

Traffic Collision Data Analysis

Collision Data (July 2008 – October 2009)

Prepared for the
Town of Los Altos Hills



Prepared by
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EXECUTIVE SUMMARY

In an on-going effort to improve public safety and with a high-level of commitment to serve the citizens of Los Altos Hills through proactive measures, the Town of Los Altos Hills asked the Sheriff's Office to take a look at a sampling of recent traffic collisions, analyze the data, and make recommendations on reducing the amount collisions resulting in property damages, injuries, and deaths.

The statistical data used for this overview was culled from a 15 month period beginning on July 1, 2008 and ending on October 31, 2009. Two different databases were queried and a reasonable, but cursory attempt was made to qualify the majority of the data. During this period deputies initiated over 2,740 traffic enforcement contacts. There were 69 reported collisions that resulted in 35 injuries and two deaths. There were no pedestrian related collisions. The data was analyzed several different ways that included geographical location, cause, type, and fault with an emphasis on those collisions that resulted in injuries or death. Traffic enforcement contact data was included in the analysis and used when determining recommendations. Recommendations were then made in sections where the Sheriff's Office felt something could be done to attempt to lower the collision rate.

Collisions occurred on 30 different streets with 43% of them occurring on just three roadways: *Altamont, El Monte, and Page Mill*. These streets accounted for 42% of the injuries, but neither fatality.

There were 11 different causes identified for the collisions. Four of the 11 causes accounted for 52 (or 75%) of the total collisions and a whopping 34 (or 92%) of the total injuries. Those top four causes were: *Speeding, Failure to Yield, Drunk Driving, and Driving Left of Center*.

There were eight different motions involved in the collisions. Three of the eight motions accounted for 46 (or 67%) of the collisions and 28 (or 76%) of the injuries during the reporting period. Those top three motions were: *Motor Vehicle Ran off Road, Bicycle Ran off Road or Fell, and Rear End*.

There were eight different types of collisions involving automobiles, motorcycles, bicycles, animals, and fixed objects. *Note:* Fixed objects include the roadway itself in instances where the vehicle rolled over or the rider fell from the bicycle or motorcycle. Two of the eight types accounted for 35 (or 51%) of all the collisions and resulted in 22 (or 60%) of the injuries. Those two types of collisions were: *Bicycle vs. Object* and *Auto vs. Object*.

There were five different fault categories with automobile drivers causing 70% of the crashes and bicycle riders causing 23% of them. However, whenever a bicyclist was involved in a collision, they were found at fault 76% of the time and they caused 43% of the injuries which included one of the fatalities.

The data sampling showed that 61% of the collisions involved only one vehicle. The operators of those vehicles either injured themselves or as in two cases, died. These single-vehicle collisions accounted for 65% of all injuries.

This cursory analysis didn't produce any obvious engineering deficiencies that might reduce the collision rate. However, a visual inspection of the problem areas did suggest that there was a lack of warning signs that can sometimes aid in calming traffic. The analysis and visual

inspection also identified one intersection where further study may be warranted. That area is Page Mill Road at Via Ventana where the street has a rather sharp curve. There may be some value at looking at the placement of traffic warning signs for bicyclists and motor vehicle operators at this location as well, but a more in depth, case-by-case study should be completed by a civil traffic engineer to determine if there are some roadway design changes or other traffic calming measures that might be appropriate. Other than that, it appears that the town is in need of consistent and specific enforcement of the vehicle code and the strategic use of resources available with an increase in focus on bicyclists. The Sheriff's Office recommends a combination of increased traffic enforcement activity through the use of the current contract hours as well as through the deployment of focused enforcement operations and recommends the incorporation of a traffic motorcycle deputy.

PURPOSE

The purpose of this analysis is to take a cursory look at recent collision trends within the town limits. The statistical data provided comes from actual collision reports received by the Santa Clara County Sheriff's Office. The cumulative data can be relied upon to give the reader an idea of problem areas as well as trends in driver behavior and it may also suggest some possible solutions at reducing the collision rate. However, it is our recommendation that the town conduct a more in depth analysis of specific collision data in any area where they might consider embarking on a large-scale engineering project.

INTRODUCTION

The Santa Clara County Sheriff's Office remains committed to reducing traffic related collisions in Los Altos Hills that result in damage to public and private property, injuries and, unfortunately in some cases, death. By reducing the collision rate, we can also expect to see a reduction in the resulting insurance claims and litigation which contribute to the rise in costs associated with operating a motor vehicle in this state.

The Sheriff's Office uses three main approaches to reduce collisions. These approaches are commonly referred to as the three E's. They are:

- Engineering
- Enforcement
- Education

Engineering – The Sheriff's Office works with municipal engineers to make recommendations for roadway design changes, sign placement, pavement markings, signal timing, etc...

Enforcement – The Sheriff's Office conducts vehicle code enforcement operations while on routine patrol, as well as through special focused enforcements operations. These special enforcement operations consist of flooding an area with deputies, and in some cases officers from other jurisdictions, for a fixed period of time. Focused enforcement operations have proven to have an immediate impact on driving behavior. Citing and warning drivers through personal contact is also a form of education that can alter driver behavior.

Education – As mentioned, enforcement operations are the primary way in which the Sheriff's Office educates the public, but we also prepare press releases for and participate in statewide and national enforcement campaigns for school zones, red light running, drunk driving, and talking

or *texting* on a cell phone while driving. Other educational tools include the use of the radar trailer and the release of statistical data.

OVERVIEW

The statistical data used for this overview was culled from a 15 month period beginning on July 1, 2008 and ending on October 31, 2009. Two different databases were queried and a reasonable, but cursory attempt was made to qualify the majority of the data.

TRAFFIC ENFORCEMENT CONTACT DATA

The traffic enforcement contact data includes citations, warnings and drunk-driving contacts that took place within the town limits as well as those areas adjacent to the town. The reason for this is that the driving behavior may have been observed within the town limits, but the stop was made in an adjacent beat area, or the violator may have been leaving or entering the town. It is assumed that the enforcement actions taken in adjacent beats indirectly affect the town in most cases. In summary, deputies initiated over 2,740 traffic related enforcement contacts during the reporting period that are broken down as follows:

COLLISION REPORT DATA

The collision report data only includes those crashes which occurred within the town limits. The types of collisions observed included automobile, motorcycle and bicycle collisions. There were no pedestrian related collisions reported during the analysis period. In summary, there were 69 reported collisions that resulted in 35 injuries and two deaths. There were 13 collisions which were criminal in nature meaning that the cause of the collision was something more than an infraction [5 - Drunk Driving], or where the driver fled the scene following the collision [8 – Hit and Run.] In the remaining portions of this report we will look at the data in several different ways highlighting the areas where trends have been identified.

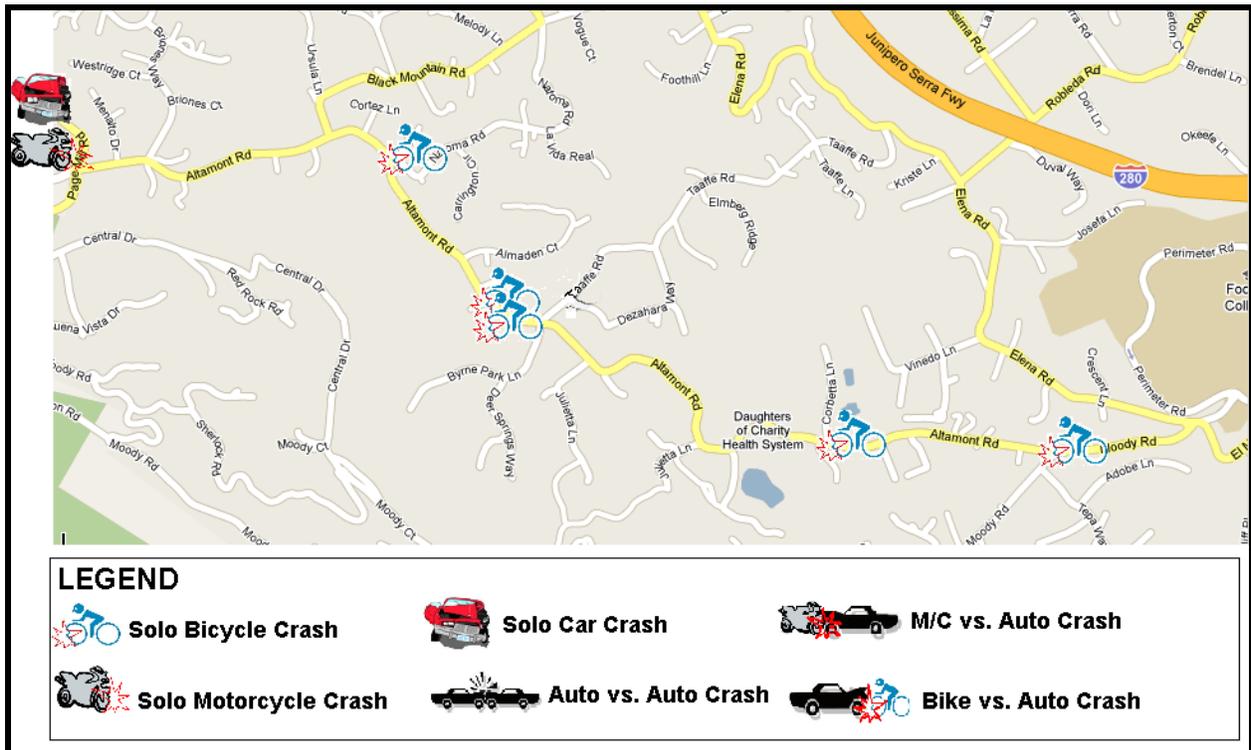
ANALYSIS BY STREET

In the supporting documentation, Table 1 shows a breakdown of the collisions by the name of the street on which they occurred. There were 69 Collisions which occurred on 30 different streets in the town—30 (or 43%) of the collisions occurred on just three of the 30 roadways. Those top three roads are:

- Altamont (10% of all collisions accounting for 19% of the injuries)
- El Monte (12% of all the collisions accounting for 5% of the injuries)
- Page Mill (22% of all the collisions accounting for 19% of the injuries)

The collisions on these three streets accounted for 16 (or 43%) of all injuries during the study period. However, neither fatality occurred on these roadways.

ALTAMONT ROAD



Altamont Road is a 2.21 mile narrow, rural, residential, two-lane roadway with no sidewalks and a limited number of shoulder areas. Motor vehicle traffic frequently shares the roadway with bicycle and pedestrian traffic. The recommended speed limit for this roadway is 30 MPH and supported by a July 15, 2008 engineering survey.

There were seven collisions during the study period on Altamont Road. All seven (or 100%) of those collisions resulted in an injury. Five of the seven collisions were solo bicyclists, one was a solo motorcyclist, and the final one was a solo automobile accident. The cause in each one of these collisions was determined to be speed related.

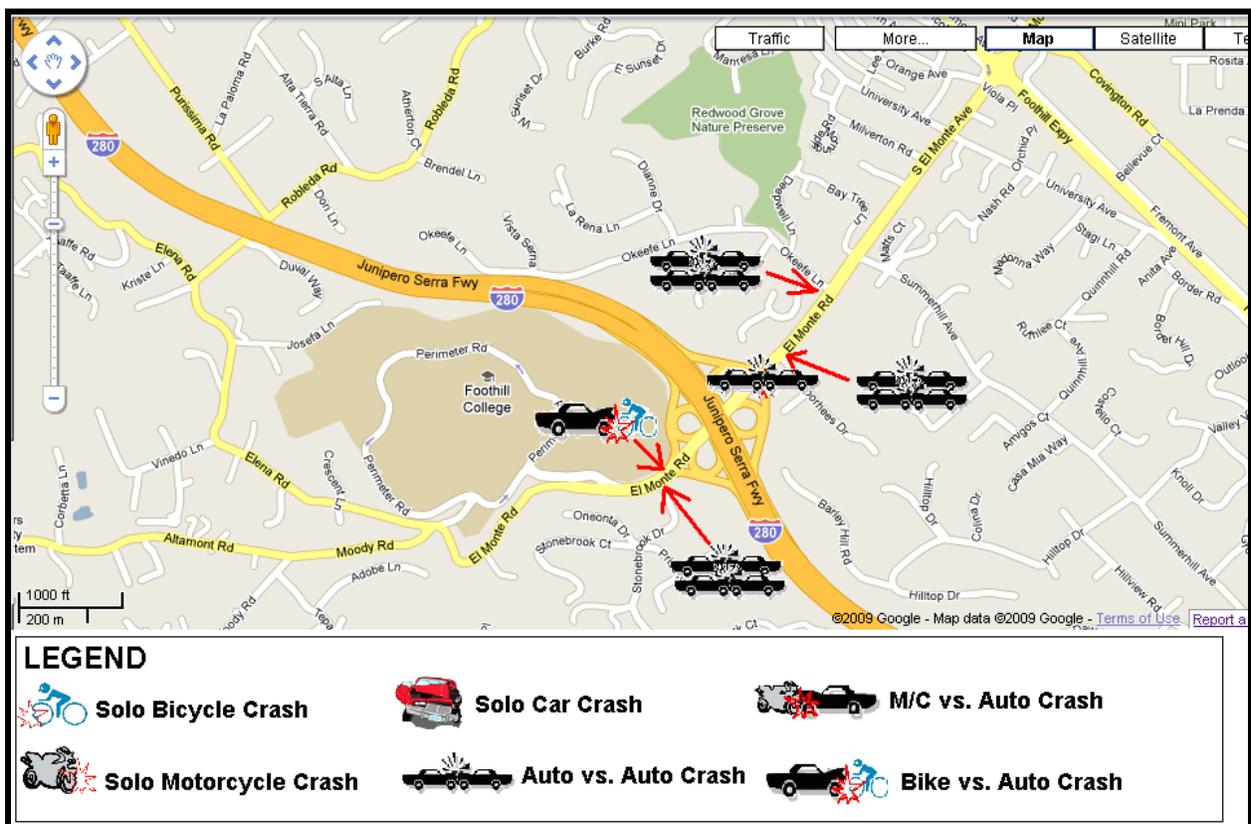
TRAFFIC ENFORCEMENT DATA ANALYSIS FOR ALTAMONT ROAD

The data indicates that during the analysis period, deputies initiated 25 traffic enforcement contacts either on Altamont or on a street nearest to the intersection of Altamont. Only one of those contacts resulted in a speeding citation and there were no enforcement contacts related to bicyclists.

RECOMMENDATIONS FOR ALTAMONT ROAD

The Sheriff's Office recommends special focused speed enforcement operations with an emphasis on bicycle traffic violations as well an increase in general traffic enforcement by patrol deputies. Further thought should be given as to how to best increase enforcement operations here given the winding and narrow nature of the roadway, such as the use of a motorcycle traffic deputy. A visual inspection of the roadway also indicated a lack of warning signs for both cars and bicycles.

EL MONTE ROAD



El Monte Road is 1.05 mile residential and institutional roadway bisected by Interstate 280. The roadway primarily consists of four lanes and is mostly straight and level. The current recommended safe speed limit was raised in 2008 from 40 MPH to 45 MPH and is supported by a current engineering survey conducted in the same year.

There were eight collisions on El Monte during the study period. Two of those collisions resulted in injuries. Seven of the eight collisions were Auto vs. Auto and one was an Auto vs. Bicycle.

Speeding caused five of the crashes on El Monte Road, but all five of those were rear-end collisions, which usually indicate that the speeds, although unsafe, were not in excess of the posted limit and that inattention during stop-and-go traffic probably played a role. One vehicle failed to yield as it entered El Monte from O'Keefe, one vehicle made an unsafe backing maneuver, and one automobile sideswiped a bicyclist using an unsafe passing maneuver.

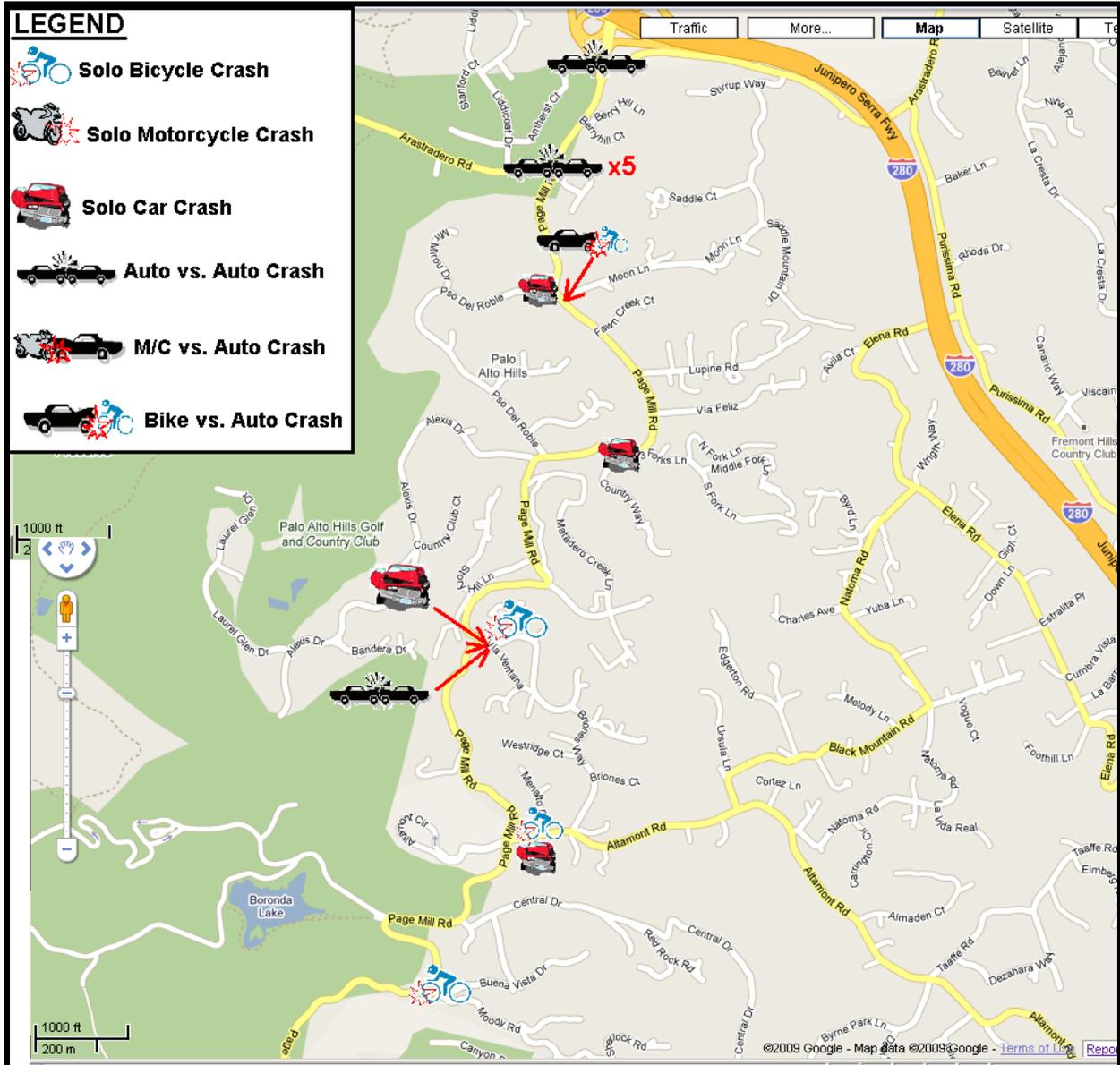
TRAFFIC ENFORCEMENT DATA ANALYSIS FOR EL MONTE ROAD

The data indicates that during the analysis period, deputies initiated 686 traffic enforcement contacts either on El Monte or on a street nearest to the intersection of El Monte. If you factor out all of the contacts that actually took place on State Route 280, it still leaves over 400 traffic enforcement contacts in the crash area.

RECOMMENDATIONS FOR EL MONTE ROAD

The Sheriff's office recommends continued general traffic enforcement in this area during the peak commute times. The use of a deputy on a motorcycle will greatly increase his/her ability to move through traffic congestion and spot violations.

PAGE MILL ROAD



Page Mill Road is approximately four miles in length. It is primarily a narrow, rural, residential, two-lane roadway with no sidewalks and a limited a number of shoulder areas. The road connects the valley in the northeast to the higher elevation foothills in the southwest portion of the town limits. Motor vehicle traffic frequently shares the roadway with bicycle and pedestrian traffic. The recommended speed limit for this roadway ranges from 30 MPH to 35 MPH and is supported by a July 15, 2008 engineering survey.

There were 15 collisions on Page Mill Road during the study period resulting in seven injuries. Five Auto vs. Auto collisions occurred at the intersection of Arastradero Road, but there was only one injury at that location. There were four bike collisions and three of those were solo.

The majority of the collisions were the result of speeding with the next biggest reason being stop sign violations.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR PAGE MILL ROAD

The data indicates that during the analysis period, deputies initiated 505 traffic enforcement contacts either on Page Mill Road, or on a street nearest to the intersection of Page Mill. If you factor out all of the contacts that actually took place on State Route 280, it still leaves over 376 traffic enforcement contacts on Page Mill Road. However, a little over one-third of those contacts resulted in a verbal warning and only one enforcement contact was made with a bicyclist.

RECOMMENDATIONS FOR PAGE MILL ROAD

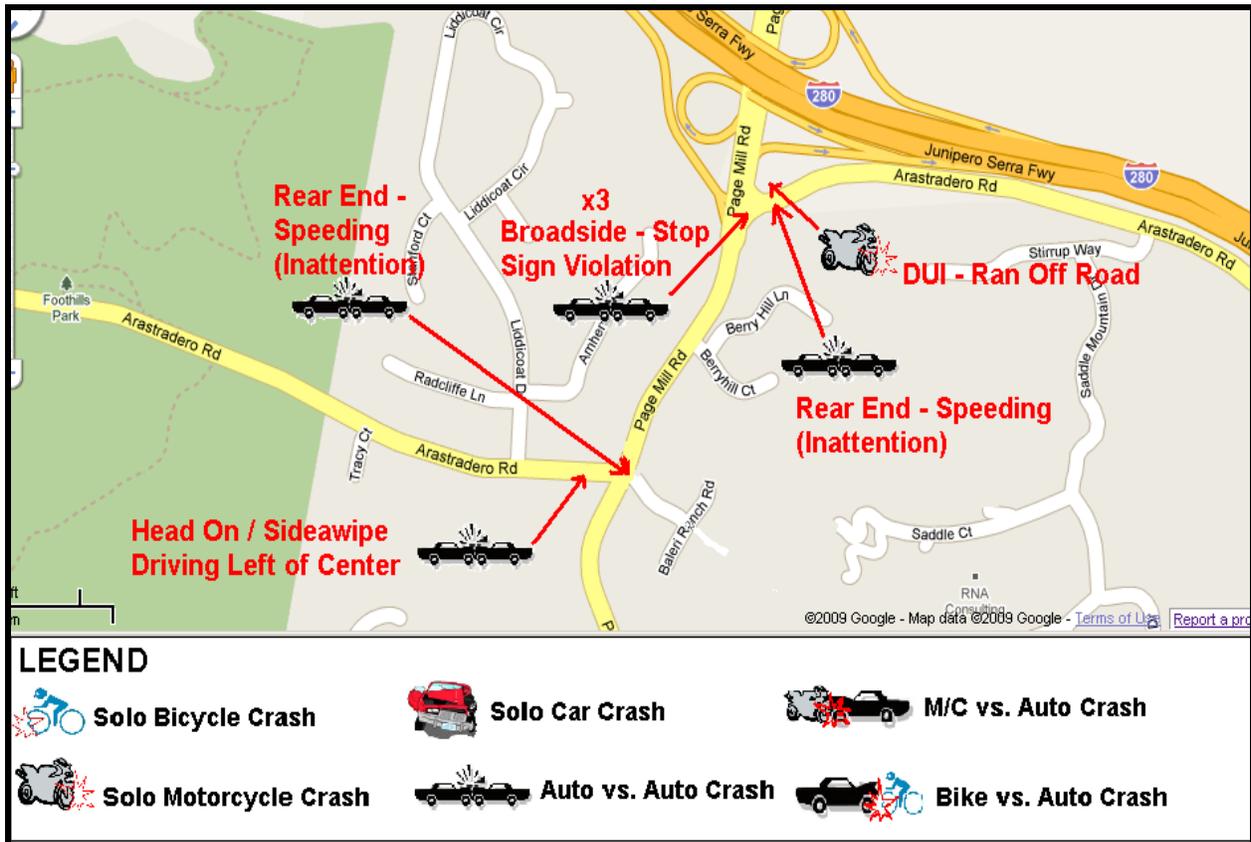
The Sheriff's Office recommends continued general enforcement, but with an increase in bicyclists contacts. Special focused traffic enforcement operations are also recommended for speed and stop sign violations by motor vehicle operators and bicyclists. The use of a deputy on a motorcycle will greatly increase their ability to observe violations on sections of the roadway where it is difficult or impossible for a full-size patrol vehicle to be or park. A visual inspection of the roadway also indicated a lack of warning signs for both cars and bicycles.

ANALYSIS BY INTERSECTION

In order to pinpoint those collisions which took place at an intersection, it was necessary to look at each case since the database only indicated the nearest cross street. The intersections with the most collisions and having a connection with the top three streets listed above were determined to be:

- Page Mill at Arastradero (Seven collisions with two injuries)
- Page Mill at Via Ventana (Four collisions with three injuries)
- El Monte at Hwy 280 (Three collisions with two injuries)

PAGE MILL at ARASTRADERO



A case-by-case look at the collisions which occurred at the intersection of Page Mill and Arastradero revealed that the two streets intersected in two different locations. Of the seven reported collisions, five of them occurred near the intersection closest to Interstate 280 and of those collisions three indicated a pattern of failing to stop at the stop sign on Page Mill Road. Two offending drivers admitted that they did not see the stop sign before the collision.

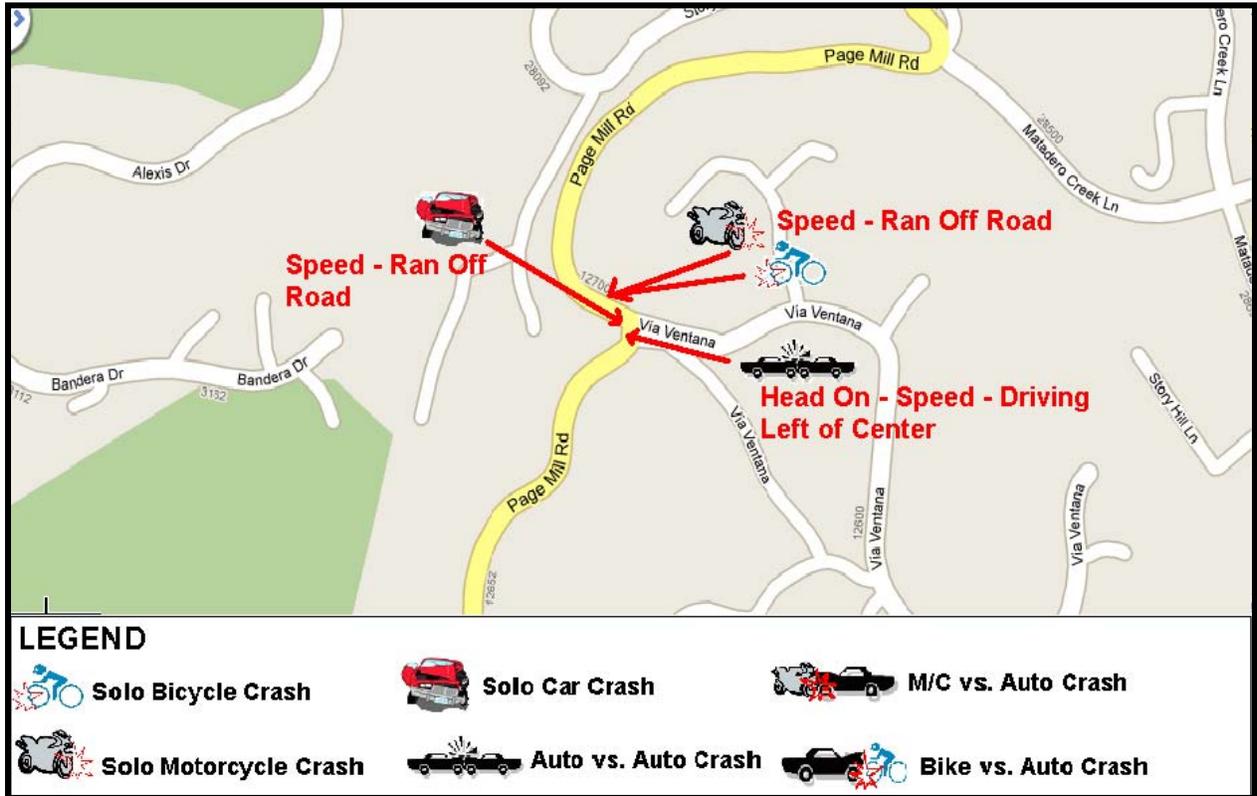
TRAFFIC ENFORCEMENT DATA ANALYSIS FOR PAGE MILL AT ARASTRADERO

The data indicates that during the analysis period, deputies initiated 206 traffic enforcement contacts at or very near these two intersections.

RECOMMENDATIONS FOR PAGE MILL AT ARASTRADERO

The Sheriff’s Office recommends continued general enforcement. Special focused traffic enforcement operations are also recommended for stop sign violations by motor vehicle operators. Intersection monitoring is difficult for deputies in patrol cars. Therefore, we recommend intersection monitoring by a motorcycle traffic deputy. A visual inspection of the roadway also indicated a lack of warning signs for both cars and bicycles.

PAGE MILL at VIA VENTANA



A case-by-case look at the collisions which occurred at the intersection of Page Mill and Via Ventana revealed that all four collisions occurred at the sharp curve located at that intersection. The driving behavior of the parties as they negotiated the curve caused the loss of control in all four collisions.

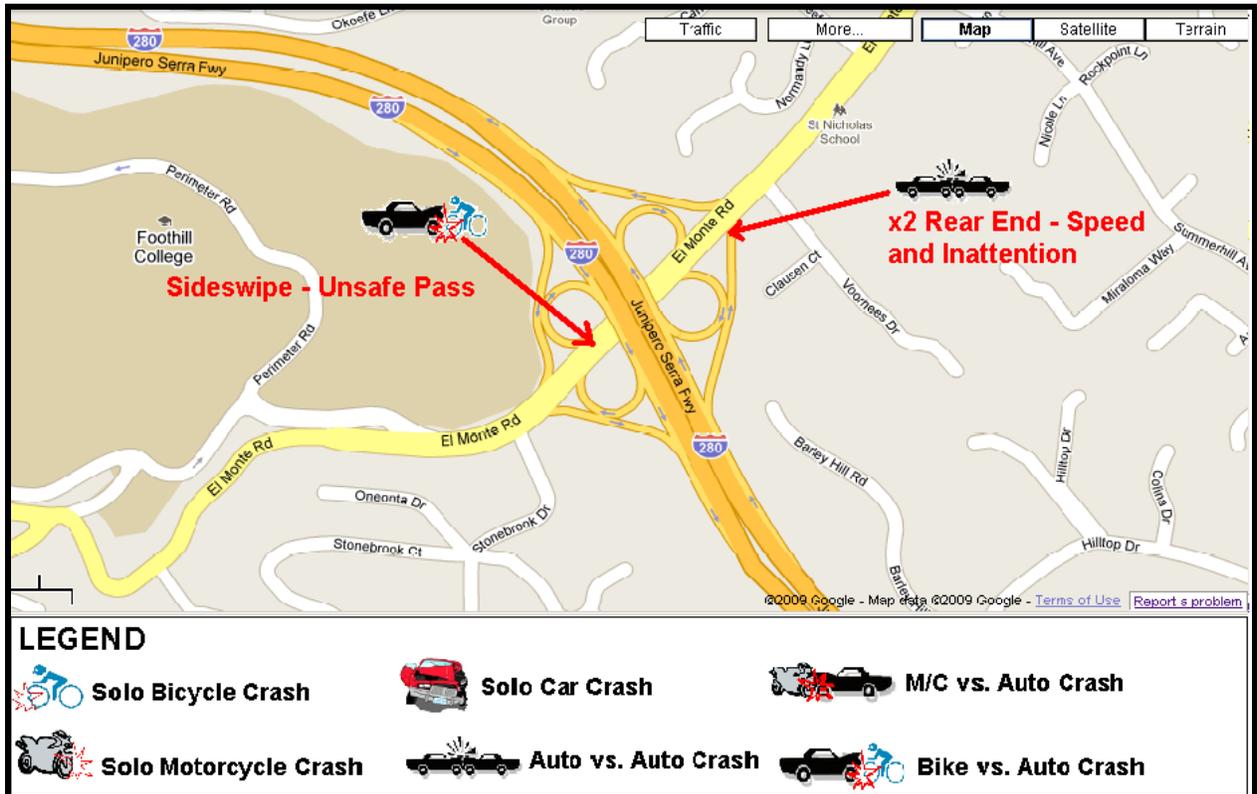
TRAFFIC ENFORCEMENT DATA ANALYSIS FOR PAGE MILL AT VIA VENTANA

The data indicates that during the analysis period, deputies initiated six traffic enforcement contacts at this intersection. The nature of the roadway in this area makes it difficult for traffic enforcement operations especially when the deputy is operating a full-size automobile.

RECOMMENDATIONS FOR PAGE MILL AT VIA VENTANA

The Sheriff’s Office recommends an increase in speed enforcement as well as special focused traffic enforcement operations using traffic deputies that operate patrol motorcycles. Motorcycle deputies should be deployed into the area to evaluate the roadway conditions for enforcement operations. Traffic engineers should review any existing traffic warning signs in the area for design, placement and/or obstructions. A visual inspection of the roadway also indicated a lack of warning signs for both cars and bicycles.

EL MONTE @ N/B INTERSTATE 280 OFF RAMP



A case-by-case look at the collisions which occurred at the intersection El Monte and Interstate 280 revealed that two of the collisions actually happened on the northbound 280 off ramp to eastbound El Monte and one occurred on westbound El Monte near the southbound 280 on ramp. The pattern identified here is inattention by drivers entering and exiting the freeway.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR EL MONTE AT SR 280

See section: ANALYSIS BY STREET – EL MONTE ROAD (Above)

RECOMMENDATIONS FOR EL MONTE AT SR 280

See section: ANALYSIS BY STREET – EL MONTE ROAD (Above)

ANALYSIS BY CAUSE

In the supporting documentation, Table 2 shows a breakdown of the collisions by cause. There were 11 different causes for the 69 collisions during the reporting period. Four of the 11 causes accounted for 52 (or 75%) of the total collisions, but a whopping 34 (or 92%) of the total injuries. Those top four causes were:

- Speeding (52% of all collisions accounting for 62% of the injuries)
- Failure to Yield (10% of all the collisions accounting for 11% of the injuries)
- Drunk Driving (7% of all the collisions accounting for 11% of the injuries)
- Driving Left of Center (6% of all collisions accounting for 8% of the injuries)

SPEEDING

SPEEDING - BICYCLISTS

As reported above, speeding caused 23 (or 62%) of injuries during the reporting period. However, 12 solo bicyclist crashes and one bike vs. bike collision accounted for over half of those speed related injuries and 35% of all the injuries during the reporting period.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR SPEEDING BICYCLISTS

The data indicates that during the analysis period, deputies initiated only seven traffic enforcement contacts with bicyclists resulting in one citation. Activity data codes currently only allow the deputy to choose between a citation and a warning for any bicycle enforcement contact. While I'm sure that some contacts were not coded correctly, I think the margin for error is small and the data clearly indicates the need for focused enforcement operations.

RECOMMENDATIONS FOR SPEEDING BICYCLISTS

Enforcing the Unsafe Speed law on bicyclists is not a common practice among law enforcement unless it is occurring on a shared bicycle pedestrian path. I believe the reason for this is that proving that the speed is unsafe becomes more subjective on non-motorized vehicles. In other words, it is more difficult to prove. Most bicyclists travel at or below the posted limit and have a greater ability than automobiles to stop or avoid hazards—their stopping and control capabilities are mostly influenced by their riding experience and the serviceability or capability of their equipment. Also, “speeding” bicyclists pose less of a threat to the safety of others should they become involved in a collision. The data shows that when the cause of the bicycle collision was speed, 100% of the time it was the bicyclists fault for traveling at an unsafe speed, but of those 14 cases, there was only one instance where the collision caused another person to be injured and in that case the offending bicyclists rear-ended another cyclist. However, I do believe that the case against a speeding cyclist is strengthened when a deputy observes the rider exhibiting a lack of control by committing a secondary violation such as, crossing over centerlines, reckless riding through blind intersections or curves and running stop signs. This type of enforcement can be difficult and labor intensive, but it should be noted here that a speeding solo bicycle crash accounted for one of the two fatalities.

It has been my experience that targeting bicyclists is quickly met with strong criticism from bicycle clubs and organizations. The backlash usually appears rather quickly in the media

through Op Ed columns, websites, and city council meetings. The town, as well as the Sheriff's Office, should be prepared to deal with this opposition and get out in front of it by highly publicizing any focused enforcement actions and the reasons behind them.

Should the decision be made to hold any special bicycle enforcement operations, emphasis should be placed on the following streets:

- Altamont
- Camino Hermoso
- Dawn
- Edith
- Page Mill
- Purissima
- Ravensbury
- Via Ventana.

The Sheriff's Office also recommends that a civil traffic engineer be consulted on the possibility of placing some type of approved bicycle traffic warning signs intended to alert the riders that bicycle collisions are frequent (or do occur) in the area.



Likewise, signs for the automobile drivers might be appropriate in some of the high volume bicycle traffic areas.



SPEEDING - AUTOMOBILES / MOTORCYCLES

Speeding motor vehicles accounted for the remaining 23 collisions which caused 10 (or 43%) of the speed related injuries, but surprisingly only 27% of all injuries during the reporting period. Also, nine of the 22 were rear-end collisions where inattentive driving usually always plays a role in the cause and where the speeds involved are below the posted limit and difficult to enforce. The 23 crashes involved nine Auto vs. Auto collisions, 13 solo automobile collisions and there was one solo motorcycle collision.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR SPEEDING MOTOR VEHICLES

The data indicates that during the analysis period, deputies issued 284 citations for speed. Activity data codes are not specific enough in this area to determine how many of 1,020 warnings given were for speed.

RECOMMENDATIONS FOR SPEEDING MOTOR VEHICLES

The Sheriff's Office recommends special focused speed enforcement operations through the use of motorcycle traffic deputies as well as an increase in speed enforcement by patrol deputies within the town limits, but with an emphasis on the following streets:

- Altamont
- Central
- Country
- El Monte
- Moody
- Page Mill
- Prospect
- Purissima
- Summitwood

FAILURE TO YIELD

Failing to yield the right-of-way caused seven (or 10%) of the crashes and four (or 11%) of the injuries during the reporting period. The violations occurred as drivers and bicyclists made turns at intersections or driveways. Three of the seven collisions were Auto vs. Bicycle and the bicyclists accounted for three of the four injuries, but were not at fault for any of these collisions.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR VEHICLES FAILING TO YIELD

Activity data codes are not specific enough in this area to determine how many of the over 2,000 citations and warnings categorized in the "other" field were given as a result of a failure to yield violation.

RECOMMENDATIONS FOR VEHICLES FAILING TO YIELD

The Sheriff's Office recommends continued general traffic enforcement during normal operations.

DRUNK DRIVING

Drunk driving accounted for five (or 7%) of the collisions and four (or 11%) of the injuries during the reporting period. All five were solo vehicle collisions that ran off the roadway.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR DRUNK DRIVING

The data indicates that during the analysis period, deputies made nine misdemeanor arrest and one felony arrest for drunk driving.

RECOMMENDATIONS FOR DRUNK DRIVING

The Sheriff's Office will continue to take advantage of Avoid the 13 grant monies that allow for the fielding of extra deputies during the specified campaign periods. However, the Sheriff's Office also recommends scheduling specific special enforcement operations that look for, stop, and arrest drunk drivers during the non-holiday periods. The Sheriff's Office will also continue to join border cities in the deployment and operation of DUI checkpoints.

DRIVING LEFT OF CENTER

Driving left of the center line accounted for four (or 6%) of the collisions and three (or 8%) of the injuries during the reporting period. There were two Auto vs. Auto collisions and two Bike

vs. Auto collisions. The two bicyclists were at fault for those crashes when they crossed over the center line. Driving left of center is primarily caused by speed, inattention, or under-steering.

TRAFFIC ENFORCEMENT DATA ANALYSIS FOR DRIVING LEFT OF CENTER

Activity data codes are not specific enough in this area to determine how many of the over 2,000 citations and warnings categorized in the “other” field were given as a result of a driving left of center violation.

RECOMMENDATIONS FOR DRIVING LEFT OF CENTER

The Sheriff’s Office recommends continued general traffic enforcement during normal operations.

ANALYSIS BY VEHICLE MOTION

In the supporting documentation, Table 4 shows a breakdown of the collisions by vehicle motion. There were eight different motions involved in the 69 collisions studied. Three of the eight motions accounted for 46 (or 67%) of the collisions and 28 (or 76%) of the injuries during the reporting period. Those top three motions were:

- Motor Vehicle Ran off Road (33% of all collisions and 27% of the injuries)
- Bicycle Ran off Road or Fell (19% of all collisions and 35% of injuries)
- Rear End (14% of all collisions and 14% of injuries)

During the reporting period, 23 solo motor vehicles ran off the road and either rolled over or struck an object causing 10 of the injuries. Likewise, 13 solo bicyclists either ran off the road or fell, but unlike the motor vehicle drivers, 100% of the riders were injured. Bicycle riders who ran off the road or fell, accounted for the largest percentage of injuries within the vehicle motion category. There were also 10 rear end collisions that resulted in five injuries.

ANALYSIS BY TYPE OF COLLISION

In the supporting documentation, Table 5 shows a breakdown of the collisions by type. There were eight different types of collision involving automobiles, motorcycles, bicycles, animals, and fixed objects. Note: Fixed objects include the roadway itself in instances where the vehicle rolled over or the rider fell from the bicycle or motorcycle. Two of the eight types accounted for 35 (or 51%) of all the collisions and resulted in 22 (or 60%) of the injuries. Those two types of collisions were:

- Bicycle vs. Object (19% of the all the collisions and 35% of the injuries)
- Auto vs. Object (32% of all the collisions and 24% of the injuries)

Not surprisingly, the collision types of Auto vs. Auto and Auto vs. Bicycle tied for the next highest rate in number and injuries, but what is surprising, is that if you break the collision types into two categories, “Solo Vehicle in Motion” and “More Than One Vehicle in Motion,” the data indicates that solo vehicle collisions accounted for more than half (61%) of the all the collisions and more than half (65%) of the injuries.

ANALYSIS BY FAULT

In the supporting documentation, Table 6 shows a breakdown of the collisions by fault. There were five different fault categories and they are broken down as follows:

- Automobile Driver (70% of the collisions and caused 49% of the injuries)
- Bicycle Rider (23% of the collisions and caused 43% of the injuries)
- Motorcycle rider (Two collisions resulting in two injuries)
- Mechanical Failure (One solo bicycle collision resulting in one injury)
- Other Than Driver (Two vehicles struck two deer in the roadway with no injuries to the drivers)

The interesting thing about these statistics is that even though bicycle riders were at fault for only 23% of the total collisions, they were determined to be the fault operator in 76% of the collisions where a bicyclist was involved. This was true whether or not it was a solo bicycle collision or a Bicycle vs. Auto collision. The riders only injured themselves in most cases and damaged their own property.

TRAFFIC ENFORCEMENT DATA ANALYSIS BY OPERATOR TYPE

The data indicates that during the analysis period, deputies initiated over 2,740 traffic enforcement contacts and only seven of those contacts were made with a bicyclist. While I'm sure that some contacts were coded incorrectly, I don't believe the margin for error to be very high. Not surprisingly, and for the reasons stated earlier in this report, traffic enforcement contacts with bicyclists are rare, not popular, and made more difficult by the geographic location of the violations.

RECOMMENDATIONS FOR ENFORCEMENT BY OPERATOR TYPE

The data clearly indicates a need for an increase in enforcement contacts with bicyclists and the Sheriff's Office recommends focused enforcement operations as described earlier in this report.

CONCLUSION

This cursory analysis didn't produce any obvious engineering deficiencies or suggest any obvious calming measures that might reduce the collision rate. However, it did identify one intersection where further study may be warranted. That area is Page Mill Road at Via Ventana where the street has a rather sharp curve. There may be some value at looking at the placement of traffic warning signs for bicyclists and motor vehicle operators, but a more in depth, case-by-case study should be completed by a civil traffic engineer to determine if there are some roadway design changes or traffic calming measures that might be appropriate. Other than that, it appears that the town is in need of consistent and specific enforcement of the vehicle code and the strategic use of resources available with an increase in focus on bicyclists. The Sheriff's Office recommends a combination of increased traffic enforcement activity through the use of the current contract hours as well as through the deployment of focused enforcement operations and recommends the incorporation of a traffic motorcycle deputy.

TABLE 1

SUMMARY BY STREET

Street	No.	Percent	Injuries	Percent	Summary by Street
ALTAMONT	7	10.14%	7	18.92%	at Corbetta, Altamont, Moody & Natoma: 5 - Solo Bikes / at Page Mill: 1 - Solo Motorcycle (M/C) / at Cortez: 1 - Solo Auto / All Speed
ALTO VERDE	1	1.45%	0	0.00%	Deer
ARASTRADERO	3	4.35%	2	5.41%	at Page Mill: 1-Auto vs. Auto (head-on) & 1-Solo M/C (Drunk) / at Purissima: 1-Bike vs. Auto (Stop Sign)
BERKSHIRE	1	1.45%	0	0.00%	1 - Auto vs. Parked Auto (Unsafe Backing)
BLACK MOUNTAIN	1	1.45%	1	2.70%	at 27501: 1 - Bike vs. Auto (Driving Left of Center / Speed)
BURKE	1	1.45%	0	0.00%	at Fremont: 1 - Auto vs. Auto (Failure to Yield when Turning in/out of Driveway)
CAMINO HERMOSO	2	2.90%	1	2.70%	1 - Solo Auto (Police Pursuit) / at Fernhill: 1 - Solo Bike (Speed)
CENTRAL	1	1.45%	1	2.70%	1 - Auto vs. Auto (Rear End - Speed)
CONCEPCION	1	1.45%	1	2.70%	1 - Solo Auto (Drunk)
COUNTRY	1	1.45%	0	0.00%	at Three Forks: 1 - Solo Auto (Speed)
DAWN	1	1.45%	1	2.70%	at Elena: 1 - Solo Bike (Speed)
EDITH	2	2.90%	2	5.41%	at 13901: 1 - Auto vs. Auto (Failure to Yield when Turning in/out of Driveway) / at Fremont: 1 - Bike vs. Bike (Rear End - Speed)
EL MONTE	8	11.59%	2	5.41%	at Voorhees, Stonebrook & O'Keefe: 4+1-Auto vs. Auto (Rear End - Speed) / at I-280: 1-Bike vs. Auto (Unsafe Pass) / at O'Keefe: 1-Auto vs. Auto (Failure to Yield when Turning in/out of Driveway) / 1-Auto vs. Auto (Backing)
ELENA	3	4.35%	2	5.41%	at La Barranca: 1 - Bike vs. Auto (Failure to Yield at an Intersection) / at Moody: 1 - Bike vs. Auto (Failure to Yield at a Driveway) / at Vinedo: 1 - Solo Auto (Speed)
FREMONT	2	2.90%	1	2.70%	at Edith: 1 - Bike vs. Auto (Driving Left of Center / Speed) / Auto vs. Parked Auto (Unsafe Backing)
GOLDEN HILL	1	1.45%	0	0.00%	at La Paloma: 1 - Solo Auto (Unsafe Turn)
I-280	1	1.45%	1	2.70%	Off-Ramp to El Monte: 1 - Auto vs. Auto (Rear End - Speed)
MOODY	4	5.80%	3	8.11%	at Altamont, Sherlock & Murietta: 3 + 1 Solo Auto (1 - Drunk / 3 - Speed)
OAK KNOLL	1	1.45%	0	0.00%	1 - Solo Auto (Unsafe Backing)
ONEONTA	1	1.45%	0	0.00%	1 - Auto vs. Parked Auto (Unsafe Turn)
PAGE MILL	15	21.74%	7	18.92%	at Via Ventana & Altamont: 2 -Solo Bikes (Speed) / at Moon: 1 -Bike vs. Auto (Failure to Yield at an Intersection) / at Via Ventana: 1-Auto vs. Auto (Driving Left of Center) / at Via Ventana, Altamont, Country & Paseo del Roble: 3 + 1 - Solo Auto (Speed) / 1+1 Auto vs. Auto (Rear End / Speed) / at Arastradero: 3 - Auto vs. Auto (Stop Sign Violation) / at I-280 Off-Ramp: 1 - Auto vs. Auto (Stop Sign Violation) / at Moody: 1 - Solo Bike (Speed)
PALO HILLS	1	1.45%	0	0.00%	1 - Auto vs. Auto (Unsafe Backing)
PASTEUR	1	1.45%	1	2.70%	1 - Solo Bike (Tire Blow Out)
PRISCILLA	1	1.45%	0	0.00%	Deer
PROSPECT	1	1.45%	1	2.70%	at 24911: 1 - Solo Auto (Speed)
PURISSIMA	3	4.35%	1	2.70%	at Conception: 1 (Fatal) - Solo Bike (Speed) / 2 - Solo Auto (1 -Speed & 1 -Unsafe Turn)
RAVENSBURY	1	1.45%	1	2.70%	at Old Ranch: 1 - Solo Bike (Speed)
ROBLEDA	1	1.45%	1	2.70%	at Brendel: 1 (Fatal) - Solo Auto (Drunk)
STONEBROOK	1	1.45%	0	0.00%	at Prospect: 1 - Solo Auto (Drunk)
SUMMITWOOD	1	1.45%	0	0.00%	at Tapa: 1 - Solo Auto (Speed)
TOTAL	69	100.00%	37	100.00%	

* **BOLD** indicates Injuries

TABLE 2

SUMMARY BY CAUSE

Cause	No.	Percent	Injuries	Percent	Summary by Cause
Driving Left of Center	4	5.80%	3	8.11%	1 + 1 - Auto vs. Auto & 2 - Bike vs. Auto (Arastradero, Black Mountain, Fremont & Page Mill)
Drunk Driving	5	7.25%	4	10.81%	4 + 1 - Solo Auto & M/C (Arastradero, Conception, Moody, Robleda (Fatal) & Stonebrook)
Failure to Yield	7	10.14%	4	10.81%	2 + 1 - Auto vs. Auto (Burke, Edith & El Monte) / 3 - Bike vs. Auto (Elena & Page Mill) / 1 - Auto vs. Parked Auto
Mechanical	1	1.45%	1	2.70%	1 - Solo Bike (Pasteur)
Other	2	2.90%	0	0.00%	2 - Auto vs. Deer
Pursuit	1	1.45%	0	0.00%	1 - Solo Auto (Camino Hermoso)
Speeding	36	52.17%	23	62.16%	12 - Solo Bike (Altamont, Camino Hermoso, Dawn, Page Mill, Purissima (Fatal), Ravensbury) / 1 - Bike vs. Bike (Edith) / 4 + 5 - Auto vs. Auto (Central, El Monte, Page Mill & I-280 Off-Ramp) / 5 + 8 - Solo Auto (Altamont, Country, Moody, Page Mill, Prospect, Purissima & Summitwood) / 1 - Solo M/C (Altamont)
Stop Sign	5	7.25%	1	2.70%	4 - Auto vs. Auto (Page Mill @ Arastradero & I280 Off Ramp) / 1 - Bike vs. Auto (Page Mill @ Arastradero)
Unsafe Backing	5	7.25%	0	0.00%	2 - Auto vs. Parked Auto (Berkshire & Fremont) / 2 - Auto vs. Auto (El Monte & Palo Hills) / 1 - Solo Auto (Oak Knoll)
Unsafe Passing	1	1.45%	1	2.70%	1 - Bike vs. Auto (El Monte)
Unsafe Turn	2	2.90%	0	0.00%	2 - Solo Auto (Golden Hill & Purissima)
TOTAL	69	100.00%	37	100.00%	

* **BOLD indicates Injuries**

TABLE 3

SUMMARY BY OUTCOME

Desc	No.	Percent	Injuries	Percent	Summary by Outcome
Collision, Fatal	2	2.90%	2	5.41%	1 - Solo Bike (Speed on Purissima) / 1 - Solo Auto (Drunk on Robleda)
Collision, Injury	35	50.72%	35	94.59%	6 - Bike vs. Auto (Black Mountain, Fremont, Elena, Page Mill, Arastradero & El Monte) / 12 - Solo Bike (Altamont, Camino Hermosa, Dawn, Page Mill, Ravensbury) / 1 - Bike vs. Bike (Edith) / 6 - Auto vs. Auto (central, El Monte, Page Mill & I280 Off Ramp) / 8 - Solo Auto (Altamont, Conception, Elena, Moody, Page Mill & Prospect) / 2 - Solo M/C (Arastradero & Altamont)
Collision, Property Damage	24	34.78%			11 - Auto vs. Auto (Arastradero, El Monte & Page Mill) / 10 - Solo Auto (Country, Moody, Golden Hill, Oak Knoll, Page Mill, Purissima, Stonebrook, Summitwood) / 1 - Auto vs. Parked Auto (Fremont) / 2 - Auto vs. Deer (Alto Verde & Priscilla)
Hit-Run, Property Damage	8	11.59%			3 - Auto vs. Auto (Burke, Page Mill & Palo Hills) / 3 - Solo Auto (Camino Hermosa, Page Mill & Purissima) / 2 - Auto vs. Parked Auto (Berkshire & Oneonta)
TOTAL	69	100.00%	37	100.00%	

Desc	No.	Percent	Injuries	Percent
Collision, Injuries or Fatality			37	53.62%
Collision, Property Damage Only	32	46.38%		

* **BOLD** indicates Injuries

TABLE 4

SUMMARY BY VEHICLE MOTION

Motion	No.	Percent	Injuries	Percent	Summary by Vehicle Motion
Backing	4	5.80%	0	0.00%	2 - Auto vs. Auto (El Monte & Palo Hills) / 2 - Auto vs. Parked Auto (Fremont & Berkshire)
Head-On / Sideswipe	5	7.25%	4	10.81%	2 - Bike vs. Auto (Black Mountain & Fremont) / 1 + 1 - Auto vs. Auto (Page Mill & Arastradero) / 1 - Bike vs. Auto (El Monte)
Broadside	8	11.59%	4	10.81%	3 - Bike vs. Auto (Elena, Page Mill & Arastradero) / 1 + 4 - Auto vs. Auto (Edith, Page Mill @ Arastradero & I280)
Hit Object/Animal in Roadway	2	2.90%	0	0.00%	2 - Auto vs. Deer (Alto Verde & Priscilla)
Motor Vehicle - Ran Off Road	23	33.33%	10	27.03%	8 + 13 - Solo Auto (Altamont, Camino Hermosa, Conception, Country, Elena, Golden Hill, Moody, Oak Knoll, Page Mill, Prospect, Purissima, Robleda (Fatal), Stonebrook & Summitwood) / 1 - Solo M/C (Arastradero) / 1 - Solo M/C (Altamont)
Bicycle - Ran Off Road or Fell	13	18.84%	13	35.14%	13 - Solo Bike (Altamont, Camino Hermosa, Dawn, Page Mill, Pasteur, Purissima (Fatal), Ravensbury) = 12 Speed Related / 1 - Mechanical
Rear End	10	14.49%	5	13.51%	Speed Related
Turning: Driveway	4	5.80%	1	2.70%	2 - Auto vs. Auto (El Monte & Burke) / 1 - Auto vs. Parked Auto (Oneonta) / 1 - Bike vs. Auto (Elena)
TOTAL	69	100.00%	37	100.00%	

* **BOLD** indicates Injuries

TABLE 5

SUMMARY BY COLLISION TYPE

Type	No.	Percent	Injuries	Percent	Summary by Collision Type
Bike vs. Bike	1	1.45%	1	2.70%	1 - Rear End - Speed (Edith)
Bike vs. Auto	6	8.70%	6	16.22%	2 - Driving Left of Center (Black Mountain & Fremont) / 2 - Failure to Yield (Elena & Page Mill) / 1 - Stop Sign (Arastradero) / 1 - Unsafe Pass (El Monte)
Bike vs. Object	13	18.84%	13	35.14%	13 - Speed (Altamont, Purissima (Fatal), Camino Hermosa, Page Mill, Dawn, Ravensbury) / 1 - Mechanical (Pasteur)
Auto vs. Auto	20	28.99%	6	16.22%	1 + 1 - Driving Left of Center (Page Mill & Arastradero) / 1 + 2 - Failure to Yield (Edith, El Monte & Burke) / 4 + 5 - Speed (Central. El Monte, Page Mill & I280 Off Ramp) / 4 - Stop Sign (Page Mill @ Arastradero & I280 Off Ramp) / 2 - Unsafe Backing
Auto vs. Object	22	31.88%	9	24.32%	3 + 1 - Drunk (Robleda (Fatal), Conception, Moody & Stonebrook) / 5 + 8 - Speed (Altamont, Moody, Page Mill & Prospect, Country, Purissima, Summitwood & Elena) / 2 - Unsafe Turn (Purissima & Golden Hill) / 1 - Unsafe Backing (Oak Knoll) / 1 - Pursuit (Camino Hermosa) / 1 - Unknown (Elena)
Auto vs. Parked Auto	3	4.35%	0	0.00%	2 - Unsafe Backing (fremont & Berkshire) / 1 - Failure to Yield (Oneonta)
Auto vs. Deer	2	2.90%	0	0.00%	2 - Other (Priscilla & Alto Verde)
MC vs. Object	2	2.90%	2	5.41%	1 - Drunk (Arastradero) / 1 - Speed (Altamont)
TOTAL	69	100.00%	37	100.00%	

Type	No.	Percent	Injuries	Percent
SOLO Vehicle in Motion	42	60.87%	24	64.86%
More Than One Vehicle in Motion	27	39.13%	13	35.14%
	69	100.00%	37	100.00%

* **BOLD** indicates Injuries

TABLE 6

SUMMARY BY FAULT

Fault	No.	Percent	Injuries	Percent	Summary by Fault
Bike	16	23.19%	16	43.24%	3 - Bike vs. Auto (Arastradero, Black Mountain & Fremont) / 1 - Bike vs. Bike (Edith) / 12 - Solo Bike (Altamont, Camino Hermosa, Dawn, Page Mill, Purissima (Fatal), Ravensbury)
Auto	48	69.57%	18	48.65%	6 + 14 Auto vs. Auto (Arastradero, Burke, Central, Edith, El Monte, I280 Off Ramp, Page Mill & Palo Hills) / 8 + 13 Solo Auto (Altamont, Camino Hermosa, Country, Conception, Elena, Golden Hill, Moody, Oak Knoll, Page Mill, Prospect, Purissima, Robleda (Fatal), Stonebrook & Summitwood) / 4 - Bike vs. Auto (Elena, Page Mill & El Monte) / 3 - Auto vs. Parked Auto (Berkshire, Fremont & Oneonta)
Motorcycle (M/C)	2	2.90%	2	5.41%	2 - Solo M/C (Arastradero & Altamont)
Mechanical Failure	1	1.45%	1	2.70%	1 - Solo Bike (Pasteur)
Other	2	2.90%	0	0.00%	2 - Auto vs. Deer (Priscilla & Alto Verde)
TOTAL	69	100.00%	37	100.00%	

* **BOLD indicates Injuries**

COLLISION DATA (Chronological Order)

Outcome	Type	Motion	Cause	Fault	Dis	Numb	Street	Ty	Cross	Disposition
Collision, Injury	Auto vs. Auto	Rear End	Speeding	Auto	L4		CENTRAL		RED ROCK	08-198-0218L
Hit-Run, Property Damage	Auto vs. PrkdAuto	Turning: Driveway	Failure to Yield	Auto	L5	25005	ONEONTA			08-205-0226L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L4		ALTAMONT		NATOMA	08-213-0153L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L4		MOODY		SHERLOCK	08-224-0374L
Collision, Injury	MC vs. Object	Ran Off Road or Fell	Drunk Driving	M/C	L3		ARASTRADERO	RD	PAGE MILL	08-229-0306L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		PAGE MILL	RD	VIA VENTANA	08-243-0270L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		ALTAMONT	RD	ALTAMONT	08-263-190L
Hit-Run, Property Damage	Auto vs. Object	Ran Off Road or Fell	Pursuit	Auto	L5	23500	CAMINO HERMOSO	DR		08-270-0294L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		ALTAMONT		MOODY	08-271-0350L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Unsafe Backing	Auto	L5	24024	OAK KNOLL	CR		08-275-0393L
Collision, Injury	Auto vs. Auto	Rear End	Speeding	Auto	L3		PAGE MILL	RD	ARASTRADERO	08-278-0107L
Collision, Injury	Auto vs. Auto	Rear End	Speeding	Auto	L2		I-280	HY	EL MONTE	08-283-0395L
Hit-Run, Property Damage	Auto vs. Auto	Rear End	Speeding	Auto	L3		PAGE MILL	RD	ARASTRADERO	08-287-0221L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		ALTAMONT		ALTAMONT	08-288-0318L
Collision, Injury	MC vs. Object	Ran Off Road or Fell	Speeding	M/C	L3		ALTAMONT		PAGE MILL	08-288-0348L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L5		RAVENSBURY		OLD RANCH	08-290-0276L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L1	26645	PURISSIMA	RD		08-294-0184L
Collision, Injury	Bike vs. Auto	Crossing Intersection	Failure to Yield	Auto	L3		ELENA		LA BARRANCA	08-318-0171L
Collision, Property Damage	Auto vs. Auto	Broadside	Stop Sign	Auto	L3		PAGE MILL		ARASTRADERO	08-331-0157L
Collision, Property Damage	Auto vs. Auto	Rear End	Speeding	Auto	L2		EL MONTE		VOORHEES	08-345-0327L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3	26726	MOODY	RD		08-351-0344L

COLLISION DATA (Chronological Order)

Outcome	Type	Motion	Cause	Fault	Dis	Numb	Street	Ty	Cross	Disposition
Collision, Property Damage	Auto vs. Auto	Rear End	Speeding	Auto	L5		EL MONTE		STONEBROOK	09-006-0120L
Collision, Injury	Auto vs. Auto	Crossing Intersection	Failure to Yield	Auto	L3	13901	EDITH			09-013-0299L
Collision, Injury	Auto vs. Auto	Crossed Over Center	Driving Left of Center	Auto	L3		PAGE MILL	RD	VIA VENTANA	09-019-0083L
Collision, Property Damage	Auto vs. Auto	Head-On / Sideswipe	Driving Left of Center	Auto	L3		ARASTRADERO	RD	PAGE MILL	09-048-0324L
Collision, Fatal	Auto vs. Object	Ran Off Road or Fell	Drunk Driving	Auto	L1		ROBLEDA		BRENDEL	09-055-0211L
Collision, Property Damage	Auto vs. Auto	Rear End	Speeding	Auto	L5		EL MONTE		STONEBROOK	09-062-0140L
Collision, Property Damage	Auto vs. Auto	Turning: Driveway	Failure to Yield	Auto	L1		EL MONTE		O KEEFE	09-071-0101L
Hit-Run, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3	25698	ELENA		VINEDO	09-080-0082L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		PAGE MILL	RD	COUNTRY	09-093-0325L
Collision, Injury	Auto vs. Auto	Rear End	Speeding	Auto	L2		EL MONTE		VOORHIES	09-098-0440L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		COUNTRY	LN	THREE FORKS	09-099-0422L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Drunk Driving	Auto	L1		CONCEPCION		CORTE MADERA	09-103-0410L
Collision, Injury	Bike vs. Auto	Broadside	Stop Sign	Bike	L1		ARASTRADERO		PURISSIMA	09-107-0238L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L4		MOODY	RD	MURIETTA	09-108-0457L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		PAGE MILL		ALTAMONT	09-132-0128L
Collision, Injury	Bike vs. Auto	Crossed Over Center	Driving Left of Center	Bike	L1		FREMONT	RD	EDITH	09-132-0342L
Collision, Property Damage	Auto vs. Auto	Backing	Unsafe Backing	Auto	L2		EL MONTE	RD	HY 280 N/B EXIT RAMP	09-138-0258L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L5	24911	PROSPECT	AV		09-145-0441L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Mechanical	Mech.	L1	300	PASTEUR	DR		09-146-0103L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		ALTAMONT	RD	CORTEZ	09-146-0298L
Collision, Property Damage	Auto vs. Auto	Broadside	Stop Sign	Auto	L3		PAGE MILL	RD	HY 280 S/B EXIT RAMP	09-152-0113L
Collision, Property Damage	Auto vs. Auto	Broadside	Stop Sign	Auto	L3		PAGE MILL		ARASTRADERO	09-155-0129L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L5		CAMINO HERMOSO	DR	FERNHILL	09-156-0145L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		PAGE MILL	RD	PASEO DEL ROBLE	09-165-0318L
Hit-Run, Property Damage	Auto vs. Auto	Backing	Unsafe Backing	Auto	L1	26756	PALO HILLS			09-174-0047L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L4		PAGE MILL	RD	ALTAMONT	09-178-0165L
Collision, Property Damage	Auto vs. Auto	Broadside	Stop Sign	Auto	L1		PAGE MILL		ARASTRADERO	09-187-0112L

COLLISION DATA (Chronological Order)

Outcome	Type	Motion	Cause	Fault	Dis	Numb	Street	Ty	Cross	Disposition
Collision, Property Damage	Deer vs. Auto	Hit Object or Animal in Road	Other	Deer	L5		PRISCILLA		STONEBROOK	09-189-0042L
Hit-Run, Property Damage	Auto vs. Auto	Turning: Driveway	Failure to Yield	Auto	L1		BURKE		FREMONT	09-195-0064L
Collision, Injury	Bike vs. Auto	Crossing Intersection	Failure to Yield	Auto	L3		PAGE MILL		MOON	09-205-0296L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		DAWN		ELENA	09-206-0254L
Hit-Run, Property Damage	Auto vs. PrkdAuto	Backing	Unsafe Backing	Auto	L5		BERKSHIRE		ELOISE	09-213-0379L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L4		ALTAMONT		CORBETTA	09-218-0085L
Collision, Injury	Bike vs. Auto	Crossed Over Center	Driving Left of Center	Bike	L3	27501	BLACK MOUNTAIN			09-233-0092L
Collision, Fatal	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L1		PURISSIMA		CONCEPTION	09-233-0248L
Hit-Run, Property Damage	Auto vs. Object	Ran Off Road or Fell	Unsafe Turn	Auto	L1	27400	PURISSIMA		VISCIANO	09-236-0141L
Collision, Injury	Bike vs. Bike	Rear End	Speeding	Bike	L1		EDITH		FREMONT	09-237-0445L
Collision, Injury	Auto vs. Object	Ran Off Road or Fell	Drunk Driving	Auto	L4		MOODY		ALTAMONT	09-253-0006L
Collision, Property Damage	Auto vs. PrkdAuto	Backing	Unsafe Backing	Auto	L1		FREMONT		PALO VISTA	09-254-0275L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Drunk Driving	Auto	L5		STONEBROOK		PROSPECT	09-255-0336L
Collision, Injury	Bike vs. Auto	Turning: Driveway	Failure to Yield	Auto	L4		ELENA		MOODY	09-256-0237L
Collision, Injury	Bike vs. Auto	Passing	Unsafe Passing	Auto	L3		EL MONTE		HY 280	09-259-0248L
Collision, Property Damage	Auto vs. Auto	Rear End	Speeding	Auto	L2		EL MONTE		O KEEFE	09-264-0199L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Unsafe Turn	Auto	L1		GOLDEN HILL		LA PALOMA	09-268-0407L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L3		PAGE MILL		VIA VENTANA	09-271-0205L
Collision, Property Damage	Deer vs. Auto	Hit Object or Animal in Road	Other	Deer	L1		ALTO VERDE		CONCEPTION	09-279-0046L
Collision, Property Damage	Auto vs. Object	Ran Off Road or Fell	Speeding	Auto	L4		SUMMITWOOD		TEPA	09-287-0448L
Collision, Injury	Bike vs. Object	Ran Off Road or Fell	Speeding	Bike	L3		PAGE MILL		MOODY	09-304-0184L