



# Memorandum

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**To:** Melka Wines  
**Attn:** Ms. Cherie Melka  
**From:** Peter Galloway  
**Re:** Winery Driveway Access; Silverado Trail (Titus and Proposed Melka Wineries) and Associated Vailima Estates HOA at Bournemouth Road  
**Date:** March 3, 2015 (Revised)  
**Project:** Proposed Melka Winery Project  
**Job No.:** 35-4569-01  
**File No.:** C1792MEM003.docx  
**CC:** Ms. Kirsty Shelton Gerosa, Farella Braun + Martel  
Mr. George Nickelson, P.E., Omni-Means

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Dear Ms. Melka,

This memorandum provides a summary of our transportation analysis related to the proposed Melka Winery Use Permit project with respect to driveway access to/from Silverado Trail. Specifically, we have focused on the recommended location of the proposed project driveway on Silverado Trail, how it relates to other adjacent winery and residential driveways, and possible suggestions to improve vehicle safety along this Silverado Trail roadway segment and beyond.

## Background Studies

In order to provide a perspective on the location of the proposed Melka Winery project driveway, a review of previous winery analyses is necessary. Prior to the Melka Winery's use permit application, the Titus Winery (located directly across from the proposed project site on Silverado Trail at 2791 Silverado Trail North) had undergone a transportation analysis for a use permit modification (*CTG, Traffic Impact Report, Proposed Titus Winery in Napa Valley, October 2, 2013*). This traffic analysis indicated "The project (Titus Winery) will provide a left-turn on the northbound Silverado Trail approach to the project entrance. Volumes will exceed the County's left-turn warrant criteria at this location. The turn lane will be built to County standards and will improve safety for northbound vehicles on Silverado Trail making a left-turn into the winery." In addition, the traffic analysis goes on to state "Sight lines would be acceptable for drivers turning from the project driveway to Silverado Trail. Sight lines to the north would be about 620 feet, while sight lines to the south would be about 750 feet. Based on surveyed travel speeds along Silverado Trail adjacent to the project site of up to 50-55 mph, the required stopping sight distance would be at most 495 feet." The proposed Titus Winery use modification project was subsequently approved by the County of Napa (including the northbound left-turn lane on Silverado Trail) and is currently under construction.

## Proposed Melka Winery Driveway Location/Left-Turn Lane Warrant

When analyzing existing traffic conditions as part of the proposed Melka Winery use permit project, it was found that their existing driveway had adequate vehicle sight distance to the north on Silverado Trail but did not have adequate vehicle sight distance to the south towards Deer Park Road described as follows: "Silverado Trail has a posted speed limit of 50-55 mph. New

radar speed surveys of Silverado Trail were conducted for the roadway in the project area.<sup>1</sup> The "critical" vehicle speed (the speed at which 85% of all surveyed vehicles travel at or below) along Silverado Trail was measured at 49 mph. Caltrans' design standards indicate that these vehicle speeds require a stopping sight distance of 415-430 feet, measured along the travel lanes on Silverado Trail.<sup>2</sup> Based on field measurements, sight distance from the current Melka Wines existing residential driveway to the north on Silverado Trail is in excess of this distance. However, vehicle sight distance to the south is limited to 270 feet due to an existing rock wall and roadway curvature."

Discussions with the project applicant indicated that they were planning to move their existing site driveway to a point further north on Silverado Trail as part of the overall project plan. To improve vehicle safety and overall sight distance lines, it was recommended to the project applicant that they move their driveway to align with the approved new driveway location for the Titus Winery project to create a standard four-way intersection alignment (rather than a less safe "off-set" driveway with the Titus Winery driveway) and is described as follows: "For this reason, the existing Melka Winery driveway would be moved to a point north to align with the re-located Titus Winery driveway. The new Melka Winery Project driveway location would be moved approximately 270-300 feet north from its existing location. This new proposed project driveway location would provide adequate vehicle sight distance in both directions on Silverado Trail. Therefore, the sight distance recommendations would be met for the speed limit and measured vehicle speeds."

The installation of a southbound left-turn lane on Silverado Trail at the re-located Melka Winery project driveway was evaluated as part of the overall traffic analysis; "Existing and near-term volumes with proposed project traffic were compared with the Napa County guidelines for installing a left turn lane on Silverado Trail at the Melka Winery driveway."<sup>3</sup> With 20 weekday/weekend trips at the proposed project driveway and 6,783 daily trips on Silverado Trail, a left turn lane is **not warranted**. This would apply to both existing plus project and near-term plus project conditions. By extension, the proposed project would not meet Caltrans warrants for the installation of a left-turn lane based on peak hour weekday or weekend volumes at the driveway intersection. As previously noted, the project applicant would be aligning their new driveway with the proposed Titus Winery's new driveway on the west side of Silverado Trail to create a four-way intersection. This would improve vehicle and pedestrian safety on Silverado Trail by focusing vehicle turning movements at the two driveways and eliminating potential off-set/conflicting movements.

It is noted that analyses of proposed project left-turn lane warrants on Silverado Trail at the proposed Melka Winery project driveway uses typical weekday and weekend project trip generation combined with the existing single-family residence on the property. Driveway volumes were then combined with existing and near-term volumes on Silverado Trail and compared to the County's left-turn lane warrant thresholds. Napa County does not require the use of "Crush/Harvest" traffic since these activities represent a temporary condition lasting only 4-6 weeks (typically) and do not reflect typical roadway conditions. In addition, projected Melka Winery driveway volumes do not include any speculative on-site uses that are not part of the overall application. Finally, the primary purpose for recommending the Melka Winery driveway align with the approved Titus Winery driveway was for safety considerations and not volume requirements. As shown in Table 1, the approved Titus Winery project would include 24,000 gallons of production, 12 employees (10 full-time, 2 part-time), and 60 weekday visitors

<sup>1</sup> *Omni Means Engineers & Planners, Radar vehicle speed surveys, 2900 Silverado Trail, November 16, 2013.*

<sup>2</sup> *Caltrans, Highway Design Manual, Table 405.1A, Corner (Stopping) Sight Distance, 6<sup>th</sup> Edition, 2009.*

<sup>3</sup> *Napa County, Adopted Road and Street Standards, revised November 21, 2006.*



generating 82 weekday daily trips.<sup>4</sup> By comparison, the proposed Melka Winery project would include 10,000 gallons of production, two employees (1 FT, 1 PT), and five (5) weekday visitors generating 10 daily trips. The County of Napa subjects any project generating greater than 20 daily driveway trips on a roadway with greater than 7,500 ADT to install a left-turn lane.

**Table 1: Approved Titus Winery Project vs. Proposed Melka Winery Project; Project Component Comparison/Resulting Weekday Daily Trips**

Project Components	Titus	Melka	Left Hand Turn Lane Warrant Threshold > 20 ADT (Driveway)
Annual production	24,000 g/yr	10,000 g/yr	
Number of employees	10 FT 2 PT	1 FT 1 PT	
Size of Facility	14,469 sq.ft.	4,984 sq.ft.	
Daily tours and tasting	60 weekday	5 weekday	
Maximum weekly tours and tastings visitation	420	30	
Number of marketing events per year	8 events with 25 guests & 12 events with 125 guests	2 events with 30 guests and 1 event with 100 guests	
Maximum number of marketing guests per year	1,700	160	
Number of parking spaces	21 and 3 loading for a total of 24	7	
<b>Total number of daily weekday trips (Driveway)</b>	<b>82</b>	<b>10</b>	<b>&gt;20</b>

<sup>4</sup> Crane Transportation Group, Traffic Impact Report Proposed Titus Winery in Napa Valley, October 3, 2013.



## Vehicle Sight Distance on Silverado Trail

Vehicle sight distance on Silverado Trail in the project study area is critical for minor street (driveway) locations that are stop-sign controlled. Vehicle speeds in the area are in the 49-55 mph range, requiring stopping sight distances of 430-500 feet. By aligning the proposed Melka Winery driveway with the approved Titus Winery driveway, vehicle safety is improved for those motorists exiting the Melka winery wishing to travel north or south on Silverado Trail. Vehicle sight distance exceeds recommended Caltrans minimums in both directions.

Should the proposed Melka Winery project driveway not be aligned with the approved Titus Winery project driveway (located at some point south of the Titus Winery driveway), vehicle conflicts would likely occur. For example, there would be less-than adequate vehicle sight distance to/from the south towards Deer Park Road. In addition, the off-set driveways would cause vehicle conflicts in the location of the Titus Winery's left-turn lane and taper between vehicles entering and leaving both the Melka and Titus properties. For these reasons, aligning the proposed Melka Winery project driveway with the approved Titus Winery driveway would create a safer vehicle access to/from the wineries onto Silverado Trail and reduce potential vehicle conflicts.

## Suggested Circulation Improvements on Silverado Trail

It is recognized that vehicle speeds and vehicle sight distance on Silverado Trail in the project study area contribute to overall vehicle safety for motorists exiting/entering the roadway from minor streets/driveways. Field observations on Silverado Trail indicate that northbound motorists are accelerating from the flashing red light intersection at Deer Park Road based on the posted speed limit sign of 50 mph past the project frontage. Continuing past the proposed project site, motorists on Silverado Trail approach a horizontal curve approximately 1,500 feet north of Deer Park Road. Currently, there are chevron arrow signs that extend through the curve. However, there are not advanced notification signs to indicate the presence of a minor street intersection (Bournemouth Road) just past the apex of the curve. Based on an aerial review of Google Earth, there is less than recommended sight distance to the north and south on Silverado Trail for motorists at Bournemouth Road for 50 mph vehicle speeds. Based on recent correspondence, residents living off Bournemouth Road have expressed concern about vehicle accidents at this location.<sup>5</sup> These accidents could be a result of high vehicle speeds on Silverado Trail and lack of vehicle sight distance from Bournemouth Road.

Although not directly related to the proposed Melka Winery Use Permit project, additional signing on Silverado Trail could help to improve vehicle safety in the area. Specifically, advanced intersection warning sign(s) could be installed for the northbound/southbound motorists approaching Bournemouth Road and the Titus Winery/proposed Melka Winery project driveways. Consistent with the California Manual on Uniform Traffic Control Devices (CAMUTCD), these would include W2-2 and W2-1 signs indicating the type of intersection design (minor or four-way). In addition, these signs would be combined with distance indicator signs (W16-2P or W16-2aP). These signs would be installed at the recommended distances prior to the minor street driveways (250 feet) to alert motorists on Silverado Trail of upcoming intersections (please see CAMUTCD signing/distance sheets—attached). In addition to recommended Caltrans signing, both the Titus Winery and proposed Melka Winery project may wish to install signing at their respective driveways to indicate winery access. These signs would provide additional notification to motorists on

<sup>5</sup> Kirsty Shelton Gerosa, Land Use Planner, Farella Braun + Martel, Personal communication with Mr. John Hendrick, Vailima Estates Homeowner Association, Melka Planning Commission Hearing and Traffic, February 12, 2015.

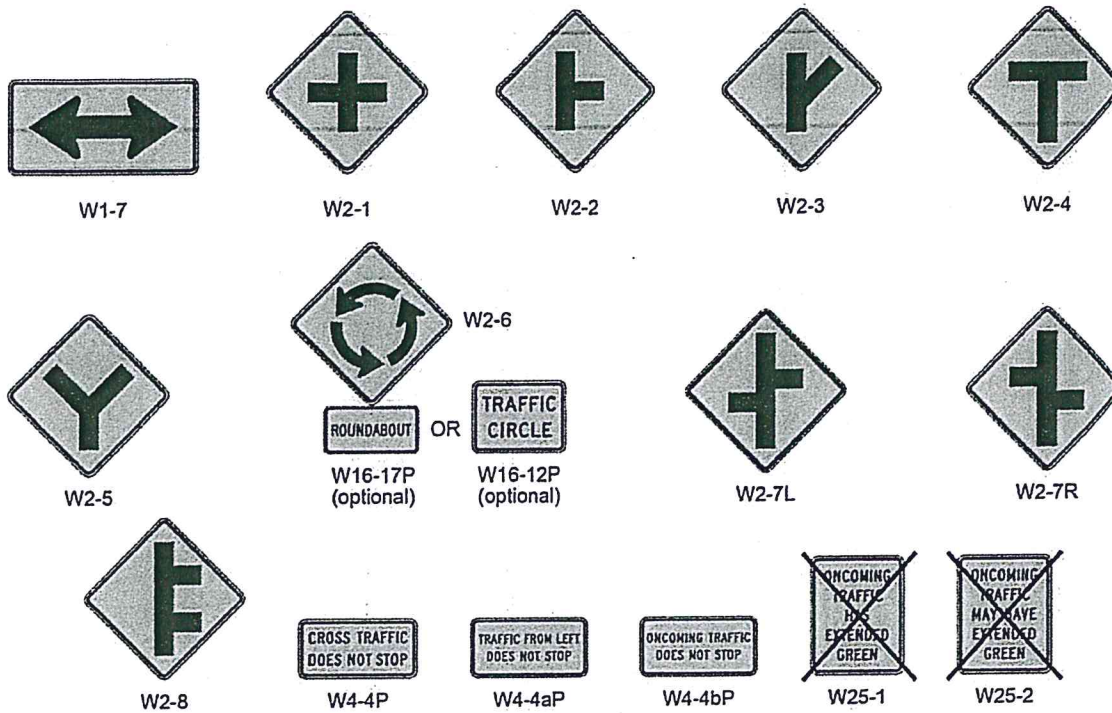


Silverado Trail to the presence of the minor street/winery driveways to avoid vehicle conflicts at these intersections. It is noted that the majority of the proposed Melka Winery project's vehicle traffic would be to/from the south on Silverado Trail (70%). Project traffic to/from the north would make up 30% of the site's traffic. This would equate to only two (2) vehicle trips during both the weekday PM peak hour and weekend mid-day peak hour traveling to/from the north on Silverado Trail.

Suggested circulation improvements on Silverado Trail would be subject to County review.



**Figure 2C-9. Intersection Warning Signs and Plaques**



**Figure 2C-9 (CA). Intersection Warning Signs and Plaques**



Figure 2C-12. Supplemental Warning Plaques

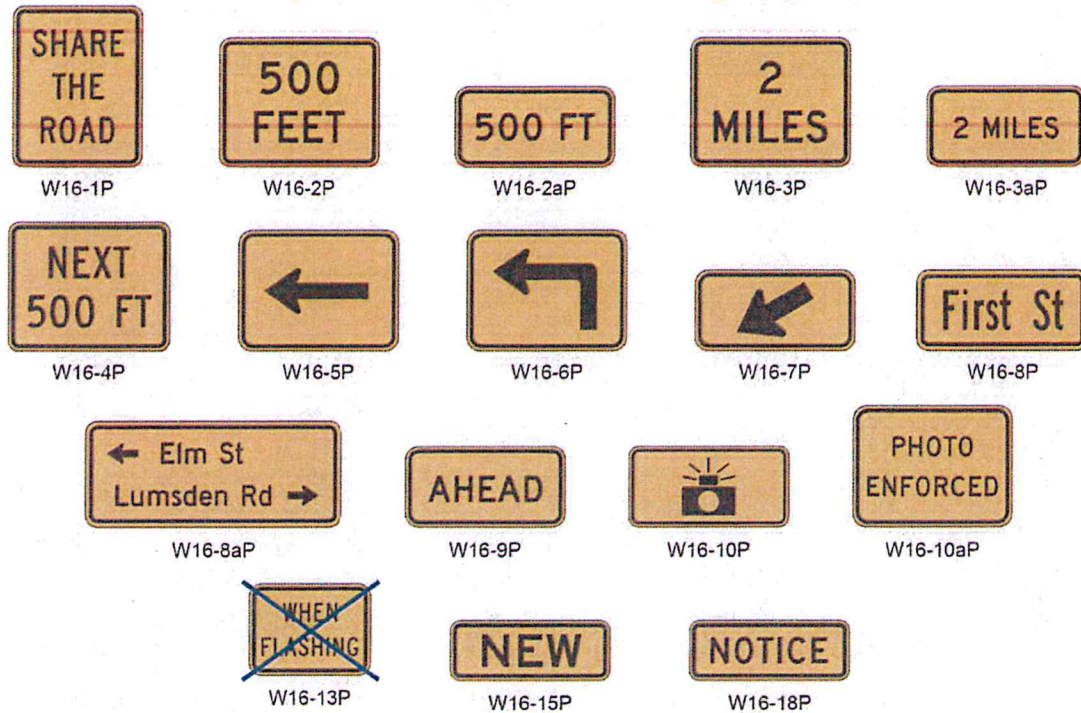


Figure 2C-12 (CA). Supplemental Warning Plaques



W34A (CA)

**Table 2C-4. Guidelines for Advance Placement of Warning Signs**

Posted or 85th-Percentile Speed	Advance Placement Distance <sup>1</sup>								
	Condition A: Speed reduction and lane changing in heavy traffic <sup>2</sup>	Condition B: Deceleration to the listed advisory speed (mph) for the condition							
		0 <sup>3</sup>	10 <sup>4</sup>	20 <sup>4</sup>	30 <sup>4</sup>	40 <sup>4</sup>	50 <sup>4</sup>	60 <sup>4</sup>	70 <sup>4</sup>
20 mph	225 ft	100 ft <sup>6</sup>	N/A <sup>5</sup>	—	—	—	—	—	—
25 mph	325 ft	100 ft <sup>6</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>	—	—	—	—	—
30 mph	460 ft	100 ft <sup>6</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>	—	—	—	—	—
35 mph	565 ft	100 ft <sup>6</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>	N/A <sup>5</sup>	—	—	—	—
40 mph	670 ft	125 ft	100 ft <sup>6</sup>	100 ft <sup>6</sup>	N/A <sup>5</sup>	—	—	—	—
45 mph	775 ft	175 ft	125 ft	100 ft <sup>6</sup>	100 ft <sup>6</sup>	N/A <sup>5</sup>	—	—	—
50 mph	885 ft	250 ft	200 ft	175 ft	125 ft	100 ft <sup>6</sup>	—	—	—
55 mph	990 ft	325 ft	275 ft	225 ft	200 ft	125 ft	N/A <sup>5</sup>	—	—
60 mph	1,100 ft	400 ft	350 ft	325 ft	275 ft	200 ft	100 ft <sup>6</sup>	—	—
65 mph	1,200 ft	475 ft	450 ft	400 ft	350 ft	275 ft	200 ft	100 ft <sup>6</sup>	—
70 mph	1,250 ft	550 ft	525 ft	500 ft	450 ft	375 ft	275 ft	150 ft	—
75 mph	1,350 ft	650 ft	625 ft	600 ft	550 ft	475 ft	375 ft	250 ft	100 ft <sup>6</sup>

<sup>1</sup> The distances are adjusted for a sign legibility distance of 180 feet for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 250 feet, which is appropriate for an alignment warning symbol sign. For Conditions A and B, warning signs with less than 6-inch legend or more than four words, a minimum of 100 feet should be added to the advance placement distance to provide adequate legibility of the warning sign.

<sup>2</sup> Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PRT of 14.0 to 14.5 seconds for vehicle maneuvers (2005 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, Avoidance Maneuver E) minus the legibility distance of 180 feet for the appropriate sign.

<sup>3</sup> Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2005 AASHTO Policy, Exhibit 3-1, Stopping Sight Distance, providing a PRT of 2.5 seconds, a deceleration rate of 11.2 feet/second<sup>2</sup>, minus the sign legibility distance of 180 feet.

<sup>4</sup> Typical conditions are locations where the road user must decrease speed to maneuver through the warning condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PRT, a vehicle deceleration rate of 10 feet/second<sup>2</sup>, minus the sign legibility distance of 250 feet.

<sup>5</sup> No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing. An alignment warning sign may be placed anywhere from the point of curvature up to 100 feet in advance of the curve. However, the alignment warning sign should be installed in advance of the curve and at least 100 feet from any other signs.

<sup>6</sup> The minimum advance placement distance is listed as 100 feet to provide adequate spacing between signs.

**Table 2C-5. Horizontal Alignment Sign Selection**

Type of Horizontal Alignment Sign	Difference Between Speed Limit and Advisory Speed (See Section 2C.06)				
	5 mph	10 mph	15 mph	20 mph	25 mph or more
Turn (W1-1), Curve (W1-2), Reverse Turn (W1-3), Reverse Curve (W1-4), Winding Road (W1-5), and Combination Horizontal Alignment/Intersection (W1-10) (see Section 2C.07 to determine which sign to use)	Recommended	Required	Required	Required	Required
Advisory Speed Plaque (W13-1P)	Recommended	Required	Required	Required	Required
Chevrons (W1-8) and/or One Direction Large Arrow (W1-6)	Optional	Recommended	Required	Required	Required
Exit Speed (W13-2) and Ramp Speed (W13-3) on exit ramp	Optional	Optional	Recommended	Required	Required



Eric Titus  
Lee E. Titus and Sons Vineyard  
2971 Silverado Trail North  
St. Helena, California 94574

March 2, 2015

Dear Chair Phillips,

We are neighbors of the proposed Melka Winery on Silverado Trail. I filed a letter in support of the project when it was last reviewed on February 18, 2015. We are still in support of the project but wanted to bring the matter of project traffic to the Commission's attention.

We received approval to construct our new winery across the street from the proposed Melka Winery. Currently the county requires a left turn lane on a county road anytime traffic from a driveway that intersects with a road such as the Silverado Trail exceeds 20 trips per day. As the projected traffic from our new driveway is expected to generate more than 20 daily trips, we agreed to construct a left turn lane on Silverado Trail at our driveway entrance. In fact, the existing driveway that currently provides access to the Melka property is being relocated to align with our new winery driveway and will likely utilize the left turn lane that we are installing.

We have reviewed the traffic study prepared for the Melka Winery and noticed that the weekday trips expected by the winery alone amounts to 10 daily trips less than the 21 daily trips that would otherwise trigger a left turn lane for the project (Table 3 of the July 10, 2014 report). However, the county's metric relates to total daily trips not just winery trips. When the trips generated by the existing residence are included, the daily trips approach the threshold for the construction of a left turn lane. In fact, Table 3 of the traffic study included with your agenda, indicates that daily trips during a crush weekend plus the daily trips associated with the residence actually exceeds the number of daily trips that would trigger a left turn lane. I would also point out that since the existing zoning permits a second residence by right, 10 additional daily trips are reasonably foreseeable. Finally, according to the revised staff report (page 6, paragraph 7—lot line adjustment), a farm labor dwelling is also be allowed by right, adding to the potential trips from the proposed driveway. The sum total of all reasonably foreseeable trips from the Melka property then will far exceed the county threshold for a left turn lane. A left turn lane designed to accommodate the projected trips from both our winery and the Melka property would provide safer access to and from both properties. Since our left turn lane has not yet been installed now is the time to include any redesign to accommodate the winery and residence that the Melkas proposed.

Given the cost to design and install a left hand turn lane, we would like the Commission to consider the true traffic impact at this location and direct the County to request contribution from the Melka project to assist with the costs of the turn lane designed to accommodate traffic from both properties. A cost sharing agreement has been required by the County in the past when more than one property would benefit from an improvement. For example, the Honig Winery and Round Pond Winery were recently required to share the cost of a joint use left turn lane on Rutherford Cross Road.

Thank you for your consideration.

Sincerely,

Eric Titus  
Lee Titus & Sons Vineyard

## Sharma, Shaveta

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**From:** Matt Pope <matt pope384@gmail.com>  
**Sent:** Tuesday, March 03, 2015 3:50 PM  
**To:** Frost, Melissa; McDowell, John; Sharma, Shaveta  
**Subject:** Fwd: new discovery  
**Attachments:** Conversion into winery.docx

FYI, not sure if this made it to staff as well

MP

----- Forwarded message -----

**From:** Virginia Simms <ggbginny@aol.com>

**Date:** Sun, Mar 1, 2015 at 1:33 PM

**Subject:** new discovery

**To:** [matt pope384@gmail.com](mailto:matt pope384@gmail.com)

**Cc:** [tkscottco@aol.com](mailto:tkscottco@aol.com), [napacommissioner@yahoo.com](mailto:napacommissioner@yahoo.com), [heathertp@comcast.net](mailto:heathertp@comcast.net), [anne.contrell@lucene.com](mailto:anne.contrell@lucene.com), [matt pope384@gmail.com](mailto:matt pope384@gmail.com)

Matt, I have found out more information about the Melka application. My phone is 224-2105.

I am going to try to attach a Board resolution that will interest you. Resolution 2010-48. You and other Commissioners, plus all Staff, should have copies of this entire document.

Ginny

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Save a Life: Spay/Neuter and Adopt!

## II. Conversion of Existing Structures:

To discourage property owners from constructing residences and barns with the express intent of converting them to wineries, the County does not generally support use permit proposals seeking to convert existing buildings to winery use if the buildings have been constructed or substantially modified within the last 5-7 years.