

# **REDUCTION OF CONSTRUCTION PROJECT RISKS TO PEDESTRIANS, DRIVERS, AND TRANSIT PASSENGERS THROUGH ANALYSIS OF HISTORICAL ACCIDENT RECORDS**

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## ABSTRACT

The proposed study will use the Pareto Principle and an accident chain analysis to analyze historical accident records to develop new construction project workplace safety recommendations that will reduce active construction project risks to pedestrians, drivers, and transit passengers.

Fulfillment of this objective requires the research team to work closely with state transportation department agency staff to

- Review existing California Department of Transportation (Caltrans) contractor safety rules, regulations, and processes;
- Review informal Caltrans contractor work practices and processes;
- Collect and review Caltrans accident data (specific to injuries to the public while they are using the transportation network);
- Analyze and correlate accident data with work practices and accident conditions (using the Pareto Principle and an accident chain analysis); we will
  - Analyze whether Caltrans safety practices were followed
  - Identify areas where practices were not effective
  - Analyze of role of site conditions in accident
- Develop improved measures to Caltrans' safety processes so as to reduce crash risk and improve transit safety.

The fulfillment of this objective also requires publishing a report of findings to share lessons learned with the Caltrans local district staff, as well as state and federal agencies.

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## **DISCLOSURE**

Project was funded in entirety under this contract to California Department of Transportation.

## INTRODUCTION

As the public agency responsible for the annual delivery of over three billion dollars in construction projects, the California Department of Transportation (Caltrans) has a tremendous responsibility to these deliver construction projects using project delivery processes and procedures that create the minimum risk to pedestrians, drivers, and transit passengers while also maintaining a safe working environment for all of its employees, consultants, and contractors.

This study exams accident data from over 74,000 accidents that occurred on selected highways in Southern California. The objective of the analysis is to compare accident data and characteristics for accidents which do not occur in construction zones with accidents that did occur in construction zones. Using Pareto Charts to conduct this comparative analyses, recommendations to reduce accidents in construction zones are made. Potential accident chain scenarios based on the analysis are also developed as a tool to communication accident mechanisms.

### Literature Review

Study of construction work zone accidents has become a nationwide and statewide priority. Title 23 United States Code (USC) 402, enacted in 1966 and administered through Title 23 Code of Federal Regulations (CFR) 1204.4, and California Vehicle Code (CVC) Section 2900 et seq. requires the State of California to have a data collection system as part of the process to reduce the number and/or severity of accidents on roads in the State of California. In response to Title 23, USC 402, the State of California developed the Traffic Collision Reports (TCR's) used by police agencies to collect and compile accident data. When the State developed the TCR's, they also developed the accident database (SWITRS) that resulted from the data collected and compiled from the traffic collisions reports. The State also developed the Traffic Accident Surveillance and Analysis System (TASAS) used by the California Department of Transportation (Caltrans) to analyze accident, traffic, and highway data collected and compiled by Caltrans. The State of California has developed a process that utilizes the

TASAS data base, including the accident information collected and compiled into it, to effectively reduce the number and severity of accidents on all highways under the jurisdiction of the State. This study to date has not extensively looked at accidents as related to active construction projects.

California has also created the Statewide Integrated Traffic Records System (SWITRS), a statewide records system. SWITRS is a centralized accumulation of data for fatal and injury motor vehicle traffic accidents. California's Department of Transportation (Caltrans), Department of Motor Vehicles (DMV), and CHP formed a committee to act as caretakers of SWITRS. Each has a special interest in the information garnered from accident investigations. CHP, Caltrans, and DMV use the statistics to improve roadway conditions and monitor the effectiveness of enforcement efforts. Each uses the system in their own way to maintain a safe motoring environment for the public. Again, however, construction related accidents are not separately considered or analyzed.

At the federal level, the Highway Safety Information System (HSIS) Laboratory offers value to FHWA's Research and Development program, to other offices within FHWA and DOT, to the safety research community in general, and to State and local engineers/planners. HSIS maintains a data base for which eight States (California, Illinois, Maine, Michigan, Minnesota, North Carolina, Utah, and Washington) provide crash, roadway inventory, traffic, driver, vehicle, and other information that can be linked to analysis files for a wide spectrum of safety studies. Texas, in particular, has had progress in research of construction project impacts to traffic accidents (Fontaine 2001, Fontaine and Hawkins 2001)

## **Pareto Principal**

The study will use the Pareto Principle and an accident chain analysis to analyze historical accident records to develop new construction project workplace safety recommendations that will reduce active construction project risks to pedestrians, drivers, and transit passengers.



The Pareto Principle is based upon the observation of Vilfredo Pareto in nineteenth century Italy that 20% of the population controlled about 80% of the wealth. Researchers have applied Pareto's concept to many other topics other than wealth distribution and have found that in most cases, occurrences are distributed in a way such that a vital few make up the largest portion of the population of outcomes – but not always strictly in a 20-80 relationship (Juran 1989). The Pareto diagram is a graphic representation of this concept. The Pareto diagram itself is a histogram with the categories of data arranged in order from the largest to the smallest and a cumulative curve for all outcomes. Used in research applications, Pareto diagrams graphically allow the separation of the vital few items from which the majority of occurrences are generated from the trivial many. Resources are then directed to the vital few, thus maximizing the effective use of available resources. Used in such a fashion, Pareto diagrams have been used or proposed in a number of applications such as quality control (Kuprenas and Kenney 1999), engineering management (Graves 1993), and safety (Kuprenas et al 1999, Kuprenas and Nasr, 2000).

### **Accident Chain Analysis**

Accident chains are a simple graphical tool used to represent the condition of events that result in an accident. Each circumstance / event is illustrated through a box. Arrows connecting the boxes indicate a relationship between the circumstances / events. The final box in the chain is the accident. Items immediately preceding the accident are the direct cause of the accident, but the value of the accident chain is beyond these events. The chain identified events prior to these direct cause events that if eliminated would prevent the accident preceding event from happening. In many cases, removal or mitigation of these earlier events is significantly easier (effort, cost, time, etc.) Than removal of later events.

Accident chains within this work are used in such a fashion. When an accident causing event is eliminated, the accident is mitigated. This work will create accident chains based on data identified from the Pareto analysis. The work will also create

mitigated accident chain diagrams to assist in determining how to reduce or eliminate the construction zone accidents studies in the chain diagrams.

## **DATA**

Accident data is pulled from the California Department of Transportation (Caltrans) accident database called “Traffic Accident Surveillance and Analysis System” (TASAS). Data used in the analysis is all accidents in Caltrans District 7 (as shown in Figure 1) for the three year period from 10/01/00 to 09/30/03 on the five state routes 005, 010, 101, 110, 405. Accidents in all directions (northbound, southbound, eastbound, and westbound), all times of day, and all conditions are included. The TASAS database includes several data fields. The TASAS data fields used in this study are

- Number of vehicles
- Type of vehicle / party
- Type of accident
- Movement proceeding accident
- Primary collision factor (including construction activity)
- Other associated factor
- Sobriety / drug use

The data set is subdivided into two groups – all accidents (including accidents in construction zones) and accidents that specifically occurred in construction zones. Table 1 below summarizes the data to be used in the analyses. Note within column 4 of the figure the large variation in number of accidents in construction zones. Note that this variation is less a function of the road, but rather more a function of whether construction took place over the three year period.

Appendix 1 is the TASAS printouts used to develop the database used in this study. Appendix 2 is a printout of the Caltrans **Traffic Manual**, Chapter 3 which includes information as to how the accident data is collected by the state (California Department of Transportation, 2006).

**FIGURE 1. Map of District Numbers**



**TABLE 1. Accident Data**

Route (1)	Total Number of Accidents (2)	Number of Accidents Not in Construction Zones (3)	Number of Accidents in Construction Zones (4)
005	16,562	16,207	355
010	18,306	17,194	1,112
101	13,169	12,938	231
110	10,555	10,480	75
405	15,894	15,715	179
<i>TOTAL</i>	<i>74,486</i>	<i>72,534</i>	<i>1,952</i>

## **ANALYSIS**

The analysis of this research is simple. The approach is to compare accident data and characteristics for accidents which do not occur in construction zones with accidents that did occur in construction zones. Using Pareto Charts to conduct this comparative analyses, recommendations to reduce accidents in construction zones are made. Potential accident chain scenarios based on the analysis are also developed as a tool to communication accident mechanisms.

### **Pareto Charts**

Series of figure showing Pareto charts with two pieces of information for each accident attribute studied. The x axis on the chart represents the attribute outcomes and the y axes showing percentage. The left axis is the percentage of each individual outcome (measured as a bar) and the right axis is and the cumulative percentage for all listed outcomes (measured as a curve). Seven charts and, hence, seven accident

attributes, are included in the analysis. Each charted attribute has between four and seventeen outcomes. Each figure also shows information on two sets of data, a dark grey set of frequency bars and curve (representing accident data for all accidents) and a light grey set of frequency bars and curves (representing accidents that happened in construction zones).

Table 2 below summarizes the number of injuries and of the number of accidents per injury. Note within columns 3 and 5 of the figure a lower number means that the accident would be more likely to result in injury – a value of one would mean every accident resulted in an injury. The table shows a 4.2% increase in the average of accidents per injury when the accident occurs in a construction zone.

**TABLE 2. Accident Data – Injuries**

Route (1)	Accidents Not in Construction Zones		Accidents in Construction Zones	
	Number of Injuries (2)	Accidents per Injury (3)	Number of Injuries (4)	Accidents per Injury (5)
005	4,098	3.95	93	3.82
010	4,418	3.89	319	3.49
101	3,584	3.61	68	3.40
110	2,722	3.85	20	3.75
405	4,475	3.51	50	3.58
<i>Average</i>	-	3.76	-	3.61

Table 3 below summarizes the number of fatalities and of the number of accidents per fatality. Note within columns 3 and 5 of the figure a lower number means that the accident would be more likely to result in fatality – a value of one hundred would mean every one hundred accidents resulted in a fatality. The table shows a significant difference between the averages shown in columns 3 and 5. The table shows an increase of 37.4% in the average of accidents per fatality when the accident occurs in a construction zone

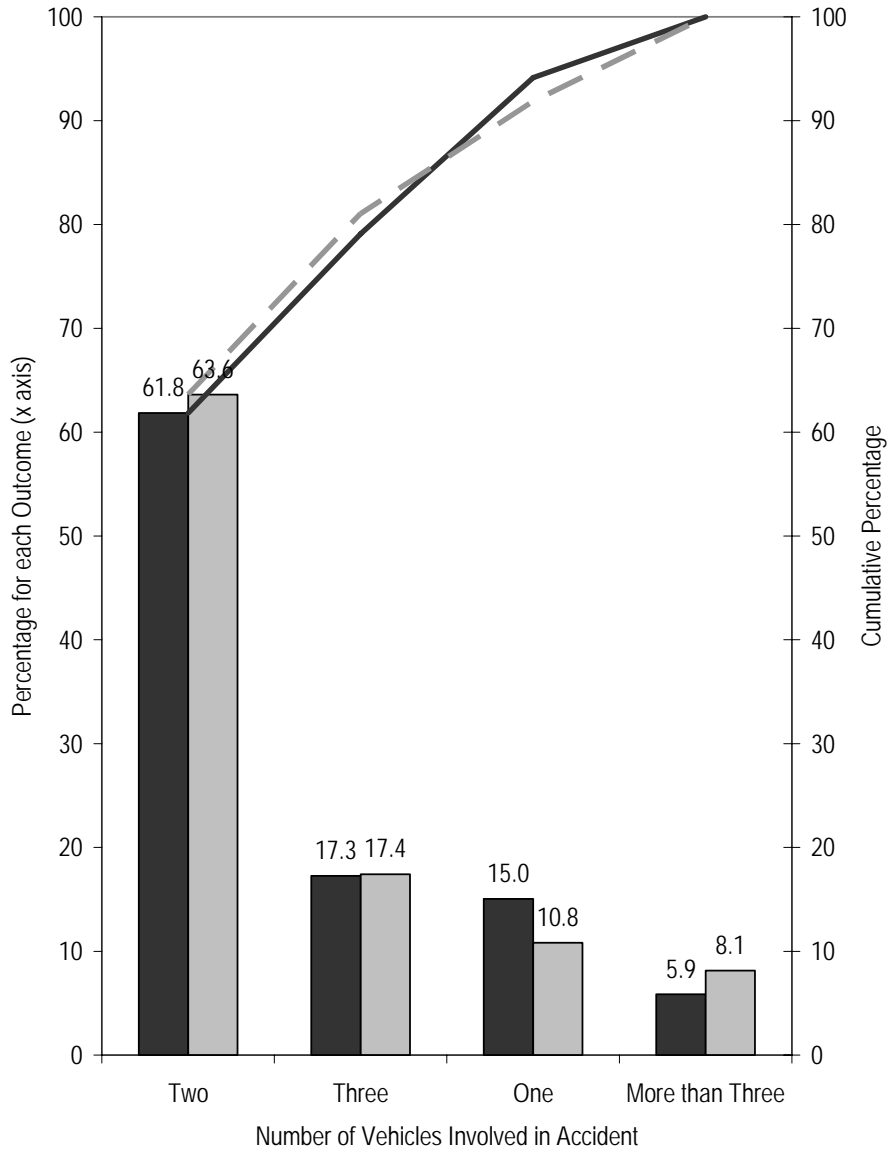
**TABLE 3. Accident Data – Fatalities**

Route (1)	Accidents Not in Construction Zones		Accidents in Construction Zones	
	Number of Fatalities (2)	Accidents per Fatality (3)	Number of Fatalities (4)	Accidents per Fatality (5)
005	89	182.10	3	118.33
010	55	312.62	2	556.00
101	30	431.27	4	57.75
110	38	275.79	1	75.00
405	42	374.17	1	179.00
<i>Average</i>	-	<i>315.19</i>	-	<i>197.22</i>

The Pareto chart showing the number of vehicles involved in each accident of the study is shown in Figure 2. The dark bars show the non-construction zone accidents; the lighter bars are the construction zone accidents. The figure shows some increase the number of vehicles involved in accidents when the accident occurred in a construction zone – construction zone accidents are much less likely to involve only one vehicle and more likely to involve more three or more cars. A comparison of averages of number of vehicles (calculated based on number of accidents weighted based upon number vehicles

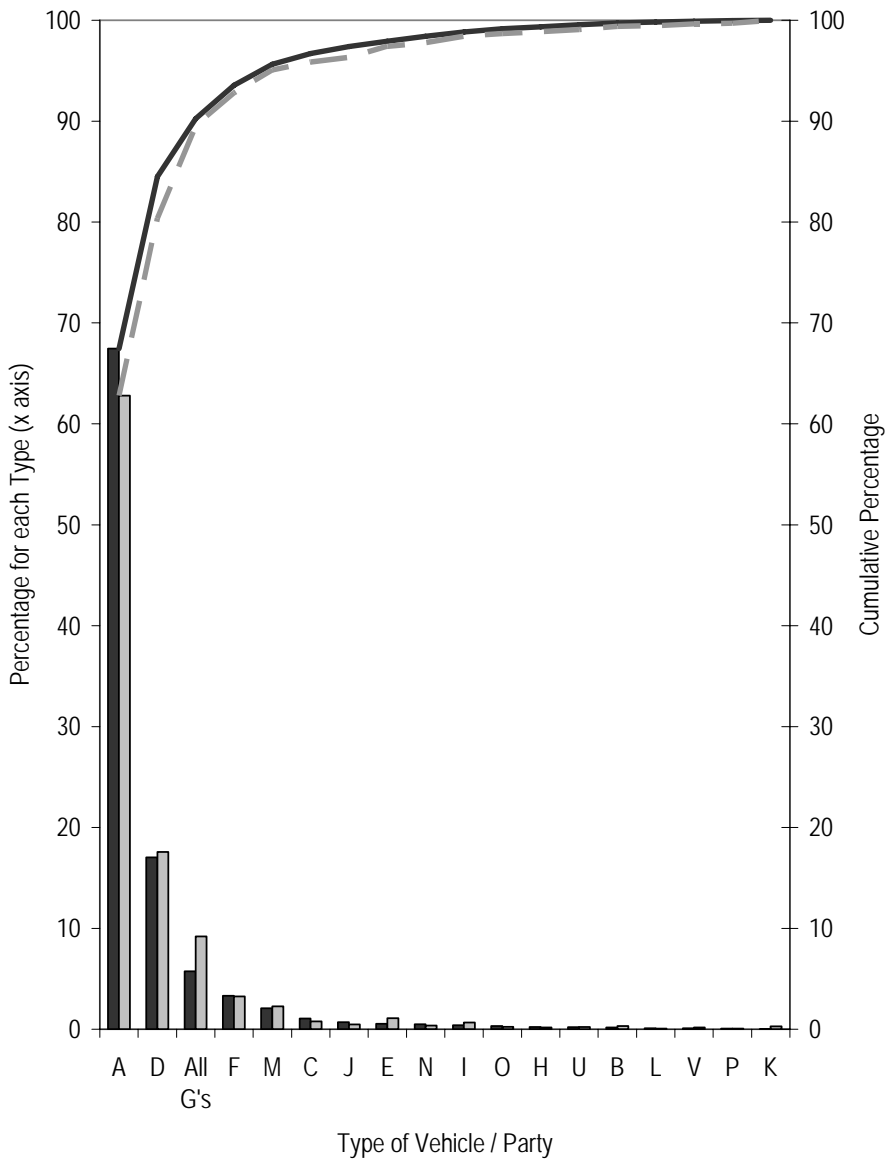
divided by the total number of accidents) shows a 3.04% increase in average of vehicles when the accident takes place in a construction zone (1.973 verses 1.908).

The Pareto chart showing the type of vehicles involved in each accident of the study is shown in Figure 3. As in the other figures, the dark bars show the non-



**FIGURE 2. Pareto Chart – Number of Vehicles Involved in Accident**

construction zone accidents; the lighter bars are the construction zone accidents. Vehicle / party types are as shown in Table 4. The figure shows a large difference in frequency of occurrence between construction and non-construction zone accidents for vehicle / party type “All G’s” – defined in Table 4 to be trucks with trailers. The chart and data show that accidents that involve trucks rose in frequency from 5.75% to 9.20% (representing a 60.2% increase) for accidents that occurred in construction zones.



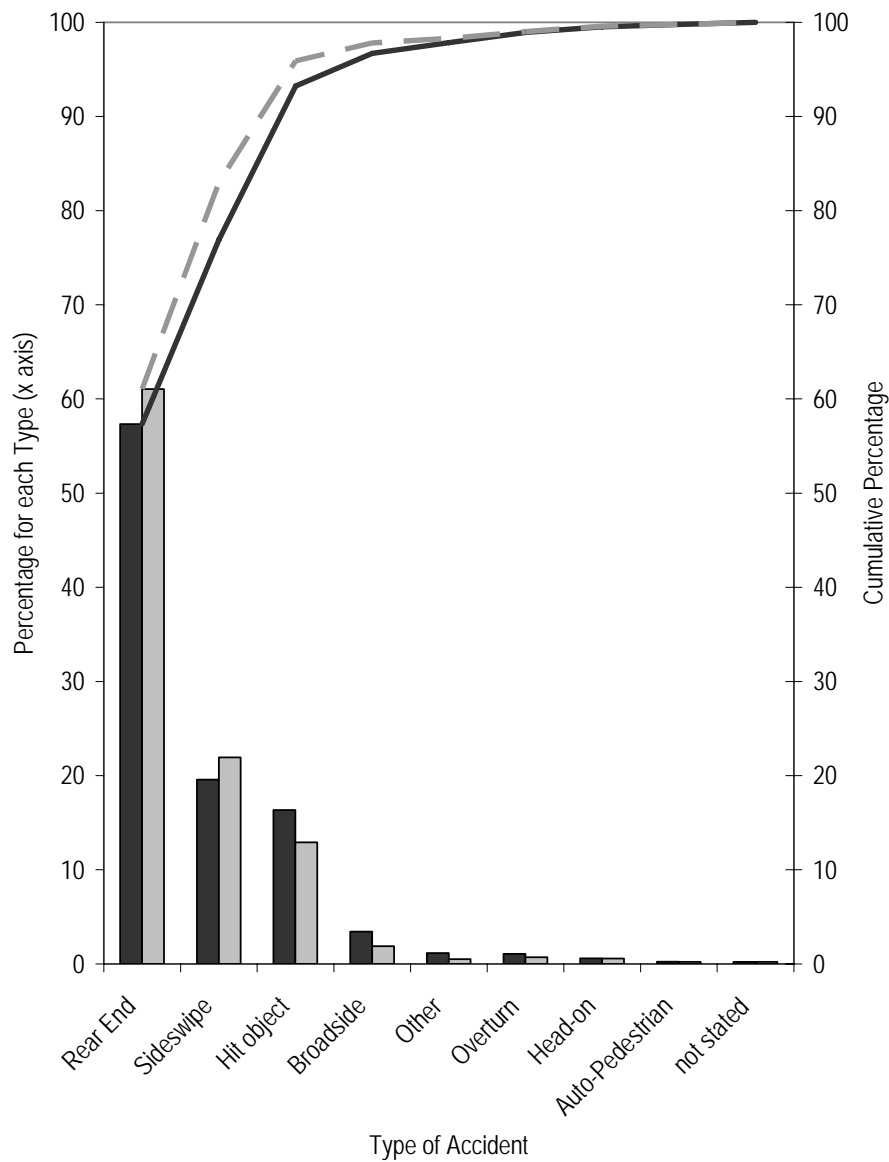
**FIGURE 3. Pareto Chart – Type of Vehicle / Party**



**TABLE 4. Vehicle / Party Types**

Code (1)	Type of Vehicle / Party (2)
A	Passenger Car / Station Wagon
D	Pickup
All G's	Truck with Trailer
F	Truck
M	Other
C	Motorcycle
J	Emergency Vehicle
E	Pickup with Trailer
N	Other (non-motor vehicle)
I	Bus
O	Spilled Loads
H	School Bus
U	Pedestrian
B	Passenger Car with Trailer
L	Bicycle
V	Dismount Pedestrian
P	Disengaged Tow
K	Construction Equipment

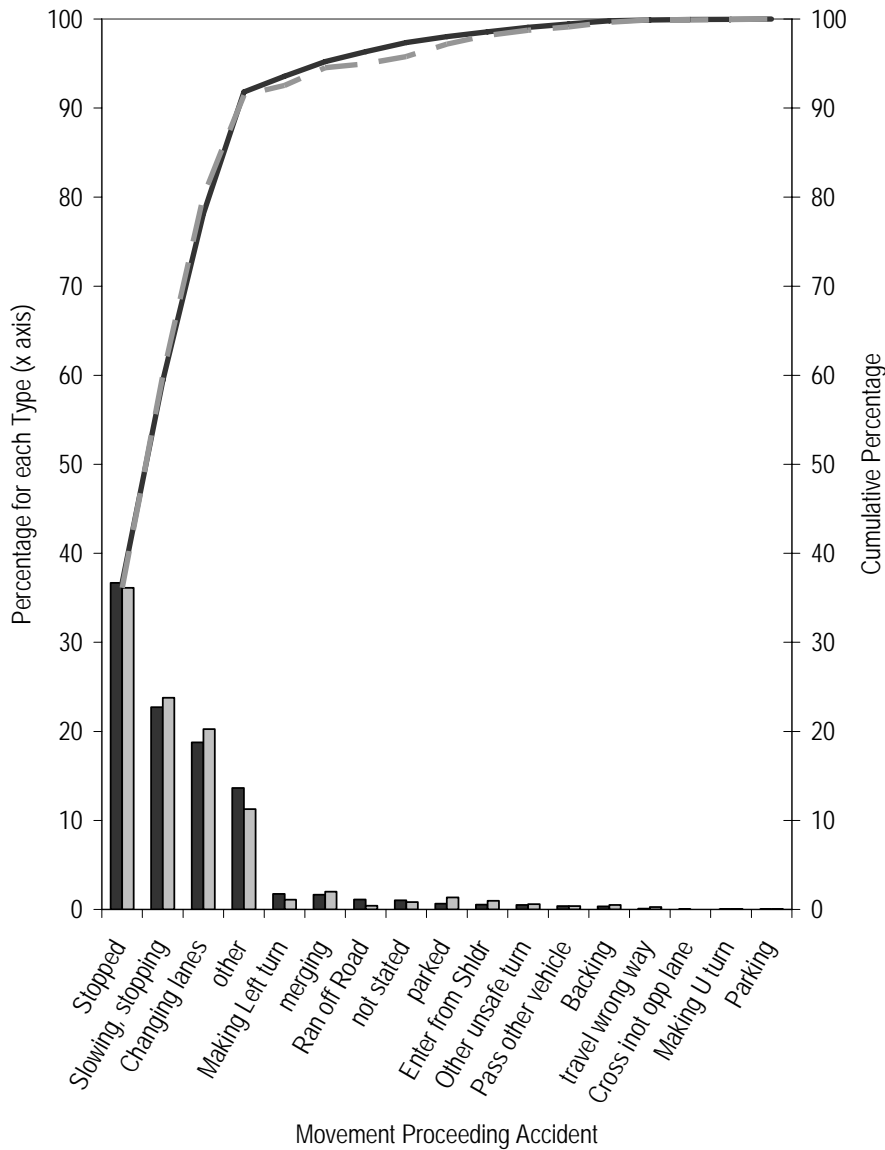
The Pareto chart showing the type of accident for each accident of the study is shown in Figure 4. The chart represents a typical, traditional Pareto chart shape. Again, the dark bars show the non-construction zone accidents; the lighter bars are the construction zone accidents. Not unexpectedly given the traffic controls common in construction zones, the figure shows “rear end” and “sideswipe” are the most common



**FIGURE 4. Pareto Chart – Type of Accident**

type of accidents. Accidents in construction zones were slightly more likely for these two types of accidents (83.0% versus 76.9% cumulative percent)

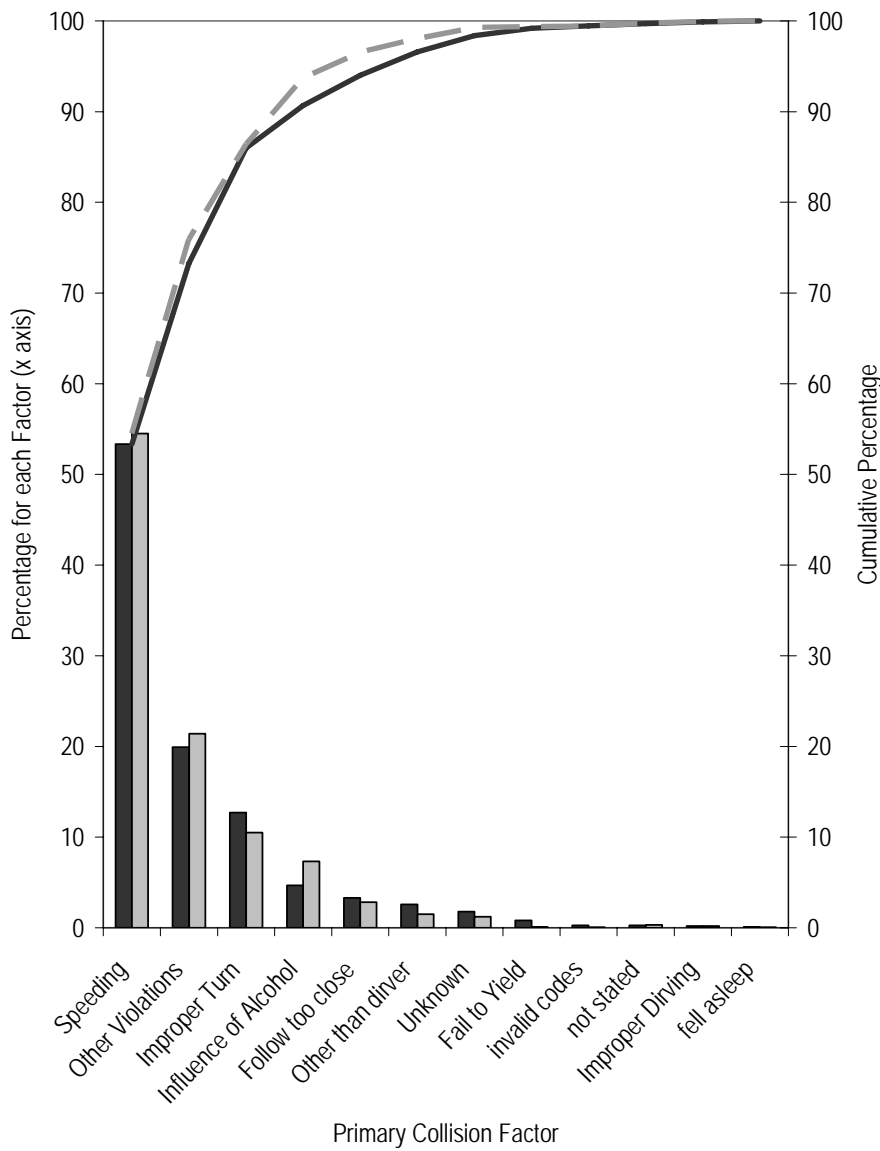
Figure 5 shows the Pareto chart for the movement preceding the collision for accidents that took place in construction zones and in non-construction zones. As in the other figures, the dark bars show the non-construction zone accidents; the lighter bars are



**FIGURE 5. Pareto Chart – Movement Preceding Accident**

the construction zone accidents. The movements of “slowing, stopping” and “changing lanes” occur with greater frequency in accidents in construction zones. As was the case in Figure 4, these results are not unexpected (given the traffic controls common in construction zones).

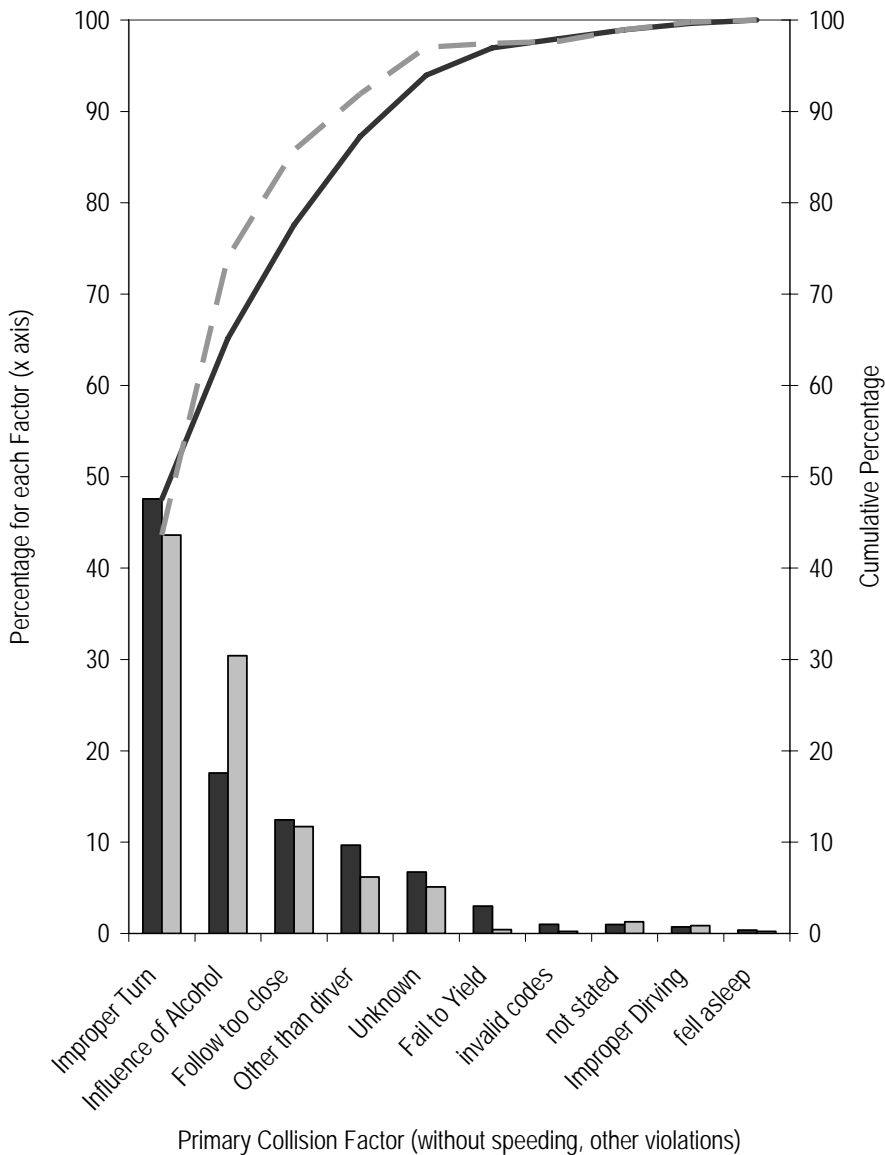
Within the TASAS database one fundamental piece of information is the primary collision factor to each accident. The Pareto chart showing the primary collision factor in each accident of the study is shown in Figure 6. The dark bars show the non-construction



**FIGURE 6. Pareto Chart – Primary Collision Factor**

zone accidents; the lighter bars are the construction zone accidents. The figure shows the most common primary collision factor to be “speeding” with “other violations” and “improper turn” also relatively common factors (~20% and ~10% respectively). The figure shows differences in collision factors based on construction zone accidents.

Figure 7 is a Pareto chart primary collision factors but with the “speeding” and “other violations” factors removed and the chart recalculated. The figure is of value

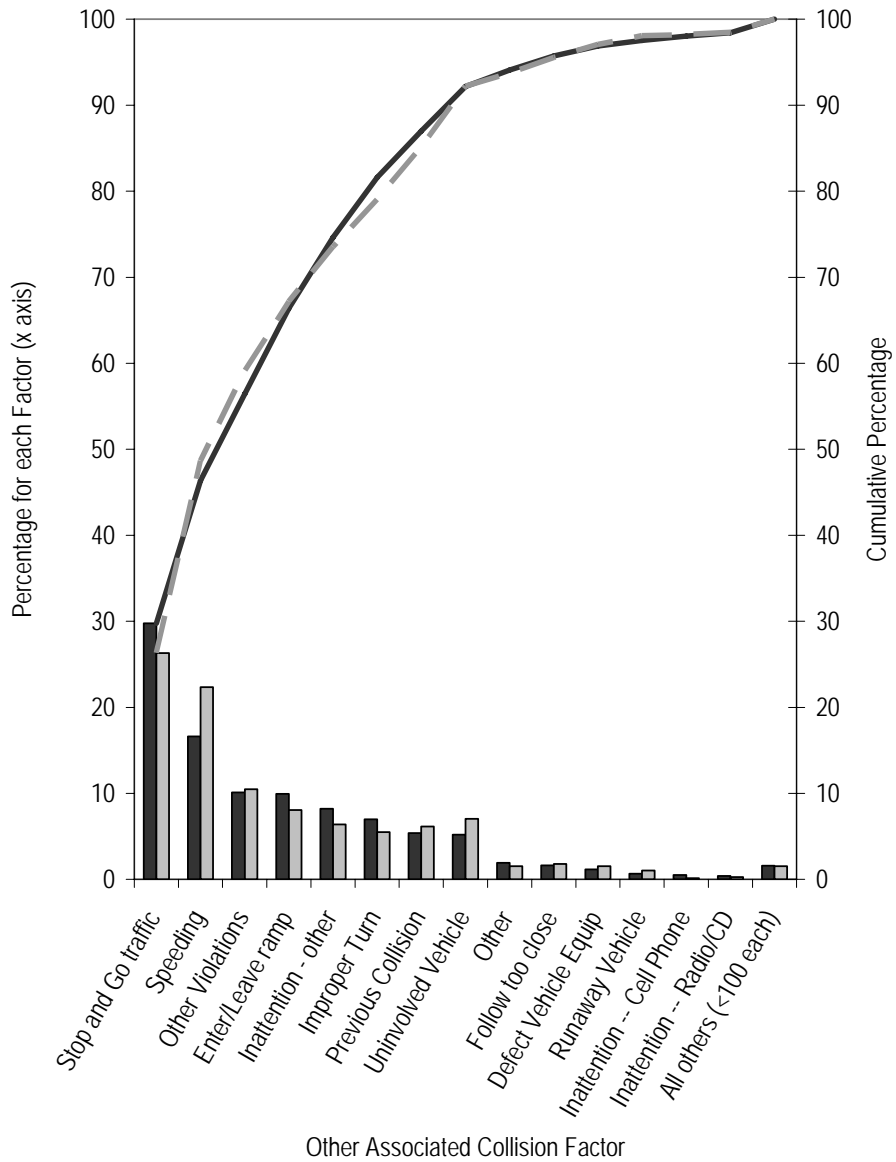


**FIGURE 7. Pareto Chart – Primary Collision Factor With “Speeding” and “Other Violations” Removed**

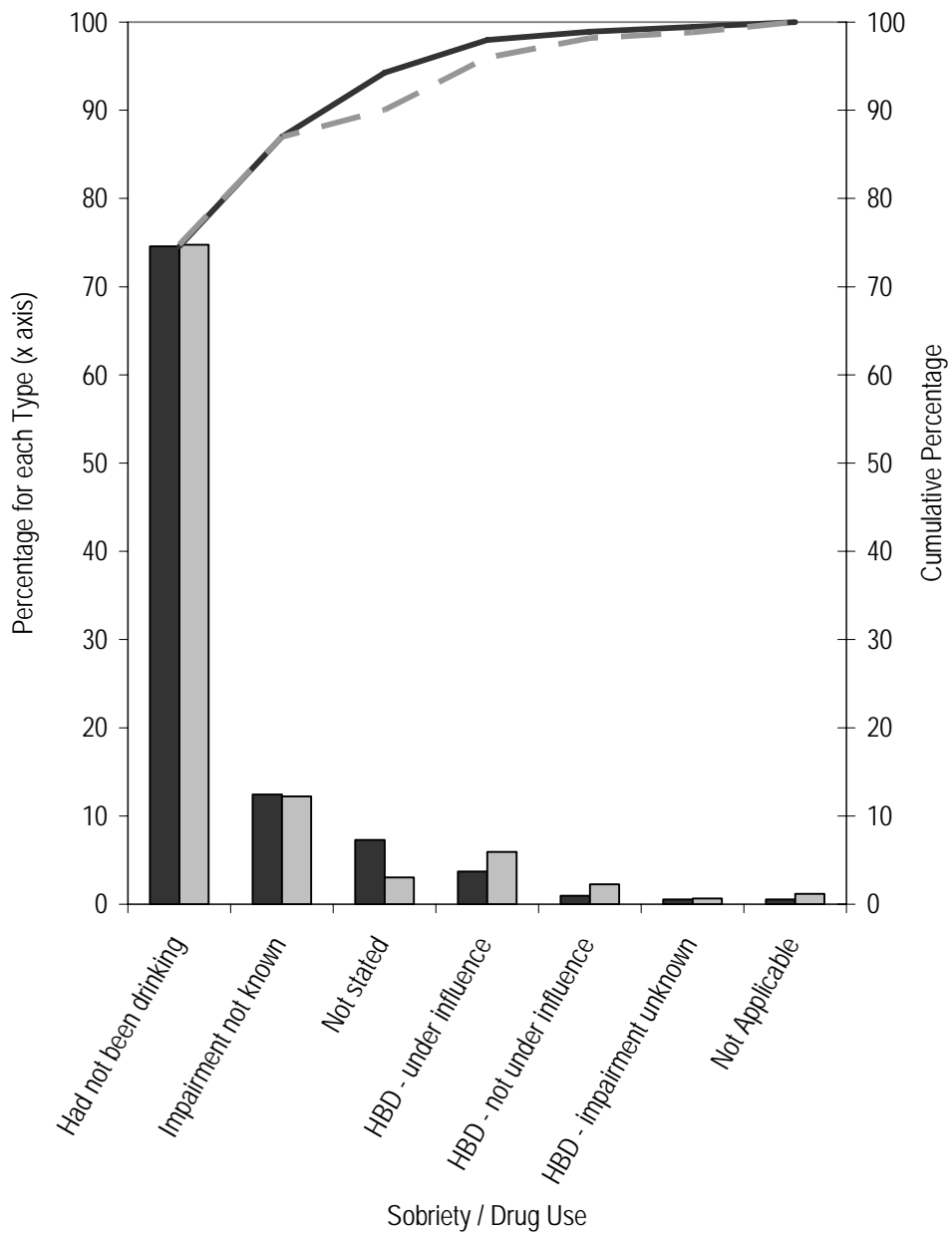
because it clearly shows a substantial difference in collision factors based on construction zone accidents – the most striking in the collision factor of “influence of alcohol”. Based on figure 6 (all factors) the data shows alcohol to be the primary collision factor in 7.3% of accidents in construction zones and only 4.7% in accidents in non construction zones. This 56% increase for construction zone accidents due to the influence of alcohol is a key finding representing about 150 additional accidents in District 7, resulting in 40 injuries and 1.3 fatalities over the three years of the study.

The TASAS database collections collision factors other than the primary collision factor. This field is called “Other Associated Factor”, and Pareto chart for these other associated factors is shown in Figure 8. As in the other figures, the dark bars show the non-construction zone accidents; the lighter bars are the construction zone accidents. Many of these factors are common to the factors shown in Figures 6 and 7. Like Figure 6, the figure shows the increased influence of speeding on accidents in construction zones, however, in Figure 8, the difference is even more pronounced. Speeding is identified as another associated collision factor in 16.6% of accidents in non-construction zones and 22.4% of accidents in construction zones.

The Pareto chart showing the influence of sobriety / drug use on frequency of accidents in construction and non-construction zones is shown in Figure 9. As in the other figures, the dark bars show the non-construction zone accidents; the lighter bars are the construction zone accidents. On the x-axis of the figure the letters “HBD” are a TASAS abbreviation for “Had Been Drinking”. The figure shows the striking increase in accident frequency on all HBD subcategories. The three HBD subcategories (“under influence”, “not under influence”, and “impairment unknown”), increase in frequency by 69.8% in construction zone accidents (from 5.19% to 8.82%).



**FIGURE 8. Pareto Chart – Other Associated Factor**



**FIGURE 9. Pareto Chart – Sobriety / Drug Use**



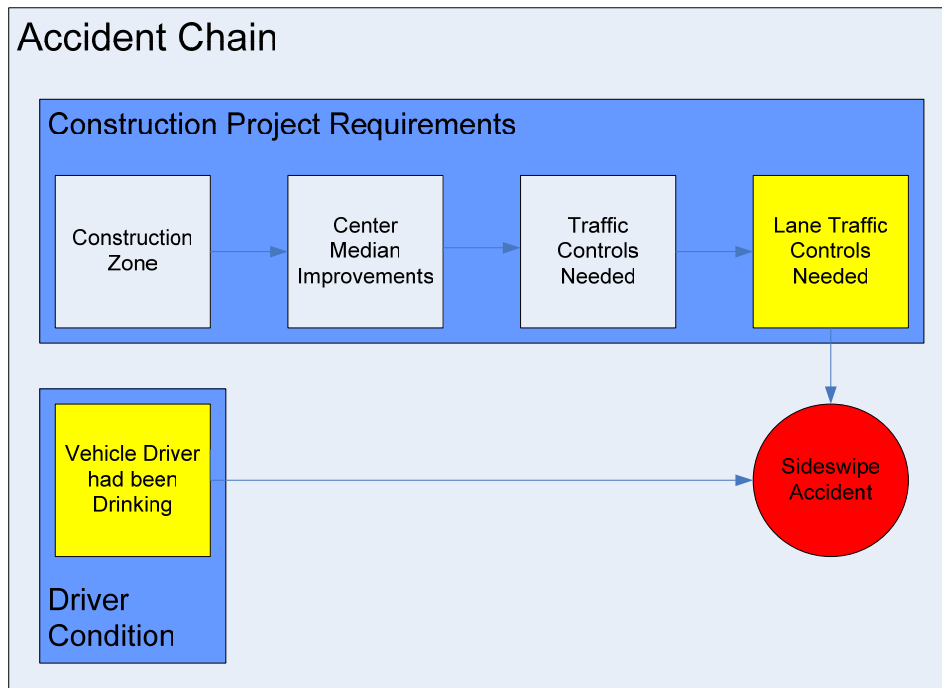
## Accident Chains

Accident chain analysis will focus on construction zone accident scenarios identified through the Pareto chart analyses. Accident chains will illustrate how

- Sideswipe accidents
- Rear end accidents
- Loaded truck rear end

accidents could have been created. Mitigated accident chains are also created for each scenario in order to understand how to eliminate these types of accidents.

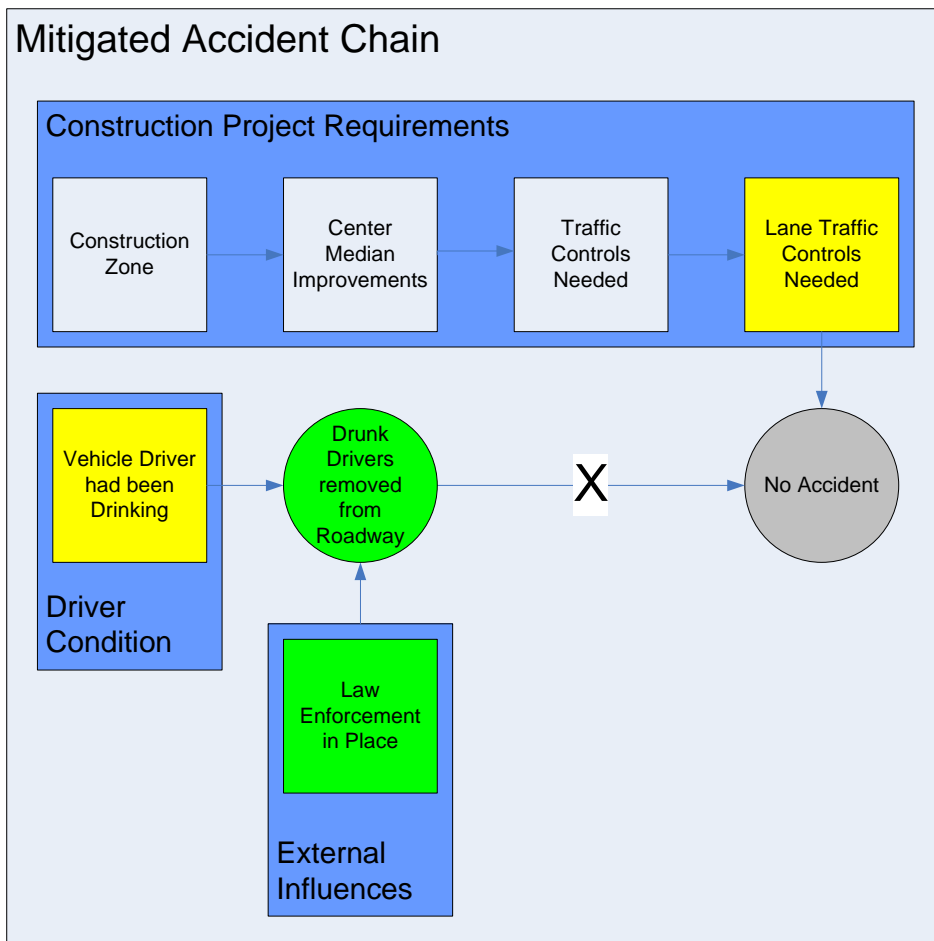
Figure 10 shows the accident chain for one finding from the analysis of the TSAS Construction Zone data analysis. The figure shows how the hypothetical Construction



**FIGURE 10. Accident Chain – Sideswipe / Drinking**

Project of a center median improvement project requires traffic controls, specifically lane traffic controls. The figure also shows the hypothetical case of a driver who had been drinking arrived at the area with lane traffic controls. The combination of these two events results in a sideswipe accident (shown in Figure 4 to be 12% more likely in a construction zone).

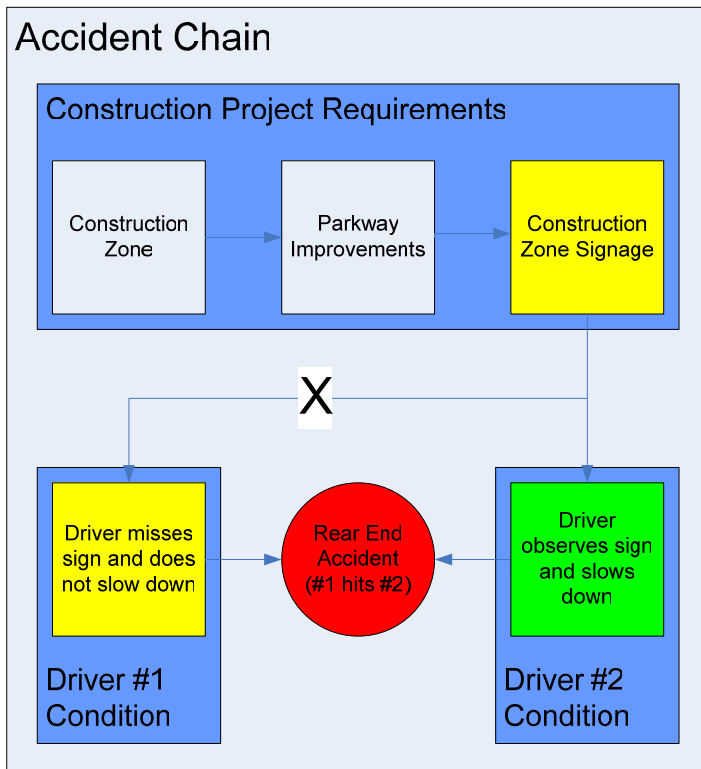
Figure 11 shows one simple mitigation for the accident shown in Figure 10. Again, the figure shows how the hypothetical Construction Project of a center median improvement project requires traffic controls, specifically lane traffic controls. Again, the figure also shows the hypothetical case of a driver who had been drinking arrived at the area with lane traffic controls. Figure 11 shows an external influence in the accident chain – law



**FIGURE 11. Accident Chain – Sideswipe / Drinking – Mitigated**

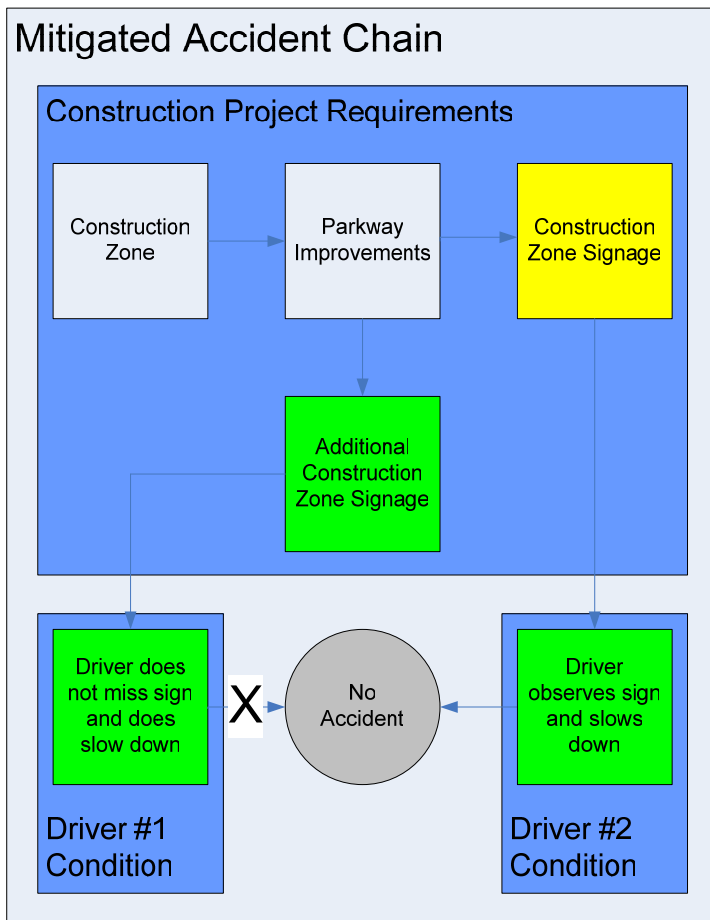
enforcement in place. The addition of the law enforcement removes the drunk drivers from the roadway and eliminates the combination of the two critical events that resulted in a sideswipe accident.

Figure 12 shows the accident chain for a second finding from the analysis of the TSAS Construction Zone data analysis. The figure shows how the hypothetical Construction Project of parkway improvements project requires traffic construction zone signage (signage to reduce speed). The figure also shows the case of two drivers approaching the construction zone with the reduced traffic speed. Driver #1 is shown not to recognize the construction zone signage, while driver #2 is shown to recognize the signage and slow down. The combination of these three events results in a rear end accident with driver #1 running into driver #2 who slowed down (shown in Figure 4 to be 6.5% more likely in a construction zone).



**FIGURE 12. Accident Chain – Rear End Accident / Follow Too Close**

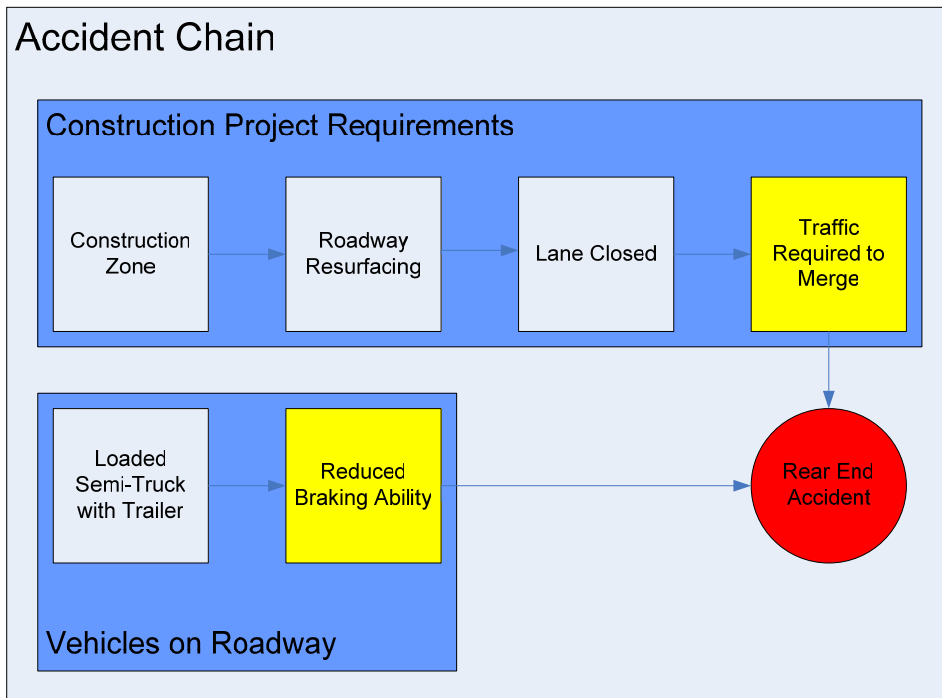
Figure 13 shows one simple mitigation for accident shown in Figure 12. Again, the figure shows how the hypothetical Construction Project of parkway improvements project requires traffic construction zone signage (signage to reduce speed). Again, the figure also shows the case of two drivers approaching the construction zone with the reduced traffic speed. Figure 13 shows an additional influence to the accident chain of Figure 12. The figure shows the utilization of additional construction traffic zone signage prior to the parkway improvements. In this mitigate chain figure, Driver #1 now recognizes the construction zone signage and slows down. Driver #2 is shown to continue to recognize the signage and slow down. The elimination of the Driver #1 error prevents the rear end accident since both drivers have slowed down (shown in Figure 4 to be 6.5% more likely in a construction zone).



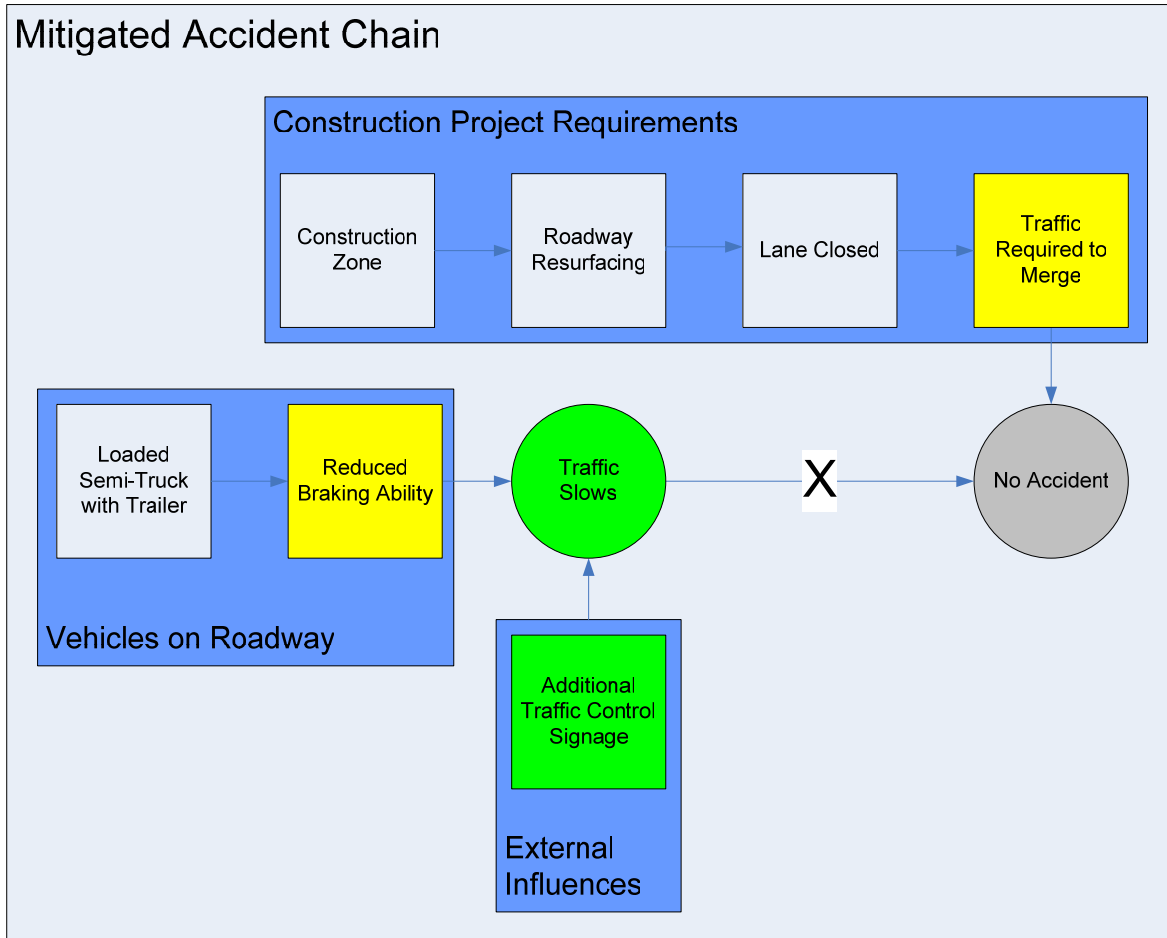
**FIGURE 13. Accident Chain – Rear End Accident / Follow Too Close - Mitigated**

Figure 14 shows a second accident chain for the rear end accident problem in construction zones. The figure also shows the involvement of a loaded semi-truck and trailer in the accident (shown in Figure 3 to be 60% more likely to be involved in an accident in a construction zone than not in a construction zone). The figure shows how the hypothetical Construction Project of roadway resurfacing project that requires one traffic lane to be closed and requires traffic to merge. In this case, a loaded truck has reduced braking ability. The combination of these two events (reduce ability to brake and merging traffic) results in a rear end accident.

Figure 15 shows a mitigated accident chain for Figure 14. Using the same mitigation measure of additional traffic control signage in the construction zone (as was also used in the mitigated accident chain shown in Figure 13), the loaded semi-truck and trailer has adequate time to brake and avoids a rear end accident with merging traffic.

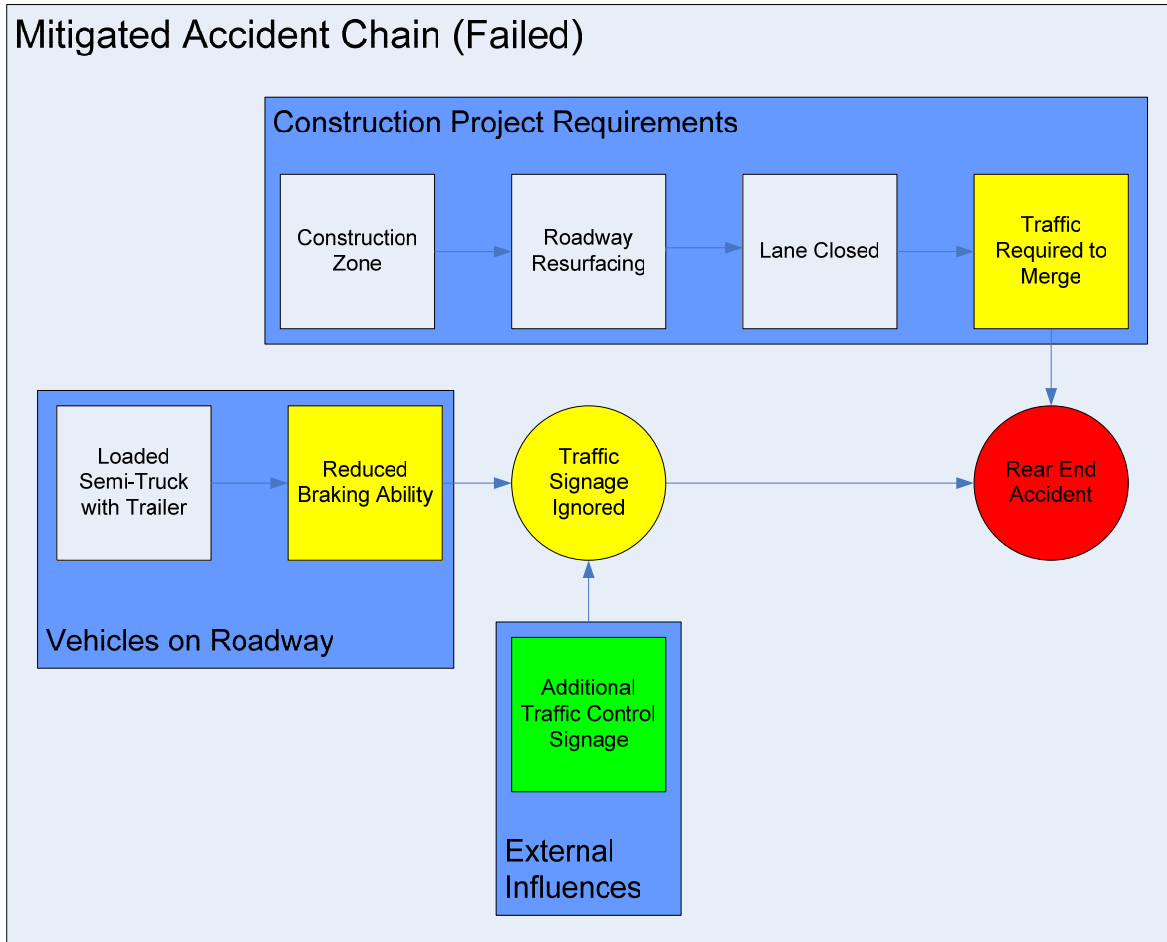


**FIGURE 14. Accident Chain – Rear End Accident / Truck**



**FIGURE 15. Accident Chain – Rear End Accident / Truck – Mitigated**

Figure 16 shows the scenario of a failed mitigation. The figure shows the mitigated chain of Figure 15, but in this case, the additional traffic control signage in the construction zone was ignored by the truck driver. The combination of the three events (reduced ability to brake, ignored signage, and merging traffic) results in a rear end accident. Figure 17 shows the failed mitigation scenario of Figure 16 corrected by the addition of an additional external influence – law enforcement in place. The addition of the law enforcement eliminates the critical event of the truck driver ignoring the traffic control signage in the construction zone by reducing speeding the construction zone, by creating an enforcement presence, and by monitoring trucks as they enter the construction zone. This enforcement creates an accident chain in which one event is removed

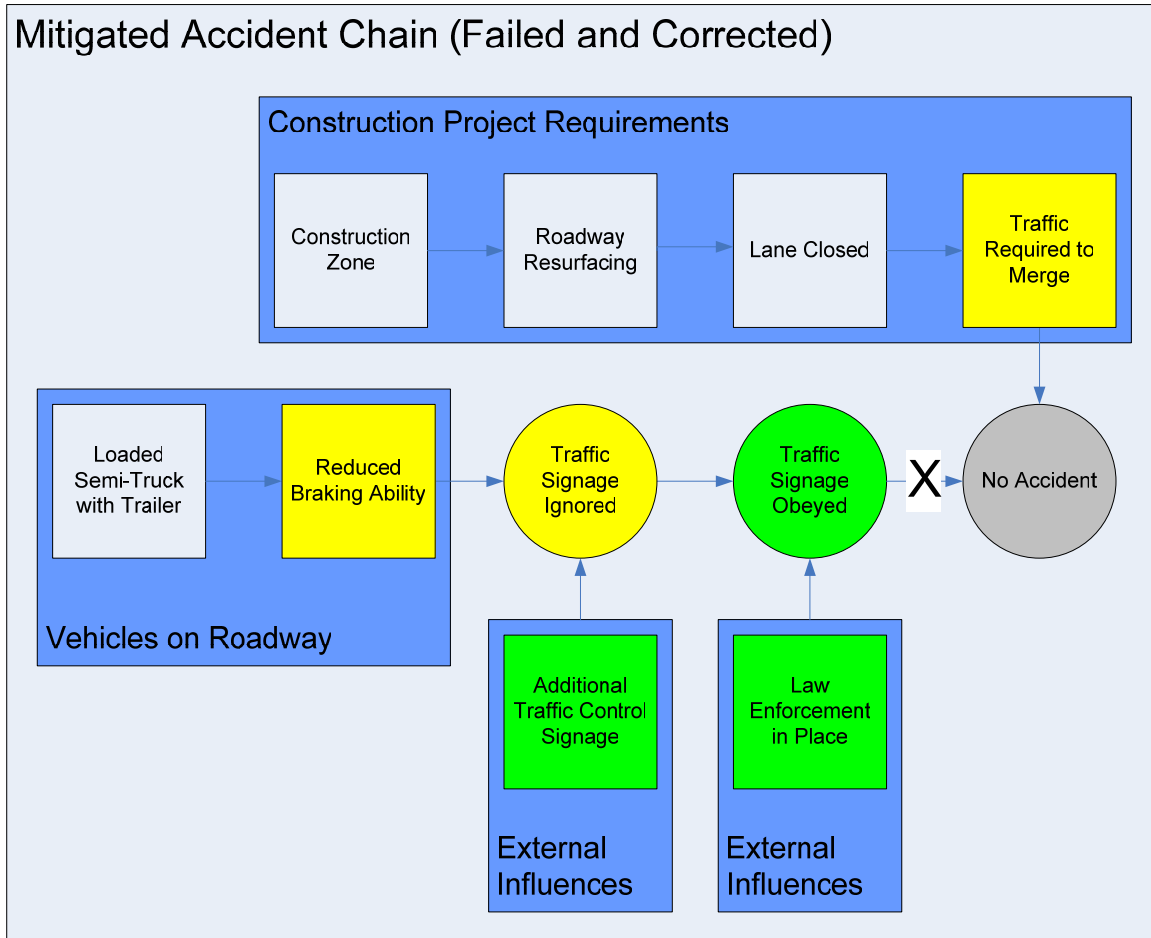


**FIGURE 16. Accident Chain – Rear End Accident / Truck – Mitigated - Failed**

(ignored signage), thereby eliminating the accident despite two events still remaining (reduced ability to brake and merging traffic).

These eight accident chain analyses demonstrate the ability of the tool to identify key actions to reduce accidents. Even with the hypothetical cases as analyzed above, construction zone accident reduction strategies of

1. Additional signage
  - ✓ Reduction in “missed” signage
  - ✓ Greater time for drivers to react and adjust



**FIGURE 17. Accident Chain – Rear End Accident / Truck – Mitigated – Failed – Corrected**

2. Additional Law enforcement

- ✓ Heightened driver awareness of traffic signage
- ✓ Removal of drunk drivers
- ✓ Reduction in speeding

have been identified through the chains. Additional chains using actual accident data would result in many more potential construction zone accident reduction strategies.



## CONCLUSIONS AND RECOMMENDATIONS

As the public agency responsible for the annual delivery of over three billion dollars in construction projects, the California Department of Transportation (Caltrans) has a tremendous responsibility to these deliver construction projects using project delivery processes and procedures that create the minimum risk to pedestrians, drivers, and transit passengers while also maintaining a safe working environment for all of its employees, consultants, and contractors. This study has introduced a methodology that uses the Pareto Principle and an accident chain analysis to analyze historical accident records.

This study has examined accident data from over 74,000 accidents pulled from the TASAS database that occurred on selected highways in Southern California between 10/01/00 to 09/30/03 on the five state routes 005, 010, 101, 110, 405. The analysis has compared accident data and characteristics for accidents which do not occur in construction zones with accidents that did occur in construction zones. Using Pareto Charts to conduct these comparative analyses, recommendations to reduce accidents in construction zones are made. Potential accident chain scenarios based on the analysis are also developed as a tool to communication accident mechanisms.

Specific findings of the analysis were found to be

- A large variation exists in the number of accidents in construction zones. Note that this variation is less a function of the road, but rather more a function of whether construction took place over the research period
- There is a 4.2% increase in the average of accidents per injury, when the accident occurs in a construction zone.
- There is an increase of 37.4% in the average of accidents per fatality when the accident occurs in a construction zone.
- There is some increase the number of vehicles involved in accidents when the accident occurred in a construction zone – construction zone accidents are much

less likely to involve only one vehicle and more likely to involve more than three or more cars.

- A 3.04% increase in average of vehicles was found when the accident takes place in a construction zone (1.973 verses 1.908).
- Accidents that involve trucks rose in frequency from 5.75% to 9.20 % (representing a 60.2% increase) for accidents that occurred in construction zones.
- The historical accident data shows “rear end” and “sideswipe” are the most common type of accidents in construction zones (likely as a consequence of the traffic controls common in construction zones).
- Accidents in construction zones are slightly more likely for these “rear end” and “sideswipe” types of accidents (83.0% verses 76.9% cumulative percent)
- The movements of “slowing, stopping” and “changing lanes” occur with greater frequency in accidents in construction zones. These results are not unexpected given the traffic controls common in construction zones.
- The historical data shows the most common primary collision factor in construction zone accidents is “speeding” with “other violations” and “improper turn” also relatively common factors (~20% and ~10% respectively).
- When the “speeding” and “other violations” factors removed, “alcohol” is the primary collision factor in 7.3% of accidents in construction zones and only 4.7% in accidents in non construction zones.
- This 56% increase for construction zone accidents due to the influence of alcohol is a key finding representing about 150 additional accidents in District 7, resulting in 40 injuries and 1.3 fatalities over the three years of the study.
- Speeding is identified as another associated collision factor in 16.6% of accidents in non-construction zones and 22.4% of accidents in construction zones.

- The three “Had Been Drinking” subcategories (“under influence”, “not under influence”, and “im pairment unknown”), increase in frequency by 69.8% in construction zone accidents (from 5.19% to 8.82%).

## **IMPLEMENTATION**

Future California Department of Transportation construction safety research should focus on two approaches – breadth and depth. Breadth means to expand the data set. The TASAS database is a significant research resource for dozens of purposes. With respect to construction safety, future research should duplicate the analyses of this work but include all freeways within the state. This analysis would

1. Confirm the findings of this work
2. Allow comparison of findings across Caltrans Districts
3. Identify relationships between variables that were not identified in this work
4. Allow statistical verification of result

Depth means to dig deeper into the current data. Every record in the TASAS database has a specific accident record associated with it. The accident records are only summarized in the database. Future research could make use of these records and would

1. Allow specific understanding of conditions (roadway, traffic, construction, etc.) at time of accidents
2. Allow specific understanding of drivers’ thoughts at the time of the accident
3. Enhance accident chain analyses by using actual case studies (as opposed to hypothetical cases)

It must be noted, however, that privacy issues associated with use of the records would need to overcome.

Future Caltrans construction zone research beyond the TASAS database can be accomplished. Rather than focus on the accident after it happens, future research should also look at near misses. Through documented records of near misses and / or through the use of stationary video cameras over construction zones, Pareto analysis of near misses and their root causes can be identified and accidents reduced.

The implementation of the research findings could be immediate value. It is recommended that Caltrans use the results of the Pareto charts presented to create additional accident chain diagrams to supplement the initial diagrams presented in this work. Based on these diagrams, Caltrans can review existing construction work zone policies with respect to law enforcement, signage, work hours, etc. and determine if any additional accident mitigations beyond their current systems are potentially possible. Timeframes for this implementation could be immediate. Implementation cost would be expected to be negligible since safety analysis of projects and policies is a routine element of Caltrans' business.

## REFERENCES

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## **APPENDIX 1**

### **Raw Accident Data from TSAS**

**Accident Data - All Accidents - 005 Freeway**

10/01/00thru 09/30/03

5 pages



11-04-14  
10/01/00 THRU 09/30/03

VTASAS SELECTIVE RECORD RETRIEVAL  
IA-005

ALL ALL ACCIDENTS

SUBMITTIONS DISTRICT 72

SUBMITTIONS NAME YUEH-S

ACCIDENTS SELECTED 16562

- MESSAGES -

LOCATION CRITERIA -

DISTRICT 07 POSTMILE FROM TO  
ROUTE 005 OR FROM TO  
COUNTY LA OR FROM TO

DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM TO  
OR FROM TO

AND

ACCIDENT AND HIGHWAY CRITERIA - NONE



----- ACCIDENT SUMMARY -----

TOTAL ACCIDENTS	FATAL	INJURY	POD	KILLED	INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT CODE	NUMBER	PCT CODE		
16,562	92	4,191	12,279	104	6,771	2,748	16.5	1	2,712	16.3	1
WITHOUT DETAIL						10,104	61.0	2	9,958	60.1	2
0						2,770	16.7	3	2,908	17.5	3
						940	5.6	> 3	741	4.4	4
									178	1.0	5
									44	0.2	6
									15	0.0	7
									1	0.0	8
									5	0.0	9

-----ACCESS CONTROL-----		-----SIDE OF HIGHWAY-----	
NUMBER	PCT CODE	NUMBER	PCT CODE
0	0.0	7,949	47.9
0	0.0	8,613	52.0
16,562	100.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0

-----YEAR-----		-----MONTH-----		-----DAY OF WEEK-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
0	0.0	1,280	7.7	2,142	12.9
0	0.0	1,239	7.4	2,347	14.1
0	0.0	1,347	8.1	2,151	12.9
0	0.0	1,365	8.2	2,232	13.4
0	0.0	1,284	7.8	2,261	13.6
0	0.0	1,483	8.9	2,920	17.6
0	0.0	1,514	9.1	2,509	15.1
1,362	8.2	1,621	9.7		
5,478	33.0	1,276	7.7		
5,396	32.5	1,397	8.4		
4,326	26.1	1,415	8.5		
0	0.0	1,331	8.0		

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
747	4.5 1-INFLUENCE ALCOHOL	83	0.5 A-HEAD-ON	39	0.2 A-HOLES, RUTS
707	4.2 2-FOLLOW TOO CLOSE	3,503	21.1 B-SIDESWIPe	39	0.2 B-LOOSE MATERIAL
159	0.9 3-FAILURE TO YIELD	8,945	54.0 C-REAR END	104	0.6 C-OBSTRUCTION ON ROAD
2,178	13.1 4-IMPROPER TURN	545	3.2 D-BROADSIDE	365	2.1 D-CONSTRUCT-REPAIR-ZONE
6,317	50.2 5-SPEEDING	2,962	17.8 E-HIT OBJECT	4	0.0 E-REDUCED ROAD WIDTH
3,527	21.2 6-OTHER VIOLATIONS	232	1.4 F-OVERTURN	22	0.1 F-FLOODED
13	0.0 B-IMPROPER DRIVING	31	0.1 G-AUTO-PEDESTRIAN	49	0.2 G-OTHER
513	3.0 C-OTHER THAN DRIVER	221	1.3 H-OTHER	15,780	95.2 H-NO UNUSUAL CONDITION
290	1.7 D-UNKNOWN	40	0.2 <-NOT STATED	170	1.0 <-NOT STATED
29	0.1 E-FELL ASLEEP	0	0.0 -INVALID CODES		
45	0.2 <-NOT STATED				
37	0.2 -INVALID CODES				

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
13,522	81.6 A-CLEAR	11,737	70.8 A-DAYLIGHT	15,053	90.8 A-DRY
2,248	13.5 B-CLOUDY	547	3.1 B-DUSK/DAWN	1,218	7.3 B-WET
604	3.6 C-RAINING	2,482	14.9 C-DARK-STREET LIGHT	53	0.3 C-SNOWY, ICI
9	0.0 D-SNOWING	1,656	9.9 D-DARK-NO STREET LIGHT	43	0.2 D-SLIPPERY
16	0.0 E-FOG	8	0.0 E-DARK-ROAD STREET LIGHT	195	1.1 <-NOT STATED
6	0.0 F-OTHER	0	0.0 F-DARK-NOT STATED	0	0.0 -INVALID CODES
5	0.0 G-MILD	132	0.7 <-NOT STATED		
152	0.9 <-NOT STATED	0	0.0 -INVALID CODES		

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
866	5.2 A-CONTROL FUNCTIONING	86	0.5 R-IND. ALIGN-RIGHT	658	3.9 1-RAMP INTERSECTION (EXIT)
10	0.0 B-CONTROL NOT FUNCTIONING	98	0.5 L-IND. ALIGN-LEFT	845	5.1 2-RAMP ENTRY
10	0.0 C-CONTROLS OBSOBE	16,378	98.8 D-DIVIDED	170	1.0 3-RAMP AREA, INTERSECT STREET
15,376	94.0 D-NO CONTROLS PRESENT	0	0.0 U-UNDIVIDED	534	3.2 4-RAMP AREA, INTERSECT STREET
100	0.6 <-NOT STATED			0	0.0 5-IN INTERSECTION
				0	0.0 6-OUTSIDE INTERSECT-NONSTATE RTE
				14,355	86.6 --DOES NOT APPLY

----- PARTY SUMMARY -----

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT CODE
14,904	89.9 A-PASSNG CAR/STA WAGON	5,022	30.3 A-STOPPED	19	0.1
75	0.4 B-PASSNG CAR W/TRAILR	13,357	80.6 B-PROCEEDED STRAIGHT	131	0.7
179	1.0 C-MOTORCYCLE	271	1.6 C-RAN OFF ROAD	6	0.0
4,322	24.0 D-PICKUP/PANEL TRUCK	98	0.5 D-MAKING RIGHT TURN	416	2.5
183	1.1 E-PICKUP/PANEL W/TRAILR	259	1.5 E-MAKING LEFT TURN	896	5.4
1,013	6.1 F-TRUCK/TRUCK TRACTOR	5	0.0 F-MAKING U TURN	604	3.6
2,396	14.4 G-TRK/TRACTOR 4 1 TRAILR	77	0.4 G-BACKING	27	0.1
181	0.9 2-TRK/TRACTOR 4 2 TRAILR	3,470	20.9 H-SLOWING, STOPPING	3	0.0
2	0.0 3-TRK/TRACTOR 4 3 TRAILR	76	0.4 I-PASS OTHER VEHICLE	30	0.1
0	0.0 4-SINGLS UNIT TRNKR	3,100	18.7 J-CHANGING LANES	3	0.0
16	0.0 5-TRK/TRK 4 1 TRNK TRLR	2	0.0 K-PARKING	26	0.1
2	0.0 6-TRK/TRK 4 2 TRNK TRLR	97	0.5 L-ENTER FROM SHLDR	468	2.8
35	0.2 H-SCHOOL BUS	89	0.5 H-OTHER UNSAFE TURN	1,467	8.8
94	0.5 I-OTHER BUS	4	0.0 M-CROSS INTO OPP LN	412	2.4
143	0.8 J-EMERGENCY VEHICLE	137	0.8 O-PARDED	291	1.7
5	0.0 K-HIGHWAY CONST EQUIP	254	1.5 P-MERGING	17	0.1
13	0.0 L-BICYCLE	13	0.0 Q-TRVL WRONG WAY	68	0.4
335	2.0 M-OTHER-MOTOR VEH	2,064	12.4 R-OTHER	351	2.1
146	0.8 N-OTHER-NON-MOTOR VEH	167	1.0 <-NOT STATED	102	0.6
85	0.5 O-SKILLED LOADS			13,573	81.9
28	0.1 P-DISCHARGED TOW			49	0.2
2	0.0 Q-UNINVOLVED VEHICLE			0	0.0
1	0.0 R-HOPED	11	0.0 2-XING XWALK-INTNST	0	0.0
33	0.1 U-PEDESTRIAN	0	0.0 3-XING XWALK-HOT INTR	51	0.3
27	0.1 V-DISHOONT PEDESTRIAN	5	0.0 4-XING HOT XWALK	11	0.0
1	0.0 M-ANIMAL - LIVESTOCK	39	0.2 5-ROADWAY-INCL SHLDR	4	0.0
4	0.0 X-ANIMAL - DEER	2	0.0 6-HOT IN ROADWAY	1	0.0
3	0.0 2-ANIMAL - OTHER	3	0.0 7-APRH-LEAVE SCHL BUS	0	0.0
		13	0.0 -INVALID CODES	0	0.0
				655	3.9
				16,416	99.1
				0	0.0

DIRECTION OF TRAVEL		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE
7,897	47.6 N-N, NE, NW BOORD	20	0.1 A-HAZARDOUS MATERIALS
8,448	51.0 S-S, SE, SW BOORD	269	1.6 B-CELL PHONE IN USE*
307	1.8 E-EASTBOUND	6,761	40.8 C-CELL PHONE NOT IN USE*
402	2.4 W-WESTBOUND	8,861	53.5 D-CELL PHONE HOME/UNKNOWN*
252	1.5 <-NOT STATED	3,843	23.2 <-NOT STATED
11	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		2	0.0 -INVALID CODES

\*SPECIAL INFORMATION CODES EFF. 04-01-01

\*INTENTION CODES EFF. 01-01-01

--- PARTY SUMMARY ---

OBJECT STRUCK			LOCATION OF COLLISION		
PRIMARY NUMBER	PCT	OTHERS NUMBER	PRIMARY NUMBER	PCT	OTHERS NUMBER
44	0.2	47	92	0.5	42
2	0.0	2	1,484	8.9	1,248
8	0.0	18	58	0.3	47
7	0.0	4	4,736	28.5	1,788
2	0.0	0	6,812	41.1	1,811
16	0.0	30	4,196	25.3	907
7	0.0	3	185	1.1	109
56	0.3	96	1,226	7.1	1,330
2	0.0	15	40	0.2	9
1	0.0	7	237	1.5	41
52	0.3	105	9	0.0	3
2	0.0	5	0	0.0	0
408	2.4	360	0	0.0	0
915	5.5	837	0	0.0	0
109	0.6	129	4,322	26.0	0
599	3.6	272	0	0.0	0
4	0.0	2	0	0.0	0
0	0.0	0	0	0.0	0
0	0.0	6	0	0.0	0
5	0.0	14	0	0.0	0
88	0.5	215	0	0.0	0
74	0.4	269	0	0.0	0
0	0.0	1	0	0.0	0
9	0.0	24	0	0.0	0
65	0.3	182	0	0.0	0
20	0.1	112	0	0.0	0
29	0.1	74	0	0.0	0
66	0.3	97	0	0.0	0
2	0.0	1	0	0.0	0
11	0.0	2	0	0.0	0
319	1.9	10	0	0.0	0
11	0.0	52	0	0.0	0
180	1.1	789	0	0.0	0
11	0.0	4	0	0.0	0
23	0.1	11	0	0.0	0
25	0.1	24	0	0.0	0
6	0.0	0	0	0.0	0
66	0.3	25	0	0.0	0
13,304	80.3	3,539	0	0.0	0
0	0.0	0	0	0.0	0
4,296	25.9	16,418	0	0.0	0
0	0.0	1	0	0.0	0

OBJECT STRUCK			LOCATION OF COLLISION		
PRIMARY NUMBER	PCT	OTHERS NUMBER	PRIMARY NUMBER	PCT	OTHERS NUMBER
0.2	0.2	42	0.2	0.2	42
7.5	7.5	1,248	7.5	7.5	1,248
10.7	10.7	1,788	10.7	10.7	1,788
10.9	10.9	1,811	10.9	10.9	1,811
5.4	5.4	907	5.4	5.4	907
8.0	8.0	1,330	8.0	8.0	1,330
0.2	0.2	9	0.2	0.2	9
0.2	0.2	41	0.2	0.2	41
0.0	0.0	3	0.0	0.0	3
0.0	0.0	0	0.0	0.0	0
0.0	0.0	0	0.0	0.0	0
99.1	99.1	16,418	99.1	99.1	16,418
0.0	0.0	0	0.0	0.0	0

SOBERITY			DRUG/PHYSICAL		
NUMBER	PCT	OTHERS NUMBER	NUMBER	PCT	OTHERS NUMBER
15,742	95.0	0	0.0	0.0	0
733	4.4	0	0.0	0.0	0
161	0.9	0	0.0	0.0	0
117	0.7	0	0.0	0.0	0
0	0.0	58	0.3	0.3	58
0	0.0	34	0.2	0.2	34
2,421	14.6	4	0.0	0.0	4
123	0.7	1	0.0	0.0	1
0	0.0	103	0.6	0.6	103
718	4.3	16,486	99.5	99.5	16,486
0	0.0	0	0.0	0.0	0

**Accident Data - All Accidents - 010 Freeway**

10/01/00thru 09/30/03

5 pages



11-04-14  
10/01/00 THRU 09/30/03

VTASAS SELECTIVE RECORD RETRIEVAL  
IA-005

ALL ALL ACCIDENTS

SUBMITTIONS DISTRICT 72

SUBMITTIONS NAME YUEH-S

ACCIDENTS SELECTED 16562

- MESSAGES -

LOCATION CRITERIA -

DISTRICT 07	POSTMILE	FROM	TO
ROUTE 005		OR FROM	TO
COUNTY LA		OR FROM	TO

DATE RANGE	FROM 10-01-00	TO 09-30-03
	OR FROM	TO
	OR FROM	TO

AND

ACCIDENT AND HIGHWAY CRITERIA - NONE

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT	NUMBER	PCT		
18,306	57	4,737	13,512	61	7,410	2,602	14.2	1	2,589	14.1	1
WITHOUT DETAIL						11,722	64.0	2	11,609	63.4	2
0						2,986	16.3	3	3,071	16.7	3
						996	5.4	> 3	807	4.4	4
									165	0.9	5
									48	0.2	6
									11	0.0	7
									4	0.0	8
									2	0.0	9

---ACCESS CONTROL---		---SIDE OF HIGHWAY---	
NUMBER	PCT	NUMBER	PCT
0	0.0	0	0.0
0	0.0	0	0.0
18,306	100.0	8,814	48.1
0	0.0	9,492	51.8
0	0.0		
0	0.0		

---YEAR---		---MONTH---		---DAY OF WEEK---	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
0	0.0	1,500	8.1	2,264	12.3
0	0.0	1,424	7.7	2,483	13.5
0	0.0	1,505	8.2	2,584	14.1
0	0.0	1,525	8.3	2,524	13.7
0	0.0	1,545	8.4	2,597	14.1
0	0.0	1,599	8.7	3,060	16.7
1,446	7.8	1,576	8.6	2,794	15.2
6,134	33.5	1,594	8.7		
6,299	34.4	1,530	8.3		
4,427	24.1	1,630	8.9		
0	0.0	1,516	8.2		
		1,362	7.4		

---HOOR OF DAY---		---ACCESS CONTROL---		---SIDE OF HIGHWAY---		---YEAR---		---MONTH---		---DAY OF WEEK---	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
374	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
429	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
402	2.1	0	0.0	18,306	100.0	8,814	48.1	9,492	51.8	8,814	48.1
259	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
219	1.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
359	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
589	3.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
918	5.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,005	5.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
879	4.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
843	4.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
818	4.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,010	5.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
957	5.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,184	6.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,399	7.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,222	6.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,265	6.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
1,116	6.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
802	4.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
648	3.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
548	2.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
592	3.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
466	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
12	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

10/01/00 THRU 09/30/03

TASAS SELECTIVE RECORD RETRIEVAL

ALL RAIL ACCIDENTS

AND330 ACC-SUMMARY  
REQ NO 7099

----- ACCIDENT SUMMARY -----

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
879	4.8 1-INFLUENCE ALCOHOL	116	0.6 A-HEAD-ON	23	0.1 A-HOLES, RUTS
971	5.3 2-FOLLOW TOO CLOSE	3,507	19.1 B-SIDESWIPE	20	0.1 B-LOOSE MATERIAL
170	0.9 3-FAILURE TO YIELD	10,713	58.5 C-REAR END	173	0.9 C-OBSTRUCTION ON ROAD
2,352	12.8 4-IMPROPER TURN	630	3.4 D-BROADSIDE	1,112	6.0 D-CONSTRUCT-REPAIR-ZONE
9,432	51.5 5-SPEEDING	2,892	15.7 E-HIT OBJECT	17	0.0 E-REDUCED ROAD WIDTH
3,863	21.1 6-OTHER VIOLATIONS	166	0.9 F-OVERTURN	22	0.1 F-FLOODED
30	0.0 8-IMPROPER DRIVING	46	0.2 G-AUTO-PEDESTRIAN	36	0.1 G-OTHER
338	1.8 C-OTHER THAN DRIVER	201	1.0 H-OTHER	16,763	91.5 H-NO UNUSUAL CONDITION
191	1.0 D-UNKNOWN	35	0.1 I-NOT STATED	140	0.7 I-NOT STATED
6	0.0 E-FELL ASLEEP	0	0.0 -INVALID CODES		
42	0.2 J-NOT STATED				
52	0.2 -INVALID CODES				

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
14,834	81.0 A-CLEAR	12,319	67.2 A-DAYLIGHT	16,756	91.5 A-DRY
2,668	14.5 B-CLOUDY	548	2.9 B-DUSK/DAWN	1,327	7.2 B-WET
665	3.6 C-RAINING	3,732	20.3 C-DARK-STREET LIGHT	27	0.2 C-SNOWY, ICI
4	0.0 D-SNOWING	1,930	9.9 D-NO STREET LIGHT	43	0.2 D-SLIPPERY
21	0.1 E-FOG	11	0.0 E-DARK-INDPR STREET LIGHT	141	0.7 E-NOT STATED
5	0.0 F-OTHER	0	0.0 F-DARK-NOT STATED	0	0.0 -INVALID CODES
0	0.0 G-WIND	58	0.3 G-NOT STATED		
109	0.5 I-NOT STATED	0	0.0 -INVALID CODES		

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
1,531	8.3 A-CONTROL FUNCTIONING	0	0.0 R-IND. ALIGN-RIGHT	1,430	7.8 1-RAMP INTERSECTION (EXIT)
15	0.0 B-CONTROL NOT FUNCTIONING	0	0.0 L-IND. ALIGN-LEFT	1,480	8.0 2-RAMP
14	0.0 C-CONTROLS OBSOBEED	18,306	100.0 D-DIVIDED	325	1.7 3-RAMP ENTRY
16,647	90.9 D-NO CONTROLS PRESENT	0	0.0 U-UNDIVIDED	706	3.8 4-RAMP AREA, INTERSECT STREET
16,99	0.5 I-NOT STATED			0	0.0 5-IN INTERSECTION
				0	0.0 6-OUTSIDE INTERSECT-NONSTATE RTE
				14,365	78.4 --DOES NOT APPLY



----- PARTY SUMMARY -----

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR			
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT	# 2	PCT CODE
17,143	93.6 A-PASNGR CAR/STA WAGON	6,465	35.3 A-STOPPED	12	0.0	0	0.0 1-INFLUENCE ALCOHOL
27	0.1 B-PASNGR CAR W/TRAILR	15,290	83.5 B-PROCEEDED STRAIGHT	138	0.7	0	0.0 2-FOLLOW TOO CLOSE
254	1.3 C-MOTORCYCLE	130	0.7 C-RAN OFF ROAD	9	0.0	0	0.0 3-FAILURE TO YIELD
4,386	23.9 D-PICKUP/PANEL TRUCK	110	0.6 D-HANKING RIGHT TURN	360	2.0	0	0.0 4-IMPROPER TURN
133	0.7 E-PICKUP/PANEL W/TRAILR	266	1.4 E-HANKING LEFT TURN	889	4.8	1	0.0 5-SPEEDING
773	4.2 F-TRUCK/TRUCK TRACTOR	3	0.0 F-HANKING U TURN	674	3.6	1	0.0 6-OTHER VIOLATIONS
1,261	6.8 G-TRK/TRACTOR # 1 TRAILR	50	0.2 G-BACKING	38	0.2	10	0.0 5-CELL PHONE* (INMATTN)
99	0.5 H-TRK/TRACTOR # 2 TRAILR	3,653	19.3 H-SLOWING, STOPPING	0	0.0	2	0.0 B-ELECTRONIC EQUIP* (INMATTN)
0	0.0 I-TRK/TRACTOR # 3 TRAILR	64	0.3 I-PASS OTHER VEHICLE	21	0.1	3	0.0 C-RADIO/CD/HEADPHN* (INMATTN)
0	0.0 J-SINGLE UNIT TANKER	3,077	16.8 J-CHANGING LANES	5	0.0	0	0.0 D-SMOKING* (INMATTN)
10	0.0 K-TRK/TRA # 1 TRNK TELR	3	0.0 K-PARKING	23	0.1	2	0.0 E-VISION OBSCUREMENT
0	0.0 L-TRK/TRA # 2 TRNK TELR	86	0.4 L-ENTER FROM SELDR	475	2.5	34	0.1 F-INATTENTION - OTHER
44	0.2 M-SCHOOL BUS	92	0.5 M-OTHER UNSAFE TURN	2,613	14.2	251	1.3 G-STOP & GO TRAFFIC
128	0.6 N-OTHER BUS	11	0.0 N-CROSS INTO OFF LN	1,414	7.7	164	0.8 H-ENTER/LEAVE RAMP
157	0.8 O-EMERGENCY VEHICLE	93	0.5 O-PARKED	1,430	2.3	48	0.2 I-PREVIOUS COLLISION
6	0.0 P-HIGHWAY CONST EQUIP	391	2.1 P-MERGING	17	0.0	7	0.0 J-UNFAMILIAR WITH ROAD
28	0.1 Q-BICYCLE	10	0.0 Q-TRVL WRONG WAY	73	0.3	11	0.0 K-DEFECT VEHICLE EQUIP
354	1.9 R-MOTOR-MOTOR VEH	2,385	13.0 R-OTHER	415	2.2	58	0.3 L-UNINVOLVED VEHICLE
119	0.6 S-OTHER-NON-MOTOR VEH	148	0.8 S-NOT STATED	92	0.5	12	0.0 M-OTHER
64	0.3 T-SPILLED LIQNS			13,110	71.6	115	0.6 H-WNE APPARENT
12	0.0 U-DISENGAGED TOW						
1	0.0 V-UNINVOLVED VEHICLE	20	0.1 V-KING WALK-INSTRT				
2	0.0 W-HUPED	2	0.0 W-KING WALK-NOT INTR	0	0.0	0	0.0 R-RAND ACCIDENT
0	0.0 X-TRAIN	5	0.0 X-KING NOT WALK	38	0.2	0	0.0 S-RUNWAY VEHICLE
59	0.3 Y-PEDESTRIAN	48	0.2 Y-RUNWAY-INCL SELDR	6	0.0	4	0.0 T-EATING* (INMATTN)
21	0.1 Z-DISEMPT PEDESTRIAN	4	0.0 Z-NOT IN RUNWAY	10	0.0	2	0.0 U-CHILDREN* (INMATTN)
0	0.0 AA-ANIMAL - LIVESTOCK	1	0.0 AA-LEAVE SCHL BUS	0	0.0	0	0.0 V-ANIMALS* (INMATTN)
0	0.0 AB-ANIMAL - BEER	8	0.0 AB-INVALID CODES	2	0.0	0	0.0 W-PERSONAL HYGIENE* (INMATTN)
8	0.0 AC-ANIMAL - OTHER			10	0.0	0	0.0 X-READING* (INMATTN)
				576	3.1	18,116	98.9 <-NOT STATED
				0	0.0	0	0.0 --DOES NOT APPLY

\*INATTENTION CODES EFF. 01-01-01

----- SPECIAL INFORMATION -----

NUMBER	PCT CODE	DESCRIPTION
19	0.1 B-HAZARDOUS MATERIALS	
608	3.3 B-CELL PHONE IN USE*	
6,493	37.6 C-CELL PHONE NOT IN USE*	
9,728	53.1 D-CELL PHONE HOME/UNKNOWN*	
4,435	24.3 <-NOT STATED	
0	0.0 --DOES NOT APPLY	
2	0.0 -INVALID CODES	

\*SPECIAL INFORMATION CODES EFF. 04-01-01

AMR330 ACC-SUMMARY  
REQ NO 7099

ALL ALL ACCIDENTS  
TASAS SELECTIVE RECORD RETRIEVAL  
LA-010

10/01/00 THRU 09/30/03

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--- PARTY SUMMARY ---

OBJECT STRUCK		PRIMARY		OTHERS		LOCATION OF COLLISION			
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT		
119	0.6	98	0.5	01-SIDE OF BRIDGE RAILING	113	0.6	55	0.3	A-BEYOND MEDIAN OR STRIPE-LEFT
2	0.0	0	0.0	02-END OF BRIDGE RAILING	1,522	8.3	1,264	6.9	B-BEYOND SHOULDER DRIVERS LEFT
3	0.0	7	0.0	03-PIER, COLUMN, ABUTMENT	27	0.1	42	0.2	C-LEFT SHOULDER AREA
2	0.0	2	0.0	04-BOTTOM OF STRUCTURE	4,664	25.4	1,639	8.9	D-LEFT LANE
2	0.0	0	0.0	05 BRIDGE END POST IN GORE	6,719	36.7	1,871	10.2	E-INTERIOR LANES
19	0.1	15	0.0	06-END OF GUARD RAIL	5,846	31.9	1,374	7.5	F-INTERIOR LANE
6	0.0	1	0.0	07-BRIDGE APPROACH GRD RAIL	143	0.7	86	0.4	G-RIGHT SHOULDER AREA
47	0.2	116	0.6	10-LIGHT OR SIGNAL POLE	1,218	6.6	1,387	7.5	H-BEYOND SHOULDER DRIVERS RIGHT
3	0.0	4	0.0	11-UTILITY POLE	37	0.2	20	0.1	I-GORE AREA
4	0.0	5	0.0	12-FOUR (TIE NOT STATED)	503	2.7	90	0.4	J-OTHER
46	0.2	168	0.9	13-TRAFFIC SIGN/SIGN POST	151	0.8	44	0.2	K-HOV LANE(S)
1	0.0	5	0.0	14-OTHER SIGNS NOT TRAFFIC	20	0.1	8	0.0	M-HOV LANE BUFFER AREA
362	1.9	387	2.1	15-GUARDRAIL	0	0.0	0	0.0	--NOT STATED
912	4.9	851	4.6	16-MEDIAN BARRIER	0	0.0	0	0.0	--DOES NOT APPLY
130	0.7	169	0.9	17-WALL(EXCEPT SOUND WALL)	4,583	25.0	18,171	99.2	--DOES NOT APPLY
746	4.0	384	2.0	18-DIKE OR CURB	0	0.0	1	0.0	-INVALID CODES
21	0.1	2	0.0	19-TRAFFIC ISLAND	0	0.0	0	0.0	
0	0.0	1	0.0	20-RAISED BARS	0	0.0	0	0.0	
0	0.0	1	0.0	21-CONCRETE OBJ (HEWL, D.I.)	0	0.0	0	0.0	
0	0.0	6	0.0	22-GUIDEPST, CURB/ERT, RM	0	0.0	0	0.0	
38	0.2	143	0.7	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	0.0	
35	0.1	196	1.0	24-CUT EMBANKMENT	0	0.0	0	0.0	
0	0.0	0	0.0	25-IN WATER	0	0.0	0	0.0	
1	0.0	7	0.0	26-CHAINAGE DITCH	0	0.0	0	0.0	
29	0.1	137	0.7	27-FENCE	17,384	94.9	0	0.0	A-HAD NOT BEEN DRINKING
6	0.0	99	0.5	28-TREES	878	4.7	0	0.0	B-HED - UNDER INFLUENCE
22	0.1	68	0.3	29-PLANTS	242	1.3	0	0.0	C-HED - NOT UNDER INFLUENCE
65	0.3	101	0.5	30-SOUND WALL	119	0.6	0	0.0	D-HED - IMPAIRMENT UNKNOWN
1	0.0	0	0.0	40-UNNATURAL MATRL ON ROAD	0	0.0	44	0.2	E-UNDER DRUG INFLUENCE
31	0.1	27	0.1	41-TEMP BARRICADES, CONES	0	0.0	23	0.1	F-OTHER PHYSICAL IMPAIRMENT
216	1.1	11	0.0	42-OTHER OBJECT ON ROAD	2,829	15.4	5	0.0	G-IMPAIRMENT NOT KNOWN
9	0.0	34	0.1	43-OTHER OBJECT OFF ROAD	135	0.7	2	0.0	H-NOT APPLICABLE
152	0.8	809	4.4	44-OVERTURNED	638	3.4	18,276	99.8	I-FATIGUE
11	0.0	9	0.0	45-CRASH CUSHION(SAND)	0	0.0	67	0.3	--NOT STATED
41	0.2	12	0.0	46-CRASH CUSHION(OTHER)	0	0.0	0	0.0	-INVALID CODES
9	0.0	31	0.1	51-CALL BOX	0	0.0	0	0.0	
12	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	
36	0.1	6	0.0	99-NO OBJECT INVOLVED	0	0.0	0	0.0	
15,167	82.8	4,251	23.2	V1 THRU V9-VEHICLE 1 TO 9	0	0.0	0	0.0	
0	0.0	0	0.0	--NOT STATED	0	0.0	0	0.0	
4,541	24.8	18,171	99.2	---DOES NOT APPLY	0	0.0	0	0.0	
0	0.0	0	0.0	-INVALID CODES	0	0.0	0	0.0	



**Accident Data - All Accidents - 101 Freeway**

10/01/00thru 09/30/03

5 pages

11-04-04  
10/01/00 THRU 09/30/03

TASAS SELECTIVE RECORD RETRIEVAL  
LA-101

ALL ALL ACCIDENTS

AMR330-CONTROLS  
REQ NO 7130

- MESSAGES -

SUBMITTORS DISTRICT 72

SUBMITTORS NAME YUES-S

ACCIDENTS SELECTED 13169

LOCATION CRITERIA -

DISTRICT 01	POSTMILE	FROM	TO
ROUTE 101		OR FROM	TO
COUNTY LA		OR FROM	TO

DATE RANGE	FROM	10-01-00	TO	09-30-03
	OR FROM		TO	
	OR FROM		TO	

AND

ACCIDENT AND HIGHWAY CRITERIA - NONE

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT CODE	NUMBER	PCT CODE		
13,169	34	3,652	9,483	37	5,528	1,651	12.5	1	1,637	12.4	1
WITHOUT DETAIL						8,220	62.4	2	8,134	61.7	2
0						2,468	18.7	3	2,539	19.2	3
						830	6.3	> 3	659	5.0	4
									149	1.1	5
									35	0.2	6
									13	0.0	7
									3	0.0	8
									0	0.0	9

---ACCESS CONTROL---		---SIDE OF HIGHWAY---		---YEAR---		---MONTH---		---DAY OF WEEK---	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
0	0.0	5,973	45.3	1,068	8.1	01-JANUARY	1,502	11.4	1-SUNDAY
0	0.0	7,196	54.6	1,055	8.0	02-FEBRUARY	1,758	13.3	2-MONDAY
13,169	100.0	0	0.0	1,175	9.0	03-MARCH	1,871	14.2	3-TUESDAY
0	0.0	0	0.0	1,070	8.1	04-APRIL	1,913	14.5	4-WEDNESDAY
0	0.0	0	0.0	1,078	8.1	05-MAY	1,922	14.5	5-THURSDAY
0	0.0	0	0.0	1,115	8.4	06-JUNE	2,277	17.2	6-FRIDAY
0	0.0	0	0.0	1,080	8.2	07-JULY	1,926	14.6	7-SATURDAY
0	0.0	0	0.0	1,160	8.8	08-AUGUST			
0	0.0	4,276	32.4	2,001	15.2	09-SEPTEMBER			
0	0.0	4,382	33.2	2,002	15.2	10-OCTOBER			
0	0.0	3,437	26.0	2,003	15.2	11-NOVEMBER			
0	0.0	0	0.0	2,004	15.2	12-DECEMBER			

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
568	5.0	71	0.5	9	0.0
440	3.3	2,503	19.0	12	0.0
188	0.8	7,561	60.4	107	0.8
1,536	11.6	430	3.2	231	1.7
7,270	55.2	1,887	14.3	11	0.0
2,342	17.9	109	0.8	9	0.0
36	0.2	42	0.3	20	0.1
277	2.1	136	1.0	12,656	96.1
346	2.7	30	0.2	114	0.8
25	0.1	0	0.0		
40	0.3				
41	0.3				

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
10,866	82.5	6,871	67.3	12,125	92.0
1,775	13.4	387	2.9	866	6.5
413	3.1	2,496	18.9	31	0.2
1	0.0	1,342	10.1	25	0.1
14	0.1	7	0.0	122	0.9
8	0.0	0	0.0	0	0.0
3	0.0	66	0.5		
89	0.6	0	0.0		

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
980	7.4	423	3.2	590	4.4
13	0.0	377	2.8	474	3.5
11	0.0	12,349	93.9	125	0.9
12,071	91.6	0	0.0	502	3.8
94	0.7			0	0.0
				0	0.0
				11,478	87.1

--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	FCT CODE	NUMBER	FCT CODE	# 1	FCT # 2
12,577	95.5 A-PASNGR CAR/STA WAGON	4,500	34.1 A-STOPPED	12	0.0
32	0.2 B-PASNGR CAR W/TRAILR	10,915	82.8 B-PROCEED STRAIGHT	77	0.5
189	1.4 C-MOTORCYCLE	115	0.8 C-RAN OFF ROAD	5	0.0
2,984	22.6 D-PICKUP/PANEL TRUCK	106	0.8 D-MAKING RIGHT TURN	333	2.5
87	0.6 E-PICKUP/PANEL W/TRAILR	245	1.8 E-MAKING LEFT TURN	887	6.7
572	4.3 F-TRUCK/BUCK TRACTOR	7	0.0 F-MAKING U TURN	472	3.5
579	4.3 G-TRK/TRACTOR & 1 TRAILR	21	0.1 G-BACKING	17	0.1
30	0.2 H-TRK/TRACTOR & 2 TRAILR	2,918	22.1 H-SLOWING, STOPPING	3	0.0
1	0.0 I-TRK/TRACTOR & 3 TRAILR	32	0.2 I-PASS OTHER VEHICLES	15	0.1
0	0.0 J-SINGLE UNIT TRUCK	2,091	15.8 J-CHANGING LANES	1	0.0
7	0.0 K-TRK/TRR & 1 TRAK TRLR	3	0.0 K-PARKING	23	0.1
0	0.0 L-TRK/TRR & 2 TRAK TRLR	56	0.4 L-ENTER FROM SHOUL	466	3.5
53	0.4 M-SCHOOL BUS	25	0.1 M-OTHER DANGEROUS TURN	907	6.8
80	0.6 N-OTHER BUS	5	0.0 N-CROSS INTO OPP LN	243	1.8
135	1.0 O-EMERGENCY VEHICLE	73	0.5 O-PARKED	254	1.9
3	0.0 P-HIGHWAY CONST EQUIP	141	1.0 P-MERGING	12	0.0
15	0.1 Q-BICYCLE	13	0.0 Q-TRVL WRONG WAY	67	0.5
399	3.0 R-OTHER-HOTOR VEH	1,794	13.6 R-OTHER	237	1.7
81	0.6 S-OTHER-NON-HOTOR VEH	1,119	0.9 S-<NOT STATED	145	1.1
57	0.4 T-FILLED LOADS			11,205	85.0
9	0.0 U-DISENGAGED TOW			18	0.1
0	0.0 V-UNINVOLVED VEHICLES			0	0.0
1	0.0 W-MOVED	25	0.1 W-KING XWALK-INTBST	0	0.0
0	0.0 X-TRAILN	1	0.0 X-KING XWALK-NOT INTR	26	0.1
49	0.3 Y-PEDESTRIAN	36	0.2 Y-ROADWAY-INCL SHOUL	4	0.0
15	0.1 Z-DISHOORT PEDESTRIAN	1	0.0 Z-NOT IN ROADWAY	3	0.0
0	0.0 AA-ANIMAL - LIVESTOCK	0	0.0 AA-LEAVE SCHL BUS	0	0.0
1	0.0 AB-ANIMAL - DEER	9	0.0 AB-INVALID CODES	1	0.0
5	0.0 AC-ANIMAL - OTHER			3	0.0
				490	3.7
				13,094	95.4
				0	0.0

DIRECTION OF TRAVEL		SPECIAL INFORMATION	
NUMBER	FCT CODE	NUMBER	FCT CODE
5,942	45.1 N-N, NE, NW BOUND	9	0.0 A-HAZARDOUS MATERIALS
7,187	54.5 S-S, SE, SW BOUND	278	2.1 B-CELL PHONE IN USE*
206	1.5 E-EASTBOUND	6,690	50.1 C-CELL PHONE NOT IN USE*
284	1.9 W-WESTBOUND	6,690	50.8 D-CELL PHONE NONE/UNKNOWN*
166	1.2 <-NOT STATED	2,941	22.3 <-NOT STATED
8	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		1	0.0 --INVALID CODES

\*SPECIAL INFORMATION CODES EFF. 04-01-01

\*INATTENTION CODES EFF. 01-01-01



--- PARTY SUMMARY ---

PRIMARY		OBJECT STRUCK		LOCATION OF COLLISION		SOBRIETY		DRUG/PHYSICAL	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
14	0.1	17	0.1	01-SIDE OF BRIDGE RAILING	65	0.4	30	0.2	A-BEYOND MEDIAN OR STRIPE-LFT
0	0.0	1	0.0	02-END OF BRIDGE RAILING	1,002	7.6	860	6.5	B-BEYOND SHOULDER DRIVERS LEFT
3	0.0	8	0.0	03-PIER-COLUMN, ABUTMENT	14	0.1	19	0.1	C-LEFT SHOULDER AREA
6	0.0	0	0.0	04-BOTTOM OF STRUCTURE	3,154	23.9	1,256	9.5	D-LEFT LANE
0	0.0	0	0.0	05 BRIDGES END POST IN CORE	5,880	44.6	1,762	13.3	E-INTERIOR LANES
10	0.0	17	0.1	06-END OF GUARD RAIL	3,567	27.0	935	7.1	F-RIGHT LANE
6	0.0	5	0.0	07-BRIDGES APPROACH GRD RAIL	109	0.8	67	0.5	G-RIGHT SHOULDER AREA
29	0.2	84	0.6	10-LIGHT OR SIGNAL POLE	810	6.1	984	7.4	H-BEYOND SHOULDER DRIVERS RIGHT
1	0.0	8	0.0	11-UTILITY POLE	79	0.2	11	0.0	I-SCENE AREA
0	0.0	3	0.0	12-FOUL (TYPE NOT STATED)	178	1.3	39	0.2	J-OTHER
55	0.4	86	0.6	13-TRAFFIC SIGN/SIGN POST	23	0.1	6	0.0	K-HOV LANE(S)
233	1.7	297	2.2	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	M-HOV LANE BUFFER AREA
710	5.3	665	5.0	15-GUARDRAIL	0	0.0	0	0.0	N-NOT STATED
82	0.6	100	0.7	16-MEDIAN BARRIER	3,744	28.4	13,075	99.2	O--DOES NOT APPLY
407	3.0	196	1.4	17-WALL(EXCEPT SOUND WALL)	0	0.0	0	0.0	P-INVALID CODES
2	0.0	1	0.0	18-DIKE OR CURB					
0	0.0	0	0.0	19-TRAFFIC ISLAND					
0	0.0	0	0.0	20-RAISED BARS					
0	0.0	0	0.0	21-CONCRETE OBJ(HUML, D, I, J)					
2	0.0	5	0.0	22-GUIDEWAST, CULVERT, DM					
38	0.2	104	0.7	23-CUT SLOPE OR EMBANKMENT					
51	0.3	154	1.1	24-OVER EMBANKMENT					
0	0.0	2	0.0	25-IN WATER					
5	0.0	17	0.1	26-ORANGE DITCH					
18	0.1	121	0.9	27-FENCE					
14	0.1	104	0.7	28-TREES					
9	0.0	45	0.3	29-FLAITS	12,391	94.0	0	0.0	A-HAD NOT BEEN DRINKING
51	0.3	79	0.5	30-SOUND WALL	659	5.0	0	0.0	B-HBD - UNDER INFLUENCE
0	0.0	0	0.0	40-NATURAL MATRL ON ROAD	198	1.5	0	0.0	C-HBD - NOT UNDER INFLUENCE
19	0.1	8	0.0	41-TEMP BARRICADES, CONES	107	0.8	0	0.0	D-HBD - IMPAIRMENT UNKNOWN
126	0.9	5	0.0	42-OTHER OBJECT ON ROAD	0	0.0	50	0.3	E-UNDER DRUG INFLUENCE
5	0.0	34	0.2	43-OTHER OBJECT OFF ROAD	0	0.0	17	0.1	F-OTHER PHYSICAL IMPAIRMENT
99	0.7	490	3.7	44-OVERTURNED	2,194	16.6	1	0.0	G-IMPACTMENT NOT ROOMN
7	0.0	4	0.0	45-CRASH CUSHION(SAND)	68	0.6	2	0.0	H-NOT APPLICABLE
15	0.1	6	0.0	46-CRASH CUSHION(OTHER)	0	0.0	46	0.3	I-FATIGUE
11	0.0	18	0.1	51-CALL BOX	523	3.9	13,117	99.6	J-NOT STATED
0	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	K--DOES NOT APPLY
17	0.1	11	0.0	99-NO OBJECT INVOLVED	0	0.0	0	0.0	L-INVALID CODES
11,115	84.4	3,455	26.2	VI THRU V9-VEHICLE 1 TO 9					
0	0.0	0	0.0	<< NOT STATED					
3,707	28.1	13,075	99.2	---DOES NOT APPLY					
0	0.0	0	0.0	-INVALID CODES					



**Accident Data - All Accidents - 110 Freeway**

10/01/00thru 09/30/03

5 pages

AVR330-CONTROLS  
REQ NO 7134

ALL ALL

TASIS SELECTIVE RECORD RETRIEVAL  
ACCIDENTS LA-110

10/01/00 THRU 09/30/03

PAGE 1

11-04-04

SUBMITTORS DISTRICT 72

- MESSAGES -

SUBMITTORS NAME YURN-S

ACCIDENTS SELECTED 10555

LOCATION CRITERIA -

DISTRICT 07 POSTVILLE FROM TO  
ROUTE 110 OR FROM TO  
COUNTY LA OR FROM TO

AND DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM TO  
OR FROM TO

ACCIDENT AND HIGHWAY CRITERIA - NONE

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	MOTOR VEHICLES INVOLVED		LINES CODED				
					NUMBER	PCT	NUMBER	PCT			
10,555	39	2,742	7,774	44	4,162	1,904	18.0	1	1,892	17.9	1
WITHOUT DETAIL						6,506	61.6	2	6,441	61.0	2
0						1,683	15.9	3	1,746	16.5	3
						462	4.3	> 3	382	3.6	4
									72	0.6	5
									13	0.1	6
									5	0.0	7
									3	0.0	9

--- HOUR OF DAY ---		--- ACCESS CONTROL ---		--- SIDE OF HIGHWAY ---		--- MONTH ---		--- DAY OF WEEK ---		
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	
255	2.4	54	0.5	5,530	52.3	01-JANUARY	886	8.3	1,455	13.7
250	2.3	0	0.0	5,025	47.6	02-FEBRUARY	896	8.4	1,382	13.0
268	2.5	10,501	99.4	0	0.0	03-MARCH	932	8.8	1,441	13.6
158	1.4	0	0.0	0	0.0	04-APRIL	859	8.1	1,421	13.4
114	1.0	0	0.0	0	0.0	05-MAY	802	7.5	1,480	14.0
216	2.0	0	0.0	0	0.0	06-JUNE	817	7.7	1,592	16.0
408	3.8	0	0.0	0	0.0	07-JULY	835	7.9	1,676	15.8
530	5.0	0	0.0	0	0.0	08-AUGUST	784	7.4	1,576	15.0
509	4.8	0	0.0	0	0.0	09-SEPTEMBER	870	8.2	1,006	9.5
410	3.8	0	0.0	0	0.0	10-OCTOBER	1,006	9.5	948	8.9
465	4.4	0	0.0	0	0.0	11-NOVEMBER	920	8.7	920	8.7
491	4.6	0	0.0	0	0.0	12-DECEMBER	0	0.0	0	0.0
560	5.3	0	0.0	0	0.0	UNKNOWN	0	0.0	0	0.0
701	6.6	0	0.0	0	0.0					
730	6.9	0	0.0	0	0.0					
649	6.1	0	0.0	0	0.0					
615	5.8	0	0.0	0	0.0					
628	5.9	0	0.0	0	0.0					
507	4.8	0	0.0	0	0.0					
399	3.7	0	0.0	0	0.0					
371	3.5	0	0.0	0	0.0					
419	3.9	0	0.0	0	0.0					
351	3.3	0	0.0	0	0.0					
3	0.0	0	0.0	0	0.0					

----- ACCIDENT SUMMARY -----

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
656	6.2	81	0.7	33	0.3
36	0.3	1,995	18.9	20	0.1
66	0.6	5,710	54.0	66	0.6
1,359	13.2	407	3.8	75	0.7
5,772	54.6	2,056	19.4	4	0.0
2,122	20.1	116	1.0	6	0.0
22	0.2	32	0.3	23	0.2
245	2.3	125	1.1	10,146	96.1
130	1.2	33	0.3	182	1.7
3	0.0	0	0.0		
44	0.4				
60	0.5				

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
8,239	78.0	6,644	62.9	9,245	87.5
1,620	15.3	320	3.0	1,054	9.9
527	4.9	2,806	26.5	38	0.3
1	0.0	684	6.4	32	0.3
14	0.1	3	0.0	186	1.7
3	0.0	0	0.0	0	0.0
1	0.0	98	0.9		
150	1.4	0	0.0		

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
748	7.0	300	2.8	589	5.5
7	0.0	260	2.4	732	6.9
5	0.0	9,992	94.6	151	1.4
9,671	91.6	3	0.0	346	3.2
124	1.1			7	0.0
				2	0.0
				8,728	82.6

-----PARTY TYPE-----<-----MOVEMENT PRECEDING COLLISION----->-----OTHER ASSOCIATED FACTOR----->  
 NUMBER PCT CODE NUMBER PCT CODE NUMBER PCT # 2 PCT CODE

NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT	# 2	PCT CODE
10,037	95.0	3,302	31.2	16	0.1	0	0.0 1-INFLUENCE ALCOHOL
3	0.0	8,483	80.3	12	0.1	0	0.0 2-FOLLOW TOO CLOSE
153	1.4	77	0.7	5	0.0	0	0.0 3-FAILURE TO YIELD
2,151	20.3	73	0.6	290	2.7	0	0.0 4-IMPROPER TURN
38	0.3	163	1.5	644	6.1	0	0.0 5-SPEEDING
400	3.7	4	0.0	317	3.0	0	0.0 6-OTHER VIOLATIONS
354	3.3	38	0.3	15	0.1	1	0.0 A-CELL PHONE* (INATN)
28	0.2	2,053	19.4	0	0.0	0	0.0 B-ELECTRONIC EQUIP* (INATN)
0	0.0	33	0.3	10	0.0	0	0.0 C-RADIO/CD/HEADPH* (INATN)
0	0.0	1,908	18.0	1	0.0	0	0.0 D-SHOULDER* (INATN)
9	0.0	2	0.0	9	0.0	1	0.0 E-VISION OBSCUREMENT
0	0.0	53	0.5	147	1.3	13	0.1 F-INATTENTION - OTHER
34	0.3	54	0.5	301	2.8	11	0.1 G-STOP & GO TRAFFIC
71	0.6	9	0.0	160	1.5	16	0.1 H-ENTER/LEAVE RAMP
146	1.3	60	0.5	185	1.7	14	0.1 I-PREVIOUS COLLISION
2	0.0	120	1.1	16	0.1	1	0.0 J-UNFAMILIAR WITH ROAD
466	4.4	14	0.1	30	0.2	2	0.0 K-DEFECT VEHICLE EQUIP
54	0.5	1,251	11.8	156	1.4	23	0.2 L-UNINVOLVED VEHICLE
40	0.3	122	1.1	54	0.5	3	0.0 M-OTHER
3	0.0	17	0.1	9,310	88.2	38	0.3 N-NONE APPARENT
3	0.0	0	0.0	5	0.0	0	0.0 P-WIND
0	0.0	0	0.0	0	0.0	0	0.0 R-RAMP ACCIDENT
0	0.0	3	0.0	23	0.2	0	0.0 S-RUNAWAY VEHICLE
0	0.0	24	0.2	1	0.0	0	0.0 T-EATING* (INATN)
10	0.0	0	0.0	4	0.0	1	0.0 U-CHILDREN* (INATN)
0	0.0	0	0.0	0	0.0	0	0.0 V-ANIMALS* (INATN)
0	0.0	1	0.0	0	0.0	1	0.0 W-PERSONAL HYGIENE* (INATN)
0	0.0	7	0.0	2	0.0	1	0.0 X-READING* (INATN)
11	0.1	0	0.0	425	4.0	10,513	99.6
				0	0.0	0	0.0 --DOES NOT APPLY

NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT	# 2	PCT CODE
5,442	51.5	2	0.0	0	0.0	0	0.0 --DOES NOT APPLY
4,532	46.7	182	1.7	0	0.0	0	0.0 A-HAZARDOUS MATERIALS
250	2.3	4,324	40.9	0	0.0	0	0.0 B-CELL PHONE IN USE*
240	2.2	5,716	54.1	0	0.0	0	0.0 C-CELL PHONE NOT IN USE*
145	1.3	2,562	24.2	0	0.0	0	0.0 D-CELL PHONE NONE/UNKNOWN*
5	0.0	0	0.0	0	0.0	0	0.0 --DOES NOT APPLY
		0	0.0	0	0.0	0	0.0 --INVALID CODES

\*INATTENTION CODES EFF. 01-01-01  
 \*SPECIAL INFORMATION CODES EFF. 04-01-01

--- PARTY SUMMARY ---

PRIMARY		OTHERS		LOCATION OF COLLISION		OTHERS			
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT		
35	0.3	19	0.1	01-SIDE OF BRIDGE RAILING	69	0.6	17	0.1	A-BEYOND MEDIAN OR STRIPE-LFT
0	0.0	1	0.0	02-END OF BRIDGE RAILING	1,047	9.9	765	7.2	B-BEYOND SHOULDER DRIVERS LEFT
3	0.0	6	0.0	03-PIER,COLUMN,ABUTMENT	9	0.0	27	0.2	C-LEFT SHOULDER AREA
0	0.0	1	0.0	04-BOTTOM OF STRUCTURE	2,568	24.3	854	8.0	D-LEFT LANE
1	0.0	0	0.0	05 BRIDGE END POST IN CORE	4,137	39.1	1,129	10.6	E-INTERIOR LANES
10	0.0	11	0.1	06-END OF GUARD RAIL	2,726	25.8	626	5.9	F-RIGHT LANE
2	0.0	2	0.0	07-BRIDGE APPROACH GRD RAIL	78	0.7	63	0.5	G-RIGHT SHOULDER AREA
27	0.2	74	0.7	10-LIGHT OR SIGNAL POLE	907	8.5	863	8.1	H-BEYOND SHOULDER DRIVERS RIGHT
0	0.0	10	0.0	11-UTILITY POLE	46	0.4	16	0.1	I-CORE AREA
2	0.0	3	0.0	12-POLE (TYPE NOT STATED)	179	1.6	32	0.3	J-OTHER
15	0.1	45	0.4	13-TRAFFIC SIGN/SIGN POST	285	2.7	101	0.9	K-HOV LANE BUFFER AREA
1	0.0	6	0.0	14-OTHER SIGNS NOT TRAFFIC	14	0.1	3	0.0	M-HOV LANE BUFFER AREA
360	3.4	312	2.9	15-GUARDRAIL	0	0.0	0	0.0	<-NOT STATED
643	6.0	527	4.9	16-MEDIAN BARRIER	2,555	24.2	10,494	99.4	--DOES NOT APPLY
138	1.3	132	1.2	17-WALL(EXCEPT SOUND WALL)	0	0.0	1	0.0	-INVALID CODES
532	5.0	258	2.4	18-DIKE OR CURB	0	0.0	0	0.0	
2	0.0	0	0.0	19-TRAFFIC ISLAND	0	0.0	0	0.0	
0	0.0	0	0.0	20-RAISED BARS	0	0.0	0	0.0	
1	0.0	1	0.0	21-CONCRETE OBJ(EDWL,D.I.,I)	0	0.0	0	0.0	
2	0.0	1	0.0	22-GUIDEPOST,CULVERT,PM	0	0.0	0	0.0	
29	0.2	90	0.8	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	0.0	
12	0.1	74	0.7	24-OVER EMBANKMENT	0	0.0	0	0.0	
0	0.0	3	0.0	25-IN WATER	0	0.0	0	0.0	
1	0.0	12	0.1	26-RAINFALL DITCH	0	0.0	0	0.0	
11	0.1	107	1.0	27-FENCE	9,789	92.7	0	0.0	A-HAD NOT BEEN DRINKING
8	0.0	36	0.3	28-TREES	637	6.0	0	0.0	B-HBO - UNDER INFLUENCE
2	0.0	21	0.1	29-PLANTS	161	1.5	0	0.0	C-HBO - HOT UNDER INFLUENCE
64	0.6	64	0.6	30-SOUND WALL	76	0.7	0	0.0	D-HBO - IMPAIRMENT UNKNOWN
0	0.0	0	0.0	40-NATURAL MATRIL ON ROAD	0	0.0	41	0.3	E-UNDER DRUG INFLUENCE
4	0.0	2	0.0	41-TEMP BARRICADES, CONES	0	0.0	12	0.1	F-OTHER PHYSICAL IMPAIRMENT
118	1.1	4	0.0	42-OTHER OBJECT ON ROAD	1,982	18.7	3	0.0	G-IMPALMENT NOT KNOWN
5	0.0	18	0.1	43-OTHER OBJECT OFF ROAD	84	0.7	0	0.0	H-HOT APPLICABLE
109	1.0	465	4.4	44-OVERTURNED	0	0.0	31	0.2	I-FATIGUE
25	0.2	3	0.0	45-CRASH CUSHION(SHMD)	444	4.2	0	0.0	<-NOT STATED
44	0.4	13	0.1	46-CRASH CUSHION(OTHER)	0	0.0	10,530	99.7	--DOES NOT APPLY
8	0.0	7	0.0	51-CALL BOX	0	0.0	0	0.0	-INVALID CODES
4	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	
22	0.2	8	0.0	99-NO OBJECT INVOLVED	0	0.0	0	0.0	
9,316	78.7	2,297	21.7	V1 THRU V9-VEHICLE 1 TO 9	0	0.0	0	0.0	
0	0.0	0	0.0	<-NOT STATED	0	0.0	0	0.0	
2,519	23.8	10,494	99.4	--DOES NOT APPLY	0	0.0	0	0.0	
0	0.0	0	0.0	-INVALID CODES	0	0.0	0	0.0	



# Accident Data - All Accidents - 405 Freeway

10/01/00thru 09/30/03

5 pages

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11-04-04  
10/01/00 THRU 09/30/03

TASAS SELECTIVE RECORD RETRIEVAL  
LA-105

ALL ALL  
ACCIDENTS

AM330-CONTROLS  
REQ NO 7118

- MESSAGES -

SUBMITTORS DISTRICT 72

SUBMITTORS NAME YUEN-S

ACCIDENTS SELECTED 15894

## LOCATION CRITERIA -

DISTRICT 07	FROM	TO	DATE RANGE FROM	10-01-00	TO	09-30-03
ROUTE 405	OR FROM	TO	OR FROM		TO	
COUNTY LA	OR FROM	TO	OR FROM		TO	

ACCIDENT AND HIGHWAY CRITERIA - NONE

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT	NUMBER	PCT		
15,894	43	4,525	11,376	49	6,337	2,213	13.9	1	2,189	13.7	1
WITHOUT DETAIL						9,548	60.0	2	9,431	59.3	2
0						2,953	18.5	3	3,062	19.2	3
						1,180	7.4	> 3	899	5.6	4
									233	1.4	5
									56	0.3	6
									16	0.1	7
									3	0.0	8
									5	0.0	9

HOOR OF DAY		ACCESS CONTROL		SIDE OF HIGHWAY		MONTH		DAY OF WEEK	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
283	1.7	0	0.0	7,832	49.2	8.2	01-JANUARY	1,569	9.8
211	1.3	0	0.0	8,062	50.7	8.0	02-FEBRUARY	2,036	12.8
276	1.7	15,894	100.0	0	0.0	8.3	03-MARCH	2,405	15.1
167	1.0	0	0.0	0	0.0	8.2	04-APRIL	2,453	15.4
158	0.9	0	0.0	0	0.0	7.8	05-MAY	2,481	15.6
265	1.6	0	0.0	0	0.0	8.5	06-JUNE	2,932	17.8
566	3.5	0	0.0	0	0.0	8.8	07-JULY	2,118	13.3
886	5.5	0	0.0	0	0.0	8.2	08-AUGUST		
967	6.0	0	0.0	0	0.0	8.0	09-SEPTEMBER		
875	5.5	0	0.0	0	0.0	8.0	10-OCTOBER		
773	4.8	0	0.0	0	0.0	8.6	11-NOVEMBER		
846	5.3	0	0.0	0	0.0	7.7	12-DECEMBER		
945	5.9	0	0.0	0	0.0	1,309	8.2	1,569	
857	5.3	0	0.0	1,276	8.0	1,276	8.0	2,036	
980	6.1	0	0.0	1,326	8.3	1,326	8.3	2,405	
1,177	7.4	0	0.0	1,306	8.2	1,306	8.2	2,453	
1,102	6.9	0	0.0	1,254	7.8	1,254	7.8	2,481	
1,172	7.3	0	0.0	1,351	8.5	1,351	8.5	2,932	
976	6.1	1,284	8.0	1,401	8.8	1,401	8.8	2,118	
695	4.3	5,210	32.7	1,312	8.2	1,312	8.2		
483	3.0	5,204	32.7	1,285	8.0	1,285	8.0		
441	2.7	4,156	26.3	1,460	9.1	1,460	9.1		
397	2.4	0	0.0	1,378	8.6	1,378	8.6		
385	2.4	0	0.0	1,236	7.7	1,236	7.7		
7	0.0								

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
600	3.7	99	0.6	30	0.1
313	1.9	3,069	19.3	21	0.1
78	0.4	9,371	58.9	108	0.6
1,972	12.4	554	3.4	179	1.1
9,095	56.6	2,385	15.0	4	0.0
3,068	18.9	180	1.1	8	0.0
55	0.3	34	0.2	35	0.2
502	3.1	178	1.1	15,457	97.2
339	2.0	24	0.1	52	0.3
7	0.0	0	0.0		
19	0.1				
6	0.0				

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
13,006	81.8	11,191	70.4	14,803	93.1
2,311	14.5	502	3.1	966	6.0
480	3.0	2,415	15.1	18	0.1
3	0.0	1,747	10.9	42	0.2
54	0.3	8	0.0	65	0.4
4	0.0	0	0.0	0	0.0
3	0.0	31	0.1		
33	0.2	0	0.0		

RIGHT OF WAY CONTROL		BIWAY GRADE		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
877	5.5	0	0.0	816	5.1
12	0.0	0	0.0	564	6.0
10	0.0	15,894	100.0	191	1.2
14,950	94.0	0	0.0	486	3.0
45	0.2			0	0.0
				0	0.0
				13,437	84.5

--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT
15,049	94.6 A-PASNGR CAR/STA WAGON	5,627	35.4 A-STOPPED	16	0.1
41	0.2 B-PASNGR CAR W/TRAILR	13,415	84.4 B-PROCEED STRAIGHT	62	0.3
339	2.1 C-MOTORCYCLE	155	1.0 C-RAN OFF ROAD	5	0.0
3,766	23.6 D-PICKUP/PANEL TRUCK	133	0.8 D-MAKING RIGHT TURN	386	2.4
106	0.6 E-PICKUP/TRUCK W/TRAILR	256	1.6 E-MAKING LEFT TURN	970	6.1
671	4.2 F-TRUCK/TRUCK TRACTOR	5	0.0 F-MAKING U TURN	539	3.3
877	5.5 G-TRK/TRACTOR & 1 TRAILR	53	0.3 G-BACKING	29	0.1
94	0.5 H-TRK/TRACTOR & 2 TRAILR	3,345	21.0 H-SLOWING, STOPPING	1	0.0
0	0.0 I-TRK/TRACTOR & 3 TRAILR	51	0.3 I-PASS OTHER VEHICLE	26	0.1
0	0.0 J-SINGLE UNIT TANKER	2,567	16.1 J-CHANGING LANES	1	0.0
9	0.0 K-TRK/TRA & 1 TANK TSLR	2	0.0 K-PARKING	15	0.0
1	0.0 L-TRK/TRA & 2 TANK TSLR	83	0.5 L-ENTER FROM SELDR	488	3.0
53	0.3 M-SCHOOL BUS	86	0.5 M-OTHER UNSAFE TURN	2,400	15.1
51	0.3 N-OTHER BUS	4	0.0 N-CROSS INTO OPP LN	338	2.1
139	0.8 O-EMERGENCY VEHICLE	75	0.4 O-PARKEO	226	1.4
8	0.0 P-HIGHWAY CONST EQUIP	219	1.3 P-MERGING	9	0.0
25	0.1 Q-BICYCLE	15	0.0 Q-TNVL WRONG WAY	60	0.3
575	3.6 R-OTHER-MOTOR VEH	1,781	11.2 R-OTHER	185	1.1
110	0.6 S-OTHER-NON-MOTOR VEH	145	0.9 S-NOT STATED	101	0.6
71	0.4 T-SPILLED LOADS			12,447	78.3
14	0.0 U-DISENGAGED TOW			17	0.1
1	0.0 V-UNINVOLVED VEHICLE	16	0.1 V-2-KING XWALK-INTRST	0	0.0
0	0.0 W-HOPED	3	0.0 W-3-KING XWALK-NOT INTR	0	0.0
0	0.0 X-TRAIN	2	0.0 X-4-KING NOT XWALK	30	0.1
36	0.2 Y-FEDESTRIAN	34	0.2 Y-ROADWAY-INCL SHLDR	6	0.0
21	0.1 Z-DISMOUNT PEDESTRIAN	1	0.0 Z-NOT IN ROADWAY	3	0.0
0	0.0 AA-ANIMAL - LIVESTOCK	0	0.0 AA-APRH-LEAVE SCHL BUS	0	0.0
5	0.0 AB-ANIMAL - DEER	13	0.0 AB-INVALID CODES	0	0.0
5	0.0 AC-ANIMAL - OTHER			6	0.0
				505	3.1
				15,799	99.4
				0	0.0

DIRECTION OF TRAVEL		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE
7,795	49.0 M-N, NE, NW BOUND	7	0.0 A-HAZARDOUS MATERIALS
7,979	50.2 S-S, SE, SW BOUND	356	2.2 B-CELL PHONE IN USE*
257	1.6 E-EASTBOUND	7,079	44.5 C-CELL PHONE NOT IN USE*
286	1.7 W-WESTBOUND	7,806	49.1 D-CELL PHONE NONE/UNKNOWN*
194	1.2 <-NOT STATED	4,143	26.0 <-NOT STATED
10	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		1	0.0 -INVALID CODES

\*INATTENTION CODES EFF. 01-01-01

\*SPECIAL INFORMATION CODES EFF. 04-01-01

--- PARTY SUMMARY ---

OBJECT STRUCK			LOCATION OF COLLISION		
PRIMARY NUMBER	PCT	OTHERS NUMBER	PRIMARY NUMBER	PCT	OTHERS NUMBER
23	0.1	29	0.1	0.1	27
0	0.0	0	0.0	0.0	1,139
1	0.0	3	0.0	0.0	1,882
4	0.0	1	0.0	0.0	1,656
1	0.0	1	0.0	0.0	1,067
4	0.0	5	0.0	0.0	1,003
3	0.0	2	0.0	0.0	13
48	0.3	92	0.5	0.0	31
0	0.0	5	0.0	0.0	415
1	0.0	0	0.0	0.0	7
43	0.2	80	0.5	0.0	0
1	0.0	2	0.0	0.0	15,805
300	1.8	252	1.5	0.0	14
849	5.3	882	5.5	0.0	0
81	0.5	107	0.6	0.0	0
448	2.8	207	1.3	0.0	0
3	0.0	2	0.0	0.0	0
0	0.0	0	0.0	0.0	0
0	0.0	0	0.0	0.0	0
0	0.0	0	0.0	0.0	0
2	0.0	0	0.0	0.0	0
0	0.0	0	0.0	0.0	0
0	0.0	0	0.0	0.0	0
2	0.0	81	0.5	0.0	0
47	0.2	221	1.3	0.0	0
101	0.6	0	0.0	0.0	0
0	0.0	0	0.0	0.0	0
7	0.0	11	0.0	0.0	0
9	0.0	76	0.4	0.0	0
17	0.1	146	0.9	0.0	0
11	0.0	60	0.3	0.0	0
67	0.4	84	0.5	0.0	0
2	0.0	1	0.0	0.0	0
16	0.1	8	0.0	0.0	0
268	1.6	8	0.0	0.0	0
18	0.1	33	0.2	0.0	0
149	0.9	724	4.5	0.0	0
4	0.0	4	0.0	0.0	0
12	0.0	4	0.0	0.0	0
16	0.1	24	0.1	0.0	0
27	0.1	1	0.0	0.0	0
35	0.2	14	0.0	0.0	0
13,275	83.5	4,263	26.8	0.0	0
0	0.0	0	0.0	0.0	0
4,590	28.8	15,805	99.4	0.0	0
0	0.0	0	0.0	0.0	0

01-SIDE OF BRIDGE RAILING  
02-END OF BRIDGE RAILING  
03-PIER, CULVERT, ABUTMENT  
04-BOTTOM OF STRUCTURE  
05 BRIDGE END POST IN CORE  
06-END OF GUARD RAIL  
07-BRIDGE APPROACH GRD RAIL  
10-LIGHT OR SIGNAL POLE  
11-UTILITY POLE  
12-POLE (TYPE NOT STATED)  
13-TRAFFIC SIGN/SIGN POST  
14-OTHER SIGNS NOT TRAFFIC  
15-GENERAIL  
16-MEDIAN BARRIER  
17-WALL(EXCEPT SOUND WALL)  
18-DIKE OR CURB  
19-TRAFFIC ISLAND  
20-RAISED BARS  
21-CONCRETE OBJ (HELM, D.I.)  
22-GUIDEPST, CULVERT, PN  
23-CVT SLOPE OR EMBANKMENT  
24-OVER EMBANKMENT  
25-IN WATER  
26-DRAINAGE DITCH  
27-FENCE  
28-TREES  
29-PLANTS  
30-SOUND WALL  
40-NATURAL MATL ON ROAD  
41-TEMP BARRICADES, CONES  
42-OTHER OBJECT ON ROAD  
43-OTHER OBJECT OFF ROAD  
44-OVERTURNED  
45-CHASS CUSHION(SWAP)  
46-CHASS CUSHION(OTHER)  
51-CALL BOX  
98-UNKNOWN OBJECT STRUCK  
99-NO OBJECT INVOLVED  
VI TRUN V9-VEHICLE 1 TO 9  
--NOT STATED  
---DOES NOT APPLY  
--INVALID CODES

01-BEYOND MEDIAN OR STRIPE-LEFT  
1-BEYOND SHOULDER DRIVERS LEFT  
C-LEFT SHOULDER AREA  
D-LEFT LANE  
E-INTERIOR LANES  
F-RIGHT SHOULDER AREA  
G-RIGHT SHOULDER AREA  
H-BEYOND SHOULDER DRIVERS RIGHT  
I-SCORE AREA  
J-OTHER  
V-HOV LANE(S)  
W-HOV LANE BUFFER AREA  
X-NOT STATED  
99-4 --DOES NOT APPLY  
--INVALID CODES

A-HAD NOT BEEN DRINKING  
B-HED - UNDER INFLUENCE  
C-HED - NOT UNDER INFLUENCE  
D-HED - IMPAIRMENT UNKNOWN  
E-UNDER DRUG INFLUENCE  
F-OTHER DRUG INFLUENCE  
G-IMPAINMENT NOT ROOM  
H-IMPAINMENT NOT ROOM  
I-FATIGUE  
J-ROT APPLICABLE  
99.6 --NOT STATED  
--DOES NOT APPLY  
--INVALID CODES



**Accident Data - Construction Zone Accidents - 005 Freeway**

10/01/00thru 09/30/03

5 pages

ADDRESS-CONTROLS  
REQ NO 7201

ALL CONST. ACCIDENTS

TASIS SELECTIVE RECORD RETRIEVAL  
LA-005

11-04-04  
10/01/00 THRU 09/30/03

PAGE 1

SUBMITTORS DISTRICT 72

- MESSAGES -

SUBMITTORS NAME YUER-S

ACCIDENTS SELECTED 355

LOCATION CRITERIA -

DISTRICT 07 POSTMILE FROM  
ROUTE 005 OR FROM  
COUNTY LA OR FROM

TO  
TO  
TO

AND

DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM TO  
OR FROM TO

ACCIDENT AND HIGHWAY CRITERIA -  
12 AM 524 ACC ROADWAY CONDITION

EQ D



ALL CONST. ACCIDENTS

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	FDO	PERSONS KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED		LINES CODED	
						NUMBER	PCT	NUMBER	PCT
355	3	93	259	4	181	32	9.0	32	9.0
						223	62.2	221	62.2
						64	18.0	65	18.3
						36	10.1	26	7.3
								9	2.5
								2	0.5
								0	0.0
								0	0.0
								0	0.0

WITHTOUT DETAIL		0	
13	3.6	00-12	MED.
16	4.5	01-	1 P.M.
10	2.8	02-	2 P.M.
11	3.0	03-	3 P.M.
7	1.9	04-	4 P.M.
6	1.6	05-	5 P.M.
10	2.8	06-	6 P.M.
14	3.9	07-	7 P.M.
13	3.6	08-	8 P.M.
23	6.4	09-	9 P.M.
32	9.0	10-	10 A.M.
28	7.8	11-	11 A.M.
28	7.8	12-	12 MORN
15	4.2	13-	1 P.M.
20	5.6	14-	2 P.M.
16	4.5	15-	3 P.M.
22	6.1	16-	4 P.M.
11	3.0	17-	5 P.M.
14	3.9	18-	6 P.M.
4	1.1	19-	7 P.M.
11	3.0	20-	8 P.M.
9	2.5	21-	9 P.M.
7	1.9	22-	10 P.M.
14	3.9	23-	11 P.M.
1	0.2	25-	UNKNOWN

ACCESS CONTROL		STATE OF HIGHWAY	
NUMBER	PCT	NUMBER	PCT
0	0.0	139	39.1
0	0.0	0	0.0
355	100.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	0	0.0

YEAR		MONTH		DAY OF WEEK	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
0	0.0	29	8.1	62	17.4
0	0.0	9	2.5	48	13.5
0	0.0	20	5.6	36	10.1
0	0.0	38	10.7	38	10.7
0	0.0	19	5.3	63	17.7
0	0.0	51	14.3	72	20.2
18	5.0	42	11.8		
101	28.4	61	17.1		
87	24.5	16	4.5		
149	41.9	34	9.5		
0	0.0	19	5.3		
		17	4.7		

----- ACCIDENT SUMMARY -----

-----PRIMARY COLLISION FACTOR-----		-----TYPE OF COLLISION-----		-----ROADWAY CONDITION-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
24	6.7	1	A-HEAD-ON	0	0.0
25	7.0	80	B-SIDESWIPE	0	0.0
2	0.5	217	C-REAR END	0	0.0
32	9.0	10	D-BROGSIDE	355	100.0
184	51.8	34	E-HIT OBJECT	0	0.0
67	18.8	6	F-OVERTURN	0	0.0
1	0.2	2	G-AUTO-FEEDSTAM	0	0.0
5	1.4	2	H-OTHER	0	0.0
12	3.3	0	<-NOT STATED	0	0.0
0	0.0	0	I-UNKNOWN	0	0.0
3	0.8	0	J-FELL ASLEEP	0	0.0
0	0.0	0	K-NOT STATED	0	0.0
0	0.0	0	L-INVALID CODES	0	0.0

-----WEATHER-----		-----LIGHTING-----		-----ROAD SURFACE-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
307	86.4	243	A-DAYLIGHT	343	96.6
42	11.8	6	B-DUSK/DAWN	6	1.6
3	0.8	56	C-DARK-STREET LIGHT	0	0.0
1	0.2	48	D-DARK-NO STREET LIGHT	0	0.0
2	0.5	1	E-FOG	6	1.6
0	0.0	0	F-DARK-INTER STREET LIGHT	0	0.0
0	0.0	0	G-OTHER	0	0.0
0	0.0	1	H-OTHER	0	0.0
0	0.0	0	<-NOT STATED	0	0.0
0	0.0	0	I-INVALID CODES	0	0.0

-----RIGHT OF WAY CONTROL-----		-----HIGHWAY GROUP-----		-----INTERSECTION OR RAMP ACCIDENT LOCATION-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
89	25.0	14	R-IND. ALIGN-RIGHT	15	4.2
0	0.0	1	L-IND. ALIGN-LEFT	5	1.4
0	0.0	340	D-DIVIDED	2	0.5
266	74.9	0	U-UNDIVIDED	13	3.6
0	0.0	0	<-NOT STATED	0	0.0

-----CONTROL FUNCTIONING-----		-----INTERSECT-NONSTATE RTE-----	
NUMBER	PCT CODE	NUMBER	PCT CODE
0	0.0	0	0.0
0	0.0	0	0.0
0	0.0	320	90.1

----- PARTY SUMMARY -----

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1 PCT	# 2 PCT CODE
308	86.7 A-PASSENGER CAB/STP WAGON	111	31.2 A-STORSED	0	0.0
2	0.5 B-PASSENGER CAB W/TRAILA	294	82.6 B-PROCEEDED STRAIGHT	6	1.6
5	1.4 C-MOTORCYCLE	4	1.1 C-RAN OFF ROAD	0	0.0
91	21.3 D-TRUCK/TRACTOR	1	0.2 D-HAKING RIGHT TURN	0	0.0
5	1.4 E-TRUCK/TRACTOR W/TRAILA	10	2.8 E-HAKING LEFT TURN	37	10.4
15	4.2 F-TRUCK/TRACTOR	1	0.2 F-HAKING U TURN	15	4.2
77	21.6 G-TRUCK/TRACTOR & 1 TRAILA	3	0.8 G-BACKING	0	0.0
8	2.2 H-TRUCK/TRACTOR & 2 TRAILA	85	23.9 H-SLOWING, STOPPING	0	0.0
0	0.0 I-TRUCK/TRACTOR & 3 TRAILA	4	1.1 I-PASS OTHER VEHICLE	1	0.2
0	0.0 J-SINGLE UNIT TANKER	47	13.2 J-CHANGING LANES	0	0.0
1	0.2 K-TRUCK/TRACTOR & 1 TANK TRLR	0	0.0 K-PARKING	0	0.0
0	0.0 L-TRUCK/TRACTOR & 2 TANK TRLR	7	1.9 L-ENTER FROM SHOUL	18	5.0
0	0.0 M-SCHOOL BUS	1	0.2 M-OTHER UNSAFE TURN	31	8.7
7	1.9 N-OTHER BUS	0	0.0 N-CROSS INTO OPP LN	5	1.4
1	0.2 O-EMERGENCY VEHICLE	4	1.1 O-PARKED	1	0.2
2	0.3 P-HIGHWAY CONST EQUIP	7	1.9 P-REVERZING	0	0.0
1	0.2 Q-BICYCLE	3	0.8 Q-TWYL WRONG WAY	2	0.5
8	2.2 R-OTHER-MOTOR VEH	28	7.8 R-OTHER	8	2.2
2	0.5 S-OTHER-MOTOR VEH	4	1.1 S-NOT STATED	2	0.5
0	0.0 T-SPILLED LOADS			305	85.9
0	0.0 U-DISENGAGED TOW			3	0.8
0	0.0 V-UNINVOLVED VEHICLE			0	0.0
0	0.0 W-HOPED	0	0.0 2-XING XWALK-INTAST	0	0.0
0	0.0 X-TRAIN	0	0.0 3-XING XWALK-NOT INTR	0	0.0
2	0.5 Y-PEDESTRIAN	1	0.2 4-XING NOT XWALK	0	0.0
1	0.2 Z-DISKOUNT PEDESTRIAN	2	0.5 5-ROADWAY-INCL SELLR	0	0.0
0	0.0 AA-ANIMAL - LIVESTOCK	0	0.0 6-NOT IN ROADWAY	0	0.0
0	0.0 AB-ANIMAL - DEER	0	0.0 7-ARRV-LEAVE SCUL BUS	0	0.0
0	0.0 AC-ANIMAL - OTHER	1	0.2 -INVALID CODES	0	0.0
				10	2.8
				353	99.4
				0	0.0
				0	0.0

DIRECTION OF TRAVEL		SPECIAL INFORMATION		INATTENTION CODES EFF. 01-01-01	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1 PCT	# 2 PCT CODE
139	39.1 N-W, NE, NW BOUND	0	0.0 A-HAZARDOUS MATERIALS		
210	59.1 S-S, SE, SW BOUND	5	1.4 B-CELL PHONE IN USE*		
6	1.6 E-EASTBOUND	186	52.3 C-CELL PHONE NOT IN USE*		
9	2.5 W-WESTBOUND	188	52.9 D-CELL PHONE NONE/UNKNOWN*		
1	0.2 <-NOT STATED	59	16.6 <-NOT STATED		
1	0.2 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY		
		0	0.0 -INVALID CODES		

\*SPECIAL INFORMATION CODES EFF. 04-01-01

--- PARTY SUMMARY ---

OBJECT STRUCK		PRIMRY		OTHERS		LOCATION OF COLLISION		OTHERS	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
0	0.0	1	0.2	01-SIDE OF BRIDGE RAILING	2	0.5	1	0.2	A-BEYOND MEDIAN OR STRIPE-JFT
0	0.0	1	0.2	02-END OF BRIDGE RAILING	15	4.2	20	5.6	B-BEYOND SHLDGR DRIVERS LEFT
0	0.0	0	0.0	03-PIER, COLUMN, ABUTMENT	3	0.8	0	0.0	C-LEFT SHOULDER AREA
0	0.0	0	0.0	04-BOTTOM OF STRUCTURE	149	41.9	50	14.0	D-LEFT LANE
0	0.0	0	0.0	05-BRIDGE END POST IN GOSE	143	40.2	45	12.6	E-INTERIOR LANES
0	0.0	0	0.0	06-END OF GUARD RAIL	87	24.5	24	6.7	F-RIGHT LANE
0	0.0	0	0.0	07-BRIDGE APPROACH GRD RAIL	3	0.8	1	0.2	G-RIGHT SHOULDER AREA
0	0.0	0	0.0	10-LIGHT OR SIGNAL POLE	11	3.0	19	5.3	H-BEYOND SHLDGR DRIVERS RIGHT
0	0.0	0	0.0	11-UTILITY POLE	1	0.2	0	0.0	I-GOSE AREA
0	0.0	1	0.2	12-POLE (TYPE NOT STATED)	4	1.1	0	0.0	J-OTHER
0	0.0	1	0.2	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	0.0	K-HOT LANE(S)
0	0.0	0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	L-HOT LANE BUFFER AREA
4	1.1	10	2.8	15-GUARDRAIL	0	0.0	0	0.0	M-<NOT STATED
1	0.2	12	3.3	16-MEDIAN BARRIER	112	31.5	355	100.0	N--DOES NOT APPLY
0	0.0	1	0.2	17-WALL (EXCEPT SOUND WALL)	0	0.0	0	0.0	O-INVALID CODES
0	0.0	2	0.5	18-DIKE OR CURB	0	0.0	0	0.0	
0	0.0	0	0.0	19-TRAFFIC ISLAND					
0	0.0	0	0.0	20-RAISED BARS					
0	0.0	0	0.0	21-CONCRETE OBJ (HEWL, D.I.)					
0	0.0	0	0.0	22-GUIDEPST, CULVERT, PN					
0	0.0	3	0.8	23-CUT SLOPE OR EMBANKMENT					
1	0.2	2	0.5	24-OVER EMBANKMENT					
0	0.0	0	0.0	25-IN WATER					
0	0.0	1	0.2	26-RETAINAGE DITCH					
0	0.0	2	0.5	27-FENCE					
0	0.0	0	0.0	28-TREES	341	96.0	0	0.0	A-HRD NOT BEEN DRINKING
0	0.0	0	0.0	29-PLANTS	25	7.0	0	0.0	B-HRD - UNDER INFLUENCE
1	0.2	2	0.5	30-SOUND WALL	3	0.8	0	0.0	C-HRD - HOT UNDER INFLUENCE
0	0.0	0	0.0	40-NATURAL MATL ON ROAD	2	0.5	0	0.0	D-HRD - IMPAIRMENT UNKNOWN
6	1.6	0	0.0	41-TEMP BARRICADES, CONES	0	0.0	0	0.0	E-UNDER DRUG INFLUENCE
9	2.5	0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	0	0.0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0	0	0.0	43-OTHER OBJECT OFF ROAD	49	13.8	0	0.0	G-IMPAINMENT NOT KNOWN
6	1.6	8	2.2	44-OVERTURNED	3	0.8	0	0.0	H-NOT APPLICABLE
3	0.8	0	0.0	45-CRASH CUSHION(SND)	0	0.0	3	0.8	I-FATIGUE
1	0.2	0	0.0	46-CRASH CUSHION(OTHER)	8	2.2	354	99.7	J-<NOT STATED
0	0.0	0	0.0	51-CALL BOX	0	0.0	0	0.0	K--DOES NOT APPLY
0	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	L-INVALID CODES
0	0.0	0	0.0	99-NO OBJECT INVOLVED					
311	87.6	108	30.4	V1 TRSU V9-VEHICLE 1 TO 9					
0	0.0	0	0.0	<<NOT STATED					
110	30.9	355	100.0	---DOES NOT APPLY					
0	0.0	0	0.0	-INVALID CODES					

**Accident Data - Construction Zone Accidents - 010 Freeway**

10/01/00thru 09/30/03

5 pages

AVIATION CONTROLS  
REQ NO 7203

ALL CONST. ACCIDENTS  
TASAS SELECTIVE RECORD RETRIEVAL  
LA-010

PAGE 1

11-04-04  
10/01/00 THRU 09/30/03

SUBMITTERS DISTRICT 72

SUBMITTERS NAME YUEH-S

ACCIDENTS SELECTED 1112

- MESSAGES -

LOCATION CRITERIA -

DISTRICT 07 POSTMILE FROM  
ROUTE 010 OR FROM  
COUNTY LA OR FROM

TO  
TO  
TO

AND

DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM TO  
OR FROM TO

ACCIDENT AND HIGHWAY CRITERIA -  
12 AN 324 ACC ROADWAY CONDITION

EQ 9

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED		LINES CODED		
						NUMBER	PCT	NUMBER	PCT	
1,112	2	319	791	3	504	127	11.4	1	126	11.3
						710	63.8	2	707	63.5
WITHOUT DETAIL						198	17.8	3	199	17.8
0						77	6.9	> 3	64	5.7
									11	0.9
									4	0.3
									0	0.0
									0	0.0
									0	0.0
									0	0.0

---ACCESS CONTROL---		---SIDE OF HIGHWAY---	
NUMBER	PCT	NUMBER	PCT
0	0.0	0	0.0
0	0.0	0	0.0
1,112	100.0	496	44.5
0	0.0	616	55.3
0	0.0		
0	0.0		
0	0.0		

---HOOR OF DAY---		---YEAR---		---MONTH---		---DAY OF WEEK---	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
43	3.8	0	0.0	68	6.1	183	16.4
44	3.9	0	0.0	66	5.9	137	12.3
34	3.0	0	0.0	111	9.9	140	12.5
23	2.0	1,112	100.0	123	11.0	133	11.9
15	1.3	0	0.0	105	9.4	158	14.2
23	2.0	0	0.0	122	10.9	192	17.2
38	3.4	0	0.0	91	8.1	169	15.1
49	4.4	0	0.0	115	10.3		
51	4.5	0	0.0	118	10.6		
48	4.3	0	0.0	605	54.4		
49	4.4	0	0.0	338	30.3		
42	3.7	0	0.0	0	0.0		
68	6.1	0	0.0	0	0.0		
65	5.8	0	0.0	0	0.0		
76	6.8	0	0.0	0	0.0		
69	6.2	0	0.0	0	0.0		
60	5.3	0	0.0	0	0.0		
51	4.5	168	15.1	0	0.0		
53	4.7	605	54.4	0	0.0		
32	2.8	338	30.3	0	0.0		
33	2.9	0	0.0	0	0.0		
41	3.6	0	0.0	0	0.0		
37	3.3	0	0.0	0	0.0		
0	0.0	0	0.0	0	0.0		

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
61	5.4	4	0.3	0	0.0
15	1.3	263	23.6	0	0.0
0	0.0	658	59.1	0	0.0
130	11.6	24	2.1	1,112	100.0
606	54.4	151	13.5	0	0.0
276	24.8	5	0.4	0	0.0
0	0.0	1	0.0	0	0.0
17	1.5	3	0.2	0	0.0
0	0.0	0	0.0	0	0.0
2	0.1	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
921	82.8	708	63.6	1,051	94.5
164	14.7	42	3.7	56	5.0
24	2.1	201	18.0	1	0.0
1	0.0	160	14.3	0	0.0
2	0.1	0	0.0	4	0.3
0	0.0	0	0.0	0	0.0
0	0.0	1	0.0	0	0.0
0	0.0	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
75	6.7	0	0.0	36	3.2
1	0.0	0	0.0	34	3.0
2	0.1	1,112	100.0	15	1.3
1,032	92.8	0	0.0	22	1.9
2	0.1	0	0.0	0	0.0
				0	0.0
				1,005	90.3



--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT CODE
1,095	90.3 A-PASNGR CAR/STA WAGON	386	34.7 A-STOPPED	1	0.0
5	0.4 B-PASNGR CAR W/TRAILR	957	86.0 B-PROCEEDED STRAIGHT	5	0.4
9	0.8 C-MOTORCYCLE	1	0.0 C-RAN OFF ROAD	0	0.0
299	26.8 D-PICKUP/PANEL TRUCK	2	0.1 D-MAKING RIGHT TURN	0	0.0
20	1.7 E-PICKUP/PANEL W/TRAILR	9	0.8 E-MAKING LEFT TURN	21	1.8
49	4.4 F-TRUCK/TRACTOR	0	0.0 F-MAKING U TURN	75	6.7
190	12.5 G-TRK/TRACTOR 6 1 TRAILR	4	0.3 G-BACKING	46	4.1
10	0.8 H-TRK/TRACTOR 6 2 TRAILR	226	20.3 H-SLOWING, STOPPING	1	0.0
0	0.0 I-TRK/TRACTOR 6 3 TRAILR	2	0.1 I-PASS OTHER VEHICLE	0	0.0
0	0.0 J-SINGLE UNIT TANKER	249	22.3 J-CHANGING LANES	0	0.0
0	0.0 K-TRK/TRA 4 1 TANK TRLR	1	0.0 K-PARKING	0	0.0
0	0.0 L-TRK/TRA 6 2 TANK TRLR	6	0.5 L-ENTER FROM SHOUL	2	0.1
4	0.3 M-SCHOOL BUS	10	0.8 M-OTHER UNSAFE TURN	17	1.5
10	0.8 N-OTHER BUS	0	0.0 N-CROSS INTO OPP LN	122	10.9
10	0.8 O-EMERGENCY VEHICLE	7	0.6 O-PARKED	40	3.5
2	0.1 P-HIGHWAY CONST EQUIP	23	2.0 P-MERGING	33	2.9
30	2.6 Q-OTHER-MOTOR VEH	1	0.0 Q-TRVL WRONG WAY	1	0.0
8	0.4 R-SPILLED LIQNS	124	11.1 R-OTHER	9	0.8
1	0.0 S-RETRIEVED TOW	8	0.7 S-NOT STATED	41	3.6
0	0.0 T-UNINVOLVED VEHICLE	0	0.0 U-WALK-INTSTR	895	80.4
0	0.0 U-MOTED	0	0.0 V-WALK-NOT INTR	1	0.0
0	0.0 V-TRAILR	0	0.0 W-XING XWALK-NOT INTR	0	0.0
2	0.1 W-PEDESTRIAN	0	0.0 X-XING XWALK	0	0.0
2	0.1 X-DISMOUNT PEDESTRIAN	3	0.2 Y-ROADWAY-INCL SELDR	3	0.2
0	0.0 Y-ANIMAL - LIVESTOCK	1	0.0 Z-NOT IN ROADWAY	0	0.0
0	0.0 Z-ANIMAL - DEER	0	0.0 AA-APRS-LEAVE SCHL BUS	0	0.0
0	0.0 AA-ANIMAL - OTHER	0	0.0 AB-INVALID CODES	0	0.0
				27	2.4
				0	0.0

DIRECTION OF TRAVEL		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE
23	2.0 M-N, NE, NW ROAD	0	0.0 B-DEBRIS MATERIALS
14	1.2 S-S, SE, SW ROAD	41	3.6 B-CELL PHONE IN USE*
490	44.0 E-NORTHBOUND	466	41.9 C-CELL PHONE NOT IN USE*
617	55.4 W-WESTBOUND	763	68.6 D-CELL PHONE NONE/UNKNOWN*
11	0.9 <-NOT STATED	92	8.2 <-NOT STATED
0	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		0	0.0 -INVALID CODES

\*SPECIAL INFORMATION CODES EFF. 04-01-01

\*INATTENTION CODES EFF. 01-01-01

--- PARTY SUMMARY ---

PRIMARY		OBJECT STRUCK		LOCATION OF COLLISION		PRIMARY		OTHERS	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
0	0.0	1	0.0	01-SIDE OF BRIDGE RAILING	3	0.2	2	0.1	A-BEYOND MEDIAN OR STRIPE-LFT
0	0.0	0	0.0	02-END OF BRIDGE RAILING	72	6.4	73	6.5	B-BEYOND SILDER DRIVERS LEFT
0	0.0	0	0.0	03-PIER, COLUMN, ABUTMENT	1	0.0	3	0.2	C-LEFT SHOULDER AREA
0	0.0	0	0.0	04-BOTTOM OF STRUCTURE	296	26.6	120	10.7	D-LEFT LANE
0	0.0	0	0.0	05 BRIDGE END POST IN GORE	432	38.8	120	10.7	E-INTERIOR LANES
2	0.1	1	0.0	06-END OF GUARD RAIL	406	36.5	109	9.8	F-RIGHT LANE
0	0.0	0	0.0	07-BRIDGE APPROACH GRD RAIL	4	0.3	4	0.3	G-RIGHT SHOULDER AREA
0	0.0	2	0.1	10-LIGHT OR SIGNAL POLE	61	5.4	74	6.6	H-BEYOND SILDER DRIVERS RIGHT
0	0.0	0	0.0	11-UTILITY POLE	3	0.2	1	0.0	I-GORE AREA
0	0.0	0	0.0	12-POLE (TYPE NOT STATED)	23	2.0	7	0.6	J-OTHER
5	0.4	4	0.3	13-TRAFFIC SIGN(S)GHT	1	0.0	1	0.0	K-HOV LANE(S)
0	0.0	1	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	M-HOV LANE BUFFER AREA
26	2.3	34	3.0	15-GUARDRAIL	0	0.0	0	0.0	<-NOT STATED
51	4.5	62	5.5	16-MEDIAN BARRIER	304	27.3	1,110	99.8	--DOES NOT APPLY
13	1.1	13	1.1	17-WALL(EXCEPT SOUND WALL)	0	0.0	0	0.0	-INVALID CODES
12	1.0	5	0.4	18-DIKE OR CURB					
0	0.0	0	0.0	19-TRAFFIC ISLAND					
0	0.0	0	0.0	20-RAISED BARS					
0	0.0	0	0.0	21-CONCRETE OBJ(HELM, D.I.)					
0	0.0	0	0.0	22-GULFDEPOST, CULVERT, FH					
1	0.0	2	0.1	23-CUT SLOPE OR EMBANKMENT					
3	0.2	3	0.2	24-OVER ENHANCEMENT					
0	0.0	0	0.0	25-IN WATER					
1	0.0	2	0.1	26-DRAINAGE DITCH					
0	0.0	3	0.2	27-FENCE					
0	0.0	0	0.0	28-TREES					
0	0.0	0	0.0	29-FLEETS	1,073	96.1	0	0.0	A-HAD NOT BEEN DRINKING
1	0.0	9	0.8	30-SOUND WALL	62	5.5	0	0.0	B-HSD - UNDER INFLUENCE
0	0.0	0	0.0	40-NATURAL BTRNL ON ROAD	29	2.6	0	0.0	C-HSD - NOT UNDER INFLUENCE
16	1.4	13	1.1	41-TEMP BARRICADES, CONES	10	0.8	0	0.0	D-HSD - IMPAIRMENT UNKNOWN
12	1.0	0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	2	0.1	E-UNDER DRUG INFLUENCE
0	0.0	2	0.1	43-OTHER OBJECT OFF ROAD	170	15.2	0	0.0	F-OTHER PHYSICAL IMPAIRMENT
4	0.3	37	3.3	44-OVERTURNED	17	1.5	0	0.0	G-IMPAIRMENT NOT KNOWN
2	0.1	1	0.0	45-CRASH CUSHION(S)HD	0	0.0	9	0.8	H-NOT APPLICABLE
7	0.6	2	0.1	46-CRASH CUSHION(OTHER)	39	3.5	1,108	99.6	I-FATIGUE
0	0.0	0	0.0	51-CALL BOX	0	0.0	0	0.0	<-NOT STATED
0	0.0	0	0.0	58-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	--DOES NOT APPLY
2	0.1	0	0.0	99-NO OBJECT INVOLVED	0	0.0	0	0.0	-INVALID CODES
964	85.7	282	26.2	V1 TRU V9-VEHICLE 1 TO 9					
0	0.0	0	0.0	<<-NOT STATED					
304	27.3	1,110	99.8	---DOES NOT APPLY					
0	0.0	0	0.0	-INVALID CODES					

# Accident Data - Construction Zone Accidents - 101 Freeway

10/01/00thru 09/30/03

5 pages

AM333C-CONTROLS  
REQ NO 7234

ALL CONST. ACCIDENTS

TASAS SELECTIVE RECORD RETRIEVAL  
LA-101

10/01/00 THRU 09/30/03

11-04-04

PAGE 1

- MESSAGES -

SUBMITTERS DISTRICT 72

SUBMITTERS NAME YUKA-S

ACCIDENTS SELECTED 231

## LOCATION CRITERIA -

DISTRICT 07	FROM	TO	DATE RANGE	FROM	TO
ROUTE 101	OR FROM	TO	10-01-00	OR FROM	09-30-03
COUNTY LA	OR FROM	TO	OR FROM	OR FROM	TO

ACCIDENT AND HIGHWAY CRITERIA -  
12 AN 524 ACC ROADWAY CONDITION

EQ D

--- ACCIDENT SUMMARY ---

AVR330 ACC-SUMMARY  
REQ NO 7234

TOTAL ACCIDENTS	FATAL	INJURY	FPO	PERSONS KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT CODE	NUMBER	PCT CODE		
231	4	68	159	4	108	23	9.5	1	23	9.5	1
						159	68.8	2	159	68.8	2
						34	14.7	3	34	14.7	3
						15	6.4	> 3	9	3.8	4
									3	1.2	5
									3	1.2	6
									0	0.0	7
									0	0.0	8
									0	0.0	9

---HOOR OF DAY---		---ACCESS CONTROL---		---SIDE OF HIGHWAY---		---MONTHS---		---DAY OF WEEK---	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
29	12.5	00-	12	123	53.2	N-	NORTHBOUND	26	11.2
24	10.3	01-	1	108	46.7	S-	SOUTHBOUND	30	12.9
37	16.0	02-	2	0	0.0	E-	EASTBOUND	25	10.8
8	3.4	03-	3	231	100.0	F-	FREWAY	36	15.5
5	2.1	04-	4	0	0.0	S-	S-1-WAY CITY ST	41	17.7
3	1.2	05-	5	0	0.0	--	INVALID DATA	34	14.7
7	3.0	06-	6	0	0.0	+-	NO DATA	39	16.8
5	2.1	07-	7						
5	2.1	08-	8						
2	0.8	09-	9						
5	2.1	10-	10						
5	2.1	11-	11						
5	2.1	12-	12						
3	1.2	13-	1						
1	0.4	14-	2						
4	1.7	15-	3						
1	0.4	16-	4						
0	0.0	17-	5						
0	0.0	18-	6						
7	3.0	19-	7						
7	3.0	20-	8						
31	13.4	21-	9						
30	12.9	22-	10						
0	0.0	23-	11						
		24-	12						
		25-	UNKNOWN						

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
31	13.4	1	0.4	0	0.0
9	3.8	41	17.7	0	0.0
0	0.0	154	66.6	0	0.0
22	9.5	1	0.4	231	100.0
129	55.8	28	12.1	0	0.0
34	14.7	1	0.4	0	0.0
2	0.8	1	0.4	0	0.0
1	0.4	3	1.2	0	0.0
1	0.4	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
1	0.4	0	0.0	0	0.0

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
210	96.9	50	21.6	223	96.5
18	7.7	3	1.2	3	1.2
1	0.4	104	45.0	0	0.0
0	0.0	73	31.6	1	0.4
0	0.0	0	0.0	4	1.7
2	0.8	0	0.0	0	0.0
0	0.0	1	0.4	0	0.0
0	0.0	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
100	43.2	2	0.8	9	3.4
1	0.4	227	98.2	1	0.4
0	0.0	0	0.0	0	0.0
127	54.9	0	0.0	2	0.8
3	1.2	0	0.0	0	0.0
				0	0.0
				220	95.2

--- PARTY SUMMARY ---

PARTY TYPE----->		MOVEMENT PRECEDING COLLISION-->		OTHER ASSOCIATED FACTOR----->	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT # 2 PCT CODE
221	95.6 A-PASSENG CAR/STA WAGON	78	33.7 A-STOPPED	1	0.4
2	0.8 B-PASSENG CAR W/TRAILR	190	82.2 B-PROCEEDED STRAIGHT	2	0.8
3	1.2 C-MOTORCYCLE	0	0.0 C-RAN OFF ROAD	0	0.0
41	17.7 D-PICKUP/PANEL TRUCK	1	0.4 D-MAKING RIGHT TURN	0	0.0
2	0.8 E-PICKUP/PANEL W/TRAILR	0	0.0 E-MAKING LEFT TURN	9	3.8
16	6.9 F-TRUCK/TRUCK TRACTOR	0	0.0 F-MAKING U TURN	33	14.2
12	5.1 G-TRK/TRACTOR 6 1 TRAILR	0	0.0 G-BACKING	10	4.3
1	0.4 H-TRK/TRACTOR 6 2 TRAILR	62	26.8 H-SLOWING, STOPPING	0	0.0
0	0.0 I-TRK/TRACTOR 6 3 TRAILR	1	0.4 I-PASS OTHER VEHICLE	0	0.0
0	0.0 J-SINGLE UNIT TANKER	36	15.5 J-CHANGING LINES	0	0.0
0	0.0 K-TRK/TRA 6 1 TANK TRLR	0	0.0 K-PARKING	0	0.0
0	0.0 L-TRK/TRA 6 2 TANK TRLR	3	1.2 L-ENTER FROM SHLDR	0	0.0
0	0.0 M-SCHOOL BUS	0	0.0 M-OTHER UNSAFE TURN	6	2.5
1	0.4 N-OTHER BUS	0	0.0 N-CROSS INTO OPP LN	16	6.9
1	0.4 O-EMERGENCY VEHICLE	7	3.0 O-PARKED	8	3.4
2	0.8 P-HIGHWAY CONST EQUIP	3	1.2 P-MERGING	7	3.0
1	0.4 Q-BICYCLE	1	0.4 Q-TRVL WRONG WAY	0	0.0
15	6.4 R-OTHER-MOTOR VEH	28	12.1 R-OTHER	3	1.2
0	0.0 S-FLAIED LOADS	2	0.8 S-NOT STATED	0	0.0
0	0.0 T-DISENGAGED TOW	0	0.0 T-FEDESTRIAN	189	81.8
0	0.0 U-UNINVOLVED VEHICLE	0	0.0 U-2-XING XWALK-INTRST	0	0.0
0	0.0 V-HOPED	0	0.0 V-3-XING XWALK-NOT INTR	0	0.0
0	0.0 W-TRAIN	0	0.0 W-4-XING NOT XWALK	1	0.4
1	0.4 X-FEDESTRIAN	2	0.8 X-ROADWAY-INCL SHLDR	0	0.0
0	0.0 Y-UNKNOW PEDESTRIAN	0	0.0 Y-NOT IN BORDWAY	0	0.0
0	0.0 Z-ANIMAL - LIVESTOCK	0	0.0 Z-APPR-LEAVE SCHL BUS	0	0.0
0	0.0 AA-ANIMAL - DEER	0	0.0 AA-INVALID CODES	0	0.0
0	0.0 AB-ANIMAL - OTHER	0	0.0 AB-INVALID CODES	0	0.0

DIRECTION OF TRAVEL----->		SPECIAL INFORMATION----->	
NUMBER	PCT CODE	NUMBER	PCT CODE
123	53.2 N-N, NE, NW BOUND	0	0.0 A-HAZARDOUS MATERIALS
108	46.7 S-S, SE, SW BOUND	1	0.4 B-CELL PHONE IN USE*
2	0.8 E-EASTBOUND	109	47.1 C-CELL PHONE NOT IN USE*
4	1.7 W-WESTBOUND	142	61.4 D-CELL PHONE NONE/UNKNOWN*
3	1.2 <-NOT STATED	37	16.0 <-NOT STATED
0	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY
		0	0.0 -INVALID CODES

\*SPECIAL INFORMATION CODES EFF. 04-01-01

\*INATTENTION CODES EFF. 01-01-01

--- PARTY SUMMARY ---

PRIMARY		OTHERS		LOCATION OF COLLISION		OTHERS			
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT		
0	0.0	1	0.4	01-SIDE OF BRIDGE RAILING	0	0.0	2	0.8	A-BEYOND MEDIAN OR STRIPE-LFT
0	0.0	0	0.0	02-END OF BRIDGE RAILING	9	3.8	13	5.6	B-BEYOND SHLDR DRIVERS LEFT
0	0.0	1	0.4	03-PIER,COLUMN,ABUTMENT	0	0.0	0	0.0	C-LEFT SHOULDER AREA
0	0.0	0	0.0	04-BOTTOM OF STRUCTURE	41	17.7	16	6.9	D-LEFT LANE
0	0.0	0	0.0	05 BRIDGE END POST IN GORE	134	58.0	36	15.5	E-INTERIOR LANES
0	0.0	0	0.0	06-END OF GUARD RAIL	55	23.8	15	6.4	F-RIGHT LANE
0	0.0	0	0.0	07-BRIDGE APPROACH GRD RAIL	5	2.1	0	0.0	G-RIGHT SHOULDER AREA
0	0.0	0	0.0	10-LIGHT OR SIGNAL POLE	7	3.0	16	6.9	H-BEYOND SHLDR DRIVERS RIGHT
0	0.0	0	0.0	11-UTILITY POLE	2	0.8	1	0.4	I-CORNER AREA
0	0.0	0	0.0	12-POLE (TYPE NOT STATED)	4	1.7	0	0.0	J-OTHER
1	0.4	2	0.8	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	0.0	K-HOV LANE(S)
0	0.0	0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	L-HOV LANE BUFFER AREA
3	1.2	4	1.7	15-GUARDRAIL	0	0.0	0	0.0	M-<NOT STATED
8	3.4	11	4.7	16-MEDIAN BARRIER	56	24.2	230	99.5	--DOES NOT APPLY
1	0.4	5	2.1	17-WALL/EXCEPT SOUND WALL	0	0.0	0	0.0	-INVALID CODES
0	0.0	0	0.0	18-DIKE OR CURB					
0	0.0	0	0.0	19-TRAFFIC ISLAND					
0	0.0	0	0.0	20-RAISED BARS					
0	0.0	0	0.0	21-CONCRETE OBJ(HOWL,D.I.)					
1	0.4	0	0.0	22-GUIDEPST,CULVERT,FM					
0	0.0	0	0.0	23-CUT SLOPE OR EMBANKMENT					
0	0.0	4	1.7	24-OVER EMBANKMENT					
0	0.0	0	0.0	25-IN WATER					
0	0.0	0	0.0	26-DRAINAGE DITCH					
0	0.0	0	0.0	27-FENCE					
0	0.0	1	0.4	28-TREES	214	92.6	0	0.0	A-HAD NOT BEEN DRINKING
0	0.0	1	0.4	29-PLANTS	33	14.2	0	0.0	B-HBD - UNDER INFLUENCE
0	0.0	3	1.2	30-SOUND WALL	14	6.0	0	0.0	C-HBD - NOT UNDER INFLUENCE
0	0.0	0	0.0	40-NATURAL MATRL ON ROAD	3	1.2	0	0.0	D-HBD - IMPAIRMENT UNKNOWN
7	3.0	2	0.8	41-TEMP BARRICADES, CONES	0	0.0	2	0.8	E-UNDER DRUG INFLUENCE
3	1.2	1	0.4	42-OTHER OBJECT ON ROAD	0	0.0	0	0.0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0	0	0.0	43-OTHER OBJECT OFF ROAD	44	19.0	0	0.0	G-IMPACTMENT NOT KNOWN
1	0.4	11	4.7	44-OVERTURNED	2	0.8	0	0.0	H-NOT APPLICABLE
0	0.0	0	0.0	45-CRASH CUSHION (GRND)	0	0.0	1	0.4	I-FATIGUE
2	0.8	0	0.0	46-CRASH CUSHION (OTHER)	13	5.6	230	99.5	<-NOT STATED
0	0.0	1	0.4	51-CALL BOX	0	0.0	0	0.0	--DOES NOT APPLY
0	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	-INVALID CODES
0	0.0	0	0.0	99-NO OBJECT INVOLVED					
201	87.0	48	21.2	V1 THRU V9-VEHICLE 1 TO 9					
0	0.0	0	0.0	<<-NOT STATED					
55	23.8	230	99.5	---DOES NOT APPLY					
0	0.0	0	0.0	-INVALID CODES					

**Accident Data - Construction Zone Accidents - 110 Freeway**

10/01/00thru 09/30/03

5 pages



AM330-CONTROLS  
REQ NO 7238

ALL CONST. ACCIDENTS  
TASAS SELECTIVE RECORD RETRIEVAL  
LA-110

10/01/00 THRU 09/30/03

11-04-04  
PAGE 1

SUBMITTORS DISTRICT 72

- MESSAGES -

SUBMITTORS NAME TUEL-S

ACCIDENTS SELECTED 75

LOCATION CRITERIA -

DISTRICT 07 POSTMILE FROM  
ROUTE 110 OR FROM  
COUNTY LA OR FROM

TO  
TO  
TO

AND

DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM TO  
OR FROM TO

ACCIDENT AND HIGHWAY CRITERIA -  
12 AM 524 ACC ROADWAY CONDITION

EQ D

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT CODE	NUMBER	PCT CODE		
75	1	20	54	1	37	10	13.3	1	10	13.3	1
WITHOUT DETAIL						42	56.0	2	40	53.3	2
0						15	20.0	3	17	22.6	3
						8	10.6	> 3	6	8.0	4
									1	1.3	5
									1	1.3	6
									0	0.0	7
									0	0.0	8
									0	0.0	9

NUMBER	PCT	ACCESS CONTROL		SIDE OF HIGHWAY		YEAR		MONTH		DAY OF WEEK	
		NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
9	12.0	1	1.3	37	49.3	0	0.0	4	5.3	10	13.3
7	9.3	0	0.0	38	50.6	0	0.0	0	0.0	6	8.0
10	13.3	74	98.6	0	0.0	0	0.0	3	4.0	5	6.6
4	5.3	0	0.0	0	0.0	0	0.0	8	10.6	17	22.6
1	1.3	0	0.0	0	0.0	0	0.0	3	4.0	13	17.3
3	4.0	0	0.0	0	0.0	0	0.0	9	12.0	8	10.6
3	4.0	0	0.0	0	0.0	0	0.0	5	6.6	16	21.3
2	2.6	0	0.0	0	0.0	0	0.0	7	9.3	10	13.3
4	5.3	0	0.0	0	0.0	0	0.0	25	33.3	7	9.3
1	1.3	0	0.0	0	0.0	0	0.0	2	2.6	8	10.6
2	2.6	0	0.0	0	0.0	0	0.0	0	0.0	7	9.3
6	8.0	0	0.0	0	0.0	0	0.0	0	0.0	11	14.6
0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12	16.0

----- ACCIDENT SUMMARY -----

-----PRIMARY COLLISION FACTOR-----		-----TYPE OF COLLISION-----		-----ROADWAY CONDITION-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
11	14.6	1	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	9	12.0	0	0.0
0	0.0	51	68.0	0	0.0
4	5.3	0	0.0	75	100.0
44	58.6	14	18.6	0	0.0
12	16.0	1	1.3	0	0.0
1	1.3	0	0.0	0	0.0
3	4.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

-----WEATHER-----

-----WEATHER-----		-----LIGHTING-----		-----ROAD SURFACE-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
55	73.3	28	37.3	73	97.3
19	25.3	2	2.6	2	2.6
1	1.3	38	50.6	0	0.0
0	0.0	7	9.3	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

-----RIGHT OF WAY CONTROL-----

-----RIGHT OF WAY CONTROL-----		-----BIHWAY GROUP-----		-----INTERSECTION OR RAMP ACCIDENT LOCATION-----	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
28	37.3	4	5.3	1	1.3
0	0.0	7	9.3	2	2.6
0	0.0	64	85.3	0	0.0
47	62.8	0	0.0	1	1.3
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	71	94.6

PRE330 ACC-SUMMARY TASS SELECTIVE RECORD RETRIEVAL 11-04-04 PAGE 4  
 REQ NO 7238 ALL CONST. ACCIDENTS LA-110 10/01/00 THRU 09/30/03

--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	# 2
70	93.3 A-PASSENG CAR/STA WAGON	25	33.3 A-STOPPED	0	0.0
0	0.0 B-PASSENG CAR W/TRAILR	59	78.6 B-PROCEEDED STRAIGHT	0	0.0
2	2.6 C-MOTORCYCLE	3	4.0 C-RAN OFF ROAD	0	0.0
19	25.3 D-PICKUP/PANEL TRUCK	0	0.0 D-HANKING RIGHT TURN	4	5.3
2	2.6 E-PICKUP/PANEL W/TRAILR	0	0.0 E-HANKING LEFT TURN	10	13.3
4	5.3 F-TRUCK/TRUCK TRACTOR	0	0.0 F-MARKING U TURN	2	2.6
2	2.6 G-TRK/TRACTOR # 1 TRAILR	1	1.3 G-BACKING	0	0.0
0	0.0 2-TRK/TRACTOR # 2 TRAILR	24	32.0 H-SLOWING, STOPPING	0	0.0
0	0.0 3-TRK/TRACTOR # 3 TRAILR	0	0.0 I-BRASS OTHER VEHICLE	0	0.0
0	0.0 4-SINGLE UNIT TRUCKR	10	13.3 J-CHANGING LAMES	0	0.0
1	1.3 5-TRK/TRA # 1 THUR TELR	0	0.0 K-PARKING	0	0.0
0	0.0 6-TRK/TRA # 2 THUR TELR	0	0.0 L-ENTER FROM SELDR	0	0.0
0	0.0 B-SCHOOL BUS	0	0.0 M-OTHER UNSAFE TURN	2	2.6
0	0.0 I-OTHER BUS	0	0.0 N-CROSS INTO OPP LN	3	4.0
0	0.0 J-EMERGENCY VEHICLE	5	6.6 O-PARKED	0	0.0
2	2.6 K-HIGHWAY CONST EQUIP	0	0.0 P-MERGING	0	0.0
0	0.0 L-BICYCLE	0	0.0 Q-TRVL WRONG WAY	0	0.0
3	4.0 M-OTHER-MOTOR VEH	6	8.0 R-OTHER	0	0.0
0	0.0 N-OTHER-NON-MOTOR VEH	0	0.0 <-NOT STATED	66	88.0
1	1.3 O-SPILLED LOUIS	0	0.0	0	0.0
1	1.3 P-DISEMPOWERED TOH	0	0.0	0	0.0
0	0.0 Q-UNINVOLVED VEHICLE	0	0.0 2-XING XRLK-INTST	0	0.0
0	0.0 R-HOPED	0	0.0 3-XING XRLK-NOT INTX	0	0.0
0	0.0 T-TRAIN	0	0.0 4-XING XRLK	1	1.3
0	0.0 U-PEDESTRIAN	0	0.0 5-ROADWAY-INCL SHLD	0	0.0
0	0.0 V-DISHOUNT PEDESTRIAN	0	0.0 6-NOT IN ROADWAY	0	0.0
0	0.0 W-ANIMAL - LIVESTOCK	0	0.0 7-ABSE-LEAVE SCAL BUS	0	0.0
0	0.0 X-ANIMAL - DEER	0	0.0 -INVALID CODES	0	0.0
0	0.0 2-ANIMAL - OTHER	0	0.0	3	4.0
38	50.6 N-N, NE, NW BOUND	0	0.0 A-HAZARDOUS MATERIALS	0	0.0
36	48.0 S-S, SE, SW BOUND	4	5.3 B-CELL PHONE IN USE*	0	0.0
0	0.0 E-EASTBOUND	35	46.6 C-CELL PHONE NOT IN USE*	0	0.0
1	1.3 W-WESTBOUND	45	60.0 D-CELL PHONE MORE/UNBOUND*	0	0.0
2	2.6 <-NOT STATED	15	20.0 <-NOT STATED	0	0.0
0	0.0 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY	0	0.0
		0	0.0 -INVALID CODES	0	0.0

\*DIRECTION OF TRAVEL----->  
 \*ATTENTION CODES EFF. 01-01-01  
 \*SPECIAL INFORMATION----->  
 \*SPECIAL INFORMATION CODES EFF. 04-01-01



# Accident Data - Construction Zone Accidents - 405 Freeway

10/01/00thru 09/30/03

5 pages

AM330-CONTROLS  
REQ NO T222

ALL CONST. ACCIDENTS

10/01/00 THRU 09/30/03

PAGE 1

SUBMITTORS DISTRICT 72

- MESSAGES -

SUBMITTORS NAME YUEN-S

ACCIDENTS SELECTED 179

## LOCATION CRITERIA

DISTRICT 07 POSTMILLS FROM  
ROUTE 405 OR FROM  
COUNTY LA OR FROM

TO  
TO  
TO

AND

DATE RANGE FROM 10-01-00 TO 09-30-03  
OR FROM  
OR FROM

ACCIDENT AND HIGHWAY CRITERIA -  
12 AN 524 ACC ROADWAY CONDITION

EQ D

--- ACCIDENT SUMMARY ---

TOTAL ACCIDENTS	FATAL	INJURY	POD	KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED	PERSONS INVOLVED	LINE CODE
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER	PCT	NUMBER
179	1	50	128	1	87	19	10.6	1
						108	60.3	2
						29	16.2	3
						23	12.8	> 3

WITHOUT DETAIL	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

ACCESS CONTROL	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

SIDE OF HIGHWAY	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

YEAR	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

MONTH	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

DAY OF WEEK	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

TYPE	NUMBER	PCT	NUMBER	PCT
0	0	0.0	0	0.0

PAR330 ACC-SUMMARY  
REQ NO 7222

ALL CONST. ACCIDENTS  
LA-105

10/01/00 THRU 09/30/03

11-04-04

PAGE 3

--- ACCIDENT SUMMARY ---

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
16	8.9	1	A-HEAD-ON	0	0.0
6	3.3	2	1.1	0	0.0
0	0.0	35	19.5	0	0.0
17	9.4	112	62.5	0	0.0
101	56.4	2	1.1	179	100.0
29	16.2	25	13.9	0	0.0
0	0.0	1	0.5	0	0.0
3	1.6	0	0.0	0	0.0
6	3.3	2	1.1	0	0.0
1	0.5	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
157	87.7	83	46.3	173	96.6
16	8.9	2	1.1	5	2.7
5	2.7	41	22.9	0	0.0
0	0.0	53	29.6	1	0.5
1	0.5	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
34	18.9	0	0.0	8	4.4
0	0.0	0	0.0	7	3.9
0	0.0	179	100.0	1	0.5
145	81.0	0	0.0	8	4.4
0	0.0	0	0.0	0	0.0
				0	0.0
				155	86.5



--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		OTHER ASSOCIATED FACTOR	
NUMBER	PCT CODE	NUMBER	PCT CODE	# 1	PCT # 2
170	94.9 A-PASSENGER CAR/STA WAGON	63	35.1 A-STOPPED	1	0.5
0	0.0 B-PASSENGER CAR W/TRAILER	151	84.3 B-FRACEDDED STRAIGHT	1	0.5
3	1.6 C-MOTORCYCLE	0	0.0 C-RAN OFF ROAD	0	0.0
40	22.3 D-PICKUP/PANEL TRUCK	1	0.5 D-MAKING RIGHT TURN	4	2.2
2	1.1 E-PICKUP/PANEL W/TRAILER	0	0.5 E-MAKING LEFT TURN	20	11.1
8	4.4 F-TRUCK/TRUCK TRACTOR	0	0.0 F-MAKING U TURN	9	5.0
7	3.9 G-TRK/TRACTOR 4 1 TRAILR	0	0.0 G-BACKING, STOPPING	0	0.0
1	0.5 H-TRK/TRACTOR 4 2 TRAILR	39	21.7 H-SLOWING, STOPPING	0	0.0
0	0.0 I-TRK/TRACTOR 4 3 TRAILR	0	0.0 I-PASS OTHER VEHICLE	0	0.0
0	0.0 J-SINGLE UNIT TRAKER	30	16.7 J-CHANGING LANES	0	0.0
0	0.0 K-TRK/TEA 4 1 TANK TRLR	0	0.0 K-PARKING	0	0.0
0	0.0 L-TRK/TEA 4 2 TANK TRLR	2	1.1 L-ENTER FROM SHOULR	7	3.9
1	0.5 M-SCHOOL BUS	0	0.0 M-OTHER UNSAFE TURN	35	19.5
1	0.5 N-OTHER BUS	0	0.0 N-CROSS INTO OPP LNI	7	3.9
1	0.5 O-EMERGENCY VEHICLE	2	1.1 O-PARKED	7	3.9
0	0.0 P-HIGHWAY CONST EQUIP	4	2.2 P-MERGING	0	0.0
0	0.0 Q-BICYCLE	0	0.0 Q-TRVL WRONG WAY	1	0.5
8	4.4 R-OTHER-NON-MOTOR VEH	21	11.7 R-OTHER	3	1.6
0	0.0 S-SPILLED LOADS	1	0.5 S-NOT STATED	1	0.5
0	0.0 T-DISEMPOWERED TOW	129	72.0	2	1.1
0	0.0 U-UNINVOLVED VEHICLE	0	0.0 U-PEDESTRIAN	0	0.0
0	0.0 V-MOVED	0	0.0 V-2-KING XWALK-INTRST	0	0.0
0	0.0 W-T-TRAIN	0	0.0 W-3-KING XWALK-NOT INTR	3	1.6
1	0.5 X-PEDESTRIAN	0	0.0 X-4-KING NOT XWALK	0	0.0
0	0.0 Y-DISHOULT PEDESTRIAN	2	1.1 Y-ROADWAY-INCL SELDR	0	0.0
0	0.0 Z-ANIMAL - LIVESTOCK	0	0.0 Z-6-NOT IN ROADWAY	0	0.0
0	0.0 AA-ANIMAL - BEER	0	0.0 AA-7-APRH-LEAVE SCIL BUS	0	0.0
0	0.0 AB-ANIMAL - OTHER	1	0.5 AB-INVALID CODES	0	0.0
102	56.9 B-H, NE, SW BOUND	0	0.0 B-HAZARDOUS MATERIALS	5	2.7
75	41.0 S-S, SE, SW BOUND	2	1.1 B-CELL PHONE IN USE*	0	0.0
4	2.2 E-EASTBOUND	84	46.9 C-CELL PHONE NOT IN USE*	0	0.0
3	1.6 N-WESTBOUND	87	48.6 D-CELL PHONE NONE/UNKNOWN*	0	0.0
5	2.7 C-NOT STATED	49	27.3 C-NOT STATED	0	0.0
1	0.5 --DOES NOT APPLY	0	0.0 --DOES NOT APPLY	0	0.0
		0	0.0 -INVALID CODES	0	0.0

\*INATTENTION CODES EFF. 01-01-01  
\*SPECIAL INFORMATION CODES EFF. 04-01-01

--- PART SUMMARY ---

PRIMARY NUMBER	PCT	OBJECT STRUCK OTHERS	NUMBER	PCT	LOCATION OF COLLISION	PRIMARY NUMBER	PCT	OTHERS NUMBER	PCT
0	0.0	0.5	01-SIDE OF BRIDGE RAILING	1	0.0	0	0.0	0	0.0
0	0.0	0.0	02-END OF BRIDGE RAILING	0	0.0	9	5.0	11	6.1
0	0.0	0.0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	0.0	0	0.0
0	0.0	0.0	04-BOTTOM OF STRUCTURE	0	0.0	36	20.1	15	8.3
0	0.0	0.0	05 BRIDGE END POST IN GORE	0	0.0	89	49.7	30	16.7
0	0.0	0.0	06-END OF GUARD RAIL	0	0.0	44	24.5	18	10.0
0	0.0	0.0	07-BRIDGE APPROACH GRD RAIL	0	0.0	4	2.2	2	1.1
0	0.0	0.5	10-LIGHT OR SIGNAL POLE	0	0.0	8	4.4	8	4.4
0	0.0	0.0	11-UTILITY POLE	0	0.0	0	0.0	1	0.5
0	0.0	0.0	12-POLE (TYPE NOT STATED)	0	0.0	4	2.2	1	0.5
0	0.0	0.5	13-TRAFFIC SIGN/SIGN POST	0	0.0	3	1.6	1	0.5
0	0.0	0.0	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	0	0.0
0	0.0	1.1	15-GUARDRAIL	0	0.0	0	0.0	0	0.0
6	3.3	0.0	16-ROAD BARRIER	62	34.6	178	99.4	0	0.0
4	2.2	0.0	17-WALL(EXCEPT SOUND WALL)	0	0.0	0	0.0	0	0.0
0	0.0	1.6	18-DIKE OR CURB	0	0.0	0	0.0	0	0.0
0	0.0	0.0	19-TRAFFIC ISLAND	0	0.0	0	0.0	0	0.0
0	0.0	0.0	20-RAISED BARS	0	0.0	0	0.0	0	0.0
0	0.0	0.0	21-CONCRETE OBJ(HWM, D.I.)	0	0.0	0	0.0	0	0.0
0	0.0	0.0	22-GUIDEPST, CULVERT, PM	0	0.0	0	0.0	0	0.0
0	0.0	1.0	23-CUT SLOPE OR EMBANKMENT	1	0.5	0	0.0	0	0.0
1	0.5	0.5	24-OVER EMBANKMENT	0	0.0	0	0.0	0	0.0
0	0.0	0.0	25-IN WATER	0	0.0	0	0.0	0	0.0
0	0.0	0.5	26-DRAINAGE DITCH	0	0.0	0	0.0	0	0.0
0	0.0	0.0	27-FENCE	0	0.0	0	0.0	0	0.0
0	0.0	0.5	28-TREES	170	84.9	0	0.0	0	0.0
0	0.0	0.0	29-BURNIS	17	9.4	0	0.0	0	0.0
0	0.0	0.0	30-SOUND WALL	6	3.3	0	0.0	0	0.0
0	0.0	0.0	40-NATURAL PATRL ON ROAD	1	0.5	0	0.0	0	0.0
0	0.0	0.0	41-TEMP BARRICADES, CONES	0	0.0	0	0.0	0	0.0
0	0.0	1.1	42-OTHER OBJECT ON ROAD	0	0.0	0	0.0	1	0.5
0	0.0	1.1	43-OTHER OBJECT OFF ROAD	31	17.3	0	0.0	0	0.0
0	0.0	2	44-OVERTURNED	4	2.2	0	0.0	0	0.0
0	0.0	0.0	45-CRASH CUSHION(SAND)	0	0.0	0	0.0	0	0.0
0	0.0	0.5	46-CRASH CUSHION(OTHER)	11	6.1	179	100.0	0	0.0
0	0.0	0.0	51-CALL BOX	0	0.0	0	0.0	0	0.0
0	0.0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0	0	0.0
1	0.5	0.0	99-NO OBJECT INVOLVED	0	0.0	0	0.0	0	0.0
152	84.9	31.2	V1 TRSU VS-VEHICLE 1 TO 9	56	31.2	178	99.4	0	0.0
0	0.0	0.0	<<-NOT STATED	0	0.0	0	0.0	0	0.0
62	34.6	178	99.4	178	99.4	0	0.0	0	0.0
0	0.0	0.0	---DOES NOT APPLY	0	0.0	0	0.0	0	0.0
0	0.0	0.0	-INVALID CODES	0	0.0	0	0.0	0	0.0

SOCIETY NUMBER	PCT	DRUG/PHYSICAL	SOCIETY NUMBER	PCT
170	84.9	0	0.0	0.0
17	9.4	0	0.0	0.0
6	3.3	0	0.0	0.0
1	0.5	0	0.0	0.0
0	0.0	0	0.0	0.0
0	0.0	1	0.5	0.5
31	17.3	0	0.0	0.0
4	2.2	0	0.0	0.0
0	0.0	0	0.0	0.0
11	6.1	179	100.0	100.0
0	0.0	0	0.0	0.0
0	0.0	0	0.0	0.0

## **APPENDIX 1**

### **Caltrans Traffic Manual, Chapter 3**

## *Traffic Manual*

### **Chapter 3 - Accident and Roadway Records**

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[3-01 - Basic Information](#)

[3-02 - Accident Reports](#)

[3-03 - Accident Record Systems](#)

[3-04 - Caltrans Accident Surveillance and Analysis System \(TASAS\)](#)

[3-05 - TASAS Accident Data \(AXDB\)](#)

[3-06 - TASAS Highway Data Base](#)

[3-07 - Kilometer Post Markers](#)

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#### ***Section 3-01 - General Information***

##### **3-01.1 Introduction**

Three elements are considered in accident analysis:

1. The driver;
2. The vehicle; and
3. The roadway and its related environment.

Accident records contain information relating to each of these three elements that may be studied by the engineer and others.

##### **3-01.2 Legal**

Title 23 United States Code (USC) 402, enacted in 1966 and administered through Title 23 Code of Federal Regulations (CFR) 1204.4, and California Vehicle Code (CVC) [Section 2900](#) et seq. requires the State of California to have a data collection system as part of the process to reduce the number and/or severity of accidents on roads in the State of California.

In response to Title 23, USC 402, the State of California developed the Traffic Collision Reports (TCR's) used by police agencies to collect and compile accident data. When the State developed the TCR's, they also developed the accident database (SWITRS) that resulted from the data collected and compiled from the traffic collisions reports. The State also developed the Traffic Accident Surveillance and Analysis System (TASAS) used by the California Department of Transportation (Caltrans) to analyze accident, traffic, and highway data collected and compiled by Caltrans.

Title 23 USC 152, enacted in 1973, administered through Title 23 CFR 924, requires the State of California to have a process whereby, through the use of a survey of all public roads, the responsible agencies of the State will identify and analyze locations, then prioritize, schedule, implement and evaluate safety improvements to roadways which are intended to reduce the number and/or severity of accidents on all public roads.

In response to Title 23 USC 152, the State of California has developed a process that utilizes the TASAS data base, including the accident information collected and compiled into it, to effectively reduce the number and severity of accidents on all highways under the jurisdiction of the State. To aid the further analysis of locations investigated, Caltrans maintains a copy of the TCR's.

Absolutely critical to the process developed by the State to meet the needs of the above Federal laws are the Traffic Collision Report utilized in the data bases maintained by Caltrans, the California Department of Highway Patrol (CHP) and numerous local agencies within the State of California. While the reader is referred to the TASAS data system for general information on trends and location to be studied, Traffic Collision Reports must be used for the detailed analysis necessary for the development of projects.

The California Vehicle Code (CVC) [Section 20008](#), Duty to Report Accidents, requires a centralized collection of data for fatal and injury motor vehicle accidents. The driver of a vehicle involved in an injury or fatal accident is required to make (or cause to be made) a written report within 24 hours after the incident. Local police units are required to forward reports for the previous month to the California Department of Highway Patrol (CHP) in Sacramento by the fifth day of the month.

[Section 16000](#) (CVC), Report Required, requires the driver of every motor vehicle involved in an incident which resulted in damage to the property of any one person in excess of \$500 or in bodily injury or in death of any person shall within 10 days report the accident on an approved form to the California Department of Motor Vehicles (DMV).

### **3-01.3 Reporting Level**

The reporting level in the State of California varies over a broad range. Factors having a significant influence on reporting level are as follows:

1. Severity: For fatal accidents, the reporting level is 100 percent; for injury accidents, the reporting level is 90 percent; and for property damage only, the reporting level is 40 percent.
2. Jurisdiction: The reporting level varies from one reporting unit to another.
3. Number of Parties Involved: The reporting level of multi-vehicle accidents is higher than it is for single vehicle accidents.

4. Time of Day: The reporting level of nighttime accidents is higher than it is for daytime.

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## ***Section 3-02 - Accident Reports***

### **3-02.1 General**

Accident Report forms are designed by various jurisdictions to satisfy various objectives.

### **3-02.2 Uniformity**

The Federal Highway Safety Program Standards require that accident records systems maintained on a local level must be compatible with the statewide system which in turn must interface with elements of a national system. This requirement plus the increased study and analysis on a county-wide, regional and statewide basis give weight to the desirability of a small number of acceptable “standard” forms.

The most widely used form in the State of California is the form CHP-555. This form, the CHP Collision Investigation Manual (CIM), and training in usage of the forms and manual are provided by the CHP at no cost to the local police agencies to encourage complete and uniform reporting.

### **3-02.3 Accident Reports Confidential**

[Section 20014](#) of the Vehicle Code requires reports made to the CHP shall be available for the confidential use of the Department of Motor Vehicles, Caltrans, and local authorities having jurisdiction over highways. Information from individual reports and/or data should be considered as confidential.

Summary data and copies of reports may be studied by agents of non-public agencies under controlled conditions for valid research purposes.

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## ***Section 3-03 - Accident Record Systems***

### **3-03.1 General**

Various cities within the State of California have had experience with several types of records systems. The system that best fulfills the requirements of a particular jurisdiction can vary from a manual plotting and filing system for a compact area with very low traffic volumes, to a very complex computerized system for a large urban area or statewide agency.

### **3-03.2 Manual Accident Record System**

The simplest manual system may consist of a pin map (accidents are plotted) and an accident file (reports are stored in date order or report number order, or a combination of both). A card or binder index is created for the reports. [See Figure 3-1.](#)

The pin map may use pins of different size and color to indicate months of the year and accident severity. Manual systems are satisfactory where the volume of data is very modest and the cost of electronic data processing equipment is not warranted.

### **3-03.3 Electronic Data Processing (EDP) Accident Record Systems**

As the volume of data increases, manual systems become cumbersome and labor intensive and conversion to EDP becomes advantageous.

In conversion, a considerable effort must be expended to convert at least a portion of the manual system file into a historical EDP accident data base.

The same effort of conversion to create an historical accident data base is sometimes required when an elementary EDP system is modified or is replaced by a more sophisticated system.

An example of a very large basic EDP system is the “Statewide Integrated Traffic Records System” (SWITRS) administered by the California Highway Patrol. The Caltrans “Traffic Accident Surveillance and Analysis System” (TASAS) is an example of a large dual data base EDP system. California counties or cities with large EDP systems include Alameda County and the cities of Los Angeles, San Diego and San Jose.

### **3-03.4 SWITRS General**

The Statewide Integrated Traffic Records System (SWITRS) is a statewide records system. SWITRS is a centralized accumulation of data for fatal and injury motor vehicle traffic accidents. In addition, a large proportion of the reported property damage only accidents are also processed into SWITRS. The reports are generated by over 100 CHP areas and over 500 city police departments, sheriffs offices and other local jurisdictions.

The processed volume of reports is about 2,500 per working day. All reports are checked for completeness, coded, key punched and processed into a computer data base. The computerized data is then available for quarterly and special reports for participating cities and counties and other State agencies.

### **3-03.5 SWITRS Data to DMV**

The California Department of Motor Vehicles (DMV) receives driver related data for its driver record files. All accidents processed through SWITRS have information transferred to drivers licenses and this becomes part of public record. This information

can be made available to authorized agencies by contacting DMV.

### **3-03.6 SWITRS Data to Caltrans**

State highway related collision reports receive additional coding as to objects struck and location details. Caltrans receives this State highway related data on a weekly basis for the Traffic Accident Surveillance and Analysis System (TASAS). The accident data transmitted to Caltrans does not contain names, drivers license numbers, addresses, vehicle license numbers, or data on age and sex of drivers and victims.

### **3-03.7 SWITRS Quarterly Output Reports**

SWITRS produces eight quarterly reports several weeks after the end of the quarter as follows:

- Report No. 1 - Type of involved party for accidents and victims.
- Report No. 2 - Accidents by day and hour of day.
- Report No. 3 - Primary collision factors for accidents and victims.
- Report No. 4 - Motorcycle, bicycle, and pedestrian accidents and victims by time of day.
- Report No. 5 - Alcohol involvement by age and sobriety of involved party and by accident type.
- Report No. 6 - Pedestrian involved accidents, location details and victim data.
- Report No. 7 - Bicyclist involved accidents, location details and victim data.
- Report No. 8 - Accident location details and involved party data year to date.

Examples of each of the preceding reports and a discussion of the data items are contained in the SWITRS Users Guide available from the California Highway Patrol.

Reports 1 through 5 have parts A and B which are cumulative year to date, and latest quarter, respectively. These reports (1 through 5) are statistical summaries only, whereas reports 6, 7 and 8 are individual listings. The year end Report 8 could be used by local authorities for traffic engineering evaluations.

### **3-03.8 SWITRS Output Reports and Other Services**

Detailed explanations of other SWITRS reports are contained in the SWITRS Users Guide, Chapters 4 and 5. One report that may be of use for traffic accident analysis is the General Retrieval Program (GRP). If specific data is required for traffic analysis or special research studies, the data may be obtained by use of GRP. Most of the collision report data can be obtained by GRP and can be formatted to an individual listing or a summary listing.

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## ***Section 3-04 - Caltrans Traffic Accident Surveillance and Analysis System (TASAS)***



### **3-04.1 TASAS General**

TASAS is a sophisticated version of an EDP traffic records system. It has an accident data base (AXDB), linked to a highway data base (HDB) which contains description elements of highway segments, intersections and ramps, access control, traffic volumes and other data. TASAS serves the needs of many offices within Caltrans and also provides roadway and/or accident information for other associated State and local agencies.

Detailed instructions as to coding, processing, and data retrieval are contained in the TASAS manuals, Section 100 and 200, TASAS Accident Data Base Support Processing Procedures, and other compilations.

### **3-04.2 TASAS Data Bases**

All of the records in the TASAS data bases are stored in a manner that each record can be accessed directly. The two major data bases are as follows:

1. TASAS Accident Data Base (AXDB).
2. TASAS Highway Data Base (HDB).

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## ***Section 3-05 - TASAS Accident Data (AXDB)***

### **3-05.1 AXDB General**

This data base contains specific data for accidents that are State highway related. Each accident record contains a ramp, intersection or highway kilometer post marker address that is a key to tie to the Highway Data Base1 (HDB).

The master file contains records for 10 years plus the current year. The processing of collision reports is shown diagrammatically in [Figure 3-2](#).

### **3-05.2 Content Accident Data Base**

The individual records in the AXDB contain two basic types of information which are:

1. General accident information including:
  - a. Location
  - b. Time and Date
  - c. Severity
  - d. Primary Collision Factor
  - e. Environmental Items
  - f. Roadway Conditions
  - g. Type of Collision
  - h. Number of Vehicles Involved
2. Information for each party including:

- a. Party Type
- b. Condition of Party
- c. Actions of Party
- d. Casualties Per Party

There are some AXDB records that do not contain any “party” information and only partial general accident information. Each accident record may contain an entry for each party up to a maximum of nine.

### **3-05.3 Responsibility for Maintaining and Updating AXDB**

The general responsibilities of Headquarters and District Traffic Branches for the Accident Data Base are as follows:

#### **A. HEADQUARTERS RESPONSIBILITIES:**

1. Coordinate with various CHP SWITRS Units to receive and process State highway related collision reports.
2. Provide guidance for CHP party coding unit.
3. Provide accident kilometer post marker location personnel and supervision for review and processing collision reports.
4. In conjunction with CHP and DMV, maintain collision report file to include ten years plus the current.
5. In cooperation with Headquarters Office of Computer Systems personnel:
  - a. Process SWITRS State related accident tapes and related edits.
  - b. Provide training and consultation service to District TASAS personnel regarding accident retrieval and other TASAS program problems and/or questions.
  - c. Identify and provide needed modifications, improvements and extensions of TASAS accident programs.
  - d. Produce and distribute quarterly and annual reports.
  - e. Provide relocation, removal, addition, and correction for computer accident records.
  - f. Monitor TASAS EDP costs.
6. Provide manuals and other printed instructions.

7. Provide TASAS data and informational service to other Headquarters (HQ) units and other public and private agencies.

#### B. DISTRICT RESPONSIBILITIES:

1. Provide accident data and advisor service for the District Traffic Division and other district divisions.
2. Maintain a district collision report file sufficient to provide for district requirements (copies of reports from Caltrans HQ Record Center can be obtained when necessary).
3. Spot check and/or review kilometer post marker coding of collision reports and initiate necessary relocation and other correction processes.
4. Maintain liaison with local police departments, traffic departments and CHP area offices located within the district to encourage accurate and complete reporting.
5. Report problems, possible improvements or modifications to programs, manuals or other related items to HQ TASAS Unit.
6. Control use of “available upon request” programs so as to make economic use of TASAS accident programs.

#### **3-05.4 TASAS Accident Output Reports**

TASAS provides the following output reports:

1. TASAS Selective Accident Retrieval (TSAR) - Furnished on Request.

A detailed list of accidents and/or summary is available for any type or types of accidents on any section of highway, any ramp or any intersection in the State Highway System. Accidents may be selected by location, highway characteristics, accident data codes or any combination of these.

2. Cumulative Number of Accidents by Kilometer Post Marker<sup>1</sup> (Table A) - Furnished Annually.

Table A reports include cumulative totals for two time periods, 12 months and 36 months.

3. Selective Accident Rate Calculation (Table B) - Furnished on Request.

Table B reports for accident data calculations are available for any highway or section of highway, any or all ramps, any or all intersections for any time period specified. The report shows both actual and average rates. The report also shows total accidents, fatalities, injuries, multi-vehicles, wet, dark, persons killed and injured and the significance.

#### 4. High Accident Concentration Locations (Table C) - Furnished Quarterly.

Table C reports list high accident concentration locations. It counts the total number of accidents for 3, 6, 12, 24, and 36 month periods. It also calculates the actual rate and shows the average rate for the 12 month period. This report does have the option to consider highway segment lengths of up to 0.8 km.<sup>1</sup> Locations with total accidents of 4 or more and significance in the 3, 6, or 12 month period are flagged as requiring investigation.

#### 5. Wet High Accident Concentration Locations (Wet Table C) - Furnished Annually.

Wet Table C Reports list high wet accident concentration locations. It counts the total number of accidents for the 3, 6, 12, 24 and 36 month periods. It also shows the number of average wet accidents and calculates the actual rate for the 36 month period. Locations with 3, 6, 9 or more accidents and significance in the 12, 24 or 36 month periods respectively are flagged as requiring investigation.

Examples of the retrieval process, TSAR and Tables A, B, C, and Wet Table C are shown in [Figures 3-4 through 3-12](#).

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### **Section 3-06 - TASAS Highway Data Base**

#### **3-06.1 HDB General**

The Highway Data Base (HDB) contains the current and historical descriptions of approximately 20,000 intersections, 13,000 ramps, and 24,400 km of highway segments in the State system.<sup>1</sup>

#### **3-06.2 HDB Content**

The Highway Data Base contains intersection, ramp, and highway segment records which contain the following information:

1. Location: District, route, county, kilometer post marker identification.
2. Highway group: Divided, undivided, independent alignment or unconstructed.

3. Descriptions: Bridges, ramps, intersections, etc.
4. Average daily traffic (ADT).
5. Federal aid system designations.
6. Other information needed for Federal Highway Administration reports.
7. Characteristics:
  - The highway records provide the detail, design and geometric features relating to the main line, including access control, roadbed and median information.
  - The intersection records describe and identify all intersections in the State Highway System including control, lighting, type, main line and cross street ADT information.
  - The ramp records identify the specific location of all ramps connected to the highway, the type of ramp configuration, on or off, rural or urban and ADT with history.

### **3-06.3 Responsibility for Maintaining and Updating HDB ([See Figure 3-13](#))**

The responsibilities for maintaining and updating the Highway Data Base are assigned to Headquarters and District Traffic Divisions as follows:

#### **A. HEADQUARTERS RESPONSIBILITIES**

The Roadway Records Unit in Headquarters has the overall responsibility to maintain a Statewide Highway Data Base. All additions, deletions and corrections must be processed through this unit.

Specific responsibilities are as follows:

1. In cooperation with Headquarters Office of Computer Systems (Information Services) produce and distribute the California Highway Log and other data compilations.
2. Provide personnel to fulfill request for specialized compilations of data, and provide training and/or advisory service to other Headquarters units and districts.
3. Maintain a file of title sheets, reduced plans and kilometer post marker computations.

4. Provide preliminary and final kilometer post marker computations for realignments, major improvements, and new route adoptions to districts and other Headquarters divisions.
5. Provide detailed coding of all roadway information to be processed into the HDB computer files.
6. Provide continuous maintenance of the HDB to ensure an up-to-date computer file.
7. Provide manuals and other printed instruction materials.
8. In cooperation with Headquarters Office of Computer Systems (Information Services), identify and provide needed modifications and improvements to the HDB.

## B. DISTRICT RESPONSIBILITIES

1. Appoint an individual as District TASAS HDB Coordinator to maintain liaison with the Headquarters Roadway Records Unit, fulfill requests for roadway information, and collect and forward information regarding needed corrections and/or additions to the HDB.
2. Review Headquarters kilometer post marker calculations for being complete and correct.
3. After determination of kilometer post markers, prepare plans for installation of kilometer post markers, and verify accuracy of placement in the field to within 0.016 km.
4. Collect, compile, and forward to Headquarters data relative to the HDB for projects that are not advertised through Headquarters.
5. Notify Headquarters Roadway Records Unit of effective dates (open to traffic) of improvements for both Headquarters and district advertised projects.
6. Review "As-Built" plans and forward appropriate data to Headquarters to ensure that the HDB accurately reflects actual conditions.
7. Report problems, possible improvements or modifications to programs, manuals or other HDB related items to the Headquarters Roadway Records Unit.

### **3-06.4 TASAS Highway Data Base Output Reports**

1. Multi-Retrieval Highway Data Base TSRR (AXR330) - Furnished on Headquarters Request.

This program provides for the highway data base to be accessed and detailed records printed out for ramps, intersections and highway segments without having to access the accident file. The summary contains segment totals by various types and vehicle kilometers traveled. Selection of highway data base records may be made based upon various highway, intersection or ramp characteristics.

2. Actual Highway Data (AXRO85) - Furnished on Headquarters Request

This report is a record of the actual contents stored in the highway data base. There are four formats available: Current, Current with History, Previous and Previous with History. The contents are similar to AXR156, and include descriptions of major highway points (junction of State routes, bridges, structures, etc.). Segment lengths, Federal aid designations, left and right roadbed information, median information, traffic volume data, various effective dates, and other data are also included.

3. Actual Intersection Data (AXR085) - Furnished on Headquarters Request

This report prints the detail information for all intersections on the State highway system currently open to traffic.

The following information is provided in this report:

- a. Location: District, route, county and kilometer post marker.
- b. Name of cross street or intersecting State route.
- c. Type of intersection and effective date.
- d. Types of traffic control devices and street lighting.
- e. Intersecting street information: Number of lanes and ADT.
- f. Available for any intersection or group of intersections needed.

There are four formats available for this report: Current, Current with History, Previous, and Previous with History.

4. Actual Ramp Data (AXR085) - Furnished on Headquarters request.

This report prints the detail information for ramps on the State highway system currently open to traffic. A ramp is defined as a roadway connecting two State highways (one of which is a freeway), or connecting a freeway to a local street. A collector road in an interchange area is coded as a ramp.

The following information is provided in this report:

- a. Location: District, route, county and kilometer post marker.
- b. Description, including the ramp direction such as southbound or northbound, on or off ramps. There is also a separate on-off field.
- c. Ramp type and effective date.
- d. Federal aid information.
- e. Ramp ADT as of the end of the calendar year.
- f. No totals are accumulated on this report.

5. Highway Characteristics Reference Table (AXRO82) - Furnished on Headquarters Request.

This report lists highway segments, intersections and ramps. The report is available in current alignment only, prior alignment only, or combined current and prior alignment format.

The following information is provided in this report:

- a. Location: District, route, county and kilometer post marker.
- b. Highway group and facility type.
- c. Highway segment length.
- d. Effective date.
- e. Description of intersections and ramps.
- f. Current or prior indication.
- g. Sequence number.

6. California State Highway Log (AXR156) - Furnished Annually.

The California State Highway Log contains a record for significant highway points in the State highway system which existed at the end of the calendar year.



The following data is provided by this log:

- a. Description of every major highway point (Junction of State routes, bridges, structures, etc.).
- b. Each record identified by kilometer post marker and given length to the next highway point.
- c. Cumulative totals of road kilometers and daily vehicle kilometers at city limits, county lines and end of routes.
- d. Federal aid designations
- e. Type of pavement, width of pavement and shoulder information for left and right roadbeds.
- f. Median Information.
- g. Current roadway effective date and date of last significant change.
- h. ADT (Average Daily Traffic).
- i. Information organized in district-route order.

Examples of some of the various TASAS output reports from the Highway Data Base are shown on [Figures 3-14](#) and [3-15](#).

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### **NOTICE**

The following information regarding Kilometer Post Markers are for future application. This information will apply after the field conversion of existing markers and conversion of the Highway Data Base.

The existing markers in the field are in English units (miles). The markers in the field are not to be mixed, metric and English, nor is a dual system contemplated. Installation of new markers, replacement of missing markers, and correction (relocation) of existing markers will be done in English units (miles). The previous policies of calculation, lateral placement, and spacing for two lane roads and divided roads and rural and urban will remain effective until such time as a full field conversion program is applied.

### ***Section 3-07 - Kilometer Post Markers***

#### **3-07.1 General**

The kilometer post markers in the field are used by traffic officers, maintenance forces and others to locate specific incidents or features with reference to the kilometer post marker system. The kilometer post marker is integral to the kilometer post marker system and shall not be used for additional marker functions. Other types of markers shall not be used as kilometer post markers. The kilometer post marker shall indicate the route, county, and kilometer post marker of the installation; only kilometer post markers shall contain the route and county designation.

Reference is made to [Section 3-06.3](#) and [Figure 3-13](#) of this manual as to the responsibility for kilometer post markers.

### **3-07.2 Kilometer Post Marker Calculations**

For Headquarters advertised projects the Roadway Records Unit of Headquarters Traffic shall calculate preliminary kilometer post marker values. After review and agreement by the District Traffic Branch, these kilometer post marker values are used to prepare plans for placement of kilometer post markers.

For projects not advertised through Headquarters, the District Traffic Branch shall be responsible for liaison with District Construction, and/or Maintenance Branches, other agencies, etc., for obtaining data to update the HDB and calculate kilometer post markers. This material is to be transmitted to the Roadway Record Unit in Headquarters and after review and agreement between Headquarters and district the calculated kilometer post markers are used to prepare plans or lists for placement of kilometer post markers.

### **3-07.3 Placement of Markers**

#### **A. Rural Areas ([See Figure 3-16](#)).**

##### **1. Two-Lane Roads.**

Markers are placed 1.6 km apart on both sides of the highway, staggered by 0.8.

##### **2. Divided Roads**

Markers are placed 1.6 km apart on both sides of the highway at the same kilometer post marker location.

#### **B. Urban Areas ([See Figure 3-16](#)).**

##### **1. Two-lane roads.**

Markers are placed 0.8 km apart on each side of the highway, staggered by 0.4 km.

##### **2. Divided roads.**

Markers are placed 0.8 km apart on each side of the highway at the same kilometer post marker location.

3. See 'D' see below.

#### C. Maximum Spacing.

When a regular marker falls within 0.4 km of a landmark (bridge, etc.), the 1.6 km or 0.8 km marker may be omitted. The intent is to have kilometer post markers spaced no farther apart than 1.6 km on rural highways, or 0.8 km on urban highways. This is a maximum spacing. Additional markers may be placed in areas where it is desired to have additional highway reference points.

#### D. Incorporated or Suburban Areas.

Kilometer post markers may be omitted in communities with city-street characteristics of curb, gutter, sidewalks and local development. In these areas, intersecting streets would be used as reference points in lieu of markers.

#### E. Kilometer Post Marker at County Lines.

At county lines, the county names and kilometer post marker information are delineated on separate markers and mounted side-by-side on separate posts, facing both directions of traffic.

#### F. Kilometer Post Marker Equation.

1. Kilometer post marker equation with a difference in value of 0.03 km or more shall be posted on the highway.
2. Each side of the equation is shown on separate markers and mounted side-by-side on separate posts, both facing the direction of traffic. [See Figure 3-17.](#)
3. Current kilometer post marker letter prefix and suffix codes are listed in the State Highway Log. They are also defined in the TASAS Manuals. All prefix letters shall be shown on the kilometer post markers. The suffix letter E identifies a kilometer post marker equation. In the field, the letter E is replaced with BK (Back) and AH (Ahead) on separate markers, placed side-by-side.

### **3-07.4 Kilometer Post Markers for Structures**

#### 1. Kilometer Post Markers

Kilometer post marker or G11 signs shall be mounted on, or placed at bridge abutments and at the beginning of bridge rails.

On skewed structures the kilometer post marker will not necessarily be identical on each side of the highway. The kilometer post marker on each side of the highway is the kilometer point of the centerline opposite the marker location. See [Figures 3-18](#) and [3-19](#).

## 2. Highway Log Kilometer Post Marker Values.

### a. Overcrossing and Underpass.

The Highway Log kilometer post marker for an overcrossing or underpass is measured from the centerline or layout line of the structure where it intersects the centerline of the highway. This rule applies to all structures crossing over the highway regardless of the skew. [See Figure 3-18](#).

### b. Undercrossings, Overheads and Bridges.

Single Structure: The Highway Log kilometer post marker is measured along the construction line as shown on the contract plans. The value is assigned to the paving notch at the end of the structure. [See Figure 3-19](#).

Divided or Separated Structures on Divided Highways: The Highway Log kilometer post marker is measured along the construction centerline of each structure. The value is assigned to the paving notch at the end of the structures. Depending on the width of the median and the skew, two kilometer post marker values may be assigned to each end. [See Figure 3-19](#).

## **3-07.5 Plans for Placement of Kilometer Post Markers**

The preparation of plans for placement of kilometer post markers shall be the responsibility of the District Traffic Branch. These plans may be combined with other traffic plans for striping, signing, etc., where possible. In some instances, plans may not be required and a list of markers to be placed may be sufficient.

Orders for kilometer post markers should be combined with orders for other types of markers whenever possible. The orders should be placed well enough in advance to ensure that the markers will be in place when the facility is opened to traffic.

## **3-07.6 Kilometer Post Markers**

Dimensions, lettering and positioning standards are included in the Standard Plans.

Kilometer post markers shall not be reflectorized. If a kilometer post marker should fall within a line of guide markers, it shall be placed in a manner that will not interfere with the guide marker pattern. Kilometer post markers are not to be used as guide markers, clearance markers, culvert markers, etc.

### **3-07.7 Kilometer Post Marker Installation and Verification**

Kilometer post markers shall be placed a minimum of 0.6 m and not more than 3.6 m beyond the edge of shoulder on the right side of the highway facing traffic. Generally, they should be placed in such a position as to minimize interference with maintenance.

When installed behind guardrail, the marker shall be placed so that the entire legend is legible from the road.

Stenciling of the kilometer post marker on concrete median barriers is permissible in addition to, but not in place of the regular kilometer post markers. This is an additional aid for maintenance and accident investigation forces.

All markers shall be located to an accuracy of 15 m on the ground. The value shown on the marker shall be to the nearest 0.015 of a kilometer (15 m), and shall reflect the kilometer point of the centerline opposite the marker location.

The District Traffic Branch shall have the responsibility to verify the accuracy of the placement of kilometer post markers. Periodic field review and inspection should be conducted to repair or replace damaged or illegible markers. Any markers found to be more than 15 m from the intended location must be relocated.

### **3-07.8 Correction of Existing Markers**

Reports of incorrect kilometer post markers may originate from various sources. The District Traffic Branch and the Roadway Records Unit of Headquarters Traffic must be in agreement as to which field markers will be corrected and which accident records will be relocated before any action is initiated.

### **3-07.9 Financing**

1. Replacement of existing markers which are destroyed or damaged beyond repair shall be financed from Maintenance funds.
2. The placement of additional or revised markers due to route redesignations, adoptions or major errors shall be financed from HB1 Safety Improvement Funds. Use the blanket Expenditure Authorization funds (EA) for installations under \$2,000.00. Individual EAs are required for installations over \$2,000.00.
3. Placement of markers on new construction shall be financed from the contract allotment.

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*List of Figures:*

[Figure 3-1 Typical Accident Record System](#)

[Figure 3-2 Collision Report Flow Chart](#)

[Figure 3-3 Data Retrieval Process](#)

[Figure 3-4 TSAR Detail](#)

[Figure 3-5 TSAR Summary](#)

[Figure 3-6 TSAR Summary - Continued](#)

[Figure 3-7 TSAR Summary - Continued](#)

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[Figure 3-9 TASAS Table A](#)

[Figure 3-10 TASAS Table B](#)

[Figure 3-11 TASAS Table C](#)

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[Figure 3-13 Highway Data Base Flow Chart](#)

[Figure 3-14 Typical Highway Data Base Report](#)

[Figure 3-15 Typical Highway Data Base Report](#)

[Figure 3-16 Placement of Kilometer Post Markers](#)

[Figure 3-17 Kilometer Post Marker Equations](#)

[Figure 3-18 Skewed Overcrossing](#)

[Figure 3-19 Kilometer Post Markers for Structures](#)

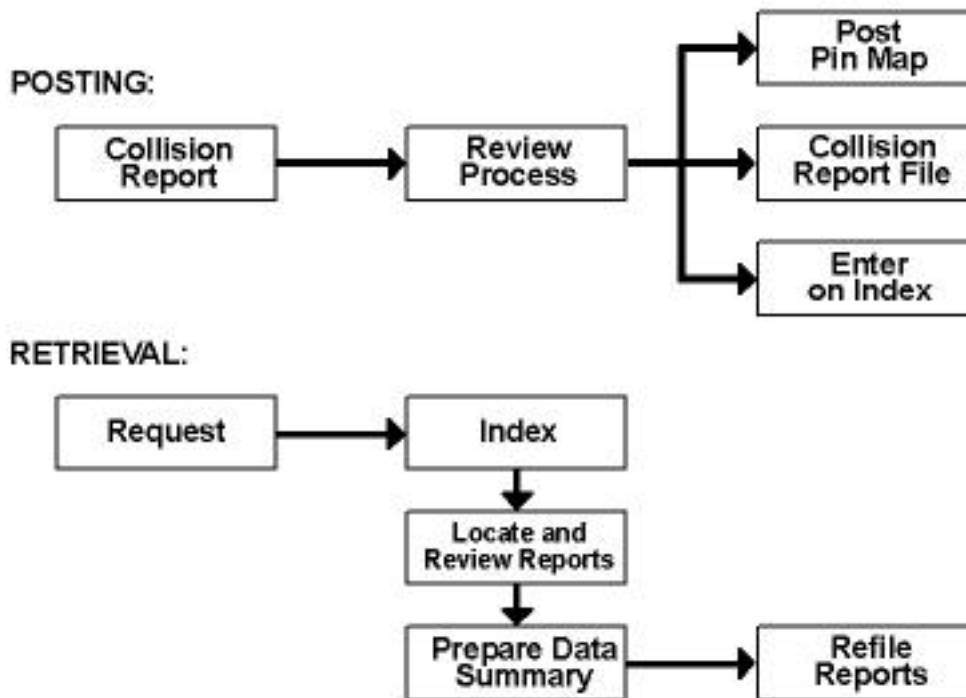
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**End of Chapter 3**

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**Figure 3-1  
TYPICAL ACCIDENT RECORD SYSTEM**



**Figure 3-2  
COLLISION REPORT FLOW CHART**

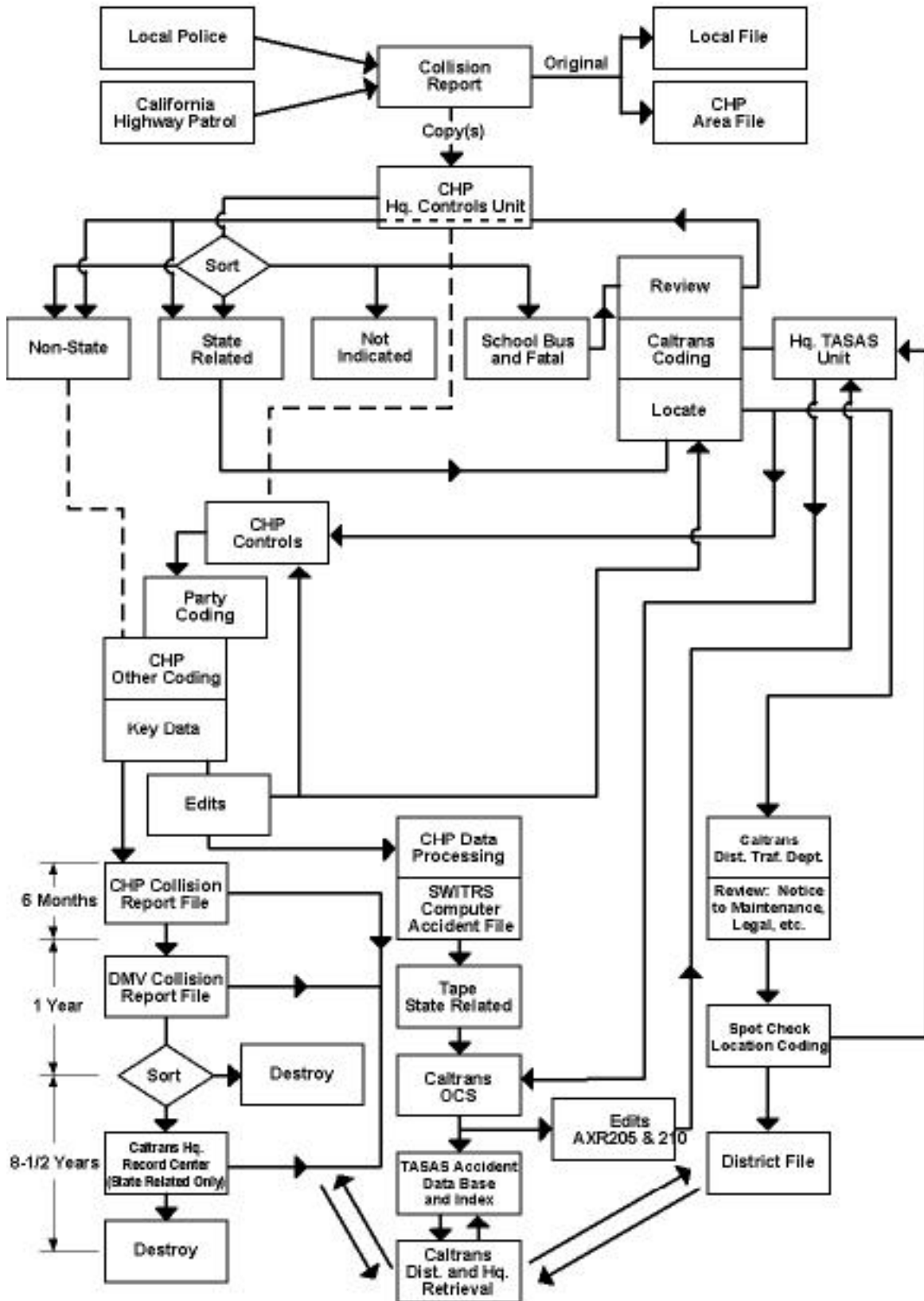
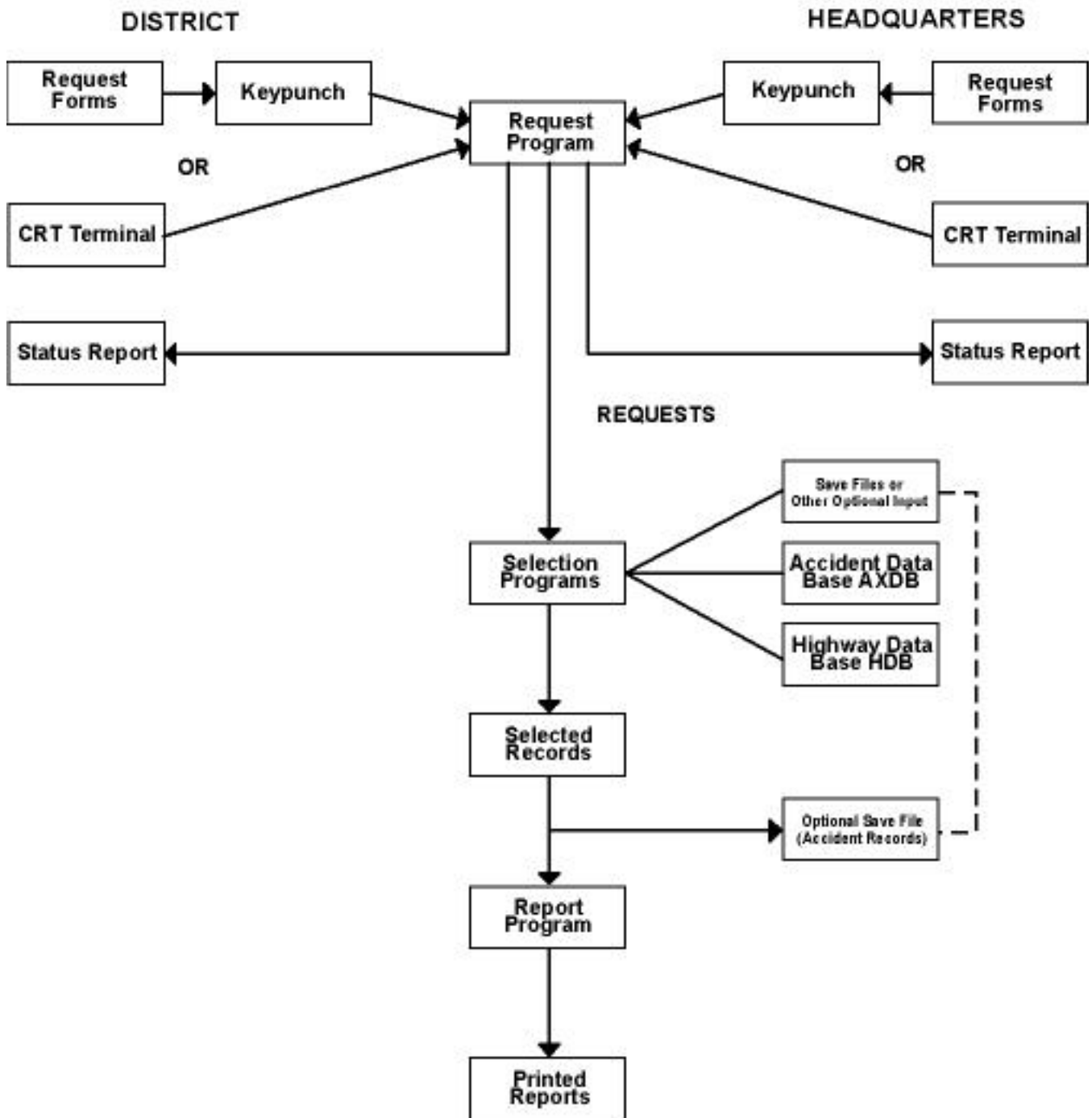




Figure 3-3  
DATA RETRIEVAL PROCESS





## Figure 3-5 TSAR SUMMARY

TASAS SELECTIVE RECORD RETRIEVAL  
ALL ACCIDENTS ON 03-SAC-16, 14,800/15,800, 07-01-87/06-30-90

07-09-96  
PAGE 3

AXR330 ACC-SUMMARY  
REQ NO 5739

- - - ACCIDENT SUMMARY - - -

TOTAL ACCIDENTS	FATAL	INJURY	PDO	PERSONS KILLED	PERSONS INJURED	MOTOR VEHICLES INVOLVED		LINES CODED			
						NUMBER	PCT CODE	NUMBER	PCT CODE		
17	0	9	8	0	11	11	64.7	1	9	52.9	1
WITHOUT DETAIL							2	11.7	3	17.6	2
0							4	23.5	5	29.4	3
							0	0.0	0	0.0	4
							0	0.0	0	0.0	5
							0	0.0	0	0.0	6
							0	0.0	0	0.0	7
							0	0.0	0	0.0	8
							0	0.0	0	0.0	9

<-----HOUR OF DAY-----> <-----ACCESS CONTROL-----> <-----SIDE OF HIGHWAY----->

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	00-12 MID.	17	100.0	G-CONVENTIONAL	0	0.0	N-NORTHBOUND
1	5.8	01-1 A.M.	0	0.0	E-EXPRESSWAY	0	0.0	S-SOUTHBOUND
1	5.8	02-2 A.M.	0	0.0	F-FREEMAY	13	76.4	E-EASTBOUND
1	5.8	03-3 A.M.	0	0.0	S-1-WAY CITY ST	4	23.5	W-WESTBOUND
1	5.8	04-4 A.M.	0	0.0	--INVALID DATA			
0	0.0	05-5 A.M.	0	0.0	+NO DATA			
0	0.0	06-6 A.M.						
4	23.5	07-7 A.M.						
0	0.0	08-8 A.M.						
0	0.0	09-9 A.M.						
0	0.0	10-10 A.M.						
0	0.0	11-11 A.M.						
2	11.7	12-12 NOON						
0	0.0	13-1 P.M.						
1	5.8	14-2 P.M.						
1	5.8	15-3 P.M.						
1	5.8	16-4 P.M.						
1	5.8	17-5 P.M.						
1	5.8	18-6 P.M.						
0	0.0	19-7 P.M.						
0	0.0	20-8 P.M.						
0	0.0	21-9 P.M.						
2	11.7	22-10 P.M.						
0	0.0	23-11 P.M.						
0	0.0	25-UNKNOWN						

<-----YEAR-----> <-----MONTH-----> <-----DAY OF WEEK----->

NUMBER	PCT	CODE	NUMBER	PCT	CODE	NUMBER	PCT	CODE
0	0.0	1986	0	0.0	01-JANUARY	2	11.7	1-SUNDAY
7	41.1	1987	0	0.0	02-FEBRUARY	2	11.7	2-MONDAY
4	23.5	1988	0	0.0	03-MARCH	0	0.0	3-TUESDAY
6	35.2	1989	2	11.7	04-APRIL	3	17.6	4-WEDNESDAY
0	0.0	1990	2	11.7	05-MAY	4	23.5	5-THURSDAY
0	0.0	1991	1	5.8	06-JUNE	4	23.5	6-FRIDAY
0	0.0	1992	0	0.0	07-JULY	2	11.7	7-SATURDAY
0	0.0	1993	0	0.0	08-AUGUST			
0	0.0	1994	6	35.2	09-SEPTEMBER			
0	0.0	1995	1	5.8	10-OCTOBER			
0	0.0	1996	2	11.7	11-NOVEMBER			
0	0.0	1997	3	17.6	12-DECEMBER			

The TASAS Highway Data Base is currently available only in US values.  
Users requiring metric values can apply a conversion factor of 1.6093 to obtain a metric value in kilometers.

## Figure 3-6 TSAR SUMMARY-Continued

TASAS SELECTIVE RECORD RETRIEVAL  
ALL ACCIDENTS ON 03-SAC-16, 14,800/15,800, 07-01-87/06-30-90

AXR330 ACC-SUMMARY  
REQ NO 5739

PRIMARY COLLISION FACTOR		TYPE OF COLLISION		ROADWAY CONDITION	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
4	23.5	0	0.0	0	0.0
0	0.0	1	5.8	0	0.0
1	5.8	2	11.7	0	0.0
1	5.8	1	5.8	0	0.0
5	29.4	8	47.0	0	0.0
2	11.7	4	23.5	0	0.0
0	0.0	0	0.0	17	100.0
2	11.7	1	5.8	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

WEATHER		LIGHTING		ROAD SURFACE	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
16	94.1	11	64.7	16	94.1
1	5.8	0	0.0	1	5.8
0	0.0	0	0.0	0	0.0
0	0.0	6	35.2	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0

RIGHT OF WAY CONTROL		HIGHWAY GROUP		INTERSECTION OR RAMP ACCIDENT LOCATION	
NUMBER	PCT	NUMBER	PCT	NUMBER	PCT
1	5.8	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	0	0.0
16	94.1	17	100.0	0	0.0
0	0.0	0	0.0	0	0.0
0	0.0	0	0.0	17	100.0

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--- PARTY SUMMARY ---

PARTY TYPE		MOVEMENT PRECEDING COLLISION		SPECIAL INFORMATION	
NUMBER	PCT CODE	NUMBER	PCT CODE	NUMBER	PCT CODE
10	58.8 A-PASNGR CAR/STA WAGON	2	11.7 A-STOPPED	0	0.0 A-HAZARDOUS MATERIALS
0	0.0 B-PASNGR CAR W/TRALR	7	41.1 B-PROCEEDED STRAIGHT	0	0.0 B-FIRE INVOLVED
1	5.8 C-MOTORCYCLE	9	52.9 C-RAN OFF ROAD	0	0.0 C-TIRE DEFECT/FAILURE
6	35.2 D-PICKUP/PANEL TRUCK	0	0.0 D-MAKING RIGHT TURN	17	100.0 <-NOT STATED
0	0.0 E-PICKUP/PANEL W/TRALR	2	11.7 E-MAKING LEFT TURN	0	0.0 --DOES NOT APPLY
3	17.6 F-TRUCK/TRUCK TRACTOR	0	0.0 F-MAKING U TURN	0	0.0 -INVALID CODES
1	5.8 G-TRK/TRACTOR & 1 TRALR	0	0.0 G-BACKING		
0	0.0 H-TRK/TRACTOR & 2 TRALR	0	0.0 H-SLOWING, STOPPING		
0	0.0 I-TRK/TRACTOR & 3 TRALR	2	11.7 I-PASS OTHER VEHICLE		
0	0.0 J-SINGLE UNIT TANKER	0	0.0 J-CHANGING LANES		
0	0.0 K-TRK/TRA & 1 TANK TRLR	0	0.0 K-PARKING		
0	0.0 L-TRK/TRA & 2 TANK TRLR	1	5.8 L-ENTER FROM SHLDR		
1	5.8 M-SCHOOL BUS	0	0.0 M-OTHER UNSAFE TURN		
0	0.0 N-OTHER BUS	1	5.8 N-CROSS INTO OPP LN		
0	0.0 O-EMERGENCY VEHICLE	0	0.0 O-PARKED		
0	0.0 P-HIGHWAY CONST EQUIP	0	0.0 P-MERGING		
0	0.0 Q-BICYCLE	0	0.0 Q-TRVL WRONG WAY		
3	17.6 R-OTHER-MOTOR VEH	2	11.7 R-OTHER		
0	0.0 S-OTHER-NON-MOTOR VEH	2	11.7 <-NOT STATED		
1	5.8 T-SPILLED LOADS				
0	0.0 U-DISENGAGED TOW				
0	0.0 V-UNINVOLVED VEHICLE				
0	0.0 W-R-MOPED				
0	0.0 X-TRAIN				
0	0.0 Y-PEDESTRIAN				
0	0.0 Z-DISMOUNT PEDESTRIAN				
0	0.0 AA-ANIMAL - LIVESTOCK				
1	5.8 AB-ANIMAL - DEER				
0	0.0 AC-ANIMAL - OTHER				
-----DIRECTION OF TRAVEL-----					
0	0.0 N-N, NE, NW BOUND				
16	0.0 S-S, SE, SW BOUND				
6	35.2 E-EASTBOUND				
2	11.7 W-WESTBOUND				
0	0.0 --DOES NOT APPLY				
-----OTHER ASSOCIATED FACTOR-----					
		# 1	PCT	NUMBER	PCT CODE
		0	0.0	0	0.0 1-INFLUENCE ALCOHOL
		0	0.0	0	0.0 2-FOLLOW TOO CLOSE
		0	0.0	0	0.0 3-FAILURE TO YIELD
		3	17.5	0	0.0 4-IMPROPER TURN
		2	11.7	0	0.0 5-SPEEDING
		3	17.6	0	0.0 6-OTHER VIOLATIONS
		2	11.7	0	0.0 E-VISION OBSCUREMENT
		1	5.8	1	5.8 F-INATTENTION
		0	0.0	0	0.0 G-STOP & GO TRAFFIC
		0	0.0	0	0.0 H-ENTER/LEAVE RAMP
		0	0.0	0	0.0 I-PREVIOUS COLLISION
		0	0.0	0	0.0 J-UNFAMILIAR WITH ROAD
		0	0.0	0	0.0 K-DEFECT VEHICLE EQUIP
		0	0.0	0	0.0 L-UNINVOLVED VEHICLE
		11	64.7	1	5.8 M-OTHER
		0	0.0	0	0.0 N-NONE APPARENT
		0	0.0	0	0.0 P-WIND
		0	0.0	0	0.0 R-RAMP ACCIDENT
		0	0.0	0	0.0 S-RUNAWAY VEHICLE
		3	17.6	17	100.0 <-NOT STATED
		0	0.0	0	0.0 --DOES NOT APPLY

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Users requiring metric values can apply a conversion factor of 1.6093 to obtain a metric value in kilometers.

### Figure 3-8 TSAR SUMMARY-Continued

PRIMARY			OBJECT STRUCK			LOCATION OF COLLISION			PRIMARY			OTHERS		
NUMBER	PCT		NUMBER	PCT		NUMBER	PCT		NUMBER	PCT	NUMBER	PCT	CODE	
0	0.0	01-SIDE OF BRIDGE RAILING	0	0.0	01-SIDE OF BRIDGE RAILING	0	0.0	0	0.0	A-BEYOND MEDIAN OR STRIPE-LFT	0	0.0		
0	0.0	02-END OF BRIDGE RAILING	0	0.0	02-END OF BRIDGE RAILING	4	23.5	3	17.6	B-BEYOND SHLDER DRIVERS LEFT	0	0.0		
0	0.0	03-PIER, COLUMN, ABUTMENT	0	0.0	03-PIER, COLUMN, ABUTMENT	0	0.0	0	0.0	C-LEFT SHOULDER AREA	0	0.0		
0	0.0	04-BOTTOM OF STRUCTURE	0	0.0	04-BOTTOM OF STRUCTURE	1	5.8	1	5.8	D-LEFT LANE	0	0.0		
0	0.0	05 BRIDGE END POST IN GORE	0	0.0	05 BRIDGE END POST IN GORE	0	0.0	0	0.0	E-INTERIOR LANES	0	0.0		
0	0.0	06-END OF GUARD RAIL	0	0.0	06-END OF GUARD RAIL	5	29.4	3	17.6	F-RIGHT LANE	0	0.0		
0	0.0	07-BRIDGE APPROACH GRD RAIL	0	0.0	07-BRIDGE APPROACH GRD RAIL	1	5.8	4	23.5	G-RIGHT SHOULDER AREA	0	0.0		
0	0.0	10-LIGHT OR SIGNAL POLE	0	0.0	10-LIGHT OR SIGNAL POLE	7	41.1	4	23.5	H-BEYOND SHLDER DRIVERS RIGHT	0	0.0		
5	29.4	11-UTILITY POLE	2	11.7	11-UTILITY POLE	0	0.0	0	0.0	I-GORE AREA	0	0.0		
0	0.0	12-POLE (TYPE NOT STATED)	0	0.0	12-POLE (TYPE NOT STATED)	0	0.0	0	0.0	J-OTHER	0	0.0		
0	0.0	13-TRAFFIC SIGN/SIGN POST	0	0.0	13-TRAFFIC SIGN/SIGN POST	0	0.0	0	0.0	V-HOV LANE(S)	0	0.0		
1	5.8	14-OTHER SIGNS NOT TRAFFIC	1	5.8	14-OTHER SIGNS NOT TRAFFIC	0	0.0	0	0.0	W-HOV LANE BUFFER AREA	0	0.0		
0	0.0	15-GUARDRAIL	0	0.0	15-GUARDRAIL	0	0.0	0	0.0	<-NOT STATED	0	0.0		
0	0.0	16-BARRIER	0	0.0	16-BARRIER	8	47.0	16	94.1	--DOES NOT APPLY	0	0.0		
0	0.0	17-WALL (EXCEPT SOUND WALL)	1	5.8	17-WALL (EXCEPT SOUND WALL)	0	0.0	0	0.0	--INVALID CODES	0	0.0		
0	0.0	18-DIKE OR CURB	0	0.0	18-DIKE OR CURB	0	0.0	0	0.0		0	0.0		
0	0.0	19-TRAFFIC ISLAND	0	0.0	19-TRAFFIC ISLAND	0	0.0	0	0.0		0	0.0		
0	0.0	20-RAISED BARS	0	0.0	20-RAISED BARS	0	0.0	0	0.0		0	0.0		
0	0.0	21-CONCRETE OBJ (HDWL, D. I.)	0	0.0	21-CONCRETE OBJ (HDWL, D. I.)	0	0.0	0	0.0		0	0.0		
0	0.0	22-GUIDEPOST, CULVERT, PM	0	0.0	22-GUIDEPOST, CULVERT, PM	0	0.0	0	0.0		0	0.0		
0	0.0	23-CUT SLOPE OR EMBANKMENT	0	0.0	23-CUT SLOPE OR EMBANKMENT	0	0.0	0	0.0		0	0.0		
0	0.0	24-OVER EMBANKMENT	0	0.0	24-OVER EMBANKMENT	0	0.0	0	0.0		0	0.0		
0	0.0	25-IN WATER	0	0.0	25-IN WATER	0	0.0	0	0.0		0	0.0		
0	0.0	26-DRAINAGE DITCH	0	0.0	26-DRAINAGE DITCH	0	0.0	0	0.0		0	0.0		
1	5.8	27-FENCE	0	0.0	27-FENCE	0	0.0	0	0.0		0	0.0		
1	5.8	28-TREES	3	17.6	28-TREES	0	0.0	0	0.0		0	0.0		
0	0.0	29-PLANTS	0	0.0	29-PLANTS	0	0.0	0	0.0		0	0.0		
0	0.0	30-SOUND WALL	0	0.0	30-SOUND WALL	0	0.0	0	0.0		0	0.0		
0	0.0	40-NATURAL MATRL ON ROAD	0	0.0	40-NATURAL MATRL ON ROAD	0	0.0	0	0.0		0	0.0		
0	0.0	41-TEMP BARRICADES, CONES	0	0.0	41-TEMP BARRICADES, CONES	0	0.0	0	0.0		0	0.0		
0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	42-OTHER OBJECT ON ROAD	0	0.0	0	0.0		0	0.0		
1	5.8	43-OTHER OBJECT OFF ROAD	0	0.0	43-OTHER OBJECT OFF ROAD	3	17.6	0	0.0		0	0.0		
4	23.5	44-OVERTURNED	1	5.8	44-OVERTURNED	0	0.0	0	0.0		0	0.0		
0	0.0	45-CRASH CUSHION(SAND)	0	0.0	45-CRASH CUSHION(SAND)	0	0.0	0	0.0		0	0.0		
0	0.0	46-CRASH CUSHION(OTHER)	0	0.0	46-CRASH CUSHION(OTHER)	0	0.0	0	0.0		0	0.0		
0	0.0	51-CALL BOX	0	0.0	51-CALL BOX	0	0.0	0	0.0		0	0.0		
0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	98-UNKNOWN OBJECT STRUCK	0	0.0	0	0.0		0	0.0		
5	29.4	99-NO OBJECT INVOLVED	1	5.8	99-NO OBJECT INVOLVED	0	0.0	0	0.0		0	0.0		
0	0.0	V1 THRU V9-VEHICLE 1 TO 9	3	17.6	V1 THRU V9-VEHICLE 1 TO 9	0	0.0	0	0.0		0	0.0		
0	0.0	<<-NOT STATED	0	0.0	<<-NOT STATED	0	0.0	0	0.0		0	0.0		
7	41.1	---DOES NOT APPLY	16	94.1	---DOES NOT APPLY	0	0.0	0	0.0		0	0.0		
0	0.0	--INVALID CODES	0	0.0	--INVALID CODES	0	0.0	0	0.0		0	0.0		

The TASAS Highway Data Base is currently available only in US values.  
Users requiring metric values can apply a conversion factor of 1.6093 to obtain a metric value in kilometers.

### Figure 3-9 TASAS TABLE A

TASAS TABLE A DISTRICT 03  
CUMULATIVE NUMBER OF ACCIDENTS BY POSTMILE  
DISTRICT/ROUTE SEQUENCE

SINCE LAST SIGNIFICANT CHANGE

PAGE 6

AXR250-A	ROUTE 080	YOL	L O C A T I O N	NO R	LNS U	NUM	TOT	FROM 93-01-01 THRU 95-12-31			FROM 95-01-01 THRU 95-12-31			PERSONS								
								ACC	FAT	INJ	VEH	WET	DARK		KLD	INJ						
				NO SIGNIFICANT CHANGE	06D U	2	390	3	148	216	96	152	3	219	135	0	43	78	38	54	0	61
					06D U	2	392	3	150	216	96	153	3	221	135	0	43	78	38	54	0	61
					06D U	2	393	3	151	216	96	154	3	226	135	0	43	78	38	54	0	61
					06D U	3	394	3	152	216	96	154	3	226	135	0	43	78	38	54	0	61
					09D U	3	397	3	154	218	98	155	3	232	137	0	44	79	40	55	0	63
					09D U	3	398	3	154	219	98	155	3	232	137	0	44	79	40	55	0	63
					09D U	3	401	3	155	221	98	155	3	233	138	0	44	80	40	55	0	63
					09D U	3	402	3	156	222	99	155	3	235	139	0	45	81	41	55	0	65
					10D U	3	403	3	157	222	99	155	3	236	140	0	46	81	41	55	0	66
					10D U	3	404	3	157	223	99	156	3	236	140	0	46	81	41	55	0	66
					10D U	3	405	3	157	224	99	157	3	236	140	0	46	81	41	55	0	66
					10D U	3	407	3	157	225	101	158	3	236	141	0	46	81	42	55	0	66
					11D U	3	408	3	157	226	101	158	3	236	142	0	46	82	42	55	0	66
					11D U	3	409	3	157	227	101	158	3	236	143	0	46	83	42	55	0	66
					11D U	3	411	3	158	227	101	158	3	237	143	0	46	83	42	55	0	66
					11D U	3	413	3	158	228	102	159	3	238	143	0	46	83	42	55	0	66
					11D U	3	415	3	159	230	104	160	3	238	144	0	46	83	42	55	0	66
					11D U	3	416	3	160	231	104	161	3	243	145	0	46	84	43	56	0	66
					11D U	3	417	3	160	231	104	161	3	243	146	0	46	84	43	56	0	66
					11D U	13	430	3	165	235	112	165	3	248	152	0	48	86	46	57	0	68
					12D U	3	431	3	166	236	112	165	3	250	152	0	48	86	46	57	0	68
					12D U	3	432	3	166	237	112	166	3	250	153	0	48	87	46	58	0	68
					12D U	2	434	3	166	239	113	166	3	250	153	0	48	87	46	58	0	68
					12D U	2	435	3	166	240	113	166	3	250	154	0	48	88	46	58	0	68
					12D U	2	437	3	166	241	114	166	3	250	154	0	48	88	46	58	0	68
					12D U	3	438	3	166	242	114	166	3	250	154	0	48	88	46	58	0	68
					12D U	3	439	3	166	243	114	166	3	250	154	0	48	88	46	58	0	68
					12D U	3	440	3	166	244	114	166	3	250	154	0	48	88	46	58	0	68
					02D U	2	442	3	168	246	114	167	3	252	154	0	48	88	46	58	0	68
					02D U	2	443	3	169	246	114	167	3	252	154	0	48	88	46	58	0	68
					04D U	2	445	3	171	246	114	169	3	256	156	0	50	88	46	60	0	71
					04D U	2	446	3	171	246	114	170	3	256	156	0	50	88	46	60	0	71
					04D U	2	447	3	171	246	114	171	3	256	156	0	50	88	46	60	0	71
					04D U	2	448	3	171	246	114	171	3	256	157	0	50	89	46	60	0	71
					04D U	2	449	3	172	247	114	171	3	257	157	0	50	89	46	60	0	71
					04D U	2	451	3	173	249	114	172	3	259	159	0	51	91	46	61	0	73
					04D U	2	452	3	173	250	114	172	3	259	159	0	51	91	46	61	0	73
					06D U	2	453	3	173	251	115	172	3	259	159	0	51	91	46	61	0	73
					06D U	2	455	3	174	252	116	173	3	259	160	0	51	92	46	61	0	73
					06D U	2	456	3	174	253	116	173	3	260	160	0	51	92	46	61	0	73
					06D U	2	457	3	174	253	116	174	3	260	160	0	51	92	46	61	0	73
					06D U	2	458	3	174	253	116	175	3	260	161	0	51	92	46	62	0	73
					06D U	2	459	3	174	254	116	175	3	260	161	0	51	92	46	62	0	73
					06D U	2	460	3	174	254	116	177	3	260	161	0	51	92	46	62	0	73
					06D U	2	461	3	174	255	116	177	3	260	161	0	51	92	46	62	0	73
					06D U	2	462	3	174	256	116	177	3	260	162	0	51	93	46	62	0	73
					06D U	2	463	3	174	256	116	177	3	260	162	0	51	93	46	62	0	73

W CAPITOL AVE UC22-142R  
END BR 22-142 LT

**The TASAS Highway Data Base is currently available only in US values.  
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**Figure 3-10  
TASAS TABLE B**

L O C A T I O N	D E S C R I P T I O N	R A GRP (RUS)	*--NUMBER OF ACCIDENTS/SIGNIFICANCE*			P E R KLD X-ST	* ADT MAIN	TOTAL *--ACCIDENT RATE ACCS/MV+ OR MVM--*			T O T							
			TOT	FAT	INJ			FAT	ACTUAL	FAT		AVERAGE	FAT					
016 SAC 03-0001	14.000 THRU SAC 017.000 3.001M 93-01-01 95-12-31 36 MO (R)	H04 (R)	36 H92	0 H99	25 H97	22 H99	10 H99	15 H99	0 H99	0 H99	9.9 H99	32.40 H99	.000 H99	.77 H99	1.11 H99	.033 H99	.45 H99	.84 H99
016 SAC 03-0002	14.017 MEISS ROAD - RT 93-01-01 95-12-31 36 MO (R)	I17 (R)	3 H92	0 H99	2 H97	2 H99	3 H99	0 H99	1 H99	0 H99	10.7 H99	11.85+ H99	.000 H99	.17 H99	.25 H99	.004 H99	.10 H99	.22 H99
016 SAC 03-0003	15.993 DILLARD RD 93-01-01 95-12-31 36 MO (R)	I20 (R)	6 H92	0 H99	4 H97	6 H99	2 H99	1 H99	0 H99	0 H99	10.4 H99	13.58+ H99	.000 H99	.29 H99	.44 H99	.009 H99	.32 H99	.69 H99
016 SAC 03-0004	16.294 KIEFER ROAD - LT 93-01-01 95-12-31 36 MO (R)	I17 (R)	1 H92	0 H99	0 H97	1 H99	0 H99	0 H99	0 H99	0 H99	10.4 H99	12.15+ H99	.000 H99	.00 H99	.08 H99	.004 H99	.10 H99	.22 H99
016 SAC 03-0005	16.764 LATROBE ROAD - LT 93-01-01 95-12-31 36 MO (R)	I17 (R)	0 H92	0 H99	0 H97	0 H99	0 H99	0 H99	0 H99	0 H99	10.3 H99	11.41+ H99	.000 H99	.00 H99	.00 H99	.004 H99	.10 H99	.22 H99
016 SAC 03-0006	16.831 INDI0 DR - RT 93-01-01 95-12-31 36 MO (R)	I17 (R)	0 H92	0 H99	0 H97	0 H99	0 H99	0 H99	0 H99	0 H99	10.3 H99	11.39+ H99	.000 H99	.00 H99	.00 H99	.004 H99	.10 H99	.22 H99

+ DENOTES MV USED IN RATES

TASAS TABLE B DISTRICT 13  
SELECTIVE ACCIDENT RATE CALCULATION  
ROUTE SEQUENCE

PAGE 1

AXR253-A 07-09-96

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LOCATION DESCRIPTION	TOTAL ACCIDENTS												AVE ADT		12 MOS RATE ACTUAL		ACCS/MV-MVM-AVERAGE		INV REQ
	36 MO	24 MO	12 MO	6 MO	3 MO	3 MO	6 MO	12 MO	24 MO	36 MO	MAIN	X-ST	F+I	TOT	F+I	TOT	F+I	TOT	
005 COL R 1.846 TO R 2.046 NORTH	6	5	4	4	2	2	2	2	2	2	12.7	-	2.19	4.37	0.22	0.46	0.22	0.46	
005 COL R 3.666 TO R 3.866 SOUTH	6	4	3	3	3	0	0	0	0	12.6	-	0.00	3.27	0.22	0.46	0.22	0.46		
005 COL R 19.105 TO R 19.305 SOUTH	5	5	3	3	1	0	0	0	0	11.3	-	1.23	3.68	0.22	0.53	0.22	0.53		
005 COL R 32.245 TO R 32.445 SOUTH	5	5	2	2	1	1	1	1	1	11.4	-	2.43	2.43	0.22	0.45	0.22	0.45		
005 SAC 11.758 TO 11.958 NORTH	7	7	4	4	0	0	0	0	0	21.5	-	0.00	2.54	0.25	0.52	0.25	0.52		
005 SAC 17.998 TO 18.198 NORTH	10	7	6	6	4	4	4	4	4	42.5	-	0.65	1.94	0.24	0.70	0.24	0.70		
005 SAC 23.041 SB OFF TO RTE 50	28	19	9	9	4	4	3	3	3	35.0	-	0.24	0.71	0.09	0.25	0.09	0.25		
005 SAC 23.118 TO 23.318 SOUTH	38	26	16	16	9	9	7	7	7	63.0	-	1.09	3.49	0.20	0.60	0.20	0.60		
005 SAC 23.238 TO 23.438 NORTH	16	13	8	8	6	6	1	1	1	64.0	-	0.64	1.72	0.20	0.60	0.20	0.60		
005 SAC 24.538 TO 24.738 NORTH	15	10	8	8	7	7	5	5	5	64.2	-	0.64	1.71	0.29	0.85	0.29	0.85		
005 SAC 25.158 TO 25.358 SOUTH	23	20	10	10	8	8	3	3	3	64.3	-	0.85	2.13	0.29	0.85	0.29	0.85		
005 YOL 5.586 TO 5.786 SOUTH	3	3	3	3	3	3	3	3	3	16.8	-	0.00	2.47	0.23	0.57	0.23	0.57		
005 YOL R 19.106 TO R 19.306 NORTH	3	3	3	3	3	2	2	1	1	8.6	-	0.00	4.78	0.21	0.43	0.21	0.43		
005 YOL R 22.226 TO R 22.426 NORTH	3	3	3	3	2	2	1	1	1	8.6	-	1.60	4.80	0.21	0.43	0.21	0.43		
016 COL 3.760 TO 3.960	3	3	1	1	0	0	0	0	0	0.7	-	0.00	18.73	1.22	2.25	1.22	2.25		
016 SAC 4.166 S WATT/ELK GROVE-FLORIN XXX U 114	25	20	10	10	7	7	4	4	4	12.2	19.0	0.00	0.88	0.20	0.45	0.20	0.45		
016 SAC 15.198 TO 15.398	10	4	1	1	0	0	0	0	0	9.3	-	0.00	1.48	0.46	0.84	0.46	0.84		
016 SAC 22.418 TO 22.618	8	5	4	4	2	2	1	1	1	7.5	-	5.49	7.33	0.76	1.45	0.76	1.45		
016 YOL 2.982 TO 3.182	4	2	1	1	1	1	0	0	0	0.8	-	18.55	18.55	1.21	2.23	1.21	2.23		
016 YOL 20.907 TO 21.107	8	6	3	3	2	2	1	1	1	3.5	-	7.82	11.73	0.49	0.90	0.49	0.90		
016 YOL 21.647 TO 21.847	8	8	3	3	3	3	0	0	0	3.6	-	7.51	11.26	0.49	0.90	0.49	0.90		
016 YOL 23.867 TO 24.067	5	4	3	3	0	0	0	0	0	3.9	-	7.13	10.69	0.49	0.89	0.49	0.89		
016 YOL 24.787 TO 24.987	4	4	1	1	0	0	0	0	0	4.0	-	0.00	3.42	0.48	0.89	0.48	0.89		
016 YOL 24.987 TO 25.187	4	4	1	1	0	0	0	0	0	4.0	-	3.42	3.42	0.48	0.89	0.48	0.89		

REQ=INVESTIGATION REQUIRED (4 OR MORE ACCS. & SIGNIFICANT IN 12,6 OR 3 MONTHS) + DENOTES MV USED IN RATES

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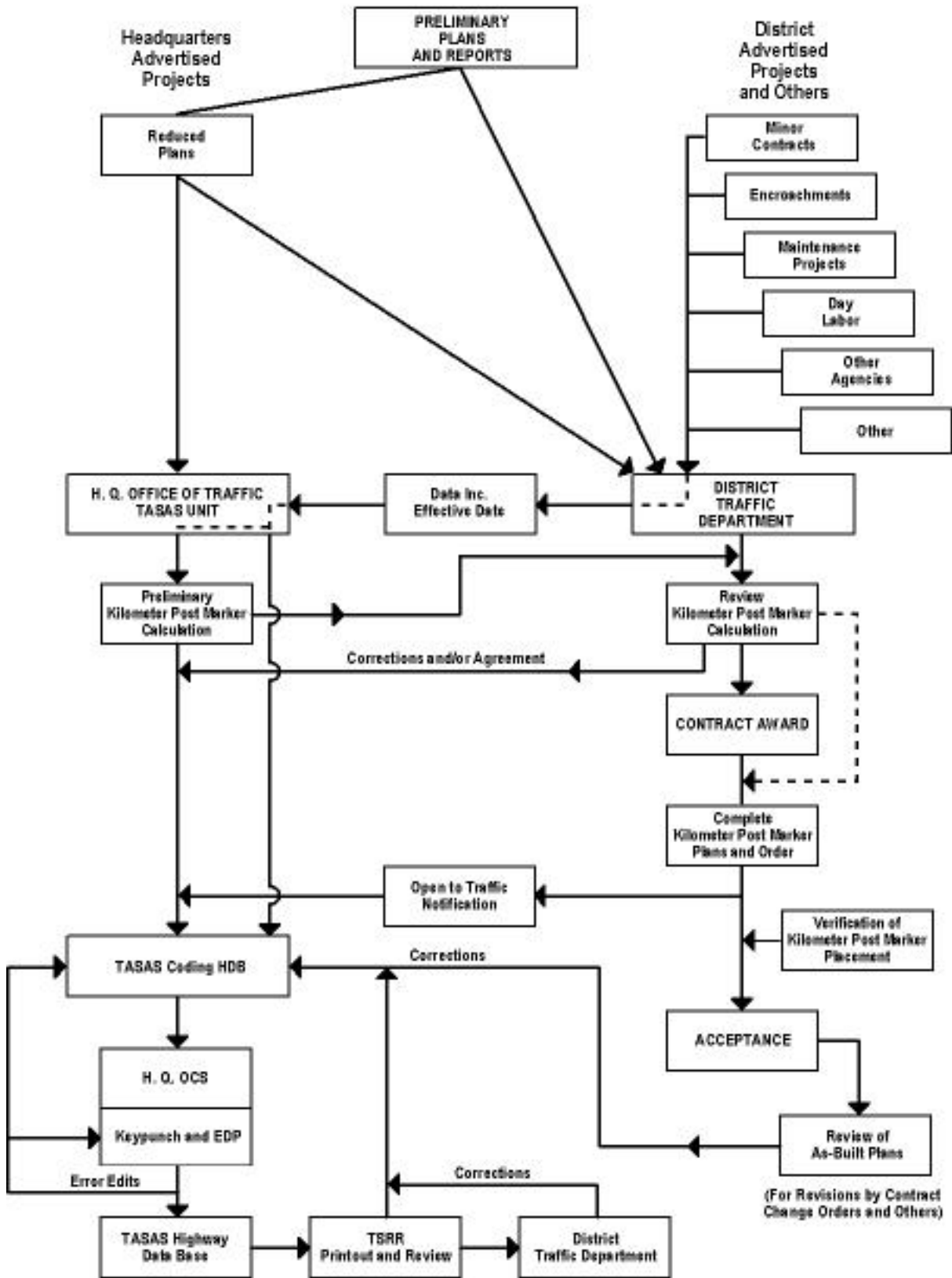
Figure 3-12  
TASAS WET TABLE C

LOCATION DESCRIPTION	SCL R RATE*	TOTAL WET ACCIDENTS	AVE ADT	*36 MOS AVERAGE NO OF ACC F+I	ACC & RATES* RATE/MVM-MV F+I	HT- REQ							
	GRP 36 MO	24 MO	12 MO	6 MO	3 MO	1000 VEH MAIN X-ST							
	LNS S	ACCS	ACCS	ACCS	ACCS								
005 SAC 11.738 TO 11.938 NORTH	02D R H54	3 N	3 Y	3 Y	0 N	21.1	-	0.16	0.33	0.86	1.79	REQ	
005 SAC 12.188 SB ON FR LAGUNA BLVD	O L R R39	-	2 N	2 Y	0 N	0.8	-	0.03	0.10	0.73	2.62	+	
005 SAC 17.718 TO 17.918 NORTH	04D U H65	3 N	3 N	3 N	3 Y	41.7	-	0.29	0.84	0.80	2.30		
005 SAC 17.918 TO 18.118 NORTH	04D U H65	4 N	4 Y	3 N	2 N	41.7	-	0.29	0.84	0.80	2.30		
005 SAC 19.838 TO 20.038 SOUTH	04D U H65	3 N	3 N	3 N	3 Y	55.7	-	0.44	1.26	0.90	2.59		
005 SAC 22.172 NB OFF TO WB RTE 50	F C U R06	4 N	3 N	3 Y	3 Y	9.4	-	0.27	0.83	0.66	2.03	+	
005 SAC 22.789 SB OFF TO EB 50 & X-3RD	F C U R06	25 Y	9 Y	4 N	3 N	37.7	-	1.08	3.34	0.66	2.03	+	
005 SAC 23.138 TO 23.338 SOUTH	05D U H66	10 Y	8 Y	5 Y	4 Y	62.1	-	0.37	1.09	0.68	2.01	REQ	
005 SAC 23.358 TO 23.558 NORTH	05D U H66	7 Y	6 Y	6 Y	0 N	62.7	-	0.37	1.11	0.68	2.02	REQ	
005 SAC 24.788 SB OFF TO RICHARDS BLVD	F D U R10	4 N	4 N	3 N	3 Y	6.9	-	0.56	1.41	1.85	4.68	+	
005 SAC 25.178 TO 25.378 SOUTH	04D U H65	8 Y	6 Y	6 Y	4 Y	59.2	-	0.48	1.38	0.92	2.66	REQ	
005 YOL R 18.686 TO R 18.886 SOUTH	02D R H54	2 N	2 N	2 Y	1 N	8.6	-	0.05	0.11	0.74	1.53		
016 SAC 14.278 TO 14.478	02U R H04	3 Y	1 N	1 N	0 N	10.3	-	0.13	0.25	1.48	2.72		
016 SAC 15.198 TO 15.398	02U R H04	3 Y	1 N	0 N	0 N	9.3	-	0.12	0.22	1.49	2.73		
016 YOL 23.847 TO 24.047	02U R H04	2 N	2 N	2 Y	2 Y	3.7	-	0.05	0.09	1.58	2.90		
016 YOL 25.355 SECOND ST - LT	--- R I17	7 Y	5 Y	5 Y	2 Y	3.7	0.0	0.07	0.15	0.43	0.91	+	
020 COL 11.140 TO 11.340	02U R H03	2 N	2 N	2 Y	2 Y	3.8	-	0.06	0.12	2.50	4.75		
020 COL 29.436 TO 29.636	02U R H02	2 N	2 N	2 Y	1 N	6.2	-	0.07	0.13	1.66	3.14		
020 COL 31.841 BRIDGE ST	-XX R I17	4 Y	2 N	1 N	1 N	10.9	2.1	0.19	0.40	0.44	0.93	+	
020 NEV 2.319 TO 2.519	02U R H03	4 Y	1 N	1 N	0 N	6.4	-	0.25	0.47	2.20	4.19		
020 NEV 30.217 TO 30.417	02U R H06	5 Y	5 Y	2 N	1 N	3.1	-	0.11	0.21	1.93	3.85		
020 SUT 15.573 JCT RTE 99	XXX S I09	9 N	5 N	5 N	4 Y	30.0	16.5	1.53	3.77	0.75	1.85	+	
020 SUT 15.810 GRAY AVE	XXX U I14	14 Y	11 Y	6 Y	2 N	1 N	33.3	19.4	1.61	3.66	0.70	1.59	+
049 ED 14.080 SKYLINE/COON HOLLOW RD	--X U I12	2 N	2 N	2 N	2 N	2 Y	5.3	0.4	0.15	0.35	0.40	0.93	+

RFO= INVESTIGATION REQUIRED (9.6 OR 3 OR MORE ACCS. & SIGNIFICANT IN 36,24 OR 12 MONTHS, RESP.) + DENOTES MV USED IN RATES

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**Figure 3-13  
HIGHWAY DATA BASE FLOW CHART**



**Figure 3-14  
TYPICAL HIGHWAY DATA BASE REPORT**

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AXR085              TRAFFIC ACCIDENT SURVEILLANCE AND ANALYSIS SYSTEM              PAGE 1
                   ACTUAL CURRENT HIGHWAY DATA WITH HISTORY                   11/14/90

P POST P LENGTH E DATE OF H A ACC-CNTL CITY RFF FED TNSTD H      A DT I N F O R M A T I O N      SEQ
P MILE S   I RECORD   G C EFF-DATE CODE UAC RTE FLNS I EFF-DATE LK-AHD P LK-BK CHANGE/MILE      D V M      N U M B E R
                   S I G N T           ( L E F T R O A D B E D )          M E D I A N       I N F O R M A T I O N
                   C H A N G E   N      NO S OT-SH T-W IN-SH S          T C B V      NO S I N-SH T-W OT-SH S
                   EFF-DATE A      EFF-DATE LN T TO TR WID TO TR F  EFF-DATE Y L A W D A      E F F -D A T E L N T T O T R W I D T O T R F

DESCRIPTION          03--SAC-005

029.022  00.204  68-08-07  D F 68-08-07  SAC S01 1005 002FK * 89-01-01 064000.000 P 066000 0000000.0000 00013056.000 0181354
                   * 87-01-01 063000.000 P 0000000.0000
                   * 86-01-01 054000.000 P 0000000.0000
                   * 85-01-01 047000.000 P 68-08-07 03 C 05 05 036 10 10 Z
DEL PASO RD OC 24-195 68-08-07  A 68-08-07 03 C 10 10 036 05 05 Z 68-08-07 J 6 Z 60Z

029.226  00.273  68-08-07  D F 68-08-07  SAC S01 1005 002FK * 89-01-01 064000.000 S 0000000.0000 00017472.000 0181414
                   * 88-01-01 063000.000 S 0000000.0000
                   * 87-01-01 063000.000 S 0000000.0000
                   * 86-01-01 054000.000 S 68-08-07 03 C 05 05 036 10 10 Z
AUX LN LT          68-08-07  A 68-08-07 03 C 10 10 048 05 05 Z 68-08-07 J 6 Z 60Z

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                   * 87-01-01 063000.000 S 0000000.0000
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68-08-07  A 68-08-07 03 C 10 10 048 05 05 Z 68-08-07 J 6 Z 60Z

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                   * 87-01-01 063000.000 S 0000000.0000
                   * 86-01-01 054000.000 S 68-08-07 02 C 05 05 024 10 10 Z
68-08-07  A 68-08-07 03 C 10 10 036 05 05 Z 68-08-07 J 6 Z 60Z

END AUX LN LT      68-08-07  A 68-08-07 03 C 10 10 036 05 05 Z 68-08-07 J 6 Z 60Z

029.698  00.174  68-08-07  D F 68-08-07  SAC S01 1005 002FK * 89-01-01 064000.000 S 0000000.0000 00011136.000 0181494
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                   * 87-01-01 063000.000 S 0000000.0000
                   * 86-01-01 054000.000 S 68-08-07 02 C 05 05 024 10 10 Z
68-08-07  A 68-08-07 03 C 10 10 036 05 05 Z 68-08-07 J 6 Z 60Z

029.872  00.035  68-12-18  D F 68-12-18  SAC S01 1005 002FK * 89-01-01 064000.000 S 0000000.0000 00002240.000 0181534
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                   * 87-01-01 063000.000 S 0000000.0000
                   * 86-01-01 054000.000 S 68-12-18 02 C 05 05 024 10 10 Z
68-12-18  A 68-12-18 02 C 10 10 024 05 05 Z 68-12-18 J 6 Z 60Z

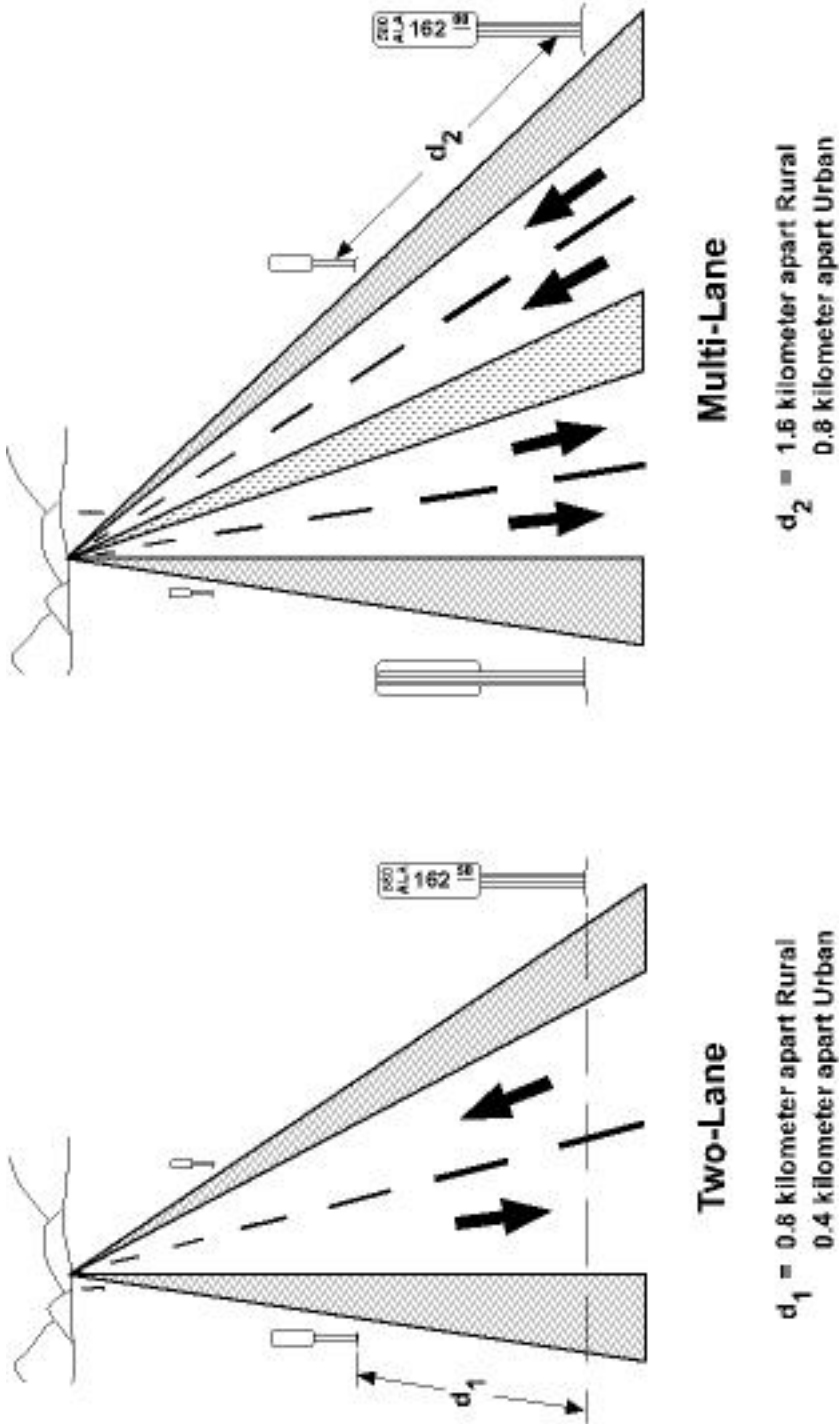
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                   * 88-01-01 042000.000 P 0000000.0000
                   * 87-01-01 045000.000 P 0000000.0000
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68-12-18  A 68-12-18 02 C 10 10 024 05 05 Z 68-12-18 J 6 Z 60Z

JCT99 N. 99/5SEP 24-241 68-12-18 A 68-12-18 02 C 10 10 024 05 05 Z 68-12-18 J 6 Z 60Z
    
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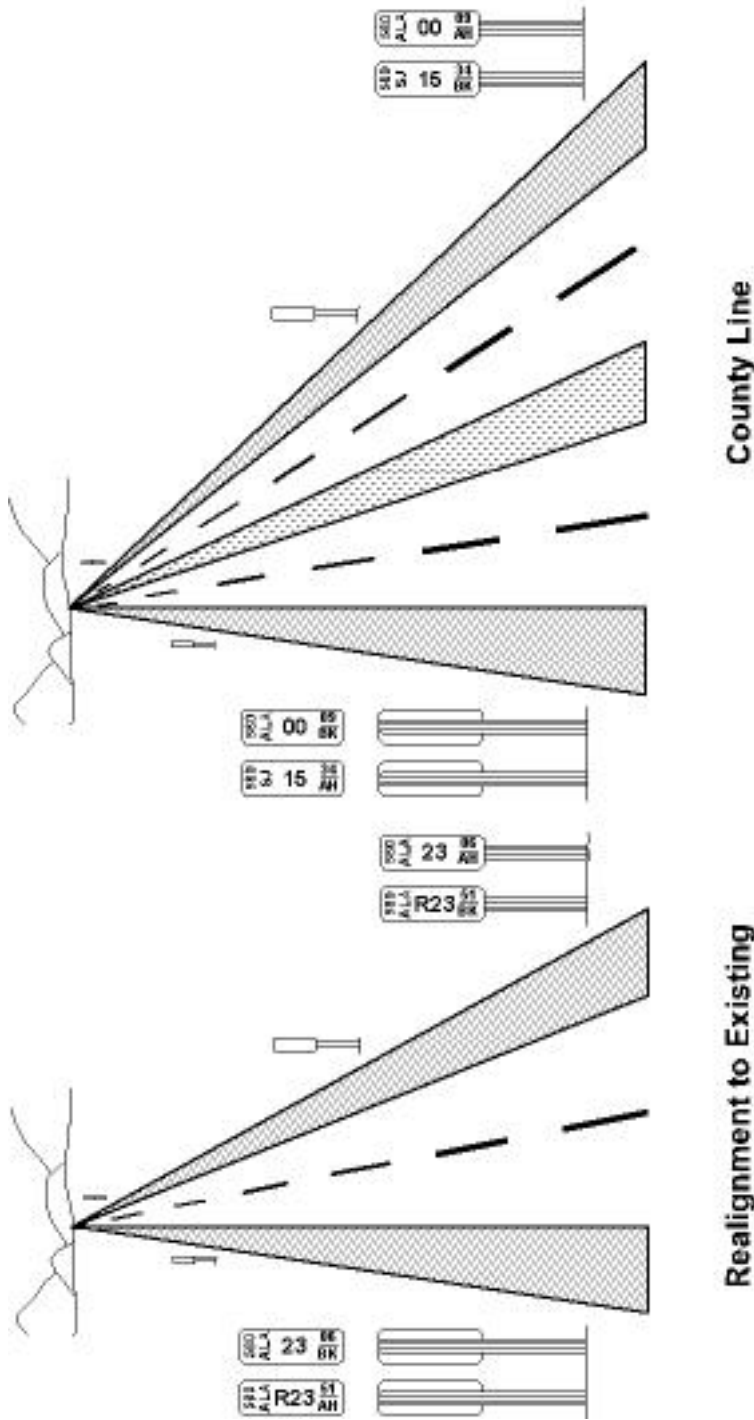
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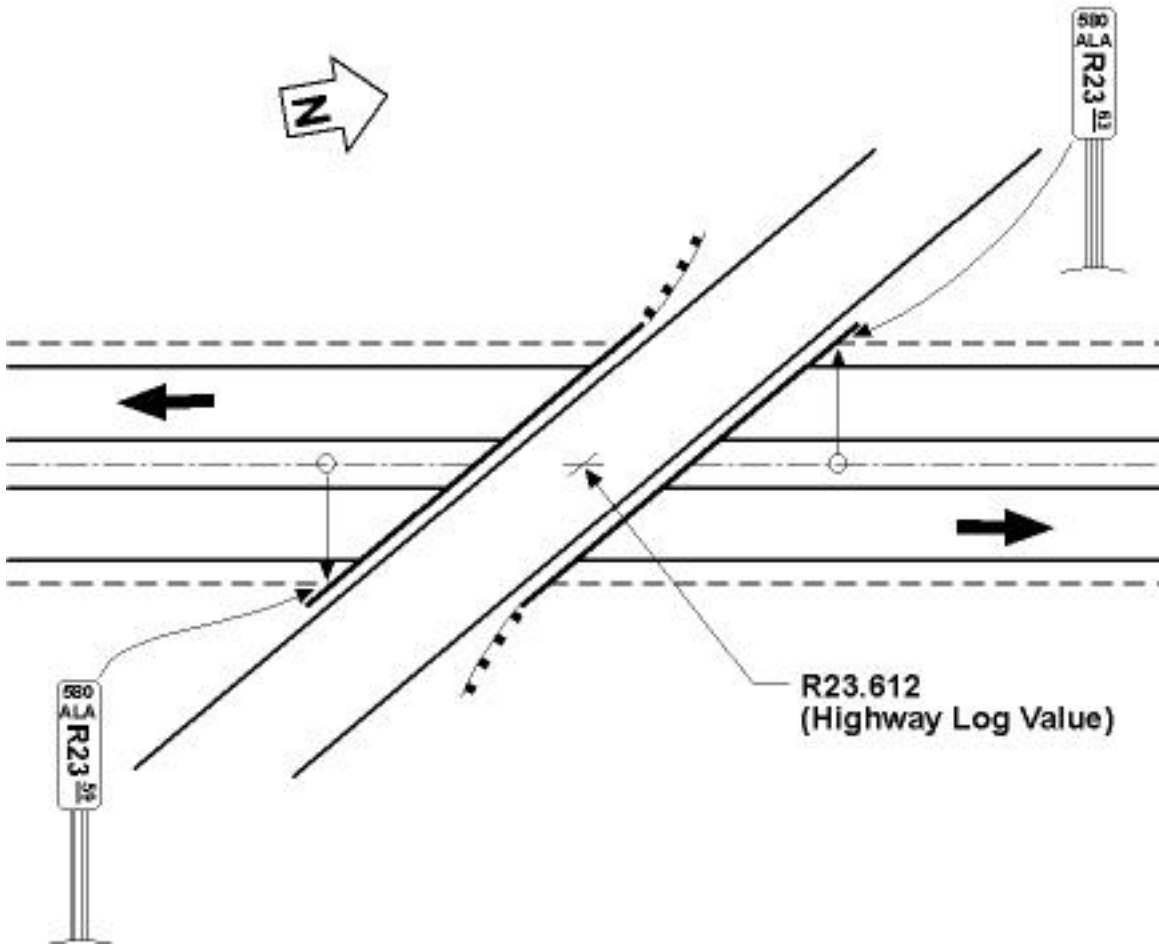
**Figure 3-16  
PLACEMENT OF KILOMETER POST MARKERS**



**Figure 3-17  
KILOMETER POST MARKER EQUATIONS**



**Figure 3-18**  
**SKEWED OVERCROSSING**





**Figure 3-19**  
**KILOMETER POST MARKERS FOR STRUCTURES**

