

Erosion Control Notes:

1. Perform erosion prevention and sediment control in accordance with the latest edition of appendix Chapter 33 of the California Building Code, applicable Napa County regulations, and Section 20 of the Caltrans Standard Specifications.

2. The approved plans shall conform with the erosion prevention and sediment control best management practices contained in the latest editions of the following publications or an equivalent best management practice:
Erosion and Sediment Control Field Manual by the San Francisco Bay Regional Water Quality Control Board.
Manual of Standards for Erosion & Sediment Control Measures by the Association of Bay Area Governments.
Construction Site Best Management Practices Manual by Caltrans.
Stormwater Best Management Practice Handbook by the California Stormwater Quality Association.

3. If discrepancies occur between these notes, material referenced herein or manufacturer's recommendations, then the most protective shall apply.

4. The owner is responsible for obtaining and complying with the national pollutant discharge elimination system (NPDES) general permit no. Cas000002 waste discharge requirements for discharges of storm water runoff associated with construction activity disturbing land equal to or greater than one acre. Construction activities include but are not limited to clearing, grading, excavation, stockpiling, and reconstruction of existing facilities involving removal and replacement.

5. Preservation of existing vegetation shall occur to the maximum extent practicable.

6. The owner is responsible for preventing storm water pollution generated from the construction site year round. The owner must implement an effective combination of erosion prevention and sediment control on all disturbed areas during the rainy season (October 15 - April 15).

7. Erosion prevention and sediment control measures shall be inspected by the owner before forecasted storm events and after actual storm events to ensure measures are functioning properly. Storm events produce at least 1 inch of precipitation in a 24 hour period. Erosion prevention and sediment control measures that have failed or are no longer effective shall be promptly replaced. Erosion prevention and sediment control measures shall be maintained until disturbed areas are stabilized.

8. Changes to the erosion prevention and sediment control plan may be made to respond to field conditions. Changes shall be noted on the plan when made.

9. Discharges of potential pollutants from construction sites shall be prevented using source controls to the maximum extent practicable. Potential pollutants include but are not limited to: sediment, trash, nutrients, pathogens, petroleum hydrocarbons, metals, concrete, cement, asphalt, lime, paint, stains, glues, wood products, pesticides, herbicides, chemicals, hazardous waste, sanitary waste, vehicle or equipment wash water and chlorinated water

10. Entrance(s) to the construction site shall be maintained in a condition that will prevent tracking or flowing of potential pollutants offsite. Potential pollutants deposited on paved areas within the county right-of-way, such as roadways and sidewalks, shall be properly disposed of at the end of each working day or more frequently as necessary.

11. Exposed slopes shall be protected by using erosion prevention measures to the maximum extent practicable, such as establishing 75% vegetation coverage, hydroseeding, straw mulch, geotextiles, plastic covers, blankets or mats.

12. Whenever it is not possible to utilize erosion prevention measures, exposed slopes shall employ sediment control devices, such as fiber rolls and silt fences. Fiber rolls and silt fences shall be trenched and keyed into the soil and installed on contour. Silt fences shall be installed approximately 2 to 5 feet from toe of slope.

13. Hydroseeding shall be conducted in a three step process. First, evenly apply seed mix and fertilizer to the exposed slope. Second, evenly apply mulch over the seed and fertilizer. Third, stabilize the mulch in place.
- Erosion Control Plan Narrative:
- Nature and Purpose of All Land Clearing, Grading or Earthmoving Activity**
This project proposes the development of approximately 19.0 acres of new vineyard (including vineyard avenues) and approximately 15.9 net acres (excluding vineyard avenues) at 8280 Wild Horse Valley Road, located in Napa, California. An additional 0.1 acres of earth disturbance will be required for trenching and installation of approximately 835 feet of new irrigation mainline, which shall be installed to provide irrigation water to the proposed vineyard development areas. Furthermore, an additional 0.5 acres land shall be used for temporary equipment staging and material storage outside of the proposed development area. The property is owned by Cap Lyons of Lyons Hillside Vineyards and corresponds to APN 033-190-004 (79.3 acres). Activities associated with the completion of this project include tree and brush removal within the proposed development areas, ripping, rock removal, application of soil amendments prior to planting, seeding of cover crop, mulching, installation of straw wattles, trenching for irrigation pipelines, installation of a new surface drainage system, installation of end posts, trellis system and deer fence, and planting of vines. No off-site spoils disposal sites are anticipated. Rocks encountered in the development area shall be used for decoration. Any leftover rocks shall be used as road base. All temporary rock, soil and soil amendments shall be stockpiled within the development areas, if needed. No long term stockpiles of rock or soil are anticipated.

Description of Existing Site Conditions (prior to site disturbance):
Topographic information was provided by Napa County GI Data Catalog, which is based on Liar data from 2002. The datum is North American Vertical Datum from 1988 (AVD188). The elevations in the proposed vineyard areas range from approximately 1,545 feet to 1,805 feet above mean sea level. Slopes within the proposed vineyard areas range from 1:3 to 38 percent. According to a biological report by WA Environmental Consultants prior to site disturbance, the subject parcel contains vegetation that consists mostly of oak woodland, chaparral and non-native grassland. A complete list of plants located within the project areas is included in the biological report prepared by WA Environmental Consultants, and dated September 2019. The proposed project shall retain approximately 77% of the tree canopy and 52% of the shrub/brush/grass cover that existed on the property in 2018. The 2018 conditions were used as a baseline due to the fact that the subject parcel was damaged by the 2017 Atlas Fire (Napa County Ordinance No. 1441). The project site is located in the Sufis Creek watershed, this is not a municipal watershed, nor is it a water deficient area. Initial site visit was conducted by Omar Reveles of Acme Engineering Inc. on March 20, 2019. Followed by other site visits on August 21, 2019, November 7, 2019 and November 12, 2019. And the last site visit on December 10, 2019.
- Natural and man-made features on site:**
According to the biological report from WA Environmental Consultants and dated September 2019, three streams run through the subject parcel, one is an unnamed blue line stream, the other two named streams are additionally there is another unnamed blue line stream that runs just outside the western parcel boundary. Appropriate setbacks based on existing ground slope shall be maintained from the development boundary to the tops of banks of all nearby streams. These setbacks shall protect any riparian habitat associated with the previously mentioned watercourses. Based on the biological report from WA Environmental Consultants and dated September 2019, there are five small seasonal wetlands within the subject parcel. Appropriate setbacks (50 foot minimum) shall be maintained between the proposed development boundaries and the seasonal wetland edges. There are no existing reservoirs on the subject parcel. Access to the subject parcel is achieved through Wild Horse Valley Road, which is an extension of Combustible Road. There is an existing network of paved, gravel and dirt roads which provide access to all of the existing structures and to the proposed vineyard areas. Structures on the subject parcel include a primary residence and water storage tanks, as well as access roads to these structures. As previously mentioned there are two unnamed blue line streams near the project site. One of these streams is just outside the western parcel boundary, the other stream is inside the subject parcel. Both streams shall have setbacks from their respective top of bank to the proposed development areas. There are two existing wells on the subject parcel. Currently all the water usage (domestic and existing vineyard) is supplied by a single well (well 1). The second well (well 2) is not yet plumbed into the existing infrastructure. The existing wells shall be the water source for the proposed vineyard. Based on a water availability analysis prepared by Acme Engineering Inc., the total irrigation water required is 6.11 acre-feet per year for the newly proposed vineyard, 1.27 acre-feet per year for a previously approved 3.8 acre vineyard development, and 12.29 acre-feet per year for all water uses on the property (domestic and vineyard irrigation). Soil types, boundaries and erosion factors were obtained from Web Soil Survey (<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>). The only soil type present on the project site is Sobrante Loam. Sobrante Loam has a K-factor (soil erodibility) of 0.32, and a T-factor (natural soil loss) of 2 tons per acre. There are no critical areas for erosion within the project site. Implementation of additional erosion control measures will only enhance the stability of the site.
- Proposed Erosion and Sediment Control Measures:**
During the first years after vineyard development a soil builder cover crop seed mix shall be used. During these initial years, all row middles shall be tilled in order to incorporate the nutrients from the cover crop back into the soil. To prevent excess soil loss during the soil building period, straw rolls shall be installed on contour (at the locations specified on the erosion control plan sheet) during the first year and as required in subsequent years. Soil loss was calculated using the Universal Soil Loss Equation (USLE). USLE calculation show that a 75% minimum ground cover with all row tillage combined with cross slope diversions and straw rolls is adequate to maintain an acceptable level of soil loss during the soil building period. After the soil building period, a permanent cover crop seed mix shall be used and row middles shall no longer be tilled, only mowed. USLE calculations show that a 75% minimum ground cover combined with cross slope diversions (at locations specified on the erosion control plan sheet) and no tillage is adequate to maintain an acceptable level of soil loss. There are several existing swales and culverts throughout the subject parcel. Some of these swales and one culvert are within the proposed development boundaries. Based on soil loss calculations and a hydrology analysis prepared by Acme Engineering Inc. development of the proposed vineyard blocks will also require installation of certain surface drainage structures. These surface drainage structures consist of cross slope diversion, water bars, drop inlets, drainage mainlines and rock aprons. The purpose of the drop inlets, drainage mainline, cross slope diversions and water bars is to direct runoff away from proposed vineyard areas and towards stabilized discharge locations. Rock aprons shall be installed at all pipe outfalls to disperse water and prevent concentrated flow from forming and creating gullies. Water bars shall be installed at locations shown on site plans along vineyard avenues. The final pass with ripping and disking implements shall be done parallel to contours to the maximum extent practicable to prevent channeling of water downhill during the first winter after development. Temporary erosion control measures shall consist of the following:

 - All row middles will be tilled during the soil building period. Cover crop shall be established and maintained with a 75% minimum ground cover.
 - Temporary cover crop mix shall be used the first year & shall be installed as follows:
Roto-till row middles to a 4" depth within 8" of the vines.
Broadcast the following seed mix:

Caryopsis	7.5	pounds per acre
Barley	15	pounds per acre
Purple Vetch	10	pounds per acre
Common Vetch	5	pounds per acre
Dundale Peas	12.5	pounds per acre

Cover newly seeded soil with rice straw at a rate of 3,000 pounds per acre prior to October 15. Alternate seed mixes may be used upon approval of the project engineer.
 - Straw wattles shall only be required after earth disturbance and up to the first year after vineyard development at the locations shown on site plan. After the first year, straw wattles shall be installed in proposed vineyard and vineyard avenues if needed.

Permanent erosion control measures shall consist of the following:
- Natural vegetation exists downslope of all blocks and is to be utilized in a permanent fashion as a no-touch buffer. No-touch buffers shall have a minimum width (adjacent to watercourses) as specified on the erosion control plan sheet. No-touch buffers shall consist of healthy existing native vegetation.
 - After the soil building period, no tilling shall occur only mowing (unless some tillage is required before reseeding) and a permanent cover crop shall be maintained with a 75% minimum ground cover, this includes vineyard turnaround areas.
 - Permanent cover crop shall be installed as follows:
Broadcast the following seed mix:

Blando Brome	12.5	pounds per acre
Zorro Annual Fescue	5	pounds per acre
Annual Ryegrass	12.5	pounds per acre
Sunrise Balsansa Clover	2.5	pounds per acre
Nitro Persian Clover	2.5	pounds per acre
Crimson Clover	5	pounds per acre
Campeda Sub Clover	5	pounds per acre
Intermediate Ryegrass	5	pounds per acre

Cover newly seeded soil with rice straw at a rate of 3,000 pounds per acre prior to October 15th of each year in the development area until the required cover crop factor is attained and maintained and the site is stable. Alternate seed mixes may be used upon approval of the project engineer.
 - Fertilizer shall be applied as necessary by vineyard management personnel for both the vineyard and to achieve the specified vegetative ground cover percentage. A site specific soil analysis should be performed. Fertilizer shall be incorporated into the cover crop seeding process at the time of seeding.
 - The proposed vineyard spacing and row direction shall be as follows:
Blocks 1-4: 8' x 4' (row x vine), tractor farmed with vine row direction oriented up/down hill.
 - The owner may subdivide the proposed vineyard blocks further based on viticultural and/or irrigation practices.

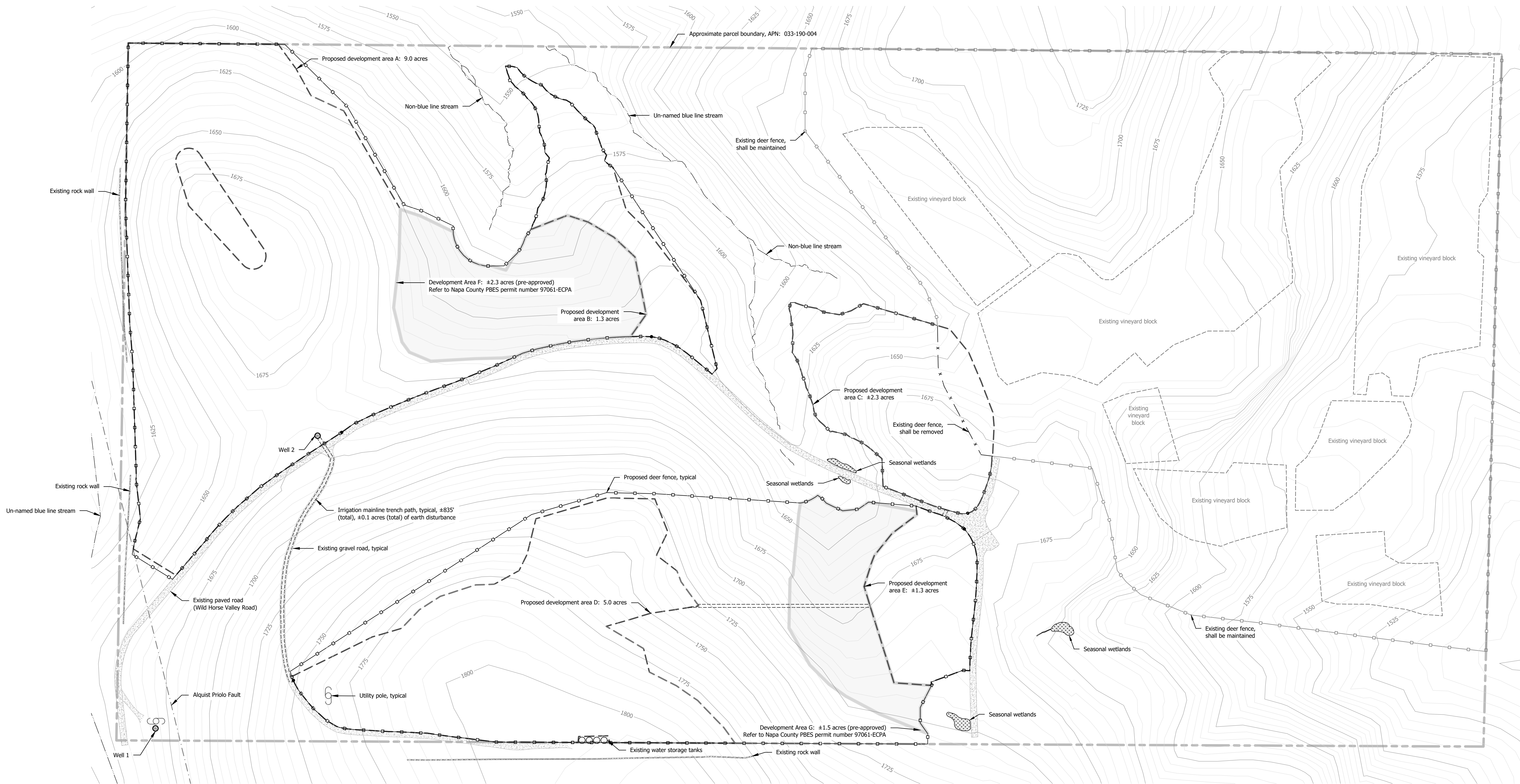
No pre-emergent herbicides will be strip sprayed in the vine rows for weed control. Contact or systemic herbicides may be applied. The maximum width of the spray strip shall 24 inches (12 inches on either side of the vine) in order to achieve 75% minimum vegetative cover (based on 8' row spacing) in the proposed tractor farmed vineyard blocks. Vineyard avenues shall not be disked, only mowed. Vineyard avenues shall be seeded and mulched prior to October 15 of the development year, and in bare or disturbed areas of the following years. Avenues that don't meet the minimum required vegetative cover percent shall be reseeded and mulched until the specified cover is attained. Seeding and mulching is not required on properly surfaced gravel roads and avenues. No off-site spoils disposal sites are anticipated. Rocks encountered in the development area shall be used for decoration. Any leftover rocks shall be used as road base. All temporary rock, soil and soil amendments shall be stockpiled within the development areas, if needed. No long term stockpiles of rock or soil are anticipated.
- Storm Water Stabilization Measures:**
The intent is to maintain the existing sheet flow and shallow concentrated flow characteristics to the maximum extent practicable; however, soil loss calculations show that excessive run lengths at specific locations need to be broken up in order to maintain soil loss values at an acceptable level. This is achieved by installing cross slope diversions at the locations specified on the erosion control plan sheet. These cross slope diversions shall break up the run lengths and divert surface runoff to more stabilized outfall locations. A hydrological study was performed using TR55. The results of this study show that the proposed development will not cause an increase in peak runoff for a 2 year - 24 hour storm, nor will there be an increase in peak runoff for a 100 year - 24 hour storm. Because of these results no increased channel degradation is anticipated due to the proposed vineyard development.

Wildlife Exclusion Fencing:
Deer fencing shall be at least 6 feet tall, include exit gates at the corners, and be comprised of no smaller than 6-inch by 6-inch squares, such that small animals can move freely through the area and deer do not become trapped within the fencing.
- Implementation Schedule:**
Land Preparation: This portion of the development will consist of clearing, ripping, rock removal, application of soil amendments, maintenance and installation of the proposed drainage structures, installation of end posts, trellis system and deer fence. This will require heavy machinery and large trucks. Approximately 8 workers shall be required for land preparation tasks. These tasks shall be carried out from April to October 2020.
- Installation of Vineyard and Erosion Control Measures: This portion of the development will consist of installation of avenues. It shall also include vineyard staking, vineyard planting, irrigation system installation, planting of cover crop and straw mulching. This will require small machinery and foot traffic. Approximately 25 workers will be required for vineyard and erosion control measure installation. These tasks shall be carried out between April and October 2020.
- Vineyard Maintenance: This portion of the development will consist of annual vineyard farming practices, annual harvesting and it also includes any necessary adjustments of permanent erosion control practices. This will mostly require ATV and foot traffic; however, if repairs are required larger machinery may also be necessary. The exception to this is during harvest when large trucks and/or trailers are expected to be on site to transport the grapes. The number of workers will vary from 1 during erosion control measure inspections to several during harvest or pruning. These tasks shall begin in September 2020. Winterization tasks shall be completed by October 15 of each year.
- Cost of Erosion Control Measures:**
Estimated cost of erosion control and sediment control measures (in addition to those previously installed) is approximately \$2,600.00 per acre.
- Directions to the site:**
In order to reach the project site, from Napa, drive east on Third Street until you reach Silverado Trail. Continue straight onto Coombsville Road. Stay on Coombsville Road for approximately 2.5 miles. Coombsville Road becomes Wild Horse Valley Road. Continue onto Wild Horse Valley Road for approximately 3.5 miles. There will be an entrance gate along Wild Horse Valley Road, just north of Lake Madigan. To schedule a site visit please contact Omar Reveles of Acme Engineering Inc. at (707) 253-2263.
- Other projects associated with this property:**
There is an approved erosion control plan for new vineyard development from 1997 (refer to Napa County PBES permit 97061-ECPA). In the mentioned erosion control plan, the approved vineyard development was split up into four phases. Phase 1 and phase 2 have been completed. The approved vineyard area associated with phase 3 is adjacent to the newly proposed development area E. The approved vineyard area associated with phase 4 is between the newly proposed development area A and B. Due to the close proximity between pre-approved and newly proposed vineyard development areas with each other, the intent is to develop the previously approved vineyard areas (phases 3 and 4, from the 1997 erosion control plan) concurrently with the newly proposed development areas (A-E).
- # LANDS OF LYONS
- ## NEW VINEYARD DEVELOPMENT EROSION CONTROL PLAN
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- Aerial Image
Not to Scale
-
- USGS Quad
Not to Scale
- # EXHIBIT A
-
- Site Information:
- Property Owner:**
Lyons Hillside Vineyard, Cap Lyons
8280 Wild Horse Valley Road
Napa, California. 94558
(510) 715-1920
- Contact Person:**
Ryan Pierce
707-815-1393
- Civil Engineer:**
Acme Engineering Inc.
Omar Reveles, P.E. RCE 74723
1700 Soscol Avenue, Suite 9
Napa, California 94559
Phone: 707-253-2263
Fax: 707-253-2149
- Initial Plan Preparation:**
December 2019
- Vineyard Site:**
Blocks 1-4
- Site Address:**
8280 Wild Horse Valley Road
Napa, California.
- Parcel Number:**
033-190-004
- Soil Types:**
179 - Sobrante Loam
- | Legend | | |
|---|------------------------------|---|
| — 1650 — | Major contour (25' interval) | ----- Irrigation mainline trench path |
| — 1600 — | Minor contour (5' interval) | • Vineyard access gate |
| - - - - - | Alquist Priolo fault | — Existing culvert |
| — Approximate parcel boundary | | — Existing rock wall |
| — Proposed development boundary | | — Slope transect |
| — Development area, from approved ECP (1997) | | — Existing well |
| — Existing vineyard block boundary | | — Proposed drainage mainline |
| — Existing vineyard block boundary | | — Proposed drop inlet |
| — Soil type boundary | | — Straw roll |
| — Existing gravel road | | — Cross slope diversion with flow direction |
| — Existing paved road | | — Existing fence |
| — Blue line stream | | — Photo location |
| — Non-blue line stream | | — Waterbar with flow direction |
| — TOB | Approximate top of bank | ○ Green monardella (special status plant species) |
| — SBK | Setback | ○ Napa lomaltium (special status plant species) |
| Seasonal wetlands | | CPP Corrugated plastic pipe |
| Areas containing 30-50% slopes | | S/W Single wall |
| Existing grass lined swale | | PBES Planning Building and Environmental Services |
| Temporary equipment staging and material storage area | | CMP Corrugated metal pipe |
| Temporary rock stockpile area | | CPP Corrugated plastic pipe |
- Sheet Index:
- Sheet 1 Title Sheet and Narrative
 - Sheet 2 Overall Site Plan
 - Sheet 3 Demolition Site Plan
 - Sheet 4 Tree Tables
 - Sheet 5 Erosion Control Site Plan
 - Sheet 6 Details
-
- Existing Underground Utilities and Pipelines**
Underground utilities and pipelines may exist within limits of development. All utilities and pipelines shall be identified and protected prior to site disturbance.
- Inspection Schedule:
- The project engineer shall inspect the following, during construction activities and post construction until site is stable and development is complete:
- Pre-construction meeting.
 - Inspection of project site delineation
 - Inspection of surface drainage facilities
 - Winterization inspection during construction
 - Final winterization inspection
 - Year 1 monitoring inspection
- Project engineer shall be notified at least 2 business days prior to each of the meetings/inspections listed above.
- ## LANDS OF LYONS

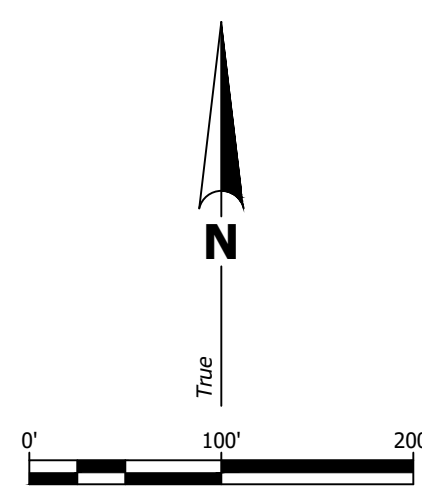
NEW VINEYARD DEVELOPMENT - EROSION CONTROL PLAN

TITLE SHEET AND NARRATIVE
- | | |
|-------------|-------------|
| PROJECT NO. | 180802-0122 |
| DRAWING NO. | 05 01 |
| SCALE | AS SHOWN |
| DATE | 07/20/2020 |
- 1 OF 6

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Overall Site Plan
Scale: 1" = 100'



- Notes:**
1. Topographic information provided by Napa County GIS database from 2003. Datum: North American Vertical Datum of 1988 (NAVD 88).
 2. Topographic data in proposed development area C was extrapolated from USGS topographic maps.

Soil Types on Site:
179 - Sobrante loam

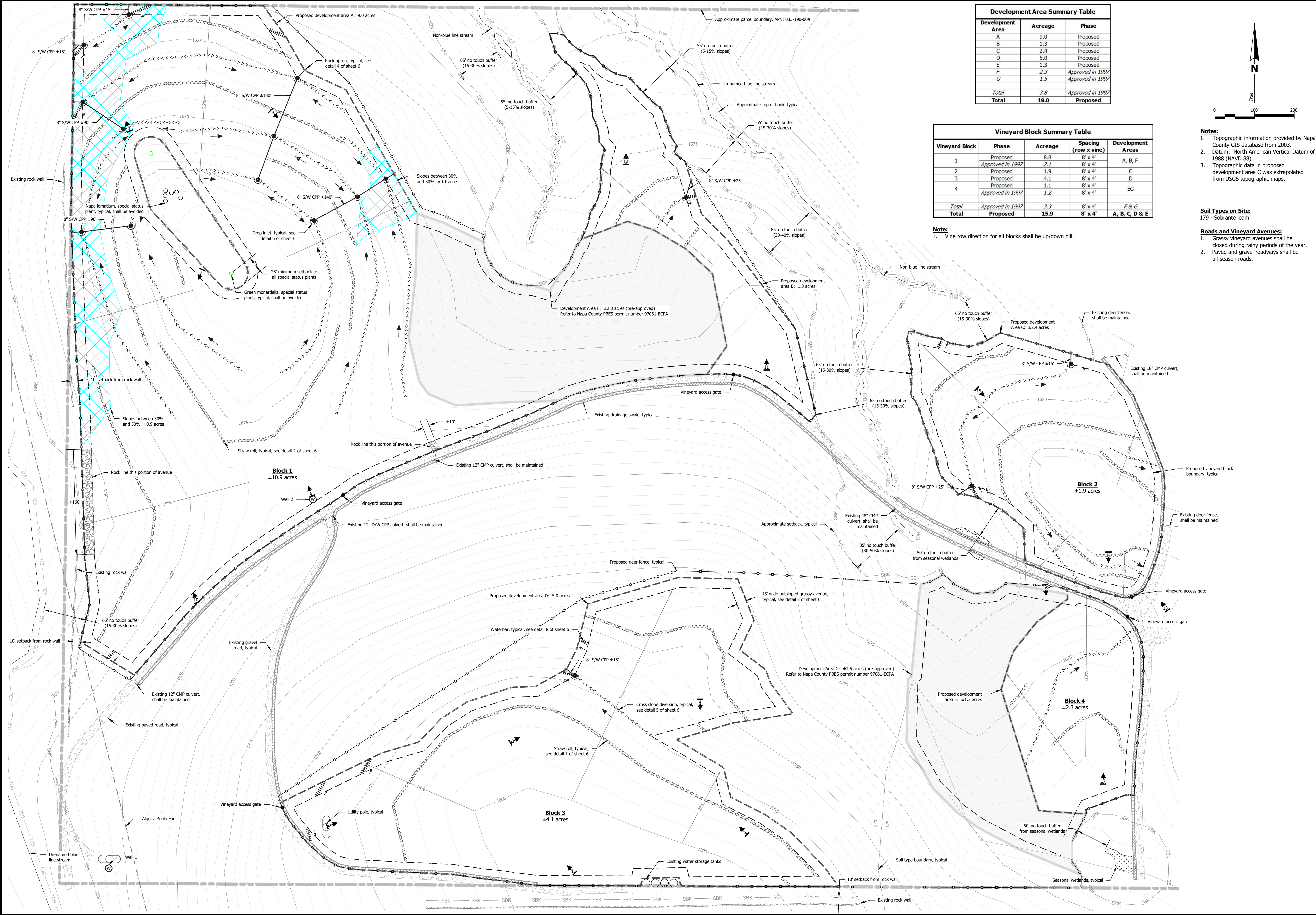
SHEET	2	PROJECT NO. 180802-0122	LANDS OF LYONS										NEW VINEYARD DEVELOPMENT - EROSION CONTROL PLAN										OVERALL SITE PLAN										DATE 07/20/2020	OF 6									
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Tree ID	Acronym	Common Name	Multi-Trunk	DBH (Inches)	Comments (from biologist)	To be Removed
1	CLO	Coast Live Oak	No	22.5	dead	Yes
2	CLO	Coast Live Oak	Yes	57.8	5 trunks 1-11.8, 2- 15, 3-15, 4-8, 5-8	Yes
3	CLO	Coast Live Oak	Yes	57.8	5 trunks 1-11.8, 2- 15, 3-15, 4-8, 5-8	Yes
4	CBO	California Black Oak	No	13.0		Yes
5	CLO	Coast Live Oak	No	9.2	dead	Yes
6	CLO	Coast Live Oak	Yes	25.0	two trunks 12 and 13	Yes
7	CB	California Bay	Yes	43.9	4 trunks 12.5, 10, 10.4, 11	Yes
8	CBO	California Black Oak	No	11.0		Yes
9	CBO	California Black Oak	No	11.0	burned and basal sprouting	Yes
10	CLO	Coast Live Oak	No	23.0		Yes
11	CBO	California Black Oak	No	16.0		Yes
12	CBO	California Black Oak	Yes	73.0	6 trunks 1-9, 2-15,3-12,4-9,5-12, 6-16	Yes
13	CLO	Coast Live Oak	No	17.3		Yes
14	CLO	Coast Live Oak	No	16.0		Yes
15	CLO	Coast Live Oak	No	12.5		Yes
16	CB	California Bay	Yes	22.5	3 trunks 1-9, 2-9, 3-4.5 dead	Yes
17	CB	California Bay	No	18.0		Yes
18	CLO	Coast Live Oak	Yes	31.5	3 trunks 1-12.5,2-11,3-8	Yes
19	CBO	California Black Oak	No	16.0		Yes
20	CLO	Coast Live Oak	Yes	31.0	3 trunks 1-14,2-10,3-7	Yes
21	CLO	Coast Live Oak	No	34.6		Yes
22	CBO	California Black Oak	No	8.0		Yes
23	CLO	Coast Live Oak	Yes	31.0	2 trunks 1-16, 2-15	Yes
24	CLO	Coast Live Oak	No	17.0		Yes
25	CBO	California Black Oak	No	14.0		Yes
26	CBO	Black oak	Yes	14.9	2 trunks 1-6.4, 2-8.5	Yes
27	CLO	Coast Live Oak	Yes	54.9	3 trunks 1-13.7, 2-18.8, 3-13.6, 4-8.8n	Yes
28	CBO	California Black Oak	No	15.0		Yes
29	CLO	Coast Live Oak	Yes	19.5	2 trunks 1-12, 2-7.5	Yes
30	CLO	Coast Live Oak	Yes	18.5	2 trunks 1-12.5w, 2-6	Yes
31	CLO	Coast Live Oak	No	14.6		Yes
32	CLO	Coast Live Oak	No	15.5		Yes
33	CLO	Coast Live Oak	No	6.7		Yes
34	CLO	Coast Live Oak	No	14.7		Yes
35	CLO	Coast Live Oak	No	9.4		Yes
36	CLO	Coast Live Oak	No	10.0		Yes
37	CBO	California Black Oak	No	15.0		Yes
38	CBO	California Black Oak	No	16.0		Yes
39	CLO	Coast Live Oak	Yes	26.0	2 trunks 1-11, 2-15	Yes
40	CLO	Coast Live Oak	No	14.0		Yes
41	CBO	California Black Oak	Yes	21.3	2 trunks 1-10.8, 2-10.5	Yes
42	CBO	California Black Oak	No	10.0		Yes
43	CBO	California Black Oak	Yes	25.1	2 trunks 1-11.6, 2-13.5	Yes
44	CBO	California Black Oak	Yes	31.7	2 trunks 1-17.7, 2- 14	Yes
45	CBO	California Black Oak	Yes	25.6	2 trunks 1-16, 2- 9.6	Yes
46	CBO	California Black Oak	No	12.0		Yes
47	CBO	California Black Oak	Yes	24.4	2 trunks 1-12, 2-12.4	Yes
48	CLO	Coast Live Oak	No	13.5		Yes
49	CBO	California Black Oak	No	11.3		Yes
50	CLO	Coast Live Oak	No	19.0		Yes
51	CLO	Coast Live Oak	No	12.0		Yes
52	CLO	Coast Live Oak	No	24.0		Yes
53	CLO	Coast Live Oak	No	15.0		Yes
54	CLO	Coast Live Oak	No	34.8	potential bat habitat	Yes
55	CLO	Coast Live Oak	Yes	70.0	3 trunks 1-31, 2-39, potential bat habitat	Yes
56	IC	Incense Cedar	No	11.0		Yes
57	CR	Coast Redwood	No	8.0		Yes
58	CR	Coast Redwood	No	12.0		Yes
59	CLO	Coast Live Oak	No	23.5		Yes
60	CLO	Coast Live Oak	No	20.8		Yes
61	CLO	Coast Live Oak	Yes	32.7	2 trunks 1-17.2, 2-15.5	Yes
62	CLO	Coast Live Oak	Yes	58.6	4 trunks 1-9.6, 2-15.5, 3-21, 4-12.5	Yes
63	CLO	Coast Live Oak	Yes	23.5	2 trunks 1-13, 2-10.5	Yes
64	CB	California Bay	Yes	25.5	2 trunks 1-11, 2-14.5	Yes
65	CB	California Bay	Yes	35.0	10 trunks 5-7dbh	Yes
67	CLO	Coast Live Oak	Yes	14.0	2 trunks 1-5, 2-9	Yes
68	CB	California Bay	Yes	52.0	8 trunks 6.5 dbh	Yes
69	CB	California Bay	No	14.2		Yes
70	CB	California Bay	No	8.0		Yes
71	CLO	Coast Live Oak	No	17.0		Yes
72	CB	California Bay	Yes	36.0	4 trunks 9dbh	Yes
73	CB	California Bay	Yes	15.0	2 trunks 7.5 dbh	Yes
75	CB	California Bay	Yes	40.0	5 trunks 8dbh	Yes
76	CLO	Coast Live Oak	No	16.0		Yes
77	CLO	Coast Live Oak	Yes	30.5	2 trunks 1-17, 2-13.5	Yes
78	CLO	Coast Live Oak	No	11.0		Yes
79	CB	California Bay	No	13.5		Yes
80	CB	California Bay	Yes	27.0	3 trunks 9dbh	Yes
81	CLO	Coast Live Oak	No	19.0		Yes
82	CLO	Coast Live Oak	No	20.5		Yes
83	CLO	Coast Live Oak	No	10.5		Yes
84	CB	California Bay	No	12.5		Yes
85	CLO	Coast Live Oak	Yes	44.0	2 trunks 1-23, 2-21	Yes
86	CBO	California Black Oak	No	14.0	14	Yes
87	CB	California Bay	Yes	23.5	2 trunks 1-12.5, 2- 11	Yes
88	CLO	Coast Live Oak	No	12.0		Yes
89	CLO	Coast Live Oak	Yes	41.0	2 trunks 1-24, 2-17	Yes
90	CB	California Bay	Yes	20.5	2 trunks 1-8.5, 2-12	Yes
91	CBO	California Black Oak	No	9.5		Yes
92	CLO	Coast Live Oak	No	19.0		Yes
93	CLO	Coast Live Oak	No	15.0		Yes
94	CLO	Coast Live Oak	No	22.0		Yes
95	CLO	Coast Live Oak	No	18.0		Yes
96	CLO	Coast Live Oak	No	24.0		Yes
97	CBO	California Black Oak	No	13.0		Yes
98	CLO	Coast Live Oak	No	13.5		Yes
99	CB	California Bay	Yes	24.0	3 trunks 1-7, 2-10,3-7	Yes
100	CLO	Coast Live Oak	Yes	24.0	3 trunks 1-7, 2-10,3-7	Yes
101	CLO	Coast Live Oak	No	16.0		Yes
102	CB	California Bay	Yes	40.0	5 trunks 8dbh	Yes
103	CLO	Coast Live Oak	Yes	24.0	2 trunks 1-13, 2-11dbh	Yes
104	CLO	Coast Live Oak	No	14.0		Yes
105	CLO	Coast Live Oak	No	17.0		Yes
106	CLO	Coast Live Oak	No	22.0		Yes
107	CLO	Coast Live Oak	Yes	32.0	3 trunks 1-12, 2-12, 3-8	Yes
108	CBO	California Black Oak	No	8.0		Yes
109	CLO	Coast Live Oak	No	12.0		Yes
110	CLO	Coast Live Oak	No	7.0		Yes
111	CBO	California Black Oak	Yes	32.0	2 trunks 1-16, 2-16	Yes
112	CBO	California Black Oak	No	16.0		Yes
113	CBO	California Black Oak	No	8.0		Yes
114	CBO	California Black Oak	Yes	36.0	2 trunks 1-18, 2-18	Yes
115	CB	California Bay	Yes	11.0	2 trunks 1-5, 2-6	Yes
116	CB	California Bay	Yes	17.0	3 trunks 1-5, 2-6, 3-6	Yes
118	CLO	Coast Live Oak	No	25.0		Yes
121	CB	California Bay	No	7.0		Yes
122	CLO	Coast Live Oak	No	7.0		Yes
124	CLO	Coast Live Oak	No	10.0		Yes
125	CBO	California Black Oak	Yes	16.0	2 trunks 1-10, 2-6	Yes
127	CB	California Bay	Yes	50.0	5 trunks 10dbh	Yes
128	CB	Coast Live Oak	Yes	25.4		Yes
129	CLO	Coast Live Oak	No	13.0		Yes
130	CLO	Coast Live Oak	No	23.0		Yes
131	CLO	Coast Live Oak	Yes	32.0	2 trunks 1-15, 2-17	Yes

ID	Acronym	Common Name	Multi-Trunk	DBH (Inches)	Comments (from biologist)	To be Removed
132	CLO	Coast Live Oak	No	23.0		No
133	CLO	Coast Live Oak	No	30.0		Yes
134	CLO	Coast Live Oak	No	22.0		Yes
135	CLO	Coast Live Oak	No	11.5		Yes
136	CBO	California Black Oak	No	12.0		Yes
137	CBO	California Black Oak	Yes	24.6	2 trunks 1-13, 2-8.6	Yes
138	CLO	Coast Live Oak	No	16.0		Yes
139	CB	California Bay	No	13.0		Yes
140	CLO	Coast Live Oak	No	10.0		Yes
141	CBO	California Black Oak	No	7.4		Yes
142	CB	California Bay	Yes	12.8	2 trunks 1-7.4, 2-5.4	Yes
143	CB	California Bay	Yes	18.4	2 trunks 1-10, 2-8.4	Yes
144	CLO	Coast Live Oak	Yes	22.0	2 trunks 1-12, 2-10	Yes
145	CLO	Coast Live Oak	Yes	23.0	2 trunks 1-12, 2-11	Yes
146	CLO	Coast Live Oak	No	7.0		Yes
147	CB	California Bay	No	10.8		Yes
148	CLO	Coast Live Oak	No	13.0		Yes
149	CLO	Coast Live Oak	Yes	39.0	2 trunks 1-19, 2-20	Yes
150	CBO	California Black Oak	No	11.0		Yes
151	CBO	California Black Oak	No	8.0		Yes
152	CLO	Coast Live Oak	No	8.0		Yes
153	CLO	Coast Live Oak	No	22.8		Yes
154	CBO	California Black Oak	No	16.0		Yes
155	CLO	Coast Live Oak	No	23.0		No
156	CB	California Bay	Yes	35.3	2 trunks 1-24.3, 2-11	No
157	CB	California Bay	No	12.0		Yes
158	CB	California Bay	No	10.0		Yes
159	CB	California Bay	No	8.0		Yes
160	CB	California Bay	Yes	26.5	3 trunks 1-12.5, 2-8, 3-6	Yes
161	CB	California Bay	No	13.4		Yes
162	CB	California Bay	No	9.0		Yes
163	CB	California Bay	No	11.0		Yes
164	CBO	California Black Oak	No	44.3	potential bat habitat	Yes
165	BM	Bigleaf Maple	No	15.0		Yes
166	CLO	Coast Live Oak	No	11.0		Yes
167	CLO	Coast Live Oak	No	26.0		Yes
168	CB	California Bay	No	20.5		Yes
169	CB	California Bay	No	11.3		Yes
170	CLO	Coast Live Oak	Yes	36.0	2 trunks 1-18, 2-18	Yes
171	CBO	Black oak	No	24.0		Yes
172	CB	California Bay	Yes	19.0	3 trunks 1-7, 2-7, 3-5	Yes
173	CLO	Coast Live Oak	No	13.0		Yes
174	CBO	California Black Oak	No	9.0		Yes
175	CLO	Coast Live Oak	No	13.0		Yes
176	CBO	California Black Oak	No	8.0		Yes
177	CBO	California Black Oak	No	8.0		Yes
178	CLO	Coast Live Oak	No	18.4		Yes
179	CBO	California Black Oak	No	9.0		Yes
180	CLO	Coast Live Oak	No	19.0		Yes
181	CLO	Coast Live Oak	No	16.0		Yes
182	CLO	Coast Live Oak	No	24.0		Yes
183	CLO	Coast Live Oak	No	22.0		Yes
184	CLO	Coast Live Oak	No	18.0		Yes
185	CLO	Coast Live Oak	Yes	56.0	3 trunks 1-16, 2-16.5, 3-23.5	Yes
186	CB	California Bay	Yes	24.0	2 trunks 1-13, 2-11	Yes
187	CLO	Coast Live Oak	No	8.0		Yes
188	CLO	Coast Live Oak	Yes	37.0	2 trunks 1-14, 2-23	Yes
189	CBO	California Black Oak	No	14.0		Yes
190	CB	California Bay	No	9.0		No
191	CLO	Coast Live Oak	No	23.0		Yes
192	CLO	Coast Live Oak	No	13.4		No
193	CLO	Coast Live Oak	No	10.0		Yes
194	CLO	Coast Live Oak	No	22.0		Yes
195	CB	California Bay	No	17.0		Yes
196	CLO	Coast Live Oak	No	32.5		No
197	CLO	Coast Live Oak	Yes	18.0	2 trunks 1-11, 2-7	Yes
198	CLO	Coast Live Oak	Yes	28.0	2 trunks 1-18, 2-10	Yes
199	CLO	Coast Live Oak	No	19.0		Yes
200	CLO	Coast Live Oak	No	13.5		Yes
201	CLO	Coast Live Oak	No	20.0		Yes
202	CLO	Coast Live Oak	No	27.0		Yes
203	VO	Valley Oak	No	13.0		Yes
204	CLO	Coast Live Oak	No	15.0		Yes
205	CLO	Coast Live Oak	Yes	34.0	2 trunks 1-15, 2-19	Yes
206	BM	Bigleaf Maple	Yes	80.3	4 trunks 1-18.5, 2-17.2, 3-19.6, 4-25	Yes
207	CBO	California Black Oak	No	12.0		Yes
208	CLO	Coast Live Oak	Yes	31.5	2 trunks 1-15.5, 2-16	Yes
209	CLO	Coast Live Oak	No	11.5		Yes
210	CLO	Coast Live Oak	Yes	30.0	2 trunks 1-17, 2-13	Yes
211	CLO	Coast Live Oak	Yes	31.0	2 trunks 1-15, 2-16	No
212	CLO	Coast Live Oak	Yes	35.5	4 trunks 1-9, 2-12.5,3-6,4-8	Yes
213	CLO	Coast Live Oak	Yes	35.8	3 trunks 1-12.8, 2-14,3-9	Yes
214	CLO	Coast Live Oak	Yes	57.8	4 trunks 1-13.6, 2-14.5,3-17.5, 4-12.2	Yes
215	CLO	Coast Live Oak	No	10.3		Yes
216	CBO	California Black Oak	No	25.0		Yes
217	CLO	Coast Live Oak	No	12.7		Yes
218	CLO	Coast Live Oak	No	13.5		Yes
219	CLO	Coast Live Oak	No	15.8		Yes
220	CLO	Coast Live Oak	No	32.0		Yes
221	CLO	Coast Live Oak	No	11.0		Yes
222	CLO	Coast Live Oak	No	13.5		Yes
223	BM	Bigleaf Maple	No	14.0		Yes
224	CLO	Coast Live Oak	No	37.0		Yes
225	CBO	California Black Oak	No	16.0		Yes
226	CBO	California Black Oak	No	14.0		Yes
227	CLO	Coast Live Oak	No	12.5		Yes
228	CLO	Coast Live Oak	No	13.0		Yes
229	CLO	Coast Live Oak	No	15.5	dead	Yes
230	CLO	Coast Live Oak	No	17.3	dead	Yes
231	CLO	Coast Live Oak	No	26.0	dead	Yes
232	CLO	Coast Live Oak	No	26.0		Yes
233	CLO	Coast Live Oak	Yes	37.0	2 trunks 1-13, 2-24	Yes
234	CLO	Coast Live Oak	No	18.0		Yes
235	CLO	Coast Live Oak	Yes	50.0	2 trunks 1-24, 2-26	No
236	VO	Valley Oak	No	12.5		Yes
237	CLO	Coast Live Oak	No	18.3		Yes
238	VO	Valley Oak	No	17.0		Yes
239	CLO	Coast Live Oak	No	17.5		Yes
240	CLO	Coast Live Oak	No	45.0	potential bat habitat	No
241	VO	Valley Oak	No	12.3		Yes
242	CLO	Coast Live Oak	No	19.8	dead	Yes
243	CLO	Coast Live Oak	No	28.0		Yes
244	CLO	Coast Live Oak	No	27.3		Yes
245	CLO	Coast Live Oak	No	18.0		Yes
246	CLO	Coast Live Oak	No	12.0		Yes
247	CLO	Coast Live Oak	No	25.4		Yes
248	CLO	Coast Live Oak	No	10.5		Yes
249	CBO	California Black Oak	No	13.3		Yes
250	CBO	California Black Oak	Yes	26.0	2 trunks 13dbh	Yes
251	CLO	Coast Live Oak	Yes	27.0	2 trunks 1-13, 2-14	Yes
252	BM	Bigleaf Maple	Yes	26.7	2 trunks 1-16.5, 2-10.2	Yes
253	CBO	California Black Oak	No	10.3		Yes
254	CLO	Coast Live Oak	No	7.8		Yes
255	CLO	Coast Live Oak	Yes	21.1	2 trunks 1-11.3, 2-9.8	Yes

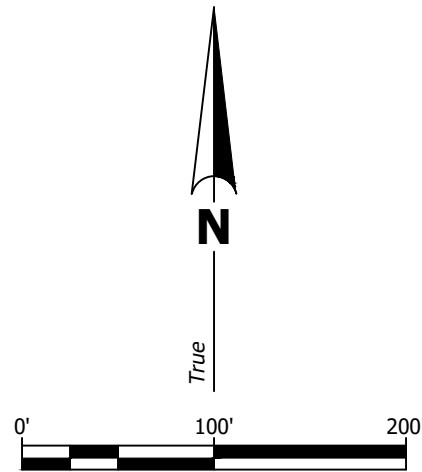
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Development Area Summary Table		
Development Area	Acreage	Phase
A	9.0	Proposed
B	1.3	Proposed
C	2.4	Proposed
D	5.0	Proposed
E	1.3	Proposed
F	2.3	Approved in 1997
G	1.5	Approved in 1997
Total	3.8	Approved in 1997
Total	19.0	Proposed

Vineyard Block Summary Table				
Vineyard Block	Phase	Acreage	Spacing (row x vine)	Development Areas
1	Proposed	8.8	8' x 4'	A, B, F
	Approved in 1997	2.1	8' x 4'	
2	Proposed	1.9	8' x 4'	C
3	Proposed	4.1	8' x 4'	D
4	Proposed	1.1	8' x 4'	EG
	Approved in 1997	1.2	8' x 4'	
Total	Approved in 1997	3.3	8' x 4'	F & G
Total	Proposed	15.9	8' x 4'	A, B, C, D & E

Note:
1. Vine row direction for all blocks shall be up/down hill.



- Notes:**
- Topographic information provided by Napa County GIS database from 2003.
 - Datum: North American Vertical Datum of 1988 (NAVD 88).
 - Topographic data in proposed development area C was extrapolated from USGS topographic maps.

Soil Types on Site:
179 - Sobrante loam

- Roads and Vineyard Avenues:**
- Grassy vineyard avenues shall be closed during rainy periods of the year.
 - Paved and gravel roadways shall be all-season roads.

NOTES/REMARKS:
1. Addressed comments from Application Completeness Determination Letter from Napa County PBES, dated 1/29/2020.
2. Addressed comments from Application Completeness Determination Memorandum from Napa County PBES - Engineering Services, dated June 12, 2020.
3. Addressed comments from email from Daniel Hornett of Napa County PBES - Engineering Services, dated July 6, 2020.

DESIGNED BY
DRAWN BY
OR
OR
OR

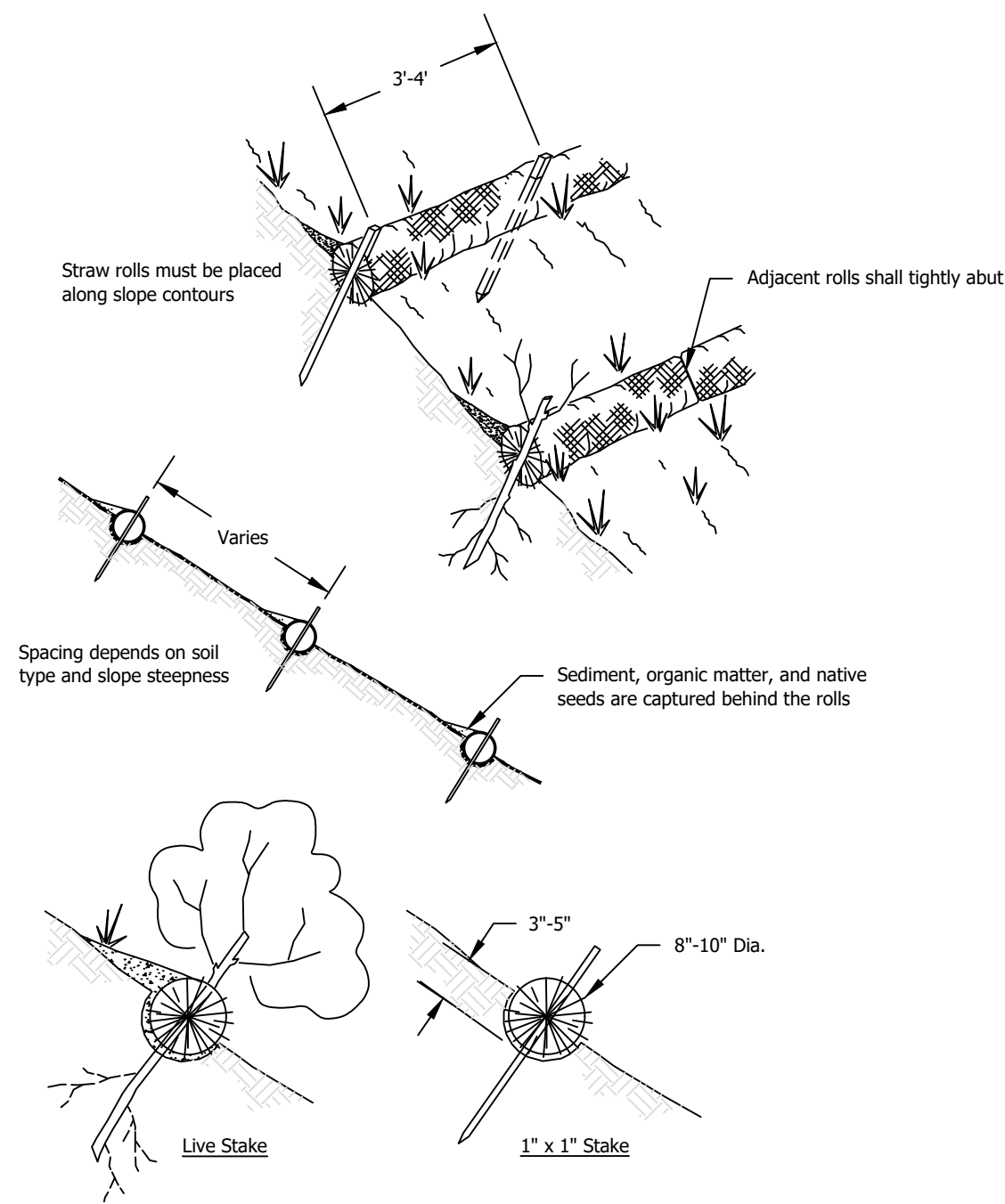
REGISTERED PROFESSIONAL ENGINEER
RENEE L. JONES
No. C 74723
JANUARY 2017
STATE OF CALIFORNIA

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1700 Soscol Avenue
Ste. 9, Napa, CA 94559
707-253-ACME

LANDS OF LYONS
NEW VINEYARD DEVELOPMENT - EROSION CONTROL PLAN
EROSION CONTROL SITE PLAN

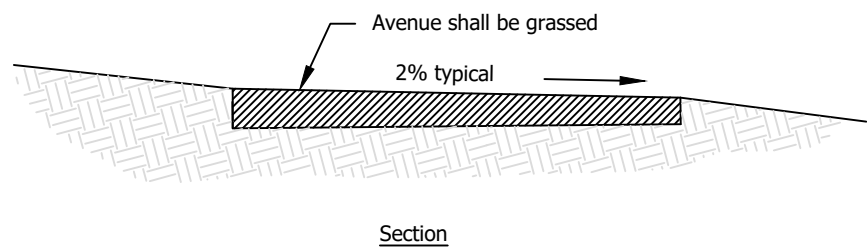
PROJECT NO. 180802-0122
DRAWING NO. 05 05
SCALE 1" = 60'
DATE 07/20/2020

SHEET 5 OF 6

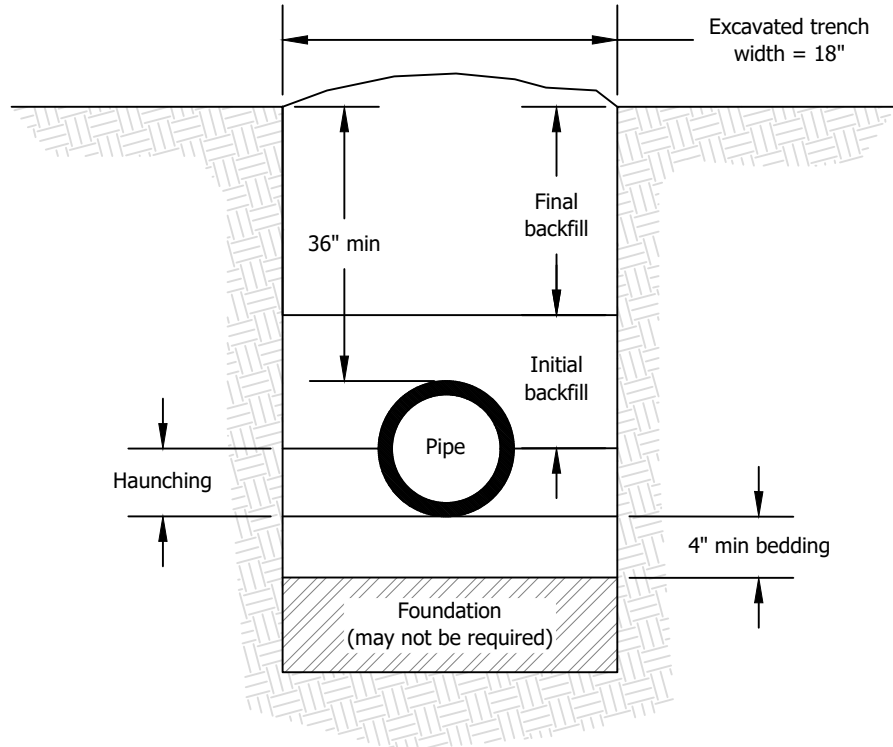


Note:
Straw roll installation requires the placement and secure staking of the roll in a trench, 3"-5" deep, dug on contour. Runoff must not be allowed to run under or around roll.

1
6 **Straw Rolls**
Not to Scale

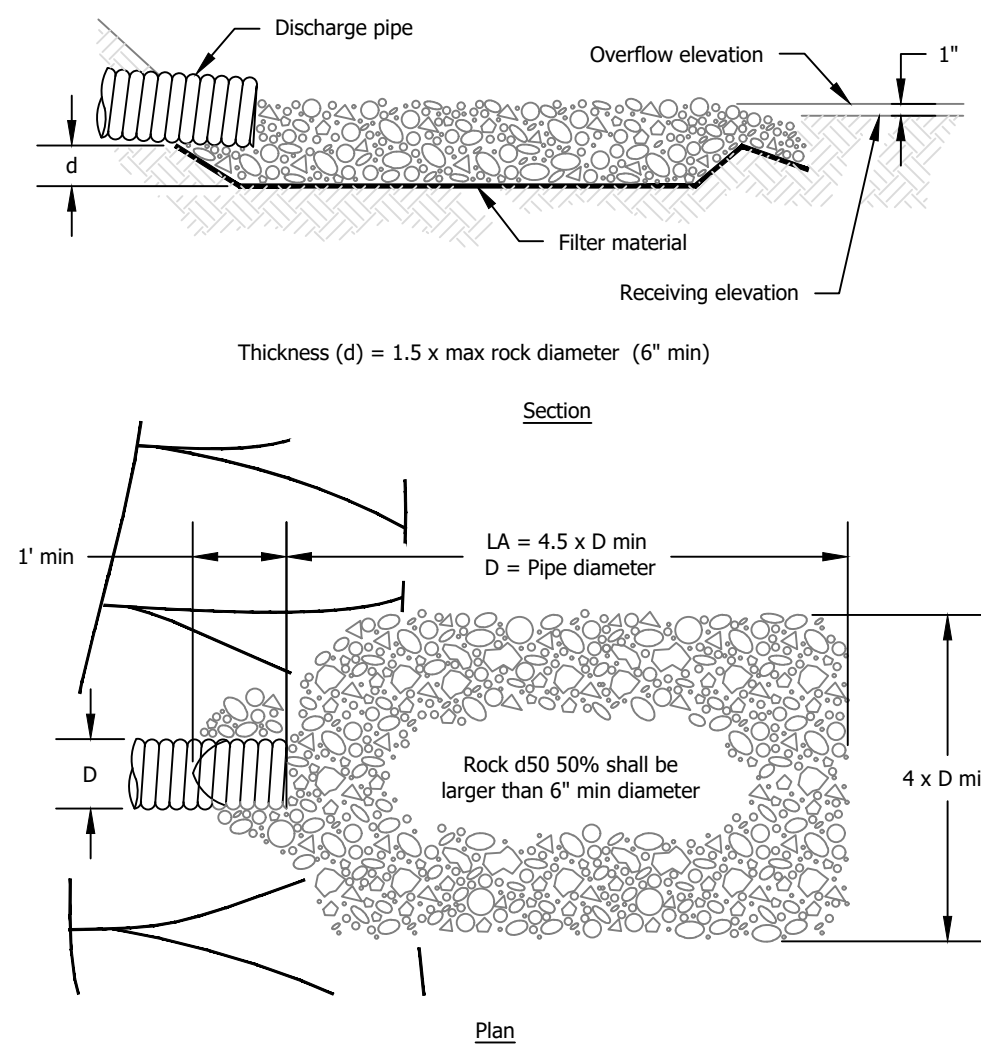


2
6 **Outslowed Grassy Avenue**
Not to Scale



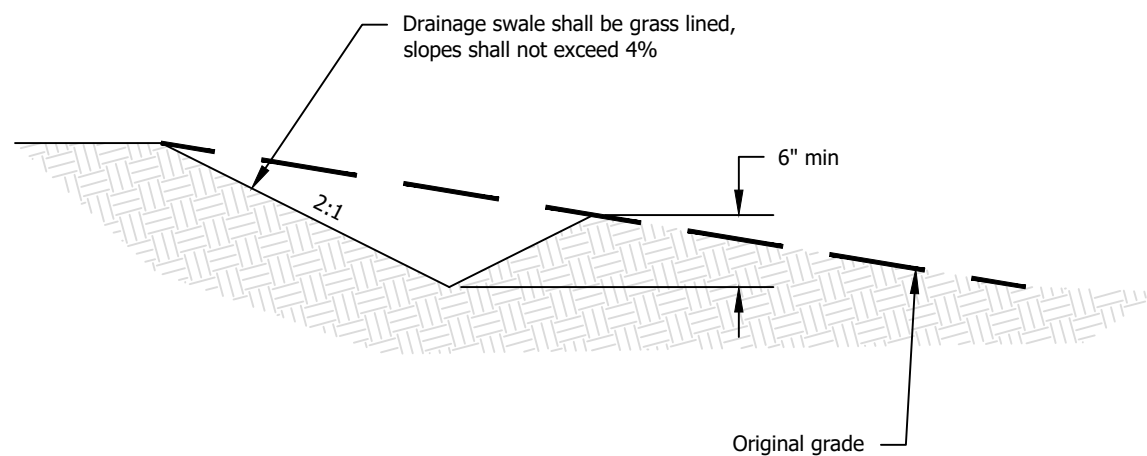
- Notes:**
- Pipe shall be installed at sufficient depth below the ground surface to provide protection from hazards imposed by vehicular loading. Minimum depth of cover for pipe shall be 36 inches.
 - Backfill shall be free of rocks, debris and organic matter, 3/4 minus and compacted to 90% RH. In areas subject to vehicular traffic, compaction shall be 95% RH minimum. Native material may be used if appropriate. Support pipe uniformly along its length prior to initial backfill.
 - At low places on the ground surface, extra fill may be placed over pipeline to provide the minimum depth of cover. The top width of the fill shall be no less than 10 feet and the side slopes no steeper than 6:1. The fill material may be placed and compacted before the trench is excavated.
 - Trench spoils shall be mounded over trench for future setting.
 - Backfill shall be placed in 6" lifts in vineyard areas and compacted. No water jetting shall be used for backfill operations.

3
6 **Trench and Backfill Detail**
Not to Scale



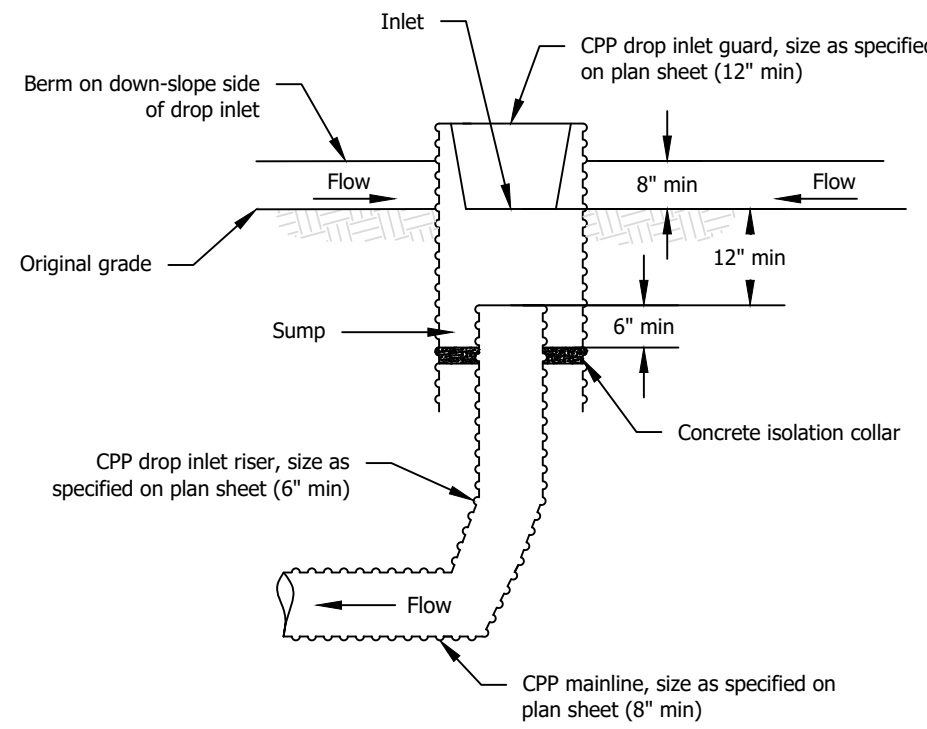
- Notes:**
- Filter material shall be Mirafi 140n filter fabric or equivalent.
 - 'LA' = length of apron. Distance 'LA' shall be of sufficient length to dissipate energy.
 - Apron shall be set at a zero grade and aligned straight.
 - The diameter of the largest stone size shall be 1.5 times the d50 size.

4
6 **Rock Apron**
Not to Scale



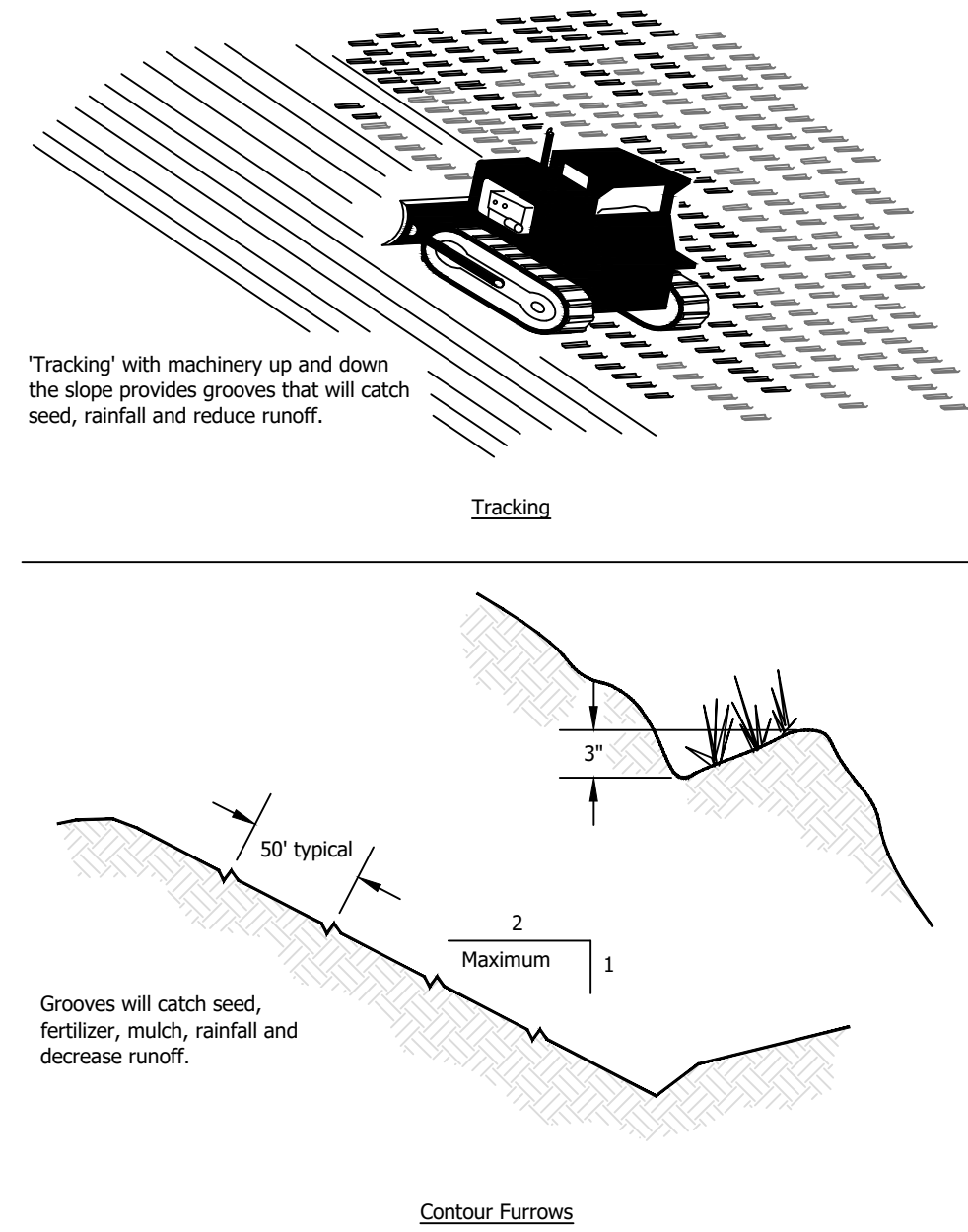
- Notes:**
- Cross slope diversions shall be installed on 4% slopes.
 - Cross slope diversions shall be grass lined.

5
6 **Cross Slope Diversion**
Not to Scale

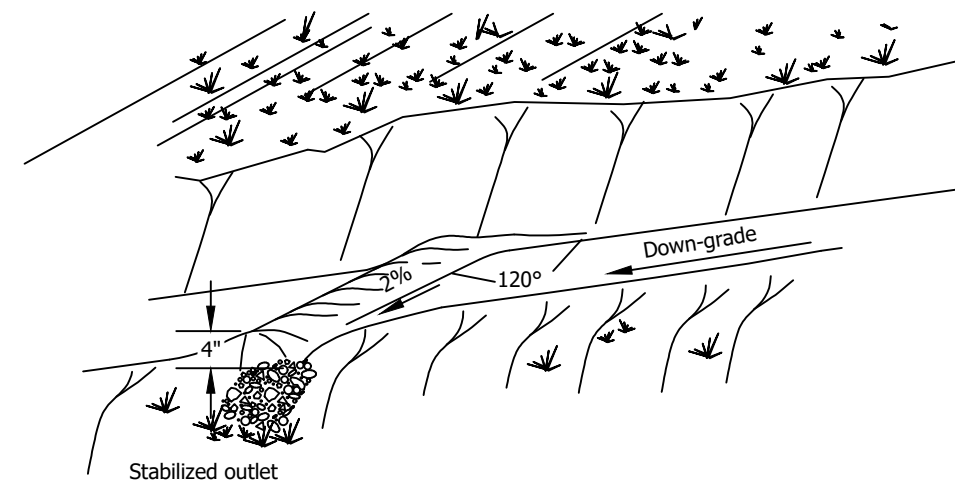


Note:
Sump area shall be checked regularly during storm season and cleaned as required.

6
6 **Drop Inlet**
Not to Scale



7
6 **Surface Roughening**
Not to Scale



8
6 **Waterbar**
Not to Scale

Environmental Commitments:

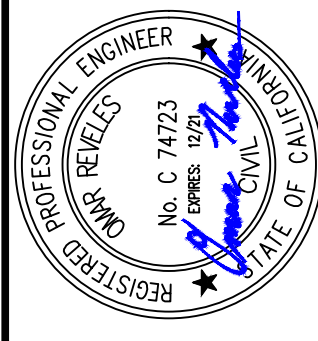
Nesting birds:

- For earth-disturbing activities occurring between February 1 and August 31 (which coincides with the grading season of April 1 through October 15 - NCC Section 18.108.070.L, and bird breeding and nesting seasons), a qualified biologist (defined as knowledgeable and experienced in the biology and natural history of local avian resources with the potential to occur at the project site) shall construct a preconstruction surveys for nesting birds within all suitable habitat on the project site, and where there is potential for impacts adjacent to the project areas (typically within 500 feet of project activities). The preconstruction survey shall be conducted no earlier than 14 days prior to when vegetation removal and ground disturbing activities are to commence. Should ground disturbance commence later than 14 days from the survey date, surveys shall be repeated. A copy of the survey shall be provided to the Napa County Planning Division and the CDFW prior to commencement of work.
- After commencement of work if there is a period of no work activity of five days or longer during the bird breeding season, surveys shall be repeated to ensure birds have not established nests during inactivity.
- In the event that nesting birds are found, the owner/permittee shall identify appropriate avoidance methods and exclusion buffers in consultation with the Napa County Planning Division and the U.S. Fish and Wildlife Service (USFWS) and/or CDFW prior to initiation of project activities. Exclusion buffers may vary in size, depending on habitat characteristics, project activities/disturbance levels, and species are determined by a qualified biologist in consultation with County Planning Division and the USFWS and/or CDFW.
- Exclusion buffers shall be fenced with temporary construction fencing (or the like), the installation of which shall be verified by Napa County prior to the commencement of any earthmoving and/or development activities. Exclusion buffers shall remain in effect until the young have fledged or nest(s) are otherwise determined inactive by a qualified biologist.
- Alternative methods aimed at flushing out nesting birds prior to pre-construction surveys, whether physical (i.e., removing or disturbing nests by physically disturbing trees with construction equipment), audible (i.e., utilizing sirens or bird cannons), or chemical (i.e., spraying nesting birds or their habitats) would be considered an impact to nesting birds and is prohibited. Any act associated with flushing birds from project areas should undergo consultation with the USFWS/CDFW prior to any activity that could disturb nesting birds.

Special Status Bat Species:

- A qualified biologist (defined as having demonstrable qualifications and experience with the particular species for which they are surveying) shall conduct a habitat assessment in order to identify suitable bat habitat trees with in the project area(s), no more than 14 days and no less than seven days in advance of the planned tree removal. If the habitat assessment determines that trees proposed for removal contain suitable bat habitat, the following shall apply to potential bat habitat trees:
 - Tree trimming and/or tree removal should only be conducted during seasonal periods of bat activity (August 31 through October 15, when young would be self-sufficiently volant and prior to hibernation, and March 1 to April 15 to avoid hibernating bats and prior to formation of maternity colonies), under supervision of a qualified biologist. Note that these windows may shift with atypical temperatures or rainfall. Trees should be trimmed and/or removed in a two-phased removal system conducted over two consecutive days. The first day (in the afternoon), limbs and branches would be removed by a tree cutter using chainsaws only. Limbs with cavities, crevices and deep bark fissures would be avoided, and only branches or limbs without those features would be removed. On the second day, the entire tree would be removed. On the second day, the entire tree would be removed.
 - For removal of bat habitat tree outside the seasonal activities identified above (between October 16 and February 28/29 of the following year or between April 16 and August 30), a qualified biologist shall conduct pre-construction survey within 14 days of project initiation and/or removal to determine absence/presence of special-status bat species. Survey methods, timing, duration, and species shall be provided for review and approval by Napa County prior to conducting pre-construction surveys. A copy of the survey shall be provided to the Napa County Planning Division and CDFW prior to commencement of work. If special-status bat species are not present, removal can proceed. If bats are found to be present, a plan for removal or exclusion shall be developed by a qualified biologist in conjunction with the Napa County planning Division and CDFW. The removal or exclusion plan shall be implemented upon approval of the plan by the County Planning Division.

NOTES/ REMARKS:	OR DESIGNED BY	OR/LB DRAWN BY	OR CHECKED BY
1. Addressed comments from Application Completeness Determination Letter from Napa County PBES, dated 1/29/2020.			
2. Addressed comments from Application Completeness Determination Memorandum from Napa County PBES - Engineering Services, dated June 12, 2020			
3. Addressed comments from email from Daniel Hornett of Napa County PBES - Engineering Services, dated July 8, 2020.			



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LANDS OF LYONS
NEW VINEYARD DEVELOPMENT - EROSION CONTROL PLAN
DETAILS

PROJECT NO. 180802-0122	DRAWING NO. 05 06	SCALE NOT TO SCALE	DATE 07/20/2020
SHEET 6		OF 6	