EXHIBIT A

GENERAL NOTES

1. ALL MATERIAL, WORKMANSHIP, AND CONSTRUCTION SHALL CONFORM TO THE COUNTY OF NAPA STANDARD SPECIFICATIONS AND STANDARD PLANS AND THE STATE OF CALIFORNIA D.O.T. STANDARD PLANS AND SPECIFICATIONS, LATEST EDITION.
2. OWNER/CONTRACTOR SHALL OBTAIN REQUIRED PERMITS FROM ALL AGENCIES AND PAY ALL FEES PRIOR TO COMMENCEMENT OF ANY WORK.
3. OWNER/CONTRACTOR SHALL GIVE THE COUNTY OF NAPA 48 HOURS NOTICE BEFORE STARTING WORK.
4. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO BEGINNING OF WORK. CONTACT THE COUNTY OF NAPA TO SCHEDULE THE MEETING.
5. WORK HOURS ARE LIMITED TO MONDAY THROUGH SATURDAY, 6:00 A.M. TO 6:00 P.M. INSPECTION WILL BE AVAILABLE MONDAY THROUGH FRIDAY FROM 8:00 A.M. TO 4:30 P.M. OWNER/CONTRACTOR SHALL SCHEDULE INSPECTIONS 48 HOURS IN ADVANCE BY CALLING MUNSELLE CIVIL ENGINEERING AT (707) 395-0968.
6. ANY DISCREPANCY DISCOVERED BY CONTRACTOR IN THESE PLANS OR ANY FIELD CONDITIONS DISCOVERED BY CONTRACTOR THAT MAY DELAY OR OBSTRUCT THE PROPER COMPLETION OF THE WORK PER THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE CIVIL ENGINEER AND OWNER IMMEDIATELY UPON DISCOVERY. NOTIFICATION SHALL BE IN WRITING.
7. ITEMS SPECIFIED ON THE STANDARD PLANS ARE APPROVED FOR USE BY THE COUNTY OF NAPA. ALL SUBSTITUTES OR ALTERATIONS SHALL BE SUBMITTED TO THE COUNTY OF NAPA FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING NOISE, ODORS, DUST AND DEBRIS TO MINIMIZE IMPACTS ON SURROUNDING PROPERTIES AND ROADWAYS. CONTRACTOR SHALL BE RESPONSIBLE TO ASSURE THAT ALL CONSTRUCTION EQUIPMENT IS EQUIPPED WITH MANUFACTURERS APPROVED MUFFLER'S AND BAFFLES. FAILURE TO COMPLY MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER.
9. IF PREHISTORIC ARCHAEOLOGICAL REMAINS SUCH AS BONE, SHELL, WORKED STONE OBJECTS, OR HUMAN GRAVES ARE UNEARTHED DURING PROJECT RELATED ACTIVITIES, WORK IN THE IMMEDIATE VICINITY OF THE FINDS SHALL HALT UNTIL A QUALIFIED PREHISTORIC ARCHAEOLOGIST HAS EVALUATED THE SITUATION AND MADE RECOMMENDATIONS FOR MITIGATION TO THE RESOURCE. IF HUMAN REMAINS ARE ENCOUNTERED THE NAPA COUNTY CORONER MUST BE NOTIFIED IMMEDIATELY.
10. IF HISTORIC-PERIOD MATERIALS SUCH AS STONE OR ADOBE FOUNDATIONS OR WALLS, STRUCTURAL REMAINS WITH SQUARE NAILS, BACKFILLED PRIVIES OR WELLS, OR REFUSE DEPOSITS ARE ENCOUNTERED, WORK IN THE IMMEDIATE VICINITY OF THE FINDS SHALL HALT UNTIL A QUALIFIED HISTORICAL ARCHAEOLOGIST HAS EVALUATED THE SITUATION AND MADE RECOMMENDATIONS FOR TREATMENT OF THE RESOURCE.
11. IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL HALT CONSTRUCTION IMMEDIATELY, NOTIFY THE COUNTY, AND IMPLEMENT REMEDIATION (AS DIRECTED BY THE COUNTY OR ITS AGENT) IN ACCORDANCE WITH ANY REQUIREMENTS OF THE NAPA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT AND THE BAY AREA REGIONAL WATER QUALITY CONTROL BOARD.
12. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE COUNTY STREETS RESULTING FROM CONSTRUCTION AT NO COST TO THE COUNTY.

VINEYARD GRADING NOTES

1. THE ENTIRE DEVELOPMENT SITE SHALL BE SEEDED AND MAINTAINED AS A PERMANENT, NON-TILLED COVER CROP THROUGH YEAR ONE. THE SITE SHALL ALSO BE STRAW MULCHED IN CRITICAL AREAS PRIOR TO OCTOBER 15TH OF EACH YEAR THAT THE AREA IS DISTURBED.
2. THE PERMANENT COVER CROP AND SEEDING RATES SHALL BE APPLIED AS DESCRIBED IN THE NARRATIVE TO THE EROSION CONTROL PLAN.
3. RESEEDING AND FERTILIZER SHALL BE APPLIED TO ESTABLISH A MINIMUM OF 90% GROUND COVER BY OCTOBER 15TH OF EACH YEAR. STRAW MULCH SHALL BE APPLIED WITHIN CRITICAL AREAS AND ON ALL OTHER DISTURBED SOILS MULCH SHALL BE APPLIED AT A RATE OF 4000LBS/ACRE.
4. VINEYARD AVENUES SHALL BE MOWED ONLY AND SHALL NOT BE DISCED.

DRAINAGE NOTE

1. ANY SUBSURFACE DRAINAGE IMPROVEMENTS SHALL CARRY SUBSURFACE WATER TO DISPOSAL LOCATIONS THAT MAXIMIZE POTENTIAL FOR INFILTRATION AND MINIMIZE POTENTIAL FOR RUNOFF AND EROSION, AND SHALL DISSIPATE THE ENERGY OR DIFFUSE THE FLOW PRIOR TO RELEASING THE SUBSURFACE WATER FROM THE SITE.

SURVEY NOTES

TOPOGRAPHIC INFORMATION SHOWN HERE IS BASED UPON A FIELD TOPOGRAPHIC SURVEY PREPARED BY MUNSELLE CIVIL ENGINEERING ON JULY 7, 2015.

1. THE LOCATION OF ANY UNDERGROUND STRUCTURES AND UTILITIES SHOWN HEREON HAVE BEEN DETERMINED FROM PHYSICAL FEATURES OBSERVED AT THE TIME OF THE SURVEY. THE SURVEYOR ACCEPTS NO LIABILITY FOR THE LOCATION, EXISTENCE, OR NON-EXISTENCE OF THOSE UNDERGROUND STRUCTURES, UTILITY LINES, AND RELATED APPURTENANCES. ANY INDIVIDUAL, COMPANY, OR AGENCY USING THIS MAP MUST CONFIRM THE LOCATION OF ALL UNDERGROUND LINES OR STRUCTURES PRIOR TO COMMENCING ANY EXCAVATION. LOCATION OF UNDERGROUND UTILITIES SHALL BE PERFORMED BY A SUBSURFACE UTILITY LOCATING COMPANY (IF DESIRED).
2. THE CONTENT OF THIS MAP WAS DEFINED BY CONTRACT AT THE SPECIFIC REQUEST OF THE CLIENT(S) AND/OR THEIR CONSULTANT(S). THE SURVEYOR ACCEPTS NO LIABILITY FOR USE OF THIS MAP BY ANY ONE OTHER THAN THE CLIENT(S) AND/OR CONSULTANTS FOR WHOM IT WAS PREPARED.
3. RECORD BOUNDARY LINES SHOWN HEREON ARE DELINEATED FROM RECORD DATA ONLY AND DO NOT CONSTITUTE A BOUNDARY SURVEY. THE PERFORMANCE OF A BOUNDARY SURVEY AND THE ANALYSIS OF LEGAL DESCRIPTIONS PERTAINING TO THE LANDS DEPICTED HEREIN WOULD BE REQUIRED IF PRECISE PROPERTY LOCATION AND BOUNDARY LIMITS ARE NEEDED OR DESIRED. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE PROPERTY DATA DELINEATED HEREON.
4. BASIS OF BEARING: N35°21'00"E BETWEEN A FOUND T-BAR TAGGED "LS 3137" AND A 34" OAK WITH TAG "LS 3137", AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 13 OF PARCEL MAPS, AT PAGES 69-71, NAPA COUNTY RECORDS.
5. ELEVATIONS SHOWN HEREON ARE ON AN ASSUMED DATUM. BENCHMARK CONTROL POINT #6, A SET 60D. ELEVATION: 930.10'

EROSION CONTROL NOTES

1. LARGE AMOUNTS OF SEDIMENT MAY ENTER THE STORM DRAIN SYSTEM WHEN STORM DRAINS ARE INSTALLED BEFORE THE UPSLOPE DRAINAGE AREA IS STABILIZED OR WHERE CONSTRUCTION IS ADJACENT TO AN EXISTING STORM DRAIN. IN CASES OF EXTREME SEDIMENT LOADING, THE STORM DRAIN ITSELF MAY CLOG AND LOSE A MAJOR PORTION OF ITS CAPACITY. TO AVOID THESE PROBLEMS, IT IS NECESSARY TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM AT THE INLETS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING WATER THAT HAS BECOME POLLUTED DUE TO NOT TAKING THE NECESSARY EROSION CONTROL ACTIONS.
3. AFTER CONSTRUCTION IS COMPLETE, ALL STORM DRAIN SYSTEMS ASSOCIATED WITH THIS PROJECT SHALL BE INSPECTED AND CLEARED OF ACCUMULATED SEDIMENT AND DEBRIS.
4. TEMPORARY STRAW BALES OR SAND BAGS SHALL BE PLACED IN FRONT OF INCOMPLETE STORM DRAIN SYSTEMS TO PREVENT SEDIMENT-LADEN WATER FROM ENTERING THE PUBLIC STORM DRAIN SYSTEM.
5. SEDIMENT BARRIERS SHALL BE CHECKED FOR SEDIMENT ACCUMULATION FOLLOWING EACH SIGNIFICANT RAINFALL AND SEDIMENT SHALL BE REMOVED AS NEEDED.
6. ENTRANCE TO THE PROJECT SHALL BE MAINTAINED IN A CONDITION IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT INTO THE PUBLIC RIGHT-OF-WAY.
7. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE REMOVED IMMEDIATELY.
8. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC-RIGHT-WAYS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO A SEDIMENT TRAP. EROSION CONTROL MEASURES SHALL BE IN PLACE AND IN ACCORDANCE WITH THESE PLANS.
9. THE APPROVED WORK DATES ARE APRIL 1 THROUGH OCTOBER 15.
10. TO CONTROL SURFACE WATER RUNOFF IN THE VINEYARD, FIBER ROLLS AND STORM DRAINAGE SHALL BE PLACED IN THE VINEYARD BLOCKS AS SHOWN ON THE GRADING AND EROSION CONTROL PLAN AND DETAIL SHEET. FIBER ROLLS WILL BE UTILIZED TO SLOW DOWN THE WATER WITHIN THE BLOCKS AND PREVENT SEDIMENT FROM ERODING DOWN THE BLOCKS.
11. A COVER CROP WILL BE ESTABLISHED WITHIN THE LIMITS OF ALL LAND DISTURBANCE. THE FOLLOWING SEED MIX APPLICATION RATE ARE PROPOSED FOR THE VINEYARD BLOCK. THE SEED, FERTILIZER AND MULCH MIXTURE SHALL BE APPLIED BY HAND OR HYDRAULICALLY AT THE RATE SPECIFIED BELOW:

    LE BALLISTERS QUICK COVER CROP APPLIED AT A RATE OF 80 LBS/ACRE IN THE FOLLOWING PERCENTAGES:

BLANDO BROME	25%
ZORRO FESCUE	8%
CRIMSON CLOVER	15%
ROSE CLOVER	15%
BARLEY	45%

    FOR VINEYARD AVENUES INSTALL LE BALLISTERS HEAVY USE AREAS MIX APPLIED AT A RATE OF 40LBS/ACRE IN THE FOLLOWING PERCENTAGES:

BLUEBUNCH WILDRYE	40%
CAL. MEADOW BARLEY	27%
CALIFORNIA BROME	33%

    FERTILIZER USED SHALL BE ONE OF THE FOLLOWING SPECIFICATIONS:

16-20-0	200-250 LBS/ACRE
12-12-12	400 LBS/ACRE
15-15-15	300 LBS/ACRE
10-20-0	300 LBS/ACRE

    THE TYPE OF MULCH USED SHALL BE ONE OF THE FOLLOWING:

STRAW MULCH	4000 LBS/ACRE
WOOD FIBER MULCH	2000 LBS/ACRE

    AREAS TO BE SEEDED SHALL BE SCARIFIED TO A DEPTH OF 4 TO 8 INCHES AND DRESSED TO PROVIDE REASONABLY SMOOTH FIRM SURFACE

    IF HYDROSEEDING METHOD IS USED A TACKIFIER SUCH AS M-BINDER OR SENTINEL SHALL BE APPLIED AT A RATE OF 75 TO 100 LBS/ACRE
12. IF COVER CROP IS ESTABLISHED PRIOR TO OCTOBER 15TH OF THIS YEAR THEN STRAW MULCH AND FIBER ROLLS WILL NOT NEED TO BE INSTALLED. COVER CROP MUST BE 90% COVERAGE WITH AN AVERAGE HEIGHT OF 4 TO 6 INCHES.
13. NORTH AMERICAN GREEN SC150 EROSION CONTROL BLANKETS OR EQUIVALENT OTHER SHALL BE APPLIED ON ALL SLOPES STEEPER THAN 2:1. JUTE NETTING SHALL BE INSTALLED OVER STRAW MULCH OVER SEED ON ALL SLOPES 2:1 TO 3:1.

GENERAL UNDERGROUND NOTES

1. NO GUARANTEE IS INTENDED THAT UNDERGROUND OBSTRUCTIONS, NOT SHOWN ON THESE PLANS, WILL NOT BE ENCOUNTERED. THOSE SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE AND THE CONTRACTOR IS CAUTIONED THAT THE OWNER, THE ENGINEER, AND THE COUNTY OF NAPA ASSUME NO RESPONSIBILITY FOR ANY OBSTRUCTIONS EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES WORKING WITHIN THE LIMITS OF THIS PROJECT.
2. CONTRACTOR SHALL NOT BEGIN EXCAVATION UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD BY THE APPLICABLE ENTITY RESPONSIBLE FOR THAT PARTICULAR UTILITY. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 24 HOURS BEFORE STARTING WORK. HAND DIGGING IS REQUIRED IF TRENCH IS WITHIN 12" OF ANY EXISTING UTILITY.
3. UNDERGROUND SERVICE ALERT: CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION.
4. THE CONTRACTOR SHALL OBTAIN A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY BEFORE EXCAVATION OF TRENCHES DEEPER THAN 5'. A COPY OF THE PERMIT MUST BE ON FILE WITH THE CITY/COUNTY BEFORE TRENCH EXCAVATION MAY BEGIN.
5. CONTRACTOR SHALL UNCOVER EXISTING BURIED UTILITIES WITH UTILITY OWNER TO VERIFY LOCATIONS AND ELEVATIONS OF UTILITIES. BURIED UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER MAINS AND LATERALS, SEWER MAINS AND LATERALS, STORM DRAINS, GAS MAINS AND LATERALS, ELECTRICAL DISTRIBUTION LINES, CABLE TELEVISION LINES, AND TELEPHONE LINES. ALL UTILITIES CONFLICTING WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BEFORE THE START OF CONSTRUCTION.
6. THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. THE PROJECT AND/OR DESIGN ENGINEER MAY ADJUST THE GRADE OF NEW SEWER AND STORM DRAIN CONSTRUCTION ACCORDINGLY WITH CONCURRENCE FROM THE CITY ENGINEER.
7. DISTANCES AND INVERTS ARE TO AND AT THE CENTER OF THE MANHOLES, CLEANOUTS, DROP INLETS, CATCH BASINS, AND YARD DRAINS OR AS MARKED ON THE DRAWINGS.
8. ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED AND APPROVED PRIOR TO PAVING.

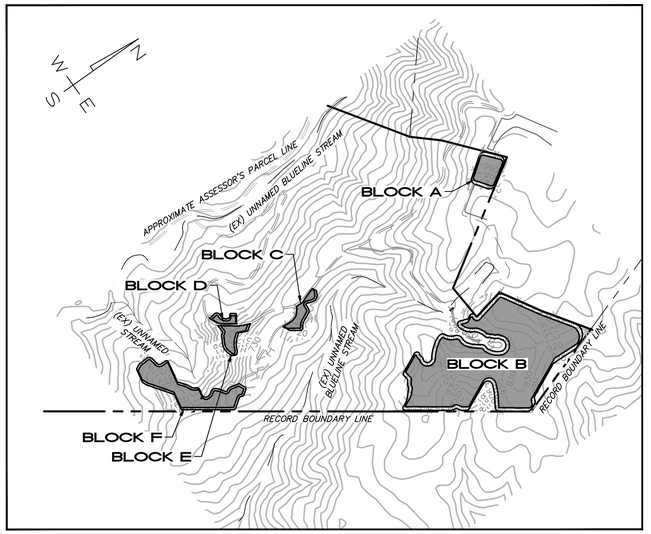
EROSION CONTROL PLANS

FOR

MT. VEEDER VINEYARDS

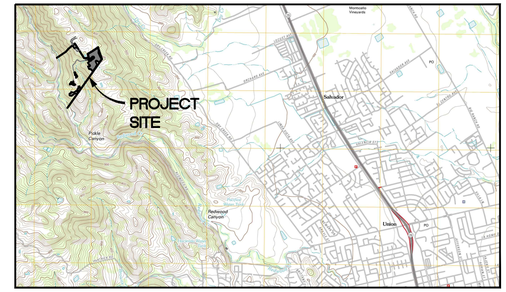
NAPA, CALIFORNIA

APN 034-230-029



OVERALL SITE PLAN

NO SCALE



VICINITY MAP

NO SCALE

VINEYARD DEVELOPMENT AREA TABLE		
BLOCK	NET PLANTABLE AREA (AC)	GROSS PLANTABLE AREA (AC)
A	0.68	0.94
B	11.57	13.88
C	0.37	0.52
D	0.13	0.22
E	0.38	0.55
F	1.99	2.58
TOTAL	15.12	18.69

PROJECT NARRATIVE

THE CLIENT INTENDS TO DEVELOP APPROXIMATELY 15.12 AC OF UNDEVELOPED LAND INTO VINEYARD. BLOCKS C – F WILL BE HAND-FARMED. SOIL RIPPING SHALL BE LIMITED TO A DEPTH OF 18" WHERE SLOPES EXCEED 3:1 AND A DEPTH OF 36" IN ALL OTHER AREAS, PER THE GEOTECHNICAL INVESTIGATION BY MILLER PACIFIC ENGINEERING GROUP. THE PROPOSED VINEYARD WILL BE PLANTED USING A 6' BY 3' SPACING. THE EXISTING DRAINAGE PATTERNS WILL REMAIN AND STORMWATER RUNOFF WILL REMAIN AS SHEETFLOW AND SHALLOW CONCENTRATED FLOW. A PERMANENT COVER CROP AND STRAW WILL HELP TO PROTECT AGAINST EROSION WITHIN THE VINEYARD BLOCKS.

SOILS ANALYSIS

THE USDA-NRCS NATIONAL COOPERATIVE SOIL SURVEY MAPS THE PROJECT SITE SOIL AS:

132 FAGAN CLAY LOAM, 15 TO 30% SLOPES
133 FAGAN CLAY LOAM, 30 TO 50% SLOPES
136 FELTON GRAVELLY LOAM, 30 TO 50% SLOPES

SHEET INDEX

1 COVER – NOTES, OVERALL SITE PLAN, AND VICINITY MAP
2 USGS AND AERIAL MAPS
3 VINEYARD LAYOUT AND EROSION CONTROL PLAN (1 OF 2)
4 VINEYARD LAYOUT AND EROSION CONTROL PLAN (2 OF 2)
5 DETAILS
6 SLOPE ANALYSIS (1 OF 2)
7 SLOPE ANALYSIS (2 OF 2)
8 FENCING PLAN

OWNER

P&M VINEYARDS HOLDINGS, LLC
PO BOX 1480
SEBASTOPOL, CA 95473

CONSTRUCTION SCHEDULE

APRIL 1, 2019 ------ SITE PREPARATION. (RIP, INSTALL STORM DRAIN, INLETS AND SWALES, STAKE AND INSTALL IRRIGATION.)

OCTOBER 15, 2019 --- SITE WINTERIZED AND READY TO BE FINALED

WINTERIZATION SHALL INCLUDE PLACEMENT OF SWALES, SEEDING WITH ANNUAL COVER CROP IN VINEYARD AREAS AND AVENUES, AND STRAW MULCH SPREAD OVER DISTURBED AREAS.

CONTACT

CORT MUNSELLE
MUNSELLE ENGINEERING
513 CENTER STREET
HEALDSBURG, CA 95448
(707) 395-0968

ABBREVIATIONS/LEGEND

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DWY	DRIVEWAY
EC	END CURVE
EG	EXISTING GROUND
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EVC	END VERTICAL CURVE
(EX)	EXISTING
FG	FINISH GRADE
GB	GRADE BREAK
HDPE	HIGH DENSITY POLYETHYLENE
IM	IRRIGATION METER
LF	LINEAR FEET
MON	STANDARD CITY MONUMENT
PAE	PRIVATE ACCESS, MAINTENANCE, DRAINAGE, SIDEWALK, AND UTILITY EASEMENT
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE
PSDE	PRIVATE STORM DRAIN EASEMENT
PSE	PRIVATE SEWER EASEMENT
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYLCHLORIDE PIPE
R=	RADIUS
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
S=	SLOPE
SD	STORM DRAIN
SDDI	STORM DRAIN DROP INLET
SDE	PUBLIC STORM DRAIN EASEMENT
SDMH	STORM DRAIN MANHOLE
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SSE	PUBLIC SANITARY SEWER EASEMENT
STD	STANDARD
TYP	TYPICAL
W	WATER
WL	WATER LINE
WM	WATER METER
WS	WATER SERVICE

RECORD BOUNDARY LINE
APPROXIMATE ASSESSOR'S PARCEL LINE
EXISTING UNNAMED BLUELINE STREAM
EXISTING UNNAMED STREAM
EXISTING ACCESS ROAD/VINEYARD AVENUE
APPROX PROPOSED 4" IRRIGATION MAINLINE PER WYATT IRRIGATION SUPPLY, INC.
STRAW WATTLE PER DETAIL
WATER BAR PER DETAIL

EXISTING PURPLE NEEDLEGRASS GRASSLAND OUTSIDE OF LIMITS OF PROPOSED VINEYARD BLOCKS TO REMAIN
EXISTING PURPLE NEEDLEGRASS GRASSLAND WITHIN LIMITS OF PROPOSED VINEYARD BLOCKS TO BE REMOVED
APPROX PROPOSED IRRIGATION MAINLINE RELIEF PER WYATT IRRIGATION SUPPLY, INC.
APPROX PROPOSED IRRIGATION MAINLINE REGULATOR PER WYATT IRRIGATION SUPPLY, INC.
APPROX PROPOSED IRRIGATION MAINLINE AIR VENT PER WYATT IRRIGATION SUPPLY, INC.

REVISION	DESCRIPTION	BY	DATE

MUNSELLE CIVIL ENGINEERING
CIVIL ENGINEERING • LAND PLANNING
513 CENTER STREET
HEALDSBURG, CA 95448
(707) 395-0968

PROFESSIONAL ENGINEER • VINEYARD • CORT L. MUNSELLE • No. 69941 Exp. 9-30-20 • CIVIL • REGISTERED • STATE OF CALIFORNIA

CORT L. MUNSELLE DATE
RCE 69941

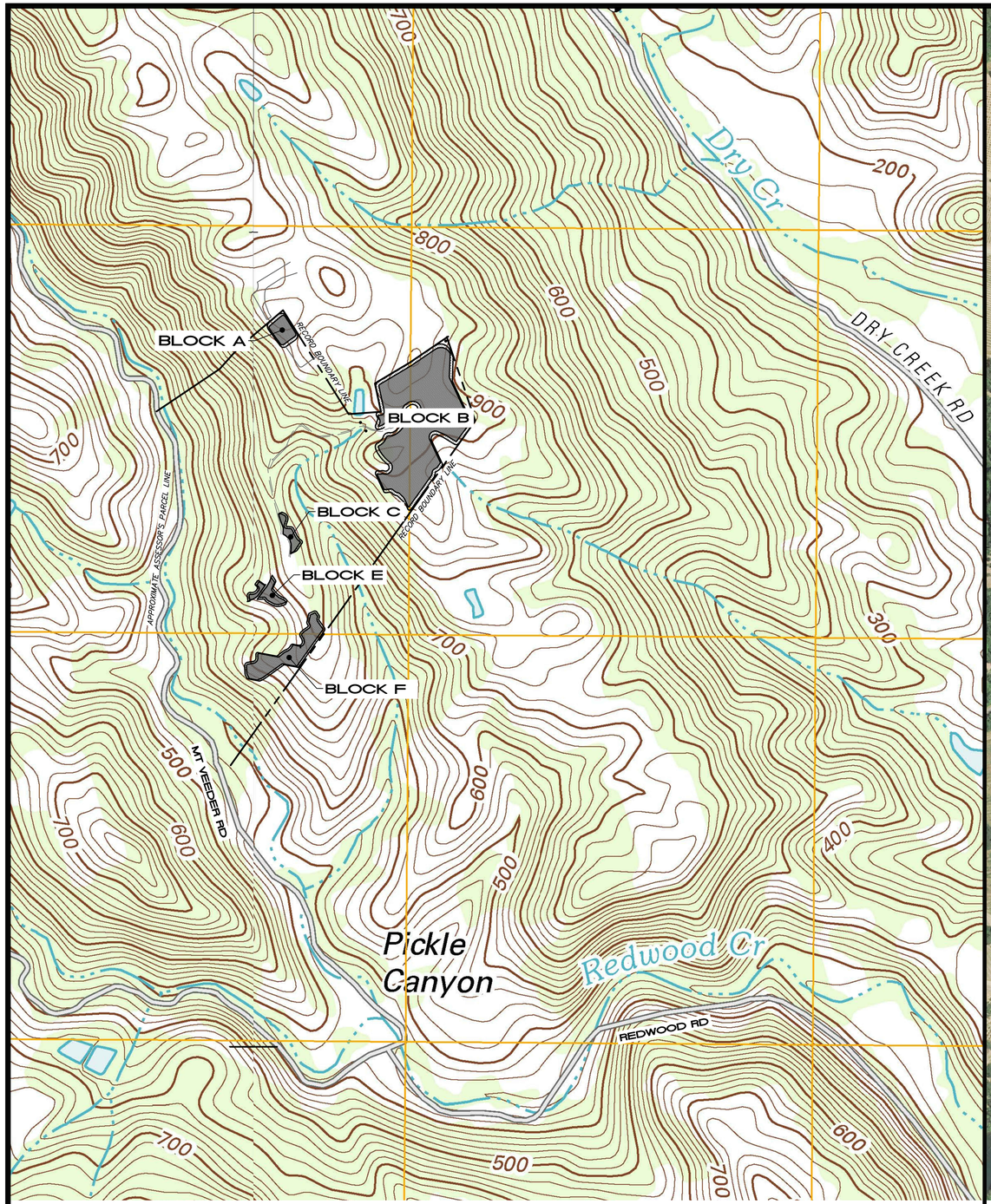
MT. VEEDER VINEYARDS
COVER - NOTES, OVERALL SITE PLAN, + VICINITY MAP
APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO. 24-16

SHEET NO. 1 OF 8 SHEETS

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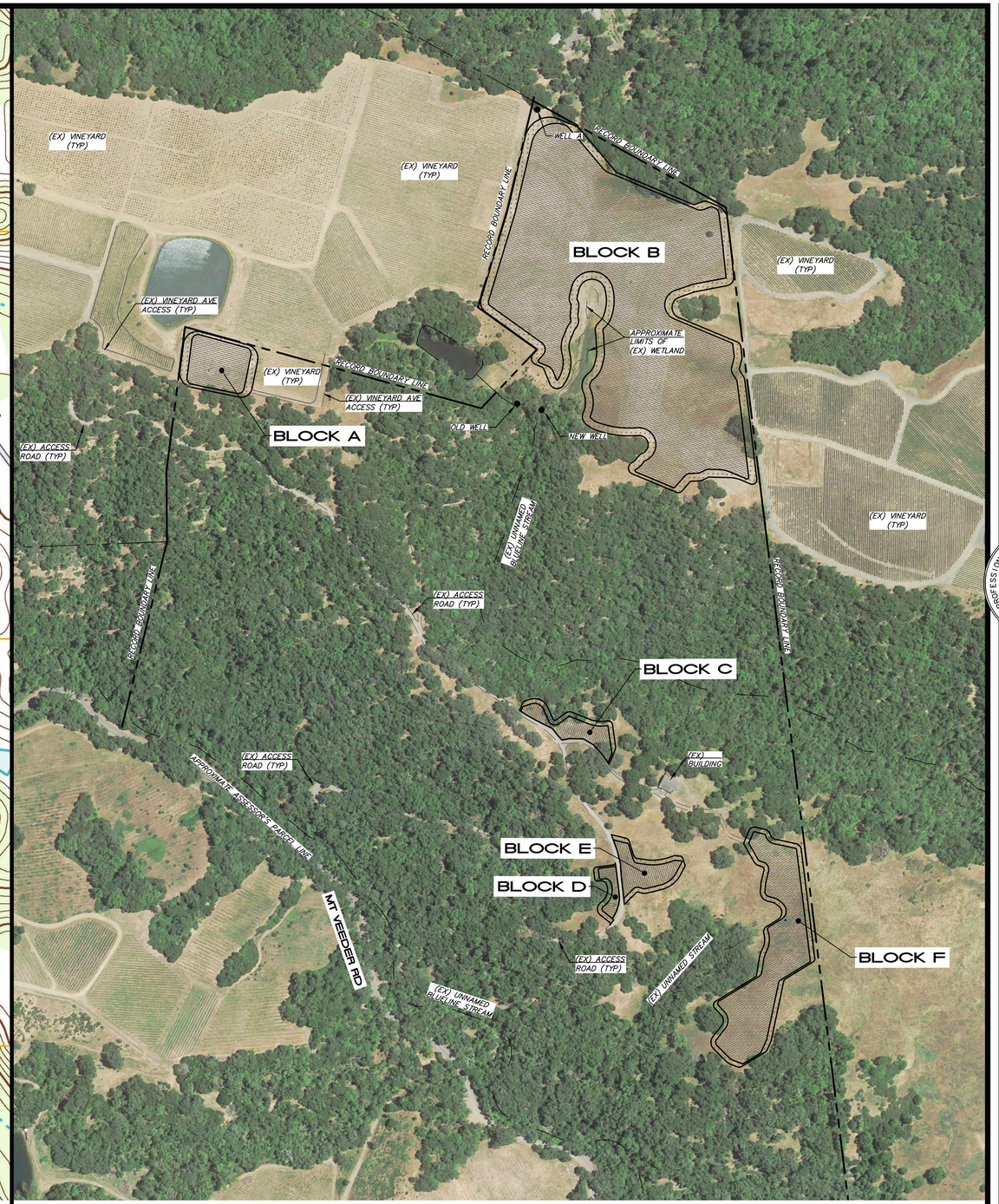


USGS MAP

SCALE: 1" = 500'

0 500 1000 1500

(GRAPHIC SCALE IN FEET)



AERIAL MAP

SCALE: 1" = 200'

0 200 400 600

(GRAPHIC SCALE IN FEET)

REVISION	DESCRIPTION	BY	DATE

MUNSELLE CIVIL ENGINEERING
CIVIL ENGINEERING • LAND PLANNING
513 CENTER STREET
HEALDSBURG, CA 95448
(707) 395-0968

PROFESSIONAL ENGINEER • CORT L. MUNSELLE • No. 69941 Exp. 8-30-20 • REGISTERED • STATE OF CALIF • CIVIL

CORT L MUNSELLE
RCE 69941

DATE

MT. VEEDER VINEYARDS

USGS AND AERIAL MAPS

APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO.
24-16

SHEET NO.
2
OF 8 SHEETS

P:\MCE JOBS\2016\24-16 MT VEEDER VINEYARDS\DWGS\24-16 IP NAPA VY ECP.DWG 8/13/2019 12:04 PM

VINEYARD DEVELOPMENT AREA TABLE		
BLOCK	NET PLANTABLE AREA (AC)	GROSS PLANTABLE AREA (AC)
A	0.68	0.94
B	11.57	13.88
C	0.37	0.52
D	0.13	0.22
E	0.38	0.55
F	1.99	2.58
TOTAL	15.12	18.69

NOTES:
1. CONTROL POINTS SHOWN ON SHEETS 3–4.
2. NO TREE REMOVAL IS PROPOSED.
3. ALL SETBACKS TO VINES ARE FROM FROM TOP OF BANK.
4. IRRIGATION DESIGN IS BY WYATT IRRIGATION DESIGN, INC. – REFER TO IRRIGATION PLAN FOR DETAILS. IRRIGATION MAINLINES SHOWN ARE APPROXIMATE ONLY AND SHALL BE CONFIRMED PRIOR TO CONSTRUCTION. NO TREE REMOVAL SHALL OCCUR AS PART OF IRRIGATION LINE INSTALLATION AND ALL MINIMUM SETBACKS TO BIOLOGICAL FEATURES SHALL BE MAINTAINED.

BLOCK A
NET AREA: 0.68 AC
GROSS AREA: 0.94 AC

BLOCK B
NET AREA: 11.57 AC
GROSS AREA: 13.88 AC

LEGEND

- TREE, DIAMETER — TREE TO BE SAVED
- KJgv — GREAT VALLEY SEQUENCE
- Qaf — FILL, HOLOCENE
- Qc — COLLUVIUM
- Qls — LANDSLIDE, QUATERNARY
- Qols — OLDER LANDSLIDE, QUATERNARY
- 136 — USDA–NAPA SOIL TYPE NUMBER
- APPROX SLIDE LIMIT
- APPROX LIMIT OF SOIL TYPE
- APPROX PROPOSED IRRIGATION MAINLINE RELIEF PER WYATT IRRIGATION SUPPLY, INC.
- APPROX PROPOSED IRRIGATION MAINLINE REGULATOR PER WYATT IRRIGATION SUPPLY, INC.
- APPROX PROPOSED IRRIGATION MAINLINE AIR VENT PER WYATT IRRIGATION SUPPLY, INC.

VINEYARD LAYOUT AND EROSION CONTROL PLAN (1 OF 2)

SCALE: 1" = 50'
0 50 100 150
(GRAPHIC SCALE IN FEET)

MUNSELLE CIVIL ENGINEERING
CIVIL ENGINEERING • LAND PLANNING
513 CENTER STREET
HEALDSBURG, CA 95448
(707) 395-0968

PROFESSIONAL ENGINEER • VINEYARD • REGISTERED • CORT L. MUNSELLE • No. 69941 • Exp. 9-30-20 • STATE OF CALIFORNIA • CIVIL

REVISION	DESCRIPTION	BY	DATE

CORT L. MUNSELLE RCE 69941 — DATE

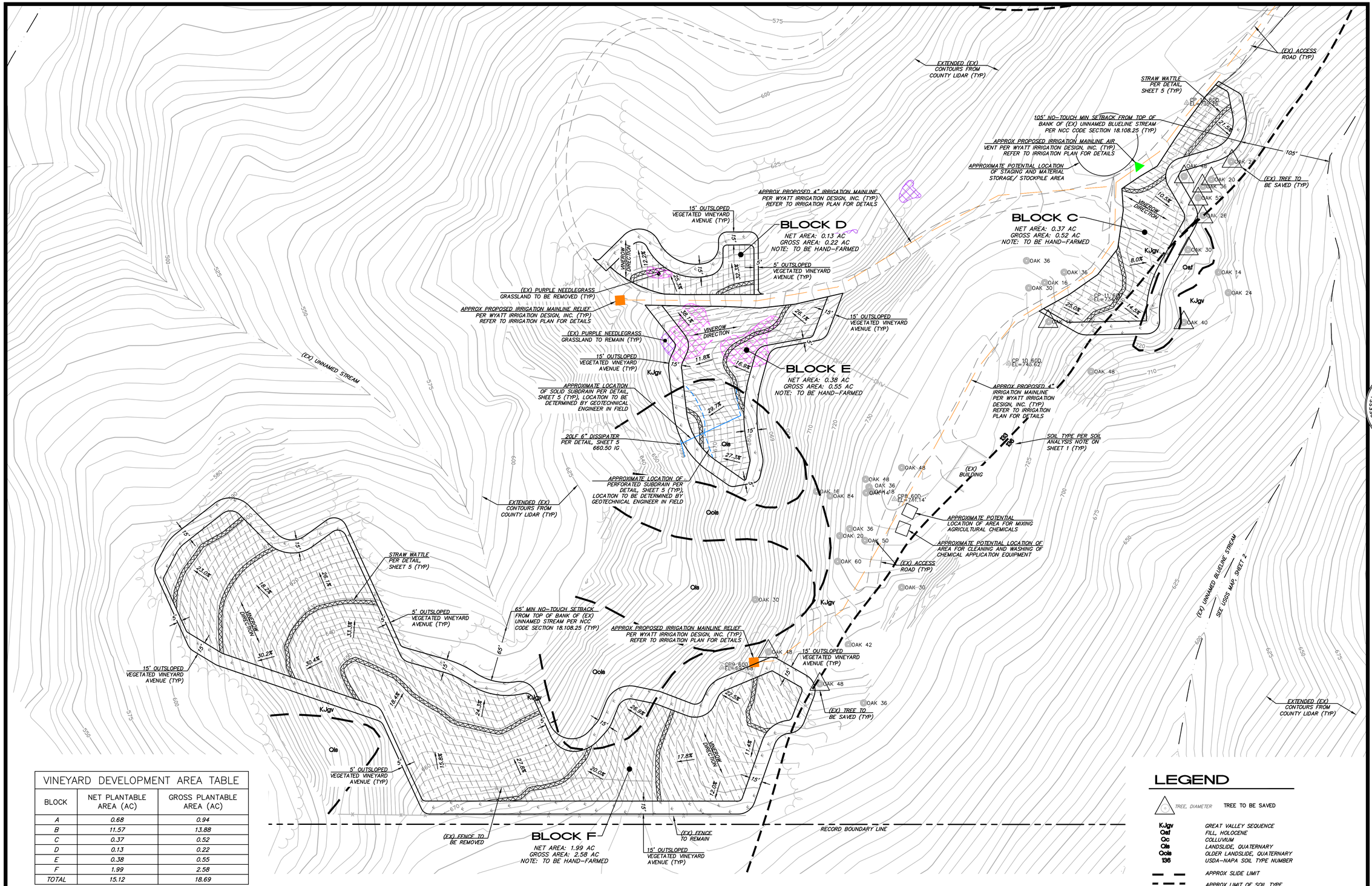
MT. VEEDER VINEYARDS
VINEYARD LAYOUT + EROSION CONTROL PLAN (1 OF 2)
APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO. 24–16

SHEET NO. 3 OF 8 SHEETS

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LEGEND

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- Qls — LANDSLIDE, QUATERNARY
- Qols — OLDER LANDSLIDE, QUATERNARY
- 136 — USDA-NAPA SOIL TYPE NUMBER
- APPROX SLIDE LIMIT
- APPROX LIMIT OF SOIL TYPE
- APPROX PROPOSED IRRIGATION MAINLINE RELIEF PER WYATT IRRIGATION SUPPLY, INC.
- APPROX PROPOSED IRRIGATION MAINLINE REGULATOR PER WYATT IRRIGATION SUPPLY, INC.
- APPROX PROPOSED IRRIGATION MAINLINE AIR VENT PER WYATT IRRIGATION SUPPLY, INC.

VINEYARD LAYOUT AND EROSION CONTROL PLAN (2 OF 2)

SCALE: 1" = 50'

0 50 100 150

(GRAPHIC SCALE IN FEET)

REVISION	DESCRIPTION	BY	DATE

MUNSELLE CIVIL ENGINEERING
CIVIL ENGINEERING • LAND PLANNING
513 CENTER STREET
HEALDSBURG, CA 95448
(707) 395-0968

PROFESSIONAL ENGINEER • MUNSELLE • REGISTERED • CORT L. • No. 69941 • Exp. 8-30-20 • CIVIL • STATE OF CALIF.

CORT L MUNSELLE RCE 69941 DATE

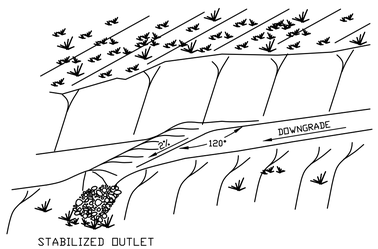
MT. VEEDER VINEYARDS
VINEYARD LAYOUT + EROSION CONTROL PLAN (2 OF 2)
APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

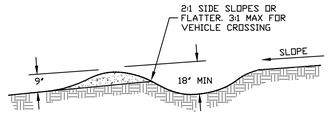
JOB NO. 24-16

SHEET NO. 4 OF 8 SHEETS

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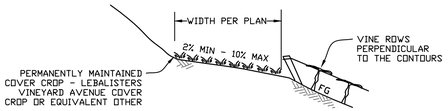


STABILIZED OUTLET



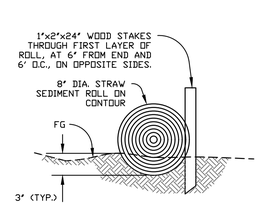
WATER BAR DETAIL

NOT TO SCALE

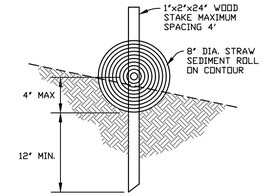


OUTSLOPED VINEYARD AVENUE DETAIL

NOT TO SCALE



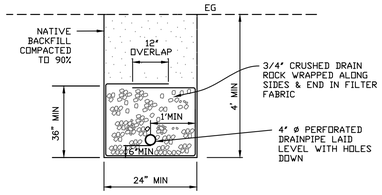
FLAT AREA



SLOPED AREA

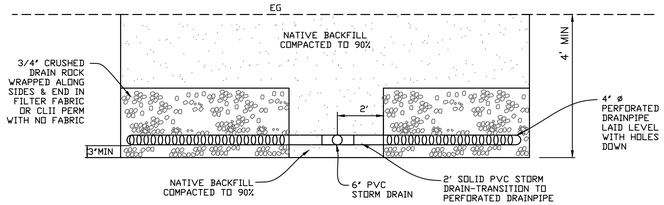
STRAW WATTLE DETAIL

NOT TO SCALE



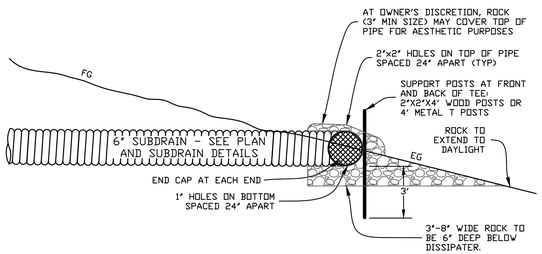
SUBDRAIN TRENCH DETAIL

NOT TO SCALE

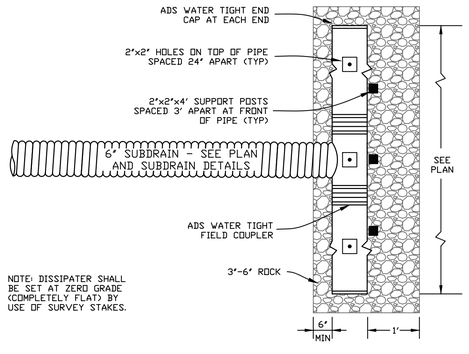


SUBDRAIN TRENCH CONNECTION TO MAINLINE DETAIL

NOT TO SCALE



SECTION



PLAN

SUBDRAIN DISSIPATER DETAIL

NOT TO SCALE

REVISION	DESCRIPTION	BY	DATE

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513 CENTER STREET
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(707) 395-0968

REGISTERED PROFESSIONAL ENGINEER • CORT L. MUNSELLE • No. 69941 • Exp. 9-30-20 • STATE OF CALIFORNIA • CIVIL

CORT L. MUNSELLE DATE
RCE 69941

MT. VEEDER VINEYARDS

VINEYARD LAYOUT + EROSION CONTROL PLAN (1 OF 2)

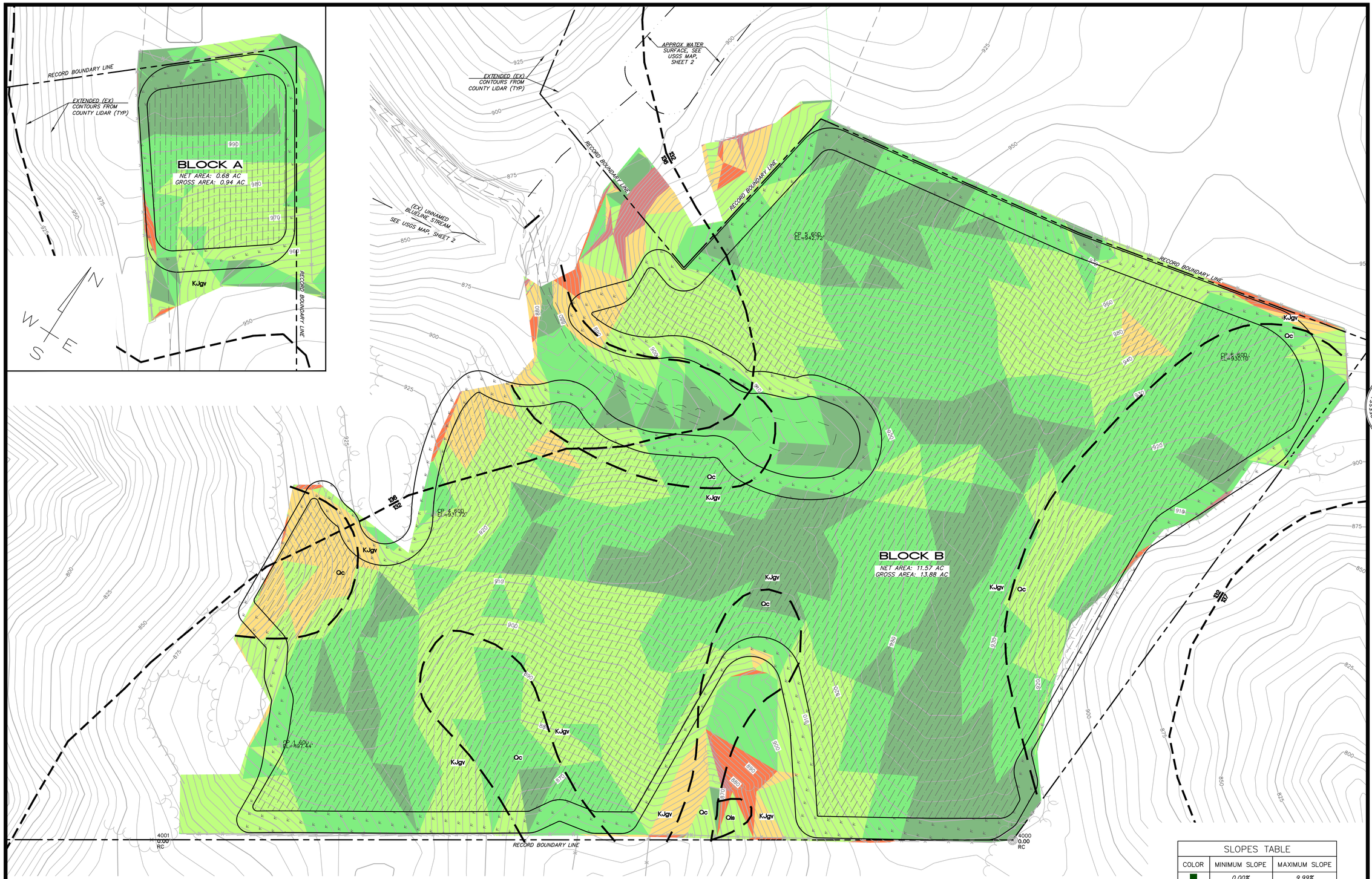
APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO.
24-16

SHEET NO.
5
OF 8 SHEETS

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SLOPE ANALYSIS

SCALE: 1" = 50'

0 50 100 150

(GRAPHIC SCALE IN FEET)

SLOPES TABLE		
COLOR	MINIMUM SLOPE	MAXIMUM SLOPE
	0.00%	9.99%
	10.00%	19.99%
	20.00%	29.99%
	30.00%	39.99%
	40.00%	49.99%
	50.00%	100.00%

REVISION	DESCRIPTION	BY	DATE

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CORT L MUNSELLE DATE
RCE 69941

MT. VEEDER VINEYARDS
SLOPE ANALYSIS (1 OF 2)

APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO. 24-16

SHEET NO. 6 OF 8 SHEETS

P:\MCE JOBS\2016\24-16 MT VEEDER VINEYARDS\DWGS\24-16 IP NAPA VY ECP.DWG 8/13/2019 12:05 PM

BLOCK D
NET AREA: 0.13 AC
GROSS AREA: 0.22 AC
NOTE: TO BE HAND-FARMED

BLOCK E
NET AREA: 0.38 AC
GROSS AREA: 0.55 AC
NOTE: TO BE HAND-FARMED

BLOCK C
NET AREA: 0.37 AC
GROSS AREA: 0.52 AC
NOTE: TO BE HAND-FARMED

BLOCK F
NET AREA: 1.99 AC
GROSS AREA: 2.58 AC
NOTE: TO BE HAND-FARMED

(EX) ACCESS ROAD (TYP)

EXTENDED (EX) CONTOURS FROM COUNTY LIDAR (TYP)

(EX) UNNAMED STREAM

(EX) UNNAMED BLUELINE STREAM SEE USGS MAP, SHEET 2

RECORD BOUNDARY LINE

KJgv

Qls

Qaf

CP 10.60D EL=758.25
CP 11.60D EL=734.47
CP 10.60D EL=748.62
CP8.60D EL=711.14'
CP8.60D EL=692.68'

OAK 48, OAK 36, OAK 20, OAK 50, OAK 60, OAK 30, OAK 42, OAK 84, OAK 16, OAK 14, OAK 24, OAK 40, OAK 18, OAK 2, OAK 5, OAK 26

SLOPE ANALYSIS

SCALE: 1" = 50'

0 50 100 150

(GRAPHIC SCALE IN FEET)

SLOPES TABLE		
COLOR	MINIMUM SLOPE	MAXIMUM SLOPE
	0.00%	9.99%
	10.00%	19.99%
	20.00%	29.99%
	30.00%	39.99%
	40.00%	49.99%
	50.00%	100.00%

REVISION	DESCRIPTION	BY	DATE

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PROFESSIONAL ENGINEER • REGISTERED • STATE OF CALIFORNIA • CORT L. MUNSELLE • No. 69941 • Exp. 8-30-20 • CIVIL

CORT L. MUNSELLE RCE 69941 DATE

MT. VEEDER VINEYARDS
SLOPE ANALYSIS (2 OF 2)

APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

JOB NO. 24-16

SHEET NO. 7 OF 8 SHEETS

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FENCING LEGEND

- EXISTING FENCE TO REMAIN
- EXISTING FENCE TO BE REMOVED
- PROPOSED NEW FENCE TO BE INSTALLED

NOTES:
1. PROPOSED FENCING SHALL CONSIST OF SMOOTH WIRE, RATHER THAN BARBED WIRE, TO PREVENT ANIMAL ENTANGLEMENT AND SHALL INCLUDE EXIT GATES AT ANY CORNERS TO ALLOW ENTRAPPED ANIMALS TO ESCAPE.
2. NO TREE REMOVAL SHALL OCCUR AS PART OF FENCE INSTALLATION OR REMOVAL.

FENCING PLAN

SCALE: 1" = 120'

0 120 240 360

(GRAPHIC SCALE IN FEET)

N E S W

REVISION	DESCRIPTION	BY	DATE

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CORT L. MUNSELLE RCE 69941 DATE

MT. VEEDER VINEYARDS
FENCING PLAN
APN 034-230-029
1300 MT. VEEDER ROAD
NAPA, CALIFORNIA

AUGUST 13, 2019

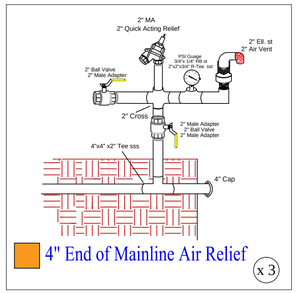
JOB NO. 24-16

SHEET NO. 8 OF 8 SHEETS

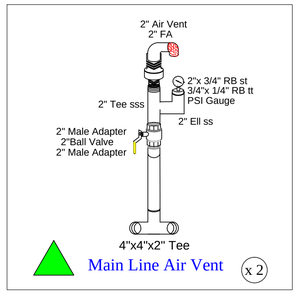
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Mt. Veeder Vineyards

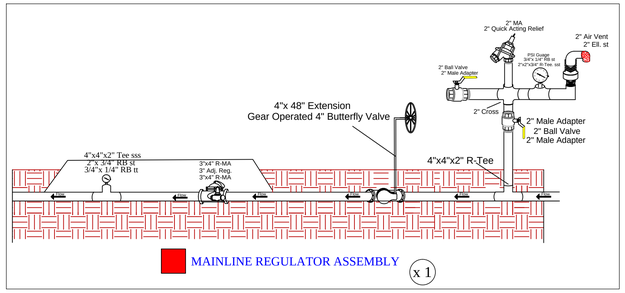
1300 Mt. Veeder Road
Napa, California



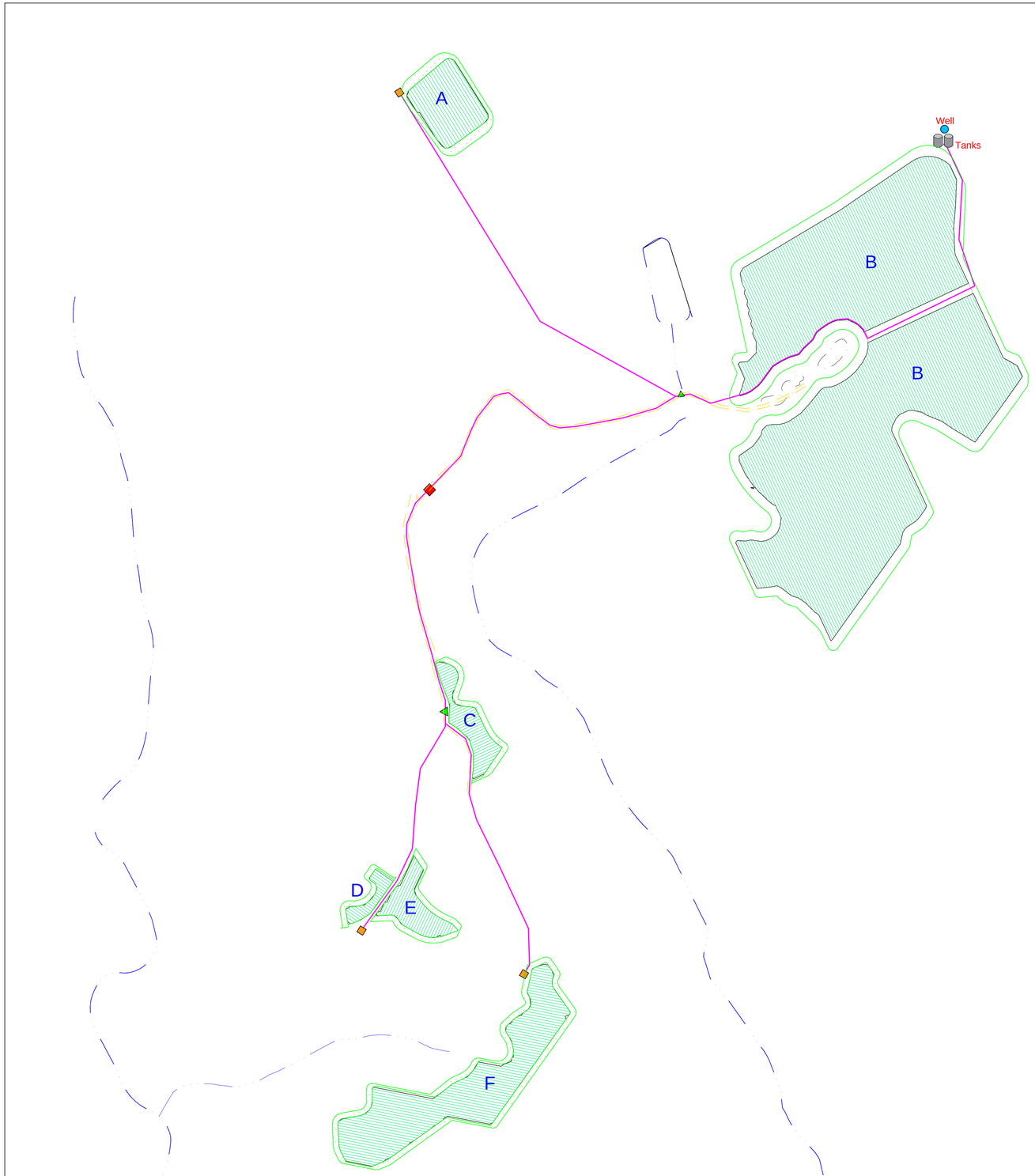
4" End of Mainline Air Relief x 3



Main Line Air Vent x 2



MAINLINE REGULATOR ASSEMBLY x 1



WYATT
IRRIGATION SUPPLY INC.

Tim Goetz: *(707) 290-7812*

Wyatt: *(707) 578-3747*

General Notes

4" SCH 40 SW PVC Pipe

Valve Key:

- 4" Mainline Relief
- Mainline Regulator
- Mainline Air Vent

Design Based On:

No.	Revision/Issue	Date

Client Name and Location

Mt. Veeder Vineyards

Drip Irrigation Design

Design # Drip	Sheet 1 of 1
Date 7/1/19	Designed By: Tim Goetz
Scale 1" = 150'	Drawn By: Francisco Valencia



Irrigation and Tree Avoidance Areas

ECPA P19-00080 - Mt Veeder Vineyards

Slope over 30% = 0.15 Ac.
Slope under 30% = 0.04 Ac.

Total Disturbed Acres = 0.19 Ac.

Prepared by: Napa County Planning,
Building and Environmental Services Dept.
Revised Date: 2019-09-12

Horizontal Datum: NAD 83
CA State Plane Coordinates, Zone II, feet

Data Disclaimer: This map was prepared for informational purposes only. No liability is assumed for the accuracy of the data delineated hereon.

Mt. Veeder Vineyards
Erosion Control Plan Narrative

March, 2019

Project Description

Site Description

The proposed project is located on a 114.9-acre parcel east of Mt. Veeder Road, approximately 2/3 miles north of Redwood Road. The property is bordered by existing vineyards, grasslands, and wooded areas. This project proposes to develop 18.69 acres of new vineyard; six vineyard blocks located in the northeastern and southeastern portions of the property. Blocks C, D, E, and F will be hand-farmed. An un-named blueline stream tributary to Redwood Creek separates the northeastern-most vineyard block (Block B) from the southeastern vineyard blocks (Blocks C through F). Subdrains are proposed in only two blocks – Blocks B and E; the approximate locations and details are shown on the plans, and the exact locations and design will be determined by the geotechnical engineer in the field.

Topography/Slopes

The topography generally consists of steep west-facing slopes and broader, more gently sloping ridgetop areas with locally undulatory or "hummocky" topography. Site-specific soils investigations indicate numerous smaller landslides and areas of colluvium in the vicinity of the vineyard blocks. The risk of damage due to slope instability is, however, considered to be low. The USDA-Napa County Soil Survey classifies the soils as: #132, Fagan clay loam, 15-30% slopes; #133, Fagan clay loam, 30-50% slopes; and #136, Felton gravelly loam, 30-50% slopes. The actual ground slope ranges from nearly flat to 30% and averages 17% within the vineyard blocks; approximately 1.12 acres have slopes greater than 30%.

Vegetation/Trees

The vegetation types of the area are wild oats grassland, purple needlegrass grassland, mixed oak forest, and wetlands; approximately 29.4 acres of grassland, 0.15 acres of wetlands, and 85.4 acres of oak woodland. A rare plant study was performed by WRA, Inc. in July, 2016 and no special-status species were observed at that time.

Structures/Access

There is one single-family residence with associated outbuildings on the project site, between proposed Blocks C and F. An existing gravel driveway connects the project site to Mt. Veeder Road. No cultural sites are known to occur on the parcel.

Site Directions

From Hwy 29, East on Redwood Road
At 4.5 miles, straight onto Mt. Veeder Road
At 5.4 miles, right on first bridge over Redwood Creek
Gate code 1960 at gate to access Block A

Source and quantity of required irrigation water

Approximately 8.2 ac-ft of irrigation water from existing wells will be required for the new vineyards. Refer to the Water Availability Analysis by Richard C. Slade & Associates LLC.

Off-site soil disposal areas

N/A, no off-site soil disposal

60/40 retention clearing analysis

N/A, project not within a Municipal Reservoir watershed

Associated projects and/or projects on the same parcel

N/A

Implementation schedule

Work will begin the spring following project approval. Pre-plant and planting year operations for each block may be conducted in one or two growing years. The work will be scheduled as follows:

Pre-plant year (P-1)	***Pre-plant season operations***
April 1 – September 1	Remove vegetation and stack for burning with proper permits; staking; installation of irrigation system; installation of subdrains under supervision of geotechnical engineer; installation of appropriate temporary and permanent erosion control measures; winterize site.
Rainy Season	Maintain erosion control measures; burning as permitting by local agencies
Planting Year (P)	***Planting Season operations***
April 1 – September 1	Complete unfinished pre-planting operations; plant vineyard; begin cultural practices; maintain existing and install remaining permanent erosion control measures; winterize site.
Rainy season	Maintain erosion control measures
Post-planting (P+1, +2…)	Maintain erosion control measures

All ground disturbing activities shall be completed by September 1 and all erosion control measures shall be installed by September 15 of each year.

<u>Temporary Erosion Control Measures</u>

1. Straw wattles shall be installed each fall in accordance with the detail and at the locations shown on the plans. Straw wattles may be removed after the final disking.
2. Straw mulch shall be spread over all disturbed areas either by hand or mechanically and in accordance with the rates shown on the plans.

<u>Permanent Erosion Control Measures</u>

1. Water bars installed at the locations and in accordance with the detail shown on the plans.
2. The dissipaters installed at subdrain outfalls in accordance with the detail shown on the plans.
3. A winter cover crop shall be installed within the new vineyard areas in the fall of years P-1 through P+1. The cover crop may be mowed during the growing season of years P through P+2. A permanent no-till cover crop shall be installed in the fall of year P+2. The permanent cover

crop under the vines may be mowed and strip-sprayed to a maximum of 9" from the vines. Spraying shall be done using springtime applications of "contact" sprays. **No pre-emergent sprays shall be used.** As a normal cultural practice, no disking, ripping, or other tillage shall take place within these areas.

A groundcover of 90% or greater will be obtained each winter. From time to time (every three to four years) it may be necessary to disk the vinerows in order to open up the ground or re-establish proper ground cover. Should this be necessary, request shall be made to and approval shall be obtained from the Napa County RCD, as described in the Napa County Conservation, Development, and Planning Department guidelines.

Cover Crop

Napa Valley Erosion Mix available from Napa Valley Ag Supply

Seed Mix	100 lbs/ac
Annual rye	45%
Barley	45%
Crimson clover	10%
Fertilizer	
Ammonium phosphate (16-20-0)	240-260 lbs/ac

Estimated cost of erosion control measures

Erosion control measures are estimated to cost between $30,000 and $39,000.