. Seed Mix (Native Seed Mix)

Plant Species	Pounds per acre
<i>Bromus carinatus</i> California brome	7.50
<i>Festuca idahoensis</i> Idaho fescue	1.50
<i>Hordeum brachyantherum</i> California barley	3.30
<i>Melica californica</i> California melicgrass	1.25
<i>Stipa pulchra</i> Purple needlegrass	2.20
<i>Vulpia microstachys</i> Small fescue	1.50
<i>Achillea millefolium</i> Common yarrow	0.05
<i>Eschscholzia californica</i> California poppy	0.50
<i>Lasthenia californica</i> Dwarf goldenfields	0.05
<i>Linum lewisii</i> Lewis flax	1.00
<i>Lupinus nanus</i> Sky lupine	4.00
<i>Lupinus succulentus</i> Arroyo lupine	5.00

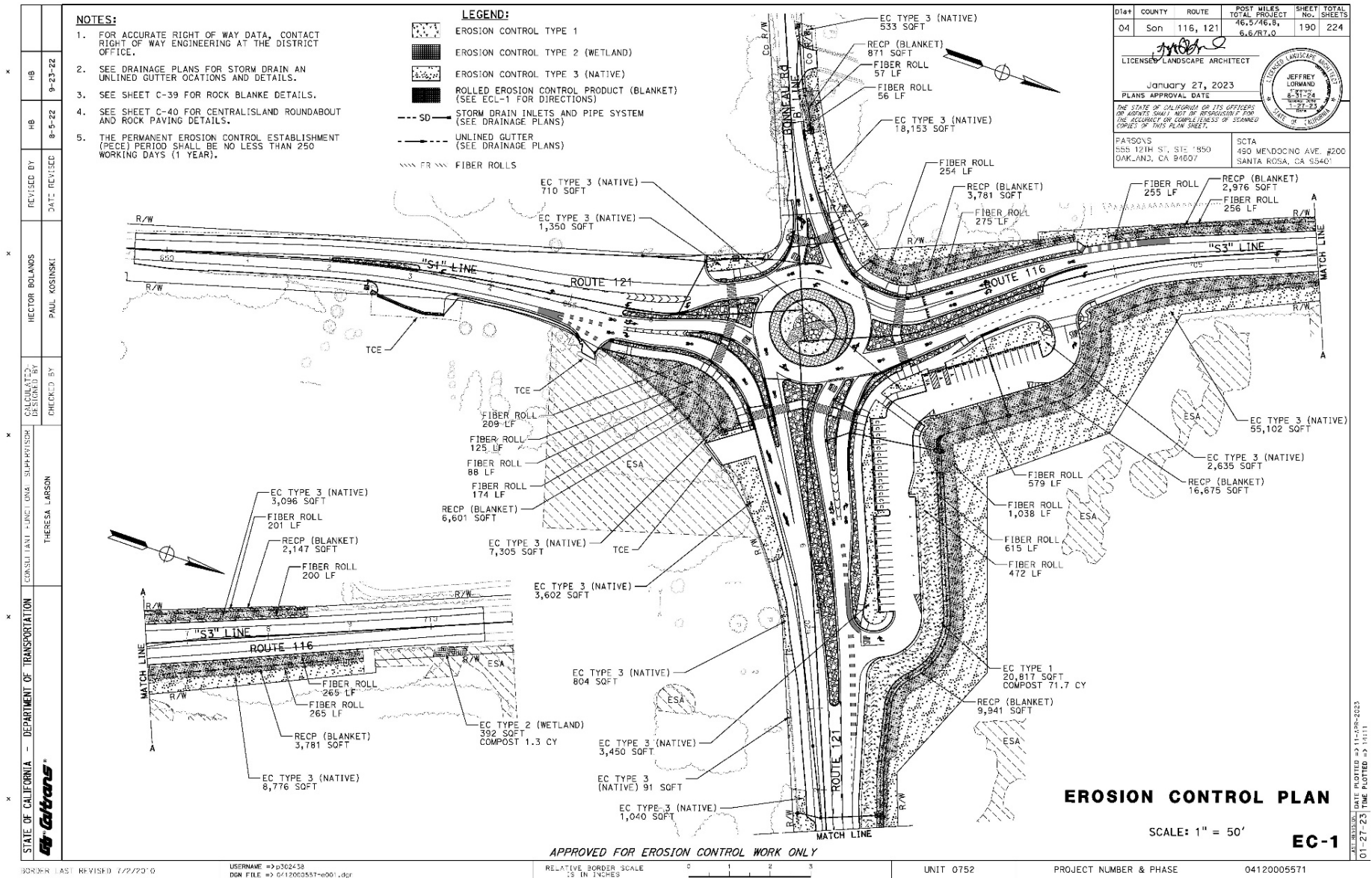


Figure 4. Hydroseeding Areas Map 1

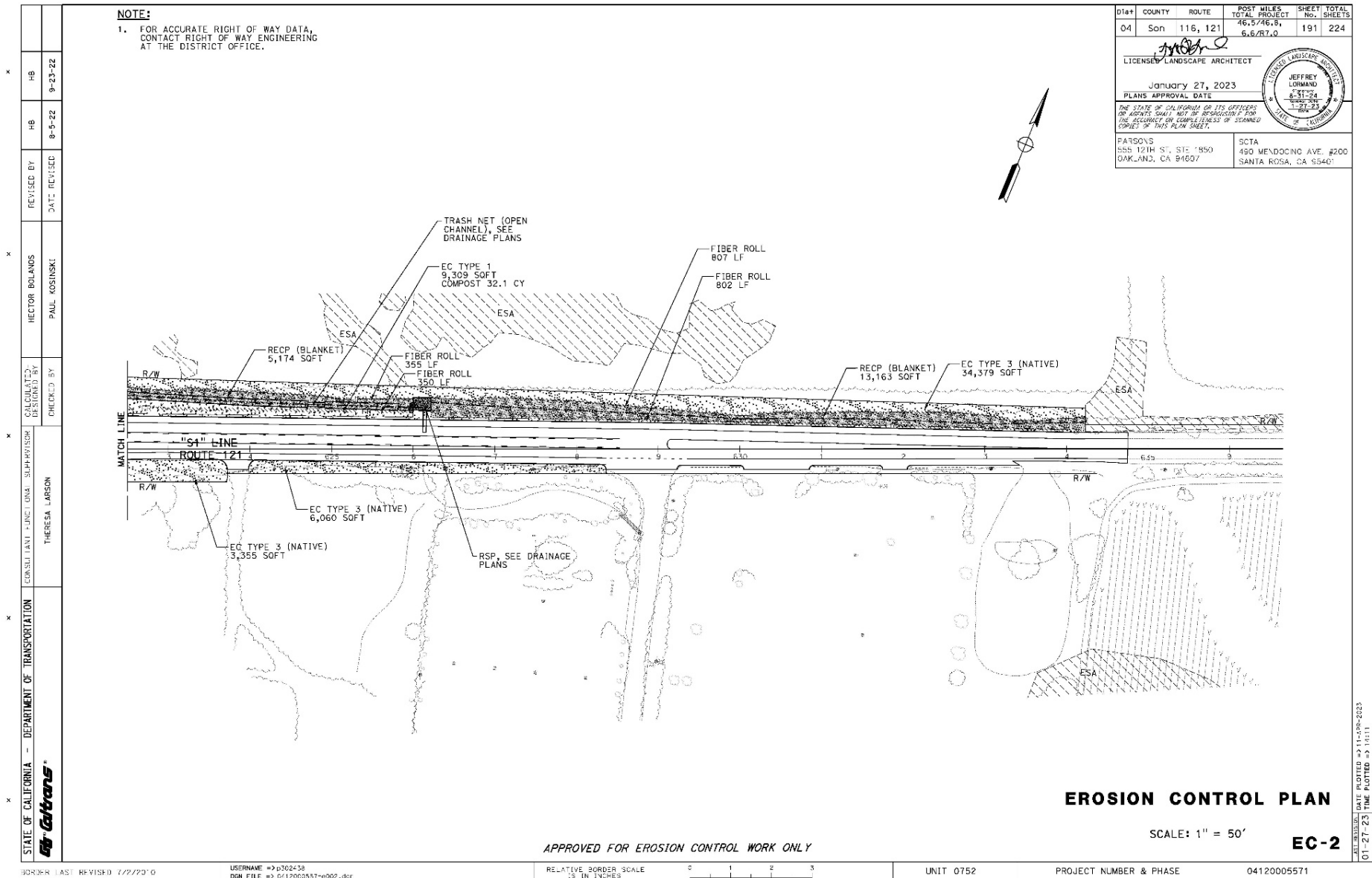


Figure 5. Hydroseeding Areas Map 2

*Mitigation and Monitoring Plan
State Route 116/121 Intersection Improvement Project*

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Chapter 5. Onsite Restoration Implementation Strategy and Schedule

5.1. Schedule

Erosion control measures will be implemented for the Project. Seed Mix 2 and Erosion Control Type 2 will be used for the jurisdictional wetland. Seed Mix 1 and 3, Erosion Control Type 1 and 3, and RECP blanket will be used for the roadside ditches.

Hydroseeding is scheduled for end of construction.

Noxious/invasive plant species control will typically occur in early fall and again in early spring in the jurisdictional wetland and roadside ditches. Details regarding noxious/invasive plant control locations, methods and percent cover success criteria are discussed in Section 5.3.

5.2. Natural Recruitment of Native Plants

Plant establishment crews will be trained to recognize native plant species that may naturally recruit at the site and avoid inadvertent removal of these plants during invasive plant control efforts. Through invasive plant species control, native species (e.g., wetland plants, grasses, and forbs) recruitment will be encouraged.

5.3. Noxious/Invasive Plant Control

Twenty-six (26) noxious/invasive plant species (Table 5) identified as either California Food and Drug Administration noxious weeds or California Invasive Plant Council (Cal-IPC) invasive non-native plants, will be targeted for removal at the site. Noxious/invasive plants should be controlled in relation to how common they are in the surrounding areas. The noxious/invasive plant cover will be no more than 35% of the total vegetative cover at the jurisdictional wetland and roadside ditches as compared to surrounding habitat.

Noxious/invasive plant species will be controlled within the restored areas and, where appropriate, implemented by two practices 1) hand pulling (physical), and/or 2) mowing (mechanical). Solarization (e.g., placing tarps over patches of noxious/ invasive plants) may also be implemented, if deemed practical.

Table 5. Noxious/Invasive Plant Species List

Botanical Name	Common Name	Cal-IPC Rating
<i>Avena barbata</i>	Slender oats	Moderate
<i>Avena fatua</i>	Common wild oats	Moderate
<i>Brassica nigra</i>	Black mustard	Moderate
<i>Brassica</i> sp.	Mustard	Limited to High
<i>Bromus hordeaceus</i>	Soft chess	Limited
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate
<i>Carpobrotus edulis</i>	Iceplant	High
<i>Conium maculatum</i>	Poison hemlock	Moderate
<i>Cortaderia jubata</i>	Pampas grass	High
<i>Cotoneaster</i> ssp.	Cotoneaster	Moderate
<i>Cynodon dactylon</i>	Bermudagrass	Moderate
<i>Dipsacus fullonum</i>	Fuller's teasel	Moderate
<i>Eucalyptus globulus</i>	Blue gum	Limited
<i>Eucalyptus</i> ssp.	Eucalyptus	Watch to Limited
<i>Foeniculum vulgare</i>	Sweet fennel	Moderate
<i>Geranium dissectum</i>	Cutleaf geranium	Limited
<i>Helminthotheca echioides</i>	Akan asante	Limited
<i>Hirschfeldia incana</i>	Summer mustard	Moderate
<i>Lythum hyssopifolia</i>	Hyssop loosestrife	Moderate
<i>Plantago lanceolata</i>	English plantain	Limited
<i>Raphanus sativus</i>	Wild radish	Limited
<i>Rubus armeniacus</i>	Himalayan blackberry	High
<i>Rumex crispus</i>	Curly dock	Limited
<i>Senecio</i> sp.	Ragwort	Watch to Moderate
<i>Silybum marianum</i>	Milk thistle	Limited
<i>Trifolium hirtum</i>	Rose clover	Limited

5.4. Irrigation

The hydroseeding is planned for after construction so the seeds can be propagated during the rainy season. Watering will also occur during maintenance activities and will cease when the success criteria has been met. Permanent irrigation is not proposed for this Project.

Chapter 6. Offsite Mitigation Design

The Project proposes to mitigate for the 0.1584 acre of jurisdictional wetlands and other WOUS and State permanent impacts at a 3:1 mitigation ratio (0.475 acre) and the 3.710 acres of CRLF habitat at a 1:1 mitigation ratio (3.710 acres). This is summarized in Table 6.

Table 6. Offsite Mitigation Requirements for Project Permanent Impacts

Impacted Resource	Permanent Impacts (acres)	Mitigation Ratio	Minimum Mitigation Area Required (acres)
Jurisdictional wetland	0.1580	3:1	0.4740
Other OWUS and State	0.0004	3:1	0.0012
<i>Aquatic Resource Subtotal</i>	<i>0.1584</i>	<i>-</i>	<i>0.4750</i>
CRLF habitat	3.7100	1:1	3.7100
Total	3.8684	-	4.185

Due to the restricted space within Caltrans' ROW, the Project will mitigate for these impacts at an offsite location in Sonoma County, as described below.

6.1. Proposed Offsite Mitigation Location

The proposed mitigation site, known as Mulas Ranch, is located 3 miles south of the City of Sonoma and 1.53 miles from the Project area (see Figure 6). The portion of the ranch where the mitigation would be implemented is within the Sonoma Creek watershed and is situated near the inland edge of the Sonoma and Schell Creek Baylands historical marshes. The ranch has historically been used for cattle grazing. Details of the site and mitigation proposal can be seen Figure 7 and in the Long Term Management Plan provide by Mulas Ranch in coordination with LSA (Appendix C).

6.2. Proposed Wetland Creation

Figure 7 shows the conceptual mitigation at the north end. Three ponds would be created for a total of 0.9 acre, which would exceed the 0.475 acre of required wetlands creation. The field where the wetlands would be created currently has very small, hummocky wetlands interspersed with non-native grasslands. Some larger low-quality wetlands exist on the property, but these would be incorporated in the design, avoided, or enhanced. The created wetlands and surrounding area, which will also be created as part of the Project's dispersal habitat impacts, will provide protected dispersal habitat for CRLF.



Figure 6. Mulas Ranch Location in Relation to Project

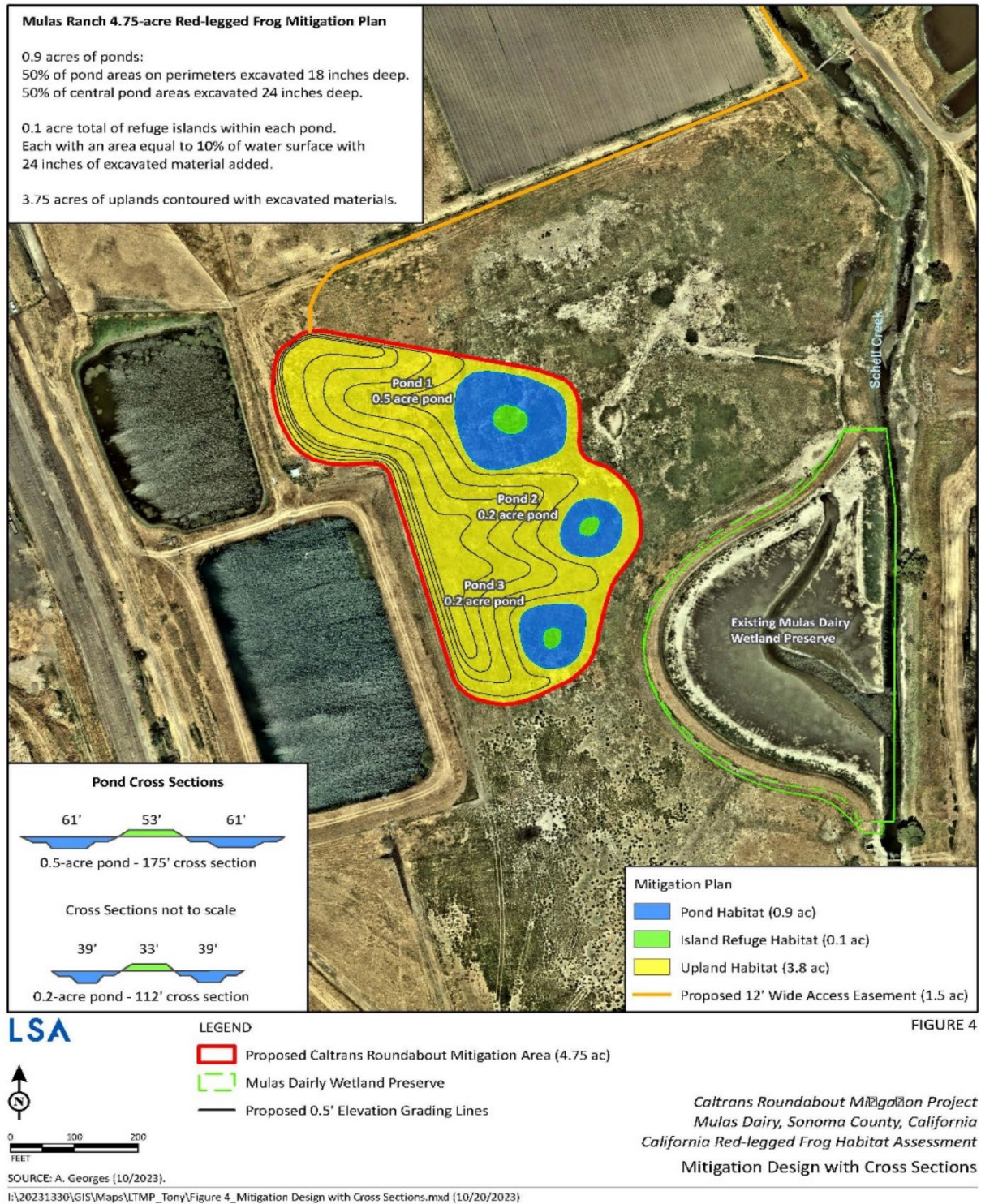


Figure 7. Proposed Offsite Mitigation

6.3. Ownership Status

The offsite mitigation site is owned by private landowners. There are no conflicts with access to the Mulas Ranch area.

Caltrans is responsible for fulfilling monitoring requirements and is committed to conducting annual monitoring of all wetland and dispersal habitat creation areas for a duration of 5 years to satisfy Agency mitigation success requirements. Contingency funding, as well as an endowment for the proposed mitigation site, will be provided if required. A conservation easement will be required to protect the offsite mitigation area in perpetuity and the conservation easement will need to be recorded immediately before the mitigation is constructed. Details of the responsible parties, conservation easement, and endowment are described in the Long Term Management Plan (Appendix C).

Chapter 7. Offsite Implementation Strategy and Schedule

7.1. Long Term Management

An Easement Holder and a Land Manager would be required to ensure the long-term viability of the created preserve in perpetuity. A Long-Term Management Plan would be required, as well as an endowment funded by Caltrans, to ensure long-term management of the preserve. The plan would include annual monitoring for the success of the wetlands, minor maintenance tasks, and repair of a protective fence on the perimeter of the 4.25-acre site as needed. Monitoring, maintenance and reporting would occur for a period of 5 years to satisfy Agency mitigation requirements. Monitoring maintenance and reporting would continue in perpetuity to satisfy agency Long term management conditions.

The Long Term Management Plan will also include language that allows for conversion of the mitigation ponds to tidal wetlands as a response to future climate change challenges.

The monitoring requirements, responsible parties, conservation easement, and endowment and described in detail in the Long Term Management Plan (Appendix C)

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Chapter 8. Success Criteria, Monitoring period, and Monitoring Measures

Caltrans is committed to achieving the restoration of all temporary impacts, including the jurisdictional wetland and roadside ditches, to pre-construction conditions. Caltrans will assess and monitor the plants at the jurisdictional wetland for a period of 5 years to achieve 70% native plant cover or similar to the surrounding area. It is anticipated that natural recruitment of native species, such as wetland plants, native grasses, and forbs, will be encouraged as a result from routine maintenance activities such as removing noxious/invasive plant species. Natural recruitment will increase plant diversity at the site.

If success criteria is projected to not be met, Caltrans will provide an analysis of why the hydroseeding have failed and suggest an appropriate solution and coordinate with the RWQCB to develop an adaptive management strategy, determine appropriate remedial actions, and assess whether the monitoring period should be modified (see Chapter 7 for more details).

It should be noted that natural catastrophes such as fire, flooding, drought/climate change, and landslides that are outside of the control of Caltrans and would otherwise impact existing native habitat, shall not be the responsibility of Caltrans. If a natural disaster does occur that prevents Caltrans from meeting any of the success criteria, Caltrans will arrange consultation with the RWQCB to discuss the specifics of the catastrophe (e.g., extend of damage, years of mitigation and monitoring already completed, etc.) and strategies (e.g., adaptive planting plans, etc.) to attain success criteria of a minimum of 70% native plant cover or similar, to the surrounding area by the end of 5 years from initial hydroseeding for the temporary impacts.

Table 7. Monitoring Requirements

Permit	Onsite	Offsite
RWQCB 401 WQC	3 years or until 70% native	5 years or until 70% native Wetland delineations at Year 3 and Year 5 or final monitoring year
USACE NWP	5 years	5 years
USFWS BO	5 years	5 years

8.1. Plant Establishment Maintenance Activities

The jurisdictional wetland and roadside ditches will be watered, weeded, and otherwise maintained quarterly in Year 1. The jurisdictional wetland will be further maintained quarterly in Years 2 through 5. Re-hydroseeding will be done (as described in Chapter 6) as needed with the same species unless Caltrans concludes that another species stands a better chance of establishing. It is also anticipated that natural recruitment of native species, such as wetland plants, grasses, and forbs, will be encouraged through

routine maintenance activities such as the removal of noxious/invasive plant species.

Noxious/invasive plant species will be controlled throughout the site to limit noxious/invasive plant species to a maximum of 35% total vegetative cover to the extent feasible.

8.1.1. Monitoring Methods

Caltrans shall monitor the jurisdictional wetland for a minimum of 5 years or until attainment of performance standards. Caltrans will monitor the success of the jurisdictional wetland through photo documentation and qualitative and quantitative measurements collected during bi-annual site visits in Years 1 to 5.

8.1.2. Photo Documentation

Prior to the start of construction, Caltrans shall establish as many fixed photo-documentation points as necessary to comprehensively document Project-related temporary impacts to the jurisdictional wetland and roadside ditches. The points shall be used to track the Project's construction impacts, the pre- and post-construction condition at each site, revegetation success, and overall Project success. Caltrans shall prepare a site map with the photo-documentation points clearly marked. Prior to and following construction, Caltrans shall photographically document the immediate pre- and post-Project condition at locations where the temporary impacts would occur. The photographs shall include captions with respect to the photograph's point of view, photo-documentation point location, and date photographed. These post-construction photographs and map shall be submitted, along with the as-built and construction completion reports. A table with photo documentation locations will be provided after the first monitoring visit.

8.1.3. Qualitative Measures

The jurisdictional wetland and roadside ditches at the Project site shall be assessed by tracking the cover by vegetation of disturbed surfaces.

8.1.4. Quantitative Measures

Through maintenance activities and supplemental watering, Caltrans assumes a minimum of 70% native plant cover or similar, to the surrounding areas for the jurisdictional wetland after 3 years and the roadside ditches after 1 year. Sampling will be conducted by either point intercept or quadrat sampling.

8.2. Maintenance, Monitoring, and Reporting Schedule

8.2.1. Maintenance Schedule

Following the prescribed monitoring site visits, Caltrans will assess if there are any problems with the jurisdictional wetland during the 3-year monitoring period and the roadside ditches during the 1-year monitoring period.

8.2.2. Monitoring Schedule

Caltrans will conduct bi-annual site assessments during the 3 years after the initial hydroseeding. Surveys will be done bi-annually to assess (qualitative and quantitative) plant establishment and native plant cover at the jurisdictional wetland for 3 years and the roadside ditches for 1 year.

8.2.3. Reporting Schedule

Monitoring results for the jurisdictional wetland will be documented in annual monitoring reports (Years 1 to 5) after the initial hydroseeding. Monitoring results for the roadside ditches will be documented in bi-annual monitoring reports at 6 months and 12 months (1 year) after the initial hydroseeding. Reports will meet requirements that will be identified in the permits issued for the Project and will include at a minimum: photographs, discussion of percent cover, discussion of the year's environmental drivers (e.g., precipitation events, drought events), and a summary of cumulative monitoring results. The annual report to the agencies will be due no later than January 31st.

Caltrans will monitor the jurisdictional wetland and roadside ditches and prepare reports for submission to the agencies.

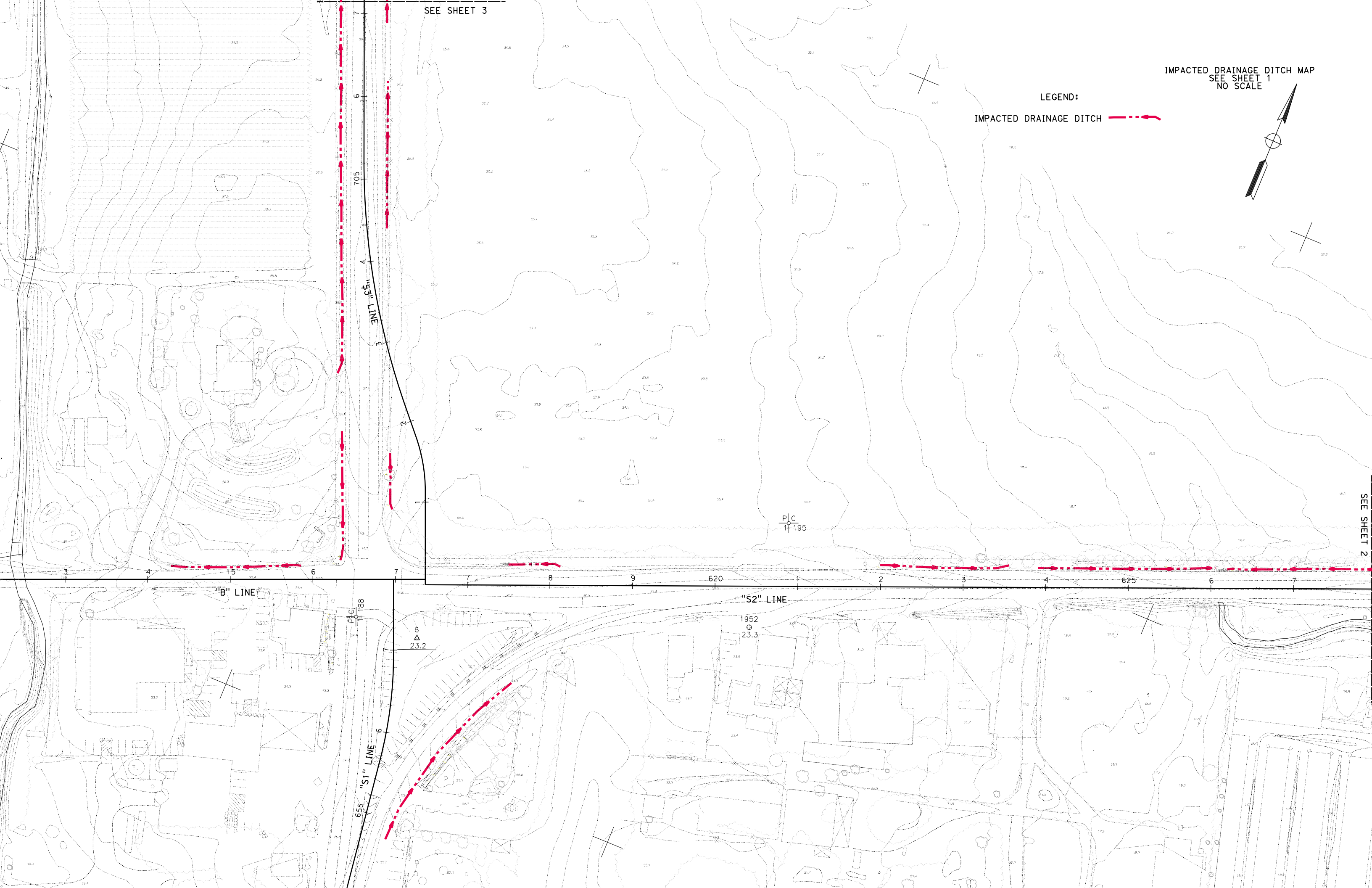
8.2.4. Completion of Restoration/Mitigation

Restoration activities will be considered complete after achieving a minimum of 70% native plant cover or similar to the surrounding areas at the end of Year 3 for the jurisdictional wetland and at the end of Year 1 for the roadside ditches. The Final Annual Reports will be submitted to the Agencies. Following receipt of the Final Reports, the agencies may request to inspect the site with a Caltrans representative to confirm that restoration requirements have been achieved. At this time, Caltrans anticipates that the Project will be considered a success and the agencies will "sign off" on their restoration requirements.

Although Caltrans will assess and monitor the site over the 5-year monitoring period (1 year for the roadside ditches) to ascertain if the site is achieving its success criteria goals, if the goals are not achieved at the end of the 5-year monitoring period (1 year for the roadside ditches), Caltrans will consult with the agencies to develop the best strategy to attain the success criteria goals.

Appendix A

Impacted Roadside Ditches Map

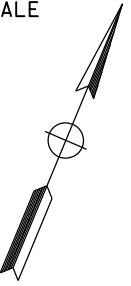


SEE SHEET 3

IMPACTED DRAINAGE DITCH MAP
SEE SHEET 1
NO SCALE

LEGEND:

IMPACTED DRAINAGE DITCH



SEE SHEET 2

705

"S3" LINE

"B" LINE

"S1" LINE

"S2" LINE

P/C
195

1952
23.3

6
23.2

620

2

3

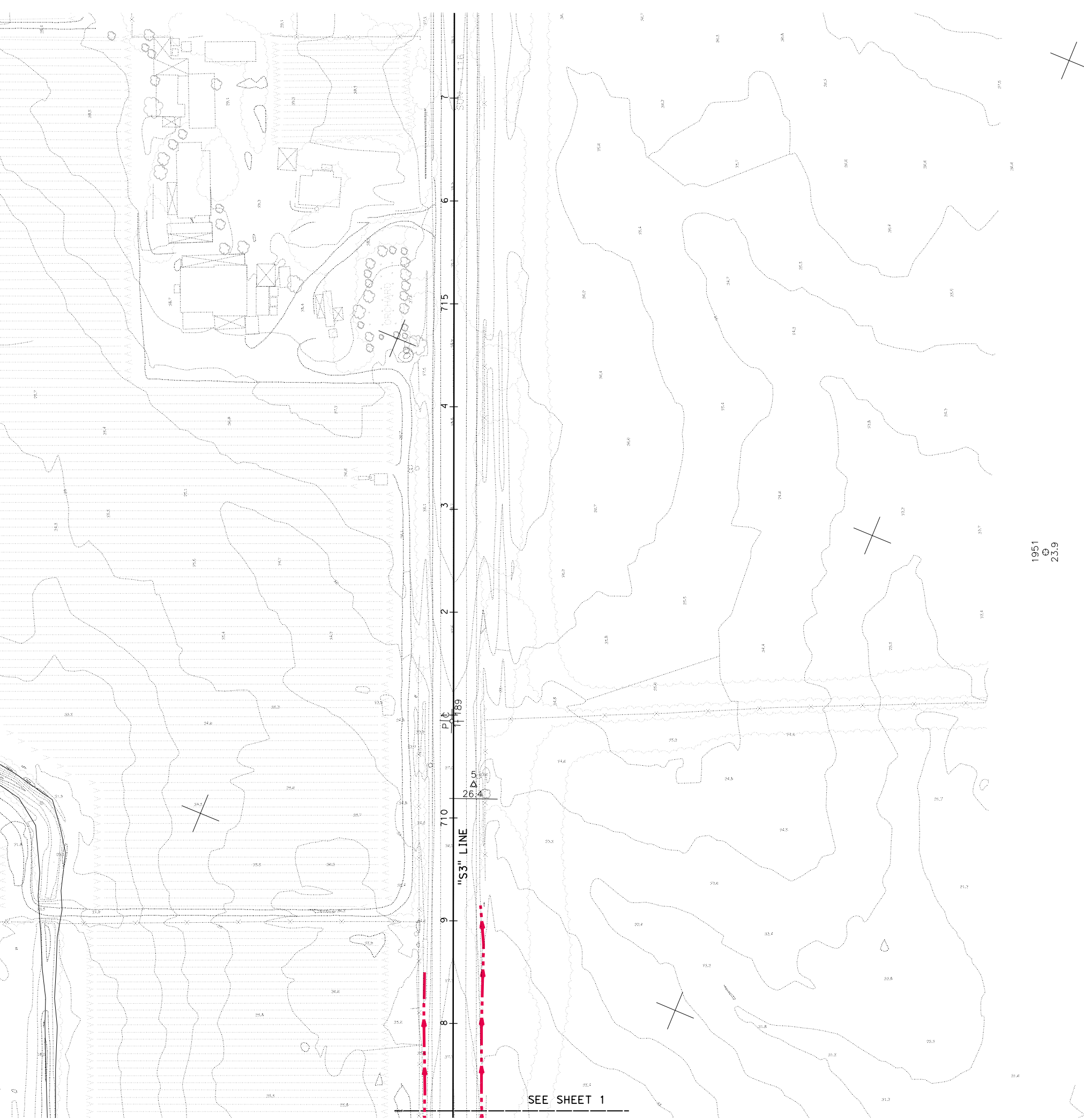
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625

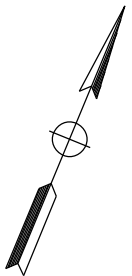
6

7





IMPACTED DRAINAGE DITCH MAP
SEE SHEET 3
NO SCALE



1951
⊙
23.9

⊙ x 6 429 500

1893
⊙
24.1

SEE SHEET 1

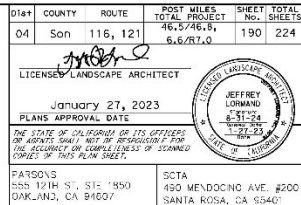
Appendix B

Erosion Control Plans

BORDER 1

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SEE DRAINAGE PLANS FOR STORM DRAIN AN UNLINED GUTTER OCATIONS AND DETAILS.
3. SEE SHEET C-39 FOR ROCK BLANKE DETAILS.
4. SEE SHEET C-40 FOR CENTRALISLAND ROUNDABOUT AND ROCK PAVING DETAILS.
5. THE PERMANENT EROSION CONTROL ESTABLISHMENT (PECE) PERIOD SHALL BE NO LESS THAN 250 WORKING DAYS (1 YEAR).

	EROSION CONTROL TYPE 1
	EROSION CONTROL TYPE 2 (WETLAND)
	EROSION CONTROL TYPE 3 (NATIVE)
	ROLLED EROSION CONTROL PRODUCT (BLANKET) (SEE EGL-1 FOR DIRECTIONS)
	STORM DRAIN INLETS AND PIPE SYSTEM (SEE DRAINAGE PLANS)
	UNLINED GUTTER (SEE DRAINAGE PLANS)
	FIBER ROLLS



EC-1

RELATIVE_BORDER_SCALE	0	1	2	3
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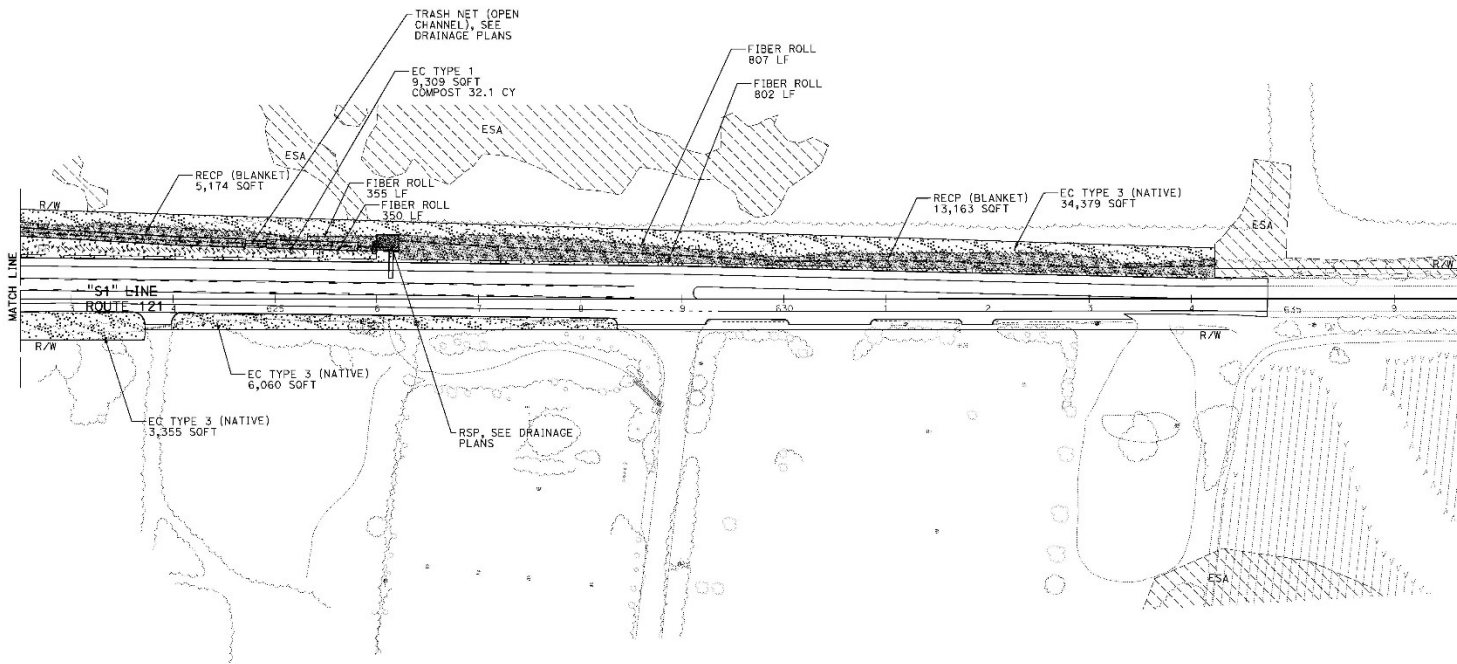
DATE PLOTTED => 11-15-2023
LAST REVISION
01 07 07

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT - FUNCTIONAL SUPPORT/DESIGN	DESIGNED BY	HECTOR BOLANDS	CHECKED BY	PAUL KOSINSKI	REVIEWED BY	HB	DATE	9-23-22
Caltrans	TERESA LARSON						HB	9-5-22	

NOTE:

- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES	TOTAL PROJECT	SHEET TOTAL
04	San	116, 121	46.5/46.5	6,6/67.0	191 224
LICENSED LANDSCAPE ARCHITECT JANUARY 27, 2023 PLANS APPROVAL DATE THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SEPARATE COPIES OF THIS PLAN SHEET. FATSOVS 2333 12TH ST, STE 1850 OAKLAND, CA 94607 SCA 490 MENDOCINO AVE, #200 SANTA ROSA, CA 95407					



EROSION CONTROL PLAN

SCALE: 1" = 50'

EC-2

APPROVED FOR EROSION CONTROL WORK ONLY

SEED MIX				
SEED	BOTANICAL NAME	COMMON NAME	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
MIX 1	BROMUS CARINATUS	CALIFORNIA BROME	85	4
	DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	75	0.5
	STIPA CERNUA	NODDING NEEDLEGRASS	75	2
	VULPIA MICROSTACHYS	SMALL FESCUE	90	4
	ACHILLEA FILIPENDULINA	FERNLEAF YARROW	85	0.1
	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	80	2
	LINUM LEWISII	LEWIS FLAX	80	2
MIX 2	BROMUS CARINATUS	CALIFORNIA BROME	85	10
	HORDEUM CALIFORNICUM	CALIFORNIA MEADOW BARLEY	80	7.5
	JUNCUS EFFUSUS	BOG RUSH	80	4
	ELYMUS TRITICOIDES	BEARDLESS WILD RYE	80	5
	CAREX BARBARAE	VALLEY SEDGE	80	2
	DANTHONIA CALIFORNICA	CALIFORNIA OATGRASS	75	7
	STIPA PULCHRA	PURPLE NEEDLEGRASS	75	7
	CAREX AUREA	GOLDEN SEDGE	75	6.5
	DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	75	6
	HORDEUM BRACHYANTHERUM	MEADOW BARLEY	75	6
	JUNCUS EFFUSUS	COMMON RUSH	75	4
	BROMUS CARINATUS	CALIFORNIA BROME	85	7.5
MIX 3	FESTUCA IDAHOENSIS	IDAHO FESCUE	85	1.5
	HORDEUM BRACHYANTHERUM	CALIFORNIA BARLEY	85	3.3
	MELICA CALIFORNICA	CALIFORNIA MELICGRASS	85	1.25
	STIPA PULCHRA	PURPLE NEEDLEGRASS	75	2.2
	VULPIA MICROSTACHYS	SMALL FESCUE	90	1.5
	ACHILLEA FILIPENDULINA	FERNLEAF YARROW	85	0.05
	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	80	0.5
	LASTHENIA CALIFORNICA	DWARF GOLDENFIELDS	85	0.05
	LINUM LEWISII	LEWIS FLAX	80	1
	LUPINUS NANUS	SKY LUPINE	85	4
	LUPINUS SUCCULENTUS	ARROYO LUPINE	85	5

EROSION CONTROL TYPE 1			
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE
STEP 1	COMPOST	COMPOST	TYPE 1
STEP 2	INCORPORATE MATERIALS		
STEP 3	HYDROSEED	SEED	
		FIBER	
STEP 4	HYDROMULCH	FIBER	
		TACKIFIER	

EROSION CONTROL TYPE 2			
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE
STEP 1	COMPOST	COMPOST	TYPE 2
STEP 2	INCORPORATE MATERIALS		
STEP 3	HYDROSEED	SEED	
		FIBER	
STEP 4	HYDROMULCH	FIBER	
		TACKIFIER	

ROLLED EROSION CONTROL PRODUCT (BLANKET)			
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE
IN EC TYPE 1 AND 3 AREAS, RECP (BLANKET) MUST BE INSTALLED AFTER HYDROMULCH AND BEFORE FIBER ROLLS.	ROLLED EROSION CONTROL PRODUCT (BLANKET)	BLANKET	TYPE C

FIBER ROLLS				
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	REMARKS
IN EC TYPE 1 AND 3 AREAS, INSTALL FIBER ROLLS AFTER HYDROMULCH AND RECP (BLANKET)	FIBER ROLLS	FIBER ROLL	8" TO 10" Dia	TYPE 1 FIBER ROLL INSTALLATION

EROSION CONTROL TYPE 3			
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE
STEP 1	IMPORTED TOPSOIL	TOPSOIL	
STEP 2	COMPOST	COMPOST	
STEP 3	INCORPORATE MATERIALS	TOPSOIL & COMPOST	
STEP 4	HYDROSEED	SEED	
		FIBER	
STEP 5	HYDROMULCH	FIBER	
		TACKIFIER	

E

Dist

COUNTY

ROUTE

POST MILES TOTAL PROJECT

SHEET No.

TOTAL SHEETS

04

Son

116, 121

46.5/46.8, 6.6/R7.0

189

224

LICENSED LANDSCAPE ARCHITECT

January 27, 2023

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PARSONS

555 12TH ST, STE 1850

OAKLAND, CA 94607

SCTA

490 MENDOCINO AVE. #200

SANTA ROSA, CA 95401

JEFFREY LORMAND

Signature

8-31-24

Renewal Date

1-27-23

DATE

STATE OF CALIFORNIA

EROSION CONTROL TYPE 1					
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	DEPTH
STEP 1	COMPOST	COMPOST	MEDIUM	150 CY/ACRE	
STEP 2	INCORPORATE MATERIALS				4"
STEP 3	HYDROSEED	SEED	MIX 1	14.6 LB/ACRE	
		FIBER	WOOD	500 LB/ACRE	
STEP 4	HYDROMULCH	FIBER	WOOD	2000 LB/ACRE	
		TACKIFIER	GUAR	125 LB/ACRE	

EROSION CONTROL TYPE 2					
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	DEPTH
STEP 1	COMPOST	COMPOST	MEDIUM	150 CY/ACRE	
STEP 2	INCORPORATE MATERIALS				4"
STEP 3	HYDROSEED	SEED	MIX 2	65 LB/ACRE	
		FIBER	WOOD	500 LB/ACRE	
STEP 4	HYDROMULCH	FIBER	WOOD	2000 LB/ACRE	
		TACKIFIER	GUAR	125 LB/ACRE	

EROSION CONTROL TYPE 3					
SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE	DEPTH
STEP 1	IMPORTED TOPSOIL	TOPSOIL		260 CY/ACRE	1"
STEP 2	COMPOST	COMPOST	FINE	390 CY/ACRE	2"
STEP 3	INCORPORATE MATERIALS	TOPSOIL & COMPOST			6"
STEP 4	HYDROSEED	SEED	MIX 3	27.9 LB/ACRE	
		FIBER	WOOD	500 LB/ACRE	
STEP 5	HYDROMULCH	FIBER	WOOD	1500 LB/ACRE	
		TACKIFIER	GUAR	125 LB/ACRE	

EROSION CONTROL LEGEND

ECL-1

EROSION CONTROL QUANTITIES											
SHEET No.	DESCRIPTION	COMPOST	INCORPORATE MATERIALS	HYDROSEED	HYDROMULCH	ROLLED EROSION CONTROL PRODUCT (BLANKET)	IMPORTED TOPSOIL	HYDROSEED MATERIALS (N)		HYDROMULCH MATERIALS (N)	
		CY	SQFT	SQFT	SQFT	SQFT	CY	SEED LB	FIBER LB	FIBER LB	TACKIFIER LB
EC-1	EROSION CONTROL TYPE 1	71.7	20,817	20,817	20,817			7.0	238.9	955.8	59.7
	EROSION CONTROL TYPE 2	1.3		392	392			0.6	4.5	18.0	1.1
	EROSION CONTROL TYPE 3	954.8		106,647	106,647		636.6	68.3	1,224.1	3,672.4	306.0
	RECP (BLANKET)					46,773					
EC-2	EROSION CONTROL TYPE 1	32.1	9,309	9,309	9,309			3.1	106.9	427.4	26.7
	EROSION CONTROL TYPE 2										
	EROSION CONTROL TYPE 3	392.1		43,794	43,794		261.4	28.0	502.7	1,508.1	125.7
	RECP (BLANKET)					18,337					
	TOTAL	1,452.0	30,126	180,959	180,959	65,110	898				

SHEET No.	FIBER ROLLS	MOVE-IN/MOVE-OUT (EROSION CONTROL)
	LF	EA
EC-1	5,384	
EC-2	2,314	
TOTAL	7,698	3

Dist

COUNTY

ROUTE

POST MILES TOTAL PROJECT

SHEET No.

TOTAL SHEETS

04

Son

116, 121

46.5/46.8, 6.6/R7.0

192

224

LICENSED LANDSCAPE ARCHITECT

January 27, 2023

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PARSONS

555 12TH ST, STE 1850

OAKLAND, CA 94607

SCTA

490 MENDOCINO AVE. #200

SANTA ROSA, CA 95401

JEFFREY LORMAND

Signature

8-31-24

Renewal Date

1-27-23

Expiry Date

LICENSED LANDSCAPE ARCHITECT

STATE OF CALIFORNIA

EROSION CONTROL QUANTITIES

ECQ-1

Appendix C

Long Term Management Plan

LONG-TERM MANAGEMENT PLAN

STATE ROUTE 116/121 ROUNDABOUT INTERSECTION IMPROVEMENT PROJECT

MULAS DAIRY, SONOMA COUNTY, CALIFORNIA

Submitted to:
Seana Gause
Project Manager
Sonoma County Transportation Authority
411 King Street
Santa Rosa, California 95404

Prepared by:

LSA Associates, Inc.
157 Park Place
Pt. Richmond, California 94801
(510) 236-6810

Project No. 20231330



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1.0 INTRODUCTION

1.1 PURPOSE OF ESTABLISHMENT

The California Department of Transportation (Caltrans) State Route (SR) 116/121 Intersection Improvement Project (EA 04-3G900) (Improvement Project) in Sonoma County includes the implementation of the Mitigation and Monitoring Plan (MMP) dated November 2023, and the establishment of a Conservation Easement on the 4.75 acre portion of the Mulas Dairy property (Conservation Easement Area) to mitigate for unavoidable impacts to waters of the U.S. and state of California and habitats for the federally threatened California red-legged frog (*Rana draytonii*) (CRLF). The Mulas Dairy is located in the Schellville region of Sonoma County, 3 miles south of the City of Sonoma and within the Schell Creek watershed; Schell Creek is a tributary to Sonoma Creek. The created Conservation Easement, hereafter referred to as the Conservation Easement, would total 4.75 acres.

This Long-Term Management Plan (LTMP) sets forth the terms of the measures governing the use, management, monitoring, and maintenance of the Conservation Easement Area, with the purpose of protecting the biological resources on-site in perpetuity. Agencies to which this LTMP is being submitted are the California Department of Transportation (Caltrans), the United States Army Corps of Engineers (USACE, project file number SPN-2016-00292), the US Fish and Wildlife Service (USFWS, BO 05ESMF00-2020-F-2392), and the San Francisco Bay Regional Water Quality Control Board (RWQCB, Place ID 881749).

1.2 PURPOSE OF THE LONG-TERM MANAGEMENT PLAN

This Long-Term Management Plan (LTMP) provides the parameters to adaptively manage and monitor the Conservation Easement Area to maintain the conservation values of the Conservation Easement Area in perpetuity. This LTMP will cover all management activities after the completion of the wetland construction as detailed in the MMP. This LTMP establishes objectives, priorities, and tasks to monitor, manage, maintain, and report on the Conservation Easement Area.

1.2.1 Conservation Values

The Mulas Dairy is located in the transition zone between the freshwater riverine, riparian woodland, emergent marsh, and riparian habitats of Schell and Sonoma creeks and the vast brackish marshes north of San Pablo Bay. Much of the Mulas Dairy land surrounding the proposed Conservation Easement Area is pastureland used to grow hay and periodically to graze dairy heifers. A large constructed freshwater pond with fringing marsh is located just to the west of the proposed Conservation Easement Area, and Schell Creek is located just to the east. Many native species, some rare, threatened, or endangered, occur or have the potential to occur in this region. Section 3.0 of this Management Plan describes in detail the biological resources of the Conservation Easement Area and their ecological relationships. The Conservation Easement, once completed, will provide high-quality freshwater aquatic habitat for CRLF, and various species of water and marsh birds. The Plan describes the elements, objectives, priorities, and tasks to monitor, manage, preserve, and enhance the habitat for CRLF and its upland and aquatic habitats in the Conservation Easement Area. These management actions will provide a secondary benefit for preserving native species diversity and other significant conservation values associated with the ponds and grasslands on the Mulas Dairy.

The management tasks and associated measures are intended to provide maximum flexibility to manage, maintain, and enhance the conservation values of the Conservation Easement.

1.2.2 Regional Conservation Framework

This Management Plan follows the general guidance of the San Francisco Bay Area Wetlands Ecosystem Goals Project 2015.

1.3 RESPONSIBLE PARTIES

1.3.1 Property Owner

The Mulas family is the current Property Owner (the Grantor).

Contact Information:

Victoria C. Mulas, Trustee of the Victoria C. Mulas Trust dated May 27, 2007, Michael M. Mulas & Denise L. Mulas, as Trustees under the Michael M. Mulas & Denise L. Mulas Trust Agreement dated October 18, 2007, Raymond M. Mulas & Janey L. Mulas, Trustees of the Raymond M. Mulas & Janey L. Mulas Trust dated June 17, 2008, and Carolyn A. Mulas, an individual (Mulas Family).

2034 Fremont Drive
Sonoma, California 94576
Contact: Mike Mulas
Phone: 707/695-8930
Agent: Tony Georges
Phone: 415/602-4151

1.3.2 Land Manager

The property owner (including the current and any successors) is responsible for land management in perpetuity as specified in this LTMP. In this capacity, the property owner is referred to as the Land Manager.

In addition to the land management tasks, the Land Manager is responsible for managing the Conservation Easement Area according to this Long-Term Management Plan. The Land Manager is also responsible for monitoring and ensuring all management tasks are completed to comply with the performance objectives listed in this Long-Term Management Plan. Upon completion of monitoring and management activities each year, the Land Manager shall submit an annual report to the Endowment Holder (Sections 1.3.2 and 1.3.4), detailing the management tasks and their outcomes, and a full accounting of all funds disbursed to the Land Manager for conducting annual management activities. The Land Manager will be funded with an endowment sufficient to cover its annual maintenance and monitoring tasks as outlined in this Management Plan in perpetuity (Appendix B).

The Land Manager may hire appropriate technical specialists to conduct such monitoring and management where necessary. The current property owner intends to contract with A&T Georges LLC.

Land Manager Contact Information:

Victoria C. Mulas, Trustee of the Victoria C. Mulas Trust dated May 27, 2007, Michael M. Mulas & Denise L. Mulas, as Trustees under the Michael M. Mulas & Denise L. Mulas Trust Agreement dated October 18, 2007, Raymond M. Mulas & Janey L. Mulas, Trustees of the Raymond M. Mulas & Janey L. Mulas Trust dated June 17, 2008, and Carolyn A. Mulas, an individual (Mulas Family).

2034 Fremont Drive
Sonoma, California 94576

Contact: Mike Mulas

Phone: 707/695-8930

Agent: Tony Georges

Phone: 415/602-4151

Current Land Manager's Anticipated Technical Specialist Contact Information:

A&T Georges LLC

54 Ross Ave

San Anselmo, California 94960

Contact: Anthony Georges

Phone: (415) 602-4151

Email: tonygeorges@aim.com

Contact: Thomas Georges

Phone: (773) 936-7881

Email: thomasjohngeorges@gmail.com

1.3.3 Conservation Easement Holder

Golden State Land Conservancy (GSLC) will be the Conservation Easement Holder (the Grantee). GSLC shall be responsible for providing annual conservation easement compliance monitoring activities and submitting an annual report to the third-party beneficiaries describing compliance with the conservation easement terms. GSLC will be funded with a stewardship endowment sufficient to cover its annual compliance monitoring and reporting tasks as outlined in the Conservation Easement and in this Management Plan in perpetuity (Appendix B). This endowment is separate from that which will be used to fund land management.

Conservation Easement Holder Contact Information:

Golden State Land Conservancy (GSLC)

3558 Round Barn Boulevard, Suite 200

Santa Rosa, CA 95403

Contact: Devin Best, Executive Director Phone:

(805) 801-9063 / Email: dbest@gslc.us

1.3.4 Long-Term Endowment Holder

GSLC will be responsible for managing the interim period funding and the Long-Term Management

Endowment Fund. The Long-term Management Endowment Fund is established to cover costs associated with long-term management tasks outlined in this Management Plan (see Section 6.1, Funding).

Endowment Holder Contact Information:

Golden State Land Conservancy (GSLC)
3558 Round Barn Boulevard, Suite 200
Santa Rosa, CA 95403
Contact: Devin Best, Executive Director Phone:
(805) 801-9063 / Email: dbest@gslc.us

1.3.5 Third-Party Beneficiaries

Caltrans, USACE, USFWS, and RWQCB are the Conservation Easement Third-Party Beneficiaries. Their primary role is to review annual reports, evaluate the adequacy of monitoring and stewardship activities, and guide or approve adaptive management decisions. The regulatory agencies may also assist the Conservation Easement Holder in enforcing the provisions of the Conservation Easement.

2.0 PROPERTY DESCRIPTION

2.1 SETTING AND LOCATION

The Conservation Easement Area is approximately 1.5 miles east of the Improvement Project on the Mulas Dairy property (Figure 1, all figures are provided in Appendix A). Schell Creek is located approximately 430 feet to the east, and the recently constructed (Fall 2020) Mulas Wetland Preserve is just to the east. Sonoma Creek is located approximately 0.8 miles west of the proposed site. Just west of the proposed Conservation Easement Area are two freshwater ponds.

The Mulas Dairy property is located in Schellville, an unincorporated community 3 miles south of the City of Sonoma in Sonoma County, California. The Conservation Easement Area falls within Sonoma County Assessor's Parcel Number 128-471-004 and is centered at Latitude 38.2416, Longitude - 122.4323. It is situated within un-sectioned lands in Township 5 North, Range 5 West on the 7.5-minute United States Geological Survey Sears Point quadrangle.

2.2 HISTORY AND LAND USE

The Mulas Dairy has used the proposed Conservation Easement Area for growing hay and/or grazing cattle since the mid-twentieth century. The area surrounding the mitigation may be used for selective grazing as a management element for future site maintenance. Dairy operations and cattle grazing (except for limited grazing to control invasive plant species) was suspended and the Mulas Dairy were closed in 2023 as a result of a settlement agreement with the California Sportfishing Protection Alliance over alleged water quality violations.

2.3 HYDROLOGY AND TOPOGRAPHY

The proposed Conservation Easement Area is near the historical marshes of the Sonoma and Schell Creek deltas. The dairy property was diked and drained in the early to mid-twentieth century, causing the regular tidal flooding to become variable depending on management and use. Interpretations of aerial photographs and historical records suggest that a sizable slough once crossed through the area, but that slough has been filled and is not immediately evident on the ground.

During major flood events, Schell and Sonoma Creeks can overtop their levees and flood much of the hayfields and pastureland on the dairy property. Flooding of this magnitude is generally caused by unusually large storms (probably storms with a recurrence frequency of 10 years or more), and water generally recedes after a few days or weeks (Vicki Mulas, pers. comm.).

There are two constructed ponds just west of the proposed Conservation Easement Area. These do not receive any runoff from the Conservation Easement Area and do not overflow into the Conservation Easement Area. One of these ponds retains clean tailwater from dairy operations, and the other pond (just west of the Conservation Easement) is maintained with reclaimed water from the Sonoma Valley Treatment Facility, which is located 0.79 miles to the northwest.

2.4 CONSERVATION EASEMENT EXCEPTIONS AND EXCLUSIONS

No exceptions or exclusions apply to the proposed Conservation Easement.

2.5 SOILS

The UC Davis California Soil Resources Lab mapped most of the proposed Conservation Easement Area as Reyes clay (UC Davis Soil Resources Laboratory 2023). Reyes clay is a somewhat poorly drained soil of slow permeability that forms on alluvial deposits, especially around the perimeter of San Francisco Bay. Reyes clay is the most common group of fine-textured marsh soils colloquially called “Bay Mud” and is a common soil series found in the diked baylands around San Pablo Bay and still-extant marshes.

A part of the northwestern corner of the proposed Conservation Easement Area is mapped as Haire clay loam. Haire clay loam is a moderately well-drained soil of very slow permeability that forms in terrace deposits. The primary use of this soil type is for dry and irrigated pasture, and when it is uncultivated, the vegetation is mostly annual grasses and forbs.

2.6 ADJACENT LAND USES

Areas adjacent to the Conservation Easement are largely undeveloped and used for grazing and hay growing by the Mulas Dairy. These lands support non-native annual grasses and pickleweed (*Salicornia* sp.) mats in low areas and, as previously noted, a perennial freshwater pond just to the west (Figure 2). To the east, an existing wetland Conservation Easement Area is contiguous with Schell Creek; this site supports brackish marsh wetlands with fringing vegetation along the creek and has a muted tidal cycle.

3.0 HABITAT AND SPECIES DESCRIPTIONS

3.1 BIOLOGICAL RESOURCES

3.1.1 Plant Communities and Habitats

The Conservation Easement Area is a flat pasture that is periodically used to graze dairy heifers and cows. During major rainfall events, overflow from Schell and/or Sonoma creeks can flood the site. Vegetation on the Conservation Easement Area is dominated by native and non-native forbs and non-native grasses. No aquatic habitat is present within the proposed site, but as noted above, a freshwater pond is just west of the site, and the Mulas Wetland Preserve and Schell Creek are located to the east (Figure 2).

Land cover on the site is mapped as intensively managed hayfields or irrigated pasture/California annual and perennial grassland (Sonoma Veg Map 2023). Dominant plants on the site include lamb's quarters (*Chenopodium album*), brass buttons (*Cotula coronopifolia*), curly dock (*Rumex crispus*), Italian rye (*Festuca perennis*), and Mediterranean barley (*Hordeum marinum*), and other non-native annual grasses. Elevations range from approximately 6 to 8.5 feet above mean sea level.

3.1.2 Upland Habitats

Prominent cover types within 1 mile of the Conservation Easement Area are mapped as intensively managed hayfields or irrigated pasture/California annual and perennial grassland (Figure 2) and are similar to the habitat in the Conservation Easement (Figure 3). Extensive areas supporting vineyard development are present to the west and north of the site. Another prominent upland cover type includes developed areas northwest (City of Sonoma), east, and northeast of the site.

3.1.3 Aquatic Habitats

Within 1 mile of the Conservation Easement Area, there are several types of water bodies: extensive freshwater and brackish marshes are present east, west, and south of the site; Sonoma and Schell Creeks are west and east of the site, respectively, and various constructed ponds and water detention basins occur just west and north of the site (Figure 2).

3.2 ENDANGERED AND THREATENED SPECIES

3.2.1 Endangered and Threatened Plants

There are no special-status plant species¹ known to occur within the Conservation Easement Area or in the general vicinity.

¹ Status Codes:

FE = Federally listed as an endangered species.
FT = Federally listed as a threatened species.
CE = State-listed as an endangered species.
CT = State-listed as a threatened species.

3.2.2 Endangered and Threatened Animals

No federal or State listed animal species have been documented in the proposed Conservation Easement Area². LSA has observed several State species of special concern in or near the Conservation Easement Area including northwestern pond turtles in the pond just west of the Conservation Easement Area and in overflow ponds from Sonoma Creek on the Mulas property south of the Conservation Easement Area. In addition, northern harriers (*Circus hudsonius*), a California Species of Special Concern, have been observed foraging over the Conservation Easement Area and are potential nesters on the Mulas property.

3.2.2.1 Federally or State Listed Species

- Swainson's hawk (*Buteo swainsoni*); CT

3.2.2.2 Other Special-status Species

- Burrowing owl (*Athene cunicularia*); CSC
- Short-eared owl (*Asio flammeus*); CSC
- Northern harrier (*Circus hudsonius*); CSC
- Northwestern pond turtle (*Actinemys marmorata*), CSC

² Status Codes:

FE = Federally listed as an endangered species.

FT = Federally listed as a threatened species.

CE = State listed as an endangered species.

CT = State listed as a threatened species.

CSC = State Species of Special Concern.

* = Refer to CDFW 2024 Special Animals List (Global and State Rank)

4.0 MANAGEMENT AND MONITORING

The overall goals of interim and long-term management of the proposed Conservation Easement Area are to foster the long-term viability of wetland and CRLF habitat and native species diversity on site. Routine management, monitoring, and maintenance tasks are intended to promote these goals for the Conservation Easement Area in perpetuity. The elements described below follow those outlined in the May 2008 Long-Term Management Plan template developed by the California Multi-agency Project Delivery Team for mitigation banks (there is no formally established template for conservation easements).

The management and monitoring tasks generally follow this template and the objectives and tasks described below correspond to the Long-Term Management Tasks and costs listed in the management endowment calculations in Appendix B for the Conservation Easement. These tables provide cost details of implementing each element, the overall annual cost, and the endowment needed to ensure long-term management of approximately 4.75 acres within the Conservation Easement.

Pursuant to the Management Plan amendment process outlined in Section 5.3, management objectives and land uses specified in this Management Plan may be modified to account for changed circumstances and increased knowledge of management techniques and monitoring protocols that result in benefits for conservation values within the Conservation Easement. The Management Plan shall not preclude the potential transition of created seasonal wetlands to tidal wetlands at Mulas Ranch as future opportunity arises and as reviewed and approved in writing by the USACE, USFWS, RWQCB. In addition, to ensure CRLF are protected during management and monitoring activities the Best Management Practices (BMPs) provided in Appendix C will be followed.

4.1 MANAGEMENT APPROACH

The management approach incorporates monitoring tasks and management tasks that are designed to maintain the conservation values and identify and correct any issues that could adversely affect the Conservation Easement Area. While it is not anticipated that major management actions will be needed, an objective of this long-term management plan is to conduct monitoring to identify any issues that arise and to use adaptive management to determine what actions might be appropriate. The Land Manager for the site shall ensure the implementation of the following tasks to achieve the established objectives.

4.1.1 Monitoring

Annual site examinations and monitoring of selected characteristics will be conducted to (1) determine stability and ongoing trends of CRLF habitat and (2) to provide information to cooperatively work with the Land Manager to implement management tasks and guide adaptive management tasks to address issues that may arise. Long-term monitoring will assess the site's condition, degree of erosion, invasion of exotic or deleterious (e.g., thatch producing) species, fire hazard, and/or other aspects that may warrant special management action. Those chosen to accomplish monitoring responsibilities will have the knowledge, training, and experience to accomplish the monitoring tasks, including applicable permits from USACE, USFWS and RWQCB

where required. Interim and long-term monitoring of suitable habitat for threatened endangered, and special-status species will be conducted. Specifically, habitat conditions of CRLF habitat will be recorded to monitor the habitat potential for CRLF in the Conservation Easement Area. The Land Manager will conduct or oversee all habitat monitoring tasks, with fieldwork support by qualified biologists or the rangeland manager as needed.

4.1.2 Management

Management tasks address the ongoing activities in the Conservation Easement related to invasive species control, maintenance of the habitat and facilities (fences, gates, etc.), safety and security, and reporting and administrative requirements.

To achieve the management tasks in this Plan, limited motor vehicle use, including occasional tractor use, is necessary primarily for monitoring activities. Truck or automobile driving would be limited to the dry season, dry conditions, and daylight hours, and care will be taken whenever vehicles are used on-site to avoid small mammal burrows, adhere to all project permits, and protect all wildlife. Low-ground pressure all-terrain vehicles (ATVs) or other vehicles may be used for livestock grazing operations and monitoring any time of year.

4.1.3 Adaptive Management

Adaptive management is an iterative process to provide robust decision-making in the face of uncertainty, intending to reduce uncertainty over time via system monitoring. In this way, decision-making simultaneously meets one or more resource management objectives and, either passively or actively, accrues information needed to improve future management. Adaptive management may include those activities necessary to address the effects of climate change, fire and fire protection, flood or other natural events, force majeure, changes in knowledge, etc. Before considering any adaptive management changes to the Management Plan according to the amendment process outlined in Section 5.3, the USACE, USFWS and RWQCB will consider whether such actions will help ensure the continued viability of the Conservation Easement Area's biological resources. Possible changes to adaptive management practices must also consider available funding.

The Interim and Long-term Endowment Cost Analysis (see Section 5.0 and Appendix B) prepared for the Conservation Easement Area is a good-faith effort to anticipate interim and long-term management needs and contingencies but changes over time may vary more than was predictable. Therefore, the USACE, USFWS, RWQCB, Land Manager, and the Conservation Easement Holder will consult about how strategies and priorities of adaptive management can be satisfied within the constraints of available funding. Ultimately, the conservation easement requires the Grantor to maintain the conservation values of the Conservation Easement Area.

Minor adaptive management changes under the Management Plan will include actions that may need to be made relatively quickly by the Land Manager in order to meet the Plan's performance objectives. If adaptive management changes do not deviate from meeting the Plan's objectives, and they are minor in nature, then the changes do not require an amendment to this Plan pursuant to Section 5.3. Such adaptive management changes are limited to the following activities 1– 3. Any other minor adaptive activities must first be approved in writing by the USACE, USFWS, and RWQCB.

1. Short-term (maximum one growing season) modifications to prescribed grazing management such as stocking rates and associated performance objectives (e.g., exceedance or reduction of residual cover and grass heights) based on rainfall patterns or wildfire on livestock forage and water availability. In the LTMP, some form of grazing, cattle, or goats, may be necessary for controlling invasive upland weeds in the Conservation Easement.
2. Minor adjustments to monitoring and management protocols needed to respond to seasonal variations in rainfall, pond water depths, vegetation pattern changes, and other variables.
3. Minor remedial actions (e.g., erosion control measures to protect CTS breeding pools) are needed to quickly respond to failure to attain management objectives.

All such adaptive management changes during the preceding year will be described in full in the annual report and subject to review and approval by USACE, USFWS, RWQCB, and the Conservation Easement Holder and for subsequent modification of the Management Plan as needed. The annual report will also describe all such adaptive management actions proposed for the following year.

4.2 BIOLOGICAL RESOURCES MONITORING AND MANAGEMENT

Element A1. Threatened and Endangered Plant and Animal Species Monitoring and Management

Objective 1: CRLF Habitat

Task 1: Monitor CRLF Habitat in Conservation Easement Area. Two annual surveys will be conducted to document CRLF habitat conditions in the constructed ponds such as water depth, ponding duration, and ratio of emergent vegetation and open water as well as to assess CRLF presence and breeding. The first annual survey will be conducted during the CRLF breeding season between December through April each year. The second survey will be conducted in the late September to assess ponding duration. These CRLF surveys will occur on the following schedule:

- Interim Management Period: Twice annually.
- Long-term Management: Once annually.
- Responsible Entity: Land Manager with the support of qualified biologists.
- Performance Objective: The constructed ponds shall generally maintain continuous standing water for a minimum of 180 days between December through September in a normal rainfall year. The target ratio for emergent vegetative cover is 10 to 40 percent.

Task 2: Maintain CRLF Breeding Habitat Characteristics. The Land Manager will review data from CRLF habitat surveys described in Task 1 above (e.g., water depth, ponding duration, and ratio of emergent vegetation and open water) to evaluate on-site CRLF habitat characteristics. In addition, if the Land Manager identifies potential problems from CRLF monitoring/surveys in Task 1, the Land Manager, with assistance from a qualified biologist, will:

1. Determine if problems were caused by site-specific habitat issues, for example, an insufficient hydroperiod,

2. Review available regional data on CRLF habitat to determine if the issues are regional problems or localized to the Conservation Easement, and
3. Evaluate alternative hypotheses based on available information to assess if incremental changes in management practices need to be implemented.

Potential management actions may include increasing duration of ponding through repair of gullies or other erosion or altering livestock use. Appendix B provides funding for this task to manage CRLF habitat on site as described below.

The Land Manager will then perform with help from a field crew and/or coordinate with contractors as necessary maintenance tasks to ensure successful on-site CRLF habitat according to the following schedule concurrently with Task 1:

- Interim Management Period: Annually.
- Long-term Management Period: The Land Manager and qualified biologist will review Conservation Easement ponds data (from Task 1) every 3 years or more often, on an as needed basis. They will also perform thorough assessments every 10 years to evaluate and plan any necessary management actions if any ponds are not successful and/or having hydrology issues related to erosion or sedimentation.

Based on these 3 and 10-year assessments, the Land Manager may identify necessary management actions requiring heavy equipment and an operator. If this occurs, a contractor will fix any pools (e.g., repairing erosion or pool outlets) and use weed-free soil to top up berms as needed. The funding allocated to these repairs will be accounted for in Appendix B with a 15-year interval. If ponds only require minor repairs with no heavy equipment, the field crew will be responsible for them as directed by the Land Manager. Minor repairs will be implemented at 3-year intervals as needed.

Evaluation and management tasks related to CRLF habitat will be implemented if problems are identified.

- Responsible Entity: Land Manager with the support of a qualified biologist and contractor, if necessary, for equipment and operator (or field crew for minor repairs).
- Performance Objective: Maintain 0.9 acre of suitable CRLF aquatic breeding habitat. Manage grazing to maintain the desired amount of emergent vegetation in ponds (see Task 10).

Objective 2: Maintain Dispersal and Upland Habitat for CRLF

Task 3: Monitor and Maintain CRLF Upland Habitat. Monitor upland habitat (the matrix of upland and pool/swale vegetation communities) characteristics for CRLF according to the following schedule. Monitoring is covered under expenses in Appendix B.

- Interim Management Period: Annually.

- Long-term Management Period: Annually.
- Responsible Entity: Land Manager with the support of a qualified biologist.
- Performance Objective: Surrounding upland grasslands shall generally be managed to provide short grass, generally between 3 to 5 inches of vegetation, patchy with some areas grazed to less than 1 inch (see Task 10). Grazing or mowing of the vegetation should not be excluded from the Conservation Easement for more than one year to prevent a buildup of thatch.

Task 4: Coordinate with the Landowner to Protect CRLF Habitat. The Conservation Easement holder/Land Manager shall coordinate with the landowner to adaptively manage upland management to maintain CRLF habitat.

- Interim Management Period: When the Conservation Easement is established and ongoing.
- Long-term Management Period: Ongoing.
- Responsible Entity: Land Manager.
- Performance Objective: See Tasks 1 through 3.

Task 5: Encourage Monitoring for Rare, Threatened, Endangered, and Other Special-Status Plants and Animals and Potential Habitat Enhancement in the Conservation Easement. Individuals conducting research and monitoring shall hold the appropriate approvals from USACE, USFWS, and RWQCB such as a Scientific Collecting Permit and Memorandum of Understanding pursuant to Fish and Game Code section 2081(a). The Land Manager's coordination time to arrange this is covered under the administrative budget but the monitoring/research project proponent is responsible for funding as shown in Appendix B.

- Interim Management Period: Ongoing as needed.
- Long-term Management Period: Ongoing as needed.
- Responsible Entity: Land Manager.
- Performance Objectives: The Land Manager shall notify USACE, USFWS, and RWQCB as appropriate of all requests for volunteer monitoring and habitat enhancement for review and approval prior to implementation.

All agreements for volunteer monitoring and habitat enhancement shall require submittal of copies of any reports or other findings to the Land Manager. These findings will be included in the annual report (Task 21). The Land Manager shall also describe any issues with monitoring or research project implementation, any successes and/or failures at any part of the process, especially during and after implementation. The Land Manager shall also discuss any lessons learned and any applicable recommendations for future monitoring and studies in the Conservation Easement.

Element A2. Invasive Species and Disease Monitoring and Control

It is necessary to monitor and control invasive species and disease because they threaten the diversity and abundance of CRLF and other native species. Invasive species and diseases result in competition for resources, predation, parasitism, interbreeding with native populations, disease transmission, or physical or chemical changes to the habitat. Invasive species include but are not limited to problematic invasive plant species and noxious weeds³. The significance of the impact of disease and invasive species depends on a number of factors such as timing, community type, and affected species.

Numerous non-native species currently occur in the San Francisco Bay Ecosystem and non-native plant species dominate many of the vegetation communities, particularly grassland habitats. Non-native aquatic animal species such as red swamp crayfish (*Procambarus clarkii*), American bullfrog (*Rana catesbeiana*), and pond slider (*Trachemys scripta*) are also present and widespread in freshwater habitats in the Bay Area. Eradication of non-native species is often impracticable; however, this Management Plan incorporates requirements for regular inspections to facilitate early detection and implementing and providing long-term funding for the control of aggressive, invasive exotic species.

Disease has been implicated as a factor in the reduction of amphibian populations worldwide (e.g., chytridiomycosis, ranavirus). Much is unknown about how disease affects the different life stages of CRLF, but it inevitably plays a role in its population dynamics.

Objective 1: Monitor and maintain control over non-native invasive species, which diminish habitat quality for CRLF (i.e., uplands and breeding pools, and other special-status species in the Conservation Easement.

Task 6: Invasive Plant Species Monitoring and Mapping. Mapping of non-native invasive plant species cover or presence through available technologies, such as GIS and aerial photography, will be conducted annually during the interim management period and every 5 years during long-term management. This task specifically includes detecting and mapping new infestations of non-native invasive plants that could threaten habitat for CRLF (i.e., upland and breeding pools).

- Interim Management Period: Annually.
- Long-term Management Period: Every 5 years.
- Responsible Entity: Land Manager, with the support of a qualified biologist or rangeland manager.
- Performance Objective: Map the presence of invasive species.

³ Problematic invasive species and noxious weeds refer to any invasive species appearing on State or Solano County lists of noxious weeds, the California Invasive Pest Plant Council's (Cal-IPC) list of problematic invasive species, or relevant other authoritative sources.

Task 7: Invasive Plant Species Control. Tasks to control invasive plant species will be conducted based on the Land Manager's mapping/survey results and recommendations employing the most effective and least disruptive methods (Appendix C). Invasive control management will be conducted annually during the interim management period and every five years during long-term management. This task includes prioritizing the early detection and early control of new infestations over reducing the extent of existing infestations.

- Interim Management Period: Annually.
- Long-term Management Period: Every 5 years.
- Responsible Entity: Land Manager with the support of a qualified biologist.
- Performance Objective: Reduced cover of invasive plant species compared to the previous year. Control or reduction in non-native plant species using, for example, the below techniques such as herbicide treatments and livestock grazing.

High priority species for control in the Conservation Easement include, medusa-head grass (*Elymus caput-medusae*), barbed goat grass (*Aegilops triuncialis*), purple star-thistle (*Centaurea calcitrapa*), yellow star-thistle (*C. solstitialis*), perennial pepperweed (*Lepidium latifolium*), and Italian thistle (*Carduus pycnocephalus*). An additional, high priority species is stinkwort (*Dittrichia graveolens*). Other invasive species that are a lesser priority including fennel (*Foeniculum vulgare*), bull thistle (*Cirsium vulgare*), milk thistle (*Silybum marianum*), rough cocklebur (*Xanthium strumarium*), and lippia (*Phyla nodiflora*). Additional species may be added to this priority list.

Herbicide use for control of invasive weeds will only be used if other manual control methods are not effective or practicable. Any herbicide use will be conducted only with EPA-approved herbicides applied according to label requirements and subject to additional use limitations specified by the EPA or California Department of Pesticide Regulation under direction of a State-licensed Pesticide Control Advisor (PCA) and applied by personnel under the direction of the PCA or holder of a Qualified Applicator's License (QAL). The Land Manager will incorporate information from the PCA such as specific herbicides, application rates, and equipment used that are appropriate for the Conservation Easement. The Land Manager will also review and utilize guidance on herbicide restrictions and application approaches from applicable regulatory sources, such as the California Invasive Plant Council⁴ and other scientific literature to protect native species. Care will be exercised to protect existing native vegetation during herbicide application. Formulations must be registered for use in wetlands. Care will also be exercised to prevent adverse effects to nesting birds that may utilize invasive weeds, such as tricolored blackbird (*Agelaius tricolor*) to the extent possible.

The control methods discussed below are currently accepted protocols and serve as guidance for control activities in the Conservation Easement, as not all control measures may apply to all situations. **Controlled burns shall not be conducted unless the Land Manager submits a burn plan to USACE, USFWS, RWQCB, and Sonoma County and receives written approval.** These methods may also change over time, so management of these species must be adaptive. These invasive plant

⁴ <https://www.cal-ipc.org/>

species can be controlled (but not necessarily eliminated) through a combination of treatments as follows:

- **Medusa-head.** Medusa-head is a non-native late-blooming grass rated as a high-priority invasive species by Cal-IPC (2024). Medusa-head is abundant within southern Sonoma County. This grass has high silica content and stiff awns and is thus not palatable to livestock late in the season. One effective control for this species is late-spring controlled burns (Kyser et al. 2014). Intensive grazing can also be an effective control method. Grazing at moderate to heavy stocking rates before the development of the awns will limit the spread of medusa-head (Bossard et al. 2000). The initial intensive grazing treatment for the Conservation Easement can be timed (based on frequent observations by the Land Manager) to coincide with the boot-stage phenology of medusa-head, which can vary from late April to early May depending on yearly weather fluctuations (Young et al. 1970). This timing is critical because if livestock grazing ceases before the boot stage, the plants will regrow and produce new seed heads. If grazing occurs after the seed head emerges from the boot, the livestock will avoid it because of the sharp awns, and there is a high risk of spreading the infestation by livestock after the seed is ripe. The timing and intensity of this treatment will be carefully implemented under the direction of Land Manager. Livestock will be removed as directed by the Land Manager when grazing has reached the “heavy” level of use, with residual dry matter (RDM) levels (amount or level of palatable vegetation remaining after the grazing season) below 500 pounds per acre. The livestock operator may need to be subsidized for this treatment to be feasible, but intensive grazing may still be less expensive and more practical than alternatives.
- **Barbed goat grass.** This species is most problematic in grasslands. This weed can be dispersed on the fur of grazing animals and “tumbleweed” across the landscape. Goat grass is considered a noxious weed by the Cal-IPC (2024). It is unpalatable to livestock and out-competes more desirable forage species. It spreads rapidly in the fur of livestock and through wind dispersal of the seed heads. This species should be targeted for eradication before it has a chance to spread further. Barbed goat grass is most effectively controlled by two consecutive years of burning prior to seed maturation in the late spring or early summer. Because burning may not be feasible and could adversely affect CRLF, repeated treatments with glyphosate (Round-Up®) as prescribed by a PCA for at least two consecutive years may be conducted prior to seed maturation in the early spring (February-April) followed by seeding of natives. Since glyphosate is a non-selective herbicide, it should be applied by wicking or site-specific spot spraying to minimize impacts on non-target species. Repeated mowing of spot infestations of goat grass prior to seed maturation may also be effective.
- **Purple star-thistle.** This species is known to occur on the Mulas Dairy lands. This species is rated as moderate priority invasive species by Cal-IPC (2024); this plant prevalent throughout the in disturbed and over grazed grasslands southern Sonoma County. Unlike yellow star-thistle, this plant is generally unpalatable to livestock at most life stages, and in some areas, dense stands of this weed can preclude cattle from grazing. However, goats have been used to control this weed in various ecological settings. Nevertheless, infestations can cause significant loss of forage. Purple star-thistle is typically a biennial species, with rosettes forming the first year and flowering the second year. Applying glyphosate (Round-Up®) in the late spring-early summer on

the rosettes and early blooming plants after adjacent desirable annual species have set seed is an effective control (Amme 1985). Care must be taken to limit this treatment to areas devoid of native perennials because this herbicide is non-selective. Effective selective herbicides include clopyralid (Transline®) and aminopyralid (Milestone®). Areas to be treated should be mowed in the early spring before seed set to remove standing purple star-thistle flowers and open the treated areas to grazing (Witham 2006). Herbicides should be applied site-specific to minimize impacts as they can affect desirable, non-target broadleaved plants.

- **Yellow star-thistle.** This species is known to occur on the Mulis Dairy lands and is rated as a high-priority invasive species by Cal-IPC (2024). A combination of techniques is most effective in controlling this annual invasive species, including grazing, mowing, burning, herbicide use, and biological controls. Mid- to late spring grazing (May-June), before the plant has produced spines, but after bolting, may control seed production and spread to a limited degree (Thomsen et al. 1996). Early summer grazing can be expected to reduce the number of flowers and seed production.

When the Land Manager determines that yellow star-thistle infestations threaten the Conservation Easements' biological integrity, a more focused management approach may be implemented. Under this approach, the infested area could be separated with temporary fencing. Grazing would be postponed within the enclosure to allow growth and elongation of the grasses and star-thistle, and then high-intensity grazing would be applied during the period when the star-thistle "bolts" or begins to emerge from the rosette and flower before the development of the spines. Repeated treatments would be required to maintain that control. Extra livestock management would be required to keep animals at the site past the normal grazing period, maintain the fencing, and manage the animals. If the Land Manager deems it appropriate, sheep or goats may be used instead of cattle for intensively managed grazing treatment of invasive species. In small areas where grazing is not feasible, mowing during the same bolting period will be used to control yellow star-thistle.

The Land Manager will also have the option to use one or more of the biological control agents reviewed by the U.S. Department of Agriculture (USDA) and UC ANR (2007) for yellow star-thistle. Two weevils (*Bangasternus orientalis* and *Eustenopus villosus*) and two flies (*Urophora sirunaseva* and *Chaetorellia succinea*), have proven to cause significant seed destruction in sufficient numbers UC ANR (2007). Biological control approaches for control of yellow star-thistle would be developed by the Land Manager in close consultation with and with the approval of the USDA and the California Department of Agriculture.

Finally, herbicides such as Round-Up®; 2,4-D; Dicamba; or Garlon 3A® can be used to control infestations of yellow star-thistle if applied by personnel with a QAL prior to seed set. Clopyralid (Transline®) and aminopyralid (Milestone®) are effective on yellow star-thistle as both pre- and post-emergent. They are most effective when applied to the early rosette stage in January or February.

- **Perennial pepperweed.** This species is currently known to occur along Schell Creek and in other wetlands in the area. Perennial pepperweed is a 3-8 feet tall, highly invasive herbaceous perennial in the mustard family. It readily invades and becomes dominant in various wetland

habitats such as riparian areas, marshes, seasonal wetlands, and adjacent upland areas. Other populations of this plant may occur in the streams and other drainages on the site.

This species is a high priority for control because it spreads quickly and forms a monoculture which can cause significant degradation of wetland habitats. Heavy grazing or mowing in the winter and early spring (January-March) when leaves are first emerging may be partially effective in controlling this plant. An early grazing season is necessary because most herbivores will not consume perennial pepperweed once stem elongation begins (Young et al. 1995). Defoliation by mowing or repeated grazing may be followed by spraying the re-sprouting plants from mid-March through mid-May with a form of glyphosate (Rodeo®) that is approved for use in aquatic sites as that was shown to be more effective than herbicide use alone (Renz and DiTomaso 2004). Since glyphosate is a non-selective herbicide, it should be applied by wicking or site-specific spot spraying to minimize impacts on non-target species. Selective herbicides that have proven effective on this species may also be used, especially chlorosulfuron (Telar®), which should not be used near standing water. Treatments should be terminated before seeds mature in June or July. Repeated treatments will probably be necessary to eradicate perennial pepperweed.

- **Italian thistle.** This weed is considered to have moderate invasiveness. It is a winter annual forb commonly found in disturbed sites, roadsides, pastures, and annual grasslands throughout much of California (Cal-IPC 2024). Small patches of Italian thistle can be controlled by hand-pulling the plants. This is best conducted before the plants bloom; plants should be cut at least 4 inches below the soil surface. Mowing is not reliable because the plants can still bloom after being cut (Bossard et al. 2000). Italian thistle responds to herbicides (glyphosate, 2,4-D ester, MCPA) only while the plants are small (Wheatley and Collett 1981). Grazing and controlled burns may help control this weed, but more research is needed.
- **Stinkwort.** This species is a fall-flowering, sticky, aromatic annual rapidly expanding its range in California. This species was first found in California in 1984 in Santa Clara County. Since then, it has rapidly expanded its range along roadsides, bay land levees, manipulated riparian areas, vacant lots, pastures, and non-native grasslands from Santa Clara, Alameda, and Contra Costa counties to surrounding counties (Cal-IPC 2024). Stinkwort can be controlled by hand-pulling, hand-mowing using weed whackers, or hoeing due to its relatively shallow root system. Removed plants should be bagged and taken off-site. Mowing a second time after the soil has dried out may provide additional control. Information regarding grazing as a control method is lacking, but the plants are likely not very palatable to livestock. Herbicides may also be used for control, particularly ester formulations of growth regulator herbicides (2,4-D, MCPA, triclopyr, etc.; DiTomaso et al., 2013). Any herbicides must be approved for aquatic use and carefully applied to avoid potential impacts on native flora and fauna.

Task 8: Non-native Wildlife Detection and Control. Currently, non-native wildlife does not appear to threaten the integrity of the biological resources on site. However, one pond slider was observed by LSA biologists in a nearby pond in 2023 and other invasive non-native wildlife, such as American bullfrogs, cannot be ruled out. To prevent non-native wildlife from becoming a threat to the biological resources in the Conservation Easement, the Land Manager, supported by a qualified

biologist, as part of their ongoing monitoring, shall evaluate the presence of non-native wildlife, including species identification and determining the severity of infestations.

- Interim Management Period: Whenever the criteria below occur have been triggered during the interim-term management period.
- Long-term Management Period: Whenever the criteria below have been triggered during the long-term management period.

Criteria to trigger implementing non-native species eradication program. If non-native pests are observed in the pools during general observations, the Land Manager will evaluate whether a non-native species eradication program would be effective, which could include pool draining to eliminate perennial or near-perennial conditions, manual trapping, and depredation and/or installation of physical barriers. Control of American bullfrogs, if necessary, will be closely coordinated with USACE, USFWS, and RWQCB to ensure that take of CRLF is avoided.

The eradication program shall include measurable objectives for target species.

- Responsible Entity: Land Manager with the support of a qualified biologist, in cooperation with USACE, USFWS, and RWQCB.
- Performance Objective: Maintain nonnative wildlife species that threaten CRLF and other native species to levels commiserate with adjacent lands.

Task 9: Disease Control. In order to minimize the spread of disease into the Conservation Easement, all boots, waders, nets, and other equipment that will come into contact with water in the ponds shall be disinfected before sampling. Surveyors shall review and implement the most current disinfection procedures recommended by USACE, USFWS and RWQCB.

The following minimum guidelines shall be implemented where they do not conflict with USACE, USFWS, or RWQCB guidance:

- a. All organic matter shall be removed from nets, traps, boots, vehicle tires, and other surfaces that have come into contact with water or potentially contaminated sediments.
- b. Boots, nets, traps, etc., shall be scrubbed, sprayed, or dipped in a bleach solution (0.5 to 1.0 cup per gallon of water) and rinsed with clean water between study sites. Do not clean equipment in the immediate vicinity of a pond or wetland. Take care to remove all traces of the bleach solution (or other approved disinfectant) before entering the next aquatic habitat.
- c. When working at sites with known or suspected disease problems, disposable gloves shall be worn and changed between handling each animal. Gloves shall be wetted down with water from the site or distilled water prior to handling amphibians. Remove the gloves by turning them inside out to avoid cross-contamination.
- d. Used cleaning materials shall be disposed of appropriately, off site.

The presence of the infectious disease chytridiomycosis caused by the fungus *Batrachochytrium dendrobatidis* (Bd) will be monitored. The possibility of infection by a second chytrid fungus *B. salamandrivorans* (Bsal) will also be monitored. During larval sampling under Task 1, biologists will inspect larvae for signs of infection including: (1) reddening or hemorrhages in ventral skin (near vent); (2) bloating or fluid accumulation under the skin; (3) the presence of pinpoint or large skin ulcers; and (4) the larvae appear to be weak, swimming poorly, or floating upside down. If such signs are observed, monitoring biologists will collect skin swabs from up to ten random individuals. Skin swab collection and sample preservation procedures will be conducted as per those outlined in Pessier and Mendelson 2017); samples will be laboratory analyzed for the presence of Bd and Bsal.

- Interim Management Period: Ongoing.
- Long-term Management Period: Ongoing.
- Responsible Entity: Land Manager in consultation with a qualified biologist.
- Performance Objective: Prevent and control disease within the Conservation Easement.

4.3 UPLAND GRASSLAND MANAGEMENT

Perennial grasslands throughout the Bay Area were converted to non-native annual grasslands during the early settlement period of the late 1700s and early 1800s. This vegetative type conversion resulted from the accidental introduction and spread of vigorous Mediterranean annual grasses by European settlers and livestock, which replaced the native perennial grasses already weakened by prolonged overgrazing, other human disturbances, and extended drought (Heady 1988). The introduced annual grasses have several adaptations to compete successfully against the native perennials, including the capability to produce seed under adverse grazing pressures and weather regimes (Menke 1992).

Thatch consists of dead plant material in various stages of decomposition. While some thatch is important to cover the soil and protect seeds, the thick buildup of thatch from the non-native annual grasses over the years can decrease grassland productivity and germination of annuals and adversely affect native species diversity. Thatch removal is critical to maintaining the ecological function of Conservation Easement grasslands. Opening up of the herbaceous canopy by appropriately timed removal of thatch can promote the growth of native perennial grasses and native forbs by increasing light penetration, reducing invasive weed species, and availability of nutrients and moisture, thereby increasing seed germination and seedling establishment. Prescribed burning is an effective tool for thatch reduction, but it is often not easily implemented due to existing air quality restrictions, safety concerns, and can potentially adversely affect CRLF if fire occurs during periods of above upland movement of these species.

Grazing by livestock (e.g., cattle and goats) is also highly effective for controlling thatch buildup. Cattle and goats are typically effective at consuming taller grass and the more palatable non-native annual grasses allowing native plants and the species that depend on them to thrive. Available research and informed observations indicate that livestock grazing is suited to maintain

wetland hydrology and ecosystem biodiversity effectively and to preserve or enhance habitat conditions for special-status plants and animals associated with wetlands and uplands (Robins and Vollmar 2002, Pyke and Marty 2005, Marty 2005).

Low to moderate grazing levels seem to support California ground squirrels' population dynamics and burrow density (Fehmi et al. 2005). In contrast, grass with significant thatch build-up may make dispersal more difficult for migrating CRLF and has been associated with declines in ground squirrel populations (EDAW 2008; Ford et al. 2013). As indicated above, livestock grazing can also increase the ponding duration of habitat ponds, may increase species diversity and native species abundance, and may lessen the effects of extended drought periods due to climate change in portions of the species range (Marty 2005; Pyke and Marty 2005). However, heavy grazing that creates bare soil may increase the predation or desiccation risk of dispersing CRLF. Cattle may trample individual frogs as they disperse over the landscape or may destroy egg masses located along pond edges. Finally, heavy cattle use near ponds may affect water quality and physical characteristics of ponds (USFWS 2004).

Element A3. Upland Vegetation Management

Task 10: Upland Vegetation Management. While livestock grazing is desirable for vegetation management, mowing provides an alternative measure to reduce thatch and maintain desired upland conditions for CRLF movement, controlling most invasive plant species, and to promote fossorial mammal populations.

- Interim Management Period: Annually.
- Long-term Management Period: Annually.
- Responsible Entity: Land Manager with the support of a qualified biologist.
- Performance Objectives: Herbaceous vegetation cover for at least 85% of the grasslands shall be patchy with some areas to less than 1 inch and other areas with 3 to 5 inches of vegetation.
 - Target Residual Dry Matter (RDM) levels by September 1 each year shall in the range of 500 to 750 pounds per acre if the site is grazed.
 - If livestock grazing is not practicable the upland area shall be mowed annually, generally in mid to late May, depending on amount and timing of rainfall.

4.4 SECURITY, SAFETY, AND PUBLIC INVOLVEMENT

The Conservation Easement does not have any direct public access and shall not have general or regular public access. The overall Property containing the Conservation Easement is currently fenced around the Property perimeter. Signs notifying the public of the site access restrictions will be placed on the Property perimeter fencing. Research and/or other educational programs or efforts may be allowed subject to the permission from the Land Manager and provided that all appropriate

permits are obtained from USACE, USFWS, and RWQCB. Research or educational programs are not specifically funded or a part of this Management Plan.

Element B1. Security

Objective 1: Discourage unauthorized access to protected areas.

Task 11: Signage Installation. Signs notifying the public of access restrictions will be posted and maintained on the perimeter fencing containing the Conservation Easement during the interim management period. Signs will be placed at regular intervals along the boundary. The maximum interval between signs will to be determined. The signs shall read: “No Trespassing: Habitat Preservation Area” in English and Spanish or have similar language.

- Interim Management Period: Signs are first erected then ongoing if signs need maintenance and/or replacing.
- Long-term Management Period: Ongoing if signs need maintenance or replacing.
- Responsible Entity: Land Manager.
- Performance Objective: Maintain appropriate signage to ensure it is posted following common practices and law in the Conservation Easement.

Task 12: Monitor and Maintain Conservation Signage. Annually record the condition of signage in the Conservation Easement. The location, type, and recommendations to implement signage repair or replacement, if applicable, will be recorded. Signs will be replaced as needed (Task 13 above).

- Interim Management Period: Annually.
- Long-term Management Period: Annually.

Monitoring signage will be included with Task 15 Trash and Trespass Monitoring and Management.

- Responsible Entity: Land Manager.
- Performance Objective: Maintain an annual record of signage condition and replace as needed.

Element B2. Trash and Trespass

Objective 1: Protect habitat within the Conservation Easement by removing trash and rectifying trespass impacts.

Task 15: Trash and Trespass Monitoring and Management.

Primary Task: During each site visit, according to the schedule below, record occurrences of trash and trespass. Record type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and trespass impact.

Secondary Task: Remove trash and rectify trespass impacts as needed and determined by the Land Manager.

- Interim Management Period:

Primary Task: Two site visits per year.

Secondary Task: Annually as needed.

- Long-term Management Period:

Primary Task: Two site visits per year.

Secondary Task: Annually as needed.

- Responsible Entity: Land Manager.

- Performance Objectives:

Objective for Primary Task: Annual record of trash and trespass compliance.

Objective for Secondary Task: Trash and trespass incidents corrected, and prevention measures implemented.

Element B3. Fire Hazard Reduction

Wildfires and prescribed burns could adversely affect CRLF, especially during the late early summer may be moving above ground. Frequent uncontrolled fires over a period of several years can also result in loss native species and an increase in weedy, non-native species. Primary human-related ignition sources on adjacent lands subject to livestock grazing include prescribed fires and vehicle use related to land management activities. Wildfire fuel loads will be reduced as needed by normal grazing and where necessary, focused grazing.

Objective 1: Maintain the site as required for fire control while limiting impacts to biological values.

Task 16: Wildfire Prevention and Management. Graze or mow grassland annual (see Task 10) to reduce vegetation fuel reduction. Costs are included under Vegetation Management Task 10.

- Interim Management Period: Ongoing as needed.

- Long-term Management Period: Ongoing as needed.

- Responsible Entity: Land Manager.

- Performance Objective: See Task 10, above.

Element B4. Mosquito Abatement Management

Although there are no nearby sensitive receptors, mosquito abatement management may be necessary if any future mosquito control methods are needed on the Mulas Dairy lands. Mosquito control remains an issue due to heightened concerns over West Nile Virus, other mosquito borne diseases, and potential harm to the public and wildlife. Research has shown that stocking ponds and waterways with mosquitofish (*Gambusia affinis*) to control mosquito larvae populations can negatively impact native aquatic species.

The Marin/Sonoma County Mosquito and Vector Control District manages mosquito control in Marin and Sonoma counties and control efforts are managed under integrated vector management practices.

Objective 1: Protect sensitive receptors and vulnerable pond species from mosquitofish and other mosquito control methods that could harm CRLF or other special-status species.

Task 17: Coordinate with the Marin/Sonoma County Mosquito and Vector Control District. If mosquitos are identified as a threat to sensitive receptors, the Land Manager shall coordinate with the Marin/Sonoma County Mosquito and Vector Control District (District) to develop techniques for the prevention and control. These techniques will be implemented on site in compliance with the District's integrated vector management practices and in consideration of applicable threatened and endangered species Recovery Plans (e.g., USFWS 2002). This may include provisions to not release mosquito fish or use other control methods that could adversely affect CRLF or other special-status species. The Land Manager shall consult with and receive written approval from USACE USFWS, and RWQCB prior to treatment on the Conservation Easement with any pesticides, including hormone-disrupting compounds, or other physical or biological controls.

- Interim Management Period: Ongoing as needed.
- Long-term Management Period: Ongoing as needed.
- Responsible Entity: Land Manager.
- Performance Objective: Ensure the mosquito abatement activities do not adversely impact CRLF or special-status species while still allowing abatement to occur.

4.5 INFRASTRUCTURE AND FACILITIES

Element C1. Fences and Gates

Objective 1: Fence Maintenance

The Easement Holder will monitor the condition of the fence that defines the outer perimeter of the Preserve annually and ensure that it and all included gates are in good repair, effective, and repaired or replaced as necessary.

Task 18: Infrastructure Monitoring. Inspect the condition of fences and gates, according to the schedule below. The inspection will be used to formulate recommendations to implement facility repair or replacement, if applicable. Cost for this task is included in Task 15 (Trash and Trespass Monitoring and Management).

- Interim Management Period: Annually during each site visit.
- Long-term Management Period: Annually during each site visit.
- Responsible Entity: Land Manager.
- Performance Objective: Fences and gates condition is monitored and recorded.

Task 19: Fence and Gates Installation and Repair. Wildlife friendly fencing, minimum 4 wire, barbless cable, will be installed around the perimeter of the conservation easement. Fences and gates will be repaired as needed.

- Interim Management Period: Repairs are assessed annually and performed as needed.
- Long-term Management Period: Repairs are assessed annually and performed as needed.
- Responsible Entity: Land Manager.
- Performance Objective: Fences and gates are maintained in good condition.

Task 20: Fence and Gate Replacement. Fencing will be replaced on a projected 30-year basis during the long-term management period, as shown in the schedule below. The cost and replacement periods of replacing fencing and gates are provided in Appendix B. The solar well exists in the northern portion of Conservation Easement 1.

- Interim Management Period: As needed (unlikely fencing will be replaced during this period).
- Long-term Management Period: On a 20 to 30-year basis or as needed to achieve performance objective.
- Responsible Entity: Land Manager.
- Performance Objective: Fences and gates are replaced to ensure they remain in good condition.

4.6 REPORTING AND ADMINISTRATION

Element D1. Annual Report

Objective 1: Provide annual reports on all conservation easement area compliance, Management Plan compliance, and general site conditions to the USACE, USFWS, and RWQCB, and other appropriate parties including the Land Manager as applicable.

Task 21: Conservation Easement Compliance. GSLC shall complete an annual compliance monitoring report, once the Conservation Easement is recorded, containing results of Conservation Easement Area inspections (monitoring of conservation easement compliance in comparison with baseline condition's report). Annual reports will include the following information and be provided to the Land Manager, USACE, USFWS, and RWQCB:

- Overview of the status/conditions of the Conservation Easement, including any physical changes (e.g., restoration activities or other natural or anthropogenic effects on the resources in the Conservation Easement or adjacent lands).
- A checklist documenting compliance with prohibited actions under the conservation easement, including photo-documentation of representative conditions and facilities and other standards compared with the baseline report.
- **Note:** Information on the status of conservation easement endowment (e.g., fees paid, interest earned, percent funded) will be provided by the Long-Term Endowment Holder (GSLC).
- Interim Management Period: Annually.
- Long-term Management Period: Annually.
 - Responsible Entity: GSLC (Grantee).
 - Performance Objective: Annual compliance report ensuring compliance with the conservation easement.

Task 22: Management Plan Compliance. Once the Conservation Easement is recorded, the Land Manager shall complete an annual monitoring report on management actions and monitoring for the Conservation Easement Area. The Management Plan monitoring report shall include any interim reports or documentation of qualified biologists or rangeland managers retained by the Land Manager in compliance with monitoring requirements. The reports will be submitted to the USACE, USFWS, and RWQCB by January 31st each year, starting in Year 1. Annual Management Plan reports by the Land Manager will include the following information:

- Each management task (Tasks 1-21 above), a description of the activities conducted to complete each task, and the status of each task.
- The status of the management endowment as provided by the endowment holder (e.g., fees paid, interest earned, percent funded).
- The results of any biological monitoring or studies conducted on the Conservation Easement.
- The results of the annual RDM assessment.
- A brief description of all management tasks conducted on the Conservation Easement.

- A brief description of any problems encountered in managing the Conservation Easement.
- A description of any proposed changes to the Management Plan.
- A description of management tasks planned to be undertaken according to the Management Plan in the coming year.
- Recommended maintenance practices, repairs, and other actions necessary to protect the habitat of CRLF in the Conservation Easement.

Following submission of the annual report, representatives of the Land Manager and, if possible, regulating agencies shall participate in a conference discussing the findings of the annual reports if any noncompliance issues are noted, or changes in management tasks are necessary for the upcoming year.

- Interim Management Period: Annually.
- Long-term Management Period: Annually.
- Responsible Entity: Land Manager.
- Performance Objective: Ensure compliance with the Conservation Easement and this Management Plan. Ensure compliance with the Biological Opinion (USFWS OSESMF00-2017-F-0544-R00I-1).

Task 23: Data Management. As part of annual report preparation, a technician and/or GIS specialist will assist in data entry, compilation, and analysis. Data management activities will also help guide other management and monitoring activities within the conservation easement. GIS data files, and database information where applicable or requested by USACE, USFWS, or RWQCB, shall be provided to the USACE, USFWS, or RWQCB with each annual report.

- Interim Management Period: Annually.
- Long-term Management Period: Annually.
- Responsible Entity. The Land Manager will be supported by a qualified biologist or geospatial data specialist.
- Performance Objective: Maintain database for Conservation Easement conservation easement. Provide data GIS data files and database information to Caltrans, USACE, USFWS, and RWQCB annually.

5.0 TRANSFER, AMENDMENTS, AND NOTICES

5.1 TRANSFER

Any subsequent transfer of responsibilities under this Management Plan will be pursuant to the Conservation Easement Deed recorded with the county of Sonoma.

5.2 LAND MANAGER REPLACEMENT

Any replacement of the Land Manager under this Management Plan will be pursuant to the Conservation Easement Deed recorded with the county of Sonoma.

5.3 AMENDMENTS

While the Management Plan has been designed to maximize flexibility for continuing the Conservation Easement, Grantee, the Land Manager, and USACE, USFWS, and RWQCB may meet, upon the request of any one of them, to amend the Management Plan to better meet management objectives and preserve the habitat and conservation values of the Conservation Easement.

Amendments to the Management Plan may be needed from time to time. Such amendments could include, but are not limited to, the following:

- Notices of changes in Land Manager, Conservation Easement Grantee, or third-party beneficiary contacts and representatives.
- Proposed changes to performance objectives.
- Adjustments to the monitoring and management protocols that could potentially trigger the need to adjust a performance objective.
- Proposed implementation of any management action that requires USACE, USFWS and/or RWQCB approval (e.g., prescribed burning, fuel breaks within the CE areas).
- Adaptive Management requires an amendment to this Plan unless it is minor in nature as specified in Section 4.1.3., including the following requirements:
- Amendments may be proposed by the Land Manager, Conservation Easement Grantee, or USACE, USFWS, and RWQCB.
- The party proposing an amendment shall circulate the proposed amendment to the other parties with an explanation of why the amendment is necessary or desirable and a description of why the party believes the impacts of the proposed amendment are necessary or are more beneficial than, and are not significantly different from, those described or anticipated in the Management Plan.
- Amendments require written approval by the Land Manager, Conservation Easement Grantee, and Regulatory Agencies.

The reviewing parties shall each respond in writing within 60 calendar days of receipt of the request. The responses shall: (a) concur with the proposed amendment; or (b) identify additional information necessary to enable the parties to approve or disapprove the amendment; or disapprove the amendment. If any of the parties disapprove the proposed amendment, it shall include in its written response an explanation of its determination, and the amendment will not be implemented. Any proposed amendments will be designed with input from all parties and approved in writing by USACE, USFWS, and RWQCB.

If the USACE, USFWS, and RWQCB determine, in writing, that continued implementation of the Management Plan would jeopardize the continued existence of a state or federally listed species, any written amendment to this Management Plan, determined by either the USACE, USFWS, or RWQCB as necessary to avoid jeopardy, shall be a required management component and shall be implemented by Land Manager.

5.4 NOTICES

Any notices regarding this Management Plan shall be directed as follows:

Property Owner

Mulas Family
2034 Fremont Drive
Sonoma, CA 94576
Contact: Mike Mulas
Phone: (707) 695-8930
Agent: Tony Georges
Phone: (415) 602-4151

Conservation Easement Holder

Golden State Land Conservancy (GSLC)
3558 Round Barn Boulevard, Suite 200
Santa Rosa, CA 95403
Contact: Devin Best, Executive Director Phone:
(805) 801-9063 / Email: dbest@gslc.us

Third Party Beneficiaries

United States Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Suite W-2605
2800 Cottage Way, Sacramento, CA 95825
Attn: Conservation Banking Division
Tel: (916) 414-6600

United States Army Corps of Engineers
San Francisco District
450 Golden Gate Ave 4th floor, San Francisco CA
94102
Attn: Chief, Regulatory Division
(cespn-rg-submittal@usace.army.mil)
(415)-503-6693

San Francisco Bay Regional Water Quality
Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: Program Manager, Water Quality
Certification Program
(510) 622-2300
(rb2-sfbayexecsupport@waterboards.ca.gov)

California Department of Transportation
District 4
111 Grand Avenue, Oakland CA, 94623-0660

P.O. BOX 23660, MS-8E
Attn: Office Chief, Office of Environmental
Compliance and Stewardship

6.0 FUNDING AND TASK PRIORITIZATION

6.1 FUNDING

Appendix B summarizes the framework for the anticipated costs for interim and long-term management of the Conservation Easement. Costs for the Conservation Easement include estimates of time and funding needed to conduct the interim and long-term monitoring and management tasks described above, such as site visits, surveys, reporting, weed removal, trash removal, fence repair, and a prorated calculation of funding needed to replace the fences and boundary markers. Reference will be made to a completed Appendix B for all initial capital costs, interim management period annual costs, and long-term management period costs for the Conservation Easement.

Adaptive management, by definition, does not include predetermined actions but rather identifies new responses based on the outcome of monitoring. Because adaptive management is an inherently experimental process, funding for adaptive management must be available in a flexible and sustainable manner. The Conservation Easement endowment includes a to-be-determined percent annualized fund dedicated to adaptive management actions. This adaptive management fund will be allowed to build over time and can only be used to fund management actions approved by USACE, USFWS, RWQCB, and the Land Manager.

Golden State Land Conservancy will hold the long-term management endowment principal and interest monies. These interest monies will fund the long-term management, enhancement, and monitoring activities on the Conservation Easement Area in a manner consistent with this Management Plan. In accordance with the Endowment Agreement, Golden State Land Conservancy will disburse funds to the Land Manager.

Golden State Land Conservancy will hold a second endowment for conservation easement compliance, which will be provided in Appendix C. These interest monies will fund the monitoring activities required to document annual compliance with the terms of the Conservation Easement and consistent with LTA standards (Task 23). Appendix C shows the endowment required and annualized funding required for conservation easement compliance monitoring.

6.2 TASK PRIORITIZATION

Unforeseen circumstances may necessitate prioritization of tasks if insufficient funds are available to accomplish all tasks. Final task priorities will be determined in consultation with Caltrans, USACE, USFWS, RWQCB, the Land Manager, and the Conservation Easement Holder and authorized in writing by all parties. These parties will meet and confer to discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks will be prioritized in this order: (1) those required by a local, State, or federal agency; (2) those necessary to maintain or remediate habitat quality; and (3) tasks involving monitoring of resources. Resources that have been shown to be stable or increasing will have lower priority for monitoring than those exhibiting downward trends. Equipment and materials necessary to implement priority tasks will be obtained as needed to meet objectives. If a longer-term solution is needed, an amendment to this Management Plan may be made pursuant to the amendment process outlined in Section 5.3.

7.0 LITERATURE CITED

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APPENDIX A

FIGURES

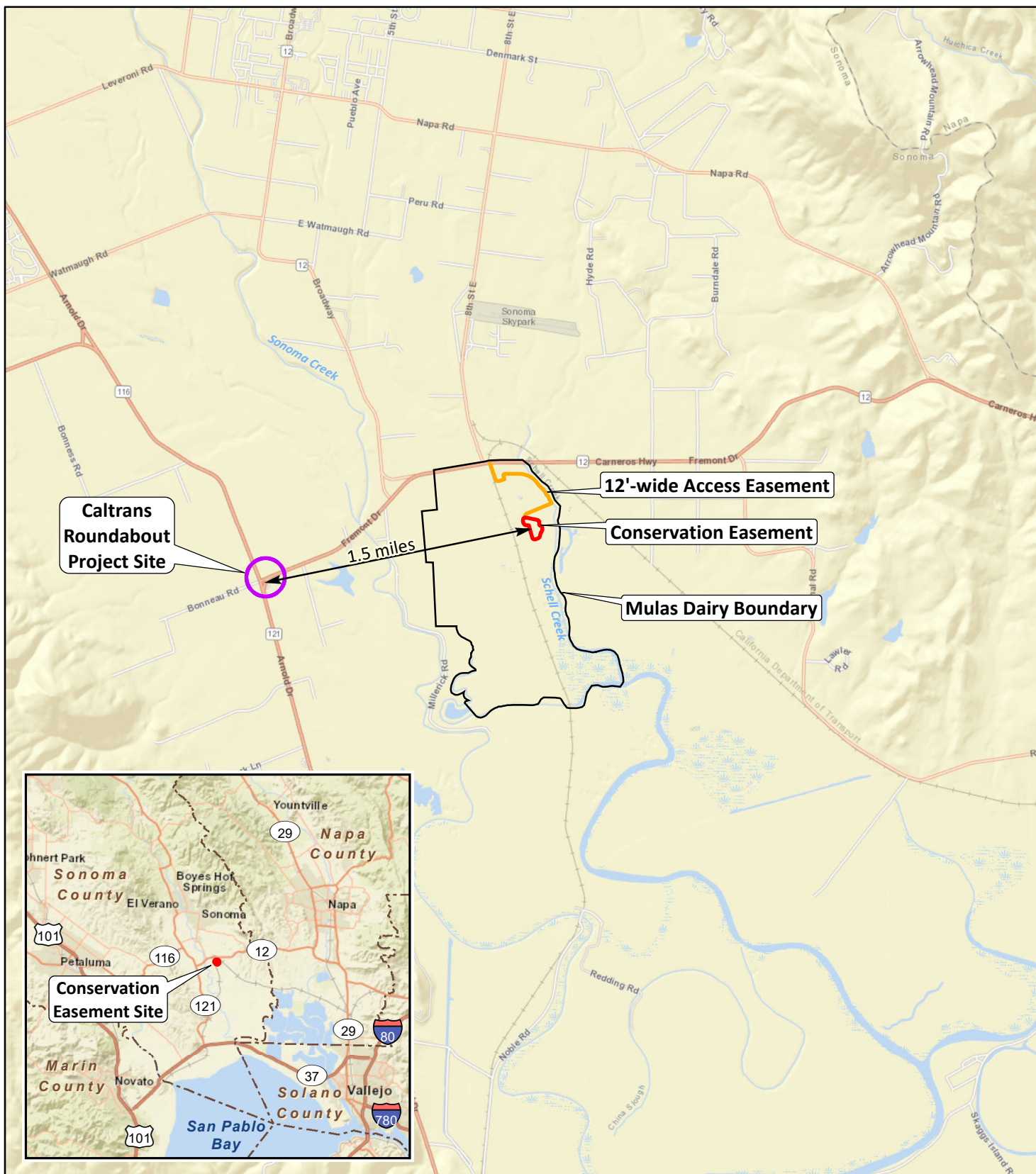
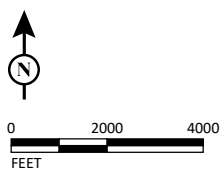


FIGURE 1

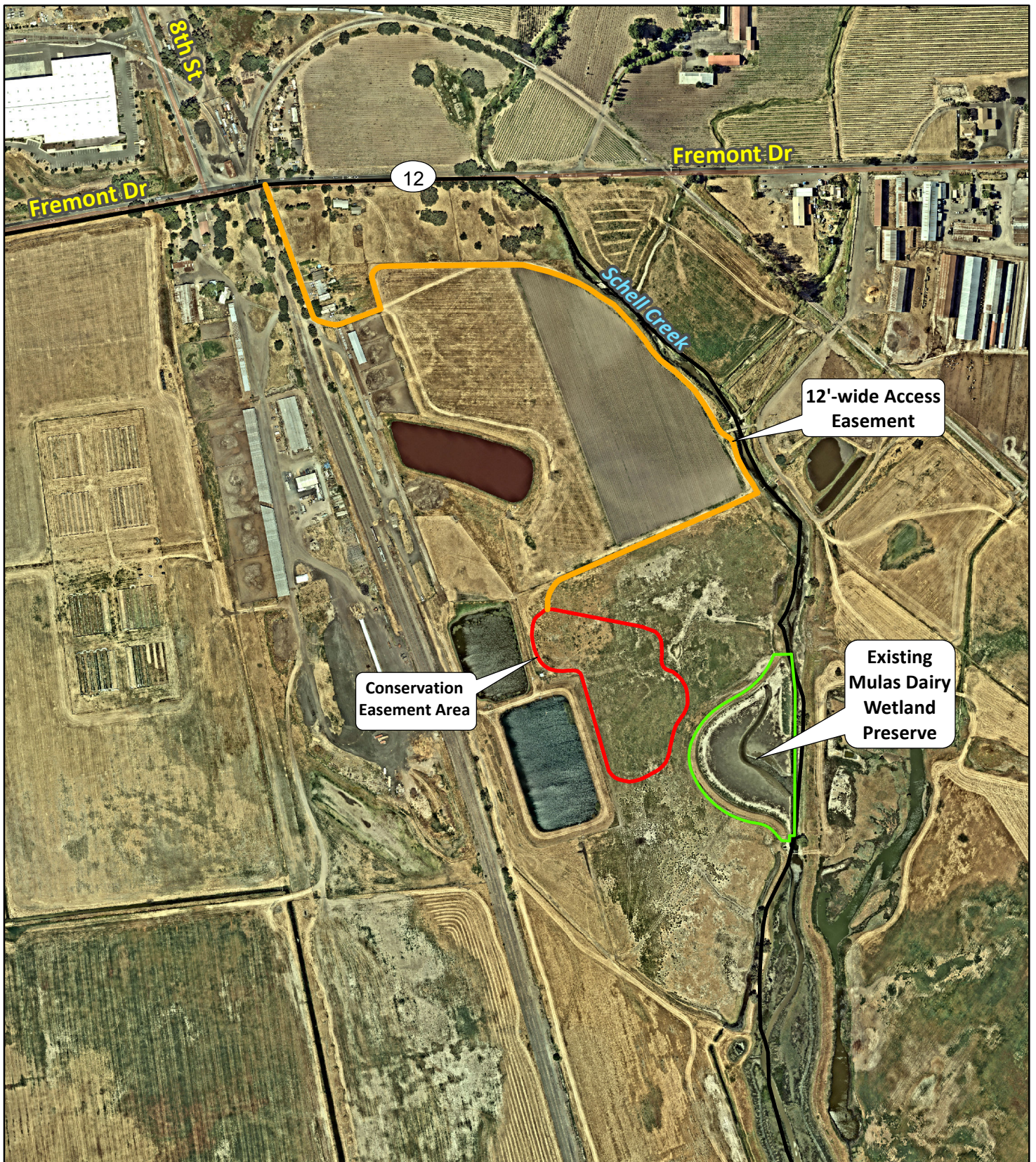
LSA



SOURCE: ESRI StreetMap North America (2012).

I:\20231330\GIS\Maps\LTMP_2024-06\Figure 1_Regional Location.mxd (6/25/2024)

State Route 116/121 Roundabout
Intersection Improvement Project
Mulas Dairy, Sonoma County, California
Regional Location



LSA

LEGEND

- Conservation Easement Area (4.75 ac)
- 12'-wide Access Easement
- Existing Wetland Preserve



0 250 500
FEET

SOURCE: A. Georges (10/2023); Nearmap (06/2023).

I:\20231330\GIS\Maps\LTMP_2024-06\Figure 2_Proposed Mitigation and Access Easement.mxd (6/25/2024)

FIGURE 2

*State Route 116/121 Roundabout
Intersection Improvement Project
Mulas Dairy, Sonoma County, California
Proposed Conservation and Access Easement*

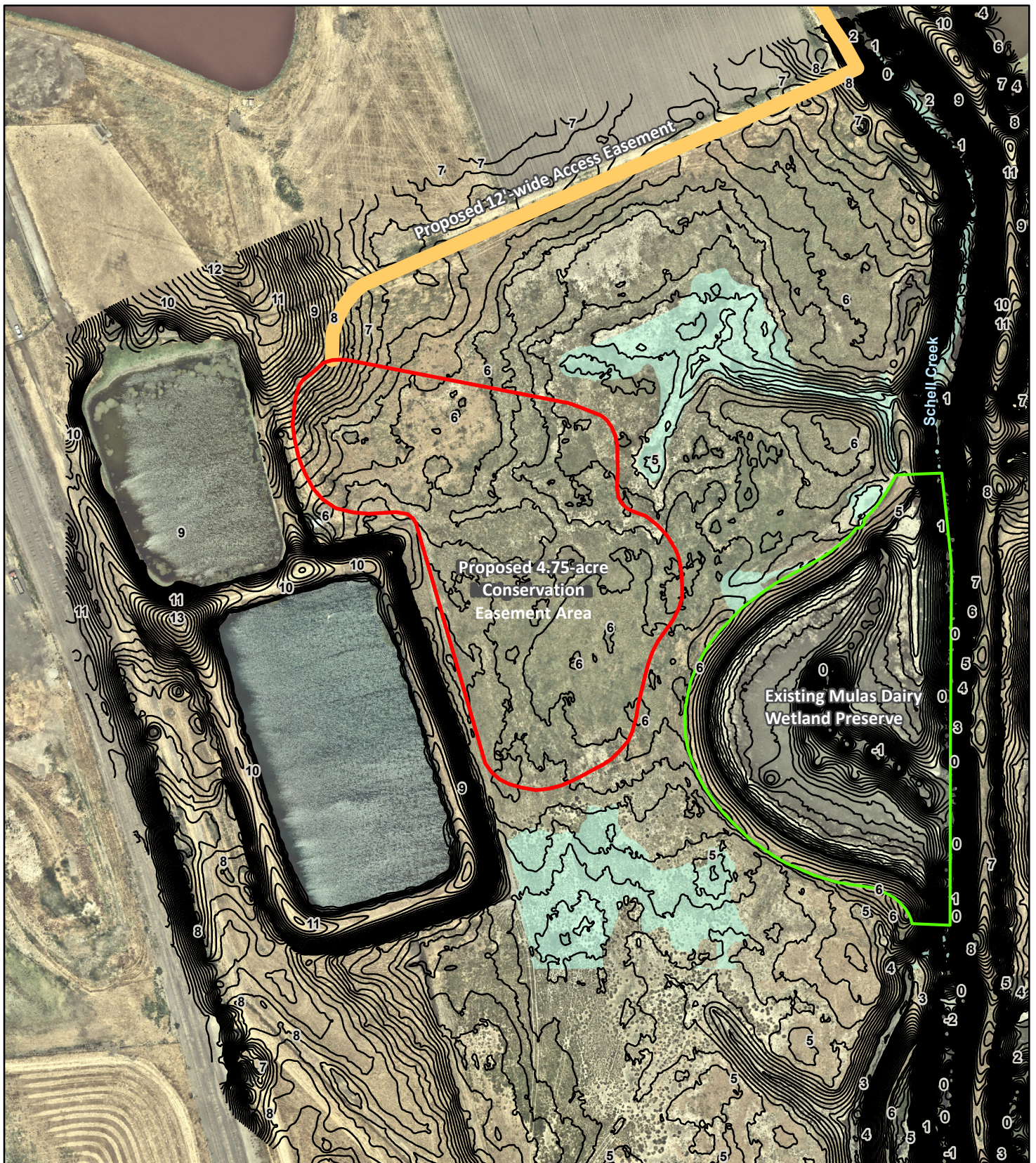
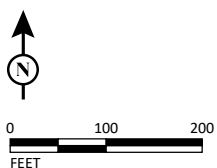


FIGURE 3

LSA

LEGEND

- Proposed Conservation Easement Area (4.75 ac)
- Proposed 12'-wide Access Easement
- Mulas Dairy Wetland Preserve
- Elevation Contours (0.2-foot interval)
- Existing Wetlands (11/2017)



SOURCE: LSA (11/2017 and 04/2023); Nearmap (06/2023)..

I:\20231330\GIS\Maps\LTMP_Tony\Figure 3_Existing Conditions.mxd (10/20/2023)

Caltrans Roundabout Milgaton Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Existing Conditions

Mulas Ranch 4.75-acre Red-legged Frog Mitigation Plan

0.9 acres of ponds:
50% of pond areas on perimeters excavated 18 inches deep.
50% of central pond areas excavated 24 inches deep.

0.1 acre total of refuge islands within each pond.
Each with an area equal to 10% of water surface with
24 inches of excavated material added.

3.75 acres of uplands contoured with excavated materials.

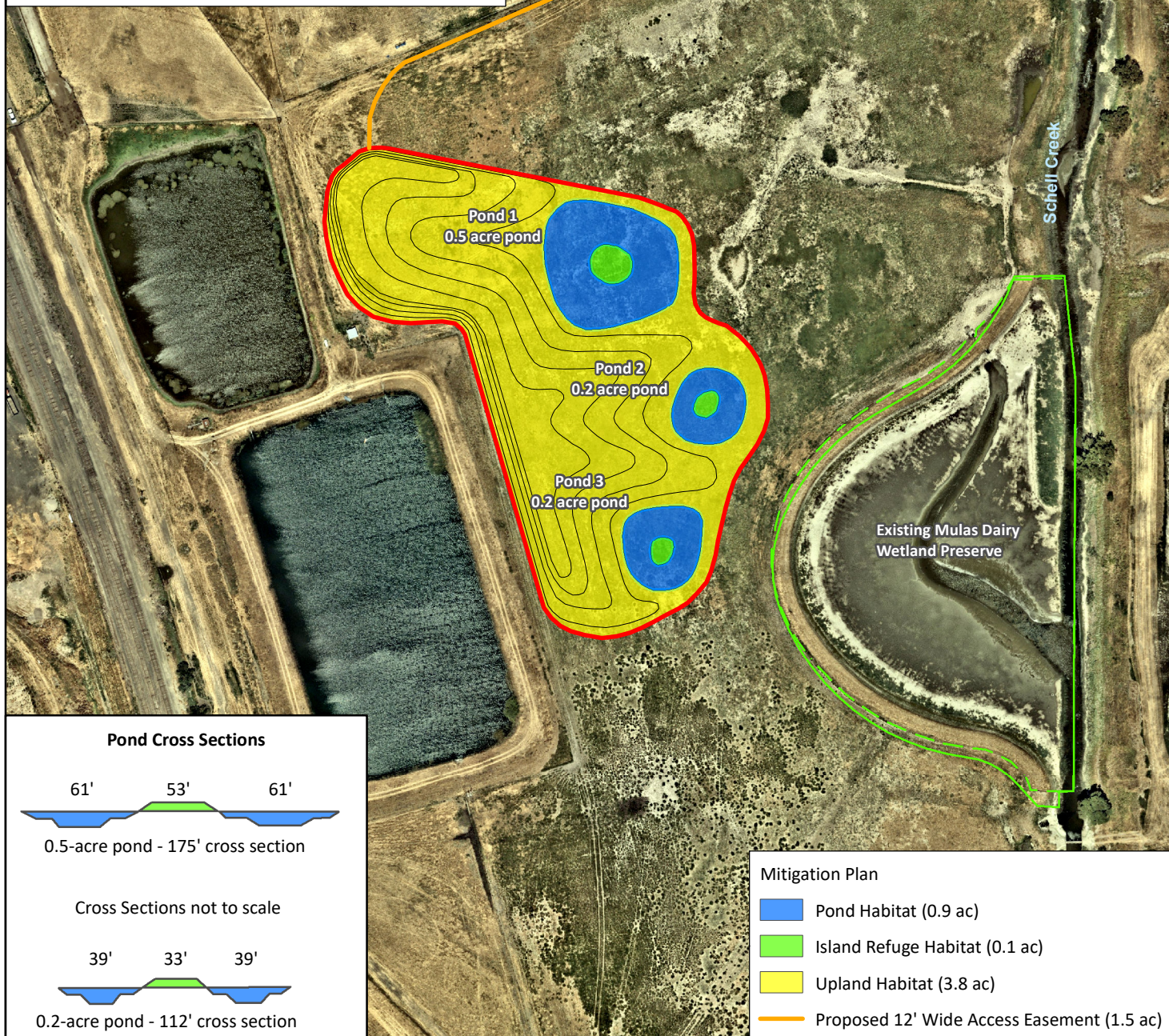
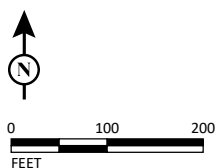


FIGURE 4

LSA



SOURCE: A. Georges (10/2023).

I:\20231330\GIS\Maps\LTMP_Tony\Figure 4_Mitigation Design with Cross Sections.mxd (10/20/2023)

Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Mitigation Design with Cross Sections

APPENDIX B

INTERIM MANAGEMENT PERIOD FUNDING AND LONG-TERM MANAGEMENT ENDOWMENT CALCULATIONS

116/121 Roundabout Mitigation Plan Costs Summary

Description	Cost
CE and Access Easement Acquisition	\$ 1,365,000.00
Due dilligence/closing costs (initially part of the temp restricted for Easement Holder)	\$ 10,000.00
Easement Holder Temp Restricted Fund	\$ 105,354.76
Easement Holder Endowment	\$ 166,271.80
Land Manager Temp Restricted Fund	\$ 100,617.00
Land Manager Endowment	\$ 756,566.26
TOTAL	\$2,503,809.82

116/121 Roundabout Mitigation Plan Costs CE and Access Easement

Description	Cost
CE and Access Easement Acquisition	1,365,000.00

116/121 Roundabout Mitigation Plan Costs for Interim Management Period

Interim Costs (Years 1-3)								
CATEGORY	RESPONSIBLE PARTY	SPECIFICATIONS FOR TASKS IN CONSERVATION AREA	UNITS	QUANTITY	COST/UNIT	PER YEAR COST	TOTAL NO. OF YEARS	TOTAL INTERIM PERIOD COST (MONITORING YEARS 1-3)
Element A1 Threatened and Endangered Plant and Animal Species Monitoring and Management								
Task 1: Monitor CRLF	Biologist	Two times per year	labor	20.00	\$130.00	\$2,600.00	3	\$7,800.00
	Land Manager	Oversight for surveys	labor	4.00	\$175.00	\$700.00	3	\$2,100.00
Task 2: Maintain Breeding Habitat Characteristics	Land Manager		labor	8.00	\$175.00	\$1,400.00	3	\$4,200.00
	Biologist		labor	4.00	\$130.00	\$520.00	3	\$1,560.00
Task 3: Monitor and Maintain CRLF Dispersal and Upland Habitat	Land Manager	Cost included in Task 1	labor		\$175.00	\$0.00	3	\$0.00
	Biologist	Cost included in Task 1	labor		\$130.00	\$0.00	3	\$0.00
Task 4: Coordinate with Easement Holder to protect CRLF and Western Pond Turtle Habitat	Land Manager		labor	4.00	\$175.00	\$700.00	3	\$2,100.00
Task 5: Encourage Monitoring for Rare, Threatened, Endangered, and Other Special-Status Plants and Animals and Potential Habitat Enhancement in the Conservation Areas	Land Manager		labor	1.00	\$300.00	\$300.00	3	\$900.00
Element A2 Invasive Species and Disease Monitoring and Control								
Task 6: Invasive Plant Species Monitoring and Mapping.	Biologist		labor	12.00	\$130.00	\$1,560.00	3	\$4,680.00
	Land Manager		labor	4.00	\$175.00	\$700.00	3	\$2,100.00
Task 7: Invasive Plant Species Control.	Biologist		labor	4.00	\$120.00	\$480.00	1	\$480.00
	Land Manager		labor	4.00	\$175.00	\$700.00	1	\$700.00
	Applicator		labor	8.00	\$200.00	\$1,600.00	1	\$1,600.00
	Applicator	Herbicide cost	expenses		\$200.00	\$200.00	1	\$200.00
Task 8: Non-native Wildlife Detection and Control.	Land Manager		labor	8.00	\$175.00	\$1,400.00	1	\$1,400.00
	Biologist		labor	8.00	\$130.00	\$1,040.00	1	\$1,040.00
Task 9: Disease Control.		Disinfectant, Labor included in Task 1	expenses	1.00	\$100.00	\$100.00	3	\$300.00
Element A3 Upland Grassland Management								
Task10:	Land Manager		labor	8.00	\$175.00	\$1,400.00	3	\$4,200.00

Interim Costs (Years 1-3)								
CATEGORY	RESPONSIBLE PARTY	SPECIFICATIONS FOR TASKS IN CONSERVATION AREA	UNITS	QUANTITY	COST/UNIT	PER YEAR COST	TOTAL NO. OF YEARS	TOTAL INTERIM PERIOD COST (MONITORING YEARS 1-3)
	Biologist	Summer Fall RDM/mid-winter grass height measurements conducted concurrent with Task 1 Field Assessment.	labor	4.00	\$130.00	\$520.00	3	\$1,560.00
	Contractor	Expenses for mowing	expenses	1	\$1,000.00	\$1,000.00	3	\$3,000.00
Element B1 Security								
Task 11: Signage Installation	Field Crew	Install signs	labor	4.00	\$130.00	\$520.00	1	\$520.00
	Sign	Cost per sign	expenses	8.00	\$20.00	160	1	\$160.00
Task 12: Monitor and Maintain Conservation Signage	Field Crew	Maintain the installed signs on perimeter fence. Replace signs as needed. Monitoring signage is included in Task 1 Monitoring	labor		\$130.00	\$0.00	3	\$0.00
Element B2 Trash and Trespass Management								
Task 15: Trash and Trespass Monitoring and Management.	Biologist	Twice per year. Labor included in Task 1	labor		\$130.00	\$0.00	3	\$0.00
Element B3 Fire Hazard Reduction								
Task 16: Wildfire Prevention and Management	Land Manager	Labor included in Task 10	labor		\$175.00	\$0.00	3	\$0.00
Element B4 Mosquito Abatement								
Task 17: Coordinate with the Marin/Sonoma County Mosquito and Vector Control District	Land Manager		labor	4.00	\$175.00	\$700.00	1	\$700.00
Element C1 Fences and Gates								
Task 18: Infrastructure Monitoring	Biologist	Inspect condition of fences, gates, water troughs, wells, and existing access road. Cost covered under Tasks 10 and 13.	labor	4.00	\$130.00	\$520.00	1	\$520.00
Task 19: Fences and Gates Installation and Repair	Contractor	1,970 LF new fencing	labor and expenses per LF	1970	\$7.50	\$14,775.00	1	\$14,775.00
	Contractor	New gates	labor and expenses	2.00	\$250.00	\$500.00	1	\$500.00
Task 20: Fence and Gate Replacement	N/A	Not required for interim period	labor and expenses	0.00	\$0.00	\$0.00	0	\$0.00
Monitoring Expenses		Mileage, miscellaneous field expenses	expenses	0.00	\$500.00	\$0.00	3	\$0.00
Annual Report								
Task 21: Conservation Easement Compliance (Annual Report Preparation)	Land Manager	Annual CE compliance report preparation. Cost covered under the CE Holder Stewardship budget (see Appendix B)	labor	8.00	\$175.00	\$1,400.00	3	\$4,200.00
Task 22: Management Plan Compliance	Land Manager	Annual monitoring report preparation with assistance from biologist.	labor	8.00	\$200.00	\$1,600.00	3	\$4,800.00
	Biologist		labor	8.00	\$175.00	\$1,400.00	3	\$4,200.00
Task 23: Data Management	Biologist or GIS Specialist	Provide database/GIS shape files.	labor	12.00	\$130.00	\$1,560.00	3	\$4,680.00

Interim Costs (Years 1-3)								
CATEGORY	RESPONSIBLE PARTY	SPECIFICATIONS FOR TASKS IN CONSERVATION AREA	UNITS	QUANTITY	COST/UNIT	PER YEAR COST	TOTAL NO. OF YEARS	TOTAL INTERIM PERIOD COST (MONITORING YEARS 1-3)
Easement Administration								
Insurance			expense	1	\$550.00	\$550.00	1	\$550.00
Legal and Emergency			expense	1	\$300.00	\$300.00	1	\$300.00
Audit			expense	1	\$400.00	\$400.00	1	\$400.00
SUBTOTAL								\$76,225.00
Contingency (10% of Subtotal)								\$7,622.50
Adaptive Management (5% of Subtotal)								\$3,811.25
Administrative Fee (17% of Subtotal)								\$12,958.25
TOTAL INTERIM COSTS (Years 1-3)				Total for Interim Management				\$100,617.00

Longterm Management Period								
Longterm Endowment								
CATEGORY	RESPONSIBLE PARTY	SPECIFICATIONS FOR TASKS IN CONSERVATION AREA	UNITS	QUANTITY	COST/UNIT	PER YEAR COST	Years	Annualized Cost
ELEMENT A1 Threatened and Endangered Plant and Animal Species Monitoring and Management								
Task 1: Monitor CRLF	Biologist	Two times per year	labor	20.00	\$130.00	\$2,600.00	1	\$2,600.00
	Land Manager	Oversight for surveys	labor	4.00	\$175.00	\$700.00	3	\$233.33
Task 2: Maintain Breeding Habitat Characteristics	Land Manager		labor	8.00	\$175.00	\$1,400.00	3	\$466.67
	Biologist		labor	4.00	\$130.00	\$520.00	3	\$173.33
Task 3: Monitor and Maintain CRLF Dispersal and Upland Habitat	Land Manager	Cost included in Task 1	labor		\$175.00	\$0.00	1	\$0.00
	Biologist	Cost included in Task 1	labor		\$130.00	\$0.00	1	\$0.00
Task 4: Coordinate with Easement Holder to protect CRLF Habitat	Land Manager		labor	4.00	\$175.00	\$700.00	1	\$700.00
Task 5: Encourage Monitoring for Rare, Threatened, Endangered, and Other Special-Status Plants and Animals and Potential Habitat Enhancement in the Conservation Areas	Land Manager	Assume once every 5 years for request on average	labor	1.00	\$300.00	\$300.00	5	\$60.00
ELEMENT A2 Invasive Species and Disease Monitoring and Control								
Task 6: Invasive Plant Species Monitoring and Mapping	Biologist		labor	12.00	\$130.00	\$1,560.00	5	\$312.00
	Land Manager		labor	4.00	\$175.00	\$700.00	5	\$140.00
Task 7: Invasive Plant Species Control	Biologist		labor	4.00	\$120.00	\$480.00	5	\$96.00
	Land Manager		labor	4.00	\$175.00	\$700.00	5	\$140.00
	Applicator		labor	8.00	\$200.00	\$1,600.00	5	\$320.00
	Applicator	Herbicide cost	expenses		\$200.00	\$200.00	5	\$40.00
Task 8: Non-native Wildlife Detection and Control	Land Manager		labor	8.00	\$175.00	\$1,400.00	5	\$280.00
	Biologist		labor	8.00	\$130.00	\$1,040.00	5	\$208.00
Task 9: Disease Control		Disinfectant, Labor included in Task 1	expenses	1.00	\$100.00	\$100.00	1	\$100.00
ELEMENT A3 Upland Grassland Management								
Task10:	Land Manager	Mowing or grazing coordination	labor	8.00	\$175.00	\$1,400.00	1	\$1,400.00
	Biologist	Summer Fall RDM/mid-winter grass height measurements conducted concurrent with Task 1 Field Assessment	labor	4.00	\$130.00	\$520.00	1	\$520.00
	Contractor	Expenses for mowing or livestock	expenses	1	\$1,000.00	\$1,000.00	1	\$1,000.00
ELEMENT B1 Security								
Task 11: Signage Installation	Field Crew	Install signs	labor	4.00	\$130.00	\$520.00		\$52.00
	Sign	Cost per sign	expenses	8.00	\$20.00	160	10	\$16.00
Task 12: Monitor and Maintain Conservation Signage	Field Crew	Maintain the installed signs on perimeter fence. Replace signs as needed. Monitoring signage is included in Task 1 Monitoring	labor		\$130.00	\$0.00	1	\$0.00
ELEMENT B2 Trash and Trespass Management								
Task 15: Trash and Trespass Monitoring and Management	Biologist	Twice per year. Labor included in Task 1	labor		\$130.00	\$0.00	1	\$0.00
ELEMENT B3 Fire Hazard Reduction								
Task 16: Wildfire Prevention and Management	Land Manager	Labor included in Task 10	labor		\$175.00	\$0.00	1	\$0.00
ELEMENT B4 Mosquito Abatement								
Task 17: Coordinate with the Marin/Sonoma County Mosquito and Vector Control District	Land Manager		labor	4.00	\$175.00	\$700.00	1	\$700.00
ELEMENT C1 Fences and Gates								
Task 18: Infrastructure Monitoring	Biologist	Inspect condition of fences, gates, water troughs, wells, and existing access road. Cost covered under Tasks 10 and 13.	labor and expenses per LF	4.00	\$130.00	\$520.00	1	\$520.00
Task 19: Fences and Gates Installation and Repair	NA		NA	NA	NA	NA	NA	
	Contractor	New gates	labor and expenses	NA	NA	NA	NA	
Task 20: Fence and Gate Replacement	Contractor	Fence Replacement	labor and expenses	1970.00	\$7.50	\$14,775.00	30	\$492.50
	Contractor	Gate Replacement	labor and expense	2	\$250.00	\$500.00	15	\$33.33
Monitoring Expenses		Mileage, miscellaneous field expenses	expenses	1.00	\$500.00	\$500.00	1	\$500.00
ANNUAL REPORT								
Task 21: Conservation Easement Compliance (Annual Report Preparation)	Land Manager	Annual CE compliance report preparation. Cost covered under the CE Holder Stewardship budget (see Appendix B)	labor	8.00	\$175.00	\$1,400.00	1	\$1,400.00
Task 22: Management Plan Compliance	Land Manager	Annual monitoring report preparation with assistance from biologist.	labor	8.00	\$200.00	\$1,600.00	1	\$1,600.00
	Biologist		labor	8.00	\$175.00	\$1,400.00	1	\$1,400.00
Task 23: Data Management	Biologist or GIS Specialist	Provide database/GIS shape files.	labor	12.00	\$130.00	\$1,560.00	1	\$1,560.00
EASEMENT ADMINISTRATION								
Insurance	Conservator		Mgmt	1	\$550.00	\$550.00	1	\$550.00
Legal and Emergency	Conservator		Mgmt	1	\$300.00	\$300.00	1	\$300.00
Audit	Conservator		Mgmt	1	\$400.00	\$400.00	1	\$400.00
General Endowment/Project Management	Conservator		Mgmt	1	\$2,500.00	\$2,500.00	1	\$2,500.00
								\$3,750.00
SUBTOTAL								\$20,813.17
Contingency (10% of Subtotal)								\$2,081.32
Adaptive Management (5% of Subtotal)								\$1,040.66
Administrative Fee (12% of Subtotal)								\$2,497.58
TOTAL LONG TERM ANNUAL COST								\$27,685.14
Endowment Needed for Annual Cost at 3%								\$922,838.06
Easement Holder Endowment at 18%							18%	\$166,271.80
Land Manager Endowment minus Easement Holder Endowment								\$756,566.25
ONE-TIME COSTS								
Conservation Assurance (institutional integrity)	Conservator	Unrestricted, non-project support of land trust organizational expenses in perpetuity	Mgmt				5%	\$46,141.90
Project Development	Conservator	Legal review of all documents, site visit, meetings, correspondence, etc.	Mgmt				7.5%	\$69,212.85
							Total for Long term management	\$1,038,192.81

APPENDIX C

BEST MANAGEMENT PRACTICES FOR HERBICIDE USE AND INVASIVE PEST PLANT SPECIES CONTROL

BEST MANAGEMENT PRACTICES FOR HERBICIDE USE

The following Best Management Practices (BMPs) are adapted from the discussions with the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board (RWQCB) for invasive plant species management in the Bay Delta Area. These BMPs will be implemented to minimize effects of herbicide use and other invasive pest plant species control on CRLF, and other special-status species present in the Conservation Easement area. Note these BMPs are subject to change as new pesticides develop and regulations and additional information on methods for safe application are developed. However, any changes will be subject to the amendment process outlined in Section 5.3, unless otherwise approved in writing by the USACE, USFWS, and RWQCB.

HERBICIDE USE BEST MANAGEMENT PRACTICES

1. Herbicide will only be administered by current Qualified Applicator Certificate holders (minimum qualification) from the California Department of Pesticide Regulation. If the applicator will be using herbicides within jurisdictional wetlands or waters of the U.S./State, the applicator must also have passed the Aquatic Category of the California Qualified Applicator Test. Applicators must also know and be able to recognize sensitive resources including listed wildlife, plants, ponds, and nesting birds.
2. With the exception of manual removal (i.e., hand-pulling), no work will be conducted between November 1 and May 15. Permission to work outside of the November 1 and May 15 timeframe may be granted from the Service-approved biologist who is supervising. Alternatively, conducting treatment may be allowed, on a case-by-case basis, after getting verbal (followed by email) agreement from the Service's Sacramento Fish and Wildlife Office and. Work continuation is dependent on prevailing conditions, forecasted weather, and whether or not activities will damage soil or vegetative cover. The only work allowed 12 hours before or after a storm event is the inspection, installation, and/or maintenance of erosion control BMPs.
3. All herbicides will be applied in accordance with all applicable federal, State of California, and local directives and regulations; and label instructions.
4. Hazardous materials storage and equipment staging and storage will occur at least 150 feet away from sensitive habitats.
5. Herbicide will not be applied during rain nor immediately following rain when soil is saturated or runoff or standing water is present. Application will only occur under favorable weather conditions, defined as:
 - a. 50% or less chance of precipitation on the day of application based on National Oceanic and Atmospheric Administration weather forecasting,
 - b. If rain, showers or light rains are predicted within 48 hours, the amount of rain predicted shall be no more than ¼ inch of rain, and

- c. Rain does not appear likely at the time of application.
- 6. Drift of herbicides will be limited by not spraying when wind speeds exceed 10 miles per hour or as indicated by label instruction to protect nearby non-target vegetation by minimizing drift. The applicator will ensure that only the necessary amount of herbicide to effectively treat the target plants is used and that all herbicides are used within their given heat tolerances to avoid volatilization.
- 7. Herbicide applicators will prescribe and use only non-ionic surfactants near open water. These surfactants are readily biodegradable and low in aquatic toxicity.
- 8. Low-volume applications and reduced application rates will be used. Spot applications rather than broadcast applications will be used when feasible¹.
- 9. All herbicide application will employ the following minimum buffers when applying herbicide near ponds: 100 feet from aquatic features for spot and directed foliar spray and 15 feet for wiping applications. These buffers do not apply to imazamox (Clearcast) which is an aquatic herbicide that will not be used near ponds. A Service-approved biologist who is supervising or conducting treatment may, on a case-by-case basis, reduce buffers after getting verbal (followed by email) agreement from the Service's Sacramento Fish and Wildlife Office and CDFW. Herbicide will not be applied directly into a pond unless a detailed application plan is developed to address effects to native amphibians and specifically approved by the Service's Sacramento Fish and Wildlife Office and CDFW.
- 10. Only an herbicide labelled for aquatic use may be applied near aquatic resources, even when dry.
- 11. When using sprayable or dust formulations and the air is calm or moving away from habitat, commence applications on the side nearest the habitat and proceed away from the habitat for spray drift near suitable listed and special-status species habitat.
- 12. When air currents are moving toward habitat, do not make applications within 120 feet upwind from occupied habitat for spray drift near suitable listed and special-status species habitat for sprayable or dust formulations.
- 13. Soil Active Herbicides (such as chlorsulfuron and imazapyr) shall not be applied within 30 yards upslope of potential CRLF breeding habitat unless a suitable method is used to contain or divert runoff waters.

MECHANICAL MEASURES BEST MANAGEMENT PRACTICES

¹ Cal-IPC. 2015. Best Management Practices for Wildland Stewardship: Protecting Wildlife When Using Herbicides for Invasive Plant Management. Cal-IPC Publication 2015-1. California Invasive Plant Council, Berkeley, CA. Available at: www.cal-ipc.org.

The following additional BMPs shall be employed within 100 feet of known native amphibian habitat on site to avoid or minimize disturbances and adverse effects to the species:

1. With the exception of manual removal (i.e. hand-pulling), no work will be conducted in the vicinity of suitable aquatic species' habitat between November 1 and May 1. Permission to work outside of the November 1 and 1 May timeframe may be granted by the Service-approved biologist who is supervising or conducting treatment, on a case-by-case basis, after obtaining verbal (followed by email) agreement from the Service's Sacramento Fish and Wildlife Office and CDFW in certain weather conditions. Work continuation is dependent on prevailing conditions, forecasted weather, and whether or not activities will damage soil or vegetative cover. The only work allowed 12 hours before or after a storm event is the inspection, installation, and/or maintenance of erosion control BMPs. Permission to work after November 1 will not be granted once wetlands are activated (standing water present).
2. If mowing occurs in or near ponds, it will occur only when the soil is no longer saturated to ensure tracks are not left in or near wetlands.
3. No hand-lines will be cut within 50 feet of wetlands during a prescribed fire conducted near or within potential native amphibian habitat. Only black lining (back burning a perimeter) and wet lining (mowing and then wetting an area to prevent combustion) will be used to create fire lines within 50 feet of wetlands.
4. If invasive species removal is required within a pond, only hand-pulling or hand tools will be used, with the minimum amount of soil disturbance required to remove target invasive species. All non-native biomass removed will be disposed of in a landfill. All soil will be replaced/left in the pond it came from.
5. All equipment used in projects requiring access to sites within pond habitat will be staged outside of the pond habitat. Construction mats and or drip pans will be placed under vehicles to minimize impacts. To further minimize adverse effects, the following measures will be implemented work near ponds:
 - a. No work shall occur within pond habitat when water is present.
 - b. As necessary, a Service and CDFW-approved biologist will be present during access and project work within pond habitat to monitor activities.
 - c. Spill containment kits will be present at all sites where petroleum-fueled equipment is used.
6. Pre- and post-project surveys will be conducted to record habitat condition before the start of a project and after completion of the project for tracking purposes. This may include photos and/or species surveys and will be used to better manage the species.

Appendix D

California Red-Legged Frog Site Assessment

CALIFORNIA RED-LEGGED FROG SITE ASSESSMENT

CALTRANS ROUNDABOUT MITIGATION PROJECT MULAS DAIRY, SONOMA COUNTY, CALIFORNIA

Submitted to:

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Biology Branch Chief/Senior Environmental Scientist
California Department of Transportation District 4
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Prepared by:

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Project No. 20231330



October 2023

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APPENDIX

A: FIGURES

- Figure 1: Regional Location
- Figure 2: Caltrans Roundabout Mitigation Area
- Figure 3: California Red-legged Frog CNDDDB Occurrences within 5 Miles
- Figure 4: Site Photographs
- Figure 5: Land Cover within 1 Mile

INTRODUCTION

The purpose of this report is to provide a California red-legged frog (*Rana draytonii*) (CRLF) site assessment for the proposed mitigation site (project) for Caltrans State Route (SR) 116/121 Intersection Improvement Project (3G900) in Sonoma County, California. This site assessment is being prepared to assess the suitability of the mitigation site for the Caltrans intersection improvement project. CRLF is a federally listed threatened species (Stebbins 2003; Thomson et al. 2016; and USFWS 2002) and a State Species of Special Concern (Thomson et al. 2016).

LOCATION OF MITIGATION SITE

The proposed mitigation site is located approximately 1.5 miles east of the intersection improvement project in a pasture on the Mulas Dairy property (Figures 1 and 2, all figures at the end of the report). Schell Creek is located approximately 430 feet to the east and the recently (fall 2020) constructed Mulas wetland preserve is just to the east. Sonoma Creek is located approximately 0.8 miles to the west of the proposed site.

The Mulas Dairy property is in Schellville, an unincorporated community 3 miles south of the City of Sonoma in Sonoma County, California (Figure 1). The proposed mitigation site is within Sonoma County Assessor's Parcel Number 128-471-004 and is centered at Latitude 38.2416, Longitude - 122.4323. It is situated within unsectioned lands in Township 5 North, Range 5 West on the Sears Point quadrangle of the California 7.5-minute United States Geological Survey quadrangle series.

PROJECT SITE DESCRIPTION

The project site is currently a flat pasture that is periodically used to graze dairy cows. During major rainfall events overflow from Schell and/or Sonoma creeks can flood the site. Vegetation on the project site is dominated by native and non-native forbs and non-native grasses, see Section 2.2. No aquatic habitat is present within the proposed site, but a freshwater pond is just west of the site and as noted above, the Mulas wetland preserve, and Schell Creek are located to the east (Figure 2).

METHODS

This CRLF site assessment follows the general guidelines provided in *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (USFWS 2005).

Prior to conducting a field survey of the site, LSA Biologist Eric Lichtwardt reviewed available occurrence records of CRLF in the California Natural Diversity Database (CNDDDB) (CDFW 2023), Thomson et al. (2016), and museum collections using VertNet, version 2016-09-29 (<http://portal.vertnet.org/>) for the region within 1 mile of the project site. The Sonoma County Vegetation Mapping and Lidar Program (Sonoma Veg Map 2023) was used to map regional land cover.

Mr. Lichtwardt and Tony Georges (representing the Mulas family) conducted a field survey on May 16, 2023; during the field survey, they covered the entire project site on foot and surveyed adjacent areas on foot and by visual inspection with the aid of binoculars (8 x 32). Particular attention was

focused on documenting any potential upland habitat retreats and aquatic habitat on and adjacent to the project site. Mr. Lichtwardt used a digital camera to document habitats on the project site and in adjacent areas.

Mr. Georges and Mr. Lichtwardt conducted a follow-up survey on October 16, 2023, focusing on documenting the presence/absence of CRLF and American bullfrogs (*Rana catesbeianus*),¹ in the freshwater ponds just west of the project site (Figure 2). Mr. Georges and Mr. Lichtwardt conducted a daytime survey (03:00-04:00 PM) of the ponds using binoculars (8x32) to aid in the search for frogs and then returned after sunset (06:20-07:20) to survey the ponds at night. During the nighttime survey a flashlight (Streamlight Stinger LED) was used in combination with binoculars to search for frog eyeshine. Weather conditions included a light wind and an air temperature of about 76 degrees Fahrenheit during the daytime survey and about 69 degrees Fahrenheit during the nighttime survey.

¹ Some workers place the American bullfrog in the genus *Lithobates*.

FINDINGS

This section provides the finding of the CRLF assessment.

CALIFORNIA RED-LEGGED FROG RECORDS

For CRLF site assessments, USFWS (2005) recommends searching the CNDDDB and other sources for CRLF occurrence records within 1 mile of the subject site. Based on LSA's review of occurrence records of CRLF in the site vicinity there are no CRLF records within 1 mile of the site; the closest records and their distance from the site are CNDDDB Occurrence #753 (3.82 miles) #724 (3.87 miles), and #659 (4.66 miles), these three occurrences are all located directly west of the project site in the Sonoma Mountains (Figure 3). Another Occurrence #733 does not specify an exact location, just a general area of occurrence south of the project site (Figure 3).

No CRLF were observed during the May 16, 2023, site assessment.

HABITAT AND COVER TYPES WITHIN THE PROPERTY AND PROJECT SITE

Project Site

As noted above, the proposed mitigation site is a flat pasture used seasonally by the Mulas Dairy to graze heifers. Land cover on the site is mapped as intensively managed hayfields or irrigated pasture/California annual and perennial grassland (Sonoma Veg Map 2023). Dominant plants on the site include lamb's quarters (*Chenopodium album*), brass buttons (*Cotula coronopifolia*), curly dock (*Rumex crispus*), Italian rye (*Festuca perennis*), and Mediterranean barley (*Hordeum marinum*), and other non-native annual grasses (Figures 4a, 4b, and 4c). Elevations range from approximately 6 to 8.5 feet above mean sea level. Soils on the site are mapped as Reyes clay.² Reyes clay is a somewhat poorly drained soil of slow permeability that forms on alluvial deposits, especially around the perimeter of San Francisco Bay.

Adjacent Areas

Areas adjacent to the project site include grazing lands of the Mulas Dairy, dominated non-native annual grasses, and as previously noted a perennial freshwater pond just to the west (Figures 2 and 4d). To the east there is an existing wetland mitigation site contiguous with Schell Creek; this site supports brackish marsh wetlands with fringing marsh vegetation along the creek and has a muted tidal cycle.

HABITAT AND COVER TYPES WITHIN 1 MILE OF THE PROJECT SITE

Upland Habitats

Prominent cover types within 1 mile of the site are mapped as intensively managed hayfields or irrigated pasture/California annual and perennial grassland (Sonoma Veg Map 2023) and are similar to the habitat on the proposed mitigation site (Figure 5). Extensive areas supporting vineyard

² Davis, University of California. California Soil Resource Lab: <https://casoilresource.lawr.ucdavis.edu/>

development are present to the west and north of the site (Figure 5). Other prominent upland cover types include developed areas northwest (City of Sonoma), east, and northeast of the site (Figure 5).

Aquatic Habitats

Within 1 mile of the site, there are several types of water bodies: extensive freshwater and brackish marshes are present east, west, and south of the site; Sonoma and Schell creeks are west and east of the site respectively, and various constructed ponds and water detention basins occur just west and north of the site (Figure 5).

FIELD SURVEY

During the October 16, 2023, field survey of the two ponds west of the project site (Figure 2) no CRLF or American bullfrogs were found. In the north pond two western pond turtles (*Actinemys marmorata*) and one pond slider (*Trachemys scripta*), a non-native invasive species, were observed. In the south pond (Figure 4d) four to five western pond turtles were observed.

DISCUSSION AND CONCLUSION

CRLF generally occurs within 492 feet from their aquatic habitat even during terrestrial movements in the wet season (Dodd 2013); however, these amphibians have been documented to travel overland through upland habitats for 0.74 to 0.86 miles (Dodd 2013). Based on LSA's observations and analysis of cover types within 1 mile of the project site (Figure 5) the closest potential breeding habitat (perennial ponds or streams) to the project site are the ponds just west of the site (Figure 2). These ponds were surveyed on foot and with binoculars, they support small patches of emergent aquatic vegetation and willows. Additional potential aquatic breeding habitat also occurs in overflow ponds in a cutoff channel of Sonoma Creek approximately 0.6 miles southwest of the mitigation site on the Mulas Ranch. Western pond turtles, a native species that occupies a similar habitat as CRLF, were observed the ponds just west of the project site (Figure 2) during the October 16, 2023, field survey; western pond turtles have previously been observed in these ponds and as noted above, in the overflow ponds of Sonoma Creek (Eric Lichtwardt pers observation). These water bodies appear to also provide potential aquatic habitat for CRLF. The pond just west of the project site (Figure 2) is maintained with reclaimed water from the Sonoma Valley Treatment Facility located about 0.79 miles to the northwest. The ponds in the cutoff channel appear to have prolonged ponding of sufficient period for CRLF breeding in most years. These ponds are likely supported by runoff and possibly groundwater. Sonoma Creek west of the mitigation site also provides potential breeding and nonbreeding aquatic habitat. Schell Creek may also provide suitable CRLF aquatic habitat in areas upstream of tidal influence.

Populations of California ground squirrels (*Otospermophilus beecheyi*) occur in upland areas near the proposed mitigation site; their burrows provide potential subterranean retreats for CRLF.

The closest known occurrences of CRLF (3.82 and 3.87 miles to the west of the mitigation site) are beyond the known normal dispersal distance of this species; however, CRLF could occur closer to the site in freshwater wetlands and Sonoma and Schell Creeks on private properties that have not been surveyed for frogs. The large perennial pond and Sonoma Creek to the west of the project site appears to support potential CRLF aquatic habitat; however, whether this amphibian is present in the pond is currently unknown. Western pond turtles, a California species of special concern, have been observed by LSA biologists in the perennial ponds just west of the project site and in overflow ponds of Sonoma Creek on the Mulas Dairy lands southwest of the proposed mitigation site. Western pond turtles have similar aquatic habitat requirements as CRLF and the presence of these turtles in nearby aquatic sites supports the conclusion that the freshwater ponds in the proposed mitigation site could be suitable for CRLF.

LITERATURE CITED

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APPENDIX A

FIGURES

Figure 1: Property Location

Figure 2: Project Site and Photo Points

Figure 3: California Red-legged Frog CNDDDB Occurrences within 1 Mile of the Property

Figure 4: Site Photographs

Figure 5: Land Cover Types within 1 Mile of the Property

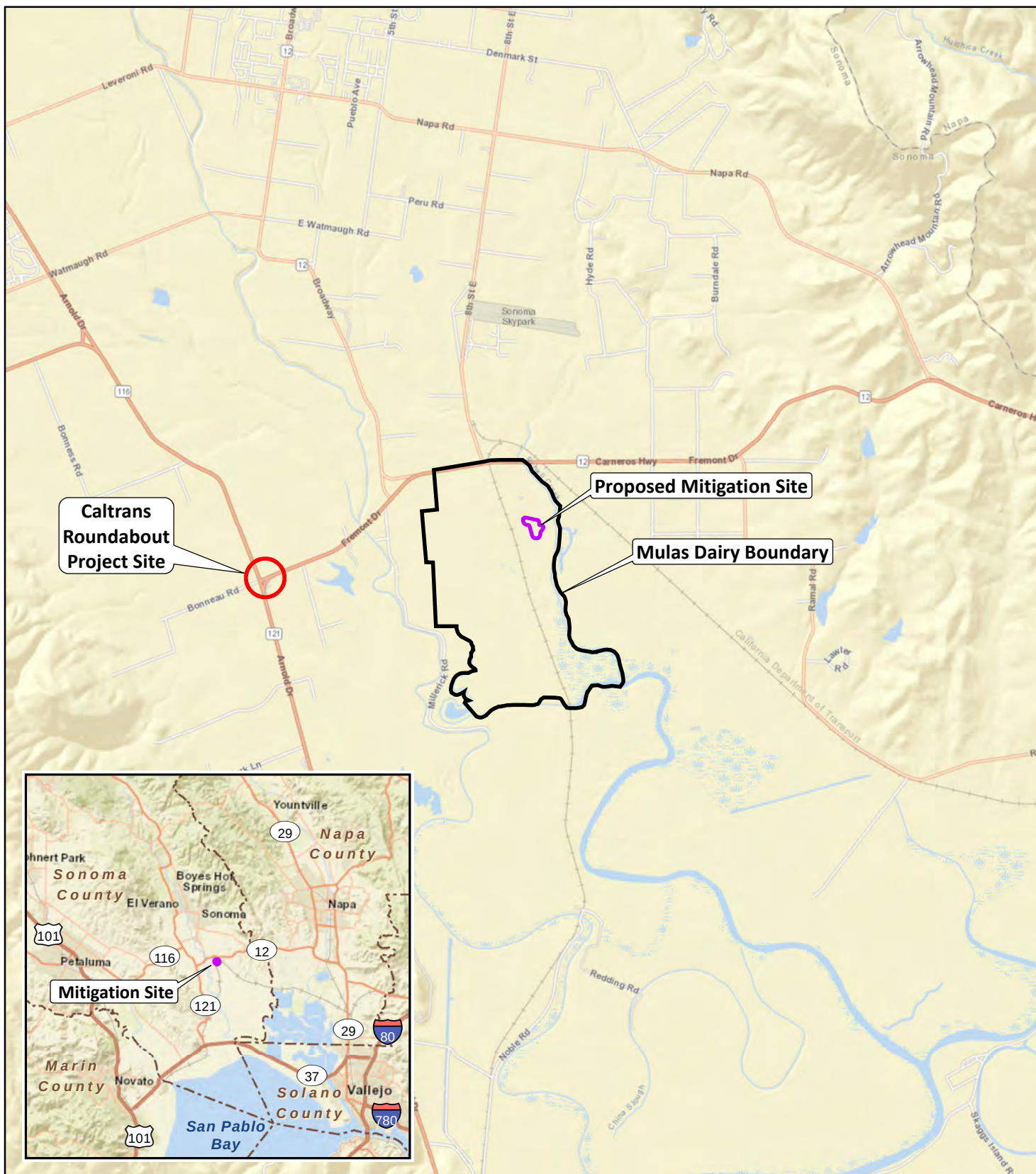
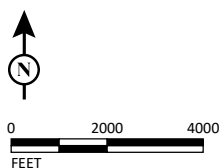


FIGURE 1

LSA



SOURCE: ESRI StreetMap North America (2012).

I:\20231330\GIS\Maps\CRLF Site Assessment\Figure 1_Regional Location.mxd (9/12/2023)

Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Regional Location



FIGURE 2

LSA

LEGEND

-  Proposed Caltrans Roundabout Mitigation Site
-  Mulas Dairy Wetland Preserve
-  Photo Point

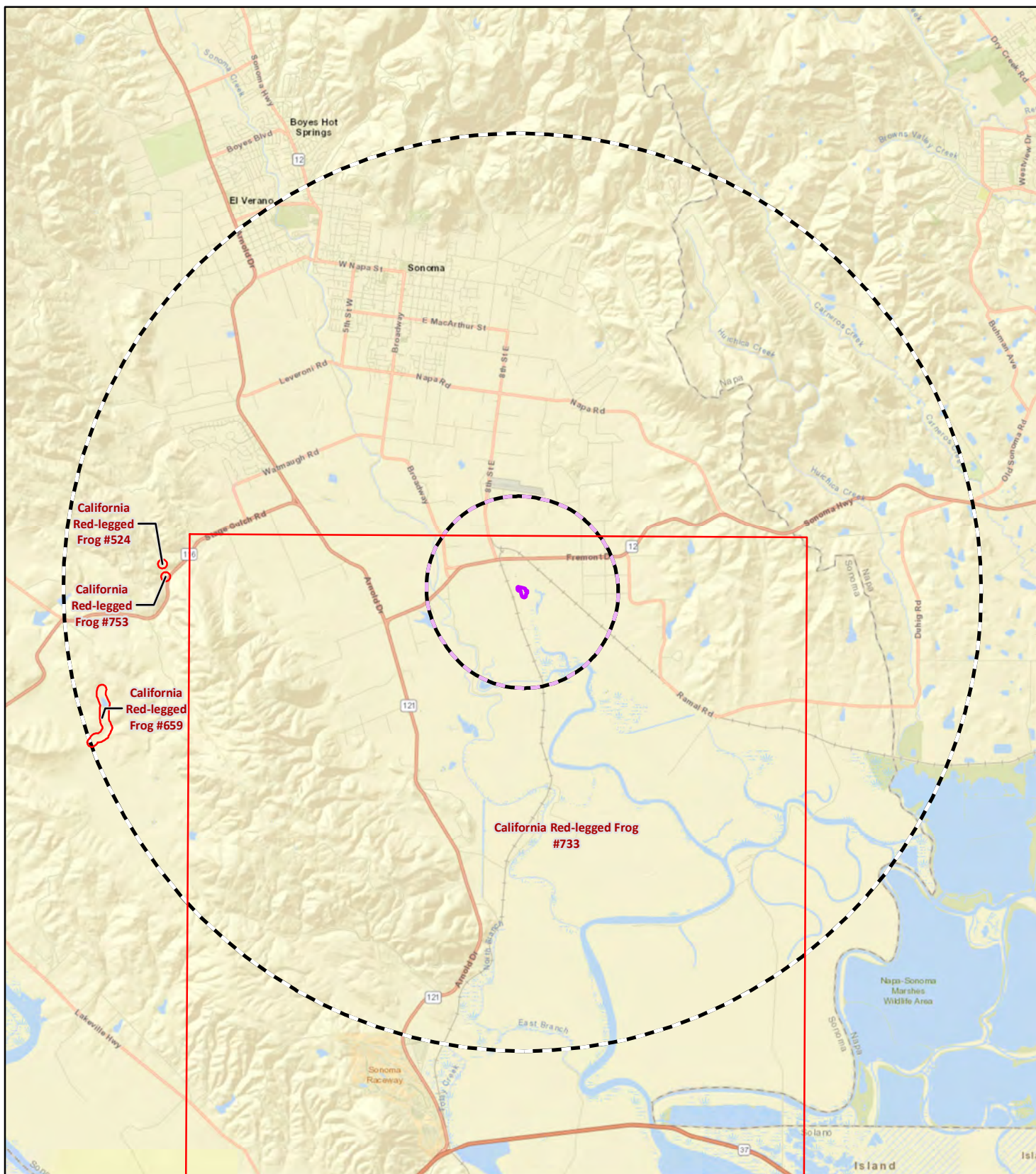


0 85 170
FEET

SOURCE: Nearmap (05/2022).

I:\20231330\GIS\Maps\CRLF Site Assessment\Figure 2_Project Site and Photo Points.mxd (6/21/2023)

*Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Caltrans Roundabout Mitigation Site*



LSA

LEGEND

- Mitigation Site
- 1-mile Buffer of Mitigation Site
- 5-mile Buffer of Mitigation Site
- California Red-legged Frog CNDDB Occurrence

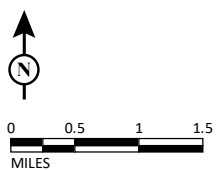


FIGURE 3

*Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment*

**California Red-legged Frog
CNDDB Occurrences within 5 Miles**

SOURCE: CDFW CNDDDB (06/2023); Esri World Street Map (2023).

I:\20231330\GIS\Maps\CRLF Site Assessment\Figure 3_CRLF CNDDB Occurrences within 1 Mile.mxd (6/21/2023)



Figure 4a: Proposed mitigation site, lamb's quarters (*Chenopodium album*) and non-native annual grasses in foreground. Eucalyptus (*Eucalyptus* spp.) along Schell Creek levee in center background, levee of freshwater pond in right background with Sonoma Mountains along right horizon. View to the south. Photo by Eric Lichtwardt (May 16, 2023).



Figure 4b: Proposed mitigation site from top of freshwater pond levee. Vegetation cover dominated by non-native annual grasses. View to the northeast. Photo by Eric Lichtwardt (May 16, 2023).

LSA

FIGURE 4

*Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Project Site Photos*



Figure 4c: Eastern edge of proposed mitigation site, vegetation dominated by lamb's quarters and non-native annual grasses. Mulis Wetland Preserve, enclosed by fence, on left, Sonoma Mountains in background. View to the southwest. Photo by Eric Lichtwardt (May 16, 2023).

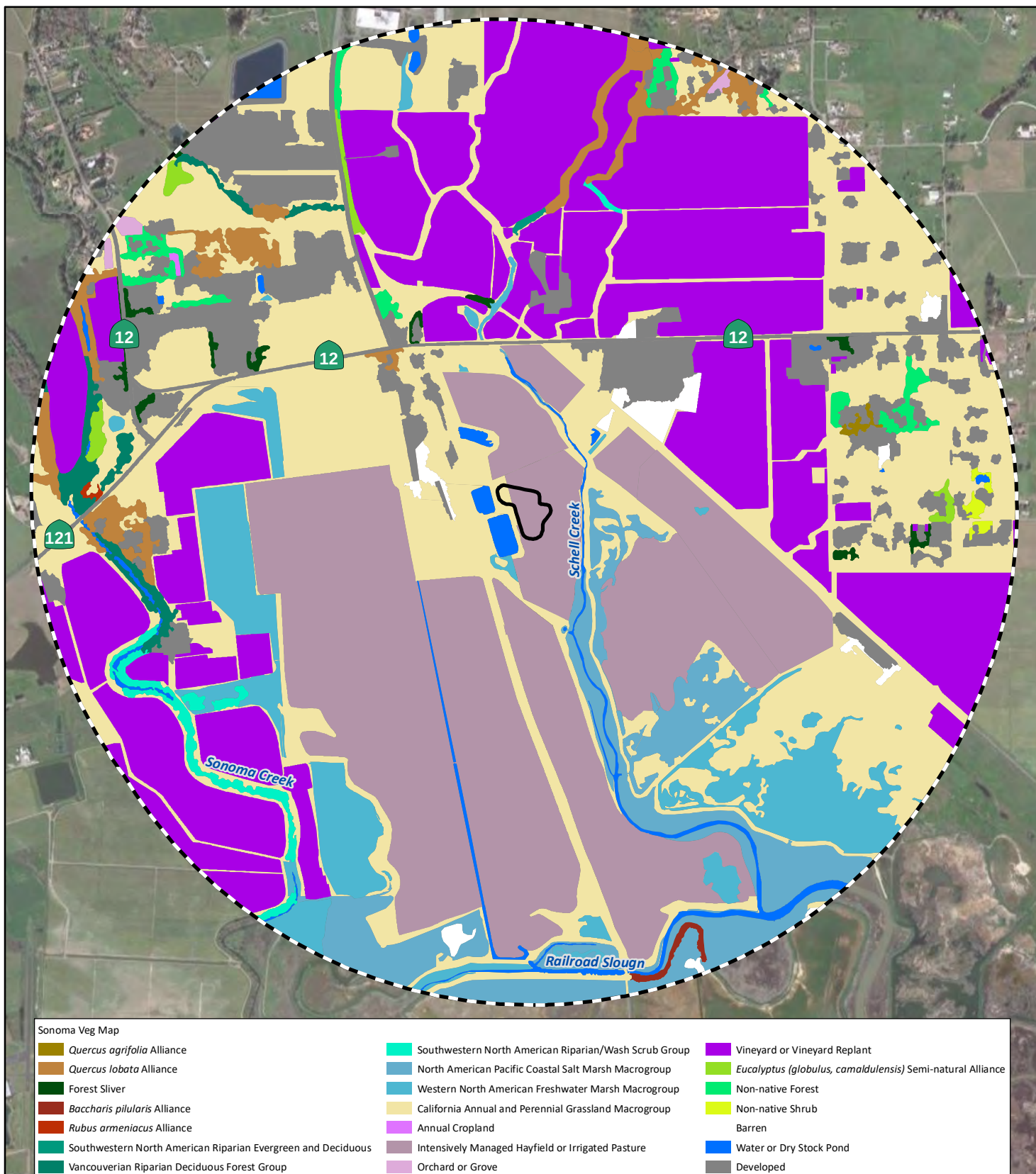


Figure 4d: Freshwater-pond just west of proposed mitigation site. Non-native annual grasses in foreground with curly dock (*Rumex crispus*) at water's edge. Bulrush (*Schoenoplectus* spp.) in right midground and willows (*Salix* spp.) on far edge of pond bank. Photo by Eric Lichtwardt (May 16, 2023).

LSA

FIGURE 4

Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
 Project Site Photos



LSA

LEGEND

- Mitigation Site
- 1-mile Buffer of Mitigation Site



0 750 1500
FEET

SOURCE: Sonoma Veg Map (05/2017).

I:\20231330\GIS\Maps\CRLF Site Assessment\Figure 5_Land Cover within 1 Mile.mxd (6/21/2023)

FIGURE 5

Caltrans Roundabout Mitigation Project
Mulas Dairy, Sonoma County, California
California Red-legged Frog Habitat Assessment
Land Cover within 1 Mile

Appendix E

Offsite Mitigation Plans

GRADING NOTES

1. ALL GRADING SHALL COMPLY WITH THE 2022 CALIFORNIA BUILDING CODE CHAPTER 18, SECTION 1804 EXCAVATION, GRADING AND FILL AND THE ORDINANCES AND STANDARDS OF SONOMA COUNTY.
2. APPROXIMATE EARTHWORK ESTIMATE IS AS FOLLOWS:
- | | | |
|------------------|------|-------------|
| RAW EXCAVATION: | 3150 | CUBIC YARDS |
| RAW EMBANKMENT: | 2700 | CUBIC YARDS |
| SHRINKAGE @ 17%: | 450 | CUBIC YARDS |
- THE ABOVE ESTIMATED VOLUMES ARE CALCULATED BASED ON EXISTING ELEVATIONS AND PROPOSED DESIGN GRADES. THE CONTRACTOR SHALL PREPARE HIS OWN EARTHWORK VOLUME CALCULATIONS AS THE BASIS FOR HIS BID. ANY EXCESS SOIL SHALL BE PLACED IN UPLAND AREAS. IF SHORTAGE OF AVAILABLE SOIL, UPLAND FILL AREAS DEPTHS MAY BE REDUCED TO BALANCE SOIL QUANTITIES.
3. SHOULD ARCHAEOLOGICAL REMAINS OR ARTIFACTS BE ENCOUNTERED DURING ANY PHASE OF CONSTRUCTION, LAND ALTERATION WORK IN THE GENERAL VICINITY OF THE FIND SHALL BE HALTED AND A QUALIFIED ARCHAEOLOGIST AND THE RESOURCE MANAGEMENT DIRECTOR SHALL BE NOTIFIED IMMEDIATELY. WORK ON THE PROJECT SHALL NOT BE RESUMED UNTIL A MITIGATION PLAN WITH ADEQUATE MEASURES FOR SITE PROTECTION IS REVIEWED AND APPROVED BY THE RESOURCE MANAGEMENT DIRECTOR.
4. PRIOR TO GRADING, THE AREA TO BE GRADED SHALL BE STRIPPED TO REMOVE ALL VEGETATION, THIS INCLUDES NATIVE GRASS, WEEDS, BRUSH AND THEIR ROOTS, MATURE TREES AND ROOT BALLS AND ANY ORGANIC MATERIALS. IN AREAS OF PROPOSED FILL, SCARIFY THE UPPER 6-INCHES, MOISTURE CONDITION, AND COMPACT TO A MINIMUM 90% RELATIVE COMPACTION AND/OR AS NECESSARY TO ENSURE GROUND AND SLOPE STABILITY AND SOIL CONDITIONS TO SUPPORT RE-VEGETATION PER NOTES HEREIN.
5. PLACEMENT OF ENGINEERED FILL SHALL OCCUR IN LIFTS OF 8-INCHES IN UNCOMPACTED THICKNESS AND SHALL BE COMPACTED TO 90% RELATIVE COMPACTION AND/OR AS NECESSARY TO ENSURE GROUND AND SLOPE STABILITY AND SOIL CONDITIONS TO SUPPORT RE-VEGETATION PER NOTES HEREIN.
6. COMPACTION OR ENGINEERED FILLS SHALL BE BY FOOTED ROLLERS OR OTHER TYPES OF ACCEPTABLE COMPACTING ROLLERS. ROLLERS SHALL BE OF SUCH DESIGN THAT THEY WILL BE ABLE TO COMPACT THE FILL TO THE APPROPRIATE DENSITY. ROLLING SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS OF APPROPRIATE MOISTURE CONTENT. ROLLING OF EACH LAYER SHALL BE CONTINUOUS OVER ITS ENTIRE AREA AND THE ROLLER SHALL MAKE SUFFICIENT TRIPS TO ENSURE THAT THE APPROPRIATE DENSITY HAS BEEN OBTAINED. NO PONDING OR JETTING SHALL BE PERMITTED.

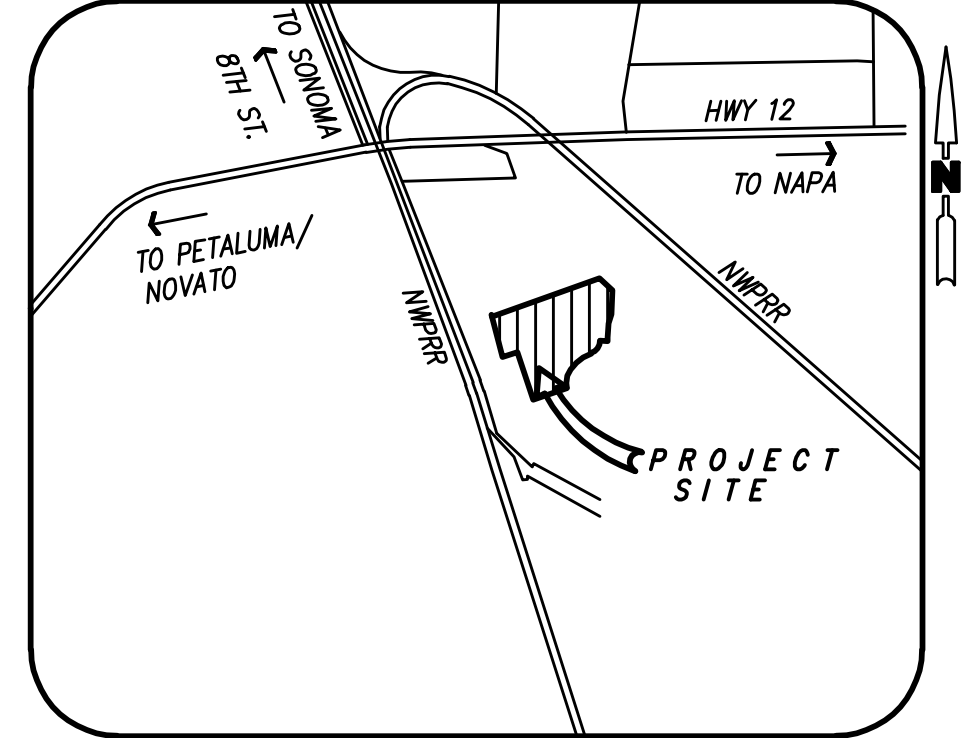
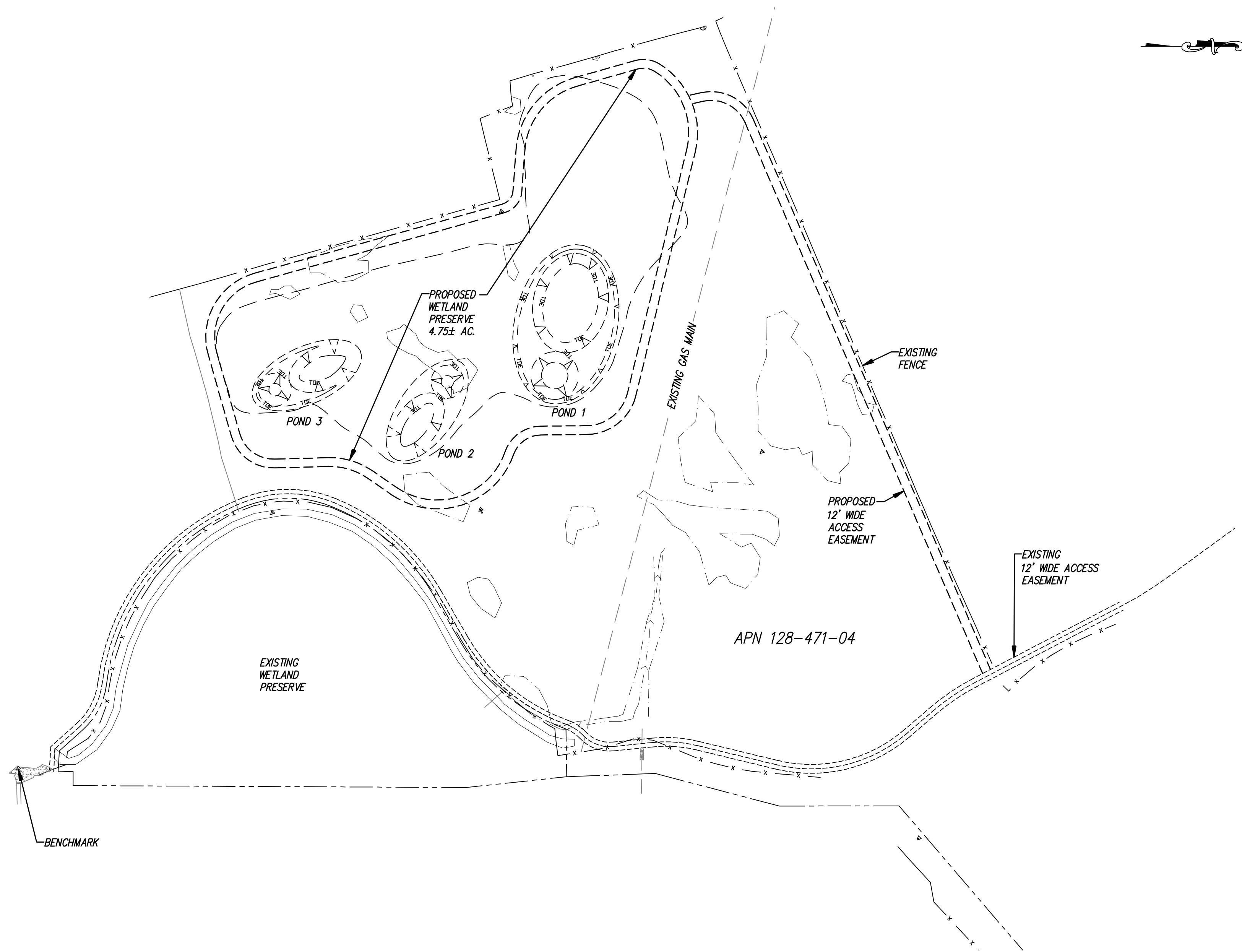
GENERAL NOTES

1. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION CONFERENCE, IF REQUIRED WITH THE SONOMA COUNTY, PUBLIC WORKS STAFF OR OTHER INTERESTED AGENCIES.
2. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT TO HAVE EXISTING UTILITIES MARKED, CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND SHALL NOTIFY THE NECESSARY AUTHORITIES 48 HOURS PRIOR TO EXCAVATING.
6. THE OFFICE OF FOULK CIVIL ENGINEERING, INC. SHALL BE NOTIFIED AT LEAST 2 WORKING DAYS PRIOR TO THE REQUIRING OF ANY GRADE STAKES AT (707) 864-0784.
7. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
8. IN THE EVENT OF ANY DISCREPANCY BETWEEN ANY DRAWINGS AND THE FIGURES WRITTEN THEREON, THE FIGURES SHALL BE TAKEN AS CORRECT.
9. CONTRACTOR AGREES THAT THEY SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER, THE ENGINEER AND SONOMA COUNTY HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

EROSION CONTROL NOTES

1. EROSION CONTROL PLAN INTENT IS TO VEGETATE NEW SLOPES PRIOR TO BEGINNING OF RAINY SEASON. TACTIFIER, FERTILIZER, AND SEED SHALL BE APPLIED INITIALLY A FIBER MULCH OF STRAW (OR APPROVED EQUAL) SHALL BE APPLIED AFTER THE SEED. SEED ALL FILL AND CUT SLOPES. SUCH SLOPES SHALL BE COMPACTED AND CAT WALKED PRIOR TO SEEDING.
2. TEMPORARY EROSION CONTROL DEVICES SHOWN HEREON, WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
3. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE ROAD AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR OR AS NECESSITATED.
4. EXCEPT AS OTHERWISE DIRECTED BY THE INSPECTOR, ALL DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FORECAST OF RAIN PROBABILITY EXCEEDS 40% AND, SHALL BE MAINTAINED EVERY DAY DURING THE RAINY SEASON (OCTOBER 15 TO APRIL 15).
5. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN TO MEET FIELD CONDITIONS WILL BE MADE ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF THE INSPECTOR.
6. CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO PROVIDE EROSION CONTROL MEASURES MADE NECESSARY BY A CONSTRUCTION OPERATION, ON THE JOB SITE BEFORE BEGINNING THAT OPERATION.
7. ADJACENT PROPERTIES SHALL BE PROTECTED FROM STORM WATERS, MUD, SILT, ETC. ON A DAILY BASIS.
8. DUST CONTROL SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, THE CONTRACTOR WHEN THEY OR THIER SUBCONTRACTOR ARE OPERATING EQUIPMENT ON-SITE, SHALL PREVENT THE FORMATION OF ANY AIRBORNE NUISANCE BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFINE DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK. ADDITIONAL WATERING SHALL BE PROVIDED ON DRY OR WINDY DAYS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST FROM HIS OWN ACTIVITIES OR HIS SUBCONTRACTORS ACTIVITIES IN PERFORMING THE WORK UNDER THIS CONTRACT AND SHALL BE RESPONSIBLE FOR ANY CITATIONS, FINES, OR CHARGES RESULTING FROM DUST NUISANCE. DUST CONTROL WILL BE DONE ON A DAILY BASIS.

MULAS RANCH, MITIGATION PROJECT
GRADING PLAN
APN 128-471-04, SONOMA COUNTY, CA



VICINITY MAP
NOT TO SCALE

SHEET INDEX

1. TITLE SHEET, NOTES & DETAILS
2. SITE & GRADING PLAN
3. GRADING CROSS SECTIONS

CIVIL ENGINEER

FOULK CIVIL ENGINEERING, INC.
4777 MANGELS BOULEVARD
FAIRFIELD, CA 94534
PHONE: (707) 864-0784

PROPERTY OWNER

VICTORIA, RAYMOND,
CAROLYN, MICHAEL MULAS
2034 FREMONT DRIVE
SONOMA, CA 95476

ENVIRONMENTAL CONSULTANT

LSA - STEVE FORMAN
157 PARK AVENUE
POINT RICHMOND, CA 94801
(510) 236-6810
(510) 3766-5767(MOBILE)

LEGEND

PROPOSED	EXISTING	
		CONTOURS
		PROPERTY LINE
		ADJACENT PROPERTY LINE
		EASEMENT LINE
		TOP OF SLOPE / TOE OF SLOPE
		GRADEBREAK / RIDGE
		FLOWLINE
		FENCE AS NOTED
		STORM DRAIN, MANHOLE, SIZE AND SLOPE DIRECTION
		SPOT ELEVATION
		DOWNWARD SLOPE DIRECTION
		RIPRAP ENERGY DISSIPATOR
		TREE TO BE REMOVED

ABBREVIATIONS

AC	ASPHALT CONCRETE	GAR	GARAGE
ADU	ACCESSORY DWELLING UNIT	INV	INVERT
BLDG	BUILDING	MH	MANHOLE
BOL	BOLLARD	MTL	METAL
BOV	BLOW OF VALVE	PIP	PROTECT IN PLACE
BW	FG AT BOTTOM OF RW	PL	PROPERTY LINE
BS	BOTTOM OF STEP	PP	POWER POLE
CO	CLEANOUT	PVMT	PAVEMENT
CONC	CONCRETE	REQD	REQUIRED
CONF	CONFORM	RSR	RISER
DDCV	DOUBLE DETECTOR CHECK VALVE	RW	RETAINING WALL
DI	DRAINAGE INLET	SD	STORM DRAIN & SUBD. MAP
DP	DIRT PILE	SS	SANITARY SEWER
DWY	DRIVEWAY	STD	STANDARD
EB	ELECTRIC BOX	TRANS	TRANSFORMER
EP	EDGE OF PAVEMENT	TW	TOP OF RETAINING WALL
EX	EXISTING	TYP	TYPICAL
FG	FINISHED GRADE	UGE	UNDERGROUND ELECTRIC
FH	FIRE HYDRANT	WTR	WATER
FUT	FUTURE	WV	WATER VALVE

NOTES

SONOMA COUNTY ASSESSOR'S PARCEL NUMBER: 0128-471-04

BENCHMARK USED: FOUND PK NAIL IN CONCRETE ON CREEK DAM LABELED AS CP 1 ON SITE SURVEY WITH CONTOURS FOR THE MULAS DAIRY RANCH SHELL CREEK MITIGATION 2304 FREMONT DRIVE SONOMA COUNTY PREPARED BY DJ SCRANTON SURVEYING DATED MAY 2017 ELEVATION=9.6 NAVD88.

RE-VEGETATION PLAN

The upland seed mix is shown in Table A and the wetland seed mix is shown in Table B. Both seed mixes will be broadcast onto the topsoil layer and then rolled with a sod roller (but not compacted) to ensure good seed to soil contact.

Table A: Upland and Refuge Islands Seed Mix

Seed Species*	Type/Function	Rate: lbs. per acre pure live seed
<i>Bromus carinatus</i> (California Brome)	perennial grass	20 lbs. per acre
<i>Elymus glaucus</i> (Blue Wild Rye)	perennial grass	5 lbs. per acre
<i>Grindelia camporum</i> (Gumplant)	perennial herb	5 lbs. per acre
<i>Festuca microstachys</i> (Small Fescue)	nurse cover crop	10 lbs. per acre
<i>Lupinus bicolor</i> (Miniature Lupine)	annual forb	5 lbs. per acre
Total Seed		45 lbs
Total Required for 3.76 acres		169 lbs

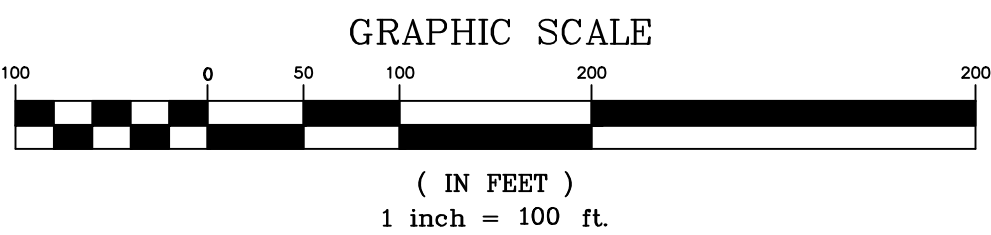
Table B: Table B: Wetland Seed Mix

Seed Species	Pure Live Seed (pounds per acre)
<i>Elymus triticoides</i> (Creeping wildrye)	15
<i>Hordeum brachyantherum</i> (Meadow barley)	15
<i>Juncus effusus</i> (Soft rush)	15
Total Seed	45 lbs
Total Required for 0.9 acres	40.5 lbs

Additional native plant species may be added or substituted depending on local availability in each seed mix.

Additional re-vegetation will include spreading of 3 to 5 of mature, locally collected cattail seed heads per constructed pond (9 to 15 total seed heads) and planting of locally collected willow (*Salix* spp.) cuttings: 10 cutting in 3 clumps on Pond 1 and 6 cuttings in 2 clumps on Ponds 2 and 3. Cuttings shall be 18 to 24 inches in length and generally ½ to 1 inch in diameter. Cuttings shall be soaked in water until roots emerge and then planting in clumps of 3 stakes. Locally collected, large woody debris (logs, tree limbs) will also be strategically placed around each pond. Logs longer than 10 feet in length will be partially buried around the pond edges to provide cover and basking sites.

DESIGNED BY: BDF
DRAFTED BY: NRF
CHECKED BY: BDF
ISSUE DATE: 02/14/24



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



REV.	DATE	DESCRIPTION	BY	APPROVED

PROJECT: MULAS RANCH, SONOMA COUNTY CALIFORNIA RED LEGGED FROG MITIGATION PROJECT			
SHEET TITLE: TITLE SHEET			
SCALE: 1"=100'	DWG: 24-002	JOB NO: 24-002	XREF: 24-002-TOPO

SHEET
1
OF 3

POND ELLIPSE DATA

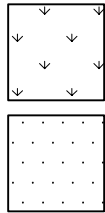
LARGE POND

OUTER ELLIPSE MAJOR AXIS=220 FEET
OUTER ELLIPSE MINOR AXIS=140 FEET
INNER ELLIPSE MAJOR AXIS=137 FEET
INNER ELLIPSE MINOR AXIS=102 FEET

SMALL POND

OUTER ELLIPSE MAJOR AXIS=160 FEET
OUTER ELLIPSE MINOR AXIS=78 FEET
INNER ELLIPSE MAJOR AXIS=98 FEET
INNER ELLIPSE MINOR AXIS=58 FEET

RE-VEGETATION LEGEND

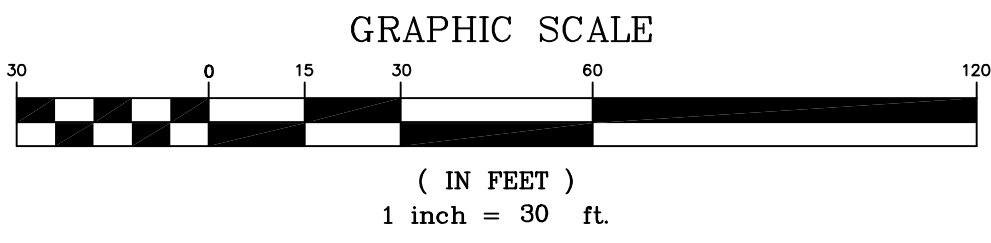


UPLAND SEED MIX TABLE A, SHEET 1

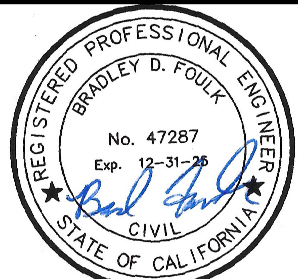
WETLAND SEED MIX, TABLE B, SHEET 1



DESIGNED BY: BDF
DRAFTED BY: NRF
CHECKED BY: BDF
ISSUE DATE: 02/14/24



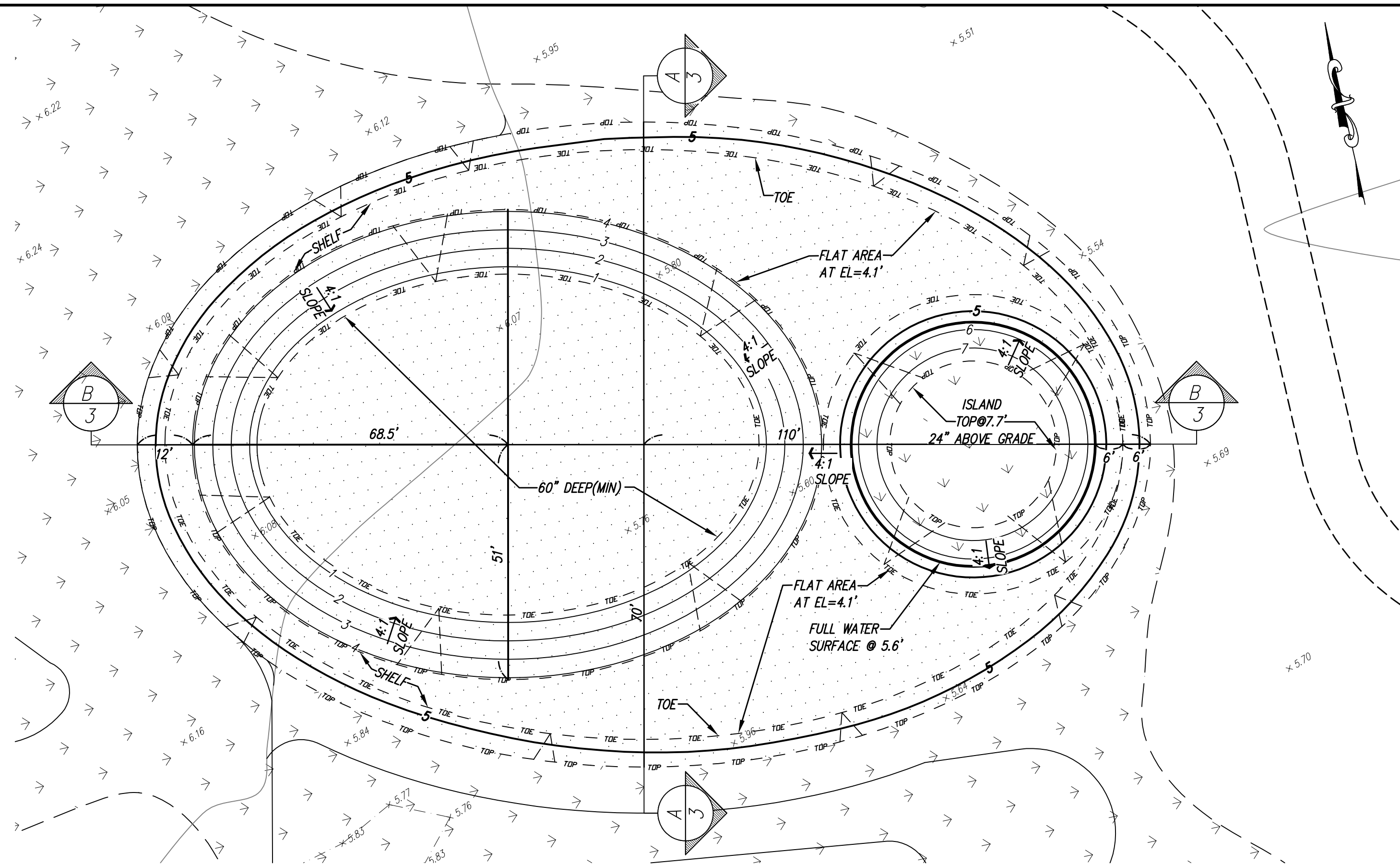
FCE FOULK CIVIL ENGINEERING, INC.
Civil Engineering Land Surveying Planning
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(707)864-0784 fax (707)864-0793 e-mail: foulkce@gmail.com



REV.	DATE	DESCRIPTION	BY	APPROVED

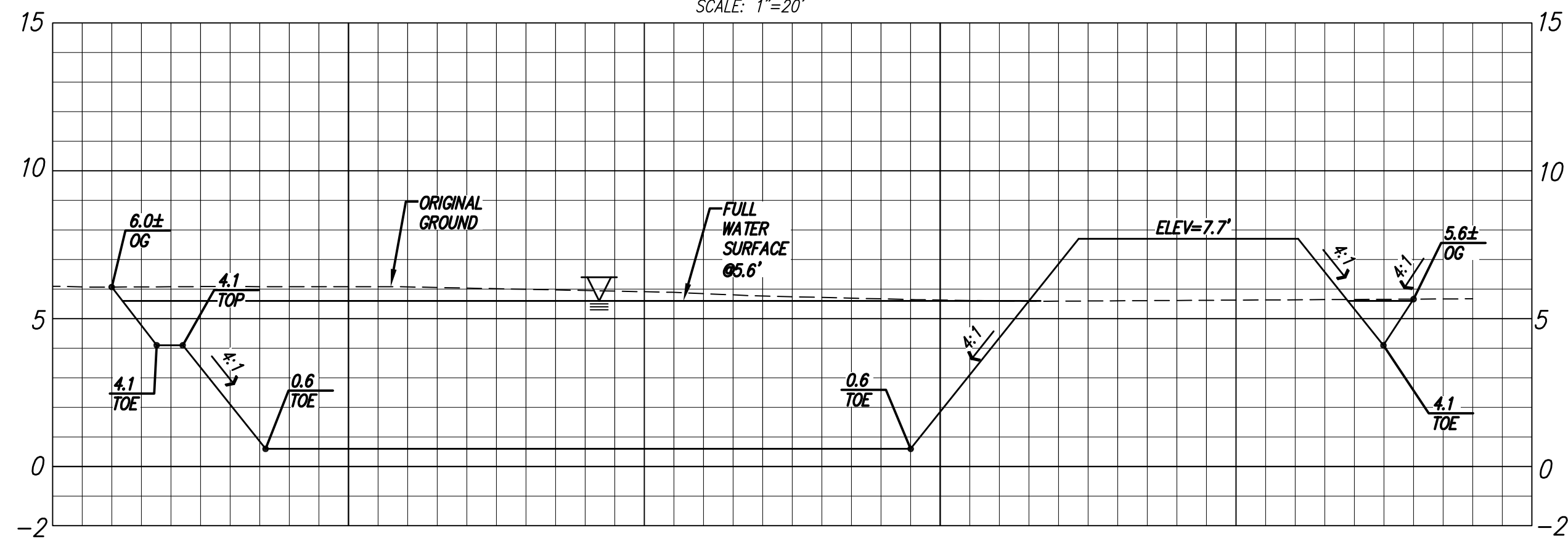
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SHEET TITLE: GRADING PLAN			
SCALE: 1"=30'	DWG: 24-002	JOB NO: 24-002	XREF: 24-002-TOPO

SHEET
2
OF 3



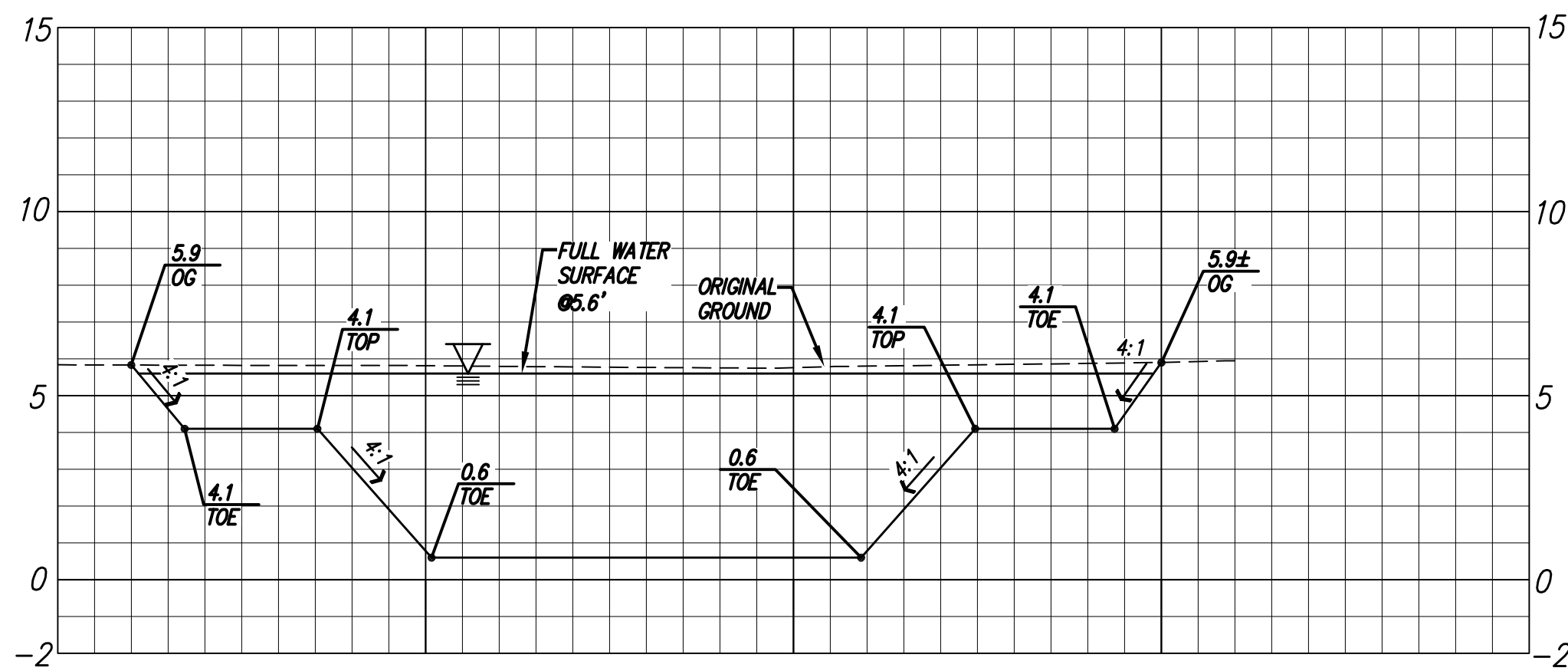
LARGE POND 1

SCALE: 1"=20'



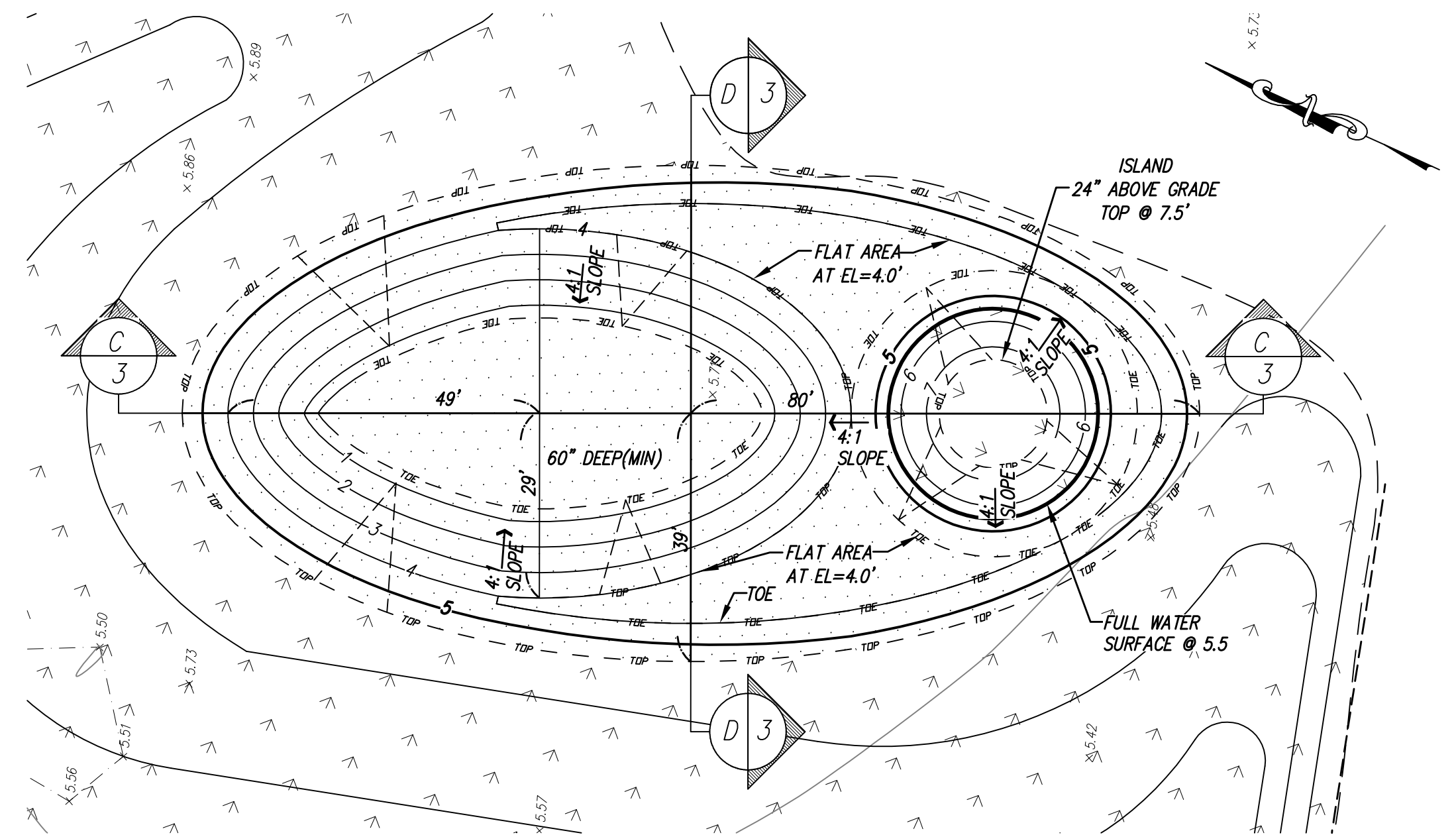
GRADING SECTION B-B - LARGE POND 1

SCALE: 1"=20' HORIZONTAL / 1"=4' VERTICAL



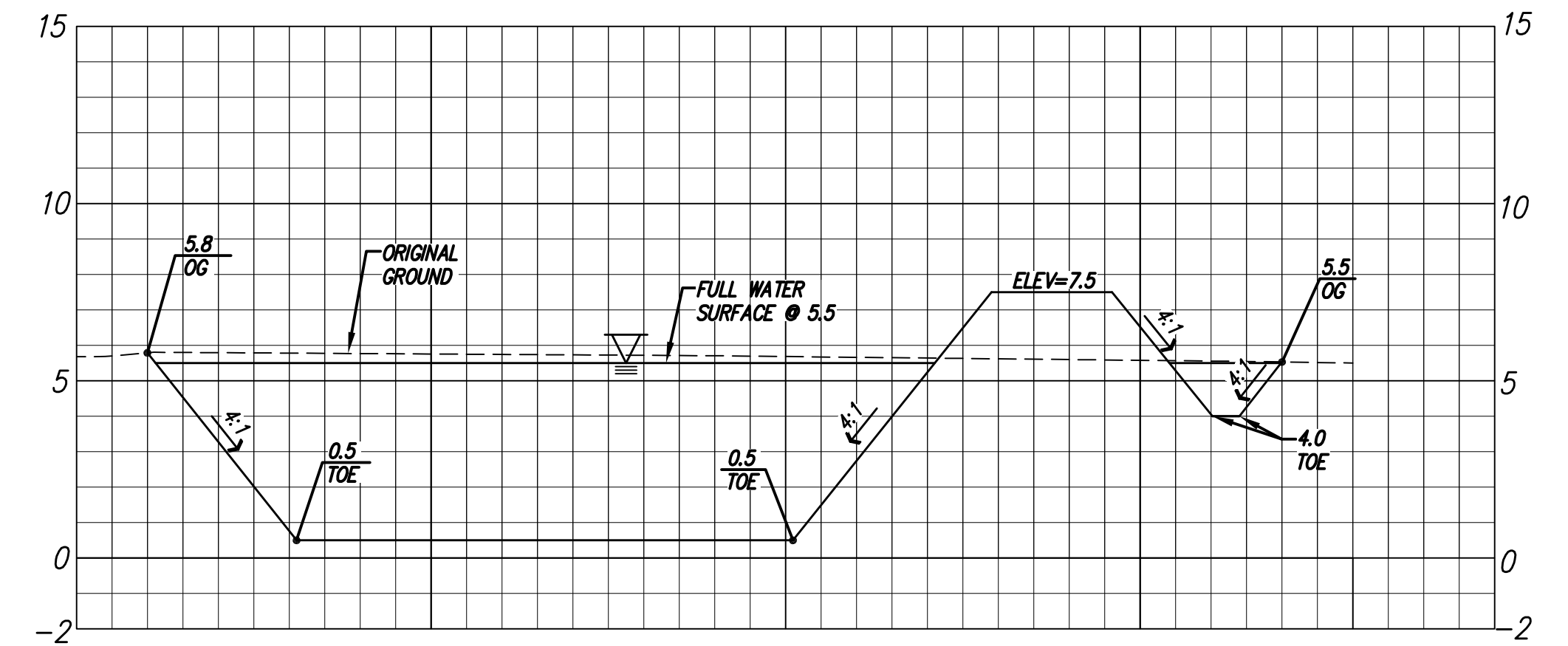
GRADING SECTION A-A - LARGE POND 1

SCALE: 1"=20' HORIZONTAL / 1"=4' VERTICAL



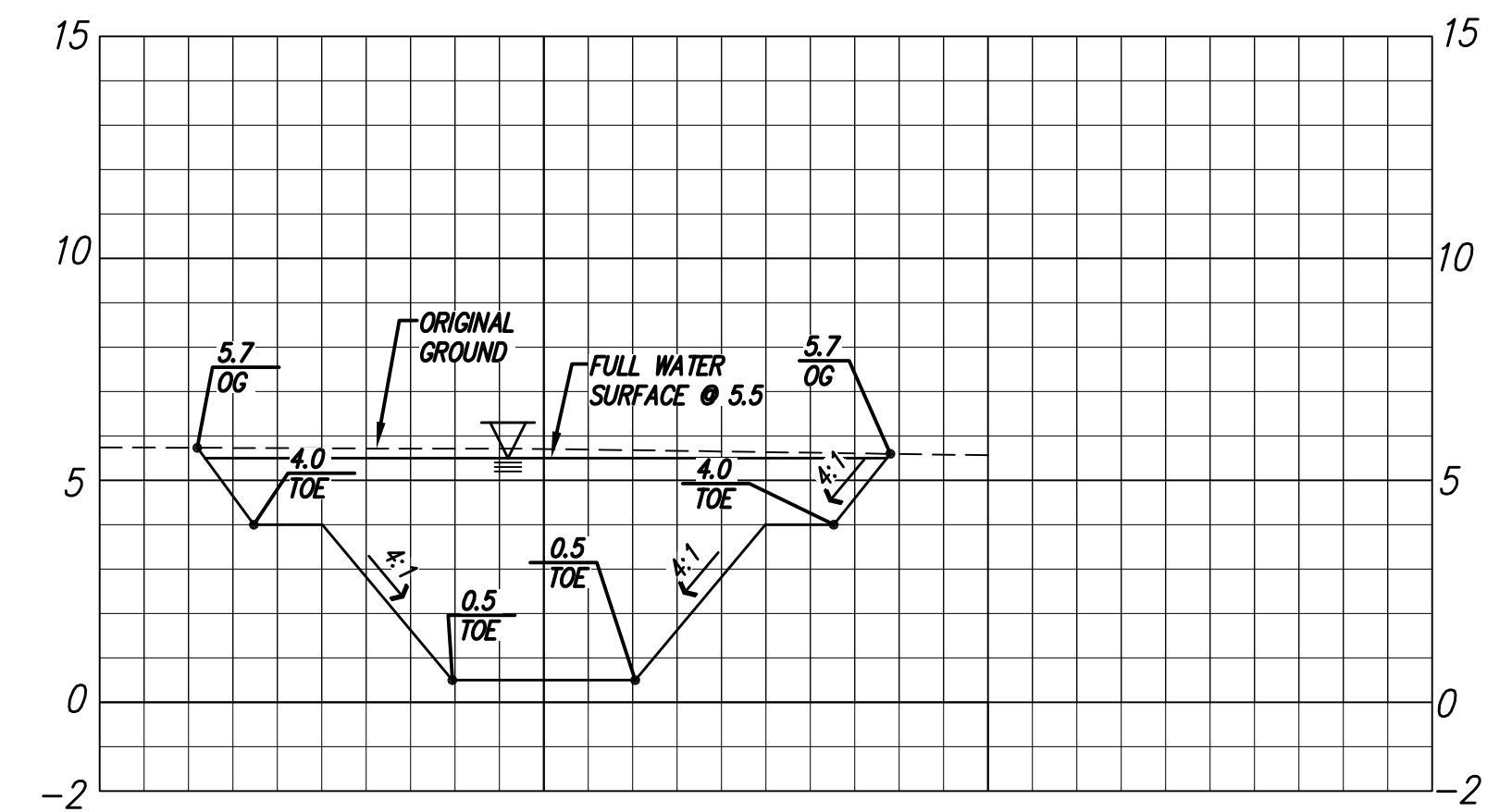
SMALL PONDS 2 & 3

SCALE: 1"=20'



GRADING SECTION C-C - SMALL PONDS 2 & 3

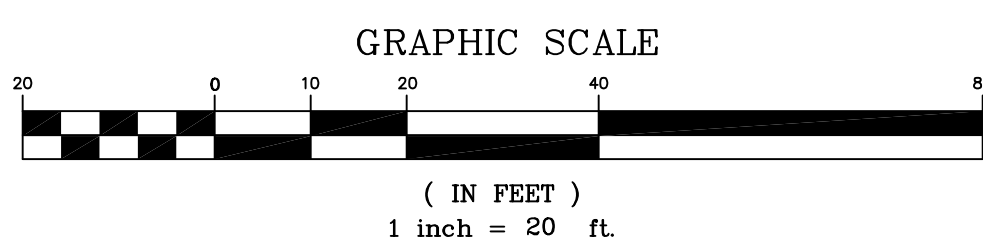
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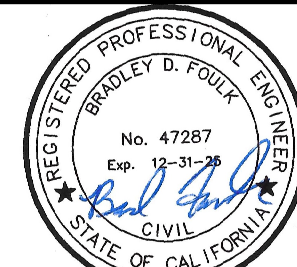
GRADING SECTION D-D - SMALL PONDS 2 & 3

SCALE: 1"=20' HORIZONTAL / 1"=4' VERTICAL

DESIGNED BY: BDF
DRAFTED BY: NRF
CHECKED BY: BDF
ISSUE DATE: 02/14/24



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



REV.	DATE	DESCRIPTION	BY	APPROVED

PROJECT:	MULAS RANCH, SONOMA COUNTY CALIFORNIA RED LEGGED FROG MITIGATION PROJECT		
SHEET TITLE:	GRADING CROSS SECTIONS		
SCALE: 1"=20'	DWG: 24-002	JOB NO: 24-002	XREF: 24-002-TOPO

SHEET
3
OF 3

Table 6.1. Summary of identified macrobotanical taxa from TAP-39. Density is calculated as count of seeds per liter.

Scientific Name	Common Name	Type	Count	Density
<i>Poaceae</i>	grass family	grass	21671.0	119.1
<i>Trifolium</i>	clover	herb	1555.1	8.5
<i>Cheno/Mont burnt</i>	goosefoot family (burnt)	herb	1494.4	8.2
<i>Asteraceae</i>	sunflower family	herb/shrub	1002.3	5.5
<i>Marah</i>	manroot	herb/vine	336.0	1.8
<i>Phacelia</i>	phacelia	herb	315.3	1.7
<i>Galium</i>	bedstraw	herb	281.3	1.5
<i>Umbellularia</i>	California bay	tree	190.0	1.0
<i>Chlorogalum</i>	soaproot	geophyte	168.0	0.9
<i>Quercus</i>	oak	tree	130.0	0.7
<i>Fabaceae</i>	bean family	herb/shrub	105.0	0.6
<i>Amsinckia</i>	fiddleneck	herb	47.0	0.3
<i>Madia</i>	tarweed	herb	41.0	0.2
<i>Cyperaceae</i>	sedge family	sedge	23.0	0.1
<i>Solanaceae</i>	nightshade family	herb	12.0	0.1
<i>Scirpus micro</i>	panicled bulrush	sedge	11.0	0.1
<i>Caryophyllaceae</i>	carnation family	herb	11.0	0.1
<i>Polygonaceae</i>	buckwheat family	herb	10.0	0.1
<i>Silene</i>	catchfly	herb	8.3	0.0
<i>Aesculus</i>	buckeye	tree	8.0	0.0
<i>Rumex</i>	dock	herb	8.0	0.0
<i>Stellaria</i>	starwort	herb	6.0	0.0
<i>Claytonia</i>	miner's lettuce	herb	5.0	0.0
<i>Plantago</i>	plantain	herb	5.0	0.0
<i>Arctostaphylos</i>	manzanita	shrub	3.0	0.0
<i>Solanum</i>	nightshade	herb	3.0	0.0
<i>Lupinus</i>	lupine	shrub	2.0	0.0
<i>Malvaceae</i>	mallow family	herb/shrub	2.0	0.0
<i>Eschscholzia</i>	poppy	herb	1.0	0.0
<i>Frangula</i>	coffeeberry	shrub	1.0	0.0
<i>Taraxia</i>	primrose, suncup	herb	1.0	0.0

**EXHIBIT B: SAMPLE CONTRACT AND
MASTER CONTRACT DOCUMENTS**

**CONTRACT BETWEEN SONOMA RESOURCE CONSERVATION DISTRICT
AND FULL COMPANY NAME
FOR PROJECT NAME**

Sonoma Resource Conservation District, a Special District of the State of California under Division 9 of the California Public Resources Code, hereinafter referred to as "SRCD," hereby enters into a contract (Contract) with Full Company Name, a type of company, hereinafter referred to as "Contractor", for PROJECT NAME, hereinafter known as "Project."

TERMS AND CONDITIONS

1. **Effective date and duration:** This Contract shall become effective upon signing of both parties and shall be in effect until MONTH DAY, 20XX, or such time as may be extended by permissible delays.
2. **Termination:** Either party shall have the right to terminate this Contract for any reason upon 30-day written notice to the other party. In the event of such termination, Contractor shall be entitled to payment for all work performed on the Project prior to such termination.
3. **List of Attachments:** The following documents are attached hereto and made a part hereof:
 - Exhibit A: Scope of Work (Exhibit A)
 - Exhibit B: Rate Schedule (Exhibit B)
 - Exhibit C: Grant Award Documents (Exhibit C)
 - Exhibit D: Protocols for Emergencies and Unexpected Events (Exhibit D)
 - Exhibit E: IRS Form W-9 (Exhibit E)
4. **Contractor Responsibilities:**
 - A. Contractor shall provide services to the SRCD as described in Exhibit A.
 - B. Contractor shall supply all labor and equipment needed to complete work as directed in this Contract.
 - C. Work will be performed on a unit price, lump sum, or time and materials not to exceed basis as reflected in the project proposal in Exhibit B.
 - D. Final report and invoice will be due by MONTH DAY, 20XX. **DELETE THIS LINE IF NOT RELEVANT.**
5. **Total Costs:** Not to exceed \$X without written authorization from SRCD. Additional work exceeding Total Cost will not be authorized without a Change Order. Change Order requires agreement by Contractor and SRCD on scope, cost, and schedule. No work shall start until an approved Change Order is in place.

6. **Invoices:** Contractor will provide copies of invoices and receipts for purchases of any materials, supplies, or outside services with invoices. Invoices shall include a detailed description of services rendered and should reference the Contract No. xx.
- Invoices shall be emailed to name of contract manager at email of contract manager.
 - Contractor shall submit invoices by the 10th of the month for services provided or qualifying expenditures made during the previous month.
7. **Bonding:**
8. **Compliance with Applicable Laws:** In the performance of the work provided by this Contract, Contractor and SRCD shall comply with all applicable Federal, State and local laws, rules, ordinances, codes, and regulations (collectively "Laws") that are applicable to the subject matter of this Contract, inclusive of all orders issued by the Health Officer of the County of Sonoma. Furthermore, Contractor is informed and aware that this Contract is funded by a federal grant from X, which grant is conditioned upon various terms which apply to Contractor. Contractor has reviewed the grant award documents attached hereto as Exhibit C and hereby agrees to comply with them to the extent they apply to a subcontractor.
9. **SRCD Responsibilities:**
- Certifications and Registrations:** SRCD will be responsible for obtaining certificates and registrations necessary for compliance with all state, county and federal mandates present for work in the area described.
 - Site Access:** SRCD will provide site access to Contractor personnel for the purpose of completing the work described in this Contract.
 - Payments:** Project is funded by xxx (Funder). The Funder will withhold up to ten percent (10%) of the total approved amount until the grant is completed. **Payments will be made to Contractor on the following schedule:**
 - SRCD will send payment to Contractor within 30 days of reimbursement from the Funder to the address below.** A completed Exhibit E must be on file with SRCD for payment to be issued.
 - SRCD will reimburse retention funds to Contractor within 30 days of reimbursement by the Funder.**

xx

Contact

Address

All inquiries regarding payments should be directed to:

Adrienne Pettit, Director of Finance

707-569-1448 x105

apettit@sonomarc.org

10. **Status of Contractor:** Contractor, in performing the services specified herein, shall act as an independent contractor. Nothing in this Contract shall be construed as creating a joint venture, partnership, employer/employee, or similar relationship between the Parties.
11. **Warranty:** For a period of one year after completion of the Project, Contractor shall provide a full warranty to the landowner for all work completed by it and shall replace or repair any work or materials that fail to function properly at no charge to the landowner or SRCD. Contractor shall also repair any surrounding areas, material or equipment that are damaged due to any negligence of Contractor for work completed within the one-year warranty period.
12. **Ownership:**
 - A. **Ownership of Skills and Knowledge:** Contractor shall retain all rights to approaches, skills, knowledge and experience acquired by Consultant during the Term of this Agreement.
 - B. **Ownership of Work Product:** All tangible and intangible results created by or on behalf of Consultant in the course of performing the services specified herein, together with any and all intellectual property rights therein, (collectively, the "Work Product") shall become the sole and exclusive property of the SRCD. As such, Contractor acknowledges and agrees that (i) all copyrightable aspects of the Work Product are deemed "works made-for-hire" as that term is defined by the United States Copyright Act, 17 U.S.C. Sections 101, et. seq.(or any successor thereto); and (ii) that SRCD is the exclusive owner of all right, title and interest, including the copyright and any and all other intellectual property rights, in and to the Work Product. To the extent that title to any such Work Product may not vest in SRCD by operation of law, or that any such Work Product may not be considered a "work made-for-hire," all right, title, and interest therein are hereby irrevocably assigned to SRCD exclusively throughout the world.
 - C. **Pre-Existing Intellectual Property:** Contractor will not incorporate any intellectual property owned by Contractor or any third party into any Work Product without SRCD's prior written permission, and agrees that the entire Indemnification Clause of Section 13 specifically applies to any third party claims associated with breach of this section.
 - D. **Pre-Existing Materials:** Contractor shall retain ownership of any materials that Contractor owned or had an interest in prior to the Effective Date ("Pre-Existing Materials"). If Contractor incorporates any Pre-Existing Materials into any Work Product, Contractor hereby grants to SRCD a nonexclusive, royalty-free, perpetual, irrevocable, transferable, sublicensable, worldwide license to fully use

and exploit the Pre-Existing Materials to the extent necessary to derive all value from the Work Product.

13. **Indemnification:** To the fullest extent permitted by law, Contractor shall indemnify and hold harmless and defend the SRCD, its directors, employees, agents and volunteers, and each of them, and the property owner where the work is being performed, from and against:

- a) Any and all claims, demands, causes of action, damages, costs, expenses, losses or liabilities, in law or in equity, of every kind and nature whatsoever for, but not limited to, injury or death of any person including SRCD and/or Contractor, or any directors, officers, employees, or volunteers of the SRCD or Contractor, or the property owner, and damages to or destruction of property of any person, including but not limited to, SRCD and/or Contractor and their directors, officers, employees, agents and volunteers, and/or the property owner, arising out of Contractor negligent performance of the services to be performed under this Contract, except liabilities arising from negligence or willful misconduct of the SRCD or its directors, officers, employees, agents or volunteers;
- b) Any and all actions, proceedings, damages, costs, expenses, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation related to the Project, compliance with which is the responsibility of Contractor; and
- c) Any and all losses, expenses, damages (including damages to the work itself), reasonable attorneys' fees, and other costs, including the costs of defense which may incur with respect to the negligent failure, or negligent refusal of Contractor to perform all its obligations under the Contract.

SRCD agrees to indemnify Contractor from any claims, damages, losses and costs, including, but not limited to, reasonable attorney's fees and litigation costs, to the proportionate extent caused by negligence, or willful misconduct of SRCD.

14. **Commercial General Liability and Automobile Liability Insurance:** Contractor shall provide proof of insurance, and shall name SRCD, its directors, officers, employees, agents and volunteers as additional insureds in Additional Named Insured Endorsement(s) for insurance coverage, in insurance policies with coverage at least as broad as the following for both commercial general liability and automobile liability insurance:

- A. Insurance Services Offices Commercial Liability coverage (Occurrence Form CG 0001)
- B. Insurance Service Offices Form Number CA 0001 covering Automobile Liability, Symbol 1 (any auto)
- C. **General Liability:** One million dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used either the general aggregate limit

shall apply (with the ISO CG 2503, or ISO CG 2504, or insurer's equivalent endorsement provided to the SRCD) or the general aggregate limit shall be twice the required occurrence limit.

- D. Automobile Liability: One million dollars (\$1,000,000) for bodily injury and property damage for each accident limit.
 - E. The general liability policy shall cover bodily injury and property damage liability, owned and non-owned equipment, blanket contractual liability, and completed operations liability.
 - F. The automobile liability policy shall cover all owned, non-owned, and hired vehicles.
 - G. Contractor shall provide proof of insurance to the SRCD upon the signing of this Contract and shall provide the Additional Named Insured Endorsement(s) prior to beginning any work.
15. **Workers' Compensation and Employer's Liability Insurance**: Contractor shall provide proof of insurance verifying that it is insured (or be qualified self-insured) under the applicable laws relating to workers' compensation insurance, all of their employees working on or about the construction site, in accordance with the "Workers' Compensation and Insurance Act," Division IV of the Labor Code of the State of California and any Acts amendatory thereof.
16. **Prevailing Wage**: The Project is subject to the requirements of Section 1720 et seq. of the California Labor Code requiring the payment of prevailing wages, the training of apprentices and compliance with other applicable requirements. Contractor and all subcontractors who perform work on the Project are required to comply with these requirements. Prevailing wages apply to all projects over \$1,000 which are defined as a "public work" by the State of California. This includes construction, demolition, repair, alteration, maintenance, and even the installation of photovoltaic systems under a Power Purchase Agreement when certain conditions are met under Labor Code Section 1720.6. Service and warranty work on public buildings and structures is also included.

The applicable California prevailing wage rate can be found at www.dir.ca.gov and are on file with the SRCD's office, which shall be available to any interested party upon request. The contractor is also required to have a copy of the applicable wage determination posted and/or available at each jobsite.

Specifically, contractors are reminded of the need for compliance with Labor Code Section 1774-1775 (the payment of prevailing wages and documentation of such), Section 1776 (the keeping and submission of accurate certified payrolls) and 1777.5 in the employment of apprentices on public works projects. Further, overtime must be paid for work in excess of 8 hours per day or 40 hours per week pursuant to Labor Code Section 1811-1813.

Special prevailing wage rates generally apply to work performed on weekends, holidays and for certain shift work. Depending on the location of the project and the amount of travel incurred by workers on the project, certain travel and subsistence payments may also be required. Contractors and subcontractors are on notice that information about

such special rates, holidays, premium pay, shift work and travel and subsistence requirements can be found at www.dir.ca.gov.

Only bona fide apprentices actively enrolled in a California Division of Apprenticeship Standards approved program may be employed on the project as an apprentice and receive the applicable apprenticeship prevailing wage rates. Apprentices who are not properly supervised and employed in the appropriate ratio shall be paid the full journeyman wages for the classification of work performed.

The public entity for which work is being performed or the California Department of Industrial Relations (DIR) may impose penalties upon contractors and subcontractors for failure to comply with prevailing wage requirements. These penalties are up to \$200 per day per worker for each wage violations identified; \$100 per day per worker for failure to provide the required paperwork and documentation requested within a 10-day window; and \$25 per day per worker for any overtime violation.

As a condition to receiving progress payments, final payment and payment of retention on any and all projects on which the payment of prevailing wages is required, Contractor agrees to present to SRCD, along with its request for payment, all applicable and necessary certified payrolls (for itself and all applicable subcontractors) for the time period covering such payment request. The term "certified payroll" shall include all required documentation to comply with the mandates set forth in Labor Code Section 1720 et seq, as well as any additional documentation requested by SRCD or its designee including, but not limited to: certified payroll, fringe benefit statements and backup documentation such as monthly benefit statements, employee timecards, copies of wage statements and cancelled checks, proof of training contributions (CAC2 if applicable), and apprenticeship forms such as DAS-140 and DAS-142.

In addition to submitting the certified payrolls and related documentation to SRCD, Contractor and all subcontractors shall be required (for all projects awarded after April 1, 2015) to submit certified payroll and related documents electronically to the DIR. Failure to submit payrolls to the DIR when mandated by the project parameters shall also result in the withholding of progress, retention and final payment.

SRCD shall withhold any portion of a payment; including the entire payment amount, until certified payroll forms and related documentation are properly submitted, reviewed and found to be in full compliance. In the event that certified payroll forms do not comply with the requirements of Labor Code Section 1720 et seq., SRCD may continue to hold sufficient funds to cover estimated wages and penalties under the Contract.

All contractors/subcontractors and related construction services subject to prevailing wage, including but not limited to trucking, surveying, and inspection work must be registered with the DIR as a "public works contractor". Those who fail to register and maintain their status as a public works contractor shall not be permitted to perform work on the project.

[Based on State funding sources, this project may be subject to special labor compliance requirements of Proposition 84.]

17. **Contractor's State License:** Contractor shall provide copy of current California state license, where applicable.
18. **Attorney Fees, Applicable Law and Forum:** In the event either party brings an action or proceeding for damages arising out of the other's performance under this Contract or to establish the right or remedy of either party, the prevailing party shall be entitled to recover reasonable attorney fees and costs as part of such action or proceeding. This Contract shall be construed and interpreted according to the substantive law of California, regardless of the law of conflicts to the contrary in any jurisdiction. Any action to enforce the terms of this Contract or the breach thereof shall be brought and tried in the forum nearest to the City of Santa Rosa, in the County of Sonoma.
19. **Nondiscrimination:** Contractor shall comply with all applicable federal, state, and local laws, rules and regulations in regard to non-discrimination. Contractor agrees not to unlawfully discriminate, harass, or to allow harassment against any employee or applicant for employment based on race, color, religion, religious creed (including religious dress and grooming practices), national origin, ancestry, citizenship, physical or mental disability, medical condition (including cancer and genetic characteristics), genetic information, marital status, sex (including pregnancy, childbirth, breastfeeding, or related medical conditions), gender, gender identity, gender expression, age, sexual orientation, veteran and/or military status, and any other status protected by state or federal law.
20. **No Waiver:** The waiver by either party of any breach or violation of any requirement of this Contract shall not be deemed to be a waiver of any such breach in the future, or of the breach of any other requirement of this Contract.
21. **Consent:** Wherever in this Contract the consent or approval of one party is required to an act of the other party, such consent or approval shall not be unreasonably withheld or delayed.
22. **Assignment and Delegation:** Neither party hereto shall assign, sublet, or transfer interest in or duty under this Contract without the written consent of the other, and no assignment shall be in force or effect whatsoever unless and until the other party shall so have consented.
23. **Severability:** If any provision of this Contract, or any portion thereof, is found by any court of competent jurisdiction to be unenforceable for any reason, such provision shall be severable and shall not in any way impair the enforceability of any other provision of this Contract.
24. **Authority to Contract:** Contractor and SRCD each warrant hereby that they are legally permitted and otherwise have the authority to enter into and perform this Contract.
25. **Notices:** Notice required to be given pursuant to the terms and provisions of this Contract shall be in writing and shall be sent first-class mail. Notice shall be deemed to be effective two (2) days after mailing to the following addresses:

To SRCD:

Valerie Quinto, Executive Director
Sonoma Resource Conservation District
1221 Farmers Ln. Suite F
Santa Rosa, CA 95405

To CONTRACTOR:

Contact

Address

26. **Entirety of Contract:** This Contract, including any documents expressly incorporated by reference whether or not attached hereto, constitutes the entire Contract between the parties relating to the subject of this Contract and supersedes all previous agreements, promises, representations, understandings and negotiations, whether written or oral, among the parties with respect to the subject matter hereof.
27. **Survival of Terms:** All express representations, waivers, indemnifications, and limitations of liability included in this Contract will survive its completion or termination for any reason.
28. **Publicity:** Contractor agrees to give appropriate credit to SRCD and any Funder(s) identified in this Contract for their financial support in any and all tours, press releases, publications, reports, signage, video credits, dedications, and other public communications regarding this Project. Contractor must obtain prior SRCD approval for the use of SRCD logo or the logo of any Funder(s) relating to this Project.
29. **Protocols for Emergencies and Unexpected Events:** Contractor agrees to meet all requirements and restrictions defined in Exhibit D,

The above Contract as outlined is hereby agreed upon:

For **Contractor**

Authorized Signer

Date

Printed Name and Title of Authorized Signer

For **SONOMA RESOURCE CONSERVATION DISTRICT**

Christine Kuehn, Executive Director

Date

Exhibit A – Scope of Work

The latest edition of the Standard Specifications of the State of California, Division of Transportation, shall govern operations and materials (but not pricing) for this project except where otherwise indicated in the specifications and on the plans. The Caltrans Standard Specifications are included as part of this contract by reference.

Exhibit B – Rate Schedule

Exhibit C – Grant Award Documents

Exhibit D – Special Considerations and Protocols for Emergencies and Unexpected Events

1 ENVIRONMENTALLY SENSITIVE AREAS

This Project site is considered an environmentally sensitive area. The contractor shall take all precautions and measures necessary to protect the environmental integrity of the site including, but not limited to, the protection of all plants, animals, and aquatic life.

The following items are an integral aspect of this construction project, and are to be reviewed before construction begins:

- 1.1 Permits: Permits are required. Please see the permit section below for more details.
- 1.2 Contractor shall have emergency spill cleanup gear (spill containment and absorption materials) and fire equipment available on site at all times. These items are to be reviewed by the Project Manager before construction begins.
- 1.3 Access to the site must be thoroughly reviewed with the Project Manager. Exact location of access way, number of trips planned, and type of vehicles used shall be discussed. Contractor shall be responsible for repairing, at his/her own cost above and beyond the scope of work.
- 1.4 Trash, litter, construction debris, cigarette butts, etc., must be stored in a designated area approved by the Project Manager or removed from the site at the end of each working day. Upon completion of work, contractor is responsible for removing all of these unwanted items to the satisfaction of the Project Manager.
- 1.5 Abiding by Exhibit X: Best Management Practices and Mitigation Measures.
- 1.6 Include any other special requirements (biological surveys/monitoring/construction timeline limitations for habitat, etc)
- 1.7 The Contractor shall conform to Sonoma County Erosion Prevention and Sediment Control in accordance with Chapter 11 and Chapter 11A of the Sonoma County Code. Detailed Sonoma County Erosion Prevention and Sediment Control notes can be found on the attached Project Plans or at the [Permit Sonoma Website](https://permitsonoma.org/instructionsandforms/grd-011erosionpreventionandsedimentcontrolnotes)¹.

¹ <https://permitsonoma.org/instructionsandforms/grd-011erosionpreventionandsedimentcontrolnotes>
Sonoma Resource Conservation District
1221 Farmers Lane, Suite F, Santa Rosa, CA 95405
707.569.1448

2 PERMITS

The SRCD has or will obtain the following required permits. Copies of permits will be provided to the Contractor. All contractors at the site must have possession of a copy of these documents and conform to their requirements at all times. No construction work may occur until all permits are available.

- 2.1 California Department of Fish and Wildlife Lake and Streambed Alteration Agreement - 1600
- 2.2 Regional Water Quality Control Board Water Quality Certification - 401
- 2.3 U.S. Army Corps of Engineer 404
- 2.4 County of Sonoma - Grading permit exemption
- 2.5 County of Sonoma - Zoning Permit

The Contractor is responsible for the obtaining the following Permit(s):

- 2.6 Electrical permit from Permit Sonoma

3 INSPECTIONS

Work performed on this project shall be subject to regular inspections by SRCD. The Contractor shall not cover up any work prior to these inspections. Inspection shall occur during construction and at job completion. Contact SRCD for observation points.

Points of inspection by SRCD for construction:

- 1. Earthwork
- 2. Tank Pad and Tank Layout
- 3. Trenching alignment
- 4. Trenching
- 5. First Flush system
- 6. Tank manifold and distribution piping
- 7. Pump and controls
- 8. Erosion prevention
- 9. Construction completion
- 10. Commissioning

4 CULTURAL RESOURCES

For projects involving ground disturbing work, paleontological resources or prehistoric, historic or tribal cultural resources are discovered during construction activities, work shall immediately be halted within the vicinity of the find. The Contractor shall call SRCD to assess the significance of the find to ensure that resources are avoided. The Northwest Information Center of the California Historical Resources Information System shall be notified at (707) 588-8455. A qualified paleontologist, archeologist, or tribal cultural resource specialist shall be consulted for an on-site evaluation. Additional mitigation may be required per the archeologist's recommendations. If potential human remains are discovered, the Contractor shall also immediately notify the Sonoma County Coroner at (707) 565-5070 and notify SRCD of the determination of the County Coroner.

5 ACTIVE FIRE OR OTHER EMERGENCY

In the event that an agency having jurisdiction has declared a Mandatory Evacuation Zone or an Evacuation Warning Zone for the area within which the project is located, all work shall immediately be halted. The Contractor may decide to demobilize equipment and materials at their own risk. If there is an active fire or other emergency within the area but the project is not within a mandatory or warning zone, the Contractor shall contact SRCD to determine whether work stoppage is necessary and appropriate. Projects will be evaluated on a case-by-case basis. Contractor shall monitor fire and weather conditions with the National Weather Service or other agency having jurisdiction to know when closures and evacuation zones are in effect. This shall be done daily, to determine the fire conditions projected for the following day and Contractor shall plan their schedule accordingly. If project work is determined to be safe to proceed during an active fire, the items listed below must be in place when there is an active fire.

- 5.1 Spark Arrestors: Whenever any task is being performed that may pose a potential fire danger, cell phones or 2-way radios shall be on site to permit a rapid emergency response if necessary. All motorized equipment shall have federal or state approved spark arrestors.
- 5.2 Trucks, Tractors: Heat from exhaust systems can ignite a wildland fire. The Contractor shall not drive off road or park near or drive through tall grasses or other flammable vegetation types without approval from the District's representative. Based upon authorization by SRCD staff, the Contractor shall remove all grasses and other types of flammable vegetation from the off-road work area approved for vehicle access.
- 5.3 Equipment, Tools: Heat from power equipment exhaust systems or sparks from equipment or tools can ignite a fire. Clear a space with a radius at least five feet from the exhaust in which to place equipment such as generators, chainsaws and power weed

cutters. Be careful when using tools that produce sparks and be sure spark arrestors are in good condition. Do not allow heated tools to contact ignitable fuels. If power equipment or tools that produce sparks are in use, a fire extinguisher shall be kept onsite. Larger equipment shall have a fire extinguisher mounted on it.

- 5.4 Fueling Equipment: Before fueling power equipment or tools in the field, clear a space in which to perform the task. Fuel should be stored in a cleared space and, where possible, in the shade. If power equipment stays in one location during the task, store fuel and equipment and perform fueling operation in the same clearing. Be sure equipment is turned off while fueling. Take extra care when fueling heated equipment. Be sure a gas spout/funnel is used to avoid spills and that gas caps are kept in place. Remove or dry any fuel spillage prior to starting equipment. During fueling operations, a fire extinguisher shall be onsite ready for use.

When practical, fuel vehicles and equipment off-site. If it is necessary to fuel on-site the following precautions shall be taken: No vehicles or equipment shall be refueled within 100 ft. (30 ft. for handheld equipment) of a watercourse, ditch, wetland, or a pond. Do not fuel equipment directly over asphalt. The fueling operator shall stay with the fueling operation at all times. Do not top off tanks. The Contractor shall have spill containment and cleanup materials available on site. Spills shall be immediately cleaned up and contaminated materials disposed in accordance with state law. Fueling operators shall have all necessary permits, licenses and training. Any spills shall be reported immediately to the crew supervisor and a SRCD representative.

- 5.5 Fire Suppression Equipment and Training: For every crew member, the Contractor is required to have the following fire suppression equipment on site: a shovel, a McLeod, Polaski, or other modified scraping tool. All vehicles shall have a pressurized water fire extinguisher or pump bladder bag, and ABC rated fire extinguisher. During fire season the Contractor is required to have a water buffalo, or water truck, with minimum 300-gallon capacity and 300 ft. of 1.5 in diameter hose stationed on the nearest service or paved road. The hose shall be pre-connected and preferably primed. The water truck and equipment listed above shall be within 30 ft. of at least one field crew member at all times. Wildland Fire Fighter qualification (S – 130²) for one or more construction crew members is recommended and will be taken into consideration when evaluating work stoppage during Red Flag Warning Days.

6 RED FLAG WARNING DAYS

A Red Flag Warning, defined by the National Weather Service, means warm temperatures, very low relative humidity, and strong winds are expected to combine to produce an increased risk of fire danger. Upon notification from the National Weather Service that a “Red Flag Warning”

² <https://www.nwccg.gov/publications/training-courses/s-130>

exists for the project area, Contractor shall contact SRCD to determine whether work stoppage is necessary and appropriate. Projects will be evaluated on a case-by-case basis. If project work is determined to be safe to proceed, the items listed under Sections 2.1 through 2.5 must be in place during all Red Flag Warning Days.

Exhibit E – IRS Form W-9

SHC 126.1 MITIGATION AGREEMENT TO IMPLEMENT WETLAND

RESTORATION

This AGREEMENT, ENTERED INTO EFFECTIVE on 06/16/2026, is between the STATE OF CALIFORNIA, acting by and through its Department of Transportation, referred to herein as “CALTRANS,” and the

SONOMA RESOURCE CONSERVATION
DISTRICT, referred to herein as “SRCD.”

RECITALS

1. CALTRANS and SRCD herein referred to as “PARTIES,” pursuant to Streets and Highways Code section 126.1, are authorized to enter into this Agreement.
2. CALTRANS has constructed the SON-116/121 Intersection Improvements Project on Route 121 between postmiles 6.5 and 7 in Sonoma County, hereinafter referred to as “PROJECT”.
3. CALTRANS has determined that PROJECT resulted in certain impacts to California red-legged frog (*Rayna draytoni*) habitat and waters of the U.S. and State, hereinafter referred to as “IMPACTS.” The following regulatory agencies have issued permitting documents related to the IMPACTS: U.S. Fish and Wildlife Service (“USFWS”), U.S. Army Corps of Engineers (“USACE”), and San Francisco Regional Water Quality Control Board (“RWQCB”), hereinafter referred to as “REGULATORY AGENCIES”.
4. The following permits require compensatory mitigation for IMPACTS, and have been issued by the REGULATORY AGENCIES, attached hereto as **Exhibit A** and made a part of this Agreement:
 - a. Mitigation Measure 1, on page 4, of the USFWS Biological Opinion, (No. 08ESMF00-2017-F-0544-2), issued February 24, 2017, and amended (No. 08ESMF00-2017-F-0544-R001-1) on June 28, 2019;
 - b. Seasonal Wetland Mitigation Measure of the RWQCB 401 Certification WDID # 2 CW 448130 issued December 20, 2022; and
 - c. Special Conditions 9 and 10 of the U.S. Army Corps of Engineers (USACE) CWA Section 404 Nationwide Permit (SPN-2016-00292S) issued January 25, 2023.
5. CALTRANS, in order to meet compensatory mitigation requirements must provide off-site mitigation for IMPACTS, hereinafter referred to as “OFFSITE MITIGATION REQUIREMENTS”.

6. The OFFSITE MITIGATION REQUIREMENTS and site location are outlined in the project's Habitat Mitigation and Monitoring Plan and Mulas Ranch Long Term Management Plan; hereinafter referred to as MANAGEMENT PLANS and attached hereto as **Exhibit B** and made a part of this Agreement. CALTRANS must create at least 0.475 acres of seasonal wetland and provide restoration of 3.71 acres of California red-legged frog ("CRLF") habitat offsite, record a conservation easement, and fund endowments for the perpetual stewardship and land management of the conservation easement.
7. A prior agreement between CALTRANS and Golden State Land Conservancy ("GSLC") was executed on August 6, 2025, to fund the recordation of the conservation easement, fund three (3) years of monitoring, and fund the perpetual stewardship and land management of the conservation easement area. This prior agreement is incorporated herein by this reference. The site was used solely for growing hay and grazing cattle. GSLC performed a hazardous waste assessment and found no potential issues.
8. CALTRANS intends to meet the remaining OFFSITE MITIGATION REQUIREMENTS by implementing the creation of 3.85 acres of CRLF upland habitat, and 0.9 acres of wetlands, followed by two (2) years of monitoring as specified in MANAGEMENT PLANS, hereinafter referred to as "MITIGATION PROJECT."
9. PARTIES agree to implement the restoration activities described in the MANAGEMENT PLANS following the recordation of a conservation easement. The conservation easement is incorporated herein by this reference
10. CALTRANS has determined that the estimated cost of satisfying MITIGATION PROJECT is \$1,299,991.00 described in **Exhibit C**.
11. The terms of this Agreement shall supersede any inconsistent terms of any prior Memorandum of Understanding (MOU) or agreement relating to MITIGATION PROJECT.
12. PARTIES now define herein below the terms and conditions under which this Agreement will be implemented.

SECTION I

SRCD AGREES:

1. All work performed by SRCD, or performed on SRCD's behalf, shall be performed in accordance with all state and federal laws, regulations, policies, procedures, and standards.

2. To prepare final designs of MITIGATION PROJECT and receive CALTRANS approval of designs prior to implementation.
3. To use one hundred percent (100%) of CALTRANS' funds provided pursuant to this Agreement, in order to satisfy SRCD's obligation and responsibilities set forth in this Agreement.
4. To prepare and submit to CALTRANS quarterly billing statements for any work performed by SRCD.
5. To submit draft monitoring reports to CALTRANS for two (2) years (with monitoring anticipated to begin in the year 2027 and end two (2) years later, currently anticipated to be year 2029 by December 1st of each year. Said reports shall contain all of the information described in the MANAGEMENT PLANS.
6. To address CALTRANS' comments on the draft monitoring report and thereafter submit a final draft monitoring report to CALTRANS by December 31st for two (2) years (with monitoring anticipated to begin in the year 2027 and end two (2) years later, currently anticipated to be year 2029 for CALTRANS' review and approval, if appropriate.
7. If at any time during the two (2) year monitoring period (with monitoring anticipated to begin in the year 2027 and end two (2) years later currently anticipated to be year 2029) it is determined by CALTRANS that progress towards the success criteria, as described in the MANAGEMENT PLANS is not being achieved then SRCD shall implement any remedial or adaptive management measures necessary to meet the success criteria.
8. Upon completion of MITIGATION PROJECT and all work incidental thereto, to furnish CALTRANS with a detailed statement of MITIGATION PROJECT costs to be borne by CALTRANS. SRCD thereafter shall refund to CALTRANS, promptly after completion of SRCD's final accounting of MITIGATION PROJECT costs, any amount of CALTRANS' deposits remaining after actual costs to be borne by CALTRANS have been deducted, or to bill CALTRANS for any additional amount required to complete CALTRANS' financial obligations pursuant to this Agreement.
9. If the work performed under this Agreement is done under contract and falls within the Labor Code section 1720(a)(1) definition of "public works" in that it is construction, alteration, demolition, installation, or repair; or maintenance work under Labor Code section 1771, SRCD must conform to the provisions of Labor Code sections 1720 through 1815, and all applicable provisions of California Code of Regulations found in Title 8, Chapter 8, Subchapter 3, Articles 1-7.
10. If work performed under this Agreement is done under contract, is paid for in whole or part with federal funds, and is of the type of work subject to federal prevailing wage

requirements, SRCD must conform to the provisions of the Davis-Bacon and Related Acts, 40 U.S.C. § 276(a) in addition to Labor Code provisions.

11. SRCD agrees to include federal prevailing wage requirements in its contracts for public work. Work performed by SRCD's own forces is exempt from federal prevailing wage requirements.
12. To retain all books, documents, papers, accounting records, and other evidence pertaining to costs incurred, including support data for cost proposals, and to make such materials available at the respective offices of CALTRANS at all reasonable times for three (3) years after the termination date of this Agreement. CALTRANS, the Federal Highway Administration, or any duly authorized representative of the Federal Government shall have access to any books, records, and documents of SRCD that are pertinent to this Agreement for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished when requested.

SECTION II

CALTRANS AGREES:

1. To obtain any and all necessary property rights and/or rights of entry required prior to the implementation of MITIGATION PROJECT and for full compliance with any terms and conditions thereof. Said rights of entry shall also include rights for SRCD personnel.
2. To obtain any and all environmental approvals and/or resource agency agreements, permits, and/or approvals required prior to implementation of MITIGATION PROJECT and to fully comply with any terms and conditions thereof.
3. To provide a biological monitor during the construction of the MITIGATION PROJECT.
4. To pay SRCD within forty-five (45) calendar days of receipt of signed quarterly invoices. CALTRANS' total obligation to SRCD for MITIGATION PROJECT costs shall not exceed the amount of \$1,299,991.00.
5. CALTRANS will obtain written confirmation from PERMITTING AGENCIES that PERMIT REQUIREMENTS have been met and provide a copy to SRCD.

SECTION III

IT IS MUTUALLY AGREED:

1. All obligations of CALTRANS under the terms of this Agreement are subject to the appropriation of resources by the Legislature, State Budget Act authority and the allocation of funds by the California Transportation Commission (CTC).
2. All applicable laws, rules and policies relating to the use of federal or state funds shall apply notwithstanding other provisions of this Agreement.
3. Under a separate agreement between CALTRANS, GSLC, and SRCD, GSLC will grant SRCD temporary access to the conservation easement and the MITIGATION PROJECT location.
4. The party that discovers hazardous material (HM) will immediately notify the other party(ies) to this Agreement. HM-1 is defined as hazardous material (including but not limited to hazardous waste) that may require removal and disposal pursuant to federal or state law, whether it is disturbed by MITIGATION PROJECT or not. HM-2 is defined as hazardous material (including but not limited to hazardous waste) that may require removal and disposal pursuant to federal or state law, only if disturbed by MITIGATION PROJECT. Management activities associated with either HM-1 or HM-2 include, without limitation, any necessary manifest requirements and designation of disposal facility.
5. CALTRANS, independent of MITIGATION PROJECT, is responsible for any HM-1 found within existing State Highway System (SHS) right of way. CALTRANS will undertake, or cause to be undertaken, HM-1 management activities with minimum impact to PROJECT schedule and will pay, or cause to be paid, all costs associated with HM-1 management activities.
6. CALTRANS has no responsibility for management activities or costs associated with HM-1 found outside the existing SHS right of way. If HM-1 is found outside existing SHS right of way, under state and federal law responsibility for such HM-1 rests with the owner(s) of the parcel(s) on which the HM-1 is found. If HM-1 is found outside the existing SHS right of way, PARTIES will reassess the feasibility of the MITIGATION PROJECT and mutually agree on a course of action prior to the commencement of any additional work.
7. SRCD is responsible for the management of any HM-2 found within MITIGATION PROJECT limits. SRCD may use up to 5% of the funds already obligated by CALTRANS under this agreement for the costs associated with HM-2 management activities. However, CALTRANS is not responsible to pay any additional money to SRCD for these costs.

8. CALTRANS' acquisition of or acceptance of title to any property on which any hazardous material is found will proceed in accordance with CALTRANS' policy on such acquisition.
9. Neither SRCD nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by CALTRANS and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon CALTRANS under this agreement. It is understood and agreed that CALTRANS, to the extent permitted by law, will defend, indemnify, and save harmless SRCD and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by CALTRANS and/or its agents under this agreement.
10. Neither CALTRANS nor any officer or employee thereof is responsible for any injury, damage, or liability occurring by reason of anything done or omitted to be done by SRCD its contractors, sub-contractors, and/or its agents under or in connection with any work, authority, or jurisdiction conferred upon SRCD under this agreement. It is understood and agreed that SRCD, to the extent permitted by law will defend, indemnify, and save harmless CALTRANS and all of its officers and employees from all claims, suits, or actions of every name, kind, and description brought forth under, but not limited to, tortious, contractual, inverse condemnation, or other theories or assertions of liability occurring by reason of anything done or omitted to be done by SRCD, its contractors, sub-contractors, and/or its agents under this agreement.
11. In the event of any breach of this Agreement by either party, the other party may enforce this Agreement by any means available at law or in equity. In the event of litigation, mediation or arbitration to resolve any breach of, or dispute related to this Agreement, each party agrees to pay for their own attorneys' cost and expenses, without regard to who prevails.
12. A failure by either party to enforce any provision of this Agreement shall not be construed as a continuing waiver, or as a waiver of the right to compel enforcement of that provision.
13. This Agreement may be executed in several counterparts and all counterparts so executed shall constitute one agreement that shall be binding on all of the parties, notwithstanding that all of the parties are not a signatory to the original or the same counterpart. If any provision of this Agreement is held invalid, the other provisions shall not be affected thereby.

14. No alteration or variation of the terms of this Agreement shall be valid unless made by a formal amendment executed by the parties hereto and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto.
15. Nothing within the provisions of this Agreement is intended to create duties or obligations to or rights in third parties not party to this Agreement or to affect the legal liability of either party to the Agreement by imposing any standard of care different from the standard of care imposed by law.
16. This Agreement shall terminate upon CALTRANS' written acceptance that SRCD has completed MITIGATION PROJECT, however all indemnification, document retention, audit, claims, environmental, legal challenge, hazardous material, operation, maintenance, and ownership articles will remain in effect until terminated or modified in writing by mutual agreement.

CONTACTS

SRCD

Christine Kuehn
Executive Director
Sonoma Resource Conservation District
707-569-1448 x 114
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CALTRANS

Daniel Licht
Mitigation Specialist
Caltrans D4
daniel.licht@dot.ca.gov

PARTIES are empowered by CA Streets and Highways Code section 126.1 to enter into this AGREEMENT and have delegated to the undersigned the authority to execute this Agreement on behalf of the respective agencies and covenants to have followed all the necessary legal requirements to validly execute this Agreement.

**STATE OF CALIFORNIA
Department of Transportation**

By: Wajahat.
Wajahat Nyaz
Deputy District Director, Design

**SONOMA RESOURCE
CONSERVATION DISTRICT**

By: Christine Kuehn
Christine Kuehn (Jun 12, 2026 16:24:54 PDT)
Christine Kuehn
Executive Director

Approved as to form and procedure:

RBB
Attorney
Department of Transportation

Certified as to budgeting of funds:

Jeffrey Kuehn
Jeffrey Kuehn
District Budget Manager

Certified as to financial terms and policies:

Ramil
Percy Ramil
HQ Accounting Supervisor

Exhibit C

SCOPE OF WORK AND BUDGET **Mulas Mitigation Pond Project** Proposal Date: November 10, 2025

Caltrans is contracting with Sonoma Resource Conservation District (SRCD) for services to design, obtain all necessary permits, construct, and provide two years of post-construction monitoring for a 4.75-acre mitigation pond/wetland area at the Mulas Property in Sonoma, California.

SCOPE OF WORK

Task 1: Design & Permitting

SRCD will provide project management and oversight for preparing 100% engineering plans and obtaining all necessary permits for a 4.75-acre mitigation pond/wetland at the Mulas Property. SRCD will solicit proposals and select a qualified design consultant to complete project designs. SRCD will assist Caltrans in obtaining all applicable permits and CEQA and NEPA coverage. SRCD will coordinate with Caltrans biology and cultural resources staff and the landowner to complete any necessary pre-construction surveys and site visits for finalizing designs. SRCD will attend meetings with Caltrans and Golden State Land Conservancy (GSLC), as needed, to maintain project progress and alignment with the property conservation easement requirements. Scope of work includes the following:

1. Communicate with project partners, consultants, and landowner (as needed).
2. Conduct up to four (4) site visits.
3. Participate in up to six (6) project coordination meetings with Caltrans and GSLC.
4. Procure and oversee Geotechnical Engineering consultant to provide:
 - a. Soils Report
5. Procure and oversee qualified design consultant to provide:
 - a. 65% Civil Engineering plans to obtain permits.
 - b. 100% Civil Engineering plans incorporating permit comments for construction
 - c. Engineer's Cost Estimate
6. Assist Caltrans in obtaining all necessary permits, filing required NEPA/CEQA documentation, and completing a Cultural Resources Study.
7. Lead Sonoma County permitting efforts. Permits may include:
 - a. Sonoma County Zoning and Grading permits
8. Review and respond to permitting plan check comments.
9. Coordinate with Caltrans Biology staff to complete pre-construction biological survey.
10. Coordinate with Caltrans Cultural Resources staff on the cultural resource study and any construction mitigation measures, if required by the study findings.

Task 2: Bid and Construction

SRCD will provide construction oversight for the mitigation pond/wetland project at the Mulas Property. SRCD will conduct a bid process to identify and procure a qualified contractor, provide construction oversight in partnership with the design engineer, and ensure compliance

with permit requirements. SRCD will complete any required permit reporting documentation. Scope of work includes the following:

1. Coordinate with Caltrans, GSLC, landowner, and permit agencies.
2. Prepare a bid package to solicit bids, host bid tour, and select a qualified implementation contractor for:
 - a. Constructing Project
 - b. Providing one (1) year of planting maintenance
3. Procure and oversee design consultant for:
 - a. Construction engineering oversight
 - b. Preparation of as-built plans following construction completion
4. Procure and oversee geotechnical engineer for:
 - a. Construction geotechnical inspections
5. Conduct a construction kickoff meeting at the project site.
6. Attend up to 12 construction oversight site visits.
7. Review and respond to contractor Requests for Information and Submittals in coordination with design consultant.
8. Complete a final construction walkthrough with the design consultant and contractor.
9. Review as-built plans following construction completion.
10. Coordinate with permit agencies, as needed during construction and submit all required reports and documentation for permit compliance.

Task 3: Monitoring

SRCD will complete two years of post-construction monitoring for the mitigation pond/wetland project at the Mulas Property, including any monitoring required by issued permits. SRCD will hire a biologist to conduct the monitoring. SRCD will submit all required monitoring reports and documentation, including payment of annual permit fees, for the first two years following project completion. Scope of work includes the following:

1. Coordinate, as needed, with Caltrans, GSLC, landowner, and permit agencies regarding monitoring requirements and findings.
2. Conduct up to four (4) monitoring site visits covering two (2) years of monitoring.
3. Monitor wetland native plant survival.
4. Procure and oversee biologist for two years of mitigation monitoring for:
 - a. California Red Legged Frog, Western Pond Turtle, rare, threatened, endangered, and other special status plants and animals and potential habitat enhancement, invasive plant species, non-native wildlife, disease.
5. Complete and submit all required monitoring reports, forms, photo documentation, and annual permit fees as required by issued permits.
6. Complete all required monitoring documentation, as required by GSLC easement and Caltrans Mitigation.

Assumptions

The following is assumed:

1. All permits will be held by Caltrans and permit fees are included in the proposed budget.
2. Caltrans will lead CEQA and NEPA compliance.
3. Caltrans will conduct a Cultural Resources survey and tribal consultation.
4. Caltrans will lead the following permit efforts:
 - a. SF Bay Regional Water Quality Control Board (RWQCB) 401 Permit
 - b. US Army Corps of Engineers 404 Permit
 - c. US Fish and Wildlife Service Biological Opinion
5. Caltrans Cultural Resources staff will support completing required mitigation measures during construction, if required by cultural resources study findings.
6. Consultation with US Fish & Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), and National Marine Fisheries Service (NMFS) has been completed, and any required updates will be done by Caltrans.
7. Caltrans will provide biological monitoring during construction.
8. A topographic survey has been completed during the concept design phase and additional surveys will not be required.
9. SRCD will lead the bid process and procure the following consultants/contractors:
 - a. Geotechnical Engineer (design and construction monitoring)
 - b. Design Engineer (design and construction oversight)
 - c. Licensed Contractor (construction and 1 year plant survival)
 - d. Biologist (post-construction monitoring)
10. Up to one (1) round of permitting plan check comments will be issued.
11. SRCD will pay all permit fees up to the specified budget.
12. SRCD will seek to obtain a Sonoma County Grading Permit waiver.
13. Budget includes monitoring for two years following completion of work. If additional years of monitoring are required by issued permits, additional budget will be needed to cover staff time for completing required monitoring visits and reporting.

TIMELINE

The following timeline is proposed:

Task	Date
Task 1. Design & Permitting	April 2026 – March 2027
Task 2. Bid & Construction	April 2027 – March 2028
Task 3. Monitoring	April 2028 – December 2029

See budget on next page