



VINEYARD DESIGN
 EROSION CONTROL
 WATER DEVELOPMENT
 DRAINAGE
 PERMITTING
 GPS/GIS

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MEMORANDUM

Date: January 29, 2025

To: Alexei Belov, Napa County Planning, Building, and Environmental Services

From: James R. Bushey, P.E.
 Rachel L. Rosasco, E.I.T.

Re: B & F Farms Track I ECP
 APNs 034-030-029 & -030
 Soil Loss Analysis

Digitally signed
 by James R.
 Bushey
 Date: 2025.01.29
 17:04:01 -08'00'

This memo transmits the findings of a soil loss modeling analysis for the above-referenced Track I Erosion Control Plan (ECP). The Universal Soil Loss Equation (USLE) was used to predict pre-project and post-project soil loss from within the proposed vineyard development areas. A combination of topographic maps, aerial imagery, and a site visit were used to determine pre-project transect locations, slopes, and cover values. Pre-project and post-project cover values are consistent with the United States Department of Agriculture (USDA) – Natural Resource Conservation Service (NRCS) publication titled “The Universal Soil Loss Equation Special Applications for Napa County, California” (May 1994).

A site visit was conducted on June 6, 2024 by Jim Bushey and Rachel Rosasco of PPI Engineering to determine the pre-project cover values for each block and/or transect area. All proposed development areas were inspected, and the cover values used in this analysis represent existing conditions at the time of the site visit. Post-project cover values were calculated using the percent cover specified in the ECP. This analysis is limited to the proposed vineyard areas as well as vineyard avenues (11.1 gross acres).

The model, summarized on page 2 of the supporting documents (attached), predicts a net decrease of approximately 6.41 tons of soil loss per year for the project as a whole. The ECP has been designed to ensure compliance with Napa County policies requiring no-net-increase in soil loss for post-project conditions. Please see the following supporting documents that contain data tables, calculations, maps of transect locations, and results from the analysis.



**B & F Farms Tr I ECP
USLE Calculation Sheets**

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USLE Calculations - Block Summary Sheet

Proposed Block Transect	Proposed Development Acres	Pre-Project Soil Loss (tons/year)	Post-Project Soil Loss (tons/year)	Net Increase/Decrease (tons/year)
1	1.12	2.21	1.71	0.49
2	1.61	3.70	2.69	1.02
3	3.20	8.33	6.47	1.86
4	2.59	8.37	6.38	2.00
5	0.49	0.89	0.72	0.17
6	0.38	0.26	0.21	0.05
7	0.61	1.23	0.92	0.31
8	0.78	1.77	1.34	0.43
9	0.29	0.49	0.40	0.09
Totals	11.07	27.25	20.84	6.41

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USLE Calculations - Transect Summary Sheet

Proposed Block Transect	Proposed Development Acres	Pre-Project Soil Loss (tons/year)	Post-Project Soil Loss (tons/year)	Net Increase/Decrease (tons/year)
1	1.12	2.21	1.71	0.49
2	1.61	3.70	2.69	1.02
3A	2.11	5.87	4.39	1.48
3B	1.09	2.45	2.07	0.38
4	2.59	8.37	6.38	2.00
5	0.49	0.89	0.72	0.17
6	0.38	0.26	0.21	0.05
7	0.61	1.23	0.92	0.31
8	0.78	1.77	1.34	0.43
9	0.29	0.49	0.40	0.09
Totals	11.07	27.25	20.84	6.41

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Block 1

Proposed Development Acres:	1.12		
Soil Unit No. (100-182):	136		
Soil Name:	Felton		
K, Soil Erodibility:	0.15		
T, Soil Loss Tolerance (tons/acre):	3		
R, Rainfall:	75		
Total Transect Length (ft):	209		
Number of Segments:	3		
Individual Segment Lengths (ft):	70		
Segment:	1	2	3
Gradient (%):	27	27	19
m:			
Individual LS:	7.43	7.43	4.70
Factor:	0.19	0.35	0.46
Product:	1.41	2.60	2.16
LS, Length and Steepness:	6.18		
Total Transect Average Gradient (%):	24		
Farming Practice:	Up & Down Hill		
P, Practice Factor (Table 6) ¹ :	1.00		
Segmented C-Value			
Segment:	1	2	3
Vegetative Canopy:	Trees 13' Tall	No Canopy	No Canopy
Canopy Cover:	50%	0%	0%
Ground Cover:	75%	75%	75%
Percent Grass:	60%	80%	80%
Percent Weeds:	40%	20%	20%
C, Cover (Table 5) ¹ :	0.033	0.027	0.027
Segment Factor:	0.19	0.35	0.46
Segmented C:	0.028		
A, Soil Loss (tons/acre):	1.97		
Soil Loss in Proposed Development (tons):	2.21		

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 1

Proposed Development Acres:	1.12		
Soil Unit No. (100-182):	136		
Soil Name:	Felton		
K, Soil Erodibility:	0.15		
T, Soil Loss Tolerance (tons/acre):	3		
R, Rainfall:	75		
Total Transect Length (ft):	209		
Number of Segments:	3		
Individual Segment Lengths (ft):	70		
Segment:	1	2	3
Gradient (%):	27	27	19
m:			
Individual LS:	7.43	7.43	4.70
Factor:	0.19	0.35	0.46
Product:	1.41	2.60	2.16
LS, Length and Steepness:	6.18		
Total Transect Average Gradient (%):	24		
Farming Practice:	Up & Down Hill		
P, Practice Factor (Table 6) ¹ :	1.00		
Cover Strategy:	Permanent		
Age of Development:	Over 3 Years		
Ground Cover:	80%		
C, Cover (Table 4) ¹ :	0.022		
A, Soil Loss (tons/acre):	1.53		
Soil Loss in Proposed Development (tons):	1.71		

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 2

Proposed Development Acres:	1.61	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	174	
Number of Segments:	2	
Individual Segment Lengths (ft):	87	
Segment:	1	2
Gradient (%):	17	32
m:		
Individual LS:	3.69	8.39
Factor:	0.35	0.65
Product:	1.29	5.45
LS, Length and Steepness:	6.74	
Total Transect Average Gradient (%):	25	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Segmented C-Value		
Segment:	1	2
Vegetative Canopy:	No Canopy	Trees 13' Tall
Canopy Cover:	0%	75%
Ground Cover:	75%	75%
Percent Grass:	80%	60%
Percent Weeds:	20%	40%
C, Cover (Table 5) ¹ :	0.027	0.032
Segment Factor:	0.35	0.65
Segmented C:	0.030	
A, Soil Loss (tons/acre):	2.30	
Soil Loss in Proposed Development (tons):	3.70	

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 2

Proposed Development Acres:	1.61	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	174	
Number of Segments:	2	
Individual Segment Lengths (ft):	87	
Segment:	1	2
Gradient (%):	17	32
m:		
Individual LS:	3.69	8.39
Factor:	0.35	0.65
Product:	1.29	5.45
LS, Length and Steepness:	6.74	
Total Transect Average Gradient (%):	25	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Cover Strategy:	Permanent	
Age of Development:	Over 3 Years	
Ground Cover:	80%	
C, Cover (Table 4) ¹ :	0.022	
A, Soil Loss (tons/acre):	1.67	
Soil Loss in Proposed Development (tons):	2.69	

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 3, Transect 3A

Proposed Development Acres:	2.11		
Soil Unit No. (100-182):	136		
Soil Name:	Felton		
K, Soil Erodibility:	0.15		
T, Soil Loss Tolerance (tons/acre):	3		
R, Rainfall:	75		
Total Transect Length (ft):	289		
Number of Segments:	3		
Individual Segment Lengths (ft):	96		
Segment:	1	2	3
Gradient (%):	22	30	25
m:			
Individual LS:	6.71	9.98	7.92
Factor:	0.19	0.35	0.46
Product:	1.27	3.49	3.64
LS, Length and Steepness:	8.41		
Total Transect Average Gradient (%):	26		
Farming Practice:	Up & Down Hill		
P, Practice Factor (Table 6) ¹ :	1.00		
Segmented C-Value			
Segment:	1	2	3
Vegetative Canopy:	No Canopy	No Canopy	Trees 13' Tall
Canopy Cover:	0%	0%	75%
Ground Cover:	75%	75%	75%
Percent Grass:	80%	80%	60%
Percent Weeds:	20%	20%	40%
C, Cover (Table 5) ¹ :	0.027	0.027	0.032
Segment Factor:	0.19	0.35	0.46
Segmented C:	0.029		
A, Soil Loss (tons/acre):	2.78		
Soil Loss in Proposed Development (tons):	5.87		

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 3, Transect 3A

Proposed Development Acres:	2.11		
Soil Unit No. (100-182):	136		
Soil Name:	Felton		
K, Soil Erodibility:	0.15		
T, Soil Loss Tolerance (tons/acre):	3		
R, Rainfall:	75		
Total Transect Length (ft):	289		
Number of Segments:	3		
Individual Segment Lengths (ft):	96		
Segment:	1	2	3
Gradient (%):	22	30	25
m:			
Individual LS:	6.71	9.98	7.92
Factor:	0.19	0.35	0.46
Product:	1.27	3.49	3.64
LS, Length and Steepness:	8.41		
Total Transect Average Gradient (%):	26		
Farming Practice:	Up & Down Hill		
P, Practice Factor (Table 6) ¹ :	1.00		
Cover Strategy:	Permanent		
Age of Development:	Over 3 Years		
Ground Cover:	80%		
C, Cover (Table 4) ¹ :	0.022		
A, Soil Loss (tons/acre):	2.08		
Soil Loss in Proposed Development (tons):	4.39		

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 3, Transect 3B

Proposed Development Acres:	1.09	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	202	
Number of Segments:	2	
Individual Segment Lengths (ft):	101	
Segment:	1	2
Gradient (%):	32	26
m:		
Individual LS:	9.04	6.97
Factor:	0.35	0.65
Product:	3.16	4.53
LS, Length and Steepness:	7.69	
Total Transect Average Gradient (%):	29	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Segmented C-Value		
Segment:	1	2
Vegetative Canopy:	Brush 3' Tall	No Canopy
Canopy Cover:	50%	0%
Ground Cover:	75%	75%
Percent Grass:	80%	80%
Percent Weeds:	20%	20%
C, Cover (Table 5) ¹ :	0.024	0.027
Segment Factor:	0.35	0.65
Segmented C:	0.026	
A, Soil Loss (tons/acre):	2.25	
Soil Loss in Proposed Development (tons):	2.45	

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 3, Transect 3B

Proposed Development Acres:	1.09	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	202	
Number of Segments:	2	
Individual Segment Lengths (ft):	101	
Segment:	1	2
Gradient (%):	32	26
m:		
Individual LS:	9.04	6.97
Factor:	0.35	0.65
Product:	3.16	4.53
LS, Length and Steepness:	7.69	
Total Transect Average Gradient (%):	29	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Cover Strategy:	Permanent	
Age of Development:	Over 3 Years	
Ground Cover:	80%	
C, Cover (Table 4) ¹ :	0.022	
A, Soil Loss (tons/acre):	1.90	
Soil Loss in Proposed Development (tons):	2.07	

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 4

Proposed Development Acres:	2.59	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	314	
Number of Segments:	2	
Individual Segment Lengths (ft):	157	
Segment:	1	2
Gradient (%):	27	30
m:		
Individual LS:	9.11	10.40
Factor:	0.35	0.65
Product:	3.19	6.76
LS, Length and Steepness:	9.95	
Total Transect Average Gradient (%):	29	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Segmented C-Value		
Segment:	1	2
Vegetative Canopy:	Trees 13' Tall	No Canopy
Canopy Cover:	75%	0%
Ground Cover:	75%	75%
Percent Grass:	60%	80%
Percent Weeds:	40%	20%
C, Cover (Table 5) ¹ :	0.032	0.027
Segment Factor:	0.35	0.65
Segmented C:	0.029	
A, Soil Loss (tons/acre):	3.23	
Soil Loss in Proposed Development (tons):	8.37	

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 4

Proposed Development Acres:	2.59	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	314	
Number of Segments:	2	
Individual Segment Lengths (ft):	157	
Segment:	1	2
Gradient (%):	27	30
m:		
Individual LS:	9.11	10.40
Factor:	0.35	0.65
Product:	3.19	6.76
LS, Length and Steepness:	9.95	
Total Transect Average Gradient (%):	29	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Cover Strategy:	Permanent	
Age of Development:	Over 3 Years	
Ground Cover:	80%	
C, Cover (Table 4) ¹ :	0.022	
A, Soil Loss (tons/acre):	2.46	
Soil Loss in Proposed Development (tons):	6.38	

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 5

Proposed Development Acres:	0.49
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	103
Number of Segments:	1
Individual Segment Lengths (ft):	103
Segment:	
Gradient (%):	30
m:	
Individual LS:	5.96
Factor:	
Product:	
LS, Length and Steepness:	5.96
Total Transect Average Gradient (%):	30
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Vegetative Canopy:	No Canopy
Canopy Cover:	0%
Ground Cover:	75%
Percent Grass:	80%
Percent Weeds:	20%
C, Cover (Table 5) ¹ :	0.027
A, Soil Loss (tons/acre):	1.82
Soil Loss in Proposed Development (tons):	0.89

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 5

Proposed Development Acres:	0.49
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	103
Number of Segments:	1
Individual Segment Lengths (ft):	103
Segment:	
Gradient (%):	30
m:	
Individual LS:	5.96
Factor:	
Product:	
LS, Length and Steepness:	5.96
Total Transect Average Gradient (%):	30
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Cover Strategy:	Permanent
Age of Development:	Over 3 Years
Ground Cover:	80%
C, Cover (Table 4) ¹ :	0.022
A, Soil Loss (tons/acre):	1.47
Soil Loss in Proposed Development (tons):	0.72

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 6

Proposed Development Acres:	0.38
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	64
Number of Segments:	1
Individual Segment Lengths (ft):	64
Segment:	
Gradient (%):	17
m:	
Individual LS:	2.24
Factor:	
Product:	
LS, Length and Steepness:	2.24
Total Transect Average Gradient (%):	17
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Vegetative Canopy:	No Canopy
Canopy Cover:	0%
Ground Cover:	75%
Percent Grass:	80%
Percent Weeds:	20%
C, Cover (Table 5) ¹ :	0.027
A, Soil Loss (tons/acre):	0.69
Soil Loss in Proposed Development (tons):	0.26

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 6

Proposed Development Acres:	0.38
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	64
Number of Segments:	1
Individual Segment Lengths (ft):	64
Segment:	
Gradient (%):	17
m:	
Individual LS:	2.24
Factor:	
Product:	
LS, Length and Steepness:	2.24
Total Transect Average Gradient (%):	17
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Cover Strategy:	Permanent
Age of Development:	Over 3 Years
Ground Cover:	80%
C, Cover (Table 4) ¹ :	0.022
A, Soil Loss (tons/acre):	0.55
Soil Loss in Proposed Development (tons):	0.21

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 7

Proposed Development Acres:	0.61	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	147	
Number of Segments:	2	
Individual Segment Lengths (ft):	74	
Segment:	1	2
Gradient (%):	24	28
m:		
Individual LS:	5.36	6.53
Factor:	0.35	0.65
Product:	1.88	4.24
LS, Length and Steepness:	6.12	
Total Transect Average Gradient (%):	26	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Segmented C-Value		
Segment:	1	2
Vegetative Canopy:	Trees 13' Tall	No Canopy
Canopy Cover:	50%	0%
Ground Cover:	75%	75%
Percent Grass:	60%	80%
Percent Weeds:	40%	20%
C, Cover (Table 5) ¹ :	0.033	0.027
Segment Factor:	0.35	0.65
Segmented C:	0.029	
A, Soil Loss (tons/acre):	2.02	
Soil Loss in Proposed Development (tons):	1.23	

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 7

Proposed Development Acres:	0.61	
Soil Unit No. (100-182):	136	
Soil Name:	Felton	
K, Soil Erodibility:	0.15	
T, Soil Loss Tolerance (tons/acre):	3	
R, Rainfall:	75	
Total Transect Length (ft):	147	
Number of Segments:	2	
Individual Segment Lengths (ft):	74	
Segment:	1	2
Gradient (%):	24	28
m:		
Individual LS:	5.36	6.53
Factor:	0.35	0.65
Product:	1.88	4.24
LS, Length and Steepness:	6.12	
Total Transect Average Gradient (%):	26	
Farming Practice:	Up & Down Hill	
P, Practice Factor (Table 6) ¹ :	1.00	
Cover Strategy:	Permanent	
Age of Development:	Over 3 Years	
Ground Cover:	80%	
C, Cover (Table 4) ¹ :	0.022	
A, Soil Loss (tons/acre):	1.51	
Soil Loss in Proposed Development (tons):	0.92	

¹ Tables 4 & 6 - USLE Special Applications for Napa County

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Block 8

Proposed Development Acres:	0.78			
Soil Unit No. (100-182):	136			
Soil Name:	Felton			
K, Soil Erodibility:	0.15			
T, Soil Loss Tolerance (tons/acre):	3			
R, Rainfall:	75			
Total Transect Length (ft):	307			
Number of Segments:	4			
Individual Segment Lengths (ft):	77			
Segment:	1	2	3	4
Gradient (%):	21	23	23	21
m:				
Individual LS:	6.50	7.33	7.33	6.50
Factor:	0.12	0.23	0.30	0.35
Product:	0.78	1.69	2.20	2.28
LS, Length and Steepness:	6.94			
Total Transect Average Gradient (%):	22			
Farming Practice:	Up & Down Hill			
P, Practice Factor (Table 6) ¹ :	1.00			
Segmented C-Value				
Segment:	1	2	3	4
Vegetative Canopy:	No Canopy	No Canopy	Trees 13' Tall	No Canopy
Canopy Cover:	0%	0%	50%	0%
Ground Cover:	75%	75%	75%	75%
Percent Grass:	80%	80%	60%	80%
Percent Weeds:	20%	20%	40%	20%
C, Cover (Table 5) ¹ :	0.027	0.027	0.033	0.027
Segment Factor:	0.12	0.23	0.30	0.35
Segmented C:	0.029			
A, Soil Loss (tons/acre):	2.26			
Soil Loss in Proposed Development (tons):	1.77			

¹ Tables 5 & 6 - USLE Special Applications for Napa County

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Block 8

Proposed Development Acres:	0.78			
Soil Unit No. (100-182):	136			
Soil Name:	Felton			
K, Soil Erodibility:	0.15			
T, Soil Loss Tolerance (tons/acre):	3			
R, Rainfall:	75			
Total Transect Length (ft):	307			
Number of Segments:	4			
Individual Segment Lengths (ft):	77			
Segment:	1	2	3	4
Gradient (%):	21	23	23	21
m:				
Individual LS:	6.50	7.33	7.33	6.50
Factor:	0.12	0.23	0.30	0.35
Product:	0.78	1.69	2.20	2.28
LS, Length and Steepness:	6.94			
Total Transect Average Gradient (%):	22			
Farming Practice:	Up & Down Hill			
P, Practice Factor (Table 6) ¹ :	1.00			
Cover Strategy:	Permanent			
Age of Development:	Over 3 Years			
Ground Cover:	80%			
C, Cover (Table 4) ¹ :	0.022			
A, Soil Loss (tons/acre):	1.72			
Soil Loss in Proposed Development (tons):	1.34			

¹ Tables 4 & 6 - USLE Special Applications for Napa County

B & F Farms Tr I ECP
 USLE Calculations Pre-Project
 PPI Engineering
 1/29/2025
 RR

Block 9

Proposed Development Acres:	0.29
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	105
Number of Segments:	1
Individual Segment Lengths (ft):	105
Segment:	
Gradient (%):	28
m:	
Individual LS:	5.52
Factor:	
Product:	
LS, Length and Steepness:	5.52
Total Transect Average Gradient (%):	28
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Vegetative Canopy:	No Canopy
Canopy Cover:	0%
Ground Cover:	75%
Percent Grass:	80%
Percent Weeds:	20%
C, Cover (Table 5) ¹ :	0.027
A, Soil Loss (tons/acre):	1.69
Soil Loss in Proposed Development (tons):	0.49

¹ Tables 5 & 6 - USLE Special Applications for Napa County

B & F Farms Tr I ECP
 USLE Calculations Post-Project
 PPI Engineering
 1/29/2025
 RR

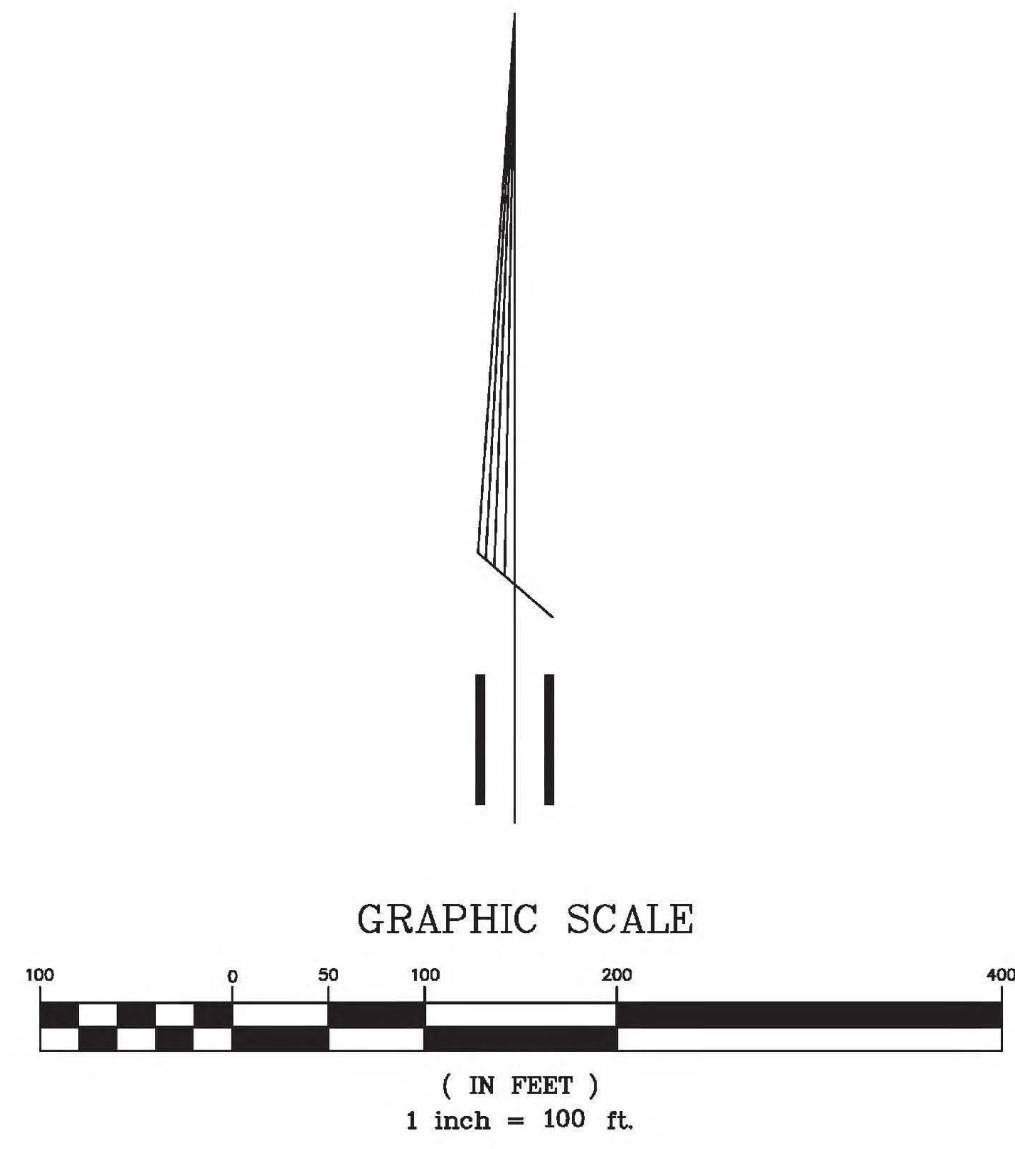
Block 9

Proposed Development Acres:	0.29
Soil Unit No. (100-182):	136
Soil Name:	Felton
K, Soil Erodibility:	0.15
T, Soil Loss Tolerance (tons/acre):	3
R, Rainfall:	75
Total Transect Length (ft):	105
Number of Segments:	1
Individual Segment Lengths (ft):	105
Segment:	
Gradient (%):	28
m:	
Individual LS:	5.52
Factor:	
Product:	
LS, Length and Steepness:	5.52
Total Transect Average Gradient (%):	28
Farming Practice:	Up & Down Hill
P, Practice Factor (Table 6) ¹ :	1.00
Cover Strategy:	Permanent
Age of Development:	Over 3 Years
Ground Cover:	80%
C, Cover (Table 4) ¹ :	0.022
A, Soil Loss (tons/acre):	1.37
Soil Loss in Proposed Development (tons):	0.40

¹ Tables 4 & 6 - USLE Special Applications for Napa County



TOPOGRAPHIC MAPPING SOURCE: NOAA LIDAR-GENERATED CONTOURS 2' CONTOUR INTERVAL
 2024 PPI ENGINEERING AERIAL PHOTO, FLOWN AUGUST 2, 2024
 2021 NAPA COUNTY AERIAL PHOTO



LEGEND

- APPROXIMATE PROPERTY LINE LOCATION
- EXISTING RESERVOIR
- WATERS OF THE U.S. MAPPED BY WRA
- WETLANDS
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING SURFACE DRAINAGE LINE, APPROXIMATE LOCATION
- EXISTING DITCH, APPROXIMATE LOCATION
- EXISTING DITCH, TO BE REMOVED
- EXISTING DROP INLET, APPROXIMATE LOCATION
- EXISTING CULVERT, APPROXIMATE LOCATION
- EXISTING CULVERT, TO BE REMOVED
- PROPOSED VINEYARD DEVELOPMENT AREA BY TRANSECT
- PROPOSED VINEYARD BLOCK BOUNDARY
- PROPOSED SURFACE DRAINAGE LINE
- PROPOSED CUTOFF COLLAR
- PROPOSED DITCH
- PROPOSED DROP INLET
- PROPOSED ROCK LEVEL SPREADER
- PROPOSED ROCK APRON
- USLE TRANSECT SEGMENT WITH SLOPE
- PROPOSED VNEROW DIRECTION
- SOIL TYPE BOUNDARY

USDA SOIL CLASSIFICATIONS:

136 FELTON GRAVELLY LOAM, 30-50% SLOPE

157 LODO-MAYMEN-FELTON ASSOCIATION, 30-75% SLOPE

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2800 JEFFERSON STREET
 NAPA, CA 94959
 707/253-1800 FAX 707/253-1804

B & F FARMS			
7335 ST HELENA HWY			
EROSION CONTROL PLAN			
SOIL LOSS ANALYSIS			
JOB NO: 12410701		SCALE: AS SHOWN	
DWG. NO: 12410701U		DATE: 1-29-25	
DESIGN ENGINEER: J. BUSHEY, R. ROSASCO		DRAWN BY: JCJ, RR	
SHEET: 1		OF: 1	