B & F FARMS
7335 ST HELENA HWY

EROSION CONTROL PLAN
REVISED JUNE 2025

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EROSION CONTROL PLAN



REVISED JUNE 2025
ORIGINAL SUBMITTAL JANUARY 2025

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EROSION CONTROL PLAN

NARRATIVE

1. The nature and purpose of the land disturbing activity and the amount of grading involved.

a) This ECP addresses the development of approximately 7.8 net acres (10.7 gross acres) of proposed vineyard on the property located at 7335 St Helena Highway in western Napa County. The ranch is located on APNs 034-030-029 and -030 which consist of approximately 120 acres per the Napa County Assessor's Office.

b) Activities to be accomplished include removing brush and trees within the proposed clearing limits, ripping, rock removal, cultivating the soil to prepare for planting, seeding cover crop, mulching, trenching for irrigation pipelines, installing trellis system and deer fence, laying out the vinerows, and installing erosion control measures.

2. General description of existing site conditions, including topography, vegetation and soils.

a) The site is located in the Dry Creek and Hopper Creek Watersheds.

b) The elevations in the vineyard area range from approximately 680 to 940 feet above mean sea level per topographic mapping. Ground slopes within the project boundary range between 15 and 33 percent. There are small pockets of areas with slope over 30% in several vineyard blocks which total approximately 3.2 acres, please see Sheet 1 for the locations.

c) Topographic mapping was provided by the National Oceanic and Atmospheric Administration (NOAA), flown 2018-2019.

d) Existing vegetation consists of annual grasses, shrubs, and trees. Please see the biological report prepared by WRA dated October 2024. Please see the WRA memo dated May 30, 2025.

e) Please see Appendix C for Vegetation Retention Calculations to demonstrate compliance with County Code Section 18.108.020(C) (70% Vegetation Retention) and County Code Section 18.108.020(D) (3:1 Tree Preservation). This project proposes to retain 96% of the tree canopy on APN 034-030-029 and 82% of the tree canopy on APN 034-030-030 for a total of 85% retention. The project has been designed to meet the 3:1 tree preservation requirement on areas under 50% slope and outside stream setbacks.

f) There are structures on the property. Please see the cultural resources report prepared by Flaherty Cultural Resource Services dated August 2, 2024.

g) The property is currently not deer fenced. Please see Figure 3 in Appendix E for the proposed Deer Fence map.

h) A site visit of the property was performed by Jim Bushey and Rachel Rosasco of PPI Engineering on Thursday, June 6, 2024 along with multiple subsequent site visits to evaluate the vineyard development area and to collect photographic documentation. Photographs of pre-project conditions can be found in Appendix A.

3. Natural and man-made features onsite including streams, lakes, reservoirs, roads, drainage, and other areas that may be affected by the proposed activity.

a) No natural or man-made features are expected to be adversely affected by this project. Tributaries of Dry Creek are in the vicinity but will not be affected by the project. The existing reservoirs in the vicinity will also not be affected by the project.

b) Tributaries on the property that meet the Napa County definition of a stream have the appropriate setbacks, determined by slope as outlined in Napa County Conservation Regulation 18.108.025, shown on Sheet 1. Prior to construction the Engineer shall stake the appropriate stream setbacks adjacent to vineyard blocks based on in-field determination of the top of bank and slope.

c) All ephemeral or intermittent streams that do not meet the Napa County definition of a stream have been avoided with a minimum 35' buffer in accordance with Napa County Conservation Regulation 18.108.025.

d) In this ECP, all wetlands are avoided with a minimum 50' buffer in accordance with Napa County Conservation Regulation 18.108.026.

e) There is an existing network of ranch roads throughout the property. The existing road network is sufficient for access to proposed vineyard blocks. The existing roads shall be maintained using BMPs including waterbars, straw mulch, and surfaced with crushed rock if needed. Please see Figure 2 in Appendix E for the roads which will be used as primary access to the vineyard blocks.

4. Location and source of water for irrigation or other uses.

a) The location of the existing wells, the proposed water sources, are shown on the Vicinity Map. Please see the WAA prepared by Richard C. Slade & Associates LLC dated January 2025.

5. Soil types/soil series identified in the Natural Resource Conservation Service (NRCS) Web Soil Survey.

a) The USDA – NRCS Web Soil Survey maps the soil within the project boundary as Felton Gravelly Loam with 30 to 50 percent slopes.

b) Some rock is expected to be generated as a result of this project. A proposed rock disposal area is shown on Sheet 1. Some of the rock generated will be used to construct erosion control features such as rock energy dissipaters and level spreaders. Rock may be crushed and used on the existing roads where needed. Rock not used immediately will be stockpiled for future use inside the proposed clearing limits. Stockpiles are expected to be less than 20 feet in height. Rock staging areas shall be located inside of proposed clearing limits. Temporary rock stockpiles shall also be located inside of proposed clearing limits. No grading activities, ground disturbance or rock storage will occur outside of the proposed clearing limits.

6. Critical areas, if any, within the development site that have serious erosion potential or problems.

a) There are no areas with serious erosion potential or problems.

7. Erosion calculations

a) Universal Soil Loss Equation (USLE) spreadsheets for this project are in Appendix B of this report.

b) Please see pre-project versus post-project soil loss analysis prepared by PPI Engineering dated January 2025.

8. Proposed erosion control methods including:

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.

1. A network of surface drainage infrastructure exists adjacent to the proposed vineyard. An existing culvert is to be replaced by a proposed drop inlet. Please see Sheet 1 for the location of the above erosion control items. Please see Detail sheets 2 and 3 and the Special Provisions for details on the erosion control items.

2. A variety of drainage systems will be utilized for erosion control in this project. Diversion ditches will direct runoff to drop inlets, and drainage pipelines will be used to direct runoff to desired locations. Level spreaders and rock energy dissipaters will be used at pipe outlets to disperse water and prevent concentrated flow from forming and developing gullies. Straw wattles will be installed. Please

see Sheet 1 for locations of the above erosion control items. Please see the Detail Sheets 2 and 3 and the Special Provisions for details on the erosion control items.

3. The final pass with disking equipment shall be performed across slopes to prevent channeling water downhill the first winter after development.

4. Straw wattles shall be installed the year of construction in the approximate locations shown on the Site Plan. Additional temporary erosion control measures shall be installed as needed.

b) Proposed vegetative erosion control measures including location, type and quantity of seed, mulch, fertilizer and irrigation, timing and methods of planting, mulching and maintenance of plant material and slopes until a specified percentage of plant coverage is uniformly established.

1. Disturbed areas shall be seeded as described below. Straw mulch shall be applied to all disturbed areas at a rate of 3,000 lbs/acre prior to October 15 of the year of construction.

2. A permanent cover crop strategy will be utilized. The permanent cover crop will be generated the first year by seeding with the following mix: Dwarf Barley at 50 lbs/acre, Blando Brome at 8 lbs/acre, Zorro Fescue at 12 lbs/acre, and Crimson Clover at 6 lbs/acre. A pre-approved alternative seed mix may be allowed.

   The permanent cover crop will be managed each year such that any areas which have less than 80% vegetative cover will be reseeded and mulched until adequate coverage is achieved. The permanent cover crop shall be mowed only and not disked.

3. The owner has the option of using a Dwarf Barley cover crop in the first three years that the block is planted to aid with vineyard establishment. If this option is used, seed shall be applied at a rate of 120 lbs/acre if broadcast or at a rate of 60 lbs/acre if drilled. The cover crop within the vineyard may be disked each spring after April 1 for the first three years. An alternative cover crop seed mix may be used upon prior approval. Each year the owner chooses to disk, the area shall be straw mulched at a rate of 3,000 lbs/acre prior to October 15. The permanent seed mix will be seeded prior to October 15 of the fourth (or earlier) year.

4. Herbicides may be used for weed management. Herbicides may be applied in spring (no earlier than February 15 to ensure adequate vegetative cover in the spray strips for the remainder of the rainy season). Strip spraying is permitted within the vineyard blocks such that the overall vegetated cover meets the required 80% cover detailed above. If the owner chooses to farm without herbicide, an alternative will be to hand-hoe around the base of the vine only, or other methods that do not result in a continuous bare strip. Other methods of vegetation management may be allowed with prior approval from the Engineer and provided the minimum cover requirements are achieved.

5. Fertilizer shall be applied as necessary by vineyard management personnel for both the vineyard and to ensure specified percent vegetative cover crop is achieved. Site-specific soil analysis should be performed.

6. The vineyard avenues shall be mowed only and shall not be disked. Unless otherwise noted, all avenues shall conform to the natural grade. Vineyard avenues shall be seeded and mulched prior to October 15 of the year of construction and in subsequent years in bare or disturbed areas. The cover crop will be managed each year such that any avenues which have less 80% vegetative cover will be reseeded and mulched until adequate coverage is achieved. Seeding and mulching is not required on avenues and roads properly surfaced with gravel.

7. The proposed vine by row spacing is expected to be 3' by 5', however in areas where cross-slope exceeds 15% the owner shall increase the row spacing as needed to ensure there is adequate room for equipment. Width of tillage equipment shall be no more than 75% of row width to allow for bench formation and to minimize erosion.

8. The owner has the freedom to further subdivide vineyard blocks within the footprint of the proposed vineyard for irrigation and viticulture purposes. The proposed vinerow directions shall not be altered without an approved modification from Napa County.

9. Irrigation pipelines shall be located within existing roadways, vineyards and vineyard avenues, and/or within proposed clearing limits. Regardless of pipeline location, pipeline trenches located on ground slopes greater than 15% shall be backfilled using imported or select native granular material to a depth of 6 inches above the pipelines such that voids do not form below haunches of pipe. Backfill shall be wheel rolled or otherwise compacted to reduce settlement. Final grading over trenches shall be mounded and water-barred such that water is directed away from trenches.

10. As stated in the Napa County Protocol for Re-Planting/Renewal of Approved Non-Tilled Vineyard Cover Crops dated March 23, 2004, when it becomes necessary, either by routine or emergency, to re-establish or renew vineyard cover crop the following measures should be followed:
    - Seek professional consultation, including soil nutrient analysis, to determine the reasons for the original cover crop's failure. Adjust soil fertility, irrigation and seed selection accordingly.
    - When tillage is necessary, alternate rows should be tilled, seeded, and straw-mulched to effectively accomplish the re-establishment/renewal process over a two-year period.
    - Tillage and re-seeding should be conducted in the following manner:
        - In year 1, till to prepare seed bed and sow desired cover crop in every other row ("the evens"), leaving the alternate rows ("the odds") untilled and mowed only.

- Mulch all tilled rows having an up and down hill (perpendicular to contour) row direction with 3,000 lbs/acre of loose straw, or approved equivalent, after seeding.
- Tilled rows with cross-slope (parallel to contour) row direction and slope gradients less than 15% may not require straw mulch.
- In year 2, till to prepare seed bed and sow desired cover crop in "odd" rows.
- In year 2, leave "even" rows untilled and mowed only.
- Mulch rows tilled in year 2 as specified above.
- Put all re-establishment measures in place by October 15
- In year 3, return all rows to non-tilled culture.

9. Stormwater stabilization measures, if the development of the site will result in increased peak rates of runoff that may cause flooding or channel degradation downstream.

a) No significant increase in quantity or rate of runoff is expected as a result of this project.

b) Please see hydrology report prepared by PPI Engineering dated January 2025.

10. An implementation schedule showing the following:

a) The proposed clearing, grading, and/or construction schedule.

DATE	DESCRIPTION
April 1:	Commence clearing and tillage operations.
October 1:	All tillage and erosion control completed. This shall include complete construction of all structural measures required in these blocks which could include ditches, drop inlets, surface drainage pipelines, level spreaders, rock aprons, etc.
October 15:	All winterization complete, including seeding, straw mulching, and straw wattle installation.

b) The proposed schedule for winterizing the site (generally by October 15 of each year the permit is in effect.)

The site shall be winterized and all necessary erosion control measures described in the Erosion Control Plan shall be installed by October 15.

c) The proposed schedule of installation of all interim erosion and sediment control measures, including the stage of completion of such devices at the end of the grading season (generally October 15) of each year the permit will be in effect.

See Item 10a).

d) The schedule for installation of permanent erosion and sediment control devices where required.

See Item 10a).

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

Typical costs for installing erosion control measures as described in this plan range from $10,000 to $30,000 per acre.

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EROSION CONTROL PLAN

S T A N D A R D P R O V I S I O N S

SECTION 1 - SCOPE OF WORK

These specifications cover the construction of the erosion control measures for approximately 7.8 acres of vineyard to be developed by Damele Roberta Tr Etal.

The drawing numbered 12410701B, Sheets 1 through 3, and these Specifications describe in detail the construction of the complete erosion control system. Requests for further information or clarification of the work to be done can be made to Jim Bushey or Matt Bueno at the Napa office of PPI Engineering, phone (707) 253-1806.

All costs for the complete construction of the erosion control system must be included in the bid items, since no other payment will be made outside of the bid items. This includes all costs for moving onto and off of the job site, all equipment, tools, materials, labor, fuel, taxes, and incidentals for furnishing and installing the erosion control system.

Surveying adequate for construction will be provided by the Owner, at the Owner's expense. The Contractor will be responsible for preserving construction survey stakes and markers for the duration of their intended use. Any restaking costs or additional survey work requested by the Contractor shall be deducted from the final payment to the Contractor. The Owner does not guarantee that the project being bid will be awarded. The Owner also reserves the right to change the quantities of actual work performed as needed with payment made according to the new quantities at the unit price bid.

SECTION 2 - AUTHORITY OF OWNER AND ENGINEER

The property is owned by Damele Roberta Tr Etal. Damele Roberta Tr Etal or the appointed representative shall have the final say in the event of a dispute with the Contractor.

The Owner shall appoint PPI Engineering as the Engineer to perform periodic review of the work. PPI Engineering shall report any unsatisfactory work to the Owner. The Contractor shall be responsible for any engineering fees or repair costs associated with bringing the unsatisfactory work into compliance with the Plans and Specifications.

SECTION 3 - CHANGES IN WORK

Materials and the manner of performance of the work performed in this contract shall be according to the Plans and Specifications. Modifications to the Plans or Specifications shall be agreed upon in writing by the Contractor, Owner, and Engineer before the work in question is performed. Materials and construction methods shall be as specified on the Plans and Specifications. The burden of proof that a given material or method constitutes an equivalent to the one specified will rest with the Contractor.

SECTION 4 - UTILITIES

At least two working days prior to beginning any excavation on the project, the Contractor shall contact Underground Service Alert (USA) at 1-800-642-2444 and request field location of all existing utilities.

Certain facilities at the site are existing. The Contractor shall be careful to avoid damaging existing facilities and shall notify the Owner immediately if any damage does occur. The cost of repairing any damage shall be the sole responsibility of the Contractor.

SECTION 5 - PROSECUTION OF THE WORK

Unless otherwise provided, the contract time shall commence upon issuance of a Notice to Proceed by the Owner. The work shall start within ten days thereafter and be diligently prosecuted to completion within the time specified in the Contractor's bid. If weather conditions prevent completion of the project within the specified amount of time, the Owner may extend the completion date of the project.

SECTION 6 - RESPONSIBILITIES OF THE CONTRACTOR

The Contractor agrees that in accordance with generally accepted construction practices, Contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including the safety of all persons and property. This requirement shall be made to apply continuously and not be limited to normal working hours. Contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of the work on this project, excepting liability arising from the sole negligence of design professional.

The Contractor shall be responsible for controlling dust and mud generated from construction activities. The Contractor shall not allow dust or mud to obstruct vehicular traffic on County roads or State Highways. The Contractor shall be responsible for cleaning all vehicles prior to leaving the site as required by the California Highway Patrol. The Contractor, at their own expense, shall provide adequate dust control and prevention of mud tracking on roads, and take other preventative measures as directed by the Owner.

The Contractor shall be responsible for following all safety laws that may be applicable. Of particular concern are the trench safety regulations issued by CAL-OSHA. The Contractor alone shall be responsible for the safety of their equipment and methods and for any damage or injury which may result from their failure, improper construction, maintenance, or operation.

The Contractor shall be responsible for installing necessary sediment retention measures to keep sediment from leaving the site if construction activities continue beyond October 1.

The Contractor shall keep the work site clean and free of rubbish and debris throughout the project. Materials and equipment shall be removed from the site as soon as they are no longer necessary or the project is completed.

The Contractor shall also be responsible for ensuring that all permits which are necessary for construction have been obtained and that copies of these permits are maintained onsite at all times.

The Contractor shall, at their own expense, furnish all necessary light, power, pumps, and water necessary for the work.

SECTION 7 - MEASUREMENT AND PAYMENT

Payment shall be made at the unit prices bid according to the actual quantities installed. Measurement of the final quantities shall be the responsibility of the Owner's Engineer.

The Engineer shall periodically observe the project during construction and upon completion of the project any unfinished or unacceptable work observed will be brought to the Contractor’s attention verbally and in writing. Final payment will be made upon satisfactory completion of all work items required by these Plans and Specifications.

SECTION 8 - GUARANTEE

In addition to the guarantees from suppliers, the Contractor shall guarantee the work he performs for a period of two years. Any repairs needed to the system within two years of completion due to faulty workmanship or materials shall be promptly repaired at no expense to the Owner. Any costs incurred by the Owner and/or Engineer within two years of completion due to rubbish or debris placed in a trench or other excavation shall be paid by the Contractor.

Unless otherwise provided in writing, payment by the Owner to the Contractor for installation of this system shall constitute acceptance of all provisions in this document by the Contractor.

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EROSION CONTROL PLAN

S P E C I A L P R O V I S I O N S

SECTION 1 - SURFACE DRAINAGE PIPELINE

1.1 GENERAL:

Surface drainage pipelines shall be installed to collect surface runoff at low points throughout the project area and transport it to a protected outlet, as shown in Detail 1, Sheet 2.

1.2 MATERIALS:

Surface drainage pipelines shall be constructed of solid corrugated polyethylene pipe (CPP) as shown on the Plans. Corrugated plastic pipe for use as surface drainage pipelines shall meet the standards of ASTM F667 and AASHTO M294, as applicable. Bent or damaged pipe shall not be used in the drainage system and shall be removed from the job site.

Pipe connections shall be made with fittings manufactured by the same manufacturer who made the pipe. All connections shall be securely fastened and the resulting connection shall not have gaps greater than 1/8 inch wide.

Gravel envelope bedding material may be volcanic rock or other granular material as approved by the Engineer. It shall be free of organic matter, clay, or other material which could prevent it from flowing uniformly around the pipe. One hundred percent of the material must pass the 1-1/2" clear square openings. Ninety to one hundred percent must pass through the 3/4" clear square openings. No more than 3% may pass the #200 U.S. Standard Sieve.

Gravel envelope material may also be a blend of clean hard sand and gravel. It shall be free of organic matter, clay, or other material that would decrease its hydraulic conductivity with time. The material shall be well graded. The coefficient of uniformity (D60/D10) must be greater than 4, and the coefficient of curvature ((D30^2/(D10 x D60)) must be between 1 and 3. One hundred percent must pass the 1/2" clear square openings. No more than 5% may pass the #100 U.S. Standard Sieve. An example of this material would be 80% 3/8 crushed rock and 20% washed concrete sand.

Alternative bedding material may be approved by the Engineer. A sample and sieve analysis of the proposed material must be submitted to the Engineer at least 2 days prior to delivering material to the job site. It will be the responsibility of the Contractor to remove and dispose of all envelope material not used on the project.

1.3 INSTALLATION:

The Contractor may use a trencher, or drainage plow with vertical soil displacement or backhoe/excavator for the excavation and placement of the surface drainage pipe as dictated by soil conditions. The operator shall be skillful in laying the tubing. Grade control may be established by visual control with grade stakes set no more than 100 feet apart or by laser control with grade stakes set no more than 200 feet apart.

Construction staking shall be provided by the Owner's Engineer. The slope, alignment, and depth of placement of the tubing shall be as shown on the Plans and as staked in the field. A minimum cover of 4.0 feet must be provided, unless otherwise staked in the field by Engineer.

A gradual variation of no more than 0.10 foot from grade will be allowed where slopes are 2% or less. Where slopes are greater than 2%, a gradual variation of no more than 0.20 foot from grade will be allowed. No reverse grade will be allowed. A gradual variation of no more than 1 foot from design alignment is allowed.

Stretching of the tubing should be avoided during installation. No more than 10% stretch will be allowed.

Cobbles and rocks may be present on the project site. The Contractor shall take necessary actions to work around the cobbles and rocks at their own expense.

1.4 BEDDING AND BACKFILL:

Surface drainage piping shall be backfilled with approved gravel envelope material to a depth of at least 3 inches above the pipe. The trench bottom shall be continuous, firm, relatively smooth, and free of rocks or other objects larger than 1 inch. Pipe may be placed directly on the bottom of the trench. Care shall be taken to ensure that bedding material completely surrounds the pipe.

Surface drainage piping shall be backfilled with approved gravel envelope material. The trench bottom shall be continuous, firm, relatively smooth, and free of rocks or other objects larger than 1 inch. Bedding shall be provided around the pipe and shall be compacted to 90% in the haunching area.

Rocks or clods shall not be allowed to fall upon or otherwise strike the pipe during any phase of construction. No rocks larger than 6" may be placed within 12" of the pipe.

Final backfill shall be placed and spread in approximately uniform layers to fill the trench completely. Rolling equipment or heavy tampers shall not be used to consolidate backfill.

Where pipe is installed under all-weather roads, backfill shall be Class II Aggregate Base compacted to 90% per ASTM D1557. Road surface shall be regraded or paved as necessary to match original conditions.

SECTION 2 - CUTOFF COLLAR

2.1 GENERAL:

Cutoff collars shall be installed on all solid pipelines with slopes greater than 5%, as shown in Detail 2, Sheet 2. Spacing between collars shall be as specified in the table below or as staked in the field by the Engineer.

Ground Slope (%)	Spacing (Feet)
0-5	None Required
6-15	200
16 and greater	100

2.2 MATERIALS:

Cutoff collars shall be constructed of Portland Cement Concrete, 3,000 psi minimum compressive strength.

The envelope material shall be the same as that specified in Section 1, subsection 1.2.

2.3 INSTALLATION:

Cutoff collars shall extend a minimum of 1.0 foot into native, undisturbed material on the sides and bottom of the trench and extend 1.0 feet above the top of the pipe measured from the uphill side. Cutoff collars shall be a minimum of 8 inches thick. A watertight seal shall be formed between the cutoff wall and the pipeline. The wall of the collar shall be poured against undisturbed soil. Backfill shall be placed around wall and hand compacted to ensure no voids are present.

The Contractor shall perforate the pipe with a minimum of 30 3/8-inch diameter holes along the pipe a minimum of 3 feet upstream of the cutoff collar to allow water to infiltrate back into the drainline. This perforated section shall be backfilled with approved envelope material. Gravel envelope shall be a minimum of 3 inches thick on all sides of the pipe.

The Contractor shall take precautions to ensure that concrete does not flow through perforations in amounts that would cause any reduction in flow capacity of pipe.

SECTION 3 – DITCH

3.1 GENERAL:

Vineyard avenues of certain blocks will be constructed with a ditch along the uphill side to collect upslope runoff and direct it to a stable outlet or drop inlet.

3.2 MATERIALS:

Ditches will be cut into native material. Rock for lining ditches (if necessary) will be native rock generated onsite, 4-inch to 8-inch diameter. Filter fabric shall be Mirafi 140N or equal.

3.3 INSTALLATION:

Ditches shall be cut into native material to the extent possible. Fill material, if necessary, shall be moisture conditioned and compacted to 90% relative compaction per ASTM D1557. Flowline slope shall be 2% minimum. Side slopes of the ditches shall be 2:1 (Horizontal:Vertical) as shown on Detail 4, Sheet 3. The ditch shall be a minimum of 12 inches deep when complete and shall be lined with 4 to 8 inch diameter angular rock if the flowline slope exceeds 5%. A non-woven filter fabric shall be placed between the ground surface and the rock. The rocks shall be keyed into the sides of the ditch such that they do not obstruct or reduce the cross section of the channel. The ditch will outlet to a Drop Inlet or rock apron.

SECTION 4 – STANDARD DROP INLETS

4.1 GENERAL:

Drop inlets shall be furnished and installed by the Contractor in the locations shown on the plans and as staked in the field by the Engineer, according to Detail 3, Sheet 2. The riser shall be 18" in diameter and the connector pipe 8" in diameter unless shown otherwise on Sheet 1. A grate shall be installed over the top of each drop inlet.

4.2 MATERIALS:

Drop inlet risers shall be galvanized, 14 gauge corrugated metal pipe (CMP) of the diameter shown on the Plans and/or Specifications.

Grates shall be Agri Drain Bar Guard or equal.

Concrete for the bottom of the inlet shall be Portland Cement concrete, 3,000 psi minimum compressive strength.

4.3 INSTALLATION:

Standard Drop inlets shall be constructed as shown on the detail sheet and as staked in the field by the Engineer. Connector pipes shall be mortared in place to form a watertight seal. Grates shall be bolted or locked to drop inlet riser. Backfill around the inlet shall be compacted sufficiently by hand or water-jetted such that excessive settlement does not occur**.**

SECTION 5 – CULVERT REPAIR

5.1 GENERAL:

Existing culverts shall be inspected, repaired, replaced or maintained as needed to divert water to vegetated vineyard areas as shown on the Plans and as staked in the field by the Engineer. If upon inspection, the Engineer determines that replacement of the culvert is required, the culvert shall be replaced in accordance with the provisions outlined in Sections 5.2 and 5.3 of these specifications and according to Detail 2, Sheet 3.

5.2 MATERIALS:

Culverts shall be Aluminized Steel Type 2 Corrugated Steel Pipe (CSP), 12 gauge minimum, conforming to ASTM A929 and AASHTO M36. Backfill for culverts shall be select native granular material approved in the field by the Engineer. Clean 8-inch median field rock generated on site will be used for energy dissipation and channel protection. Filter fabric shall be Mirafi 1100N filter fabric or equivalent (if needed).

5.3 INSTALLATION:

A trench will be excavated such that the invert of the pipe is at the same elevation of the upstream and downstream flow line. Culverts shall be installed to follow the natural grade of the existing ground surface.

Backfill around the culvert shall be placed in no greater than 8 inch lifts and compacted to 95% relative compaction per ASTM D1557. A minimum of 2 feet of cover shall be maintained along the entire length of pipe unless approved otherwise by the Engineer.

All disturbed areas shall be seeded and mulched. Permits from appropriate regulatory agencies shall be obtained prior to construction.

SECTION 6 – ROCK LEVEL SPREADER

6.1 GENERAL:

A rock level spreader will be constructed as shown in Detail 4, Sheet 2 along the field edges from excess fieldstone as staked in the field by the Engineer.

6.2 MATERIALS:

Rock used in the construction of the rock level spreader shall be field rock generated onsite and shall be well-graded to prevent large voids within the structure. Smaller (3-inch minus) field rock and ¾-inch minus gravel will be used to line the trough of the spreader. Gravel may be crushed rock generated onsite but should contain sufficient fines to reduce the overall permeability of the spreader and cause water to flow laterally along the length of the structure (generally equivalent to Cal –Trans Class II Aggregate Base).

6.3 INSTALLATION:

The rock level spreader shall be constructed as shown on Detail 4, Sheet 2 and as staked in the field by the engineer. A bench shall be cut along the outboard toe for placement of rock. Care shall be taken to remove as much of the fine material (clay and silt size) as possible prior to placing the rock. The rock level spreader shall be parallel to the contour to ensure the water is evenly distributed, and the ends shall be turned uphill at least 2 feet in elevation to prevent water from running around the end. The spreader shall be constructed of large, well-graded rock to a finished cross-section with a trough depth of at least 3 feet. A layer of 3-inch minus field rock shall be spread 6-inches thick within the trough and a 6-inch layer of gravel applied over the smaller rock. Finished depth of the trough shall be at least 1 foot.

SECTION 7 – ROCK APRON

7.1 GENERAL:

A rock apron will be installed at the outlet of a ditch to help disperse concentrated flow and to minimize erosion downstream of the outlet. Rock aprons shall be installed where shown on the Plans and as staked in the field by the engineer.

7.2 MATERIALS:

Rock used in the construction of rock aprons shall be 4”-12” well graded field rock generated onsite. Filter fabric shall be Mirafi 140N or equal.

7.3 INSTALLATION:

Rock aprons shall be constructed as shown on Detail 3, Sheet 3. All rock shall be placed on undisturbed native vegetation if possible. If soil is disturbed place rock on filter fabric. The apron shall extend approximately 10 feet from the outlet of the pipe. The upstream end of the apron shall be approximately 6 feet wide. The downstream end shall be approximately 10 feet wide. A small keyway shall be excavated into native material at the downstream end of the spreader as shown in the detail. A rock berm shall be constructed at the downstream end of the apron as shown on the detail.

SECTION 8 - TEMPORARY MEASURES

8.1 GENERAL:

Temporary erosion control measures shall be constructed by the Owner. These measures can include water bars, straw wattles, straw mulching, straw bale dikes, and other practices as needed. The measures shall be constructed in conformance with the detail drawings and maintained in a functional condition throughout the rainy season.

SECTION 9 - MAINTENANCE

9.1 GENERAL:

The erosion control measures described in these Specifications and shown on the Plans and Details require regular maintenance in order to function as intended. Vineyard management personnel shall assure that the erosion control measures are monitored throughout the rainy season each year and necessary repairs and/or maintenance are performed immediately. Maintenance operations shall include, but not be limited to the following activities.

9.2 DITCHES:

Ditches shall be monitored for over-topping and repaired as needed. Debris that could reduce the capacity of the ditch shall be removed during/after each storm event.

9.3 STRAW WATTLES:

Straw wattles shall be monitored and repaired as needed to ensure water does not run under the wattle or between adjacent wattles. Should excessive erosion cause the wattle to fill with sediment, this material shall be removed to a protected location and the source of the sediment located and protected as needed.

9.4 ROCK ENERGY DISSIPATERS:

These structures shall be monitored during/after every runoff event the first year and periodically in subsequent years. Adjustments shall be made as necessary to ensure flow is dissipated in a non-erosive manner.

9.5 DROP INLETS:

Drop inlets are designed with trash racks at the ground surface. Debris shall be removed from trash racks after each storm event or as necessary to ensure a clear flow path for water entering the drop inlet. Damaged trash racks shall be repaired immediately in order to ensure that unacceptable quantities of debris do not enter the storm drainage piping system. Drop inlets shall also be inspected annually for any sediment that may have accumulated within the riser. Sediment shall be removed and spread in a safe location and protected as necessary.

9.6 LEVEL SPREADERS:

Level spreaders shall be inspected after each storm event the first year and at least annually thereafter to ensure proper functioning.

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



Photo 1

6/6/2024



Photo 2

6/6/2024

APPENDIX B

USLE CALCULATIONS

PPI Engineering

Napa County
Maximum Length of Slope
for a soil loss of 3 tons per acre

NAME: B & F Farms DATE: 3/26/24

Cover Type: Permanent Cover Crop
Soil Unit No. (100-182)--- 136 -K= 0.15
Soil Name Felton -R= 75
-T= 3

Percent Cover		65% Up & Down Hill	70% Up & Down Hill	75% Up & Down Hill	80% Up & Down Hill	85% Up & Down Hill	90% Up & Down Hill
		C= 0.058 P= 1.0	C= 0.046 P= 1.0	C= 0.034 P= 1.0	C= 0.022 P= 1.0	C= 0.015 P= 1.0	C= 0.010 P= 1.0
	2	3,413,910	7,392,969	20,249,525	86,417,495	309,769,882	1,196,766,620
	4	44,882	80,121	170,586	506,507	1,319,513	3,636,149
	6	4,687	7,451	13,639	32,576	70,074	157,666
	8	2,158	3,431	6,281	15,001	32,268	72,603
	10	1,151	1,831	3,351	8,003	17,215	38,734
	12	697	1,108	2,028	4,843	10,418	23,441
P	14	457	726	1,330	3,176	6,832	15,372
E	16	318	505	925	2,210	4,754	10,696
R	18	232	368	674	1,609	3,461	7,788
C	20	175	278	509	1,215	2,613	5,880
E	22	136	216	395	945	2,032	4,572
N	24	108	172	315	753	1,619	3,643
T	26	88	140	256	612	1,317	2,964
	28	73	116	212	507	1,091	2,455
S	30	61	98	179	427	918	2,066
L	32	52	83	152	364	783	1,762
O	34	45	72	132	314	676	1,521
P	36	39	63	115	274	590	1,327
E	38	35	55	101	242	520	1,169
	40	31	49	90	215	462	1,039
	42	28	44	81	192	414	931
	44	25	40	73	174	373	840
	46	23	36	66	158	339	763
	48	21	33	60	144	310	697
	50	19	30	55	132	285	641

NOTES:
C=Cover and Management Factor
P=Practice Factor

APPENDIX C

VEGETATION RETENTION CALCULATIONS

B & F FARMS
7335 ST HELENA HWY

3:1 Tree Preservation Calculations

APN: 034-030-029

Area Type	Existing Area	Proposed Development area	Area to be Retained	% Retained	3:1 Ratio
Canopy Cover Entire Parcel	31.7	0.3	31.4	99%	0.9
Canopy Cover on Land Less than 30% Slope & Outside Stream Setbacks	0.6	0.1	0.5	83%	0.3
Canopy Cover on Land between 30% - 50% Slope & Outside Stream Setbacks	4.3	0.1	4.2	98%	0.3
Total Canopy Cover on Land Less than 50% slope & Outside of Stream Setbacks	4.9	0.2	4.7	96%	0.6

APN: 034-030-030

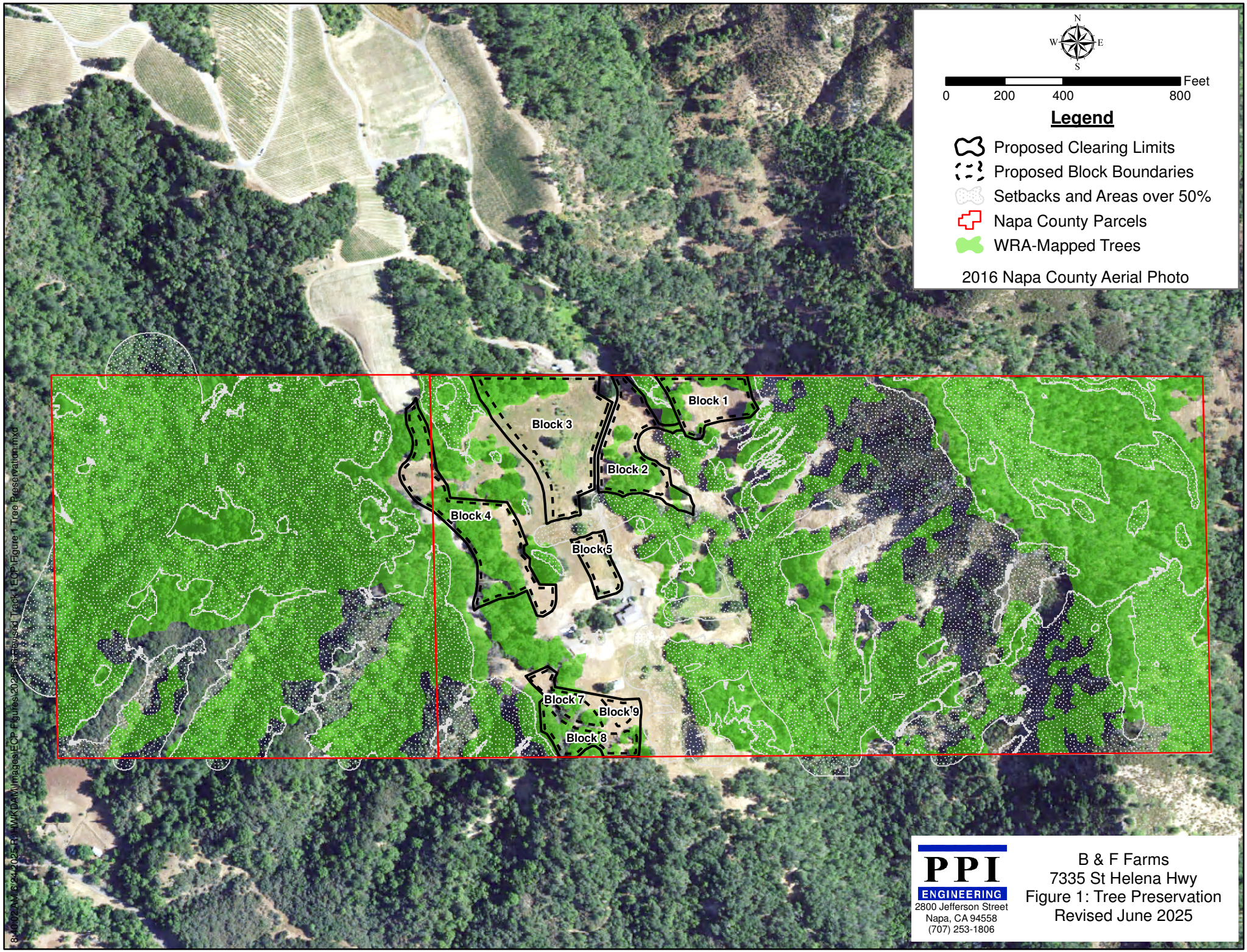
Area Type	Existing Area	Proposed Development area	Area to be Retained	% Retained	3:1 Ratio
Canopy Cover Entire Parcel	46.8	3.9	42.9	92%	11.7
Canopy Cover on Land Less than 30% Slope & Outside Stream Setbacks	6.3	2.2	4.1	65%	6.6
Canopy Cover on Land between 30% - 50% Slope & Outside Stream Setbacks	14.5	1.5	13.0	90%	4.5
Total Canopy Cover on Land Less than 50% slope & Outside of Stream Setbacks	20.8	3.70	17.1	82%	11.1

Combined Parcel Totals

Area Type	Existing Area	Proposed Development area	Area to be Retained	% Retained	3:1 Ratio
Canopy Cover Entire Parcel	78.5	4.2	74.3	95%	12.6
Canopy Cover on Land Less than 30% Slope & Outside Stream Setbacks	6.9	2.3	4.6	67%	6.9
Canopy Cover on Land between 30% - 50% Slope & Outside Stream Setbacks	18.8	1.6	17.2	91%	4.8
Total Canopy Cover on Land Less than 50% slope & Outside of Stream Setbacks	25.7	3.9	21.8	85%	11.7

Notes:
1. Source: Site-Specific Biological Study
2. 75% retention (or higher) is the same as 3:1 preservation (or higher)

Some rounding may occur


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Feet
Legend
Proposed Clearing Limits
Proposed Block Boundaries
Setbacks and Areas over 50%
Napa County Parcels
WRA-Mapped Trees
2016 Napa County Aerial Photo
Block 1
Block 2
Block 3
Block 4
Block 5
Block 7
Block 8
Block 9
8:40:02 AM 6/24/2025 P:\HWK\DAM\Images\ECP Figures\2025 Revised Track 1 ECP\Figure 1 Tree Preservation.mxd
PPI
ENGINEERING
2800 Jefferson Street
Napa, CA 94558
(707) 253-1806
B & F Farms
7335 St Helena Hwy
Figure 1: Tree Preservation
Revised June 2025

APPENDIX D

SLOPE CALCULATIONS

B & F FARMS
7335 ST HELENA HWY

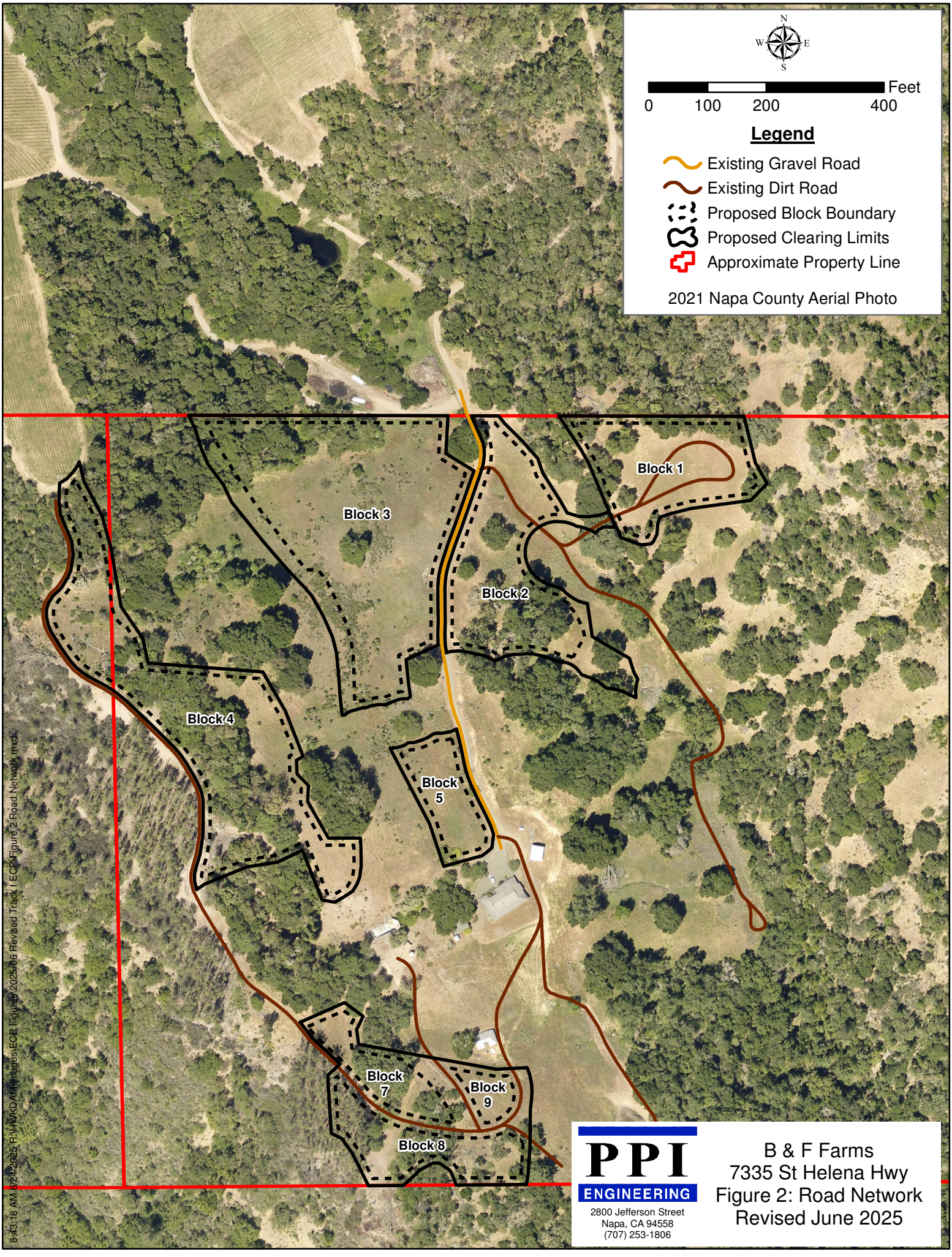
Average Slope Of Proposed Vineyard Blocks

Block	Gross Acres	Net Acres	Slope #1	Slope #2	Average slope
1	1.1	0.9	25%	33%	29%
2	1.6	1.1	15%	21%	18%
3	3.2	2.5	23%	30%	27%
4	2.6	2.0	18%	23%	21%
5	0.5	0.3	23%	29%	26%
7	0.6	0.3	22%	24%	23%
8	0.8	0.5	16%	21%	19%
9	0.3	0.1	27%	N/A	27%
Total	**10.7**	**7.8**			**24%**

Note: Some rounding may occur.

APPENDIX E

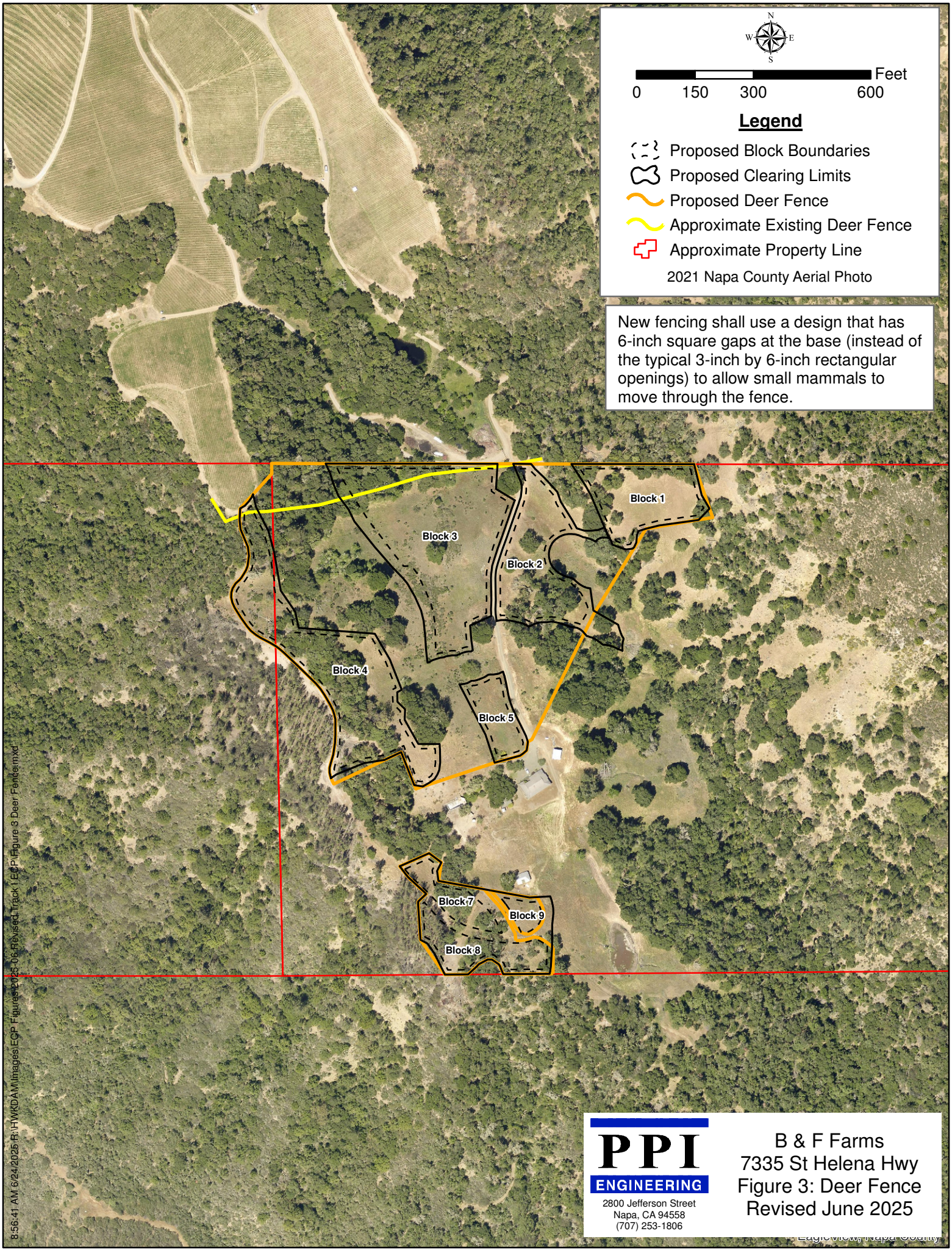
SUPPORTING FIGURES

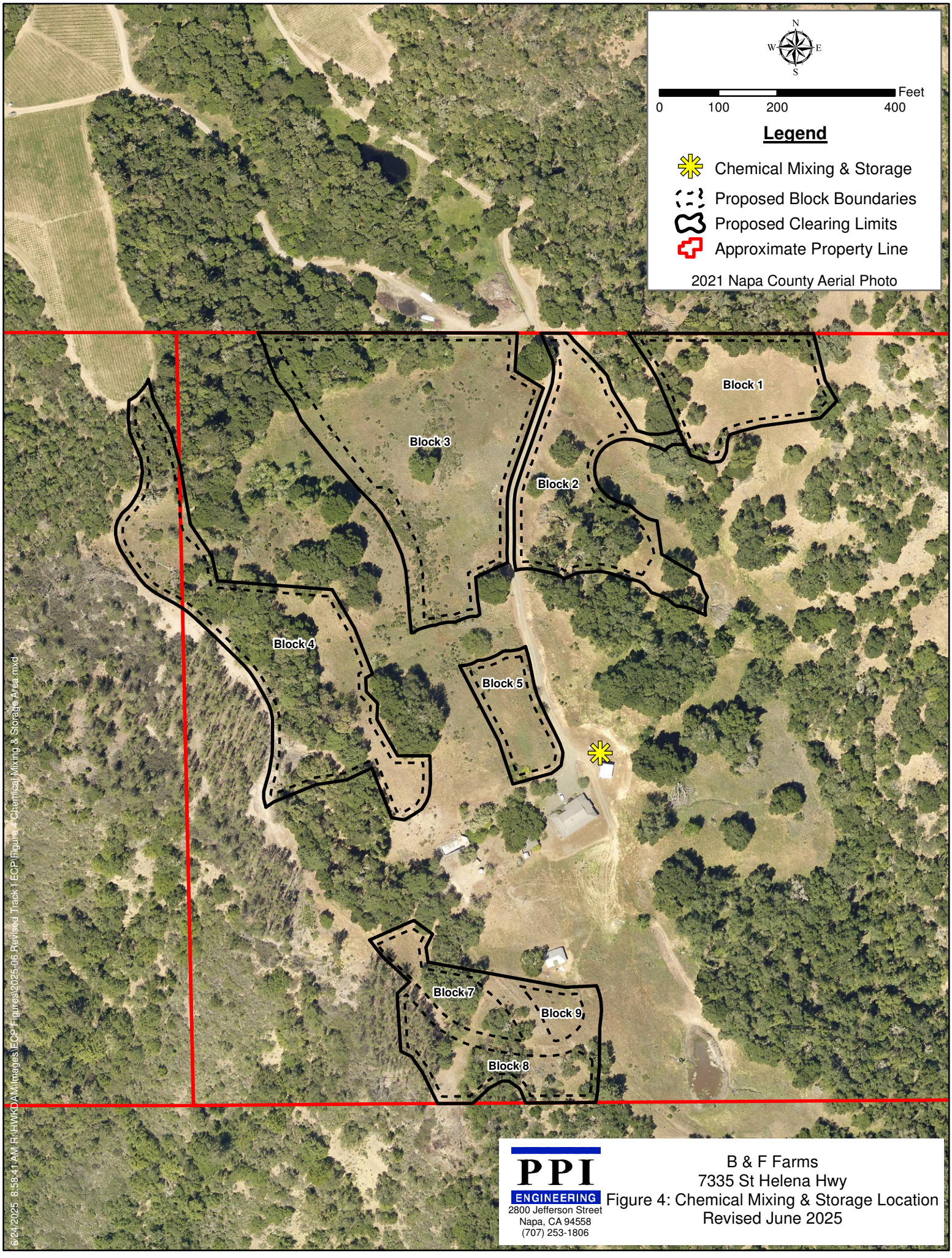


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B & F Farms
7335 St Helena Hwy
Figure 2: Road Network
Revised June 2025

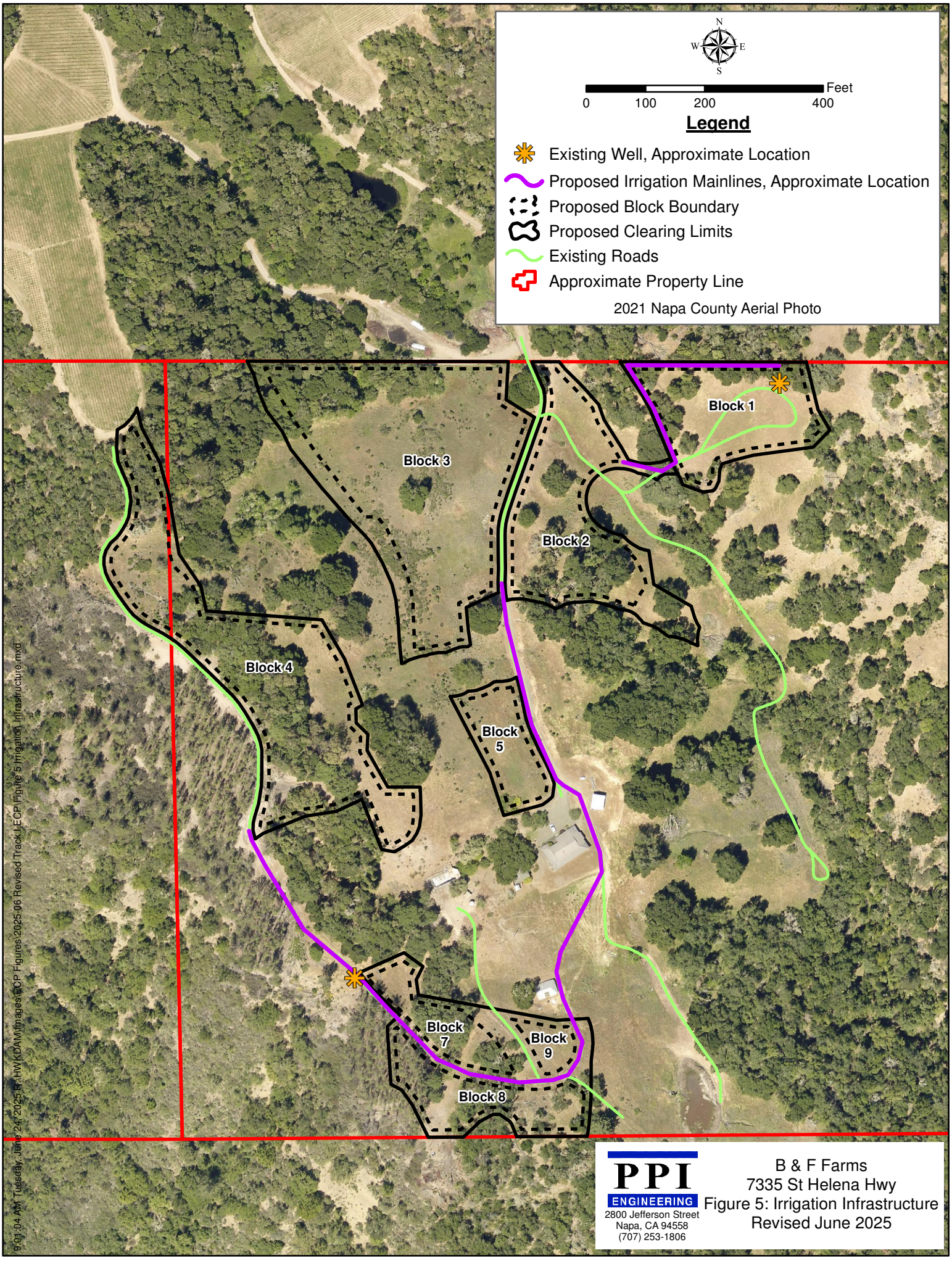
8:43:18 AM 6/24/2025 R:\HWKD Admin\Projects\EQP Figures\2025-06 Revised Track I EQP Figure 2 Road Network.mxd


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Feet
Legend
Proposed Block Boundaries
Proposed Clearing Limits
Proposed Deer Fence
Approximate Existing Deer Fence
Approximate Property Line
2021 Napa County Aerial Photo
New fencing shall use a design that has 6-inch square gaps at the base (instead of the typical 3-inch by 6-inch rectangular openings) to allow small mammals to move through the fence.
Block 1
Block 2
Block 3
Block 4
Block 5
Block 7
Block 8
Block 9
8:56:41 AM 6/24/2025 R:\HWKDAM\Images\EQP Figures\2025-06 Revised Track 1 EQP Figure 3 Deer Fence.mxd
PPI
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(707) 253-1806
B & F Farms
7335 St Helena Hwy
Figure 3: Deer Fence
Revised June 2025
Eagleview, Napa County



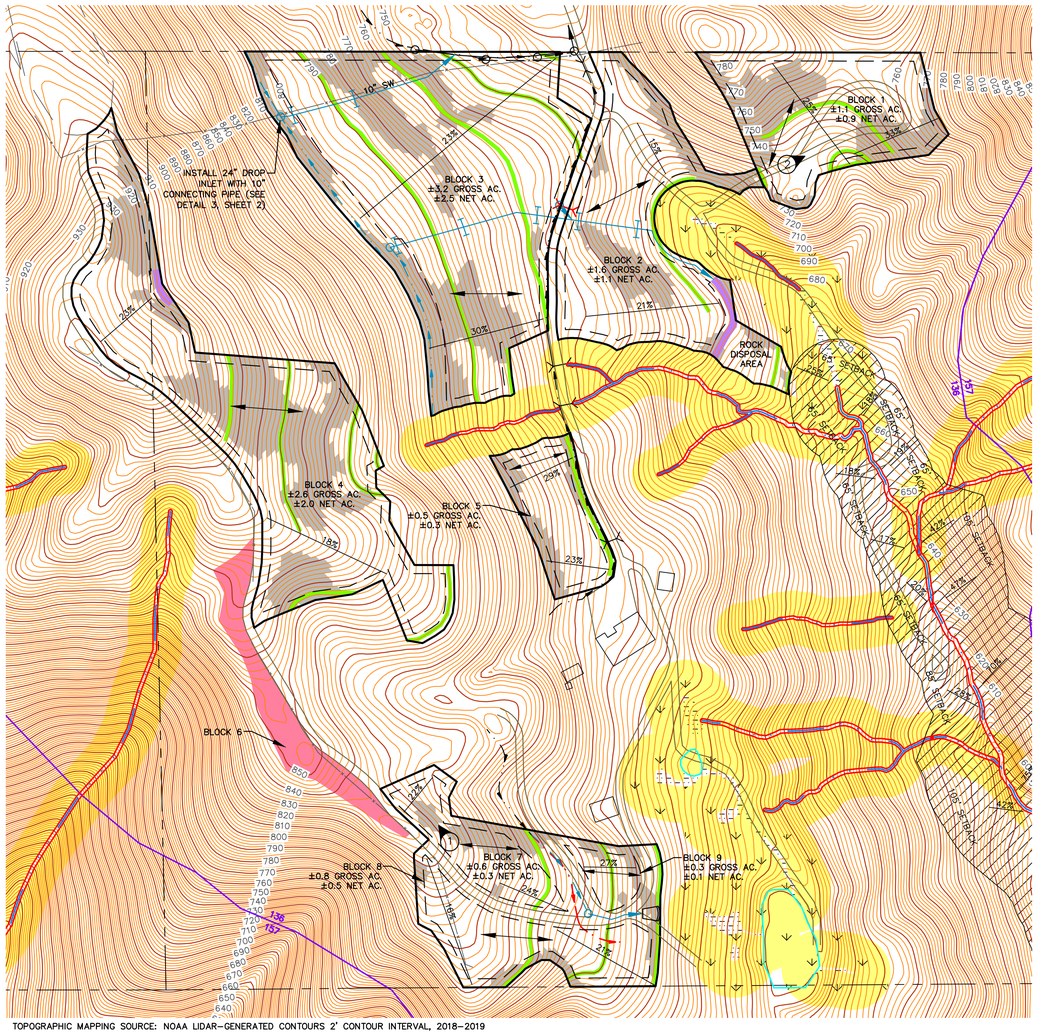
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Napa, CA 94558
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B & F Farms
7335 St Helena Hwy
Figure 4: Chemical Mixing & Storage Location
Revised June 2025



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(707) 253-1806

B & F Farms
7335 St Helena Hwy
Figure 5: Irrigation Infrastructure
Revised June 2025



TOPOGRAPHIC MAPPING SOURCE: NOAA LIDAR-GENERATED CONTOURS 2' CONTOUR INTERVAL, 2018-2019

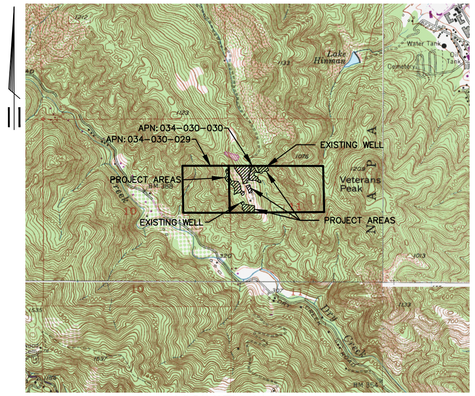
GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LEGEND

- APPROXIMATE PROPERTY LINE LOCATION
- EXISTING VINEYARD AREA
- EXISTING RESERVOIR
- WATERS OF THE U.S. MAPPED BY WRA
- TOP OF BANK, APPROXIMATE
- NAPA COUNTY STREAM SETBACK
- 35' WATERS SETBACK
- WETLANDS
- 50' WETLAND SETBACK
- EXISTING ROAD
- EXISTING FENCE
- EXISTING BUILDING
- EXISTING SURFACE DRAINAGE LINE, APPROXIMATE LOCATION, TO BE INSPECTED, REPAIRED, REPLACED OR MAINTAINED AS NEEDED (SEE DETAIL 1, SHEET 2)
- EXISTING DITCH, APPROXIMATE LOCATION, TO BE INSPECTED, REPAIRED & MAINTAINED AS NEEDED (SEE DETAIL 4, SHEET 3)
- EXISTING DITCH, TO BE REMOVED
- EXISTING DROP INLET, APPROXIMATE LOCATION, TO BE INSPECTED, REPAIRED, REPLACED OR MAINTAINED AS NEEDED (SEE DETAIL 3, SHEET 2)
- EXISTING CULVERT, APPROXIMATE LOCATION, TO BE INSPECTED, REPAIRED, REPLACED OR MAINTAINED AS NEEDED (SEE DETAIL 2, SHEET 3)
- EXISTING CULVERT, TO BE REMOVED
- PROPOSED VINEYARD CLEARING LIMITS
- PROPOSED VINEYARD BLOCK BOUNDARY
- PROPOSED 8" DIAMETER SURFACE DRAINAGE LINE, UNLESS OTHERWISE NOTED (SEE DETAIL 1, SHEET 2)
- PROPOSED CUTOFF COLLAR (SEE DETAIL 2, SHEET 2)
- PROPOSED DITCH (SEE DETAIL 4, SHEET 3)
- PROPOSED 18" DIAMETER DROP INLET, UNLESS NOTED OTHERWISE (SEE DETAIL 3, SHEET 2)
- PROPOSED STRAW WATTLE (SEE DETAIL 1, SHEET 3)
- PROPOSED ROCK LEVEL SPREADER (SEE DETAIL 4, SHEET 2)
- PROPOSED ROCK APRON (SEE DETAIL 3, SHEET 3)
- SW — SINGLE WALL CORRUGATED POLYETHYLENE PIPE
- AREA WHERE GROUND SLOPE IS 30 PERCENT OR GREATER
- AREA REMOVED FROM PROJECT
- PROPOSED VINEROW DIRECTION
- X — PHOTO POINT NUMBER & LOCATION (SEE APPENDIX A)
- X% — AVERAGE SURFACE SLOPE
- 136 / 157 — SOIL TYPE BOUNDARY



VICINITY MAP

USGS NAPA, RUTHERFORD, SONOMA
& YOUNTVILLE QUADRANGLES
TOWNSHIP 6 N., RANGE 5 W.
SCALE: 1" = ±2000'

NOTES:

1. OWNER: DAMELE, ROBERTA TR ETAL
   SITE ADDRESS: 7335 ST HELENA HWY, NAPA
   APN: 034-030-029 & -030
2. ACCESS TO PROJECT IS FROM ST HELENA HIGHWAY. THE SITE IS GATED AND LOCKED. ADMITTANCE IS AVAILABLE UPON REQUEST.
3. EXISTING VEGETATION CONSISTS OF ANNUAL GRASSES, SHRUBS, AND TREES.
4. DISTURBED AREAS SHALL BE SEEDED AS DESCRIBED BELOW. STRAW MULCH SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 3,000 LBS/ACRE PRIOR TO OCTOBER 15 OF THE YEAR OF CONSTRUCTION.
5. PERMANENT COVER CROP (NO-TILL):
   A PERMANENT COVER CROP STRATEGY WILL BE UTILIZED. THE PERMANENT COVER CROP WILL BE GENERATED THE FIRST YEAR BY SEEDING WITH THE FOLLOWING MIX:

VARIETY	RATE (LBS/ACRE)
DWARF BARLEY	50
BLANDO BROME	8
ZORRO FESCUE	12
CRIMSON CLOVER	6

   A PRE-APPROVED ALTERNATIVE SEED MIX MAY BE ALLOWED.

   THE PERMANENT COVER CROP WILL BE MANAGED EACH YEAR SUCH THAT ANY AREAS WHICH HAVE LESS THAN 80% VEGETATIVE COVER WILL BE RESEEDED AND MULCHED UNTIL ADEQUATE COVERAGE IS ACHIEVED. THE PERMANENT COVER CROP SHALL BE MOWED ONLY AND NOT DISKED.
6. THE OWNER HAS THE OPTION OF USING A DWARF BARLEY COVER CROP IN THE FIRST THREE YEARS THAT THE BLOCK IS PLANTED TO AID WITH VINEYARD ESTABLISHMENT. IF THIS OPTION IS USED, SEED SHALL BE APPLIED AT A RATE OF 120 LBS/ACRE IF BROADCAST OR AT A RATE OF 60 LBS/ACRE IF DRILLED. THE COVER CROP WITHIN THE VINEYARD MAY BE DISKED EACH SPRING AFTER APRIL 1 FOR THE FIRST THREE YEARS. AN ALTERNATIVE COVER CROP SEED MIX MAY BE USED UPON PRIOR APPROVAL. EACH YEAR THE OWNER CHOOSES TO DISK, THE AREA SHALL BE STRAW MULCHED AT A RATE OF 3,000 LBS/ACRE PRIOR TO OCTOBER 15. THE PERMANENT SEED MIX WILL BE SEEDED PRIOR TO OCTOBER 15 OF THE FOURTH (OR EARLIER) YEAR.
7. HERBICIDES MAY BE USED FOR WEED MANAGEMENT. HERBICIDES MAY BE APPLIED IN SPRING (NO EARLIER THAN FEBRUARY 15 TO ENSURE ADEQUATE VEGETATIVE COVER IN THE SPRAY STRIPS FOR THE REMAINDER OF THE RAINY SEASON). STRIP SPRAYING IS PERMITTED WITHIN THE VINEYARD BLOCKS SUCH THAT THE OVERALL VEGETATED COVER MEETS THE REQUIRED 80% COVER DETAILED ABOVE. IF THE OWNER CHOOSES TO FARM WITHOUT HERBICIDE, AN ALTERNATIVE WILL BE TO HAND-HOE AROUND THE BASE OF THE VINE ONLY, OR OTHER METHODS THAT DO NOT RESULT IN A CONTINUOUS BARE STRIP. OTHER METHODS OF VEGETATION MANAGEMENT MAY BE ALLOWED WITH PRIOR APPROVAL FROM THE ENGINEER AND PROVIDED THE MINIMUM COVER REQUIREMENTS ARE ACHIEVED.
8. FERTILIZER SHALL BE APPLIED AS NECESSARY BY VINEYARD MANAGEMENT PERSONNEL FOR BOTH THE VINEYARD AND TO ENSURE SPECIFIED PERCENT VEGETATIVE COVER CROP IS ACHIEVED. SITE-SPECIFIC SOIL ANALYSIS SHOULD BE PERFORMED.
9. THE VINEYARD AVENUES SHALL BE MOWED ONLY AND SHALL NOT BE DISKED. UNLESS OTHERWISE NOTED, ALL AVENUES SHALL CONFORM TO THE NATURAL GRADE. VINEYARD AVENUES SHALL BE SEEDED AND MULCHED PRIOR TO OCTOBER 15 OF THE YEAR OF CONSTRUCTION AND IN SUBSEQUENT YEARS IN BARE OR DISTURBED AREAS. THE COVER CROP WILL BE MANAGED EACH YEAR SUCH THAT ANY AVENUES WHICH HAVE LESS THAN 80% VEGETATIVE COVER WILL BE RESEEDED AND MULCHED UNTIL ADEQUATE COVERAGE IS ACHIEVED. SEEDING AND MULCHING IS NOT REQUIRED ON AVENUES AND ROADS PROPERLY SURFACED WITH GRAVEL.
10. THE PROPOSED VINE AND ROW SPACING IS EXPECTED TO BE 3' BY 5', HOWEVER IN AREAS WHERE CROSS-SLOPE EXCEEDS 15% THE OWNER SHALL INCREASE THE ROW SPACING AS NEEDED TO ENSURE THERE IS ADEQUATE ROOM FOR EQUIPMENT. WIDTH OF TILLAGE EQUIPMENT SHALL BE NO MORE THAN 75% OF ROW WIDTH TO ALLOW FOR BENCH FORMATION AND TO MINIMIZE EROSION.
11. THE OWNER HAS THE FREEDOM TO FURTHER SUBDIVIDE VINEYARD BLOCKS WITHIN THE FOOTPRINT OF THE PROPOSED VINEYARD FOR IRRIGATION AND VITICULTURE PURPOSES. THE PROPOSED VINEROW DIRECTIONS SHALL NOT BE ALTERED WITHOUT AN APPROVED MODIFICATION FROM NAPA COUNTY.
12. THE LOCATION OF THE EXISTING WELLS, THE PROPOSED WATER SOURCES, ARE SHOWN ON THE VICINITY MAP.
13. THE PROJECT HAS NO DEER FENCE. SEE APPENDIX E FOR THE PROPOSED DEER FENCE MAP.
14. REQUESTS FOR FURTHER INFORMATION, CLARIFICATION OF WORK TO BE DONE, OR INSPECTION INFORMATION CAN BE MADE TO JIM BUSHEY OR MATT BUENO AT PPI ENGINEERING IN NAPA, (707) 253-1806.
15. PROPERTY LINES AS SHOWN ARE APPROXIMATE. OWNER SHALL BE RESPONSIBLE FOR SURVEYING PROPERTY LINE(S) AS NECESSARY PRIOR TO ANY SITE DISTURBANCE.
16. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
17. AT LEAST 48 HOURS PRIOR TO EXCAVATING, THE CONTRACTOR SHALL CALL UNDERGROUND SERVICES ALERT (U.S.A.) AT 811 IN ORDER TO LOCATE EXISTING UTILITIES. IT IS THE OWNER'S RESPONSIBILITY TO LOCATE ANY ADDITIONAL UNDERGROUND UTILITIES THAT MAY HAVE BEEN INSTALLED "IN-HOUSE" OR BY PRIVATE CONTRACTORS AND THEREFORE MAY NOT BE LOCATED THROUGH UNDERGROUND SERVICE ALERT.
18. IT IS THE OWNER'S RESPONSIBILITY TO INSTALL ALL STRUCTURAL MEASURES AS SHOWN ON THE SITE PLAN AND DETAILS AND AS DESCRIBED IN THE SPECIFICATIONS WITHIN THE TIME FRAMES SPECIFIED FOR THIS PROJECT. ANY DEVIATION FROM THESE PLANS MUST BE REVIEWED AND APPROVED BY NAPA COUNTY PLANNING, BUILDING AND ENVIRONMENTAL SERVICES DEPARTMENT. IT IS THE OWNER'S RESPONSIBILITY TO INITIATE THIS MODIFICATION PROCESS. PPI ENGINEERING MUST BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION IN ORDER TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE OWNER/MANAGER AND CONTRACTOR(S). FOR ONGOING MULTI-YEAR PROJECTS PPI ENGINEERING MUST BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF RESUMING CONSTRUCTION EACH YEAR.

USDA SOIL CLASSIFICATIONS:

136	FELTON GRAVELLY LOAM, 30-50% SLOPE
157	LODO-MAYMEN-FELTON ASSOCIATION, 30-75% SLOPE



REV. NO.	DESCRIPTION	BY	DATE
1	DRAWING 12410701B SUPERSEDES DRAWING 12410701A. INCORPORATED CHANGES RESULTING FROM COUNTY COMMENTS. REMOVED BLOCK 6 FROM PROJECT.	JCJ	6-23-25

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PPI ENGINEERING
2800 JEFFERSON STREET
NAPA, CA 94558
707/253-1806 FAX 707/253-1604

JOB NO: 12410701
DWG. NO: 12410701B

B & F FARMS
7335 ST HELENA HWY

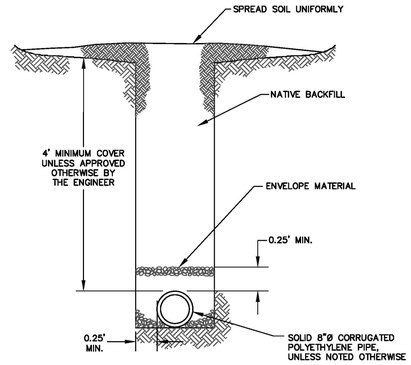
EROSION CONTROL PLAN

SITE PLAN

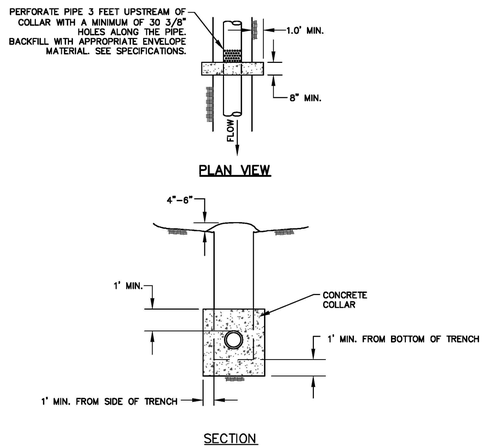
DESIGN ENGINEER: J. BUSHEY, R. ROSASCO

SCALE:	DRAWN BY:	DATE:	SHEET:
AS SHOWN	JCJ	6-23-25	1 OF: 3

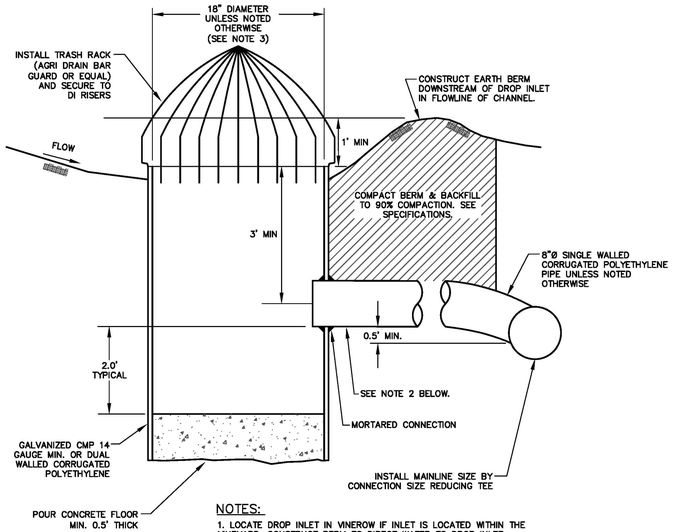
R:\PROJECTS\12410701 Hawkes-Damele Trust LET\Drawings\12410701B.dwg, 1:50x Plot, 6/23/2025 4:43:21 PM



1/2 SURFACE DRAINAGE PIPELINE
N.T.S.



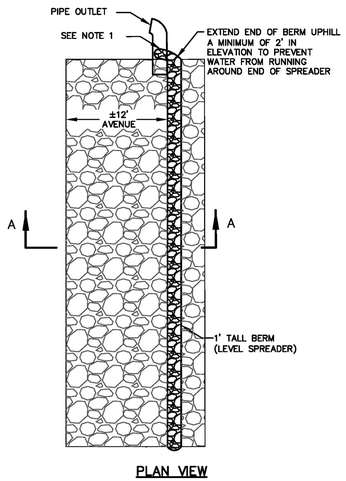
2/2 CUTOFF COLLAR
N.T.S.



NOTES:

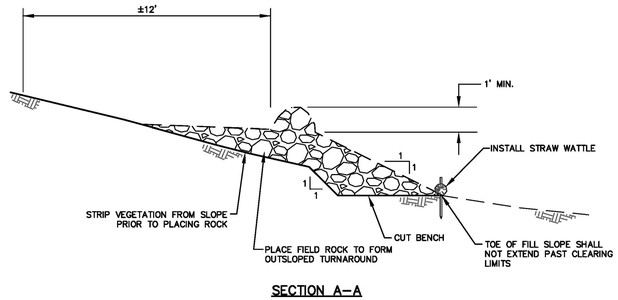
1. LOCATE DROP INLET IN VINEROW IF INLET IS LOCATED WITHIN THE VINEYARD. CONSTRUCT BERM TO DIRECT WATER TO DROP INLET.
2. NO ADDITIONAL CONNECTOR PIPE SHALL BE REQUIRED WHERE THE INLET IS LOCATED AT UPPER END OF ALL MAINLINES. MAINLINE SIZES AS SPECIFIED SHALL CONNECT DIRECTLY TO DROP INLET.
3. EXISTING DROP INLETS THAT REQUIRE REPAIR OR REPLACEMENT SHALL USE THE SAME SIZE AND TYPE OF MATERIAL AS THE EXISTING INFRASTRUCTURE UNLESS PRE-APPROVED OR OTHERWISE DIRECTED BY THE ENGINEER.

3/2 STANDARD DROP INLET
N.T.S.



NOTES:

1. WHERE A PIPE OUTLETS TO THE LEVEL SPREADER, THE PIPE SHALL BE CONSTRUCTED SO THAT THE FLOW LINE GRADUALLY TRANSITIONS TO BECOME PARALLEL WITH THE LEVEL SPREADER.
2. SMALLER (3-INCH MINUS) FIELD ROCK AND 3/4-INCH MINUS GRAVEL WILL BE USED TO LINE THE TROUGH.



4/2 ROCK LEVEL SPREADER
N.T.S.

DETAILS ON THIS SHEET:
SURFACE DRAINAGE PIPELINE
CUTOFF COLLAR
STANDARD DROP INLET
ROCK LEVEL SPREADER

REGISTERED PROFESSIONAL ENGINEER
JAMES R. BUSHEY
No. 49931
EXPIRES 9-30-26
Civil
STATE OF CALIFORNIA

REV. NO.	DESCRIPTION	BY	DATE
	DRAWING 12410701B SUPERSEDES DRAWING 12410701A. INCORPORATED CHANGES RESULTING FROM COUNTY COMMENTS. NO CHANGES WERE MADE TO THIS SHEET.	JCJ	6-23-25

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PPI ENGINEERING
2800 JEFFERSON STREET
NAPA, CA 94558
707/253-1806 FAX 707/253-1604

JOB NO: 12410701
DWG. NO: 12410701B

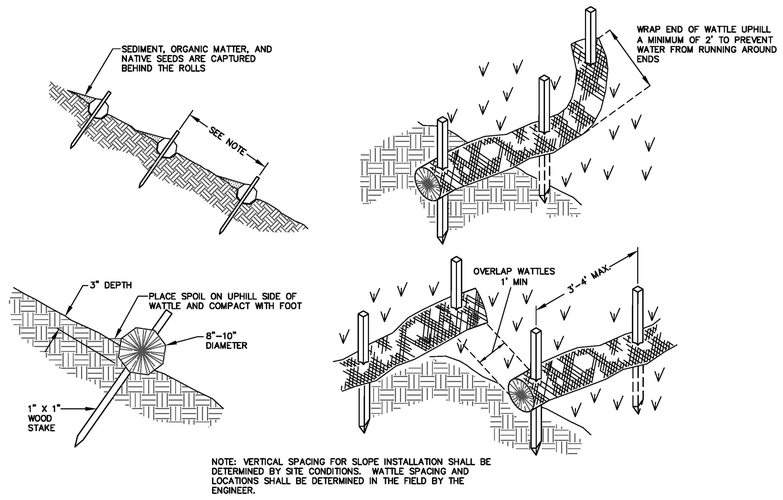
B & F FARMS
7335 ST HELENA HWY

TRACK I EROSION CONTROL PLAN
DETAILS

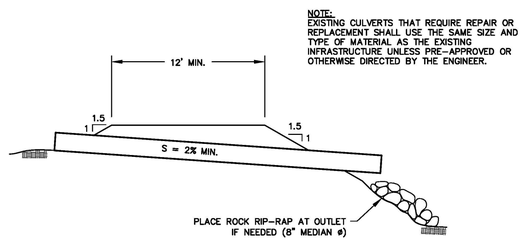
DESIGN ENGINEER: J. BUSHEY, R. ROSASCO

SCALE:	DRAWN BY:	DATE:	SHEET:
AS SHOWN	JCJ	6-23-25	2 OF: 3

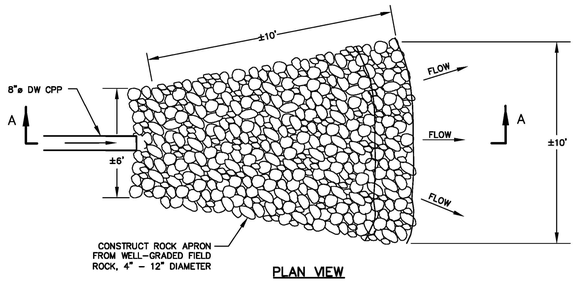
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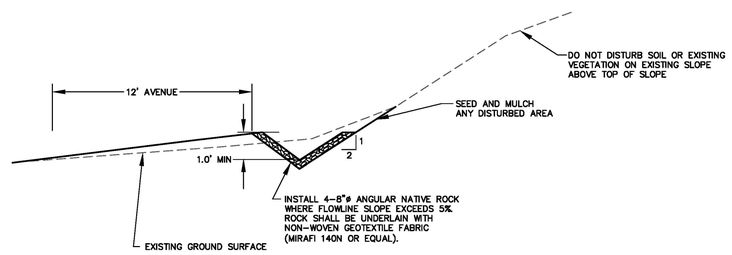
1/3 STRAW WATTLE INSTALLATION
N.T.S.



2/3 TYPICAL CULVERT
N.T.S.



3/3 ROCK APRON
N.T.S.



4/3 DITCH TYPICAL CROSS SECTION
N.T.S.

REGISTERED PROFESSIONAL ENGINEER
JAMES B. JACOBY
No. 49931
EXPIRES: 9-30-26
Civil
STATE OF CALIFORNIA

DETAILS ON THIS SHEET:
STRAW WATTLE INSTALLATION
TYPICAL CULVERT
ROCK APRON
DITCH TYPICAL CROSS SECTION

REV. NO.	DESCRIPTION	BY	DATE
	DRAWING 12410701B SUPERSEDES DRAWING 12410701A. INCORPORATED CHANGES RESULTING FROM COUNTY COMMENTS. NO CHANGES WERE MADE TO THIS SHEET.	JCJ	6-23-25

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JOB NO: 12410701
DWG. NO: 12410701B

B & F FARMS
7335 ST HELENA HWY
TRACK I EROSION CONTROL PLAN
DETAILS

DESIGN ENGINEER: J. BUSHEY, R. ROSASCO

SCALE:	DRAWN BY:	DATE:	SHEET:
AS SHOWN	JCJ	6-23-25	3 OF: 3

R:\ENGR\AM\12410701 Hwy 29 and St Helena Track I & F CP\Drawings\12410701B.dwg, J. Duval, 6/23/2025 8:53:22 PM