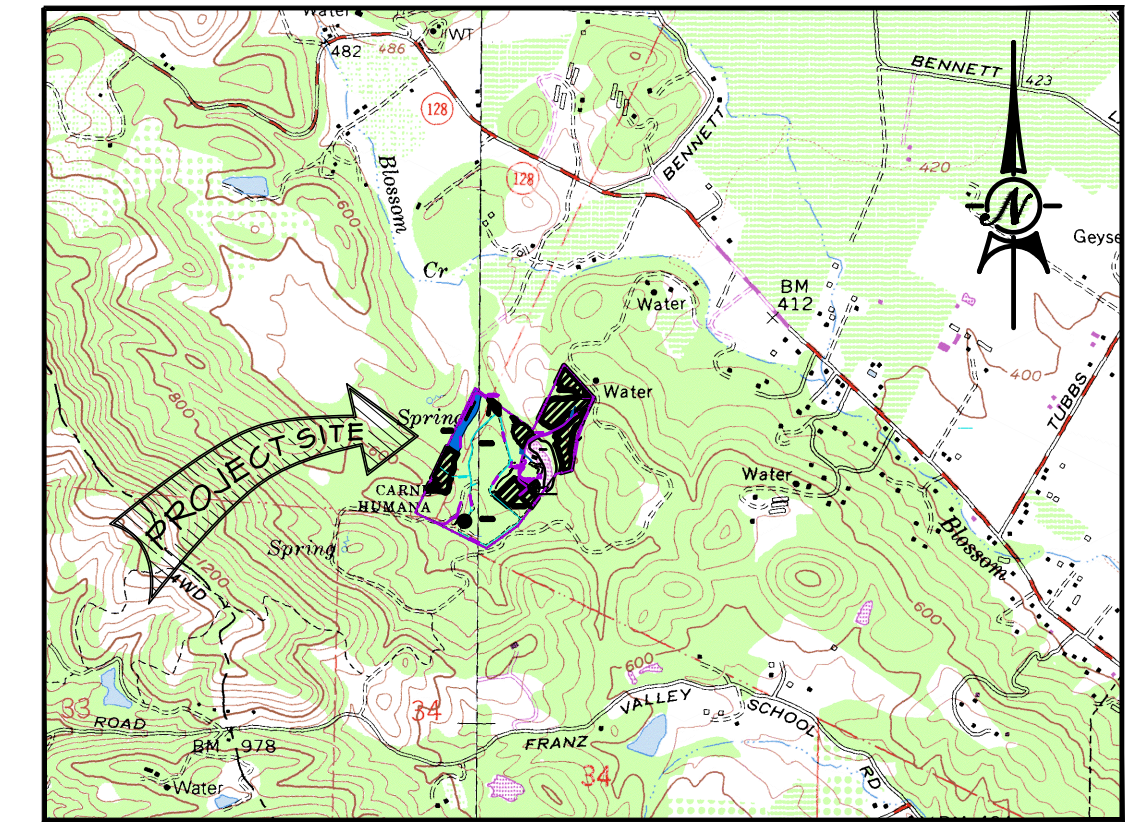




PORTION OF CALISTOGA & MARK WEST SPRINGS 7.5 MIN. QUAD MAP

Vicinity Map

1" = ±2000'

Narrative

This project is the new planting of approximately ±9.78 gross acres (±7.09 net acres) of vineyard within APN 017-160-036, a ±40.00 acre parcel located at 3363 Hwy 128, Calistoga. Due to the Napa County Fire in 2017, there was much damage to the trees, brush and grasses, a Cal Fire permit was obtained to remove the trees and brush that were damaged. Within the parcel boundaries are a residence, an outbuilding, a water storage tank, a reservoir and access roads, ±11.21 net acres of existing vineyard and ±15 acres of tree canopy, brush, and resident grasses. Primary access is from Hwy 128.

Existing average ground slopes in the project area range from 5% to 35%, with slopes over 30% being confined to small areas (totaling ±0.49 acres) within the proposed vineyard blocks. Block 2 will be planted with a vinerow spacing 6' and vine spacing of 5', other Blocks will be planted with a vinerow spacing of 7' and a vine spacing of 5'; row direction is shown on plan. A new drip irrigation system will be installed with the existing water tank and an existing well as the water source. Water use on the new vineyard is expected to be ±2.1 af per annum for irrigation and frost control.

There are no County definition streams within project area. Setbacks have been provided pursuant to Napa County Conservation Regulations. The projects drains toward unnamed streams and is within the Blossom Creek subwatershed.

The Biological Resource Survey prepared by WRA, September 2018, and comments on January 9, 2020 revealed no special status species which will be impacted by this project.

There is no known cultural sites found with in the block areas, based on study by Russell Kobayashi (RPF), May 14, 2018.

Soils within the block boundaries have been classified in the USDA Soil Conservation Service's, Napa County Soil Survey, as SCS#139, #140 Forward gravelly loam and SCS#141-Forward Kidd complex.

Vegetation removal consists of resident grasses, brush and some trees. All organic material to be burned shall be stacked at strategic locations within the cleared areas. Burning of the organic material shall only take place after obtaining approval from all the governing agencies.

Ground Preparation shall include removal of vegetation and rocks, shallow ripping (18" max depth) and disking. **Rocks** shall be used for local landscaping, and/or erosion control features, and/or they may be crushed and used as surfacing for existing traffic areas, and/or they may be off-hauled to a properly permitted disposal site. Rocks may be placed at existing rock disposal areas shown on drawing, provided that the footprint of the disposal site is not increased.

Wildlife Exclusion Fence is existing and shall remain in place. Repairs to the existing deer fence will be made where necessary and gates or cattle guards may be added where convenient.

Temporary Erosion Control Measures consist of the installation of fiber rolls, and the application of straw mulch. The installation of all fiber rolls shall be completed in accordance with the appropriate details at all locations as shown on the Plan Sheet. A straw mulch cover shall be applied over all open and/or disturbed and seeded areas at the rate specified in the seeding requirements.

Permanent Erosion Control Measures consist of the following:

- Construction and repair of diversion ditches and water bars where shown on the plan and as needed in accordance with the appropriate detail.
- Repair and maintenance of all culverts and ditches in and round vineyard areas.
- A winter cover crop shall be seeded and mulched within the new vineyard area in year P-1. **A permanent no-till cover crop shall be planted within the Blocks in the fall immediately after planting** (refer to cultivation chart under *Project Notes*). This permanent cover crop may be mowed and spot sprayed around each of the vines using springtime applications of "contact" sprays NO PREEMERGENT SPRAYS SHALL BE USED. Backpack sprayers may be used to spray around the vines as needed. As a normal cultural practice, no disking, ripping or other tillage shall take place after the vineyard has been planted. Block 2 will be qaud farmed or hand farmed no tracker farming will be allowed. Optimally, a ground cover of 80% or greater will be obtained each winter. From time to time (every three or four years), it may be necessary to disk the vine rows in order to open up the ground or to re-establish proper ground cover. Should this be necessary, the Napa County PBES shall be notified, and work shall proceed as prescribed in Napa County Conservation, Development and Planning Department guidelines, dated April 8, 2004, entitled "Protocol for Replanting/Renewal of Approved Non-Tilled Vineyard Cover Crops".
- Implementation and adherence to the **Annual Winterization** program presented in the Project Notes.

Costs: The total cost of all erosion control measures is estimated to be \$4500-5000/acre including equipment, materials, and labor.

The project site was visited by the plan preparer in January 2019 to inspect the site for potential erosion problems, and determine proper mitigation.

Exhibit A

JOHNSON VINEYARD

3363 HWY 128

EROSION CONTROL PLAN

FOR NEW VINEYARD

SHEET INDEX

- TITLE SHEET
- PLAN & DETAILS

Project Notes

APN & Owner: 017-160-036

Johnson, R Edward & Polly P TR
3363 State Highway 128
Calistoga, Ca. 94515

Site Address: 3363 Hwy 128, Calistoga

Contact: Edward Johnson @ (707) 227-5561
3363 Hwy 128
Calistoga, Ca 94515

Drew L. Aspegren, P. E. @ 963-4927
Napa Valley Vineyard Engineering, Inc.
176 Main St., Suite B
St. Helena, CA 94574

Mapping: Napa County GIS Data Base (2002)

Implementation Schedule: Work may begin during the first growing season after project approval and may be phased over several years. Preplant and planting year operations may be conducted simultaneously in different parts of the proposed vineyard or they may be conducted during the same year. The work will be scheduled as follows:

Year P-1 April 1 thru Oct 15	Clearing, rock and root removal, stacking vegetation for burning or other disposal, disking, installing permanent erosion control measures prior to vineyard layout, staking and installation of drip system installing temporary erosion control measures. Winterization, consisting of seeding and mulching, shall be completed by October 15.
Rainy Season Oct 16 thru Mar 31	Maintain erosion control measures, burning as allowed by government agencies.
Fallow Seasons April 1 thru Oct 15	Mow cover crop, seed and mulch as required to reestablish cover crop in the field.
Year P April 1 thru Oct 15	Complete unfinished pre-plant operations. Plant vineyard and begin cultural practices (refer to cultivation chart below). Maintain all erosion control features.
Year P+1 Forward	Continue farming practices: maintain all ECP measures contained herein: complete winterization as specified below

Cover Cropping and Cultivation Practices

Year	Cultivation during growing season	Cover Crop, planted at end of growing season
Pre-plant (P-1)	rip and disk	winter cover crop
Fallow Year	mow and disk	winter cover crop
Planting (P)	full till	permanent cover crop
P+1 Forward	no-till	permanent cover crop

All ground disturbing activities shall be completed by October 15 of each year, and all erosion control measures shall be in place by October 15, or by the end of any time extension allowed by Napa County PBES.

Seeding Requirements: All exposed or disturbed soils shall be seeded. Seed and fertilizer shall be applied hydraulically or broadcast at the rates specified below:

Johnson Cover Crop Winter Mix @60lb ac.	Barley	100%
Johnson Cover Crop Permanent Mix @30lb ac.	Blando Bromo Zorro Fescue Rose Clover	70% 20% 10%

Fertilizer: Ammonium phosphate sulfate (16-20-0) 200-240 lbs/ac

An alternate seed mix and/or fertilizer may be used after review and approval by the plan preparer.

Straw Mulch shall be spread over all disturbed and seeded areas. The mulch shall be spread mechanically or by hand at the rate of 2 tons/acre.

Fiber Rolls shall be installed at the locations shown on the plan in accordance with the appropriate detail. Fiber Rolls shall be maintained through the winter after planting, after which it may be removed.

Water Bars shall be constructed where shown on the Plan in accordance with the appropriate detail. Water bars shall remain as permanent structures and shall be reshaped as necessary prior to each rainy season.

Maintenance and Annual Winterization: Cover cropping and cultivation shall be implemented as described in the Narrative (Permanent Erosion Control Measures) and elsewhere in the Project Notes (Cover Cropping and Cultivation Practices).

Annual Winterization shall be completed by October 15 each year, or by the end of any extension period granted by Napa County PBES, and shall include the following:

- The condition of the non-tilled cover crop, including those areas outside the vineyard, and the suitability and effectiveness of the seed mix and fertilizer shall be evaluated. Weak areas shall be reseeded as necessary; if addition of soil amendments is indicated, they shall be incorporated and those areas shall be seeded and mulched.
- All roadside ditches, water bars, drop inlets, infield diversions shall be cleaned, repaired and reshaped as necessary.
- All roads and turnspaces which are not rocked or paved shall be seeded, fertilized and mulched, and they shall remain undisturbed throughout the rainy season.
- All existing erosion control and drainage features shall be inspected, cleaned, and repaired as necessary.

All existing erosion control features and drainage shall be inspected and cleaned, or repaired as necessary. All erosion control measures shall be inspected after each storm event, and any necessary repairs, cleaning and maintenance shall be promptly performed.

Special Notes

- Environmental Commitment, Bat protection:**
 - A Qualified Biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a habitat assessment in order to identify suitable bat habitat trees with in the project area(s), no more than 6 months and no less than 14 days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:
 - Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed.
 - For removal of bat habit trees outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the County Planning Division and CDFW prior to commencement of work. If special-status bat species are not present removal can proceed. If bats are found to be present a plan for removal or exclusion will be developed by a qualified biologist in conjunction with the County Planning Division and CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the County Planning Division.
- Environmental Commitment, Bird protection:**
 - For earth-disturbing activities occurring between February 1 and August 31, (which coincides with the grading season of April 1 through October 15 - NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with potential to occur at the project site) shall conduct preconstruction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas. The preconstruction survey shall be conducted no earlier than 14 days prior to vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys should be repeated. A copy of the survey will be provided to the Napa County Conservation Division and the CDFW prior to commencement of work.
 - After commencement of work if there is a period of no work activity of 5 days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
 - In the event that nesting birds are found, the Permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the County Conservation Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species as determined by a qualified biologist in consultation with County Conservation Division and the USFWS and/or CDFW.
 - Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
 - Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

Legend

(0.52)	AREA & ACREAGE WITH SLOPES GREATER THAN 30%
	BLOCK BOUNDARY
	AVENUE/TURNSPACE
	VINEYARD BOUNDARY (APPROX.)
②	DETAIL 2
(E)	EXISTING
	FIBER ROLL
	IRRIGATION MAIN EXISTING
MSB	MINIMUM SETBACK
	MINIMUM SETBACK BOUNDARY
P	PLANTING YEAR
PBES	PLANNING, BUILDING AND ENVIRONMENTAL SERVICES
	PROPERTY LINE APPROXIMATE LOCATION
(RDA)	ROCK DISPOSAL AREA
	ROCK DISPOSAL AREA
	SILT FENCE
SCS	SOIL CONSERVATION SERVICE
	SCS SOIL MAPPING UNIT
	SCS SOIL TYPE BOUNDARY
TOB	TOP OF BANK
	TOP OF BANK BOUNDARY
	WATER BAR
	WILDLIFE EXCLUSION FENCE (E)
	VALLEY OAKS

JOHNSON VINEYARD
3363 HWY 128
EROSION CONTROL PLAN
FOR NEW VINEYARD
FILE #P19-00220-ECPA

Napa Valley Vineyard Engineering, Inc.
176 Main St., Suite B
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(707) 963 4927



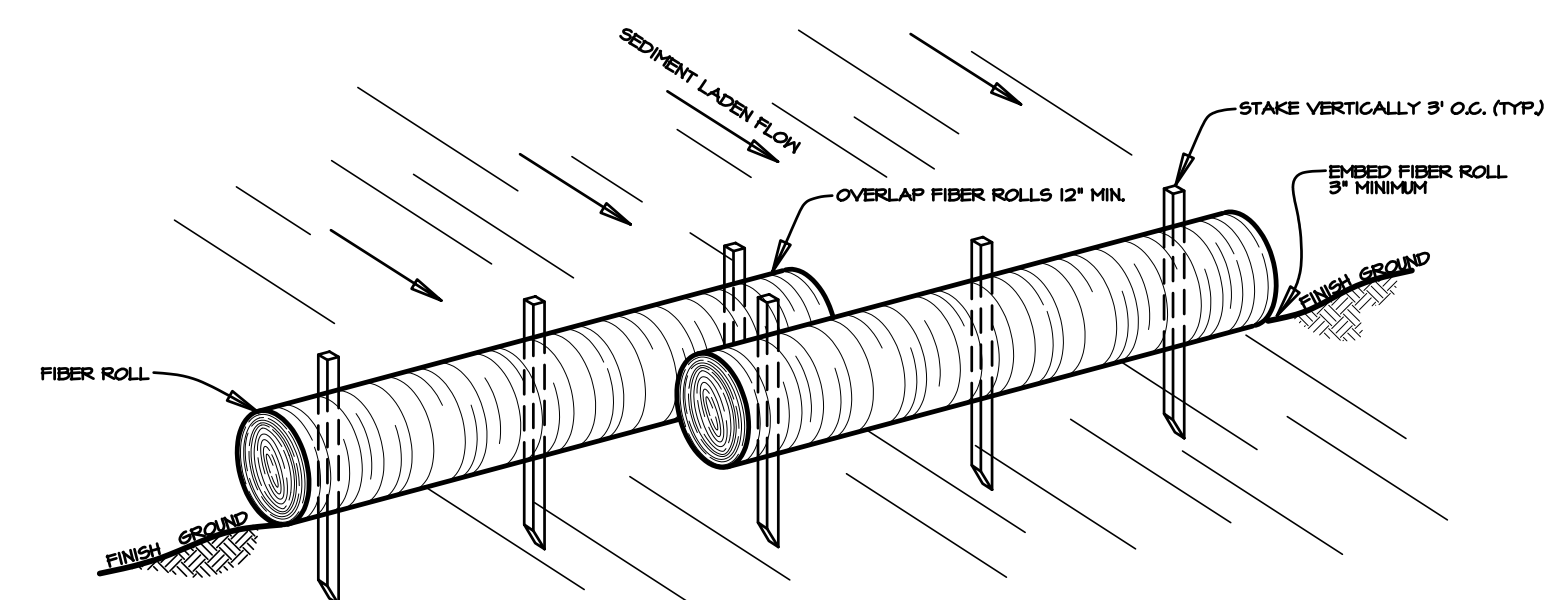
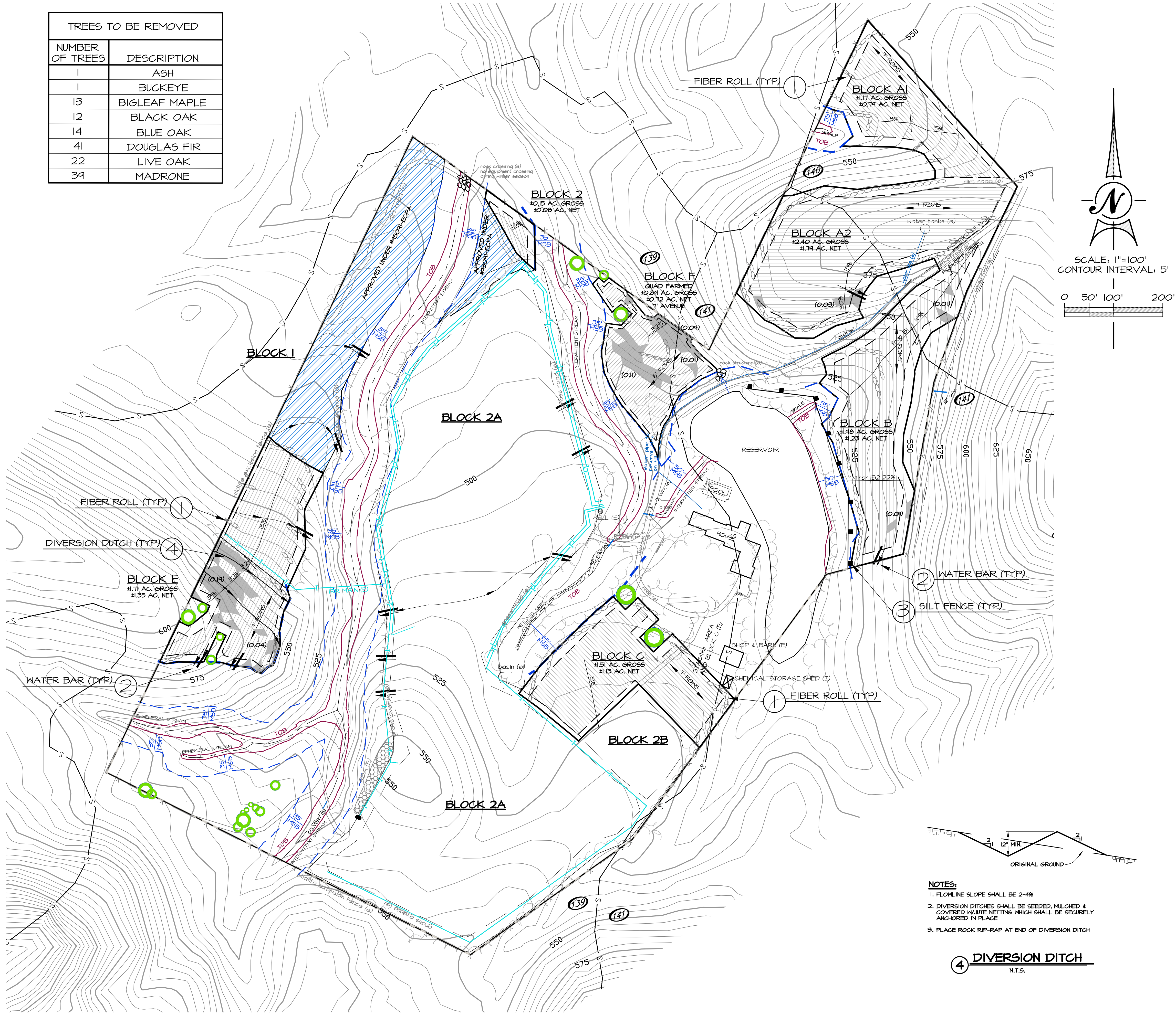
DREW L. ASPEGREN, PE
R.C.E. 31418

April 10, 2019

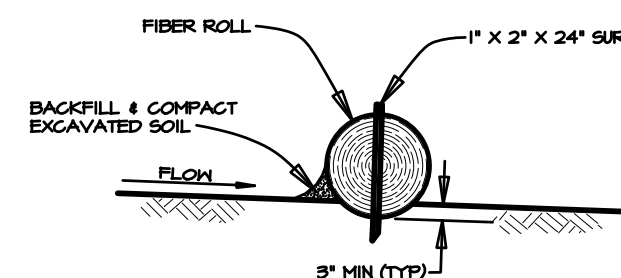
DATE

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TREES TO BE REMOVED	
NUMBER OF TREES	DESCRIPTION
1	ASH
1	BUCKEYE
13	BIGLEAF MAPLE
12	BLACK OAK
14	BLUE OAK
41	DOUGLAS FIR
22	LIVE OAK
39	MADRONE

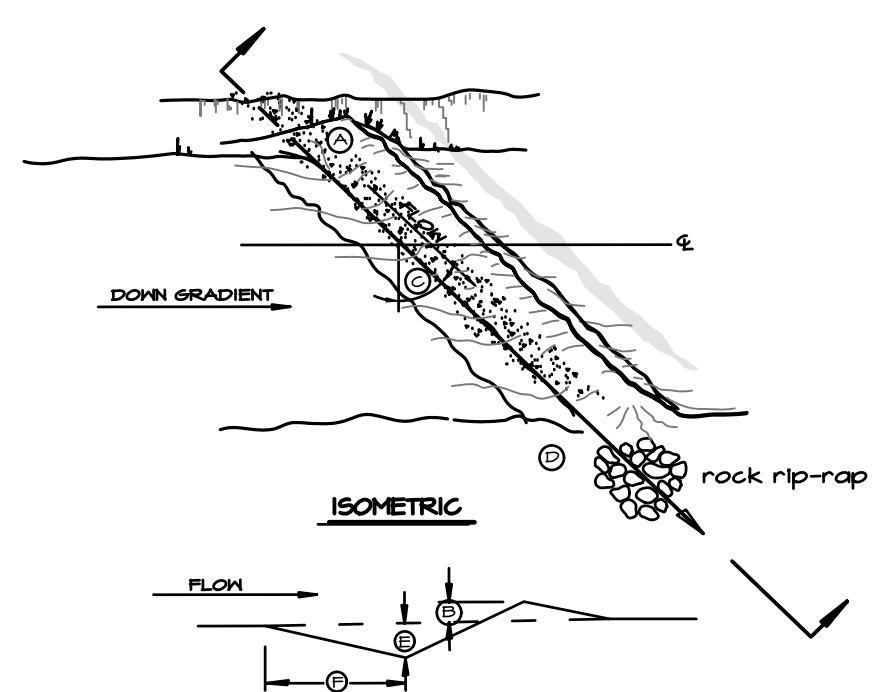


FIBER ROLL SEDIMENT BARRIER (ISOMETRIC VIEW)

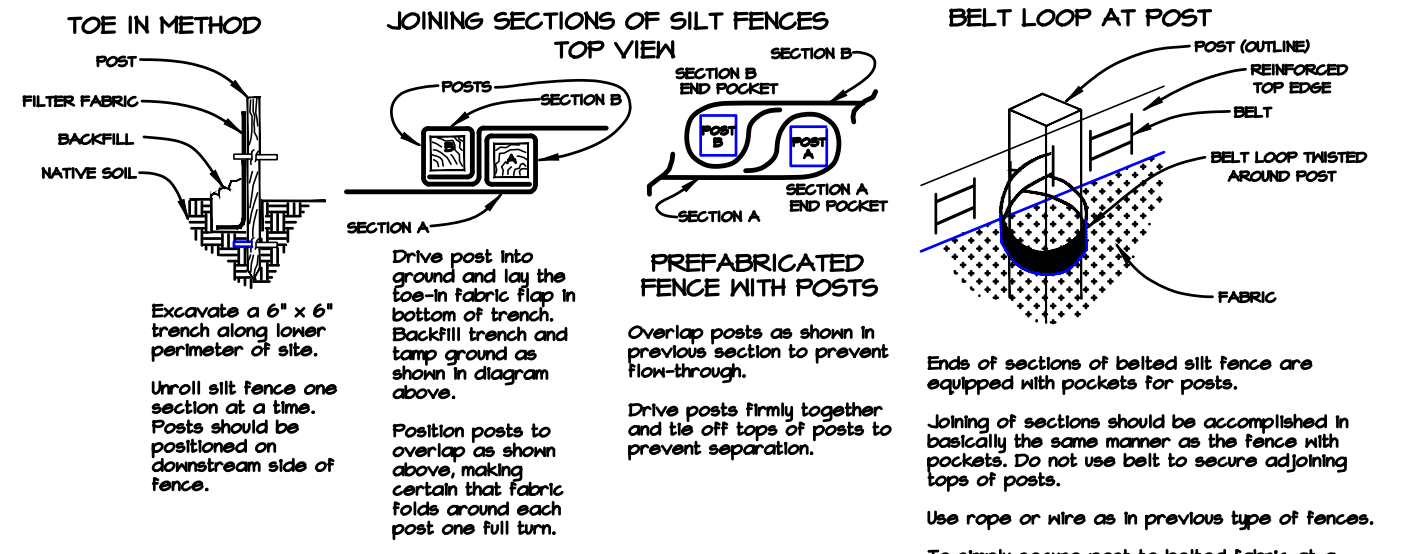


FIBER ROLL SEDIMENT BARRIER (SECTION)

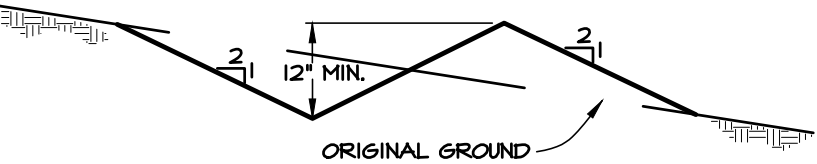
1 FIBER ROLL
N.T.S.



2 WATER BAR
N.T.S.



3 SILT FENCE
N.T.S.



4 DIVERSION DITCH
N.T.S.

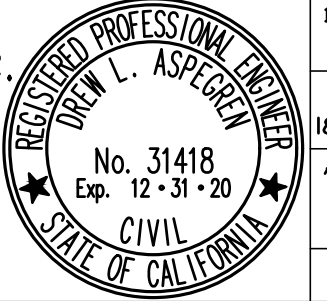
- NOTES:
1. FLOWLINE SLOPE SHALL BE 2-4%
 2. DIVERSION DITCHES SHALL BE SEEDED, MULCHED & COVERED W/ JUTE NETTING WHICH SHALL BE SECURELY ANCHORED IN PLACE
 3. PLACE ROCK RIP-RAP AT END OF DIVERSION DITCH

TOPOGRAPHIC MAPPING FROM NAPA COUNTY GIS DATABASE (2002)

REV.	DESCRIPTION	BY	DATE
1	PER COUNTY COMMENT JULY 16 & 31, 2014	DLA	1-10-20

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DATE	SCALE
4-10-19	AS SHOWN
DRAWN	CHECKED
DLA	DLA
APPROVED	
DREW L. ASPEGREN, PE	R.C.E. 31418

JOHNSON VINEYARD
3363 HWY 128

EROSION CONTROL PLAN
TRACK 1- NEW VINEYARD
PLAN & DETAILS