



Experience is the difference

Santa Rosa Office

1305 North Dutton Ave
Santa Rosa, CA 95401
707-544-1072

Napa Office

1041 Jefferson St, Suite 4
Napa, CA 94559
707-252-8105

November 2, 2021 (Revised January 31, 2022)

PPI Engineering

Attn: Jim Bushey

JBushey@PPIEngineering.com

Landslide Hazard Evaluation
Peterson Vineyard Development
3496 Soda Canyon Road
Napa, California

Project Number: 7542.01.09.2

The purpose of this letter is to provide geologic information regarding the planned vineyard development at 3496 Soda Canyon Road in Napa, California. The project site plan has been prepared by PPI Engineering, titled "Austin Peterson 3496 Soda Canyon Road Erosion Control Plan" dated January 2022. This letter is being prepared with the intent to comply with Napa County Code Section 18.108.027 (F).

Our geologic publication research included reviewing the following information:

Bezore, S.P., et al., 2005, Geologic Map of the Yountville 7.5' Quadrangle, Napa County, California, California Geological Survey, Scale 1:24,000.

Dwyer, M.J., Noguchi, N., and O'Rourke, J., 1976, Reconnaissance Photo-Interpretation Map of Landslides in 24 Selected 7.5-Minute Quadrangles in Lake, Napa, Solano, and Sonoma Counties, California: U.S. Geological Survey OFR 76-74, 25 Plates, Scale 1:24,000.

National Center for Airborne Laser Mapping (NCALM), 2003, LiDAR, Napa Watershed, California, [Opentopo.sdsc.edu](http://opentopo.sdsc.edu).

Natural Resources Conservation Service, United States Department of Agriculture, accessed September 7, 2021. Web Soil Survey, available online at <http://websoilsurvey.nrcs.usda.gov/>.

Based on our geologic review we compiled the image and table below indicating the soil types and depth of materials. This information was collected from the NRCS Web Soil Survey listed above.



Napa County, California														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number				Liquid limit	Plasticity index
					Unified	AASHTO	> 10 inches	3-10 inches	4	10	40	200		
							L-R-H	L-R-H	L-R-H	L-R-H	L-R-H	L-R-H		
			<i>In</i>											
143—Guenoc-Rock outcrop complex, 5 to 30 percent slopes														
Guenoc	60	C	0-12	Loam	CL-ML	A-4	0-0-0	0-0-0	80-90-100	75-88-100	70-83-95	50-63-75	25-28-30	5-8-10
			12-30	Silty clay loam, clay loam, gravelly clay loam	CL, GC	A-6, A-7	0-0-0	15-23-30	60-80-100	55-75-95	50-68-85	40-63-85	35-43-50	15-25-35
			30-40	Unweathered bedrock	—	—	0-0-0	—	—	—	—	—	—	—
Rock outcrop	30		0-10	Unweathered bedrock	—	—	—	—	—	—	—	—	—	—
176—Rock outcrop-Hambright complex, 50 to 75 percent slopes														
Rock outcrop	60		0-10	Unweathered bedrock	—	—	—	—	—	—	—	—	—	—
Hambright	30	D	0-12	Very stony loam	CL-ML, CL	A-6, A-4	0-0-0	50-63-75	90-95-100	85-93-100	75-85-95	55-73-90	15-23-30	5-10-15
			12-22	Unweathered bedrock	—	—	0-0-0	—	—	—	—	—	—	—

On September 29, 2021, we performed a geologic reconnaissance of the site and vicinity. We observed the vineyard blocks shown on the draft plans and various access roads. We paid particular interest to drainages and steeper sloping areas.

Based on our geologic review and reconnaissance, we judge that it is geologically feasible to grade and plant the subject vineyard slopes as planned. We did not identify any large-scale slope instabilities within the vineyard blocks during our publication review and did not observe any slope failures or landslides at the project site during our reconnaissance.

We understand that the former reservoir that has been breached will be removed during the vineyard planting project. Based on our surficial reconnaissance, we judge that the former reservoir embankments can be removed as shown on the draft erosion control plans.

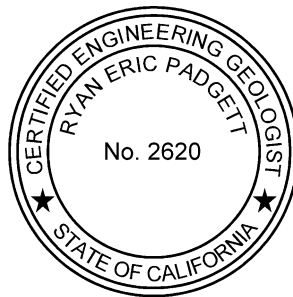
We judge the risk of global slope instability, both currently and after vineyard development, to be low. As such, erosion of the site surface soils should be considered the primary slope condition of concern. If erosion control measures are installed and maintained in accordance with County of Napa Regulations, we judge the risk of erosional failure at the site to be low.

We trust this provides the information you require at this time. Please call if you have questions.

Very truly yours,
RGH Consultants



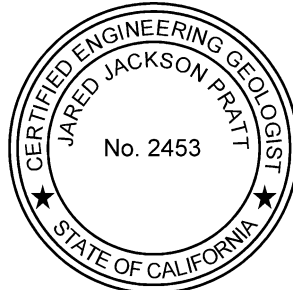
Ryan E. Padgett
Senior Engineering Geologist
Project Manager



cc: Annalee Sanborn
ASanborn@PPIEngineering.com



Jared J. Pratt
Principal Engineering Geologist



REP:JJP:rep:brw