

## Sunol Cut-Through Traffic

Abbreviations:

CA-84 is Niles Canyon Road, California Highway 84

MSE is the eastern intersection of CA84 with Sunol's Main Street

MSW is the western intersection of CA84 with Sunol's Main Street

MSEB is east bound traffic on Sunol's Main Street

SPR is the Sunol-Pleasanton Road

vph is vehicles per hour

### Statement: Traffic Issue "Cut Through Traffic on Sunol's Main Street"

We have increasing problems in Sunol traffic that have become onerous and are showing probability of becoming even more so. These problems principally occur at peak traffic times 7:00 to 9:00AM and 4:00 to 7:00PM during commute days. The afternoon time period is the more concerning, although some difficulty has been seen in the morning. These problems, in order of severity, are:

1. Vehicles leaving CA-84 Eastbound at MSW to pass through Sunol on Main Street to rejoin Eastbound CA-84 on MSE. This is characterized as "cut-through" traffic and greatly exacerbates 2 (immediately below), particularly in the 4:00 PM time period. This also causes congestion along Main Street and interferes with the traffic egress at Sunol Glen School.
2. Difficulty of vehicles turning left at MSE to join Eastbound CA-84.
3. Vehicles traveling South on Kilkare Road to turn left onto Main Street are often considerably delayed at the stop sign at Main Street because of both the "cut-through" traffic and the free left turn for persons accessing Foothill Road from Eastbound CA-84. (All of the current traffic exiting Eastbound CA-84 streams unimpeded through this intersection.)
4. Vehicles turning right from Main Street onto Kilkare Road are also delayed by blockage from the free left turn from Main Street to Kilkare Road. (This is more due to the free left turners not signaling their intended turn.)

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The reason for selecting the difficulty of turning left from Sunol's Main Street onto CA-84 as the second most severe is that people from the Sunol area attempting to access I-680 or CA-84 to the Livermore area or the Sunol-Pleasanton Road (SPR) for access to Pleasanton are stymied by the traffic congestion conditions at the eastern intersection of CA-84 and Main Street. During the rush hours when CA-84 eastbound is backed up past this intersection, there is a very small "Keep Clear" area designated in this eastbound lane that the left turner from Main Street must negotiate. At the same time, the traffic southbound on SPR is also usually backed up. The drivers entering westbound CA-84 from SPR and those continuing westbound on CA-84 from this intersection

(CA-84 with SPR) have been “unleashed” and are usually exuberantly accelerating as they reach MSE. This greatly exacerbates the difficulties of the driver attempting (fervently hoping) to negotiate the left turn entry onto eastbound CA-84. There are relatively few safe opportunities during rush hours to make this turn and the practitioners of “cut-through” traffic compete with the residents of the Sunol area for these few opportunities. This makes this particular intersection somewhat dangerous during the rush hours.

### **Data Gathering and Presentation:**

There were three approaches to data gathering regarding the cut-through traffic. We counted traffic at various intersections at the peak hours. We requested and received help from CalTrans and Alameda County. We worked with Sunol Glen School to quantify traffic originating from their activities and also with a questionnaire directed to parents.

As usual in a Sunol project, we received enthusiastic support from community volunteers. Mike Brown, Rick Flynn and Kathleen Nava went above and beyond the call of duty to count and experience traffic at various locales and times. We had students from Sunol Glen (thanks to Superintendant Molly Barnes and Teacher Suzette Takei) counting traffic as part of their community service credits. Margie Quarry created and coordinated the questionnaire from Sunol Glen parents.

**Traffic Count Description:** CalTrans set up a video camera to monitor traffic for twelve hours from 7:00AM to 7:00PM on Wednesday, May 8, 2013 at the corner of Kilkare Road and Main Street. The video recordings were analyzed into 15 minute segments. In addition, the person monitoring the video performed manual traffic counts at the same corner during the heavy traffic times.

The traffic counts by the Sunol volunteers took place irregularly over several months from March through May. Counts were made at the morning and afternoon rush hours at Kilkare & Foothill, Kilkare & Main, Main & Bond, Sunol Glenn parking lot, Foothill & Bond and Foothill & Castlewood. These various locations give us additional information that permits us to make some inferences that the single location of the video data will not. As an example, the video data gives us high confidence regarding the number of cars that enter MSEB at Kilkare. Further it also tells us how many of these cars came from CA-84 and how many entered from Kilkare, but, it does not inform us regarding how many of those cars went to Bond Street, how many went to Sunol Glen and how many continued back onto CA-84 eastbound. However, our manual counts gather this information. Our manual counts at a given location and time but on different weekdays show high correlation varying only by a few percent. The manual and video counts reported by CalTrans were virtually the same as our counts at the same location and daily times..

The counts made at Sunol Glen show that there is some but not great overlap between the peak school pickup times and the peak commuter traffic. It appears that there may be more concerning interference in the morning than in the afternoon. The afternoon period from 3:30 PM to 4:30PM is the time of greatest afternoon interference between the cut-through traffic and the school traffic.

From our Sunol Glen questionnaire we determined that the biggest concern of the respondents was the congested traffic near the school in the afternoon and the potential for students to be injured in the vicinity of the Bond&Main intersection due to the traffic. This was not, however, mentioned by a majority of the respondents. Those who did mention the traffic, on the order of 10% of the respondents, were of the opinion that there was too much rush hour congestion in the vicinity of the Bond&Main intersection.

**Traffic Count Data:** Except for the rush hours, there is modest traffic in Sunol. Seventy five percent of the total traffic between 7:00AM and 7:00PM leaving MSW into Sunol occurs in the three hours from 3:30PM to 6:30PM. Further, thirty percent of this traffic continues to MSE as cut-through traffic. The cut-cut through traffic in those same three hours is over ninety percent of the eastbound traffic on Main Street between 7:00AM and 7:00PM. During this peak time there is, on average, four or five seconds between vehicles as they pass though this intersection. The relevant sheets from the CalTrans data are included as the last two pages. The information on MSEB from these data show that between 7:00AM and 3:30PM the average MSEB is 91vph with 43vph coming from eastbound CA-84 and 38vph from southbound Kilkare. From 3:30PM to 6:30PM the average MSEB is 218vph with 190vph from eastbound CA-84 and 18vph from southbound Kilkare. The cut-through traffic increases by a factor of 5 and the local traffic decreases by a factor of 2. This information is borne out by our direct counts, particularly at Main Street and Bond. On occasion, we saw as many as 18 vehicles in queue at MSE. When the line is this long, it blocks access from both Bond Street and Sunol Glen parking to the queue. In the interest of information completeness, two volunteers also experienced eastbound rush hour traffic on CA-84 between MSW and MSE. When the traffic on CA-84 is backed up to the MSW exit from eastbound CA-84, it takes between eight and ten minutes to reach MSE.

**Findings from the Traffic Count Data:** The information harvested supports the expressed views that there is a substantial impact on the Sunol community from the cut-through traffic. Some residents along Main Street have stated that there is difficulty leaving their driveways during the rush periods. It is also clear that many residents of the area avoid driving into Sunol during the afternoon rush period. Respecting access to MSE, on average there are 10 cut-through vehicles for every vehicle from a resident or someone who does more than cut-through. This does, indeed, cause unnecessary delay for Sunol residents who need access to eastbound CA-84 during the rush period.

**Motivation for the cut-through traffic:** The motivation for cut-through traffic clearly is saving commute time for those who practice it. As mentioned, the time between MSW and MSE on CA-84 is about 8 to 10 minutes when traffic is fully backed up through the underpass. When traffic is still discernible before the underpass, the delay may be 6 to 8 minutes. Some who exits CA-84 at MSW can get to the traffic queue on eastbound Main Street for MSE in less than two minutes. If the traffic queue at MSE is its average size of six vehicles, it may take as little as three minutes to enter eastbound CA-84 for a time gain of one to five minutes. On average a practitioner of cut-through traffic can probably expect to save four minutes and rarely a loss.

**No overall positive features of cut-through traffic:** Since all of the cut-through traffic must still pass through the intersection of CA-84 and SPR, one cut-through practitioner's time saving means that each of the drivers bypassed individually lose enough time to add up to the net

amount gained. Thus if the cut-through driver saves 6 minutes and bypasses 60 drivers who remain on CA84, then each of the bypassed drivers has a commute extended by 12 seconds. The cut-through traffic creates a queue at MSE delaying vehicles from the Sunol community needing access at MSE. This adds minutes of unnecessary idling time for each vehicle from the Sunol community.

### **Summary of Community and Environmental Impacts of Cut-through Traffic:**

The principal affects of the rush hour cut-through traffic are:

1. Traffic congestion at MSE.
2. Traffic increase in the vicinity of Sunol Glen.
3. Unnecessary traffic on eastbound Main Street.
4. Delays for Sunol community traffic in accessing eastbound CA-84
5. Excess idling time at the MSE queue.

**Proposals to alleviate cut-through traffic:** Two proposals have been advanced to discourage cut-through traffic on Main Street. They are variants on a similar theme. In making these proposals we considered that minimum construction was a necessity and compliance should be straight forward.

The common features are:

1. Add stop signs each way on Main Street at its intersection with Kilkare Road. This converts this intersection from a Tee Stop to a Three-way Stop.
2. Add an advisory sign at this new eastbound Main Street Stop sign
3. Add an advisory sign at the exit from CA-84 to MSW before the overpass.

The difference between the two proposals is the wording of the advisory signs

#### **Proposal A:**

The sign at Main and Kilkare reads:

**No Through Traffic to Eastbound CA-84  
Vehicles over 12' Clearance Excepted**

The sign prior to the overpass reads:

**Stop Ahead  
No Through Traffic to Eastbound CA-84  
Vehicles over 12' Clearance Excepted**

Proposal B:

The sign at Main and Kilkare reads:

**Left Turn Only**  
**3:30 PM to 6:30 PM**  
**Except Saturday, Sunday and Holidays**  
**Vehicles over 12' Clearance Excepted**

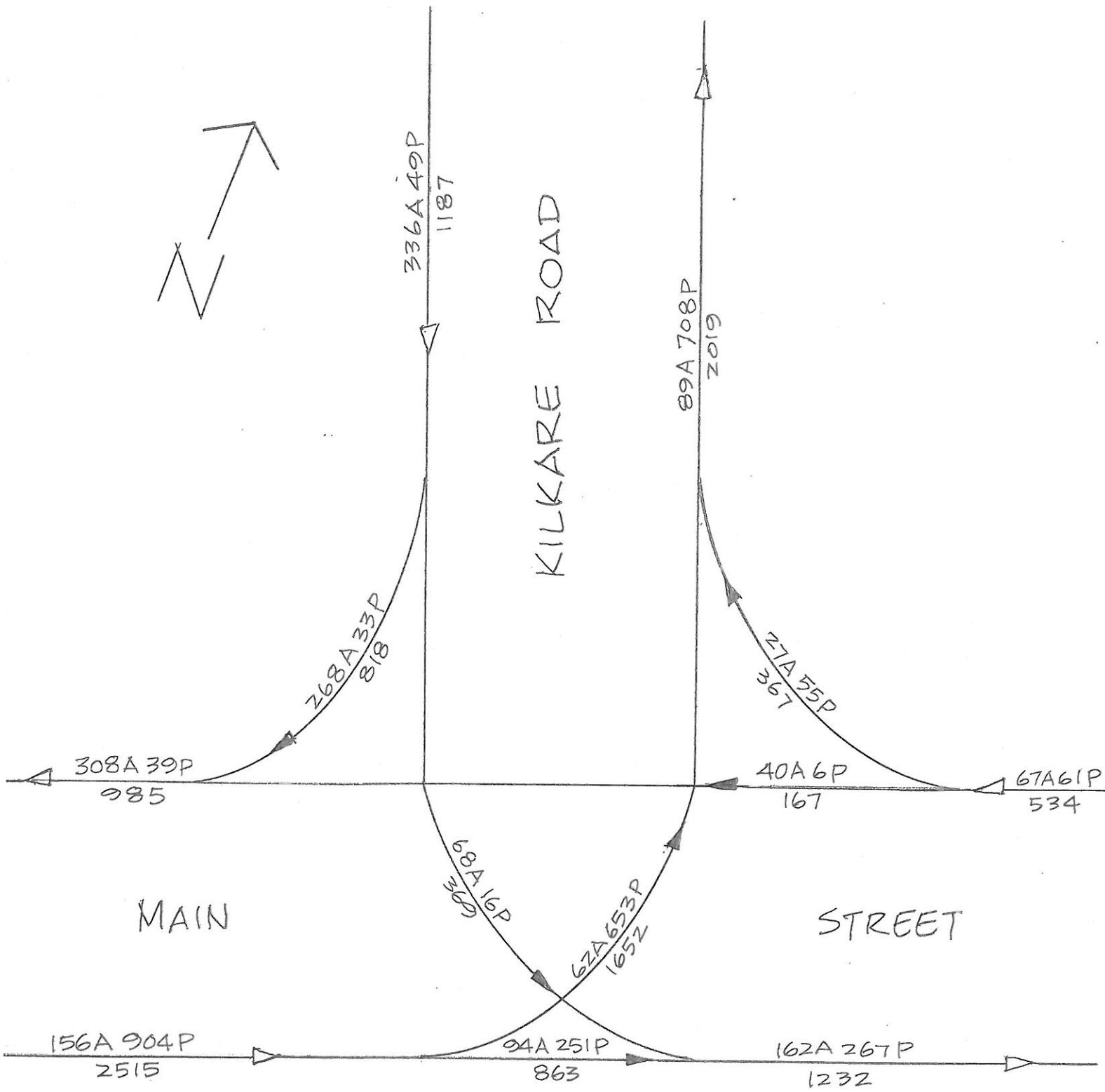
The sign prior to the overpass reads:

**Stop Ahead**  
**Left Turn Only**  
**3:30 PM to 6:30 PM**  
**Except Saturday, Sunday and Holidays**  
**Vehicles over 12' Clearance Excepted**

Of the two proposals, clearly Proposal A has the lesser negative impact on the Sunol Community as anyone exiting at MSW having need to access any Sunol assets can, with the exception of stopping at the intersection of Main and Kilkare, go directly as now without cut-through traffic competing for space and time. Compliance may be an issue as cut-through drivers might state that they were planning to stop at the Post Office, but there was no parking or they realized that they had forgotten money and couldn't buy stamps after all or other similar excuses.

Proposal B eliminates the cut-through traffic during rush hours but will cause some members of the Sunol Community entering Sunol from MSW during the rush hours to revise their routes during these times.

The advisory signs prior to the overpass are similar in purpose to the advisory signs on SPR prior to Castlewood Drive.



LEGEND: MOVISION OUTPUT

0000 12 HOUR TOTAL  
(0700-1900)

000A AM PEAK  
(0745-0845)

000P PM PEAK  
(1700-1800)

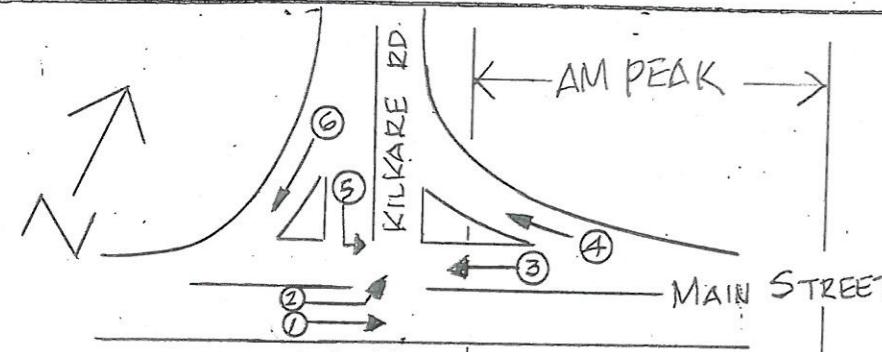
FLOW DIAGRAM

12 HOUR COUNT (CAR)  
5/8/13

INTERSECTION OF MAIN  
STREET AND KILKARE ROAD  
IN THE RURAL TOWN OF  
SUNOL

04-ALA 84-16.98

## - MIOVISION OUTPUT -



12 HOUR COUNT FIELD SHEET (0700-1900)  
AT INTERSECTION OF MAIN STREET AND KILKARE ROAD  
IN THE RURAL TOWN OF SUNOL

CO-RTE ALA-84-16.98

DATE May 8, 2013

WEATHER FAIR

BY DCC