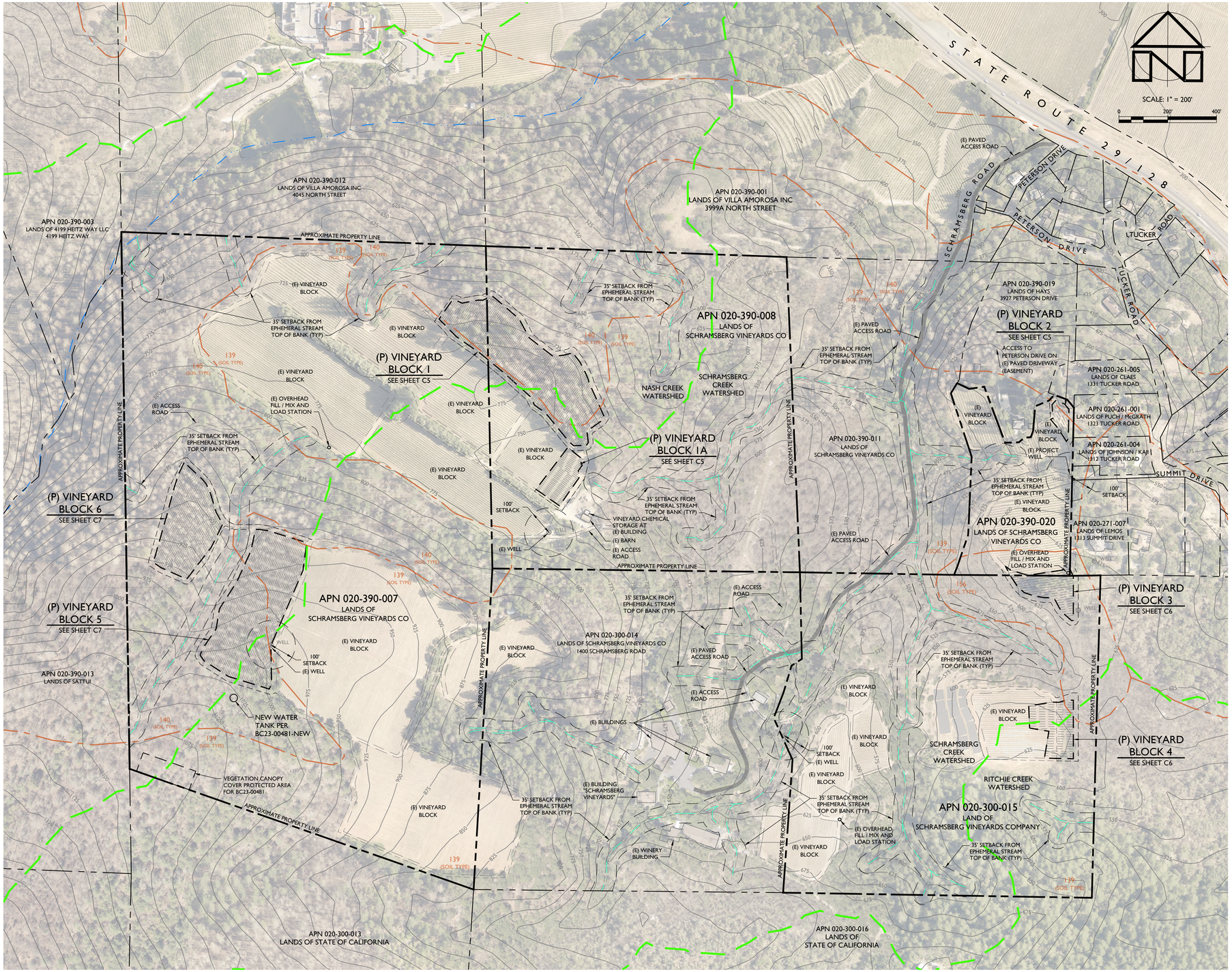
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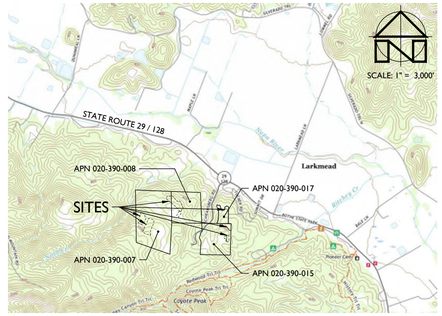
SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS



OVERALL SITE PLAN

SCALE: 1" = 200'



LOCATION MAP

SCALE: 1" = 3,000'

PROJECT INFORMATION:

PROPERTY OWNER & APPLICANT:
SCHRAMSBERG VINEYARDS COMPANY
1400 SCHRAMSBERG ROAD
CALISTOGA, CA 94515

SITE ADDRESS:
NO SITUS
CALISTOGA, CA 94515

ASSESSOR'S PARCEL NUMBERS:
020-300-015, 020-390-007, 020-390-008, & 020-390-020

PARCEL SIZES:
40.0 ±, 73.5 ±, 40.0 ± & 9.0 ± ACRES

PROJECT SIZE:
14.1 ± ACRES DISTURBED AREA
11.0 ± ACRES PLANTED

ZONING:
AGRICULTURAL WATERSHED (AW)

SHEET INDEX

C1 OVERALL SITE PLAN
C2 NOTES AND ABBREVIATIONS
C3 VINEYARD SLOPE DETERMINATION PLAN
C4 VINEYARD SLOPE DETERMINATION SECTIONS
C5 EROSION CONTROL PLAN - BLOCKS 1, 1A & 2
C6 EROSION CONTROL PLAN - BLOCKS 3 & 4
C7 EROSION CONTROL PLAN - BLOCKS 5 & 6
C8 FENCING EXHIBIT
C9 DETAILS

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS TO PROVIDE THE DETAILS ASSOCIATED WITH DEVELOPMENT OF NEW VINEYARDS ON THE PROPERTIES.

FLOOD HAZARD NOTE:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 06055C0410E, EFFECTIVE SEPTEMBER 26, 2008, THE PROJECT SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA.

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- SOIL TYPE BOUNDARY
- COUNTY DEFINED WATERSHED BOUNDARY
- BLUELINE STREAM
- EPHEMERAL STREAM
- EXISTING VINEYARD BLOCK
- EXISTING VINEYARD AVENUE
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE

SOIL TYPE LEGEND:

138 FORWARD GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES
139 FORWARD GRAVELLY LOAM, 9 TO 30 PERCENT SLOPES
140 FORWARD GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
156 KIDD LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

APPLIED CIVIL ENGINEERING INCORPORATED
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Napa, CA 94559
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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
OVERALL SITE PLAN

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

REVISIONS:	BY:
12/8/2023 PERMIT SUBMITTAL	YMS
⚠ 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

FILE: 16-152ECP-OSP.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C1 OF 9

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GENERAL NOTES:

1. THESE DRAWINGS WERE DEVELOPED EXCLUSIVELY FOR THIS PROJECT AND ARE NOT TO BE REPRODUCED OR USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF APPLIED CIVIL ENGINEERING INCORPORATED.
2. ALL MATERIALS AND WORKMANSHIP FOR THE WORK DESCRIBED ON THESE PLANS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AS ADOPTED AND AMENDED BY NAPA COUNTY:
   A. CALIFORNIA BUILDING CODE (2022)
   B. CALIFORNIA ELECTRIC CODE (2022)
   C. CALIFORNIA PLUMBING CODE (2022)
   D. CALIFORNIA MECHANICAL CODE (2022)
   E. CALIFORNIA FIRE CODE (2022)
   F. CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS (2022)
   G. NAPA COUNTY CODE (CURRENT)

   CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR BEING FAMILIAR WITH ALL STANDARDS, CODES AND REGULATIONS APPLICABLE TO THIS PROJECT.
3. CONTRACTOR SHALL BE APPROPRIATELY LICENSED WITH THE STATE OF CALIFORNIA TO PERFORM THE WORK SHOWN ON THESE PLANS.
4. CONTRACTOR SHALL SUPPLY ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO CONSTRUCT THE IMPROVEMENTS ILLUSTRATED ON THESE PLANS.
5. CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL MATERIALS AND PRODUCTS TO BE USED FOR THE SITE IMPROVEMENTS TO APPLIED CIVIL ENGINEERING INCORPORATED FOR REVIEW AND APPROVAL.
6. THE IMPROVEMENTS SHOWN ON THESE PLANS REQUIRE INSPECTION BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING ALL INSPECTIONS.
7. CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH APPLIED CIVIL ENGINEERING INCORPORATED AND NAPA COUNTY AT LEAST ONE WEEK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO REVIEW THE PROJECT PLANS AND SPECIFICATIONS AND NAPA COUNTY REQUIREMENTS.
8. CONTRACTOR IS RESPONSIBLE FOR SECURING ALL CONSTRUCTION RELATED PERMITS FROM THE GOVERNING AGENCIES AND MAINTAINING A COPY OF THE PERMITS AND THE APPROVED PLANS ON THE JOB SITE AT ALL TIMES.
9. THE PROPERTY OWNER AND CONTRACTOR ARE RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS FOR WORK WITHIN ANY RIPARIAN AREA PRIOR TO COMMENCING WORK IN THAT AREA.
10. CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE CONDITIONS AND THE SAFETY OF PROPERTY AND PEOPLE ON THE JOB SITE AT ALL TIMES. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE CONDITION, IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS, AT ALL TIMES, INCLUDING OUTSIDE OF NORMAL WORKING HOURS. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
11. CONTRACTOR SHALL PROVIDE AND MAINTAIN BARRICADES TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC TO THE SATISFACTION OF NAPA COUNTY AND THE OWNER.
12. THESE PLANS ARE INTENDED TO PROVIDE HORIZONTAL AND VERTICAL CONTROL FOR THE PROPOSED SITE IMPROVEMENTS SHOWN HEREON.
13. ALL DIMENSIONS SHOWN ON THESE PLANS SHOW MEASUREMENTS IN A HORIZONTAL PLANE UNLESS OTHERWISE SPECIFIED.
14. ALL WRITTEN DIMENSIONS SUPERCEDE ANY SCALED DIMENSIONS. IF AN APPARENT DISCREPANCY IS IDENTIFIED CONTACT APPLIED CIVIL ENGINEERING INCORPORATED IMMEDIATELY FOR A WRITTEN CLARIFICATION.
15. IF ANY CONTRACTOR, SUBCONTRACTOR, OR SURVEYOR IDENTIFIES ANY OMISSIONS, DEFICIENCIES, CONFLICTS OR ERRORS IN THESE PLANS AND SPECIFICATIONS OR IF THERE IS ANY DOUBT AS TO THEIR MEANING OR INTENT, THEY SHALL CONTACT APPLIED CIVIL ENGINEERING INCORPORATED FOR A WRITTEN ADDENDUM OR CLARIFICATION. CONTRACTOR IS NOT ELIGIBLE FOR ADDITIONAL COMPENSATION IF THEY FAIL TO DO SO BEFORE PROVIDING A PROPOSAL.
16. CONTRACTOR IS TO PROTECT ALL EXISTING SITE IMPROVEMENTS, UTILITIES, BUILDINGS AND NATURAL FEATURES FROM DAMAGE THROUGHOUT THE DURATION OF CONSTRUCTION. ANY DAMAGE CAUSED BY CONTRACTOR SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
17. IN THE EVENT THAT ARCHEOLOGICAL ARTIFACTS OR HUMAN REMAINS ARE DISCOVERED DURING CONSTRUCTION, WORK SHALL CEASE IN A 50-FOOT RADIUS SURROUNDING THE AREA OF DISCOVERY. THE PERMITTEE SHALL CONTACT NAPA COUNTY PLANNING BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT AT (707) 253-4417 FOR FURTHER GUIDANCE, WHICH WILL LIKELY INCLUDE THE REQUIREMENT FOR THE PERMITTEE TO HIRE A QUALIFIED PROFESSIONAL TO ANALYZE THE ARTIFACTS ENCOUNTERED AND TO DETERMINE IF ADDITIONAL MEASURES ARE REQUIRED.

    IF HUMAN REMAINS ARE ENCOUNTERED DURING THE DEVELOPMENT, ALL WORK IN THE VICINITY MUST BE, BY LAW, HALTED, AND THE NAPA COUNTY CORONER INFORMED, SO THAT THE CORONER CAN DETERMINE IF AN INVESTIGATION OF THE CAUSE OF DEATH IS REQUIRED, AND IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN. IF THE REMAINS ARE OF NATIVE AMERICAN ORIGIN, THE NEAREST TRIBAL RELATIVES AS DETERMINED BY THE STATE NATIVE AMERICAN HERITAGE COMMISSION SHALL BE CONTACTED BY THE PERMITTEE TO OBTAIN RECOMMENDATIONS FOR TREATING OR REMOVAL OF SUCH REMAINS, INCLUDING GRAVE GOODS, WITH APPROPRIATE DIGNITY, AS REQUIRED UNDER PUBLIC RESOURCES CODE SECTION 5097.98.

EXISTING UTILITY NOTES:

1. THE EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. THEY ARE BASED ON INFORMATION PROVIDED BY THE PROPERTY OWNER, THE SURVEYOR AND THE RESPECTIVE UTILITY COMPANIES. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR THE COMPLETENESS OF THEIR LOCATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING UTILITY LOCATIONS PRIOR TO ORDERING MATERIALS OR BEGINNING CONSTRUCTION. IF A DISCREPANCY BETWEEN THE PLANNED AND ACTUAL HORIZONTAL OR VERTICAL LOCATION OF AN EXISTING UTILITY EXISTS, CONTACT APPLIED CIVIL ENGINEERING INCORPORATED FOR AN ALTERNATE DESIGN.
3. CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION TO MARK THE LOCATION OF EXISTING UTILITY LINES. CALL UNDERGROUND SERVICE ALERT (USA) AT (800) 227-2600.
4. EXISTING UTILITIES ARE TO REMAIN IN SERVICE AT ALL TIMES. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES PER THE REQUIREMENTS OF THE UTILITY OWNER.
5. CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY RELOCATIONS WITH THE UTILITY OWNER.

SURVEY NOTES:

1. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES. TOPOGRAPHIC INFORMATION WAS TAKEN FROM THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATABASE. APPLIED CIVIL ENGINEERING INCORPORATED ASSUMES NO LIABILITY REGARDING THE ACCURACY OR COMPLETENESS OF THE TOPOGRAPHIC INFORMATION.
2. AERIAL PHOTOGRAPHS ARE NADIR IMAGES CAPTURED BY PICTOMETRY INTERNATIONAL DATED JULY 15, 2021 AND MAY NOT REPRESENT CURRENT CONDITIONS.
3. CONTOUR INTERVAL:

   SHEET C1: TWENTY FIVE (25) FEET.

   OTHER SHEETS: FIVE (5) FEET, HIGHLIGHTED EVERY TWENTY FIVE (25) FEET
4. VERTICAL DATUM: NAVD 88
5. THE PROPERTY LINES SHOWN ON THESE PLANS DO NOT REPRESENT A BOUNDARY SURVEY. THEY ARE APPROXIMATE AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.
6. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS. ANY AT-RISK MONUMENTS SHALL BE IDENTIFIED BY A PRE-CONSTRUCTION CORNER RECORD SUBMITTED TO THE COUNTY SURVEYOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. PRE AND POST CONSTRUCTION CORNER RECORDS SHALL BE PREPARED AS NEEDED TO PERPETUATE LOCATIONS THAT ARE AT RISK DUE TO PROJECT ACTIVITIES. ALL WORK TO BE PERFORMED BY A LICENSED SURVEYOR. MONUMENTS AND MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED SUBJECT TO THE PROVISIONS OUTLINED ABOVE AT THE CONTRACTOR'S EXPENSE.
7. ALL CONSTRUCTION STAKING SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR.

GRADING NOTES:

1. ALL EARTHWORK IS TO CONFORM TO THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, NAPA COUNTY CONSERVATION REGULATIONS AND THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT - ENGINEERING DIVISION STANDARDS.
2. ALL CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2:1 UNLESS OTHERWISE APPROVED BY A GEOTECHNICAL ENGINEER.
3. ALL DEBRIS GENERATED DURING DEMOLITION, SITE STRIPPING AND GRADING ACTIVITIES IS TO BE DISPOSED OF PROPERLY OFFSITE BY THE CONTRACTOR.
4. CONTRACTOR IS RESPONSIBLE FOR IMPORTING AND / OR EXPORTING MATERIALS AS NECESSARY TO ACHIEVE THE FINISH GRADES ILLUSTRATED ON THESE PLANS.
5. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN A MANNER THAT PREVENTS WIND BLOWN DIRT AND DUST AND RELATED DAMAGE TO NEIGHBORING PROPERTIES.
6. CONTRACTOR SHALL CONFORM TO EXISTING IMPROVEMENTS WITH A SMOOTH TRANSITION TO AVOID ABRUPT CHANGES IN GRADE, LOW SPOTS OR OTHER HAZARDOUS CONDITIONS.
7. PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL FINISH GRADED SLOPES AFTER THE COMPLETION OF CONSTRUCTION AND REPAIRING ANY EROSION DAMAGE.

UTILITY NOTES:

STORM DRAIN PIPING NOTES:

1. ALL STORM DRAIN PIPE 8" IN DIAMETER AND SMALLER IS TO BE SDR 35 PVC OR ADS N-12 WITH WATERTIGHT JOINTS UNLESS OTHERWISE NOTED.
2. ALL STORM DRAIN PIPE 12" IN DIAMETER AND LARGER IS TO BE ADS N-12 WITH WATER TIGHT JOINTS UNLESS OTHERWISE NOTED.
3. ALL 4" DIAMETER STORM DRAIN PIPE IS TO BE INSTALLED WITH A MINIMUM SLOPE OF 1% UNLESS OTHERWISE NOTED.
4. ALL 6" AND LARGER STORM DRAIN PIPE IS TO INSTALLED WITH A MINIMUM SLOPE OF 0.5% UNLESS OTHERWISE NOTED.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL WORK WILL BE PERFORMED BY THE VINEYARD MANAGER IN ACCORDANCE WITH THIS APPROVED VINEYARD EROSION CONTROL PLAN.
2. ALL DISTURBED AREAS MUST BE WINTERIZED BY OCTOBER 15TH OF EACH YEAR THAT THE PROJECT IS UNDER CONSTRUCTION.
3. A REQUEST TO ALLOW GRADING TO EXTEND BEYOND OCTOBER 15TH MAY BE GRANTED BY THE NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT - CONSERVATION DIVISION IF A MAJORITY OF THE GRADING HAS BEEN COMPLETED AND THERE COULD BE A DETRIMENTAL EFFECT ON THE ENVIRONMENT IF THE REMAINING GRADING REMAINS INCOMPLETE. A REQUEST TO ALLOW GRADING TO EXTEND BEYOND OCTOBER 15TH MUST BE SUBMITTED IN WRITING TO NAPA COUNTY NO LATER THAN OCTOBER 1ST. GRADING BEYOND THE WINTERIZATION DEADLINE WILL NOT BE ALLOWED PRIOR TO APPROVAL BY NAPA COUNTY.
4. ALL PERMANENT DRAINAGE FACILITIES AND SEDIMENT RETENTION STRUCTURES MUST BE INSTALLED BY OCTOBER 1ST.
5. ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (WATER BARS, SILT FENCE & STRAW WATTLES) MUST BE INSTALLED BY OCTOBER 15TH.
6. ALL EROSION CONTROL MEASURES MUST BE INSPECTED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE RAINY SEASON (OCTOBER 15TH THROUGH APRIL 1ST). INSPECTIONS MUST BE PERFORMED AT LEAST ONCE PER WEEK DURING EXTENDED DRY PERIODS, IMMEDIATELY BEFORE ANTICIPATED RAIN EVENTS, ONCE EVERY 24 HOURS DURING EXTENDED RAIN EVENTS AND IMMEDIATELY FOLLOWING EACH RAIN EVENT.
7. ALL DISTURBED AREAS ARE TO BE STABILIZED BY PLANTING OF AN EROSION CONTROL COVER CROP. PRIOR TO APPLYING THE EROSION CONTROL SEED BLEND, THE SEED BED SHOULD BE PREPARED BY UNIFORMLY SCARIFYING THE GROUND SURFACE TO A DEPTH OF TWO TO FOUR INCHES AND CONDITIONING TO BREAK UP LARGE PEDS.
8. THE COVER CROP SEED BLEND SHOULD BE BROADCAST OR DRILLED AFTER THE SEED BED HAS BEEN PREPARED.
9. A TEMPORARY TILLED COVER CROP WILL BE ESTABLISHED IN THE VINEYARD BLOCK AREAS FOR THE FIRST THREE YEARS AFTER PLANTING WHILE THE VINEYARD IS GETTING ESTABLISHED. THE TEMPORARY COVER CROP SEED MIX FOR THE VINEYARD ESTABLISHMENT SHOULD BE THE "SOIL BUILDER" AVAILABLE FROM NAPA VALLEY AG SUPPLY APPLIED AT A MINIMUM RATE OF 75 POUNDS PER ACRE:

COMMON VETCH	10%
CALIFORNIA RED OATS	20%
FIELD PEAS	30%
BELL BEANS	40%

10. THE PERMANENT COVER CROP SEED MIX FOR ALL NO-TILL VINEYARD BLOCKS AND VINEYARD AVENUES SHOULD BE THE "VINTNER'S BLEND" AVAILABLE FROM NAPA VALLEY AG SUPPLY APPLIED AT A MINIMUM RATE OF 75 POUNDS PER ACRE:

CREEPING RED FESCUE	40%
CHEWING FESCUE	25%
DWARF PERENNIAL RYE	25%
ROSE CLOVER	8%
NEW ZEALAND WHITE CLOVER	2%

11. ALTERNATE SEED MIX MAY BE USED BY THE VINEYARD MANAGER PROVIDED THAT ATTENTION IS GIVEN TO CHOOSING A COVER CROP THAT IS SUITABLE FOR THE SITE SOIL AND TOPOGRAPHIC CONDITIONS. ANY ALTERNATE SEED MIX MUST BE APPROVED BY THE ENGINEER AND THE NAPA COUNTY RESOURCE CONSERVATION DISTRICT PRIOR TO USE.
12. ALL SEEDED AREAS ARE TO BE FERTILIZED TO PROMOTE SUCCESSFUL ESTABLISHMENT OF THE COVER CROP. THE RECOMMENDED FERTILIZER IS AMMONIUM PHOSPHATE (16-20-0) APPLIED AT A RATE OF 250 POUNDS PER ACRE.
13. ADDITIONAL SOIL AMENDMENTS WILL BE ADDED BASED ON FUTURE SOILS TESTING REPORTS BY OTHERS. TYPICAL AMENDMENTS INCLUDE: COMPOSTED ORGANIC MATTER, LIME AND / OR GYPSUM. THE AMENDMENTS SHOULD BE INCORPORATED DURING THE LAND PREPARATION PROCESS TO INCREASE SOIL NUTRIENT CONTENT AND AVAILABILITY, AND TO IMPROVE SOIL STRUCTURE AND WATER HOLDING CAPACITY.
14. AFTER THE SEED AND FERTILIZER HAVE BEEN PLACED THE SEEDED AREA SHOULD BE RAKED, DRAGGED OR HARROWED TO ENSURE THAT SEEDS ARE PROPERLY BEDDED.
15. ALL DISTURBED AREAS ARE TO BE MULCHED WITH STRAW AT A RATE OF 3,000 POUNDS PER ACRE TO PROTECT THE BARE SOILS WHILE THE COVER CROP IS GETTING ESTABLISHED.
16. STRAW SHOULD BE SPREAD BY HAND IN A MANNER THAT PROMOTES FORMATION OF AN INTERWOVEN MATRIX. CRIMPING STRAW INTO THE SOIL IS HIGHLY RECOMMENDED ESPECIALLY ON WINDY SITES AND IS MANDATORY ON SITES WHERE STRAW IS MECHANICALLY CHOPPED AND BLOWN INTO PLACE.
17. ALL SOIL CUT AND FILL SLOPES THAT ARE STEEPER THAN 4:1 (HORIZONTAL TO VERTICAL) MUST BE COVERED WITH NORTH AMERICAN GREEN C125BN EROSION CONTROL BLANKET AFTER THE EROSION CONTROL SEED AND FERTILIZER HAVE BEEN PLACED.
18. CONTRACTOR MUST MAINTAIN AN ADEQUATE SUPPLY OF EROSION CONTROL MATERIALS ONSITE TO FACILITATE MAINTENANCE AND REPAIR THROUGHOUT THE RAINY SEASON. TYPICAL MATERIALS THAT SHOULD BE KEPT ONSITE INCLUDE SILT FENCE AND STRAW WATTLE SEDIMENT BARRIERS, GRAVEL BAGS, EROSION CONTROL BLANKETS, STRAW AND EROSION CONTROL SEED MIX.

EROSION CONTROL COVER CROP MANAGEMENT NOTES:

1. ESTABLISHING AN EFFECTIVE VEGETATIVE COVER CROP WILL BE THE PRIMARY MEANS OF PREVENTING EROSION FROM THE PROPOSED VINEYARD DEVELOPMENT AREA. AFTER THE INITIAL LAND PREPARATION ACTIVITIES ARE COMPLETE A TEMPORARY COVER CROP WILL BE PLANTED AND STRAW MULCH WILL BE APPLIED THROUGHOUT THE CLEARED AREA TO STABILIZE THE PROJECT AREAS THROUGH THE WINTER. MINIMUM COVERAGE REQUIRED TO MAINTAIN EROSION RATES AT ACCEPTABLE LEVELS ARE LISTED IN THE VINEYARD BLOCK COVER CROP SPECIFICATION TABLE, THIS SHEET.
2. THE TEMPORARY COVER CROP WILL BE TILLED IN THE SPRING DURING THE INITIAL VINEYARD ESTABLISHMENT PERIOD (UP TO THE FIRST THREE YEARS). THE TILLED AREAS AND ANY OTHER DISTURBED AREAS OR AREAS WITH LESS THAN ADEQUATE COVER WILL ALSO BE MULCHED EACH YEAR IN THE FALL TO PROTECT THE BARE SOIL WHILE THE COVER CROP IS GETTING ESTABLISHED.
3. AFTER THE VINEYARD ESTABLISHMENT PERIOD ALL VINEYARD BLOCKS WILL BE CONVERTED TO A NO-TILL REGIME. THE NO-TILL COVER CROP WILL BE MOWED IN THE SPRING AND WILL BE RESEEDED AND MULCHED IN THE FALL AS NECESSARY TO ACHIEVE THE SPECIFIED COVER IN THE VINEYARD BLOCK COVER CROP SPECIFICATION TABLE, THIS SHEET.
4. ALL VINEYARD AVENUES WILL BE PROTECTED WITH A PERMANENT NO-TILL COVER CROP WITH DENSITIES MAINTAINED AT THE INDICATED COVER SPECIFICATION FOR THE BLOCK OR MORE THROUGHOUT THE RAINY SEASON. VINEYARD AVENUES SHALL NOT BE TILLED. ALTERNATIVELY, VINEYARD AVENUES MAY BE LINED WITH CRUSHED ROCK TO PROTECT FROM EROSION AND PROVIDE ALL WEATHER ACCESS.
5. THE COVER CROP SHOULD BE IRRIGATED PRIOR TO THE RAINY SEASON TO ESTABLISH A DENSE COVER PRIOR TO THE ONSET OF HEAVY RAINS. THIS IS ESPECIALLY IMPORTANT IN EROSION PRONE AREAS SUCH AS VINEYARD AVENUES AND MORE STEEPLY SLOPING AREAS. IN ORDER TO EFFECTIVELY ESTABLISH COVER, AT LEAST TWO INCHES OF WATER SHOULD BE APPLIED TO GERMINATE THE SEEDS. WATER SHOULD BE APPLIED BY SPRINKLER OR MICROSPRAYERS AT A RATE THAT DOES NOT CAUSE RUNOFF OR EROSION. ADDITIONAL WATER SHOULD BE APPLIED, AS NECESSARY, TO ACHIEVE THE DESIGN COVER PERCENTAGE AND TO MAINTAIN THE COVER CROP UNTIL SUFFICIENT RAINFALL OCCURS. IF ADEQUATE WATER IS NOT AVAILABLE TO IRRIGATE THE ENTIRE PROJECT AREA THEN 20 FOOT WIDE STRIPS, ORIENTATED ALONG THE CONTOUR, SHOULD BE IRRIGATED. LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

VINEYARD BLOCK COVER CROP SPECIFICATION TABLE

BLOCK ID	REQUIRED COVER %
1	85%
1A	75%
2	75%
3	80%
4	80%
5	80%
6	80%

TREE REMOVAL INVENTORY:

THE FOLLOWING TREES WILL BE REMOVED AS PART OF THE PROJECT. THE INVENTORY WAS PROVIDED BY THE PROJECT REGISTERED PROFESSIONAL FORESTER SCOTT BUTLER AND IS INDICATIVE OF GENERAL AVERAGE TREE SIZES:

BLOCK 1*

D-FIR	74 TREES	AVERAGE 16"
MADRONE	64 TREES	AVERAGE 12"
LIVE OAK	14 TREES	AVERAGE 10"
TAN OAK	3 TREES	AVERAGE 12"

BLOCKS 2, 3 & 4

D-FIR	2 TREES	AVERAGE 12"
MADRONE	1 TREE	AVERAGE 16"
LIVE OAK	1 TREE	AVERAGE 14"
BLACK OAK	4 TREES	AVERAGE 14"

BLOCKS 5 & 6

NO TREES

* NOTE THAT BLOCKS 1, 5 AND 6 WERE LOGGED AFTER THE 2020 GLASS FIRE UNDER AN EMERGENCY NOTICE WITH CALFIRE.

ABBREVIATIONS:

AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALT CONCRETE	(N)	NEW
AD	AREA DRAIN	NO	NUMBER
AP	ANGLE POINT	OC	ON CENTER
BTM	BOTTOM	OD	OUTSIDE DIAMETER
CLR	CLEAR	OG	ORIGINAL GRADE
CONF	CONFORM	(P)	PROPOSED
CP	CONTROL POINT	PC	POINT OF CURVATURE
DCV	DOUBLE CHECK VALVE	PCC	PORTLAND CEMENT CONCRETE
DI	DROP INLET	PIV	POST INDICATOR VALVE
DN	DOCUMENT NUMBER	PL	PROPERTY LINE
DOC	DOCUMENT	PT	POINT OF TANGENCY
DS	DOWN SPOUT	PVC	POLYVINYL CHLORIDE
(E)	EXISTING	PW	PROCESS WASTE
EC	END CURVE	PWCO	PROCESS WASTE CLEANOUT
ELEV	ELEVATION	RSV	RECIRCULATING SPLITTER VALVE
EP	EDGE OF PAVEMENT	SAD	SEE ARCHITECTURAL DRAWINGS
EPB	ELECTRICAL PULL BOX	SD	STORM DRAIN
EOC	EDGE OF CONCRETE	SDCO	STORM DRAIN CLEANOUT
(F)	FUTURE	SDMH	STORM DRAIN MANHOLE
FDC	FIRE DEPARTMENT CONNECTION	SED	SEE ELECTRICAL DRAWINGS
FF	FINISH FLOOR	SF	SQUARE FEET
FG	FINISH GRADE	SHLDR	SHOULDER
FH	FIRE HYDRANT	SLD	SEE LANDSCAPE DRAWINGS
FL	FLOW LINE	SMD	SEE MECHANICAL DRAWINGS
FS	FINISH SURFACE	SPD	SEE PLUMBING DRAWINGS
FSR	FIRE SPRINKLER RISER	SSD	SEE STRUCTURAL DRAWINGS
GB	GRADE BREAK	SS	SANITARY SEWER
GM	GAS METER	SSCO	SANITARY SEWER CLEANOUT
HMA	HOT MIX ASPHALT	SSMH	SANITARY SEWER MANHOLE
HP	HIGH POINT	TC	TOP FACE OF CURB
INV	INVERT	TD	TERRACE DRAIN
IPS	IRON PIPE SIZE	TW	TOP OF WALL
IRR	IRRIGATION	TYP	TYPICAL
LF	LINEAR FEET	WM	WATER METER
LP	LOW POINT	WV	WATER VALVE
MAX	MAXIMUM	XFMR	TRANSFORMER

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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
NOTES AND ABBREVIATIONS

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

REVISIONS:	BY:
12/8/2023 PERMIT SUBMITTAL	YMS
1 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

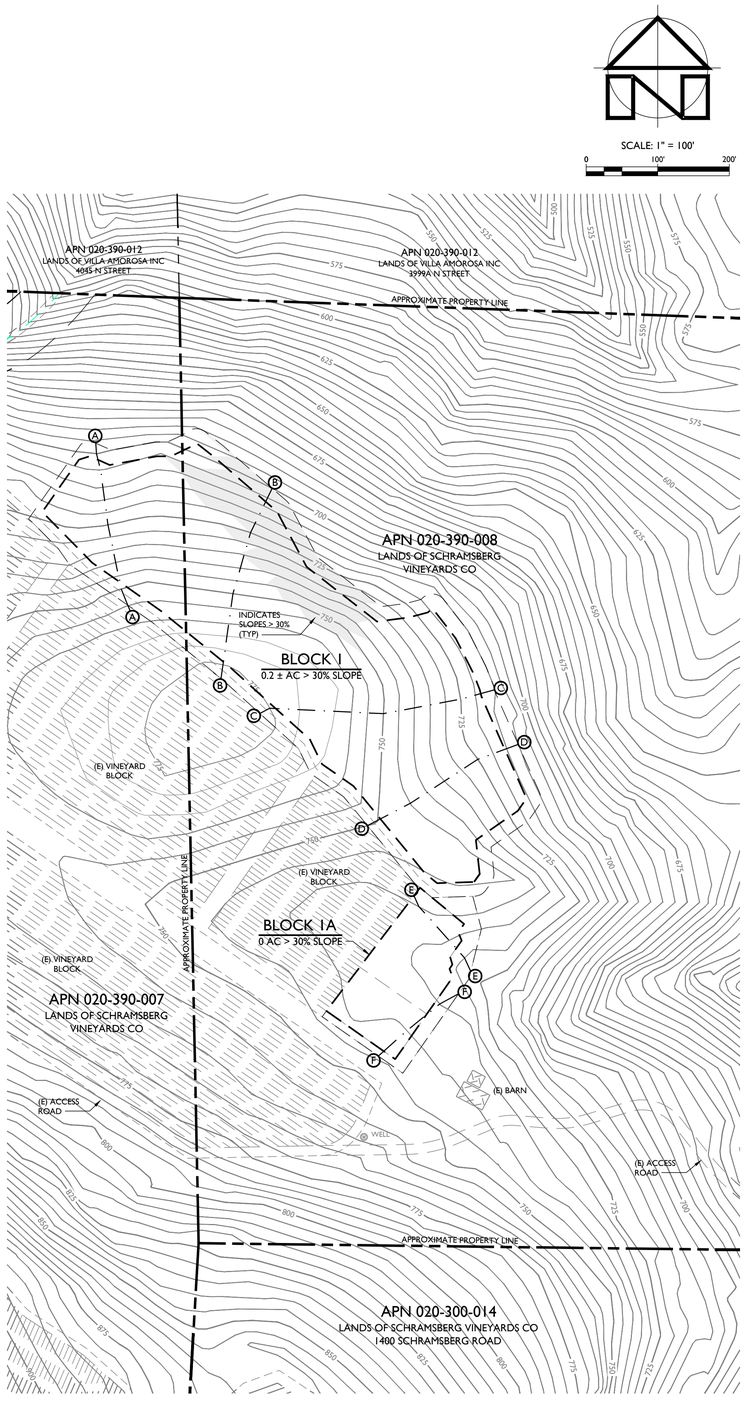
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ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C2

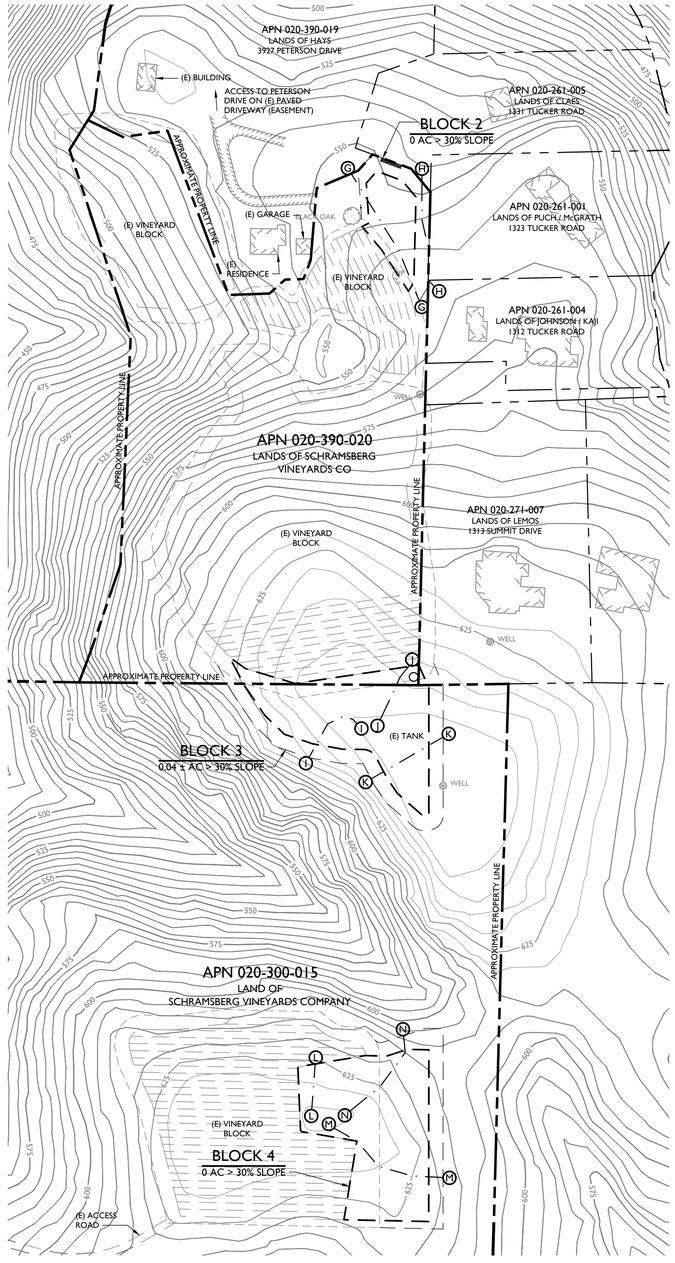
OF 9

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VINEYARD BLOCKS 1 AND 1A

SCALE: 1" = 100'

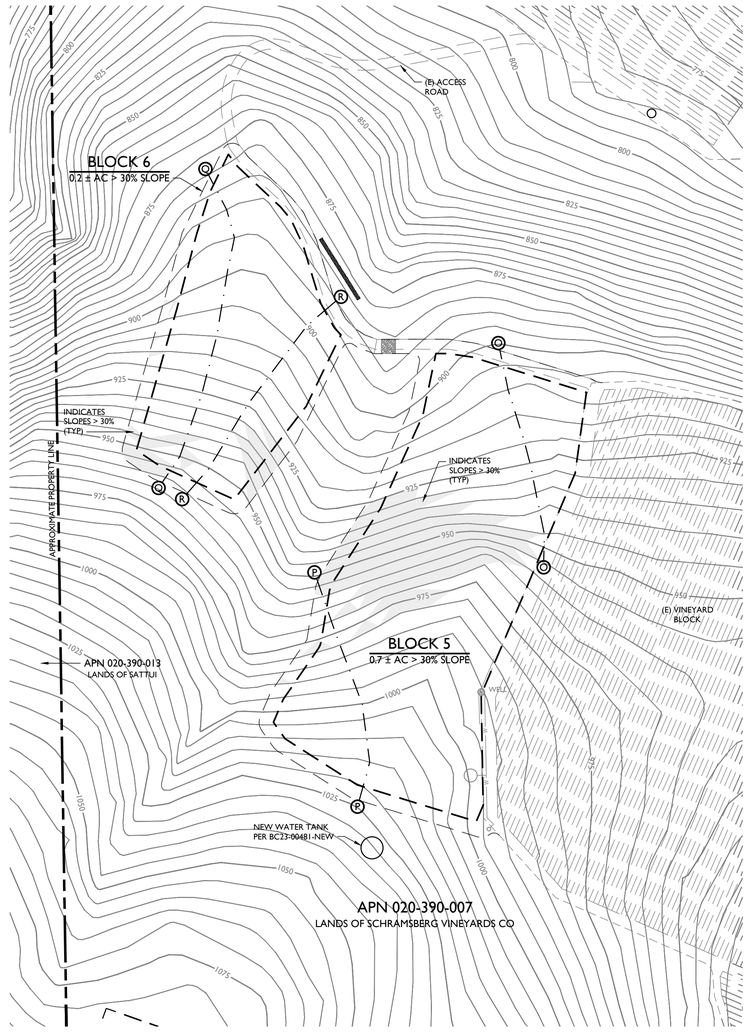


VINEYARD BLOCKS 2, 3 AND 4

SCALE: 1" = 100'

LEGEND:

- APPROXIMATE PROPERTY LINE
- VINEYARD CLEARING LIMTS / VINEYARD AVENUE
- LIMIT OF VINEYARD BLOCK
- SLOPE SECTION. SEE TABLE, THIS SHEET.
- > 30% SLOPES (1.1 ± ACRES TOTAL) (NOT MORE THAN 1 ACRE CONTIGUOUS)



VINEYARD BLOCKS 5 AND 6

SCALE: 1" = 100'

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(707) 320-4988 | www.appliedcivil.com

SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
VINEYARD SLOPE DETERMINATION PLAN

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

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12/8/2023 PERMIT SUBMITTAL	YMS
⚠ 5/17/2024 RESPONSE TO COMMENTS	YMS

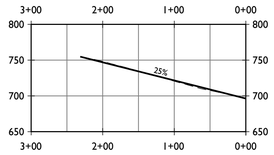
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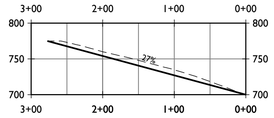
ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C3 OF 9

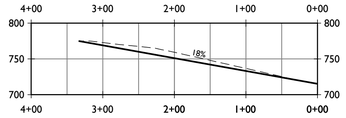
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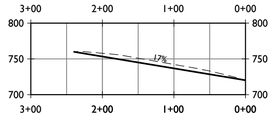
SECTION A - A



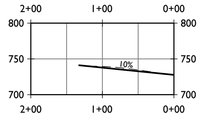
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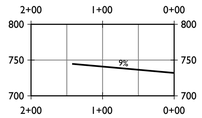
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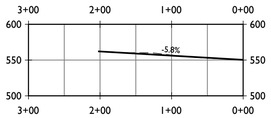
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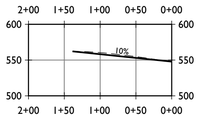
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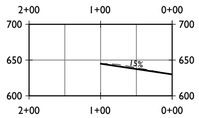
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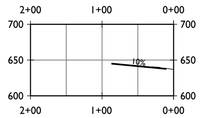
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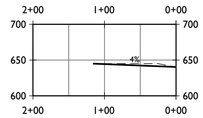
SECTION H - H



SECTION I - I



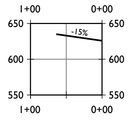
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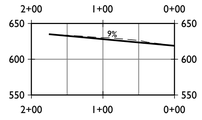
SECTION K - K

VINEYARD SLOPE SECTIONS

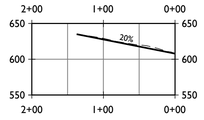
BLOCK 1	
A - A	25%
B - B	27%
C - C	18%
D - D	17%
BLOCK 1A	
E - E	10%
F - F	9%
BLOCK 2	
G - G	6%
H - H	10%
BLOCK 3	
I - I	15%
J - J	10%
K - K	4%
BLOCK 4	
L - L	15%
M - M	9%
N -N	20%
BLOCK 5	
O - O	18%
P - P	22%
BLOCK 6	
Q - Q	18%
R - R	21%
AVERAGE	15%



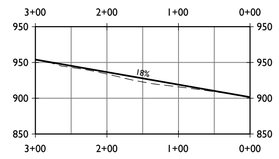
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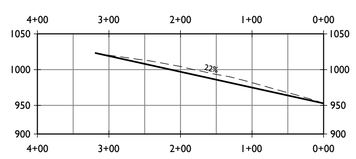
SECTION M - M



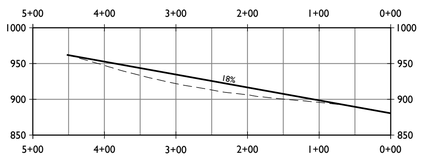
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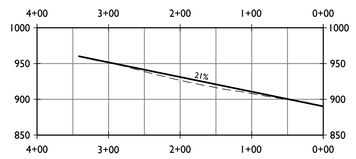
SECTION O - O



SECTION P - P



SECTION Q -Q



SECTION R -R

VINEYARD SLOPE DETERMINATION SECTIONS

SCALE: 1" = 100'

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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
VINEYARD SLOPE DETERMINATION SECTIONS

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

REVISIONS:	BY:
12/8/2023 PERMIT SUBMITTAL	YMS
1 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

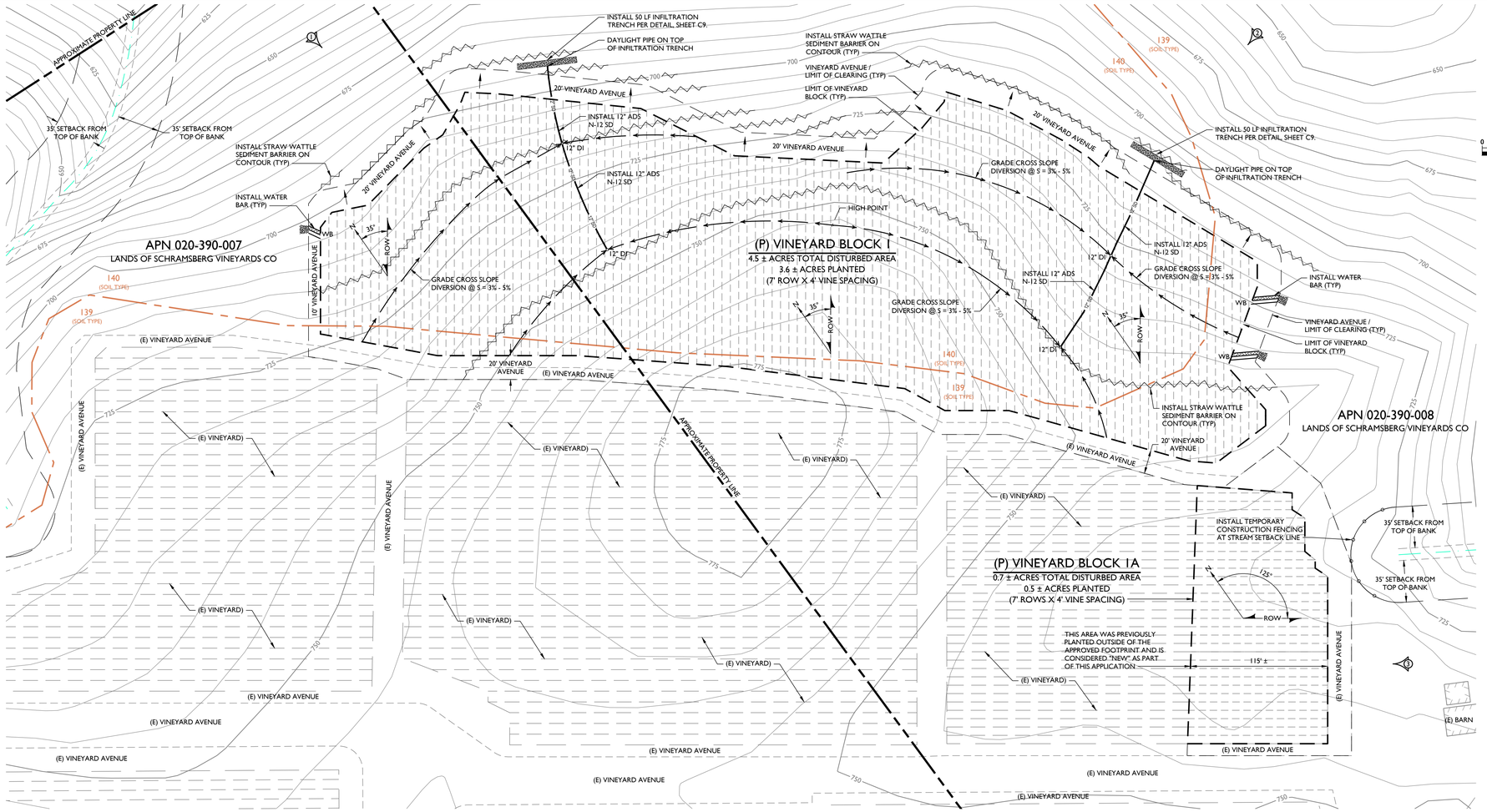
FILE: 16-152ECP-SLOPESEC.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C4

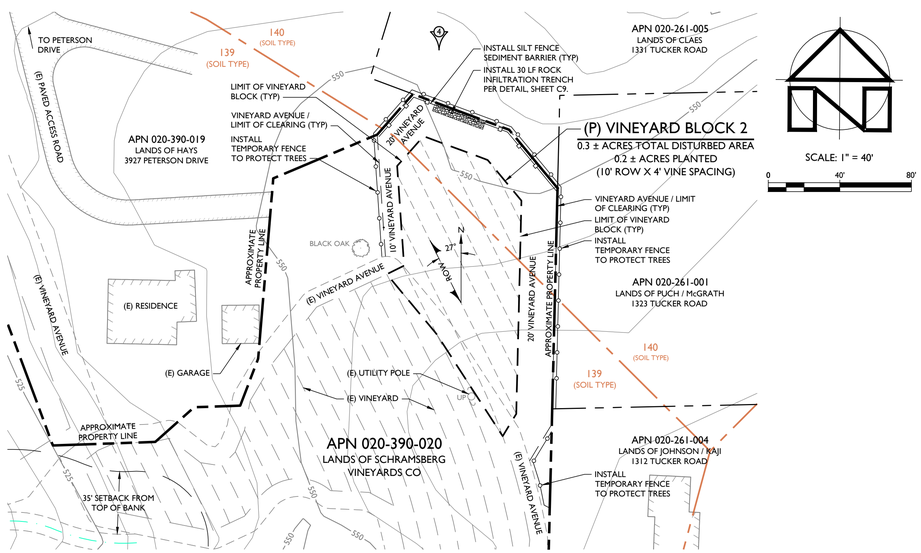
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EROSION CONTROL PLAN - BLOCKS 1 AND 1A

SCALE: 1" = 50'



EROSION CONTROL PLAN - BLOCK 2

SCALE: 1" = 50'

SOIL TYPE LEGEND:

138	FORWARD GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES
139	FORWARD GRAVELLY LOAM, 9 TO 30 PERCENT SLOPES
140	FORWARD GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
156	KIDD LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- STREAM SETBACK
- SOIL TYPE BOUNDARY
- BLUELINE STREAM
- EPHEMERAL STREAM & APPROXIMATE TOP OF BANK
- EXISTING VINEYARD BLOCK
- EXISTING VINEYARD AVENUE
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- PROPOSED VINE ROWS & ROW DIRECTION
- STRAW WATTLE SEDIMENT BARRIER
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE SEDIMENT BARRIER
- WATERBAR
- ROCK ENERGY DISSIPATOR
- PHOTO LOCATION AND DIRECTION

NOTES:

1. ALL CLEARING LIMITS SHALL BE MARKED BY THE ENGINEER OR SURVEYOR PRIOR TO CONSTRUCTION AND TEMPORARY CONSTRUCTION FENCING (ORANGE FENCING OR EQUIVALENT) SHALL BE INSTALLED ALONG THE CLEARING LIMITS PRIOR TO ANY LAND PREPARATION ACTIVITIES. THE TEMPORARY CONSTRUCTION FENCING SHALL BE ADJUSTED AROUND THE CANOPY OF ANY TREES THAT ARE TO REMAIN OUTSIDE OF THE CLEARING LIMITS WITH CANOPY THAT OVERHANGS INTO THE CLEARING LIMITS TO KEEP LAND PREPARATION ACTIVITIES OUTSIDE OF THE TREE CANOPY AREA.
2. ALL STREAM SETBACKS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. TRACK WALK ENTIRE DISTURBED AREA. SEE SURFACE ROUGHENING DETAIL, SHEET C9.
4. ALL TEMPORARY STAGING, STOCKPILE AND PARKING AREAS SHALL BE WITHIN THE PROPOSED DEVELOPMENT AREAS. NO STAGING, STOCKPILING, PARKING OR OTHER LAND DISTURBANCE SHALL OCCUR OUTSIDE OF THE PROPOSED DEVELOPMENT AREAS.
5. ALL EROSION CONTROL MATERIALS SHALL BE FREE OF PLASTIC MONOFILAMENT SO THAT SMALL WILDLIFE WILL NOT BECOME ENTANGLED.

SITE PHOTOGRAPH NOTES:

① REPRESENTS APPROXIMATE LOCATION AND DIRECTION OF ISOMETRIC VIEW OBTAINED FROM GOOGLE EARTH IMAGERY DATED MAY 13, 2023. SEE PHOTOGRAPHIC DOCUMENTATION OF EXISTING SITE CONDITIONS FOR THE SCHRAMSBERG VINEYARDS CO VINEYARD DEVELOPMENT EROSION CONTROL PLAN FOR PHOTOGRAPHS AND DESCRIPTIONS.

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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
EROSION CONTROL PLAN - BLOCKS 1, 1A & 2

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUEGENBURG
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

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1 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

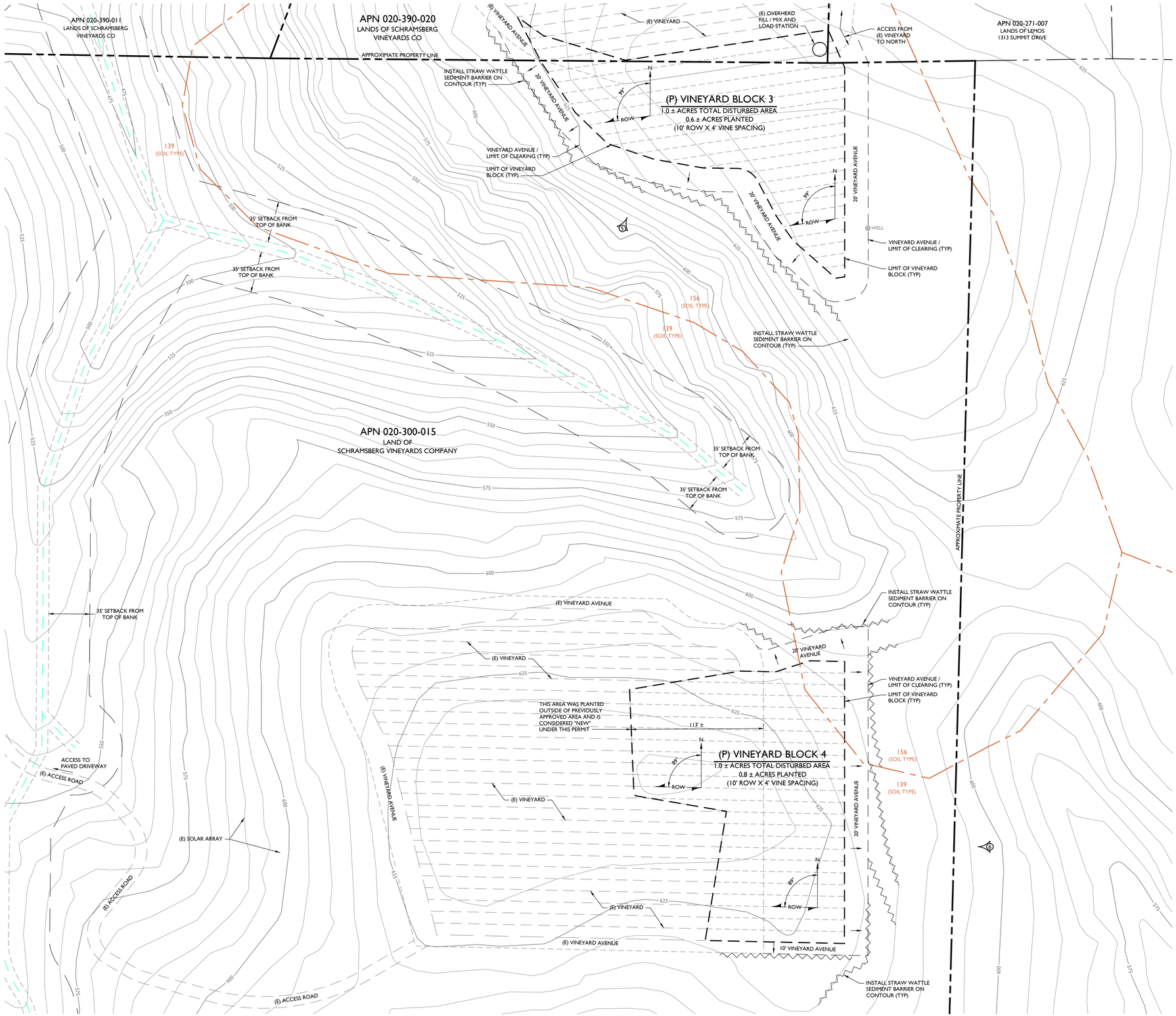
FILE: 16-152ECP-PLANS.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C5

OF 9

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EROSION CONTROL PLAN - BLOCKS 3 & 4

SCALE: 1" = 40'

SCALE: 1" = 40'

0 40' 80'

SOIL TYPE LEGEND:

138	FORWARD GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES
139	FORWARD GRAVELLY LOAM, 9 TO 30 PERCENT SLOPES
140	FORWARD GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
156	KIDD LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- STREAM SETBACK
- SOIL TYPE BOUNDARY
- BLUELINE STREAM
- EPHEMERAL STREAM & APPROXIMATE TOP OF BANK
- EXISTING VINEYARD BLOCK
- EXISTING VINEYARD AVENUE
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- PROPOSED VINE ROWS & ROW DIRECTION (ROW)
- STRAW WATTLE SEDIMENT BARRIER
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE SEDIMENT BARRIER
- WB — WATERBAR
- ROCK ENERGY DISSIPATOR
- PHOTO LOCATION AND DIRECTION

NOTES:

1. ALL CLEARING LIMITS SHALL BE MARKED BY THE ENGINEER OR SURVEYOR PRIOR TO CONSTRUCTION AND TEMPORARY CONSTRUCTION FENCING (ORANGE FENCING OR EQUIVALENT) SHALL BE INSTALLED ALONG THE CLEARING LIMITS PRIOR TO ANY LAND PREPARATION ACTIVITIES. THE TEMPORARY CONSTRUCTION FENCING SHALL BE ADJUSTED AROUND THE CANOPY OF ANY TREES THAT ARE TO REMAIN OUTSIDE OF THE CLEARING LIMITS WITH CANOPY THAT OVERHANGS INTO THE CLEARING LIMITS TO KEEP LAND PREPARATION ACTIVITIES OUTSIDE OF THE TREE CANOPY AREA.
2. ALL STREAM SETBACKS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. TRACK WALK ENTIRE DISTURBED AREA. SEE SURFACE ROUGHENING DETAIL, SHEET C9.
4. ALL TEMPORARY STAGING, STOCKPILE AND PARKING AREAS SHALL BE WITHIN THE PROPOSED DEVELOPMENT AREAS. NO STAGING, STOCKPILING, PARKING OR OTHER LAND DISTURBANCE SHALL OCCUR OUTSIDE OF THE PROPOSED DEVELOPMENT AREAS.
5. ALL EROSION CONTROL MATERIALS SHALL BE FREE OF PLASTIC MONOFILAMENT SO THAT SMALL WILDLIFE WILL NOT BECOME ENTANGLED.

SITE PHOTOGRAPH NOTES:

① REPRESENTS APPROXIMATE LOCATION AND DIRECTION OF ISOMETRIC VIEW OBTAINED FROM GOOGLE EARTH IMAGERY DATED MAY 13, 2023. SEE PHOTOGRAPHIC DOCUMENTATION OF EXISTING SITE CONDITIONS FOR THE SCHRAMSBERG VINEYARDS CO VINEYARD DEVELOPMENT EROSION CONTROL PLAN FOR PHOTOGRAPHS AND DESCRIPTIONS.

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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
EROSION CONTROL PLAN - BLOCKS 3 & 4

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

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DATE: MAY 17, 2024

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12/8/2023 PERMIT SUBMITTAL	YMS
1 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

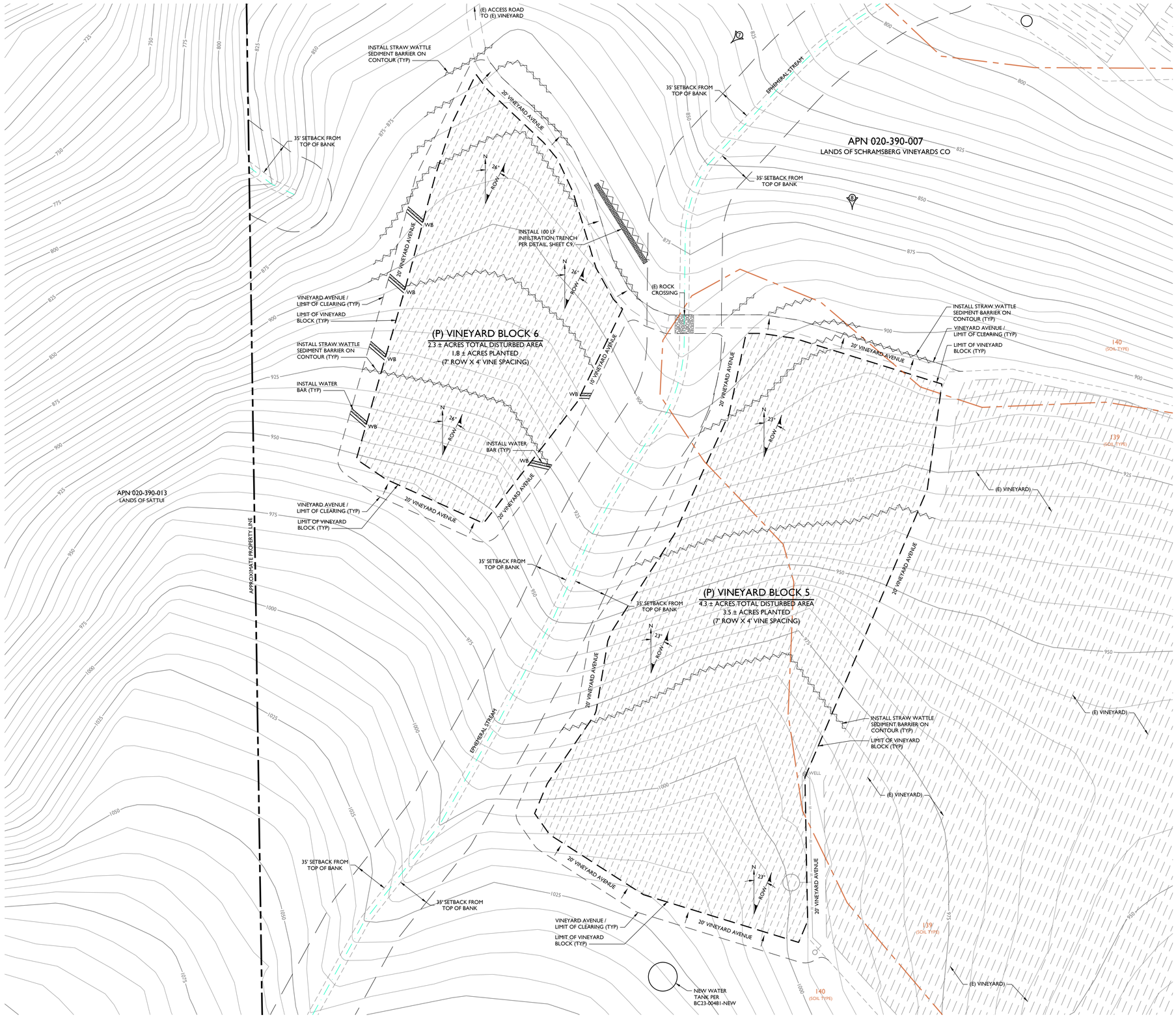
FILE: 16-152ECP-PLANS.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C6

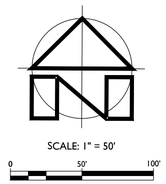
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EROSION CONTROL PLAN - BLOCKS 5 & 6

SCALE: 1" = 50'



SOIL TYPE LEGEND:

138	FORWARD GRAVELLY LOAM, 2 TO 9 PERCENT SLOPES
139	FORWARD GRAVELLY LOAM, 9 TO 30 PERCENT SLOPES
140	FORWARD GRAVELLY LOAM, 30 TO 75 PERCENT SLOPES
156	KIDD LOAM, 30 TO 75 PERCENT SLOPES

SOIL TYPE BOUNDARIES SHOWN ON THIS MAP ARE BASED ON THE NAPA COUNTY GEOGRAPHIC INFORMATION SYSTEM DATA AND SHOULD BE CONSIDERED APPROXIMATE.

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- STREAM SETBACK
- SOIL TYPE BOUNDARY
- BLUELINE STREAM
- EPHEMERAL STREAM & APPROXIMATE TOP OF BANK
- EXISTING VINEYARD BLOCK
- EXISTING VINEYARD AVENUE
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- ROW — PROPOSED VINE ROWS & ROW DIRECTION
- STRAW WATTLE SEDIMENT BARRIER
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE SEDIMENT BARRIER
- WB — WATERBAR
- ROCK ENERGY DISSIPATOR
- PHOTO LOCATION AND DIRECTION

NOTES:

1. ALL CLEARING LIMITS SHALL BE MARKED BY THE ENGINEER OR SURVEYOR PRIOR TO CONSTRUCTION AND TEMPORARY CONSTRUCTION FENCING (ORANGE FENCING OR EQUIVALENT) SHALL BE INSTALLED ALONG THE CLEARING LIMITS PRIOR TO ANY LAND PREPARATION ACTIVITIES. THE TEMPORARY CONSTRUCTION FENCING SHALL BE ADJUSTED AROUND THE CANOPY OF ANY TREES THAT ARE TO REMAIN OUTSIDE OF THE CLEARING LIMITS WITH CANOPY THAT OVERHANGS INTO THE CLEARING LIMITS TO KEEP LAND PREPARATION ACTIVITIES OUTSIDE OF THE TREE CANOPY AREA.
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3. TRACK WALK ENTIRE DISTURBED AREA. SEE SURFACE ROUGHENING DETAIL, SHEET C9.
4. ALL TEMPORARY STAGING, STOCKPILE AND PARKING AREAS SHALL BE WITHIN THE PROPOSED DEVELOPMENT AREAS. NO STAGING, STOCKPILING, PARKING OR OTHER LAND DISTURBANCE SHALL OCCUR OUTSIDE OF THE PROPOSED DEVELOPMENT AREAS.
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① REPRESENTS APPROXIMATE LOCATION AND DIRECTION OF ISOMETRIC VIEW OBTAINED FROM GOOGLE EARTH IMAGERY DATED MAY 13, 2023. SEE PHOTOGRAPHIC DOCUMENTATION OF EXISTING SITE CONDITIONS FOR THE SCHRAMSBERG VINEYARDS CO VINEYARD DEVELOPMENT EROSION CONTROL PLAN FOR PHOTOGRAPHS AND DESCRIPTIONS.

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SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
EROSION CONTROL PLAN - BLOCKS 5 & 6

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
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DRAWN BY: PowerCAD LLC

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⚠ 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

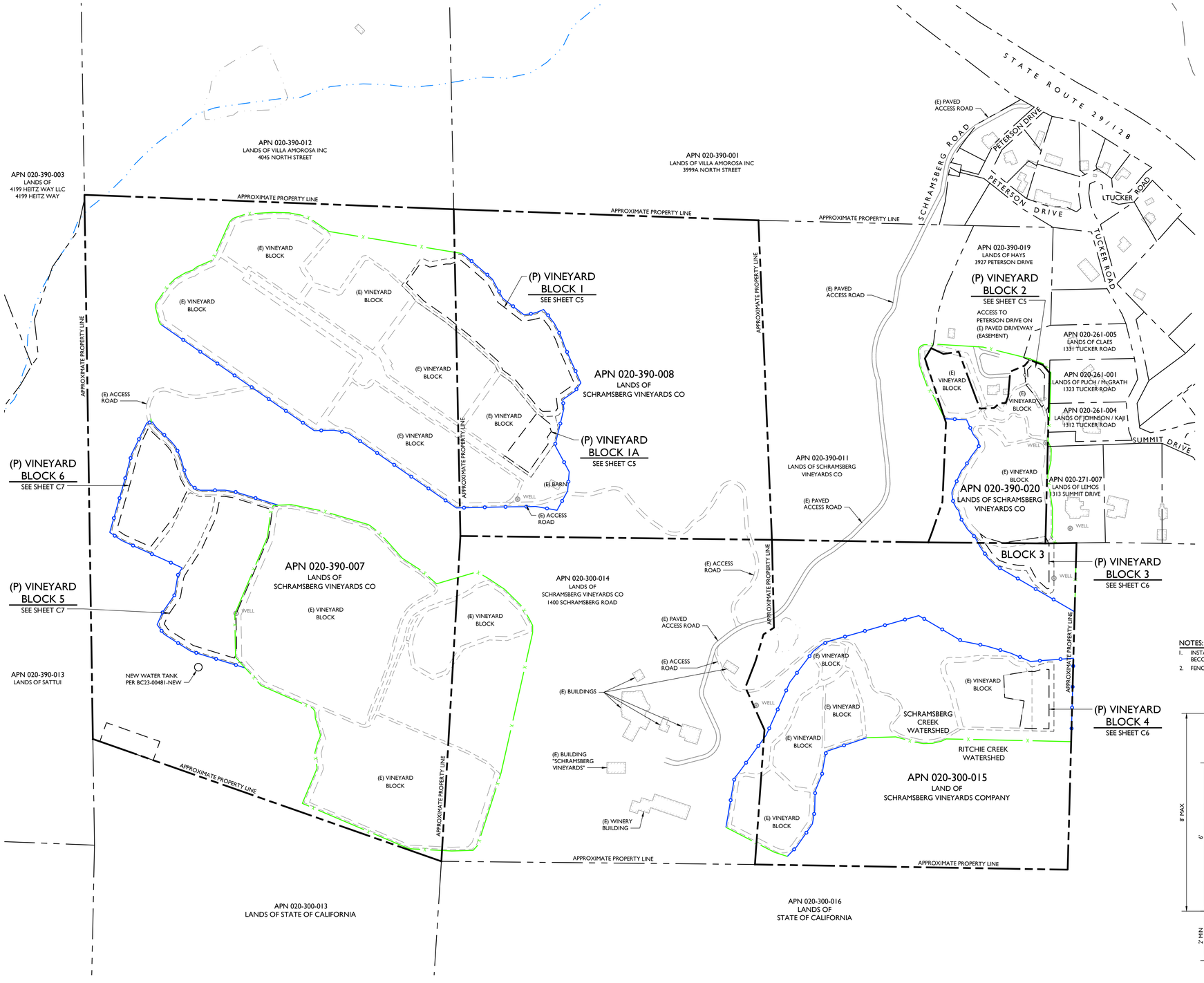
FILE: 16-152ECP-PLANS.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C7

OF 9

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FENCING EXHIBIT

SCALE: 1" = 200'

SCALE: 1" = 200'

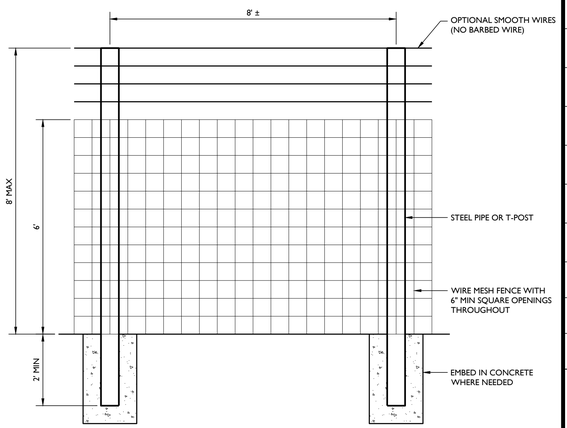
0 200' 400'

LEGEND:

- APPROXIMATE PROPERTY LINE (SUBJECT PARCEL)
- APPROXIMATE PROPERTY LINE (ADJACENT PARCEL)
- BLUELINE STREAM
- EXISTING VINEYARD BLOCK
- EXISTING VINEYARD AVENUE
- PROPOSED LIMIT OF VINEYARD BLOCK
- PROPOSED VINEYARD CLEARING LIMITS / VINEYARD AVENUE
- EXISTING FENCING
- NEW FENCING

NOTES:

1. INSTALL GATES AT ALL CORNERS TO ALLOW ANIMALS TO EXIT IF THEY BECOME ENTRAPPED WITHIN THE FENCED AREA.
2. FENCING, IF INSTALLED, SHALL BE LOCATED AS SHOWN ON THIS PLAN.



WILDLIFE EXCLUSION FENCING DETAIL

APPLIED CIVIL ENGINEERING INCORPORATED
2160 Jefferson Street, Suite 120
Napa, CA 94559
(707) 320-4988 | www.appliedcivil.com

SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
FENCING EXHIBIT

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

REVISIONS:	BY:
12/8/2023 PERMIT SUBMITTAL	YMS
5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

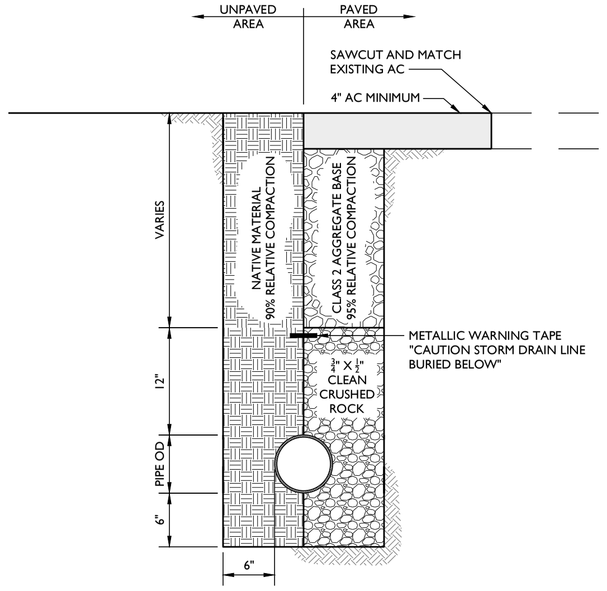
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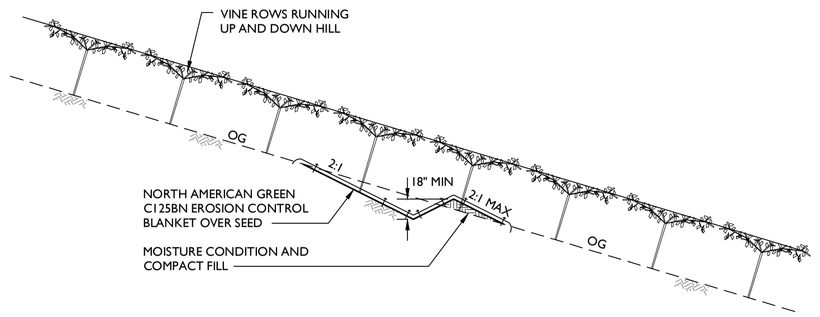
SHEET NUMBER: C8

OF 9

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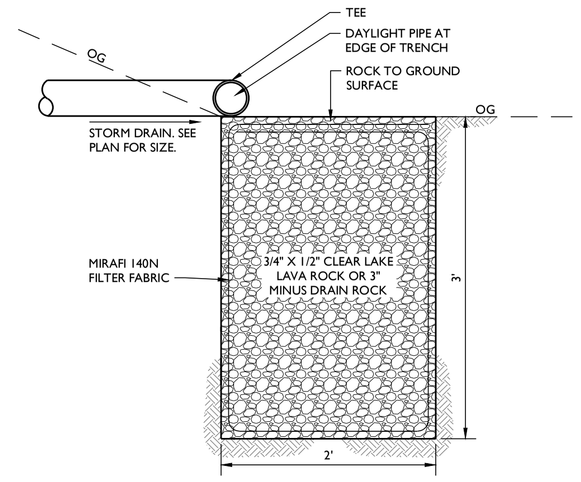
AGRICULTURAL STORM DRAIN TRENCH DETAIL



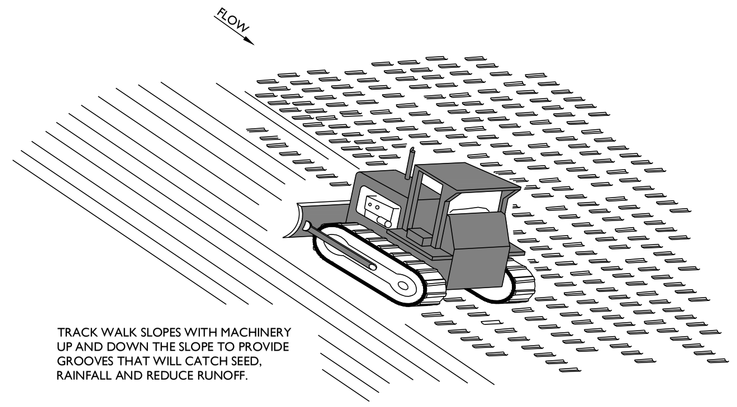
CROSS SLOPE DIVERSION DETAIL

NOTES:

1. ONSITE COBBLE MAY BE SUBSTITUTED FOR LAVA ROCK PROVIDED THE VOID SPACE RATIO IS ≥ 0.35.
2. TRENCH SHALL BE ALIGNED TO FOLLOW CONTOUR AND BE LEVEL FROM END TO END.

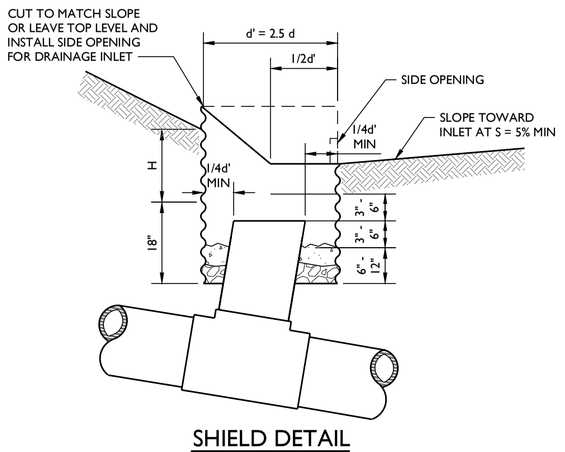


GRAVEL INFILTRATION TRENCH DETAIL

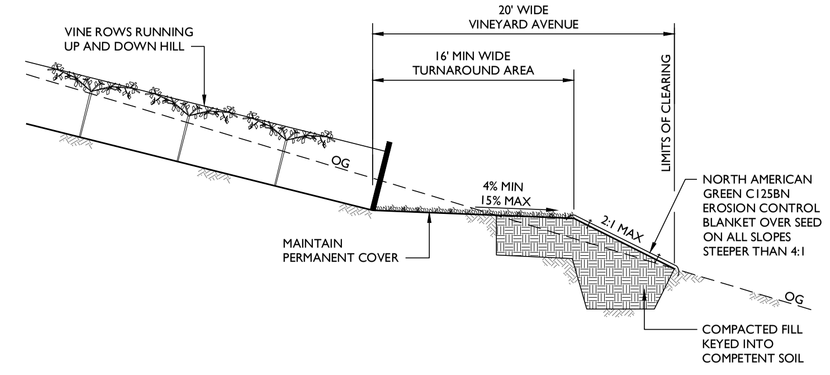


SURFACE ROUGHENING DETAIL

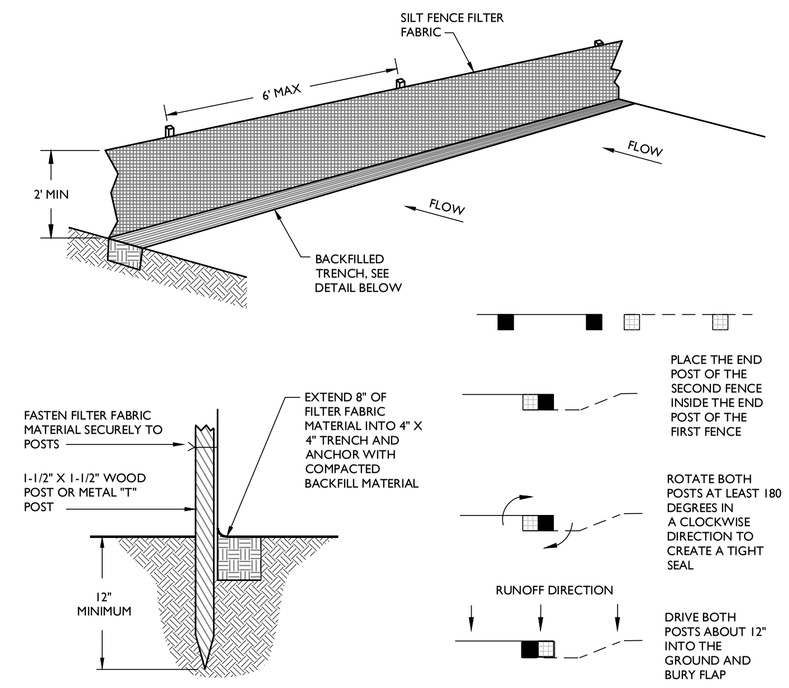
INLET RISER d, INCHES	SHIELD d, INCHES	MAX. DESIGN FLOW INTO RISER (CFS) RISER LIP BELOW SHIELD LIP BY	
		6"	3"
8	18	1.4	1.2
10	24	2.2	1.8
12	30	3.1	2.6
15	36	4.9	4.2



SHIELD DETAIL



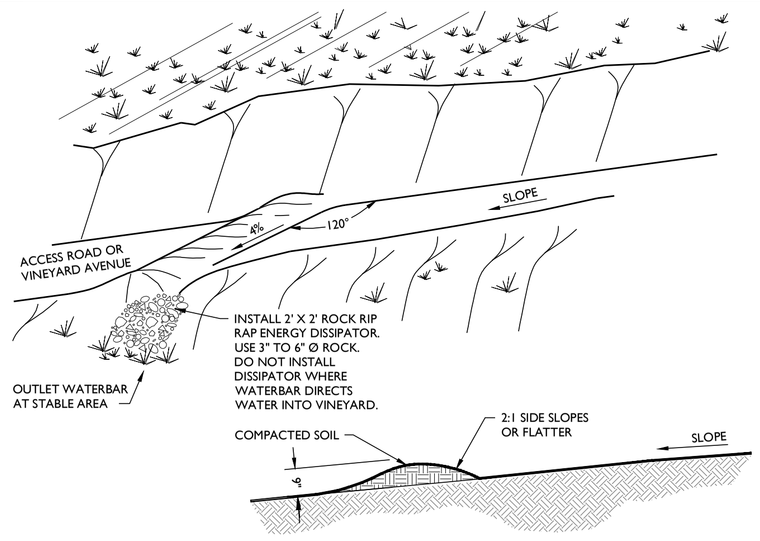
OUTSLOPED VINEYARD AVENUE AT BOTTOM OF BLOCK DETAIL



TRENCH DETAIL

SPLICING DETAIL

SILT FENCE DETAIL



SECTION

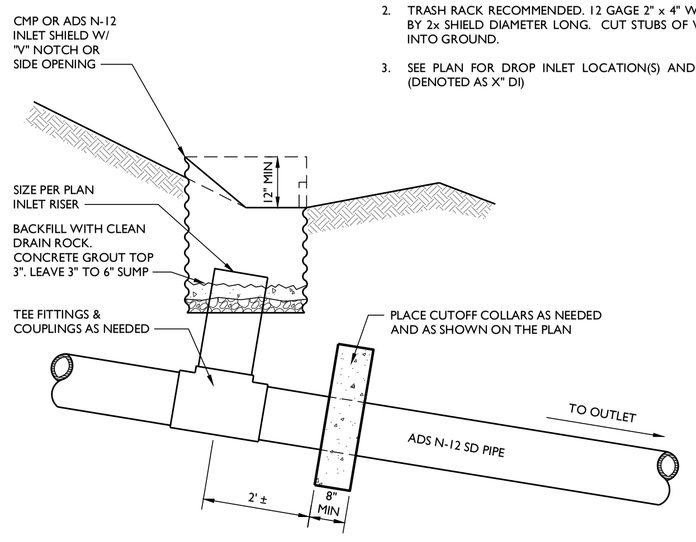
MAXIMUM DISTANCE BETWEEN WATERBARS

EROSION HAZARD	SLOPE ALONG ROAD			
	<10%	11% - 25%	26% - 50%	>50%
EXTREME	100'	75'	50'	50'
HIGH	150'	100'	75'	50'
MODERATE	200'	150'	100'	75'
LOW	300'	200'	150'	100'

WATERBAR DETAIL

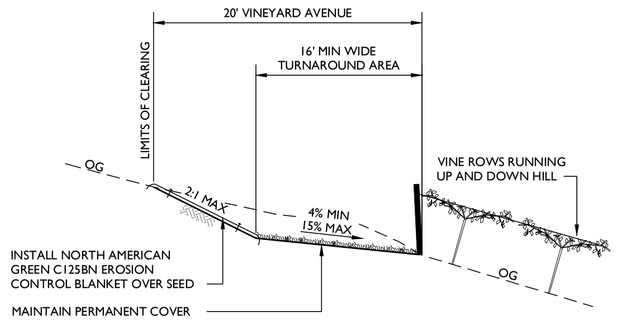
DESIGN & INSTALLATION NOTES

1. COMPACT BACKFILL ALONG PIPELINE AND THEN EXCAVATE FOR INLET SHIELD.
2. TRASH RACK RECOMMENDED. 12 GAGE 2" x 4" WWM, 12" HIGH BY 2x SHIELD DIAMETER LONG. CUT STUBS OF WWM PUSHED INTO GROUND.
3. SEE PLAN FOR DROP INLET LOCATION(S) AND RISER SIZE(S). (DENOTED AS X" DI)



TYPICAL INSTALLATION AT CROSS SLOPE DIVERSION

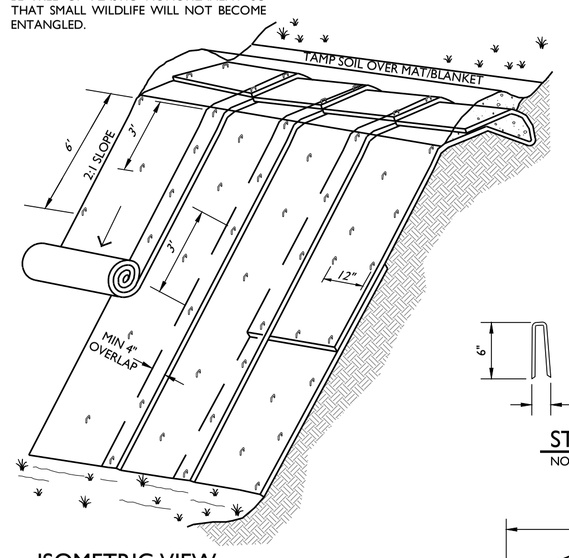
VINEYARD DROP INLET DETAIL



OUTSLOPED VINEYARD AVENUE AT TOP OF BLOCK DETAIL

NOTE:

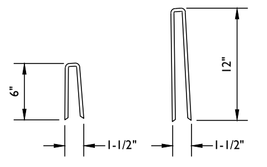
ALL EROSION CONTROL MATERIALS SHALL BE FREE OF PLASTIC MONOFILAMENT SO THAT SMALL WILDLIFE WILL NOT BECOME ENTANGLED.



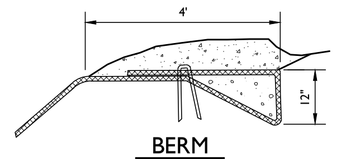
ISOMETRIC VIEW

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. MATS / BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.



STAPLES
NOT TO SCALE



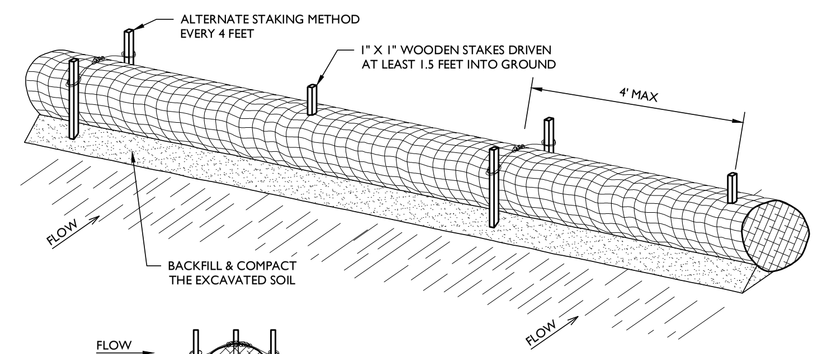
BERM
NOT TO SCALE

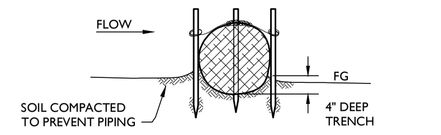
TYPICAL SLOPE SOIL STABILIZATION

EROSION CONTROL BLANKET DETAIL

NOTES:

1. PREPARE SMOOTH SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED. SHALLOW GULLIES SHOULD BE SMOOTHED AS WORK PROGRESSES.
2. DIG SMALL TRENCHES ACROSS THE SLOPE ON CONTOUR, TO PLACE ROLLS IN. THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE ONE THIRD TO ONE HALF THE THICKNESS OF THE ROLL. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE ROLL 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE.
3. IT IS CRITICAL THAT ROLLS ARE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR. A HAND LEVEL, LASER LEVEL OR EQUIVALENT TYPE OF INSTRUMENT SHOULD BE USED TO ENSURE LEVEL INSTALLATION. START DIGGING TRENCHES AND INSTALL ROLLS FROM THE BOTTOM OF THE SLOPE AND WORK UP.
4. LAY THE ROLL ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE.
5. USE A STRAIGHT BAR TO DRIVE CLEAN HOLES THROUGH THE WATTLE AND INTO THE SOIL. DRIVE THE STAKE THROUGH PREPARED HOLE INTO SOIL. LEAVE ONLY 1 OR 2 INCHES OF STAKE EXPOSED ABOVE ROLL.
6. INSTALL STAKES AT 4 FEET MAX INTERVALS.
7. USE EXCAVATED MATERIAL TO CREATE COMPACTED BERM ON UPSLOPE SIDE OF ROLL TO PREVENT WATER FROM PIPING UNDER ROLL AND FORCE IT TO FILTER THROUGHOUT THE ROLL.
8. ENDS OF ROLLS SHOULD BE OVERLAPPED 1' AND SHOULD BE SECURELY STAKED TO PREVENT WATER PASSAGE THROUGH THE JOINT.





NOTE:

ALL EROSION CONTROL MATERIALS SHALL BE FREE OF PLASTIC MONOFILAMENT SO THAT SMALL WILDLIFE WILL NOT BECOME ENTANGLED.

FIBER ROLL / WATTLE SEDIMENT BARRIER DETAIL

APPLIED CIVIL ENGINEERING INCORPORATED
2160 Jefferson Street, Suite 120
Napa, CA 94559
(707) 320-4988 | www.appliedcivil.com

SCHRAMSBERG VINEYARDS CO

VINEYARD DEVELOPMENT EROSION CONTROL PLANS
DETAILS

PREPARED UNDER THE DIRECTION OF:

REGISTERED PROFESSIONAL ENGINEER
MICHAEL R. MUELRATH
MRM
NO. 67435
Exp. 12/31/2026
5/17/2024
CIVIL
STATE OF CALIFORNIA

DRAWN BY: PowerCAD LLC

CHECKED BY: MRM

DATE: MAY 17, 2024

REVISIONS:	BY:
12/8/2023 PERMIT SUBMITTAL	YMS
⚠ 5/17/2024 RESPONSE TO COMMENTS	YMS

JOB NUMBER: 16-152

FILE: 16-152ECP-DETAILS.DWG

ORIGINAL SIZE: 24" X 36"

SHEET NUMBER: C9

OF 9

Schramsberg Vineyards Co

Vineyard Development Erosion Control Plan

Erosion Control Plan Narrative

1. *The nature and purpose of all/any land clearing, grading or earthmoving activity, the amount of cut & fill, the location of spoils storage and disposal areas, the total number of acres of grading involved including but not limited to roads, vineyards, avenues, trenching for irrigation or pipes, reservoirs, wells, water tanks, septic systems, etc. Indicate the acres of land clearing, grading or earthmoving activity that will occur on 30% or greater slopes. (Note: slopes shall be calculated in whole percent)*

   The project site is located southeast of the City of Calistoga at the end of Schramsberg Road in an unincorporated portion of Napa County, California (Napa County APNs 020-300-015, 020-390-007, 020-390-008 and 020-390-020). Access to a majority of the project area including Blocks 1, 1A, 4, 5 & 6 is via the paved private driveway (Schramsberg Road) and existing gravel and dirt vineyard access roads that serve the existing winery, vineyard and residential uses. Access to the Block 2 and Block 3 project area is via Peterson Driveway and an existing paved private driveway and existing onsite vineyard access roads serving the existing adjacent residence and onsite vineyards.

   The purpose of the proposed land clearing, grading and earthmoving is to prepare the project area for planting with new vineyard. Following is a list of planned land preparation activities:

   - Clearing and grubbing of existing vegetation
   - Re-contouring and land smoothing to promote sheet flow
   - Ripping and rock breaking as needed to fracture subsoils and rock to a depth of approximately 24 to 48 inches to prepare soil for planting and to incorporate soil amendments within the vineyard footprint area (vineyard avenues will not be ripped)
   - Mechanical and hand rock raking to remove loose rocks from the ground surface
   - Discing and harrowing to prepare seedbed for vegetative erosion control measures
   - Installation of erosion control features
   - Installation of vineyard irrigation and trellis systems

   Grading within the project area will be the minimum amount needed to smooth out the existing ground surface and create smooth slopes to promote sheet flow and to install the proposed runoff and erosion control measures. Cuts and fills will be minor and are expected to average from 0 to 6 inches. The estimated quantity of grading is approximately 1,000 cubic yards of cut and 1,000 cubic yards of fill. An earthwork balance will be achieved onsite. Import and/or export of soil material is not planned however, soil amendments will be imported and incorporated into the project area as needed to improve soil tilth and thereby support vine and cover crop growth.

All temporary debris, vegetation, soil and soil amendment stockpiles and storage areas, if needed, will be located within the proposed vineyard project area. No long-term stockpiles of rock or soil are anticipated.

No new roads are required to access the proposed vineyard development area. Access is via the existing driveways and access roads.

The total disturbed area for the vineyard development project is 14.1 ± acres. The total disturbed area includes the area to be planted with vines and the area used for perimeter avenues and incidental disturbance for installation of erosion control features. The total area to be planted with vines within the 14.1 ± acre project area is 11 ± acres.

Stream and drainage course setbacks will be provided in accordance with the Napa County Conservation Regulations. Stream setbacks are shown on the erosion control plan.

The proposed vineyard development consists of seven vineyard blocks (1, 1A, 2, 3, 4, 5 & 6). Blocks 1A and a portion of Block 4 are existing vineyards that were planted without the benefit of an erosion control plan and are therefore being treated as new vineyard in this proposal. The blocks will have a row spacing of between 7 and 10 feet and vine spacing along the row of 4 feet for an average vine density of 1,089 to 1,556 vines per acre.

The details of the proposed vineyard development are shown on the Schramsberg Vineyards Co Vineyard Development Erosion Control Plan prepared by Applied Civil Engineering Incorporated.

2. *Comprehensive description of existing site conditions, including topography, vegetation (including under-story and canopy cover), and soils. Provide extent of tree canopy covered and shrub and brush without a tree canopy covered areas in acres for each parcel. Identify and indicate the project boundaries in watersheds, including municipal watersheds, and in the water deficient area. The plan preparer is required to visit the site and the narrative must include the date, purpose, and persons making each site visit. The description shall verify the source or validity of the topographic map. Wide angle or panoramic photographs documenting existing site conditions shall be provided. A photo location map indicating the date of the site visit and by whom it was made shall accompany such documentation.*

<u>Topography:</u>

The project area is located on a moderately sloping hillside in Napa County southeast of the City of Calistoga (Latitude = 38.5524 ° N & Longitude = 122.5437° W). Topography on the property varies and is characterized by gentle to steep slopes ranging from less than 5% to in excess of 30%.

Average slopes within the proposed vineyard development area are moderate and range from 4% to 27% with an overall average slope of 15%. Slopes were determined using topographic data obtained from the Napa County Geographic Information System database and the slope transect method in several representative locations in the proposed development area.

Isolated areas within the project area, totaling 1.1 acres have slopes slightly in excess of 30%. There are no contiguous areas with slopes exceeding 30% that exceed one acre in size.

Vegetation:

The Calveg designations for the subject parcel were obtained from the Napa County GIS database and are as follows:

BA – Barren / Rock
CQ – Northern Mixed Chaparral
DF – Pacific Douglas-Fir
HG – Annual Grass / Forbs
NX – Mixed Hardwoods
RD – Redwood – Douglas-Fir

Our visual observation of onsite vegetation in the vicinity of the project area is consistent with the Calveg designations. However, portions of the property are developed to vineyard which should be classified as AG – Agriculture.

A detailed assessment of vegetation within the parcel and subject project area was prepared by Forest Ecosystem Management and Salix Natural Resource Management (FEM & SNRM). According to the report by FEM & SNRM there are no sensitive plant species that will be affected by the proposed project. Please refer to the report prepared by FEM & SNRM for additional information.

The FEM & SNRM report (Table #2) estimates the following land use / coverage statistics for the entire study area:

Tree Canopy Cover (Natural Woodland)	171.6 ± acres
Grass Cover	0 ± acres
Developed (Ag and Urban)	57.4 ± acres

In total, approximately 12.2 acres of tree canopy cover (natural woodland) will be converted to new vineyard (note disturbance areas on ECP plans are slightly higher as they are rounded up to account for incidental disturbances beyond the conversion area. The calculated tree canopy cover and grass cover retention percentages for the entire parcel are as follows:

Tree Canopy Retention	93%
Grass Retention	N/A

Watershed:

The project site is located in the Mayacamas Mountain range along the west side of the Napa Valley. Rainfall runoff from the entire project area generally flows northerly and easterly and southerly via sheet flow and thence concentrates in the onsite drainage courses that are

tributary to blue line streams which are commonly known as Schramsberg Creek, Nash Creek and Ritchie Creek. All three blue line streams are tributary to the Napa River.

No changes in runoff patterns are proposed as part of this project. All existing drainage patterns will be maintained.

The subject parcel is not located within a municipal drinking water supply watershed.

The subject parcel is not located within the Milliken-Sarco-Tulocay groundwater deficient area.

Site Visits & Photograph Documentation:

Representatives from Applied Civil Engineering Incorporated have visited the site several times. The purpose of the site visits was to review existing site conditions and to verify the general validity of the topographic mapping for this project that was obtained from the Napa County GIS database. Isometric photographs of the project area were obtained from Google Earth and are presented in the Photographic Documentation of Existing Site Conditions for the Schramsberg Vineyard Co Vineyard Development Erosion Control Plan.

3. *All natural and man-made features on-site including but not limited to, streams, watercourses (drainage, channels, etc.), wetlands, riparian habitat, lakes, reservoirs, roads, water tanks, septic systems, reservoirs, ponds, etc. Indicate which ones may be affected by the proposed activity. For blue line and County-definitional streams indicate top, toe, and slope of bank, channel depth, and existing and proposed setback conditions. The entire length of blue line streams & 41 County-named streams on the parcel(s) shall be included in photo documentation (a recent aerial may be included). Provide the name and distance of the nearest blue line and/or County-definitional stream(s) to the project site.*

Existing manmade improvements on the subject parcels include a winery, residence, vineyards wells, tanks, ponds, roads and the related access and utility infrastructure typical of this type of winery, residential and agricultural development. None of the existing manmade improvements will be affected by the proposed project.

There are two blue line streams located on the subject properties. In the far northern portion of the property is Nash Creek and in the central portion of the property is Schramsberg Creek. Ritchie Creek is also located just south of the property. The nearest blue line stream to the project area is Nash Creek which is located approximately 475 feet westerly of the project area at its closest point.

There are two ephemeral drainages located near Blocks 1 & 1A a third ephemeral drainage located southwest of Block 2, a fourth ephemeral drainage located between Blocks 3 & 4 and a fifth ephemeral drainage located between Blocks 5 & 6. A 35' setback has been established for all ephemeral drainages in close proximity to the project areas.

4. *Location and source of water for irrigation or other uses. Provide copies of all necessary permits.*

   All irrigation water will be supplied by existing developed groundwater resources. No other new wells or other water sources are planned at this time.

   Please refer to the Water Availability Analysis prepared by O'Connor Environmental Inc. for additional information regarding estimated water use and estimated aquifer recharge rates.

5. *Soil types/soil series identified in the Soil Conservation Service (SCS) Napa County Soil Survey, or, if prepared, a site-specific soils report.*

   The United States Department of Agriculture Soil Conservation Service Soils Map for Napa County shows several soil types mapped on the subject property including:

   138 Forward gravelly loam, 2 to 9 percent slopes
   139 Forward gravelly loam, 9 to 30 percent slopes
   140 Forward gravelly loam, 30 to 75 percent slopes
   156 Kidd loam, 30 to 75 percent slopes

   Nearly all of the project areas are mapped as Forward gravelly loam with the exception of Block 5 and a small portion of Block 4 which are mapped as Kidd loam. The approximate soil type boundaries based on data obtained from the Napa County Geographic Information System database are illustrated on Sheet C1 of the Schramsberg Vineyards Co Vineyard Development Erosion Control Plan.

6. *Critical areas of erosion and slope instability such as gullies, landslides, etc. within or potentially affecting the "development site" (i.e., the area disturbed by the project) or potentially affected by the work to be undertaken within the development site. In the case of landslides a report indicating the probable effects of the planned work on slope stability and erosion levels shall be prepared and submitted by a registered geologist.*

   No landslides are noted on the Napa County GIS Parcel Summary Reports for the subject properties.

   Furthermore, representatives from Applied Civil Engineering Incorporated have visited the site several times to review the project area and have not observed any signs of gullies, landslides, slope instability or excessive erosion within the project area or in close proximity to the project area that would affect, or be affected by, the proposed project.

7. *Any erosion calculations prepared.*

   The Universal Soil Loss Equation (USLE) was used to model pre-project and post-project conditions and estimate soil loss rates from the project area due to sheet erosion. The Soil Loss Analysis prepared by Dave Steiner, CPESC, CPSWC is included as an attachment to this document.

   The USLE calculations predict that net soil loss rates will decrease relative to existing conditions after implementation of the proposed vineyard erosion control plan and will be less than the prescribed soil loss tolerance (T) for the soil type.

8. *Any/all proposed erosion control methods including, but not limited to:*

   a. *All drainage systems and facilities, walls, cribbing or other erosion protection devices to be constructed with, or as a part of the proposed work.*

      The following measures will be implemented to minimize the potential for erosion on the project site during development and following completion of the vineyard development program:

      - Sediment Barriers – Temporary silt fence and/or straw wattle type sediment barriers will be installed throughout the development area. The planned locations and installation details are provided on the erosion control plan. Additional sediment barriers will be installed as deemed necessary throughout the course of construction. The sediment barriers are intended to provide temporary sediment control during development and until the cover crop is established.

      - Erosion Control Blankets – Erosion control blankets will be installed over seed on all cut and fill slopes that are steeper than 4:1 (Horizontal : Vertical). Erosion control blankets will provide additional protection from rainfall impact on exposed soils while the cover crop is getting established. The erosion control blanket locations, specifications and installation details are provided on the erosion control plan.

      - Water Bars/ Rolling Dips – Temporary water bars or permanent rolling dips will be installed on vineyard avenues to divert runoff from the avenues to prevent rutting along the avenues. Water bar and rolling dip locations and installation details are shown on the erosion control plan.

      - Energy Dissipators – Rock rip-rap energy dissipators will be constructed at the outlet of all water bars that direct flow outside of the vineyard area to dissipate runoff energy and minimize the potential for erosion.

      - Storm Drain Pipe - A permanent storm drain pipe will be installed where indicated on the Erosion Control Plan. The storm drain pipe will collect runoff that might otherwise concentrate and cause erosion within the development area. The

storm drain pipe will outlet to a level spreader or infiltration trench as indicated on the plans in order to dissipate runoff energy, return the water to sheet flow conditions, slow down the runoff and promote infiltration.

- Cross Slope Diversions – Permanent cross slope diversion ditches will be installed in various locations throughout the project area where indicated on the Erosion Control Plan. The purpose of the cross slope diversions is to limit the effective slope length within the vineyard block. This minimizes the chance for the runoff regimes transitioning from sheet flow to concentrated flow which would lead to increased runoff velocities and an increased potential for excessive erosion. Furthermore, cross slope diversions will be constructed with a mild longitudinal slope to minimize the potential for erosion within the diversion, promote infiltration and mitigate any potential for increasing the rate at which runoff reaches receiving waters. Cross slope diversion locations and installation details are shown on the erosion control plan.

- Straw Mulch – Weed free agricultural straw derived from wheat, rice, barley, or native grass shall be used. Straw mulch can be applied by hand and can be adhered to slopes by roughening the soil surface before the mulch is applied, spreading the straw in a manner that promotes formation of an interwoven matrix, then crimping the straw into the soil. Straw mulch shall be applied at a rate of 3,000 pounds per acre over disturbed areas.

b. *Proposed vegetative erosion control measures including maintenance of plant material and slopes until a specified percentage of plant coverage is uniformly established.*

Minimum coverage has been calculated for each block in order to maintain soil loss rates at or below existing conditions and also below the soil loss tolerance "T" for each soil type. Minimum coverage rates for each development area are as follows:

VINEYARD BLOCK COVER CROP SPECIFICATION TABLE	
Block ID	Required Cover %
1	85%
1A	70%
2	75%
3	80%
4	80%
5	80%
6	80%

The seed, fertilizer and mulch specifications are provided on the erosion control plan.

This temporary cover crop will be cultivated in the spring and replanted in the fall for the first three years of the vineyard establishment period. Straw mulch will also be applied

each fall during the vineyard established period. In the Fall, following the vineyard establishment period all vineyard blocks will be planted with a permanent cover crop seed mix and farming practices will transition to a permanent cover, no-till, farming regime. The permanent cover crop will be mowed in the Spring. Spring mowing will be timed to allow maturation of seeds and promote natural stand regeneration. All permanent cover crop areas will be reseeded every two to three years or more frequently as needed to maintain at least 80% cover. Straw mulching will also be implemented as needed to achieve the 80% coverage requirement.

Weed control under the vine rows will be primarily via mechanical means such as string trimmers and minimal herbicide usage. Herbicide used to control weeds within the vineyard block will be limited to spraying of post-emergent herbicide in a narrow 18-24 inch maximum width strip spray, if necessary to control weeds at the bases of the vines. The post emergent herbicide will be applied in the late winter or early spring to ensure that the spray area has vegetative protection through the rainy season. If the spray areas are not achieving adequate cover, they must be mulched with straw and reseeded each year to provide the required cover.

The cover crop should be irrigated prior to the onset of the rainy season for at least the first Fall following development to establish a dense cover prior to the onset of heavy winter rains.

c. *Proposed erosion control measures for vineyard avenues to accommodate farm or vineyard equipment and materials storage locations*

A permanent cover crop will be planted in the vineyard avenues the first Fall following land preparation activities and it will be maintained as permanent cover throughout the life of the vineyard. No tilling will occur in the vineyard avenues. The permanent cover crop will be mowed in the Spring. Mowing will be timed to allow maturation of seeds and promote natural cover crop regeneration. All permanent cover crop areas will be reseeded every two to three years or more frequently as needed to maintain at least the coverage specified for each vineyard block. Straw mulching and / or pre-irrigation of the cover crop will also be implemented as needed to achieve the 80% coverage requirement. No herbicides will be used in the vineyard avenues.

Alternatively, vineyard avenues may be lined with crushed rock to limit their susceptibility to erosion and provide all weather access.

Water bars and / or straw wattles will be installed across the sloping vineyard avenues to force runoff to adjacent stable areas so that runoff does not concentrate on the vineyard avenues and cause erosion. Locations are shown on the erosion control plans.

9. *Storm water stabilization measures to handle any increased peak rates of runoff from the development of the site that would result in flooding or channel degradation downstream. Include calculations of estimated increased runoff and/or an explanation of why an increase is/is not expected.*

   Detailed calculations of predicted runoff rates within the project area for both pre- and post-project conditions utilizing the United States Department of Agriculture Technical Release 55 (USDA TR-55) methodologies are presented in the Hydrologic Analysis prepared by David Steiner, CPESC, CPSWQ. These calculations indicate that post-project conditions, including built in project design parameters, will result in runoff rates that are not greater than current conditions for the 2, 5, 10, 25, 50 and 100 year design storm events.

   Since the project has been designed to maintain existing drainage patterns and since there will be no increase in peak runoff rates, the proposed project will not result in any significant change to local or regional hydrology / runoff patterns that could result in downstream flooding or channel degradation.

10. *An implementation schedule indicating:*

    a. *The proposed vegetation clearing, earth moving/grading, and construction/planting schedule.*
    b. *The proposed schedule for winterizing the site (by October 15th of each year the permit is in effect except in a municipal watershed where it is by September 1st).*
    c. *The proposed schedule for installation of all interim erosion and sediment control measures (including vegetative measures) and the state of completion of such devices/measures at the end of the grading season (i.e., on October 15th [except in 5 designated municipal watersheds where it is September 1st] of each year the permit will be in effect).*
    d. *The proposed schedule for installation of any permanent erosion and sediment control devices required.*

    <u>Vineyard Development Schedule</u>

    The schedule below is an estimate and is subject to change. Implementation of winterization and erosion control measure must be adjusted to accommodate any changes in development and planning under consultation with the Engineer. All land preparation, planting and erosion control work is to be performed by the property owner or by their contractor / vineyard manager.

April 2025	Commence Vineyard Development Program
	Begin clearing and grubbing of existing vegetation. Complete land preparation for vineyard planting including: ripping, discing, rock removal and processing, recontouring and incorporation of soil amendments. Install waterbars / rolling dips and rock energy dissipators.
	Install irrigation and trellis systems.

	Plant rootstock.
Prior to October 1, 2025	Complete all drainage system improvements including cross slope diversions, drainage pipes and outfalls.
Prior to October 15, 2025	Complete all earth disturbing activities.
	Winterize Site Seed vineyard with temporary cover crop seed mix Seed vineyard avenues with permanent cover crop seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars Pre-irrigate cover crop to establish cover prior to rainy season.
	Establish reserve of erosion control measures to be maintained onsite throughout the rainy season to facilitate rapid deployment. Materials shall include silt fence, straw wattle, straw, erosion control seed mix, erosion control blanket and plastic sheeting.
October 15, 2025 - April 2026	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.
Spring 2026	Cultivate temporary cover crop within vineyard block footprint area and perform fine site grading to repair any storm damaged areas. No tilling of vineyard avenues is to be performed.

Prior to October 15, 2026	Complete all earth disturbing activities Winterize Site Seed vineyard with temporary cover crop seed mix Seed vineyard avenues with permanent cover crop seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars
October 15, 2026 - April 2027	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.
Spring 2027	Cultivate temporary cover crop and perform fine site grading to repair any storm damaged areas.
Prior to October 15, 2027	Complete all earth disturbing activities Winterize Site Seed vineyard with temporary cover crop seed mix Seed vineyard avenues with permanent cover crop seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars
October 15, 2027 - April 2028	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.
Spring 2028	Cultivate temporary cover crop and perform fine site grading to repair any storm damaged areas.

Prior to October 15, 2028	Complete all earth disturbing activities Winterize Site Seed vineyard rows with permanent cover crop seed mix Seed vineyard avenues with permanent cover crop seed mix Place fertilizer, straw mulch and erosion control blankets Install sediment barriers Install water bars
October 15, 2028 - April 2029	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion damaged areas or areas with less than the specified cover percentage and repair or replace erosion control devices as necessary.
Spring 2029 & Beyond	See Annual Maintenance Schedule

<u>Annual Maintenance Schedule</u>

Spring	Mow permanent cover crop in vineyard and vineyard avenues and perform fine site grading to repair any storm damaged areas.
Prior to October 15	Winterize Site Repair any damage to vineyard and vineyard avenues that has occurred during the farming season. Place seed and straw on all vineyard avenues as needed to achieve the specified cover percentage. Install water bars. Place erosion control seed, fertilizer, straw mulch, erosion control blankets and sediment barriers as necessary to stabilize any erosion prone areas outside and adjacent to the vineyard areas.
October 15 - April 1	Inspect and maintain vegetative cover and erosion control devices at least once per week, prior to each anticipated rainfall event, at least once every 24 hours during extended rainfall events and following each rainfall event. Reseed and mulch any erosion damaged areas or areas with less than

the specified percentage cover and repair or replace erosion control devices as necessary.

11. The estimated cost of implementation of the erosion and sediment control measures.

Implementation of erosion and sediment control measures for this project is anticipated to cost approximately $5,000 to $10,000 per acre for installation and maintenance. This estimate includes only the erosion and sediment control portions of the project, not the entire cost of permitting, engineering, land preparation, development, irrigation systems, trellis systems, and plants.