HIGHWAY SAFETY INFORMATION SYSTEM

GUIDEBOOK FOR THE CALIFORNIA STATE DATA FILES

Volume I:
SAS FILE FORMATS

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INTRODUCTION

(NOTE: Changes from the previous edition of the Guidebook are shown in bold and italic.)

The California database incorporated into the HSIS system is derived from the California TASAS (Traffic Accident Surveillance and Analysis System). The system, maintained by the Traffic Operations Office (TO) of CALTRANS, is a mainframe-based system based on COBOL programming. The TO Office provides the data to HSIS in the form of two different data files. These contain:

Accident data (including accident, vehicle, and occupant data)

Roadway inventory data (including intersection and interchange ramp data, and Average Daily Traffic counts)

Raw file data is provided to the Highway Safety Research Center (HSRC) where they are retained as backup information. When obtained from California, the documentation (variable listings, definitions, etc.) for these raw files and for the SAS files that are developed from them is available from HSIS staff.

Beginning in 1994, the HSIS system was converted to a relational database for internal use. This database, using a SYBASE system, stores the data received from California and other States, and the data files for a given State are linked and manipulated using SQL language. However, this conversion from the original SAS-based system to the newer relational system is somewhat transparent to the end-user of the data since the output files produced by SYBASE for modeling and analysis will be SAS formatted. As in the past, we have continued to produce SAS format libraries for each of the variables in each of the files. Because it is envisioned that the majority of analyses will utilize these SAS files and formats, this Guidebook will concern these SAS files - their formats, completeness, and quality. Single-variable tables for key variables from each file will continue to be published in a separate Volume II document.

As noted above, the California SAS <u>accident data</u> are divided into three separate subfiles, the first containing the basic accident information on a case-by-case basis, the second containing information on up to nine vehicles in each accident (including driver information), and the third containing information on up to 70 occupants in each crash. *(If more than nine vehicles are in a crash, the additional vehicles are captured*

in separate accident records that are exactly like the initial record, but 1 second later.)   The HSIS accident and vehicle data are extracted directly from the TASAS by the TO staff. The occupant data, including data on the driver, are not included in TASAS, but are in the California Highway Patrol's SWITRS (Statewide Integrated Traffic Records System) file. This latter file is acquired from California by the US DOT National Highway Traffic Safety Administration (NHTSA) each year, and HSRC staff obtains copies of this file from NHTSA and merges it with the TASAS data.

Unlike the accident file, which is referenced to a point on the roadway, each record in the Roadlog File contains information on a homogeneous section of roadway (i.e., a stretch of road that is consistent in terms of certain characteristics, with a new section being defined each time any of the characteristics changes). Each record contains current characteristics of the roadway system and includes such variables as traveled way width, number of lanes, paved and total shoulder width, median type, and other variables. Traffic information in the form of Average Annual Daily Traffic (AADT) and Daily Vehicle Miles of travel is included for each section. As will be noted below, unlike most other HSIS State inventories, this file also contains information on terrain, design speed, and special features such as auxiliary lanes. There is no horizontal or vertical alignment information in the files.

Although intersections were included as part of the basic TASAS roadway inventory record, a separate Intersection File has been created in the HSIS system. Each record in the file contains information on both the mainline route and the crossing route. The information includes such items as intersection type, traffic control type, lighting, channelization, and AADT for both the mainline and cross street.

In similar fashion, an Interchange Ramp File has been developed that contains information on approximately 14,000 individual ramps. Although there is no way to tie these ramps to one of the approximately 3,000 associated interchanges in the State, the file does contain information on ramp type (e.g., diamond, slip, direct left-turn connector, etc.), AADT, and whether the crossing road is a State route or not.

DETAILS OF MAJOR FILES

The Accident Files

The State agency responsible for statewide accident data collection is the California Highway Patrol (CHP). The CHP is responsible for investigating crashes on all freeways (urban and rural) and on other State routes and county roads outside municipal areas. It is also responsible for the collection and computerization of crash data from all investigating agencies in the State. The CHP investigates approximately two-thirds of all accidents occurring on State routes. The remainder are reported by municipal police. The general accident reporting threshold used by the CHP is currently $500 or personal injury. This threshold is believed to be fairly consistently used by all CHP personnel in terms of filing crash reports. Conversations with the CHP indicated that when minor (non-towaway) crashes are reported, they are reported on a "short form." In approximately 50 percent of these minor cases, the officer will not provide information on uninjured passengers.

However, neither the report form used nor the reporting threshold followed is consistent across the many local municipalities in the State. Unlike the other HSIS States, accident data are not collected statewide by all police departments on a standard form. While some municipalities use the standard CHP form, some have developed their own form. *However, since 1995, both Los Angeles and San Diego have converted to the standard CHP form. Indeed, all major cities are now using this standard form, and CHP is continuing to "recruit" other cities to use the form.* Even for cities that use non-CHP forms, their data are "converted" to CHP format by accident coders to the extent possible. They are ultimately key-punched into the CHP's data system, known as SWITRS (Statewide Integrated Traffic Records System).

In addition to differing forms, it also appears that different municipalities follow different reporting thresholds, with some reporting only towaway crashes, many reporting crashes with damage of greater than $1,000, and some not reporting property-damage-only (PDO) crashes at all. Some information on the level of PDO reporting can be gleaned from CHP's "*Annual Report of Fatal and Injury Motor Vehicle Traffic Accidents.*" This publication, available at the FHWA HSIS office, provides a city-by-city breakdown of fatal, injury, and PDO crashes reported. In general, if reported to a moderately low threshold, 55 to 70 percent of the total crashes should be no-injury (PDO) crashes. Cities that don't show such a ratio are more than likely not fully reporting these non-injury crashes.

Thus, in general, while injury and fatal data are felt to be accurate for both the CHP and most municipalities, PDO crashes (and thus total crashes) are most accurate for the Highway Patrol. Crashes investigated by the Patrol can be identified by using the variable CHP_IND. In terms of rate development, this means that rates developed for freeways (urban and rural) and for other rural roads (outside municipalities) where accidents are reported by the CHP would be accurate. Total accident rates developed for urban areas should be considered somewhat suspect, or the analyst must determine which cities should be included in the rate on the basis of reporting ratios or other information.

It is estimated that there are more than 500,000 accidents in the entire State each year. Approximately *160,000* of these are investigated by the CHP on State routes (where TASAS inventory information is available). As noted above, all forms (regardless of form type) are sent to the CHP for processing. The CHP then separates the forms into those occurring on State routes (including the urban areas using their own forms) and those on non-State routes, and sends the State route hard copies to the TO Office for location coding. Of the 500,000 total accidents that occur each year, approximately *160,000* occur on the State system and are location-coded by TO.

The location coding is done by coding staff using maps, straight line diagrams, reference marker location logs, and other aids. In addition to the standard coding done by other States, all accidents that occur on interchange ramps are located to the specific interchange ramp on which they occur. (See specifics under later discussion of "Interchange Ramps.")

The mile-posting of all accidents is based on the investigating officer's location-related information and on his/her narrative and sketch. Each officer is instructed to provide a distance to a reference point measured in 0.01 miles in rural areas or feet in urban areas. Unlike other States, the officer attempts to give distances to reference markers in both directions from the point of the crash. All routes on the State system (Interstate, U.S., and State numbered highways) have both regularly spaced reference markers as well as markers on many different objects along the roadway (e.g., bridges, culverts, boundary signs).

In summary, given the reference markers, locations procedures, and coding procedures used, it is believed that the location coding for the *160,000* State-route accidents per year is probably as accurate as would be found in any State in the United States, with more than 90 percent of the urban and rural accidents being located to within 0.01 miles. TO staff estimate that there are problems in location provided by the officers in less

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than 2 percent of the accidents that the staff codes. These are sent back to the police officers for correction.

In addition to the location coding, the TO staff also code additional variables related to fixed objects struck (up to four in sequence), location of collision by lane, and movement and direction of travel prior to collision. These codes are then returned to the CHP along with the location codes and hard copies.

All codes are then keypunched by the CHP and entered into SWITRS. Once keypunched and entered, the complete computer file is sent back to the TO Office for its use. The complete annual file is "closed out" around April of the following year.

The TASAS system retains up to 10 years of accident data. The HSIS system currently contains accident data for *1991-1997.*

The Accident Subfile contains more than 40 variables and approximately *160,000* crash records per year. It contains basic variables describing the overall crash (i.e., time and location, weather, lighting, collision severity, accident type, etc.). The file does not include a "first harmful event" variable or a "most harmful event." It also does not contain speed limit or vehicle damage or point of contact. More specific variables related to contributing factors, object struck, and vehicle movements are included in the Vehicle Subfile.

Although the Accident Subfile does not contain a "sequence of events" variable, the Vehicle Subfile does contain a type of sequence for fixed-object impacts. Here, the CHP coders enter up to four fixed-objects (and their locations) in the order they are struck. One of the fixed-object codes is "rollover," which will allow meaningful analysis of roadside hardware and fixed-object impacts.

The Vehicle Subfile contains more than 30 variables and approximately *320,000* vehicle records per year. It contains information on up to nine vehicles in the crash. *(If more than nine vehicles are in a crash, the additional vehicles are captured in separate accident records that are exactly like the initial record, but 1 second later.)* In addition to the fixed-object sequence, the file contains specific information on vehicle type, an indication of "direction of travel," contributing factors, vehicle maneuvers and pedestrian locations prior to the crash, and the number of injured and killed occupants. As noted above, specific driver information related to injury, restraint use, sex, and physical condition/drug use are extracted from a separate CHP file and attached to this file. (It is noted that approximately 2 percent of the vehicles in the HSIS vehicle file cannot be matched with the supplemental information. This occurs because the TO staff manually enters some city reports and some late CHP reports that are not included in the SWITRS file.) The truck information on the file contains

some detail on the basic configuration - whether van or tanker and how many trailers are being pulled. ***The National Governor's Association (NGA) truck-crash elements are not on the report form or the file, but are now collected by the CHP (not cities) on a supplementary form. These data are submitted to the U.S. DOT's Federal Motor Carriers Safety Administration for its use. (While these data are not part of HSIS, it might be possible to link them with the standard accident report form, and thus to roadway inventory and traffic information, by matching time/date/location items of the supplemental forms.)***

The HSIS Occupant Subfile contains information on up to 70 occupants per crash. As noted above, it is not part of TASAS, but is extracted from the CHP file. It contains information on occupant type, sex, age, seating position, injury class, safety equipment use, and ejection for approximately ***210,000*** occupants per year. Of these, approximately ***150,000*** are injured and uninjured passengers. However, as noted above, information on uninjured passengers is not captured in approximately 50 percent of the minor (non-towaway) crashes. If one passenger is injured, data are captured on all other passengers whether injured or not. Thus, the file is biased to some extent toward more serious (injury-producing) crashes. The remaining 60,000 records concern injured (but not uninjured) drivers. Information on uninjured (and injured) drivers is found in the Vehicle Subfile.

To assess the accuracy of accident variables, we questioned the California DOT TO staff concerning their feelings of variables that were incompletely coded or might be inaccurate, and we examined a series of single-variable tables for key variables in each of the subfiles. The TO staff indicated that virtually all variables on the Accident and Vehicle Subfiles seem to be coded correctly, especially by the CHP. (They do not use the occupant data in the CHP files, and thus have no knowledge of its accuracy.) They do feel that the information concerning whether an accident occurred in a construction zone (which is part of a "road condition" variable) is less than accurate. (On the basis of a recent HSIS staff analysis of work zone accident data in other HSIS and non-HSIS States, this problem is common across almost all States.)

In addition to information received from the TO staff, single-variable tabulations were run to examine the questions of reporting completeness and data accuracy for these accident subfiles. (As noted earlier, single-variable tables for key variables are provided in Volume II of the Guidebook.) Here, study of percentage of "unknown," "not applicable," and "not stated" values for more than 50 key variables indicates that, in general, the data in the Accident and Vehicle Subfiles are coded to a high degree of completeness. With very few

exceptions, these data also appear to be quite consistent across years, and similar variables appear to have similar values. The exceptions are noted under pertinent variables in the later format section.

As noted above, the major exception to this is in terms of completeness and accuracy of the Occupant Subfile data. First, the file contains data that are biased to some extent toward the more severe accidents, since some significant proportion of the uninjured occupants in non-towaway, PDO crashes do not get entered into the file. Second, there are some differences in the type/seating of occupants between the two variables related to *OCC_TYP* (Occupant Type) and SEATPOS (Seating Position). This is due to the fact that the Occupant Type variable combines all uninjured occupants into one code, and that while report forms used by California cities all contain some type of information on drivers, all do not contain a variable on seating position. It is again noted that the most complete information on drivers can be found in the Vehicle Subfile. Other data issues are noted with the specific variable in the later format section.

Except for these Occupant Subfile problems, on the basis of both the interviews and the data comparisons conducted, the majority of the data appear quite accurate.

The Roadway Inventory Files

The California roadway inventory system, taken directly from TASAS, contains current characteristics of the State road system. It is divided into three files within the HSIS system. The first is a basic roadway characteristics file (i.e., the "Roadlog") containing information on the roadway mainline cross section. The second is an Intersection File, which contains information on the characteristics of approximately 20,000 intersections and their approach roadways. The third is an Interchange Ramp File, describing the basic characteristics of more than 14,000 separate ramps of interchanges.

All three inventory files were developed from inventory information originally collected through a series of field surveys and from construction drawings. Updates to the file are now done on a routine basis by the TO inventory staff based on new construction drawings. The only updates that would be missed by the TO staff are new intersections built at the district level when new development (e.g., a shopping center) occurs. These are sometimes reported by the district office and sometimes not. Often, during accident plotting procedures, these come to the attention of the TO staff, who then request information from the district office. In general however, the Operations staff feel that the inventory information is quite accurate.

The Roadlog File

As shown in Table 1 below, the basic Roadlog File contains information on approximately *16,000* miles of mainline (non-ramp) roadway. This includes all functional classes of roads within the State system - Interstate, U.S., and State routes. This file contains information on approximately 2,450 miles of Interstate, 11,000 miles of other primary highway, and 1,700 miles of secondary/county/township roads. California has a higher proportion of freeway mileage than do the other HSIS States, particularly urban freeway. Currently, there are *five* roadway inventory files in the HSIS system, *1993-1997*. Because a new record is generated each time any of the items in the file changes, the sections that are generated are fairly short, resulting in a large number of individual records. The *approximately 15,500* miles of basic inventory information is divided into approximately 50,000 records, resulting in an average section length of 0.3 miles.

The file contains information on route descriptors (including functional class) and general terrain, and cross-section information related to traveled way width, number of lanes, paved and total shoulder width, median type, and other variables. Unlike most State inventories, it also contains information on design speed, special features such as auxiliary lanes, and detailed information on median barriers. The original TASAS file does not contain specific information on the type of shoulder (e.g., earth, sod, gravel, paved). However, California staff note that two variables related to total shoulder width and treated shoulder width can be used to infer whether part or all of a shoulder is paved.

Table 1. HSIS roadway mileage by roadway category (1997 data).

Roadway Category	Mileage
Urban freeways	*2237.24*
Urban freeways < 4 Lanes	*39.37*
Urban multilane divided non-freeways	*724.89*
Urban multilane undivided non-freeways	*178.79*
Urban 2 lane highways	

	622.85
Rural freeways	*1847.03*
Rural freeways < 4 Ins	*94.81*
Rural multilane divided non-freeways	*605.20*
Rural multilane undivided non-freeways	*407.74*
Rural 2 lane highways	*8491.00*
Other	*210.46*
Total	*15459.37*

The original TASAS file contains groups of variables for "right roadbed" and "left roadbed." Since the definition of each type of roadbed can change depending on whether or not the roadway is divided, the data have been converted to more standard HSIS definitions. After conversion (and as in other HSIS States), "Road 1" is either the full roadway for undivided sections, or the right-hand roadway in the direction of inventory for divided sections. "Road 2" only exists for divided roadways, and is the left-hand roadway in the direction of inventory. There are a few variables that were left in the original "roadbed" format (e.g., right and left roadbed "special features"). These are noted in the format section of this Guidebook.

Traffic information in the form of Average Daily Traffic is included for each section, along with Daily Vehicle Miles of travel. ***Truck percentages are not included in the basic inventory file. However, for 1996 and later, TO staff responsible for traffic counts have published truck counts and percentages on the web. HSIS staff have extracted these data and added them to the Roadlog File for each roadway section where possible. A detailed description of the basis for these traffic variables is included below in "Traffic Information in the Roadway Inventory Files."***

Finally, unlike most States, the California Roadlog File contains some information concerning changes that occurred to the roadway elements. With some programming, this should allow "before/after" analysis for specific roadway changes. Unlike the Washington State HSIS file, this is not a "date of last change" for each

variable. Instead, using a "history indicator" flag and an "effective date" variable, one can determine whether a change has occurred since the preceding year within a group of variables. These flag and date variables exist for groups of variables related to the access control, AADT, median, right roadbed, and left roadbed. To determine the specific variable that changed, and the change in that variable, one must compare the current group of variables with the same group in the preceding year's file. (As noted in the format section under these flag and date variables, this is somewhat difficult to do since the roadbed designations for most variables except for these "history" variables have now been converted to the more conventional "Road 1/Road 2" definitions.) It is also noted that both the history indicator and the effective-date variable must be used in identifying changes. The history indicator variable will remain "on" after the first change, and thus will not indicate whether a subsequent change has occurred. However, the effective date will indicate when the current roadway characteristics became "open to traffic."

To assess the accuracy of roadway inventory variables in this Roadlog File and the related files concerning intersections and ramps, we again questioned the California DOT TO staff and examined a series of single-variable tables for key variables in each of the files. The TO staff feel that the overall quality of the variables in all three files is very high. As noted above, the information in the files is updated in an ongoing effort based on construction plans and maintenance effort reports.

In addition to information received from the TO staff, single-variable tabulations were run to examine the questions of reporting completeness and data accuracy. (Again, single-variable tables for key variables are provided in Volume II of the Guidebook.) Here, study of percentage of "unknown," "not applicable," and "not stated" values for more than 40 key variables in the Roadlog File indicate that, in general, the data are coded to a high degree of completeness. For most variables, there was no missing data. The data also appear to be quite consistent across years, and similar variables appear to have similar values.

In general, from the interviews and the data comparisons conducted, the data appear quite accurate. In the limited number of cases where possible inaccuracies were found or where more detailed definitions might be critical in future analyses, they are noted in the later formats section under the specific variables.

Two new variables, RODWYCLS and MVMT, have been created by HSIS staff in the roadway segment file of each of the HSIS States. For California, both are included in the ROADLOG File, and RODWYCLS is also included in the Accident File. The RODWYCLS (Roadway Class) variable

is based on the combination of rural/urban, access control, number of lanes, and median type variables. This variable classifies each roadway segment into one of 10 roadway types described in the later "Format" section. The MVMT variable (Million Vehicle Miles of Travel) is calculated for each segment in the roadway file by multiplying the segment length, AADT and 365 days in a year, and dividing by one million. Both these variables were created in response to inquires from data users, whose most frequent questions have concerned either crash frequencies or rates (per MVMT) for one or more of these roadway classes. Frequency distributions of selected crash variables by RODWYCLS for the latest year of the data are also included in Volume II of each State's Guidebook.

The Intersection File

As noted earlier, intersection-related information for approximately 20,000 intersections has been extracted from the TASAS roadway inventory file and placed in a separate HSIS Intersection File. This file contains more detail on intersections than do most State inventory files, describing both the mainline route and the intersecting route. *Unlike intersection files from other States, which contain "conventional" intersections where two major roads cross each other, California intersection data includes both these conventional intersections plus other non-standard "intersections" such as junctions at campgrounds, parks, forest service roads, etc. A new variable called JUNCTYPE is currently being created based on the intersection description and the traffic control device variables to more clearly define the different intersection types in the file. (See "Intersection Format" section.) JUNCTYPE equal to '1' would restrict the data to the more conventional intersections.*

In the development of this file, the original TASAS roadway record was used to generate an intersection record each time a State route crosses either a State or non-State route. Thus, during the development process, two (duplicate) records would be generated each time two State routes crossed. (Only one record would be generated when a State route crossed a non-State route since the non-State route would not be inventoried in the roadway file.) A given State route would appear as "mainline" in one of these records, and as "intersecting street" in the second record. To reduce computer storage requirements, the original TASAS file only carries the full set of intersection variables on the record with the lower route number. For example, for an intersection of US 100 with California State Route 2, the data would be retained on the record in which CA 2 was the mainline. The

higher number route record would only contain reference data pointing to the other record. For ease of use in the HSIS file, these higher-numbered route records have been deleted from the file. The intersecting route can still be matched with other files since the location (milepost) information is retained on the intersection record, along with the mainline location information.

For each intersection record, specific inventory variables for the mainline include variables related to intersection type, whether the mainline is divided or undivided, traffic control type (with information on whether the signals are semi-actuated or fixed time), intersection lighting, presence of signal mastarm, the presence of left-turn channelization, the presence of right-turn channelization, the type of traffic flow (e.g., two way versus one way with left turns permitted or not permitted), the number of through lanes, and the mainline AADT. It is noted that the channelization and traffic flow information is in the record only once for the mainline (and once for the intersecting street), meaning that the incoming and outgoing legs of each roadway are assumed identical with respect to these variables. In addition to the general information and the information on the mainline legs, cross-street variables include information on the traffic signal mastarms, left and right turn channelization, type of traffic flow, AADT and the number of through lanes.

Finally, as with inventory variables on the Roadlog File, there are a series of "history" and "effective date" variables that will help the analyst determine whether a change has occurred to the intersection in the past year. There are separate history variables for the entire intersection, traffic control, and lighting, and separate history variables for mainline and cross street AADT, and for the groups of variables describing the mainline and cross street (including channelization, mastarm, and traffic flow type). Again, as discussed above, both variables must be used in determining when a change has occurred.

In terms of data accuracy and completeness, examination of tables for the 20 key variables in the file indicate very little missing data (i.e., less than 4 percent for any variable, and no missing data for most variables). The values for all variables appear logical, and no problems were indicated by California TO staff.

The Interchange Ramp File

As with the intersection data, information on approximately 14,000 ramps has been extracted from the TASAS roadway inventory file and placed in a separate HSIS Interchange Ramp File. It is noted there is no "unifying number" that would allow one to group ramps that would be in the same interchange. Thus, an analysis can be done on a ramp basis rather than interchange basis. It is estimated that these 14,000 ramps represent approximately 3,000 interchanges statewide.

Specific variables on the file include the general type of ramp (on or off), the basic ramp design (e.g., diamond, direct, slip, loop, etc.), the AADT on the ramp, whether a median is present on the roadway where the ramp begins, and whether the crossroad on which the ramp terminates is a State or non-State ("area 4") route. Again, a separate pair of history variables are present for both the general descriptive information and for the AADT information.

For reference purposes, only one milepost is provided for each ramp (i.e., not "begin" and "end" mileposts as provided for non-ramp highway segments). This ramp milepost is the same as the mainline milepost at the "nose" of the ramp - the point where the ramp joins the mainline highway. Thus, for exit-ramps, it is the upstream end of the ramp (where the ramp leaves the freeway), and for entrance-ramps, it is the point where the ramp joins the freeway. Coding of crashes to ramps will be discussed in the later sections concerning "File Linkage."

In terms of completeness and accuracy, examination of tables for the five key variables in the file indicate missing data in less than 1 percent of the records. Values appear logical, and no problems were indicated by California TO staff.

<u>Traffic Information in the Roadway Inventory Files</u>

<u>AADT data.</u> As indicated in the preceding three sections, all three inventory files contain AADT information. In addition, the Roadlog File contains information on Daily Vehicle Miles, which is computed as the product of the section length and section AADT estimate. ***As described at the end of this section, truck count data have been added to the files beginning with the 1996 data.***

In California, the 12 district offices have the responsibility of collecting traffic data and developing the AADT estimates for each road section within their district. TO, in the CALTRANS central office, oversees the operation and attempts to maintain consistency in the methods and data across all districts as much as possible. If requested, TO personnel will assist a district in calculating the AADT estimates. The Division also maintains all count data on an on-line computer file for the districts' use.

There are approximately ***2,400*** permanent count stations on mainline highways operated by CALTRANS in California. Of these, approximately ***600*** are permanent, continuous counting control stations that operate continuously each day in a given year. Every major State-administered route is counted each year. The 600 permanent continuous count stations form a network that covers all major routes. The remaining control stations are permanent, quarterly counting control stations, i.e., in-pavement loops to which a counter/recorder device is attached for 7 to 14 days during each quarter. CALTRANS also collects count data at approximately ***600*** of these quarterly counting control stations once every 3 years. In a given year, there are approximately ***1,200*** permanent quarterly counting stations where count data are not collected. California has determined that the AADT estimates that are derived from the simple average of the four (unadjusted) quarterly counts do indeed account for seasonal fluctuations without further adjustment based on nearby permanent counters. Consequently, there are no additional adjustments or corrections applied to the AADTs estimated from the quarterly counts.

In addition to the permanent control stations, approximately ***1,700*** coverage counts are collected annually. The intent is to collect coverage counts on a 3-year cycle (for a total of approximately ***5,000*** coverage counts), although conditions may force longer intervals in certain districts at times. A coverage count is basically a 24-hour to 1-week count.

Coverage counts are expanded to AADT estimates using factors derived from the combined continuous counts and quarterly count data. For road sections that are not counted in a given year, it is the responsibility of the districts to develop these AADT estimates. In some cases, the districts reply on overall traffic growth trends

within the district. However, in most cases, the AADT assigned to the section is developed by studying the traffic growth in counts falling on each side of the section.

It is also noted that 24-hour to 1-week coverage counts are collected on approximately 3,200 on- and off-ramps per year. These ramp counts are manipulated through ramp balancing to reflect continuity of flow on mainline freeways.

Finally, "13-bin" vehicle classification data are collected at approximately *150* permanent stations and *70* weigh-in-motion stations across the State. Additional classification counts are collected on an as-requested basis, typically at locations where traffic count data are being collected. Since this is district-based, there is no reliable estimate on how many additional classification counts are collected across all 12 districts per year. The *70* weigh-in-motion stations also provide speed data.

Truck count data. *As noted above, CALTRANS TO staff responsible for traffic counts have published truck counts and percentages on the web. HSIS staff have extracted these data and added them to the Roadlog File for each roadway section where possible. A detailed description of the data can be found at the CALTRANS web site at http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm.*

Truck counting is done throughout the State in a program of continuous truck count sampling. As noted above, these "13-bin" sample counts are conducted at 150 permanent stations and 70 weigh-in-motion stations. The sampling includes partial day, 24-hour, 7-day, and continuous vehicle classification counts. The partial day and 24-hour counts are usually made on high-volume, urban highways. The 7-day counts are made on low-volume, rural highways. The counts are usually taken only once in the year, and approximately one-sixth of the locations are counted annually. As indicated above, 70 locations were continuously monitored using weigh-in-motion equipment. The resulting counts are adjusted to an estimate of annual average daily truck traffic by compensating for seasonal influence, weekly variation, and other variables that may be present. It is noted that at many of the count locations, which are often intersections of major routes, two counts would be made - one on the upstream and one on the downstream side of the intersection (in the direction of roadway inventory).

For each count location, the data include a "Verification/Estimation Year" when there is

either an actual count, or some other information that provides what TO staff consider to be an accurate estimate of truck counts. In years between these actual counts or "estimates," the truck data at a given station are adjusted based on changes in total AADT - i.e., the truck counts are changed proportional to changes in AADT for that location.

Because there are only limited locations where truck count data are actually collected, in order to provide truck information for each of the large number of highway segments in the HSIS California Roadlog File, these point counts had to be extrapolated to other roadway segments. Based on conversation with TO staff, the most logical manner of extrapolation was to "carry-forward" a set of truck counts on a route (from lower to higher mileposts) across all Roadlog sections until a section containing a new count station is reached. That new count is then carried forward to the Roadlog section on that route containing the next count station, etc. As noted above, since both a "before-intersection" and an "after-intersection" truck count is often made, the bias in this extrapolation is that the "after-intersection" counts will be applied to more Roadlog sections than the "before-intersection" counts. The latter may only be applied to one section, since the count may then be changed by the "after-intersection" count at the same location. While we know this is a bias, the TO staff indicated that they did not know of a more unbiased method for the extrapolation. In some limited cases, there are multiple counts within the same Roadlog section. These counts are averaged for that section, but the final (downstream) count is the one "carried forward."

As expected, this limited number of count locations did not cover all routes or all sections on every route (e.g., sections prior to the initial count on a route contain no truck information). However, using the "carry forward" extrapolation method, truck data have now been attached to approximately 90 percent of the Roadlog mileage.

As is seen in the later "Format" section of this Guidebook, truck count variables attached to the Roadlog segments include total truck counts, counts for trucks with two axles (and dual rear tires), three axles, four axles, and trucks with five or more axles. In addition, a "flag" variable has been attached that defines the Roadlog sections where actual counts/verified estimates are made. For the researcher who wishes to work with the original web-based data, HSIS staff are retaining a separate file that can link each of the "flagged sections" with the original web-based information

concerning the base-year in which a count (or verified estimate) was made, and whether the data in that year was a count or a verified estimate. Contact the HSIS staff for more details of this file and file linkage procedures.

In summary, as in other States, the truck count data in California are relatively limited, and significant extrapolation is necessary to provide estimates of data for a large sample of Roadlog sections. Truck volumes on "non-count" years are allowed to vary with changes in total AADT, which may or may not be a good assumption (but no other assumption appears more rational). However, unlike other States, the data provided are more than just a total "truck percentage" - they represent estimates of counts for various axle combinations.

Issues Related to Developing and Merging Files

As noted above, the accident data are subdivided into three subfiles - accident, vehicle, and occupant. The Accident and Vehicle Subfiles can be linked together using the accident report number (i.e., CASENO). When linking the occupant subfile, the additional linking variable related to vehicle number (i.e., VEHNO) must match so that the occupants are associated with the vehicle in which they were traveling. To link vehicles with accidents, first sort both subfiles by CASENO. To link the Occupant file with the other two subfiles, first sort both the Vehicle subfile and Occupant subfile by case number and vehicle number. Next sort the Accident subfile by case number. Alternatively, the separate subfiles can be linked by specifying an SQL JOIN operation with the constraining condition that case number and vehicle number from each table are equal. SQL processing does not require the data to be pre-sorted and the output will not be in any particular sort order unless ORDER BY is specified.

The Accident Subfile can be linked to the Roadlog File using the CNTY_RTE and MILEPOST variables in the crash record, and the CNTYRTE, BEGMP, and ENDMP variables in the Roadlog File. Similarly, the Accident Subfiles can be linked to Intersection and Interchange Ramp Files using the two variables related to county/route (i.e., CNTY_RTE in the Accident Subfiles or CNTYRTE in the Interchange Ramp files) and MILEPOST. *If the researcher is only interested in "mainline" crashes (i.e., non-ramp/non-intersection crashes), then INT_RMP variable should be screened for "Mainline Crashes" before matching with the roadway segment.*

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To prepare the Accident Subfile for linking with the Roadlog File using a SAS data step process, the analyst must sort both the Accident and the Roadway File into location order by CNTY_RTE and MILEPOST on the Accident file and by CNTYRTE and BEGMP on the Roadlog File. Similar sorts would be done with other files to be merged. For the alternative SQL join, the analyst must specify an exact match on CNTYRTE and a range match where MILEPOST occurs between BEGMP and ENDMP. (Programs to accomplish this merging and division are available from HSIS staff at FHWA.)

The ramp accidents (INT_RMP = '1', '2', '3', '4') can be linked to the ramp file by CNTY_RTE and MILEPOST of the accidents and CNTYRTE and MILEPOST of the ramps. Each of the ramp accidents will have the same milepost as the ramp. (As described above, this milepost actually represents the nose of the ramp, but all accidents occurring on the ramp will be given that same milepost.) If an accident occurs in the speed change lane prior to the gore area, it is coded to the mainline rather than the ramp. If after the gore and prior to the ramp terminal, it is coded to the ramp. If the ramp terminal is an intersection (as in a diamond interchange), and the accident occurs in the crossroad/ramp intersection or is near enough to be judged as being affected by the ramp terminal (usually 46m [150 ft]), there are two different ways of locating the crash depending on the type of crossroad. If the crossroad is a State route, then the crash is coded to the State route. If, on the other hand, the crossroad is non-State route, the accident is coded to the ramp, but is designated in the accident file under INT_RMP ("Intersection/Ramp accident location") to be a "ramp area, intersecting street" location. This is referred to as "area 4" by California staff. As noted above, there is also a code on the Interchange Ramp File defining whether an "area 4" exists for a given ramp (i.e., whether the crossroad is a non-State route.) For non-State routes, "area 4" would also include any crashes occurring between the two ramp terminals (i.e., on or near the overpass).

Finally, where appropriate and possible, a format that defines categories within a given variable has been developed for HSIS SAS variables. These categories are shown in the pages below. If you are an SAS user and wish to receive a formatting program that includes these SAS formats (with linkage to the pertinent variable name), please request these from the HSIS staff who provide the data file to you.

CALIFORNIA CONTACTS

__State Liaison__ -- Janice Benton (916-654-7271) -- Ms. Benton is our main contact in the California DOT when questions arise concerning the California data files in general. She is the Manager of the Accident Surveillance and Coding Branch of the CALDOT Division of Traffic Operations, and is the primary custodian of the TASAS system. She should be the first contact on all questions related to all accident and roadway inventory files.

__Traffic Counts__ -- Joe Avis (916-654-3072) -- Mr. Avis is the traffic count specialist within the Division of Traffic Operations. He is responsible for headquarters coordination and storage of the traffic counts collected by the district offices, and forwards the AADT to Ms. Benton for inclusion in TASAS.

__California Highway Patrol Accident Data__ -- Bev Christ (916-375-2850) -- Ms. Christ is the Governmental Program Analyst with the California State Highway Patrol. She works with the SWITRS data which is the basis for the HSIS driver information in the Vehicle Subfile and the Occupant Subfile. She can answer questions related to these data and to the overall nature of data collection by the State Highway Patrol and city agencies. (However, accident-related questions should be posed to Ms. Benton first, as our main point of contact.)

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
AADT	AADT	Road	NUM	I-65	II-141
ACC_DATE	DATE OF ACCIDENT -YMD	Accident	CHA(8)	I-31	
ACC_DTE	ACCESS CONTROL DATE	Road	CHA(8)	I-65	
ACC_HIST	ACCESS CONTROL HISTORY	Road	CHA(1)	I-65	
ACCESS	ACCESS CONTROL	Road	CHA(1)	I-65	II-143
ACCTYPE	TYPE-OF-COLLISION	Accident	CHA(1)	I-31	II-3
ACCYR	COLLISION ACCYR	Accident	CHA(4)	I-31	
ACCYR	COLLISION ACCYR	Vehicle	CHA(4)	I-45	
ACCYR	COLLISION ACCYR	Occupant	CHA(4)	I-59	
ADT_DTE	ADT DATE	Road	CHA(8)	I-65	
ADT_DVM	DAILY VEHICLE MILES(DVM)	Road	NUM	I-66	
ADT_HST	ADT HISTORY	Road	CHA(1)	I-66	
ADT_MSG	ALPHA MESSAGE	Road	CHA(4)	I-66	
ADT_STUS	ADT STATUS PROFILE	Road	CHA(1)	I-66	II-144
AGE	OCCUPANT AGE	Occupant	NUM	I-59	II-127
AREA4	RAMP AREA 4 INDICATOR	Ramp	CHA(1)	I-99	II-245
BEGMP	POSTMILE-BEGMP	Road	NUM	I-66	
CASENO	UNIQUE ACCIDENT CASEO	Accident	CHA(21)	I-31	
CASENO	UNIQUE ACCIDENT CASEO	Vehicle	CHA(21)	I-45	
CASENO	UNIQUE ACCIDENT CASEO	Occupant	CHA(21)	I-59	
CAUSE1	PRIMARY COL FACTOR	Accident	CHA(1)	I-31	
CAUSHPAL	COLL FACTOR ALPHA (CHP)	Accident	CHA(1)	I-32	
CAUSHPCD	COLL FACTOR CODING (CHP)	Accident	CHA(5)	I-32	
CAUSHPCT	COLL FACTOR CATEGORY (CHP)	Accident	CHA(2)	I-32	
CAUSHPLG	COLL FACTOR LEGAL CODE (CHP)	Accident	CHA(1)	I-33	
CAUSHPSB	COLL FACTOR CODE SUBSECTION (CHP)	Accident	CHA(1)	I-33	
CITY	CITY	Road	CHA(2)	I-66	
CNTY_RTE	COUNTY ROUTE	Accident	CHA(10)	I-33	
CNTYRTE	ROAD COUNTY ROUTE	Road	CHA(10)	I-66	
CNTYRTE	INTERSECTION COUNTY ROUTE	Intersection	CHA(9)	I-85	
CNTYRTE	RAMP COUNTY ROUTE	Ramp	CHA(10)	I-99	
CONTRIB1	FIRST ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	II-61
CONTRIB2	SECOND ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	II-64
CONTRIB3	THIRD ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	
COUNTY	COUNTY	Accident	CHA(2)	I-34	II-5
COUNTY	COUNTY	Road	CHA(2)	I-66	II-145
COUNTY	COUNTY	Intersection	CHA(2)	I-85	II-207
CURB1	CURB AND LANDSCAPE	Road	CHA(1)	I-68	II-153
DES_NBR	ROAD DESC NUMBER	Road	CHA(1)	I-68	
DESG_SPD	DESIGN SPEED	Road	CHA(1)	I-68	II-154
DIR_TRVL	DIRECTION OF TRAVEL	Vehicle	CHA(1)	I-46	II-66
DISTANCE	DISTANCE	Accident	CHA(5)	I-34	

COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
DISTRICT	DISTRICT	Accident	CHA(2)	I-35	
DISTRICT	DISTRICT	Road	CHA(2)	I-68	
DISTRICT	DISTRICT	Intersection	CHA(2)	I-85	II-215
DIVIDED	DIVIDED HIGHWAY	Road	NUM	I-69	II-156
DRV_AGE	DRIVER AGE	Vehicle	NUM	I-46	II-67
DRV_INJ	DRIVER EXTENT OF INJURY	Vehicle	CHA(1)	I-46	II-70
DRV_SEX	DRIVER SEX	Vehicle	CHA(1)	I-46	II-71
EJECT	EJECTED FROM VEHICLE	Occupant	CHA(1)	I-60	II-130
ENDMP	POSTMILE + SEG_LNG	Road	NUM	I-69	
FAULT	VEHICLE AT FAULT	Accident	CHA(2)	I-35	II-13
FEAT_LF	LEFT RDBD SPECIAL FEATURE	Road	CHA(1)	I-69	II-157
FEAT_RG	RIGHT RDBD SPECIAL FEATURE	Road	CHA(1)	I-69	II-159
FED_AID	FEDERAL AID (IN LIEU)	Road	CHA(1)	I-70	II-161
FED_PREF	FEDERAL AID RTE PREFIX	Road	CHA(1)	I-70	II-162
FED_RTE	FEDERAL AID RTE	Road	CHA(3)	I-70	
FILETYP	FILE TYPE	Accident	CHA(1)	I-35	
FILETYP	FILE TYPE	Road	CHA(1)	I-70	
FUNC_CLS	FUNCTIONAL CLASS	Road	CHA(1)	I-70	II-163
HAZMAT	HAZARDOUS MATERIAL	Vehicle	CHA(1)	I-47	II-72
HIST_ADD	HISTORY ELEMENTS RELATIVE ADDR	Road	NUM	I-71	
HIT_RUN	HIT AND RUN	Accident	CHA(1)	I-35	II-15
HOUR	TIME OF ACCIDENT	Accident	CHA(4)	I-36	II-16
HWY_GRP	HIGHWAY GROUP	Accident	CHA(1)	I-36	
HWY_GRP	HIGHWAY GROUP	Road	CHA(1)	I-71	II-164
HWY_GRP	HIGHWAY GROUP	Intersection	CHA(1)	I-85	II-217
HWY_GRP	HIGHWAY GROUP	Ramp	CHA(1)	I-99	
INJ	DRV/OCC INJURY	Occupant	CHA(1)	I-60	II-131
INS_OTS	INSIDE OUTSIDE CITY	Road	CHA(1)	I-71	II-165
INT_ADDR	HISTORY ELEMENTS RELATIVE ADDR	Intersection	NUM	I-86	
INT_DESC	INTERSECTION DESCRIPTION	Intersection	CHA(23)	I-86	
INT_DTE	INTERSECTION EFFECTIVE DATE	Intersection	CHA(6)	I-86	
INT_HST	INTERSECTION TYPE HISTORY	Intersection	CHA(1)	I-86	
INT_PRF	INTERSECTING RTE PREFIX	Intersection	CHA(1)	I-86	
INT_RMP	INTS/RAMP ACC LOCATION	Accident	CHA(1)	I-36	II-20
INT_RSUF	INTERSECTING RTE SUFFIX	Intersection	CHA(1)	I-86	
INT_RTE	INTERSECTING RTE NBR	Intersection	CHA(3)	I-86	
INT_SEQ	INTERSECTING RTE ORDER SEQ NBR	Intersection	NUM	I-87	
INTOX	ALCOHOL INVOLVED	Vehicle	CHA(1)	I-47	II-73
INTY_RTE	INTERSECTION COUNTY ROUTE	Intersection	CHA(9)	I-86	

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JUR_TYPE    JURISDICTION TYPE          Accident    CHA(1)  I-37
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<u>COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES</u>

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
LANEWID	AVERAGE LANE WIDTH	Road	NUM	I-71	II-166
LGHT_DTE	INTERSECTION LIGHT TYPE DATE	Intersection	CHA(6)	I-87	
LGHT_HST	INTERSECTION LIGHT TYPE HISTORY	Intersection	CHA(1)	I-87	
LGHT_TYP	INTERSECTION LIGHT TYPE	Intersection	CHA(1)	I-87	II-218
LIGHT	LIGHT CONDITION	Accident	CHA(1)	I-37	II-21
LOC_TYP1	FIRST COLL LOCATION	Vehicle	CHA(1)	I-47	II-74
LOC_TYP2	SECOND COLL LOCATION	Vehicle	CHA(1)	I-47	II-76
LOC_TYP3	THIRD COLL LOCATION	Vehicle	CHA(1)	I-47	II-78
LOC_TYP4	FOURTH COLL LOCATION	Vehicle	CHA(1)	I-47	II-80
LOG_ERR	LOG ERROR INDICATOR	Intersection	CHA(1)	I-87	
LSHL_WD2	LEFT SHOULDER WIDTH RD2	Road	NUM	I-72	II-169
LSHLDWID	LEFT SHOULDER WIDTH RD1	Road	NUM	I-72	II-168
LTRD_DTE	LEFT ROADBED DATE	Road	CHA(8)	I-72	
LTRD_HST	LEFT ROADBED HISTORY	Road	CHA(1)	I-72	
MAKE	VEHICLE MAKE	Vehicle	CHA(2)	I-48	
MED_DTE	RAMP MEDIAN DATE	Road	CHA(8)	I-73	
MED_DTE	RAMP MEDIAN DATE	Intersection	CHA(6)	I-87	
MED_DTE	RAMP MEDIAN DATE	Ramp	CHA(8)	I-100	
MED_HIST	MEDIAN HISTORY	Road	CHA(1)	I-73	
MED_HIST	MEDIAN HISTORY	Intersection	CHA(1)	I-88	
MED_HST	RAMP MEDIAN HISTORY	Ramp	CHA(1)	I-100	
MED_IND	RAMP MEDIAN INDICATOR	Intersection	CHA(1)	I-88	II-219
MED_IND	RAMP MEDIAN INDICATOR	Ramp	CHA(1)	I-100	II-246
MED_TYPE	MEDIAN TYPE	Road	CHA(1)	I-73	II-170
MED_VAR	MEDIAN VARIANCE	Road	CHA(1)	I-74	II-173
MEDBARTY	MEDIAN BARRIER TYPE	Road	CHA(1)	I-72	II-174
MEDWID	MEDIAN WIDTH	Road	NUM	I-73	II-177
MILEPOST	RAMP MILEPOST	Accident	NUM	I-37	
MILEPOST	RAMP MILEPOST	Intersection	NUM	I-88	
MILEPOST	RAMP MILEPOST	Ramp	NUM	I-100	
MISCACT1	MOVEMENT PRECEDING COLL	Vehicle	CHA(1)	I-49	II-82
ML_AADT	MAINLINE AADT	Intersection	NUM	I-88	II-220
ML_ADTDT	MAINLINE ADT DATE	Intersection	CHA(6)	I-88	
ML_ADTHS	MAINLINE ADT HISTORY	Intersection	CHA(1)	I-88	
ML_DATE	MAINLINE HISTORY DATE	Intersection	CHA(6)	I-88	
ML_HIST	MAINLINE HISTORY	Intersection	CHA(1)	I-89	
ML_LANES	MAINLINE NUMBER OF LANES	Intersection	CHA(1)	I-89	II-222
ML_LEFT	MAINLINE LEFT	Intersection	CHA(1)	I-89	II-224

TURN CHANNELIZATION

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COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
ML_LNGT	MAINLINE SECTION LENGTH	Intersection	CHA(3)	I-89	
ML_MAST	MAINLINE SIGNAL MASTARM	Intersection	CHA(1)	I-89	
ML_RIGHT	MAINLINE RIGHT TURN CHANNELIZATION	Intersection	CHA(1)	I-90	II-225
ML_TRFLO	MAINLINE TRAFFIC FLOW	Intersection	CHA(1)	I-90	II-226
MVMT	MILLION VEHICLE MILES TRAVELED	Road	NUM	I-74	
NA_MILE	NON-ADD MILEAGE	Road	CHA(1)	I-74	
NAT_LND	NATIONAL LANDS	Road	CHA(1)	I-74	II-178
NO_LANE1	NUMBER OF LANES RD1	Road	NUM	I-75	II-179
NO_LANE2	NUMBER OF LANES RD2	Road	NUM	I-75	II-180
NO_LANES	TOTAL NUMBER OF LANES	Road	NUM	I-75	II-181
NUM_INJ	TOTAL NUMBER INJURED	Vehicle	CHA(2)	I-49	II-86
NUM_KILL	TOTAL NUMBER KILLED	Vehicle	CHA(2)	I-50	II-87
NUM_OCCS	OCCUPANTS	Accident	NUM	I-37	II-22
NUMVEHS	TOT-NBR-VEHICLES	Accident	CHA(2)	I-37	II-23
OBJECT1	FIRST OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-88
OBJECT2	SECOND OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-94
OBJECT3	THIRD OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-100
OBJECT4	FOURTH OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-105
OCC_TYP	OCCUPANT TYPE	Occupant	CHA(1)	I-60	II-132
OCCNUM	OCCUPANT NUMBER	Occupant	NUM	I-60	
ON_OFFRP	ON/OFF RAMP INDICATOR	Ramp	CHA(1)	I-100	II-247
PART_TYP	PARTY TYPE	Vehicle	CHA(1)	I-51	
PAV_WDL	LEFT PAVED SHLD WDTH RD1	Road	NUM	I-75	II-182
PAV_WDL2	LEFT PAVED SHLD WIDTH RD2	Road	NUM	I-75	II-183
PAV_WDR2	RIGHT PAVED SHLD WIDTH RD2	Road	NUM	I-75	II-184
PAV_WIDR	RIGHT PAVED SHLD WDTH RD1	Road	NUM	I-75	II-185
PHYSCOND	DRIVER PHYSICAL CONDITION	Vehicle	CHA(1)	I-51	II-110
POP_GRP	POPULATION GROUP = (CITY/RURAL GROUP)	Accident	CHA(1)	I-38	
PSMILPRF	POSTMILE PREFIX	Accident	CHA(1)	I-38	
PSMILPRF	POSTMILE PREFIX	Road	CHA(1)	I-75	II-186
PSMILPRF	POSTMILE PREFIX	Intersection	CHA(1)	I-91	II-227
PSMILSUF	POSTMILE SUFFIX	Accident	CHA(1)	I-38	
PSMILSUF	POSTMILE SUFFIX	Road	CHA(1)	I-76	II-188
PSMILSUF	POSTMILE SUFFIX	Intersection	CHA(1)	I-91	II-228
RD_DATE	ROAD DATE	Road	CHA(8)	I-76	

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RD_DEF1      ROADWAY CONDITION      Accident      CHA(1)  I-39    II-24
RD_DEF2      ROAD CONDITION 2       Accident      CHA(1)  I-39    II-26
RD_DEF3      ROAD CONDITION 3       Accident      CHA(1)  I-39
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COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
RD_DESC	ROAD DESCRIPTION	Road	CHA(25)	I-76	
RDSURF	ROAD-SURFACE	Accident	CHA(1)	I-39	II-28
RECTYPE	RECORD TYPE	Road	CHA(1)	I-76	
RECTYPE	RECORD TYPE	Intersection	CHA(1)	I-91	
RECTYPE	RECORD TYPE	Ramp	CHA(1)	I-100	
REST1	SAFETY EQUIPMENT	Occupant	CHA(1)	I-61	II-133
RGRD_DTE	RIGHT ROADBED DATE	Road	CHA(8)	I-76	
RGRD_HSR	RIGHT ROADBED HISTORY	Road	CHA(1)	I-77	
RMADTDTE	RAMP ADT DATE	Ramp	CHA(8)	I-100	
RMADTHST	RAMP ADT HISTORY	Ramp	CHA(1)	I-100	
RMP_ADT	RAMP AADT	Ramp	NUM	I-101	II-248
RMP_DTE	RAMP TYPE DATE	Ramp	CHA(8)	I-101	
RMP_HST	RAMP HISTORY	Ramp	CHA(1)	I-101	
RMP_SEQ	RAMP SEQUENCE NUMBER	Ramp	NUM	I-101	
RMP_TYPE	RAMP TYPE	Ramp	CHA(1)	I-102	II-250
RO_SEQ	ROUTE ORDER SEQUENCE	Road	NUM	I-77	
RO_SEQ	ROUTE ORDER SEQUENCE	Intersection	NUM	I-91	
RODWYCLS	ROADWAY CLASSIFICATION	Accident	CHA(2)	I-39	II-29
RODWYCLS	ROADWAY CLASSIFICATION	Road	CHA(2)	I-77	II-189
RPT_LEV	ACCIDENT REPORT LEVEL	Accident	CHA(1)	I-40	
RSHL_WD2	RIGHT SHOULDER WIDTH RD2	Road	NUM	I-77	II-191
RSHLDWID	RIGHT SHOULDER WIDTH RD1	Road	NUM	I-77	II-192
RTE_NBR	RDWAY ROUTE NUMBER	Accident	CHA(3)	I-40	
RTE_NBR	RDWAY ROUTE NUMBER	Road	CHA(3)	I-77	
RTE_NBR	RDWAY ROUTE NUMBER	Intersection	CHA(3)	I-91	
RTE_SUF	RDWAY ROUTE SUFFIX	Accident	CHA(1)	I-40	II-31
RTE_SUF	RDWAY ROUTE SUFFIX	Road	CHA(1)	I-78	II-193
RTE_SUF	RDWAY ROUTE SUFFIX	Intersection	CHA(1)	I-91	II-229
RTE_TYPE	HIGHWAY TYPE INDICATOR	Vehicle	CHA(1)	I-52	
RU_IO	RURAL/URBAN INSIDE OUTSIDE CITY	Road	CHA(1)	I-78	II-194
RURURB	RURAL URBAN	Road	CHA(1)	I-78	II-196
SCN_FRWY	SCENIC FREEWAY	Road	CHA(1)	I-79	II-197
SDE_HWY	SIDE-OF-HIGHWAY	Accident	CHA(1)	I-40	II-32
SEATPOS	SEATING POSTION	Occupant	CHA(1)	I-62	II-136
SEG_LNG	SECTION LENGTH	Road	NUM	I-79	

SEVERITY	COLLISION SEVERITY	Accident	CHA(1)	I-40	II-33
SEX	OCCUPANT SEX	Occupant	CHA(1)	I-62	II-137

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COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
SOB_TEST	FIRST SOBRIETY/CONDITION	Vehicle	CHA(1)	I-52	II-111
SOB_TST2	SECOND SOBRIETY/CONDITION	Vehicle	CHA(1)	I-52	II-112
SURF_TY2	SURFACE TYPE RD2	Road	CHA(1)	I-79	II-199
SURF_TYP	SURFACE TYPE RD1	Road	CHA(1)	I-79	II-198
SURF_WD2	TRAVELED-WAY WIDTH RD2	Road	NUM	I-80	II-202
SURF_WID	TRAVELED-WAY WIDTH RD1	Road	NUM	I-80	II-201
TERRAIN	TERRAIN	Road	CHA(1)	I-80	II-203
TOLL	TOLL AND FOREST RDS	Road	CHA(1)	I-80	II-204
TOT_INJ	OCCUPANTS INJURED	Accident	NUM	I-41	II-34
TOT_KILL	OCCUPANTS KILLED	Accident	NUM	I-41	II-35
TOWAWAY	INJURY, FATAL, OR TOWAWAY?	Accident	CHA(1)	I-41	II-36
TRF_CNTL	TRAFFIC CONTROL TYPE	Intersection	CHA(1)	I-92	II-230
TRF_OPER	TRAFFIC CONTROL OPERATING	Accident	CHA(1)	I-41	
TRFCTLDT	TRAFFIC CONTROL TYPE DATE	Intersection	CHA(6)	I-91	
TRFCTLHS	TRAFFIC CONTROL TYPE HISTORY	Intersection	CHA(1)	I-91	
TRK2AX	2-AXLE TRUCK AADT	Road	NUM	I-81	
TRK3AX	3-AXLE TRUCK AADT	Road	NUM	I-81	
TRK4AX	4-AXLE TRUCK AADT	Road	NUM	I-81	
TRK5AX	5+-AXLE TRUCK AADT	Road	NUM	I-81	
TRKCNTFL	TRUCK COUNT FLAG	Road	CHA(1)	I-80	
TRKTOT	TOTAL TRUCK AADT	Road	NUM	I-80	
TYPEDESC	INTERSECTION TYPE	Intersection	CHA(1)	I-92	II-233
VEH_INVL	MOTOR VEHICLES INVOLVED WITH	Accident	CHA(2)	I-41	II-37
VEHNO	VEHICLE NUMBER	Vehicle	NUM	I-52	
VEHNO	VEHICLE NUMBER	Occupant	NUM	I-62	
VEHTYPE	VEHICLE TYPE	Vehicle	CHA(1)	I-53	II-113
VEHYR	VEHICLE MODEL YEAR	Vehicle	CHA(4)	I-54	II-117
VIOL	VIOLATION CATEGORY	Vehicle	CHA(2)	I-54	II-119
WEATHER	WEATHER	Accident	CHA(1)	I-42	II-39
WEEKDAY	DAY-OF-WEEK	Accident	CHA(1)	I-42	II-41
XSTAADT	X-STREET AADT	Intersection	NUM	I-93	II-234
XSTADTDT	X-STREET ADT DATE	Intersection	CHA(6)	I-93	

```
XSTADTHS    X-STREET ADT HISTORY            Intersection CHA(1)   I-93
XSTLANES    X-STREET NUMBER OF LANES        Intersection CHA(1)   I-93      II-236
XSTLNGT     X-STREET SECTION LENGTH         Intersection CHA(3)   I-93
XSTRTDTE    X-STREET DATE                   Intersection CHA(6)   I-94
XSTRTHST    X-STREET HISTORY                Intersection CHA(1)   I-94
XSTRTLFT    X-STREET LEFT                   Intersection CHA(1)   I-94      II-238
            TURN CHANNELIZATION

(CON'T)
```

COMPOSITE LIST OF VARIABLES FOR ALL CALIFORNIA HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
XSTRTMST	X-STREET SIGNAL MASTARM CHANNELIZATION	Intersection	CHA(1)	I-94	II-239
XSTRTRGH	X-STREET RIGHT TURN	Intersection	CHA(1)	I-94	II-240
XSTSTRT	X-STREET STATE ROUTE INDICATOR	Intersection	NUM	I-94	II-241
XSTTRFLO	X-STREET TRAFFIC FLOW	Intersection	CHA(1)	I-95	II-242
	2 BY 2 TABLE CODE				
RODWYCLS	BY ACCTYPE	Accident			II-42
RODWYCLS	BY LIGHT	Accident			II-46
RODWYCLS	BY SEVERITY	Accident			II-50
RODWYCLS	BY WEATHER	Accident			II-54

LIST OF VARIABLES FOR CALIFORNIA ACCIDENT SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
ACCTYPE	TYPE-OF-COLLISION	Accident	CHA(1)	I-31	II-3
ACCYR	COLLISION ACCYR	Accident	CHA(4)	I-31	
ACC_DATE	DATE OF ACCIDENT -YMD	Accident	CHA(8)	I-31	
CASENO	UNIQUE ACCIDENT CASEO	Accident	CHA(21)	I-31	
CAUSE1	PRIMARY COL FACTOR	Accident	CHA(1)	I-31	
CAUSHPAL	COLL FACTOR ALPHA (CHP)	Accident	CHA(1)	I-32	
CAUSHPCD	COLL FACTOR CODING (CHP)	Accident	CHA(5)	I-32	
CAUSHPCT	COLL FACTOR CATEGORY (CHP)	Accident	CHA(2)	I-32	
CAUSHPLG	COLL FACTOR LEGAL CODE(CHP)	Accident	CHA(1)	I-33	
CAUSHPSB	COLL FACTOR CODE SUBSECTION (CHP)	Accident	CHA(1)	I-33	
CNTY_RTE	COUNTY ROUTE	Accident	CHA(10)	I-33	
COUNTY	COUNTY	Accident	CHA(2)	I-34	II-5
DISTANCE	DISTANCE	Accident	CHA(5)	I-34	
DISTRICT	DISTRICT	Accident	CHA(2)	I-35	
FAULT	VEHICLE AT FAULT	Accident	CHA(2)	I-35	II-13
FILETYP	FILE TYPE	Accident	CHA(1)	I-35	
HIT_RUN	HIT AND RUN	Accident	CHA(1)	I-35	II-15
HOUR	TIME OF ACCIDENT	Accident	CHA(4)	I-36	II-16
HWY_GRP	HIGHWAY GROUP	Accident	CHA(1)	I-36	
INT_RMP	INTS/RAMP ACC LOCATION	Accident	CHA(1)	I-36	II-20
JUR_TYPE	JURISDICTION TYPE	Accident	CHA(1)	I-37	
LIGHT	LIGHT CONDITION	Accident	CHA(1)	I-37	II-21
MILEPOST	RAMP MILEPOST	Accident	NUM	I-37	
NUMVEHS	TOT-NBR-VEHICLES	Accident	CHA(2)	I-37	II-23
NUM_OCCS	OCCUPANTS	Accident	NUM	I-37	II-22
POP_GRP	POPULATION GROUP = (CITY/RURAL GROUP)	Accident	CHA(1)	I-38	
PSMILPRF	POSTMILE PREFIX	Accident	CHA(1)	I-38	
PSMILSUF	POSTMILE SUFFIX	Accident	CHA(1)	I-38	
RDSURF	ROAD-SURFACE	Accident	CHA(1)	I-39	II-28
RD_DEF1	ROADWAY CONDITION	Accident	CHA(1)	I-39	II-24
RD_DEF2	ROAD CONDITION 2	Accident	CHA(1)	I-39	II-26
RD_DEF3	ROAD CONDITION 3	Accident	CHA(1)	I-39	
RODWYCLS	ROADWAY CLASSIFICATION	Accident	CHA(2)	I-39	II-29
RPT_LEV	ACCIDENT REPORT LEVEL	Accident	CHA(1)	I-40	
RTE_NBR	RDWAY ROUTE NUMBER	Accident	CHA(3)	I-40	
RTE_SUF	RDWAY ROUTE SUFFIX	Accident	CHA(1)	I-40	II-31
SDE_HWY	SIDE-OF-HIGHWAY	Accident	CHA(1)	I-40	II-32
SEVERITY	COLLISION SEVERITY	Accident	CHA(1)	I-40	II-33
TOT_INJ	OCCUPANTS INJURED	Accident	NUM	I-41	II-34
TOT_KILL	OCCUPANTS KILLED	Accident	NUM	I-41	II-35
TOWAWAY	INJURY, FATAL, OR TOWAWAY?	Accident	CHA(1)	I-41	II-36
TRF_OPER	TRAFFIC CONTROL OPERATING	Accident	CHA(1)	I-41	

LIST OF VARIABLES FOR CALIFORNIA ACCIDENT SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
VEH_INVL	MOTOR VEHICLES INVOLVED WITH	Accident	CHA(2)	I-41	II-37
WEATHER	WEATHER	Accident	CHA(1)	I-42	II-39
WEEKDAY	DAY-OF-WEEK	Accident	CHA(1)	I-42	II-41
	2 BY 2 TABLE CODE				
RODWYCLS	BY ACCTYPE	Accident			II-42
RODWYCLS	BY LIGHT	Accident			II-46
RODWYCLS	BY SEVERITY	Accident			II-50
RODWYCLS	BY WEATHER	Accident			II-54

NOTE: SAS variable names and explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

ACCTYPE   **TYPE-OF-COLLISION**

```
'A' = 'HEAD-ON'
'B' = 'SIDESWIPE'
'C' = 'REAR END'
'D' = 'BROADSIDE'
'E' = 'HIT OBJECT'
'F' = 'OVERTURNED'
'G' = 'AUTO-PEDESTRIAN'
'H' = 'OTHER'
'<' = 'NOT STATED'
OTHER = 'ERROR/OTHER CODES';
```

ACCYR   **YEAR OF ACCIDENT**

NON-LABELED VARIABLE – Year of accident (YYYY)

ACC_DATE   **DATE OF ACCIDENT**

NON-LABELED VARIABLE – Year/month/date of accident (YYYYMMDD)

CASENO   **UNIQUE ACCIDENT CASENO**

NON-LABELED VARIABLE – Accident Case number

NOTE: digits 1-4 = YEAR OF ACCIDENT

CAUSE1   **PRIMARY COLL FACTOR (DOT)**

```
'1' = 'ALCOHOL'            Under influence of alcohol
'2' = 'FOLLOW TOO CLOSE'   Following too closely
'3' = 'FAILURE TO YIELD'   Failure to yield
'4' = 'IMPROPER TURN'      Improper turn
'5' = 'SPEEDING'           Speeding
'6' = 'OTH VIOL HAZOUS'    Other Violations (hazardous)
'B' = 'OTH IMPR DRIVING'   Other improper driving
```

(CON'T)

```
'C' = 'OTH THAN DRIVING'     Other than driving
'D' = 'UNKNOWN'              Unknown
'E' = 'FELL ASLEEP'         Fell asleep
'<' = 'NOT STATED'          Not stated
'-' = 'INVALID CODE'        Invalid code
 OTHER = 'ERROR/OTHER CODES'; Errors/other codes
```

NOTE: This variable concerning primary collision factor is based on coding provided by the California DOT TO Office. While sufficient for many analyses, these larger categories are developed by combining more detailed codes (e.g., "running red light" code is a subset of "Other Violations (hazardous)." More detailed coding for specific primary collision factors as coded by the California Highway Patrol can be found in combinations of the following variables: CAUSHPAL, CAUSHPLG, CAUSHPCD, CAUSHPSB, CAUSHPCT. See formats below.

CAUSHPAL   COLL FACTOR ALPHA (CHP)

```
'A' = '(VEH) CODE VIOLATION'  (Vehicle) Code violation
'B' = 'OTH IMPR DRIVING'      Other improper driving
'C' = 'OTH THAN DRIVING'      Other than driving
'D' = 'UNKNOWN'               Unknown
 OTHER = 'ERROR/OTHER CODES';
```


CAUSHPCD   COLL FACTOR CODING (CHP)

NON-LABELED VARIABLE

NOTE: This is a five-digit code related to violations/causes as defined in sections in the California legal codes. The extensive format for this variable can be found on the California State Highway Patrol webpage at http://www.leginfo.ca.gov/calaw.html and then search on VEHICLE CODE.

CAUSHPCT   COLL FACTOR CATEGORY (CHP)

```
'01' = 'DRV/BIC UNDER INFLUENCE'   Driving or bicycling under
                                   influence of alcohol or drug
'02' = 'IMPEDING TRAFFIC'          Impeding traffic
'03' = 'UNSAFE SPEED'              Unsafe speed
'04' = 'FOLLOWING TOO CLOSELY'     Following too closely
'05' = 'WRONG SIDE OF ROAD'        Wrong side of road
'06' = 'IMPROPER PASSING'          Improper passing
'07' = 'UNSAFE LANE CHANGE'        Unsafe lane change
'08' = 'IMPROPER TURNING'          Improper turning
```

(CON'T)

```
'09' = 'AUTO ROW (NOT 11)'        Automobile right-of-way (not 11)
'10' = 'PED ROW'                  Pedestrian right-of-way
'11' = 'PEDESTRIAN VIOLATION'     Pedestrian violation
'12' = 'TRAF SIGNALS AND SIGNS'   Traffic signals and signs
'13' = 'HAZARDOUS PARKING'        Hazardous parking
'14' = 'LIGHTS'                   Lights
'15' = 'BRAKES'                   Brakes
'16' = 'OTHER EQUIPMENT'          Other equipment
'17' = 'OTH HAZARD VIOL (NOT 22)' Other hazardous violation (not
                                  22)
'18' = 'OTH THAN DRIV (OR PED)'   Other than driver (or pedestrian)
'21' = 'UNSAFE START/BRAKE'       Unsafe starting or backing
'22' = 'OTHER IMPROPER DRIVING'   Other improper driving
'23' = 'PED/OTH UNDER INFLUENCE'  pedestrian or other under
                                  influence of alcohol or drug
'24' = 'FELL ASLEEP'              Fell asleep
'00' = 'UNKNOWN'                  Unknown
```

CAUSHPLG   **COLL FACTOR LEGAL CODE (CHP)**

```
'B' = 'BUS AND PROFESSION'        Business and professions
'C' = 'VEHICLE'                   Vehicle
'H' = 'CITY HEALTH & SAFETY'      City health and safety
'I' = 'CITY ORDINANCE'            City ordinance
'O' = 'COUNTY ORDINANCE'          County ordinance
'P' = 'PENAL'                     Penal
'S' = 'STRTS AND HIGHWAYS'        Streets and highways
'W' = 'WELFARE AND INSTI'         Welfare and institutions
OTHER = 'ERROR/OTHER CODES';
```

CAUSHPSB   **COLL FACTOR CODE SUBSECTION (CHP)**

NON-LABELED VARIABLE – Subsection of the California legal code. See
CAUSHPCD

CNTY_RTE   **COUNTY ROUTE**

NON-LABELED VARIABLE – Linkage variable, consisting of DISTRICT+
RTE_NBR+RTE_SUF+COUNTY+PSMILPRF+HWY_GRP

COUNTY　　**COUNTY**

'01' = 'ALAMEDA'		'11' = 'GLENN'	
'02' = 'ALPINE'		'12' = 'HUMBOLDT'	
'03' = 'AMADOR'		'13' = 'IMPERIAL'	
'04' = 'BUTTE'		'14' = 'INYO'	
'05' = 'CALAVERAS'		'15' = 'KERN'	
'06' = 'COLUSA'		'16' = 'KINGS'	
'07' = 'CONTRA COSTA'		'17' = 'LAKE'	
'08' = 'DEL NORTE'		'18' = 'LASSEN'	
'09' = 'EL DORADO'		'19' = 'LOS ANGELES'	
'10' = 'FRESNO'		'20' = 'MADERA'	
'21' = 'MARIN'		'40' = 'SAN LUIS OBISPO'	
'22' = 'MARIPOSA'		'41' = 'SAN MATEO'	
'23' = 'MENDOCINO'		'42' = 'SANTA BARBARA'	
'24' = 'MERCED'		'43' = 'SANTA CLARA'	
'25' = 'MODOC'		'44' = 'SANTA CRUZ'	
'26' = 'MONO'		'45' = 'SHASTA'	
'27' = 'MONTEREY'		'46' = 'SIERRA'	
'28' = 'NAPA'		'47' = 'SISKIYHOU'	
'29' = 'NEVADA'		'48' = 'SOLANO'	
'30' = 'ORANGE'		'49' = 'SONOMA'	
'31' = 'PLACER'		'50' = 'STANISLAUS'	
'32' = 'PLUMAS'		'51' = 'SUTTER'	
'33' = 'RIVERSIDE'		'52' = 'TEHAMA'	
'34' = 'SACRAMENTO'		'53' = 'TRINITY'	
'35' = 'SAN BENITO'		'54' = 'TULARE'	
'36' = 'SAN BERNARDINO'		'55' = 'TUOLUME'	
'37' = 'SAN DIEGO'		'56' = 'VENTURA'	
'38' = 'SAN FRANCISCO'		'57' = 'YOLO'	
'39' = 'SAN JOAQUIN'		'58' = 'YUBA'	

DISTANCE　　**DISTANCE**

NON-LABELED VARIABLE – Five-digit distance in feet from the center of the reference intersection to the point of collision.

```
DISTRICT     DISTRICT

             '01' =  'DISTRICT ONE'
             '02' =  'DISTRICT TWO'
             '03' =  'DISTRICT THREE'
             '04' =  'DISTRICT FOUR'
             '05' =  'DISTRICT FIVE'
             '06' =  'DISTRICT SIX'
             '07' =  'DISTRICT SEVEN'
             '08' =  'DISTRICT EIGHT'
             '09' =  'DISTRICT NINE'
             '10' =  'DISTRICT TEN'
             '11' =  'DISTRICT ELEVEN'
             '12' =  'DISTRICT TWELVE'
             '-'  =   'INVALID DATA'
             '+'  =   'NO DATA';


FAULT        VEHICLE AT FAULT

             '01' = 'VEHICLE ONE'
             '02' = 'VEHICLE TWO'
             '03' = 'VEHICLE THREE'
             '04' = 'VEHICLE FOUR'
             '05' = 'VEHICLE FIVE'
             '06' = 'VEHICLE SIX'
             '07' = 'VEHICLE SEVEN'
             '08' = 'VEHICLE EIGHT'
             '09' = 'VEHICLE NINE'
             '10' = 'VEHICLE TEN'
             '11' = 'VEHICLE ELEVEN'
             '12' = 'VEHICLE TWELVE'
             '13' = 'VEHICLE THIRTEEN'
             '14' = 'VEHICLE FOURTEEN'
             '15' = 'VEHICLE FIFTEEN'
             '00' = 'NOT STATED';


FILETYP      FILE TYPE

             'H' = 'HIGHWAY RECORD'
             'I' = 'INTERSECTION'
             'R' = 'RAMP'
             '-' = 'INVALID DATA'
             '+' = 'NO DATA';


HIT_RUN      HIT AND RUN

             '1' = 'HIT & RUN FELONY'     Hit and run felony
             '2' = 'HIT & RUN MISDER'     Hit and run misdemeanor
```

```
        '0' = 'NOT ABOVE';              Not above

HOUR         TIME OF ACCIDENT

             HHMM formated as
             '0100 – 0159' = '1 AM – 159 AM', etc
             '2500'='UNKNOWN'
             '2600'='NOT STATED'


HWY_GRP      HIGHWAY GROUP

             'R' = 'INDEP ALIGN RGHT'     Right independent alignment
             'L' = 'INDEP ALIGN LEFT'     Left independent alignment
             'D' = 'DIVIDED HIGHWAY'
             'U' = 'UNIDIVIDED HIGHWY'
             'X' = 'UNCONSTRUCTED'
             'Z' = 'OTHER'
             '-' = 'INVALID DATA'
             '+' = 'NO DATA';
```

NOTE: In the HSIS version of the Roadlog File, codes "D", "U", and "X" do not appear. They are combined by CA DOT into "Z". In other data files provided by California to other users, these codes may occur. To link with crash data, they must be recoded to "Z".

```
INT_RMP      INTS/RAMP ACC LOCATION

             '1' = 'RAMP INTER(EXIT)'      Ramp intersection (exit), last 50
                                                               feet

             '2' = 'RAMP'                  Mid-Ramp
             '3' = 'RAMP ENTRY'            Ramp entry, first 50 feet
             '4' = 'RAMP AREA/STREET'      Ramp area/intersection street,
                                           within 100 feet
             '5' = 'IN INTERSECTION'       In intersection
             '6' = 'OUTSIDE INT'           Outside intersection (non-State
                                                                  route),
                                                                  within
                                                                  250 feet


             '<' = 'NOT STATED OR UNDETERMINED'  Not stated or undetermined
             '-' = 'DOES NOT APPLY';             Does not apply
```

NOTE: Code "4" refers to locations on non-State intersecting routes (which are not mileposted) between 150 ft "outside" the ramp-related intersection to 150 ft outside the opposing ramp-related intersection. Similarly, code "6" is for locations on non-State routes within + 150 ft of the intersection. Thus, in both cases, the crashes are mileposted to the ramp or State route. In contrast,

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similar locations on intersecting State routes are mileposted to the
intersecting State route. This variable will allow for
identification of such "area 4" crashes if desirable in the analysis.
 See AREA4 in the Ramp File.

JUR_TYPE   **JURISDICTION TYPE**

'1' = 'CHP JURISDICTION'
'2' = 'OTHER'

NOTE: Data began in 1995 file.

LIGHT   **LIGHT CONDITION**

'A' = 'DAYLIGHT'   Daylight
'B' = 'DUSK-DAWN'   Dusk - dawn
'C' = 'DARK-STRT LIGHT'   Dark - street lights
'D' = 'DAK-NO STR LIGHT'   Dark - no street lights
'E' = 'DRK-LGH NOT FUNC'   Dark - street lights not
                                functioning
'F' = 'DARK-NOT STATED'   Dark - not stated
'<' = 'NOT STATED'   Not stated
OTHER = 'ERROR/OTHER CODES';

MILEPOST   **MILEPOST (BASED ON POSTMILE/1000)**

NON-LABELED VARIABLE – Milepost of crash in miles (XXX.XXX)

NUMVEHS   **TOT-NBR-VEHICLES**

'00' = '0'
'01' = '1'
'02' = '2'
'03' = '3'
'04' = '4'
'05' = '5'
'06'-'15' = '6-15'
OTHER = 'ERROR/OTHER CODES';

NUM_OCCS   **TOTAL NUMBER OF OCCUPANTS**

0 = '0'
1 = '1'
2 = '2'

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```
                   3 = '3'
                   4 = '4'
                   5 = '5'
                   6-70  = '6-70';
```

POP_GRP   POPULATION (CITY/RURAL GROUP)

```
               '1' = 'INC < 2500) '        Incorporated (less than 2500)
               '2' = 'INC 2500 TO 10000'   Incorporated (2500 to 10000)
               '3' = 'INC 10000 TO 25000'  Incorporated (10000 to 25000)
               '4' = 'INC 25000 TO 50000'  Incorporated (25000 to 50000)
               '5' = 'INC 50000 TO 100K'   Incorporated (50000 to 100000)
               '6' = 'INC 100K TO 250K'    Incorporated (100000 to 250000)
               '7' = 'INC > 250000'        Incorporated (greater than 250000)
               '9' = 'UNINC RURAL'         Incorporated (greater than 250000)
               '0' = 'UNINC PRIV PROP'     Unincorporated (rural)
               '<' = 'NOT STATED';
```

PSMILPRF   POSTMILE PREFIX

```
               ' ' = 'NO PREFIX'           No prefix
               'A' = 'REPOSTED'            Reposted
               'B' = 'BUS LANE'            Bus lane
               'C' = 'COMMERCIAL'          Commercial
               'D' = 'DUP MEANDERING'      Duplicate (meandering)
               'F' = 'REPOS -COMMERC'      Reposted - Commercial (C)
               'G' = 'REPOS -DUP'          Reposted - Duplicate (D)
               'H' = 'RELGNED DUP'         Realigned - Duplicate (D)
               'J' = 'REPOS RELGN DUP'     Reposted, realigned - Duplicate
               'K' = 'REPOSTED-OVERLAP'    Reposted - Overlap (L)
               'L' = 'OVERLAPING PSTML'    Overlapping Postmiles
               'M' = 'REALIGND REALIGN'    Realigned realignment (R)
               'N' = 'REP/REALG REALGN'    Reposted, realighned realignment (M)
               'P' = 'REPOSTED REALIGN'    Reposted realignment (R)
               'Q' = 'REPOSTED - SPUR'     Reposted - Spur (S)
               'R' = 'REALIGNMENT'
               'S' = 'SPUR'
               'T' = 'TEMP CONNECTION'     Temporary Connection
               'U' = 'REPOST -TMP CONN'    Reposted - Temporary connection (T)
               '-' = 'INVALID DATA'
               '+' = 'NO DATA';
```

PSMILSUF   POSTMILE SUFIX

```
               ' ' = 'NO SUFFIX'
```

```
              'E' = 'EQUATION'
              '-' = 'INVALID DATA'
              '+' = 'NO DATA';




RDSURF        ROAD SURFACE

              'A' = 'DRY'
              'B' = 'WET'
              'C' = 'SNOWY, ICY'
              'D' = 'SLIPPERY/MUDDY'
              '<' = 'NOT STATED'
              OTHER = 'ERROR/OTHER CODES';


RD_DEF1       ROADWAY CONDITION 1
RD_DEF2       ROADWAY CONDITION 2
RD_DEF3       ROADWAY CONDITION 3

              'A' = 'HOLES,DEEP RUTS'       Holes, deep ruts
              'B' = 'LOOSE MATRL ROAD'      Loose material on road
              'C' = 'OBSTRU ON RDWAY'       Obstruction on roadway
              'D' = 'CONST/REPAIR ZN'       Construction - repair zone
              'E' = 'REDUCED RD WDTH'       Reduced road width
              'F' = 'FLOODED'               Flooded
              'G' = 'OTHER'                 Other
              'H' = 'N/UNUSUAL CONDIT'      No unusual conditions
              '<' = 'NOT STATED'            Not stated
              OTHER = 'ERROR/OTHER CODES';

RODWYCLS      ROADWAY CLASSIFICATION

              '01' = 'URB FRWY >=4 LN'      Urban freeways, four or more lanes
              '02' = 'URB FRWY < 4 LN'      Urban freeways, less than four lanes
              '03' = 'URB 2-LANE ROADS'     Urban two-lane roads
              '04' = 'URB ML DV N-FRE'    Urban multilane divided non-freeway
              '05' = 'URB ML UND N-FRE'   Urban multilane undivided non-freeway

              '06' = 'RUR FRWY >=4 LN'       Rural freeways, four or more lanes
              '07' = 'RUR FRWY < 4 LN'      Rural freeways less than four lanes
              '08' = 'RUR 2-LANE ROADS'      Rural two-lane roads
              '09' = 'RUR ML DV N-FRE'     Rural multilane divided non-freeway
              '10' = 'RUR ML UND N-FRE'    Rural multilane undivided non-freeway

              '99' = 'OTHERS';             Others
```

NOTE: Created variable added to HSIS accident and roadway inventory files in all States in 1999. See Discussion.

RPT_LEV   ACCIDENT REPORT LEVEL

'1' = 'BELOW REPORTING LEVEL' Below reporting level
'2' = 'ABOVE REPORTING LEVEL' Above reporting level
'<' = 'NOT STATED'   Not stated or undetermined
'-' = 'DOES NOT APPLY';

NOTE: This variable is erroneous. All records on the file are considered reportable.

RTE_NBR   ROUTE NUMBER

NON-LABELED VARIABLE – Route number.

RTE_SUF   ROUTE SUFFIX

'P' = 'ALIGNMENT PRIOR'   Prior obsolete
'S' = 'SUPPLEM MILEAGE'   Supplemental alignment, partial opened
                               for use before alignment is complete
'U' = 'UNRELINQUISHED'   Unrelinquished, superseded by
                               realignment, but not yet accepted for
                               non-State-highway maintenance
'Z' = 'UNDER CONSTRU'
' ' = 'NO SUFFIX';

SDE_HWY   SIDE-OF-HIGHWAY

'N' = 'NORTHBOUND'
'S' = 'SOUTHBOUND'
'E' = 'EASTBOUND'
'W' = 'WESTBOUND';

NOTE: For divided highways, roadway on which collision occurred, based on nominal direction of route. For single vehicle crash, it is the same as nominal direction of travel, overruled by impact with second vehicle after crossing median.

SEVERITY   COLLISION SEVERITY

'1' = 'FATAL'   Fatal
'2' = 'SEVERE INJURY'   Severe injury
'3' = 'OTH VISIBLE INJ'   Other visible injury

-42

```
                    '4' = 'COMPLAINT/PAIN'      Complaint of pain
                    '0' = 'PDO';                Property damage only


    TOT_INJ     OCCUPANTS INJURED

                    0 = '0'
                    1 = '1'
                    2 = '2'
                    3 = '3'
                    4 = '4'
                    5 = '5'
                    6-99  = '6-99';


    TOT_KILL    OCCUPANTS KILLED

                    0 = '0'
                    1 = '1'
                    2 = '2'
                    3 = '3'
                    4 = '4'
                    5 = '5'
                    6-99  = '6-99';


    TOWAWAY     INJURY, FATAL, OR TOW-AWAY

                    '1' = 'YES'
                    '2' = 'NO';


    TRF_OPER    TRAFFIC CONTROL OPERATING

                    'A' = 'CNTL FUNCTIONING'     Controls functioning
                    'B' = 'CNTL N/FUNCTION'      Controls not functioning
                    'C' = 'CONTROL OBSCURED'     Controls obscured
                    'D' = 'NO CONTROLS'          No controls present
                    '<' = 'NOT STATED'           Not stated
                    OTHER = 'ERROR/OTHER CODES';


    VEH_INVL    MOTOR VEHICLES INVOLVED WITH

                    '01' = 'OVERTURNED'          Non-collision (e.g., overturned without
                                                 collision or occupant jumped out)
                    '02' = 'PEDESTRIAN'          Pedestrian
                    '03' = 'OTHER MOTOR VEH'     Other motor vehicle
                    '04' = 'MV ON OTHER RDWAY'   Motor vehicle on other roadway
                    '05' = 'PARKED MOTOR VEH'    Parked motor vehicle
                    '06' = 'TRAIN'               Train
                    '07' = 'BICYCLE'             Bicycle
```

```
(CON'T)
'08' = 'ANIMAL(NOT 10)'       Animal (not 10)
'09' = 'FIXED OBJECT'         Fixed-object (tree, utility pole, light
                              standard, guardrail, boulder or
                              construction machinery in construction
                              area not in motion)
'10' = 'OTHER OBJECT'         Other object (animal-drawn conveyance,
                              ridden animal, street car, fallen tree
                              or stone, construction machinery     in
                              motion in construction area, or object
                              dropped from motor vehicle but not
                              still in motion (if still in motion,
                              type collision = 03))
'11,'00' = 'OTHER,NOT STATED' Other (obsolete, combined with not
                              stated)


Regarding Pedestrians
'1' = 'NO PED INVOLVED'       No pedestrian involved
'2' = 'IN CRSWK AT INTR'      Crossing in crosswalk at intersection
'3' = 'IN CRSWK N/INTER'      Crossing in crosswalk not at
                              intersection
'4' = 'CROSS N/IN CRSWK'      Crossing - not in crosswalk
'5' = 'IN RDWY/SHOULDER'      In roadway - include shoulder
'6' = 'NOT IN ROADWAY'        Not in roadway
'7' = 'APPR/LEV SCH BUS'      Approaching/leaving school bus
'0' = 'NOT STATED';           Not stated
```

WEATHER   WEATHER

```
'A' = 'CLEAR'
'B' = 'CLOUDY'
'C' = 'RAINING'
'D' = 'SNOWING'
'E' = 'FOG'
'F' = 'OTHER'
'G' = 'WIND'
'<' = 'NOT STATED'
OTHER = 'ERROR/OTHER CODES';
```

WEEKDAY   DAY-OF-WEEK

```
'1' = 'SUNDAY'
'2' = 'MONDAY'
'3' = 'TUESDAY'
'4' = 'WEDNESDAY'
'5' = 'THURSDAY'
'6' = 'FRIDAY'
'7' = 'SATURDAY'
OTHER ='ERROR/OTHER CODES';
```

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
ACCYR	COLLISION ACCYR	Vehicle	CHA(4)	I-45	
CASENO	UNIQUE ACCIDENT CASEO	Vehicle	CHA(21)	I-45	
CONTRIB1	FIRST ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	II-61
CONTRIB2	SECOND ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	II-64
CONTRIB3	THIRD ASSOCIATED FACTOR	Vehicle	CHA(1)	I-45	
DIR_TRVL	DIRECTION OF TRAVEL	Vehicle	CHA(1)	I-46	II-66
DRV_AGE	DRIVER AGE	Vehicle	NUM	I-46	II-67
DRV_INJ	DRIVER EXTENT OF INJURY	Vehicle	CHA(1)	I-46	II-70
DRV_SEX	DRIVER SEX	Vehicle	CHA(1)	I-46	II-71
HAZMAT	HAZARDOUS MATERIAL	Vehicle	CHA(1)	I-47	II-72
INTOX	ALCOHOL INVOLVED	Vehicle	CHA(1)	I-47	II-73
LOC_TYP1	FIRST COLL LOCATION	Vehicle	CHA(1)	I-47	II-74
LOC_TYP2	SECOND COLL LOCATION	Vehicle	CHA(1)	I-47	II-76
LOC_TYP3	THIRD COLL LOCATION	Vehicle	CHA(1)	I-47	II-78
LOC_TYP4	FOURTH COLL LOCATION	Vehicle	CHA(1)	I-47	II-80
MAKE	VEHICLE MAKE	Vehicle	CHA(2)	I-48	
MISCACT1	MOVEMENT PRECEDING COLL	Vehicle	CHA(1)	I-49	II-82
NUM_INJ	TOTAL NUMBER INJURED	Vehicle	CHA(2)	I-49	II-86
NUM_KILL	TOTAL NUMBER KILLED	Vehicle	CHA(2)	I-50	II-87
OBJECT1	FIRST OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-88
OBJECT2	SECOND OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-94
OBJECT3	THIRD OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-100
OBJECT4	FOURTH OBJECT STRUCK	Vehicle	CHA(2)	I-50	II-105
PART_TYP	PARTY TYPE	Vehicle	CHA(1)	I-51	
PHYSCOND	DRIVER PHYSICAL CONDITION	Vehicle	CHA(1)	I-51	II-110
RTE_TYPE	HIGHWAY TYPE INDICATOR	Vehicle	CHA(1)	I-52	
SOB_TEST	FIRST SOBRIETY/CONDITION	Vehicle	CHA(1)	I-52	II-111
SOB_TST2	SECOND SOBRIETY/CONDITION	Vehicle	CHA(1)	I-52	II-112
VEHNO	VEHICLE NUMBER	Vehicle	NUM	I-52	
VEHTYPE	VEHICLE TYPE	Vehicle	CHA(1)	I-53	II-113
VEHYR	VEHICLE MODEL YEAR	Vehicle	CHA(4)	I-54	II-117
VIOL	VIOLATION CATEGORY	Vehicle	CHA(2)	I-54	II-119

NOTE: SAS variable names and explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

ACCYR   **YEAR OF ACCIDENT**

NON-LABELED VARIABLE – Year of accident (YYYY)

CASENO   **UNIQUE ACCIDENT CASENO**

NON-LABELED VARIABLE – Accident case number (with digits 1-4 being year of accident)

CONTRIB1   **FIRST ASSOCIATED FACTOR**
CONTRIB2   **SECOND ASSOCIATED FACTOR**
CONTRIB3   **THIRD ASSOCIATED FACTOR**

```
        '1' = 'ALCOHOL'            Under influence of alcohol
        '2' = 'FOLLOW TOO CLOSE'   Following too closely
        '3' = 'FAILURE TO YIELD'   Failure to yield
        '4' = 'IMPROPER TURN'      Improper turn
        '5' = 'SPEEDING'           Speeding
        '6' = 'OTH VIOL HAZOUS'    Other violations (hazardous)
        '7' = 'VISION OBSCURED'    vision obscured
        'A' = 'VEHICLE CODE VIOL'  Vehicle code violation
        'B' = 'OTH IMPR DRIVING'   Other improper driving
        'C' = 'OTH THAN DRIVING'   Other than driving
        'D' = 'UNKNOWN'            Unknown
        'E' = 'VISION OBSCUREMENT' Vision obscurement
        'F' = 'INATTENTION'        inattention
        'G' = 'STOP & GO TRAF'     stop and go traffic
        'H' = 'ENTR/LEAV RAMP'     enter/leave ramp
        'I' = 'PREV COLLISION'     previous collision
        'J' = 'UNFAMILIAR W/RD'    unfamiliar with road
        'K' = 'DEFECT VEH EQUP'    defect vehicle equipment
        'L' = 'UNINVOLVED VEH'     uninvolved vehicle
        'M' = 'OTHER'              Other
        'N' = 'NONE APPARENT'      none apparent
    'O','S' = 'RUNAWAY VEH'        runaway vehicle
        'P' = 'WIND'               Wind
        'R' = 'RAMP ACCIDENT'      ramp accident
    '<','Z' = 'NOT STATED'         Not stated
        '-'   = 'DOES NOT APPLY';  does not apply
```

DIR_TRVL   **DIRECTION OF TRAVEL**

```
'N' = 'N, NE OR NW BND'        North, northeast, or northwest bound
'S' = 'S, SE OR SW BND'        South, southeast, or southwest bound
'E' = 'EASTBOUND'
'W' = 'WESTBOUND'
'<' = 'NOT STATED'
'-' = 'DOES NOT APPLY'
OTHER = 'ERROR/OTHER CODES';
```


DRV_AGE   **DRIVER AGE**

```
00    = 'NOT STATED'
01    ='INFANT - 1 YR'
02-04 ='02-04 YRS'
05-10 ='05-10 YRS'
11-14 ='11-14 YRS'
15    ='   15 YRS'
16    ='   16 YRS'
17    ='   17 YRS'
18    ='   18 YRS'
19    ='   19 YRS'
20    ='   20 YRS'
21-25 ='21-25 YRS'
26-30 ='26-30 YRS'
31-35 ='31-35 YRS'
36-45 ='36-45 YRS'
46-55 ='46-55 YRS'
56-65 ='56-65 YRS'
66-89 ='66-89 YRS'
90-99 ='90-99 YRS'
```


DRV_INJ   **DRIVER EXTENT OF INJURY**

```
'1' = 'KILLED'
'2' = 'SEVERE INJURY'
'3' = 'OTH VISIBLE INJURY'
'4' = 'COMPLAINT-PAIN'
'0' = 'NO INJURY';
```


DRV_SEX   **DRIVER SEX**

```
'1' = 'MALE'
'2' = 'FEMALE'
'0' = 'NOT STATED';
```

HAZMAT   **HAZARDOUS MATERIAL**

      'A' = 'HAZARDOUS MATERIAL'
      '<' = 'NOT STATED '
      '-' = 'DOES NOT APPLY';

INTOX   **DRIVER SOBRIETY**

      '1' = 'HAD N/BEEN DRINK'   Had not been drinking
      '2' = 'HBD-UNDER INFLU'   Had been drinking - under influence
      '3' = 'HBD-N/UNDR INFLU'   Had been drinking - not under influence
      '4' = 'HBD-IMPAIR UNKWN'   Had been drinking - impairment unknown
      '7' = 'IMPAIR NOT KNOWN'   Impairment not known (Hit and run)
      '0' = 'NOT STATED';   Not stated/not applicable

      NOTE: New variable in 1995. However, identical information on
      sobriety is found in SOB_TEST for all years. Thus, either variable
      may be used in analyses.

LOC_TYP1   **FIRST COLLISION LOCATION**
LOC_TYP2   **SECOND COLLISION LOCATION**
LOC_TYP3   **THIRD COLLISION LOCATION**
LOC_TYP4   **FOURTH COLLISION LOCATION**

      'A' = 'BEYOND MED/BARR'   Beyond median or barrier stripe -
                               driver's left
      'B' = 'BEYOND SHLD LFT'   Beyond shoulder - driver's left
      'C' = 'LEFT SHLD AREA'   Left shoulder area
      'D' = 'LEFT LANE'   Left lane
      'E' = 'INTERIOR LANES'   Interior lanes
      'F' = 'RIGHT LANE'   Right lane
      'G' = 'RGHT SHLDER AREA'   Right shoulder area
      'H' = 'BEYOND SHLD RGT'   Beyond shoulder - driver's right
      'I' = 'GORE AREA'   Gore area
      'J' = 'OTHER'   Other
    *'V' = 'HOV LANE'   HOV lanes
    *'W' = 'HOV BUFFER AREA'   HOV buffer area
      '<' = 'NOT STATED'   Not stated
      '-' = 'DOES NOT APPLY'   Does not apply
      OTHER = 'ERROR/OTHER CODES';

      *New codes added in 1996.

MAKE   VEHICLE MAKE

```
           '01' = 'AMERICAN MOTORS'
           '02' = 'BUICK'
           '03' = 'CADILLAC'
           '04' = 'CHEVROLET'
           '05' = 'CHRYSLER'
           '06' = 'DODGE'
           '08' = 'FORD'
          *'09' = 'GMC'
           '10' = 'IMPERIAL'
           '11' = 'LINCOLN'
           '12' = 'MERCURY'
           '14' = 'OLDSMOBILE'
           '16' = 'PLYMOUTH'
           '17' = 'PONTIAC'
           '18' = 'STUDEBAKER'
           '30' = 'OTHER DOMESTIC'
           '51' = 'DATSUN'
           '52' = 'FIAT'
           '53' = 'MERCEDES-BENZ'
           '54' = 'MG'
           '55' = 'OPEL'
           '56' = 'RENAULT'
           '57' = 'TRIUMPH'
           '58' = 'TOYOTA'
           '59' = 'VOLKSWAGON'
           '60' = 'VOLVO'
           '61' = 'HONDA'
           '62' = 'MAZDA'
           '63' = 'AUDI'
           '64' = 'BMW'
           '65' = 'PORSCHE'
           '66' = 'SUBARU'
           '70' = 'OTHER FOREIGN'
          *'71' = 'LEXUS'
          *'72' = 'ACCURA'
          *'73' = 'MITSUBISHI'
          *'74' = 'HYUNDAI'
           '98' = 'PED,BIKE,OTHER'
           '99' = 'TRK N/PICKUP'
           OTHER = 'ERROR/OTHER CODES';

           *New codes added in 1995
```

-

MISCACT1   MOVEMENT PRECEDING COLLISION

```
'A' = 'STOPPED'              Stopped
'B' = 'PROCEED STRAIGHT'     Proceeding straight
'C' = 'RAN OFF ROAD'         Ran off road
'D' = 'MAKING RIGHT TURN'    Making right turn
'E' = 'MAKING LEFT TURN'     Making left turn
'F' = 'MAKING U TURN'        Making U turn
'G' = 'BACKING'              Backing
'H' = 'SLOWING,STOPPNG'      Slowing, stopping
'I' = 'PASSING OTH VEH'      Passing other vehicle
'J' = 'CHANGING LANES'       Changing lanes
'K' = 'PARKING MANEUVER'     Parking maneuver
'L' = 'ENT TRAF FRM SHL'     Entering traffic from shoulder,
                             median, parking strip or private drive
'M' = 'OTH UNSAFE TURN'      Other unsafe turning
'N' = 'CROS TO OPP LNE'      Crossed into opposing lane
'O' = 'PARKED'               Parked
'P' = 'MERGING'              Merging
'Q' = 'WRONG WAY'            Traveling wrong way
'R' = 'OTHER'                Other
'S' = 'RUNAWAY VEH'          Runaway vehicle
'<' = 'NOT STATED'           Not stated

/*  Regarding Pedestrians*/

'1' = 'NO PED INVOLVED'      No pedestrian involved
'2' = 'IN CRSWK AT INTER'    Crossing in crosswalk at intersection
'3' = 'IN CRSWK N/INTER'     Crossing in crosswalk not at
                             intersection
'4' = 'CROSS N/IN CRSWK'     Crossing - not in crosswalk
'5' = 'IN RDWY/SHOULDER'     In roadway - include shoulder
'6' = 'NOT IN ROADWAY'       Not in roadway
'7' = 'APPR/LEV SCH BUS'     Approaching/leaving school bus
'-' = 'DOES NOT APPLY'       Does not apply
OTHER = 'ERROR/OTHER CODES';
```

NUM_INJ   TOTAL NUMBER INJURED

```
'00',' 0' = '0'
'01',' 1' = '1'
'02',' 2' = '2'
'03',' 3' = '3'
'04',' 4' = '4'
'05',' 5' = '5'
' 6'-' 9','06'-'09','10'-'70' = '6-70';
```

```
NUM_KILL      TOTAL NUMBER KILLED

              '00',' 0' = '0'
              '01',' 1' = '1'
              '02',' 2' = '2'
              '03',' 3' = '3'
              '04',' 4' = '4'
              '05',' 5' = '5'
              ' 6'-' 9','06'-'09','10'-'70' = '6-70';


OBJECT1        FIRST OBJECT STRUCK
OBJECT2        SECOND OBJECT STRUCK
OBJECT3        THIRD OBJECT STRUCK
OBJECT4        FOURTH OBJECT STRUCK

              '01' = 'SDE BRDG RAIL'      Side of bridge railing
              '02' = 'END BRDG RAIL'      End of bridge railing
              '03' = 'PIER,ABUT BRDG'     Pier, column or abutment of bridge
              '04' = 'BOTM BRDG STRUCT'   Bottom of bridge structure
              '05' = 'BRDG END PST GOR'   Bridge end post in gore
              '06' = 'END OF GUARDRAIL'   End of guardrail (new code - 1992)
              '07' = 'BRDG APPR GDRL'     Bridge approach guardrail (new - 1992)
              '10' = 'LGHT/SIGNAL POLE'   Light or signal pole
              '11' = 'UTILITY POLE'       Utility pole
              '12' = 'POLE - TYPE N/S'    Pole - type not stated
              '13' = 'TRAF SGN/ POST'     Traffic sign or sign post
              '14' = 'OTH SGN N/TRAFFIC'  Other signs (not traffic)
              '15' = 'GUARDRAIL'          Guardrail
              '16' = 'BARRIER'            Barrier
              '17' = 'WALL/CONCRETE'      Wall (concrete or wood - not median
                                          barrier)
              '18' = 'DIKE OR CURB'       Dike or curb (including curb of
                                          median & a.c. Berm)
              '19' = 'TRAFFIC ISLAND'     Traffic island (not curbed median
                                          separation)
              '20' = 'RAISED BARS'        Raised bars
              '21' = 'CONCRETE OBJECT'    Concrete object (hdwl, d.i., etc.)
              '22' = 'GDPOST/CULV/ MRK'   Guidepost, culvert or mile post
                                          marker
              '23' = 'CUT SLPE/ EMBANK'   Cut slope or embankment, struck from
                                          below
              '24' = 'OVER EMBANKMENT'    Over embankment
              '25' = 'RIVER,LAKE'         In water (river, lake, canal)
              '26' = 'DRAINAGE DITCH'     Drainage ditch (with or without
                                                     water)
              '27' = 'FENCE'              Fence
              '28' = 'TREES'              Trees
              '29' = 'PLANTS (MISCELL)'   Plants (miscellaneous)
```

```
'30' = 'SOUND WALLS'          Sound walls


(CON'T)
'40' = 'ROCKS,FALLEN TREE'    Rocks, fallen trees, snowbank in
                              roadway, tree overhead, falling trees
                              or other natural material on road
'41' = 'TEMP BARRICADES'      Temporary barricades, cones or signs
'42' = 'OTH OBJEC ON RD'      Other object on road
'43' = 'OTH OBJEC OFF RD'     Other object off road
'44' = 'OVERTURNED'           Overturned
*'45' = 'CRASH CUSHION-SAND'  Crash cushion-Sand
*'46' = 'CRASH CUSHION-OTHER' Crash cushion-Other
*'51' = 'CALL BOX'            Call box
'98' =  'UNKNOWN'             Unknown Object involved
'99' =  'N/OBJ INVOLVED'      No object involved
'V1'-'V9' = 'Vehicle 1 to 9'  Vehicle 1 to 9
'<<' = 'NOT STATED'           Not stated
'--' = 'DOES NOT APPLY'       Does not apply
OTHER = 'ERROR/OTHER CODES';
```

*New variables in 1996. Note that "Crash Cushion" was separated into two codes in 1996: "Crash Cushion-Sand" and "Crash Cushion-Other".
.

PART_TYP   **PARTY TYPE**

```
'1' = 'DRIVER'               Driver
'2' = 'PASSENGER'            Passenger (includes non-operator on
                             bicycle or any victim on/in parked
                             vehicle, or multiple victims on/in
                             non-motorized vehicle)
'3' = 'PEDESTRIAN'           Pedestrian
'4' = 'BICYCLIST'            Bicyclist
'5' = 'OTHER';               Other (single victim on/in non-motor
                             vehicle, e.g., ridden animal, horse-
                             drawn carriage, train, or building)
```

PHYSCOND   **DRIVER PHYSICAL CONDITION**

```
'0' = 'NOT STATED'           Not stated
'5' = 'UNDR DRUG INFLUN'     Under drug influence
'6' = 'OTH PHYSL IMPAIR'     Other physical impairment
'8' = 'SLEEPY/FATIGUE';      Sleepy or fatigued
```

NOTE: New variable in 1995. However, identical information on sobriety is found in SOB_TEST for all years. Thus, either variable may be used in analyses.

RTE_TYPE   **HIGHWAY TYPE INDICATOR**

```
'1' = 'ON STATE ROUTE'
'2' = 'NOT ON STATE RT'        Not on State route
'3' = 'INTERSECT ST RT'        Intersecting State route
'-' = 'DOES NOT APPLY'
'<' = 'NOT STATED';
```

NOTE: This variable is not reliable for at least part of 1991-94.
There were programming errors in the data coding/storage efforts.

SOB_TEST   **FIRST SOBRIETY/CONDITION**
SOB_TST2   **SECOND SOBRIETY/CONDITION**

```
'A' = 'HAD N/BEEN DRINK'        Had not been drinking
'B' = 'HBD-UNDER INFLU'         Had been drinking - under influence
'C' = 'HBD-N/UNDR INFLU'        Had been drinking - not under influence
'D' = 'HBD-IMPAIR UNKWN'        Had been drinking - impairment unknown
'E' = 'UNDR DRUG INFLUN'        Under drug influence
'F' = 'OTH PHYSL IMPAIR'        Other physical impairment
'G' = 'IMPAIR NOT KNOWN'        Impairment not known
'H' = 'N/A(STATWD FORM)'        Not applicable (statewide form)
'I' = 'FATIGUE'                 Fatigue
'<' = 'NOT STATED'              Not stated
'-' = 'DOES NOT APPLY'          Does not apply
OTHER = 'ERROR/OTHER CODES';
```

NOTE: Beginning in 1995, INTOX and PHYSCOND provide identical
information to SOB_TEST.

VEHNO   **VEHICLE NUMBER**

```
1 = 'VEHICLE ONE'
2 = 'VEHICLE TWO'
3 = 'VEHICLE THREE'
4 = 'VEHICLE FOUR'
5 = 'VEHICLE FIVE'
6 = 'VEHICLE SIX'
7 = 'VEHICLE SEVEN'
8 = 'VEHICLE EIGHT'
9 = 'VEHICLE NINE'
0 = 'NOT STATED' ;
```

```
VEHTYPE      VEHICLE TYPE

             'A' = 'PASS CAR/STAT WG'    Passenger car (includes station
                                           wagon)
             'B' = 'PASS CAR W/TRLER'    Passenger car with trailer
             'C' = 'MOTORCYCLE'          Motorcycle
             'D' = 'PKUP/PANEL TRUCK'    Pickup or panel truck
             'E' = 'PKUP/PNL W/TRL'      Pickup or panel truck with trailer
             'F' = 'TRK/TRUCK TRACTR'    Truck or truck tractor
             'G' = 'TRK/TRAC W/1 TRL'    Truck or truck tractor with 1 trailer
             '2' = 'TRK TRAC W/2 TRL'    Truck or truck tractor with 2 trailers
             '3' = 'TRK TRAC W/3 TRL'    Truck or truck tractor with 3 trailers
             '4' = 'SINGLE UNIT TNKR'    Single unit tanker
             '5' = 'TRK/TRLR W/1 TNK'    Truck/trailer and 1 tank trailer
             '6' = 'TRK/TRLR W/2 TNK'    Truck/trailer and 2 tank trailers
             'H' = 'SCHOOL BUS'          School bus
             'I' = 'OTHER BUS'           Other bus
             'J' = 'EMERGENCY VEH'       Emergency vehicle
             'K' = 'HWY CONST EQUIP'     Highway construction equipment
             'L' = 'BICYCLE'             Bicycle
             'M' = 'OTH MTR VEHICLE'     Other motor vehicle
             'N' = 'OTH N/MTR VEH'       Other non-motor vehicle
             'O' = 'SPILLED LOADS'       Spilled loads
             'P' = 'DISENGAGED TOW'      Disengaged tow
             'Q' = 'UNINVOLVED VEH'      Uninvolved vehicle
             'R' = 'MOPED'               Moped
             'S' = 'RUNAWAY VEH'         Runaway vehicle
             'T' = 'TRAIN'               Train
             'U' = 'PEDESTRIAN'          Pedestrian
             'V' = 'DISMOUNTED PED'      Dismounted pedestrian
             'W' = 'ANIMAL - LIVESTK'    Animal - livestock
             'X' = 'ANIMAL - DEER'       Animal - deer
             'Z' = 'ANIMAL - OTHER'      Animal - other
             '<' = 'NOT STATED '
             '-' = 'DOES NOT APPLY'
             OTHER = 'ERROR/OTHER CODES';
```

VEHYR   VEHICLE MODEL YEAR

```
'1901'-'1979' = '1901-1979'
'1980'-'1990' = '1980-1990'
'1991'='1991'
'1992'='1992'
'1993'='1993'
'1994'='1994'
'1995'='1995'
'1996'='1996'
'1997'='1997'
'1998'='1998'
'1999'='1999'
'9999'='NS/PED/BIKE'          Not stated, pedestrian, or bicycle
OTHER = 'ERROR/OTHER CODES';
```

NOTE: There will be some invalid codes which appear valid (e.g., a "1999" vehicle in a 1997 crash – when "1999" should only be valid for 1998 and later crash years).

VIOL   VIOLATION CATEGORY

```
'01' = 'UNDR INFLNC-PUB'    Under influence in public
'02' = 'COUNTY ORDIN'       County ordinance
'03' = 'CITY ORDIN'         City ordinance
'05' = 'BUS/PROF CODE'      Business/professions code
'06' = 'FELONY (NOT 15)'    Felony (not 15)
'08' = 'CONTROLLED SUB'     Controlled substances
'09' = 'OTHER HLTH/SFTY'    Health/safety code not otherwise
                            classified
'10' = 'OTHER PENAL CD'     Penal code not otherwise classified
'11' = 'STREET/HGWY CD'     Streets/highways code
'13' = 'WELFARE/INST CD'    Welfare/institutions code
'15' = 'MANSLAUGHTER'       Manslaughter
'16' = 'OTH CODE (OBSLT)'   Other code (obsolete)
'19' = 'HIT AND RUN'        Hit and run
'20' = 'DUI-ALC/DRG'        Driving (or bicycling) under influence
                            of alcohol and/or drug
'21' = 'IMPROPER LN'        Improper lane
```

```
'22' = 'IMPEDING TRF'        Impeding traffic
'23' = 'RUN STOP SIG'        Failure to heed stop signal
'24' = 'RUN STOP SIGN'       Failure to heed stop sign
'25' = 'UNSAFE SPEED'        Unsafe speed
'26' = 'RECKLESS DRVG'       Reckless driving
'27' = 'WRONG SIDE RD'       Wrong side of road
'28' = 'UNSAFE LN CHNG'      Unsafe lane change
'29' = 'IMPROPER PASSING'    Improper passing
'30' = 'FOLLOW TOO CLOSE'    Following too closely
'31' = 'IMPROPER TURN'       Improper turning


(CON'T)
'33' = 'AUTO RIGHT/WAY'      Automobile right-of-way
'34' = 'PED RIGHT/WAY'       Pedestrian right-of-way
'35' = 'PED VIOLATION'       Pedestrian violation
'37' = 'DUI-DRUG'            Driving under influence of drug
'38' = 'HAZARDOUS PRKG'      Hazardous parking
'39' = 'LIGHTS'              Lights
'40' = 'BRAKES'              Brakes
'43' = 'OTHER EQUIP'         Other equipment
'44' = 'OTHER HAZ MVMT'      Other hazardous movement
'46' = 'IMPROPER REGIS'      Improper registration
'47' = 'OTHER NON-MOVNG'     Other non-moving violation
'48' = 'EXCESSIVE SMOKE'     Excessive smoke
'49' = 'EXCESSIVE NOISE'     Excessive noise
'50' = 'OVERWEIGHT'          Overweight
'51' = 'OVERSIZE'            Oversize
'52' = 'EXCEED MAX SPD'      Over maximum speed
'53' = 'UNSAFE STRT/BKNG'    Unsafe starting or backing
'60' = 'OFF-HGWY VEH VIO'    Off-highway vehicle violation
'61' = 'CHLD RESTR VIOL'     Child restraint violation
'62' = 'SEAT BELT VIOL'      Seat belt violation (non-use)
'63' = 'SEAT BELT EQUIP'     Seat belt equipment violation
'00' = 'NOT STATED';         Not stated
```

LIST OF VARIABLES FOR CALIFORNIA OCCUPANT SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
ACCYR	COLLISION ACCYR	Occupant	CHA(4)	I-59	
AGE	OCCUPANT AGE	Occupant	NUM	I-59	II-127
CASENO	UNIQUE ACCIDENT CASEO	Occupant	CHA(21)	I-59	
EJECT	EJECTED FROM VEHICLE	Occupant	CHA(1)	I-60	II-130
INJ	DRV/OCC INJURY	Occupant	CHA(1)	I-60	II-131
OCCNUM	OCCUPANT NUMBER	Occupant	NUM	I-60	
OCC_TYP	OCCUPANT TYPE	Occupant	CHA(1)	I-60	II-132
REST1	SAFETY EQUIPMENT	Occupant	CHA(1)	I-61	II-133
SEATPOS	SEATING POSTION	Occupant	CHA(1)	I-62	II-136
SEX	OCCUPANT SEX	Occupant	CHA(1)	I-62	II-137
VEHNO	VEHICLE NUMBER	Occupant	NUM	I-62	

NOTE: This file contains information on all passengers plus injured (but not uninjured) drivers.

NOTE: SAS variable names and explanatory names are shown above each
listing. (See Discussion for information on SAS formats.)

NOTE: This file contains information on all passengers plus injured
drivers.

ACCYR　　　　　**YEAR OF ACCIDENT OR COLLISION**

NON-LABELED VARIABLE – Year of crash (YYYY)

AGE　　　　　**OCCUPANT AGE**

```
00    = 'NOT STATED'
01    ='INFANT - 1 YR'
02-04 ='02-04 YRS'
05-10 ='05-10 YRS'
11-14 ='11-14 YRS'
15    ='   15 YRS'
16    ='   16 YRS'
17    ='   17 YRS'
18    ='   18 YRS'
19    ='   19 YRS'
20    ='   20 YRS'
21-25 ='21-25 YRS'
26-30 ='26-30 YRS'
31-35 ='31-35 YRS'
36-45 ='36-45 YRS'
46-55 ='46-55 YRS'
56-65 ='56-65 YRS'
66-89 ='66-89 YRS'
90-99 ='90-99 YRS'
```


CASENO　　　　　**UNIQUE ACCIDENT CASENO**

NON-LABELED VARIABLE – Accident case number, with digits 1-4 being
year of accident.

EJECT   **EJECTED FROM VEHICLE**

        '0' = 'NOT EJECTED'
        '1' = 'FULLY EJECTED'
        '2' = 'PARTIALLY EJECTED'
        '3' = 'UNKNOWN';

        NOTE: Approximately 10% of the cases are "unknown." This is not
        unusual given the nature of this variable and the fact that it may
        not appear on all police forms in California.

INJ   **DRV/OCC INJURY**

        '1' = 'KILLED'   Killed (died no later than 30 days
                                        after collision)
        '2' = 'SEVERE INJURY'   Severe injury
        '3' = 'OTH VISIBLE INJ'   Other visible injury
        '4' = 'COMPLAINT-PAIN'   Complaint of pain
        '0' = 'NON-INJURY'   Non-injury (PDO) crash

OCCNUM   **OCCUPANT NUMBER**

        0 = '0'
        1 = '1'
        2 = '2'
        3 = '3'
        4 = '4'
        5 = '5'
        6-70 = '6-70';

OCC_TYP   **OCCUPANT TYPE**

        '1' = 'DRIVER'   Driver
        '2' = 'PASSENGER'   Passenger (includes non-operator on
                                        bicycle or any victim on/in parked
                                        vehicle, or multiple victims on/in non-
                                        motorized vehicle)
        '3' = 'PEDESTRIAN'   Pedestrian
        '4' = 'BICYCLIST'   Bicyclist
        '5' = 'OTHER'   Other (single victim on/in non-motor
                                        vehicle, e.g., ridden animal, horse-
                                        drawn carriage, train, or building)'
        '6' = 'NON-INJ PARTY';   Non-injured party

        NOTE: Note that codes 1-5 are for injured occupants only. Code 6
        includes all uninjured (non-driver) occupants and users.

REST1   OCCUPANT RESTRAINT

```
'A' = 'NONE IN VEHICLE'        None in vehicle
'B' = 'UNKNOWN'                Unknown
'C' = 'LAP BELT USED'          Lap belt used
'D' = 'LAP BELT N/USED'        Lap belt not used
'E' = 'SHLDR HARN USD'         Shoulder harness used
'F' = 'SHLDR HARN N/USD'       Lap/shoulder harness not used
'G' = 'LAP/SHL HRN USD'        Lap/shoulder harness used
'H' = 'LAP/SHL HRN N/US'       Lap/shoulder harness not used
'J' = 'PASS REST USD'          Passive restraint used
'K' = 'PASS REST N/USD'        Passive restraint not used
'L' = 'AIR BAG DEPLOYED'       Air bag deployed
'M' = 'AIR BAG N/DEPLOY'       Air bag not deployed
'N' = 'OTHER'                  Other
'P' = 'NOT REQUIRED'           Not required
```

CHILD RESTRAINT

```
'Q' = 'IN VEH USED'            In vehicle used
'R' = 'IN VEH NOT USED'        In vehicle not used
'S' = 'IN VEH USE UNK'         In vehicle use unknown
'T' = 'IN VEH IMPR USED'       In vehicle improper used
'U' = 'NONE IN VEH'            None in vehicle
```

M/C HELMET-DRIVER

```
'V' = 'DR-NO MC HELMET'        Driver - No motorcycle helmet
'W' = 'DR-YES MC HELMET'       Driver - Motorcycle helmet in use
```

M/C HELMET-PASSENGER

```
'X' = 'PASSG-NO MC HEL'        MC Passenger - No motorcycle helmet
'Y' = 'PASSG-YES MC HEL';      MC Passenger - Motorcycle helmet in
```

NOTE: Restraint information for drivers is for injured drivers only. As with all States, the data for restraint use is somewhat questionable given that it is not observed by the officer.

SEATPOS   **SEATING POSITION**

```
'1' = 'DRIVER'
'2'-'6' = 'PASSENGERS'
'7'   = 'STAT WAGON REAR'
'8'   = 'REAR OCC TRR/VAN'
'9'   = 'POSITION UNKNOWN'
'0'   = 'OTHER OCCUPANTS';
```

NOTE: The data in this variable is somewhat different from similar data in the *OCC_TYP* (Occupant Type) variable. This is due to the fact that the Occupant Type variable combines all uninjured occupants into one code, and that while report forms used by California cities all contain some type of information on drivers and the number of occupants, all do not contain a variable related to seating position.

SEX   **OCCUPANT SEX**

```
'1' = 'MALE'
'2' = 'FEMALE'
'0' = 'NOT STATED';
```

VEHNO   **VEHICLE NUMBER**

```
1 = 'VEHICLE ONE'
2 = 'VEHICLE TWO'
3 = 'VEHICLE THREE'
4 = 'VEHICLE FOUR'
5 = 'VEHICLE FIVE'
6 = 'VEHICLE SIX'
7 = 'VEHICLE SEVEN'
8 = 'VEHICLE EIGHT'
9 = 'VEHICLE NINE'
0 = 'NOT STATED' ;
```

LIST OF VARIABLES FOR CALIFORNIA ROADLOG FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
AADT	AADT	Road	NUM	I-65	II-141
ACCESS	ACCESS CONTROL	Road	CHA(1)	I-65	II-143
ACC_DTE	ACCESS CONTROL DATE	Road	CHA(8)	I-65	
ACC_HIST	ACCESS CONTROL HISTORY	Road	CHA(1)	I-65	
ADT_DTE	ADT DATE	Road	CHA(8)	I-65	
ADT_DVM	DAILY VEHICLE MILES(DVM)	Road	NUM	I-66	
ADT_HST	ADT HISTORY	Road	CHA(1)	I-66	
ADT_MSG	ALPHA MESSAGE	Road	CHA(4)	I-66	
ADT_STUS	ADT STATUS PROFILE	Road	CHA(1)	I-66	II-144
BEGMP	POSTMILE-BEGMP	Road	NUM	I-66	
CITY	CITY	Road	CHA(2)	I-66	
CNTYRTE	ROAD COUNTY ROUTE	Road	CHA(10)	I-66	
COUNTY	COUNTY	Road	CHA(2)	I-66	II-145
CURB1	CURB AND LANDSCAPE	Road	CHA(1)	I-68	II-153
DESG_SPD	DESIGN SPEED	Road	CHA(1)	I-68	II-154
DES_NBR	ROAD DESC NUMBER	Road	CHA(1)	I-68	
DISTRICT	DISTRICT	Road	CHA(2)	I-68	
DIVIDED	DIVIDED HIGHWAY	Road	NUM	I-69	II-156
ENDMP	POSTMILE + SEG_LNG	Road	NUM	I-69	
FEAT_LF	LEFT RDBD SPECIAL FEATURE	Road	CHA(1)	I-69	II-157
FEAT_RG	RIGHT RDBD SPECIAL FEATURE	Road	CHA(1)	I-69	II-159
FED_AID	FEDERAL AID (IN LIEU)	Road	CHA(1)	I-70	II-161
FED_PREF	FEDERAL AID RTE PREFIX	Road	CHA(1)	I-70	II-162
FED_RTE	FEDERAL AID RTE	Road	CHA(3)	I-70	
FILETYP	FILE TYPE	Road	CHA(1)	I-70	
FUNC_CLS	FUNCTIONAL CLASS	Road	CHA(1)	I-70	II-163
HIST_ADD	HISTORY ELEMENTS RELATIVE ADDR	Road	NUM	I-71	
HWY_GRP	HIGHWAY GROUP	Road	CHA(1)	I-71	II-164
INS_OTS	INSIDE OUTSIDE CITY	Road	CHA(1)	I-71	II-165
LANEWID	AVERAGE LANE WIDTH	Road	NUM	I-71	II-166
LSHLDWID	LEFT SHOULDER WIDTH RD1	Road	NUM	I-72	II-168
LSHL_WD2	LEFT SHOULDER WIDTH RD2	Road	NUM	I-72	II-169
LTRD_DTE	LEFT ROADBED DATE	Road	CHA(8)	I-72	
LTRD_HST	LEFT ROADBED HISTORY	Road	CHA(1)	I-72	
MEDBARTY	MEDIAN BARRIER TYPE	Road	CHA(1)	I-72	II-174
MEDWID	MEDIAN WIDTH	Road	NUM	I-73	II-177
MED_DTE	RAMP MEDIAN DATE	Road	CHA(8)	I-73	
MED_HIST	MEDIAN HISTORY	Road	CHA(1)	I-73	
MED_TYPE	MEDIAN TYPE	Road	CHA(1)	I-73	II-170
MED_VAR	MEDIAN VARIANCE	Road	CHA(1)	I-74	II-173
MVMT	MILLION VEHICLE MILES TRAVELED	Road	NUM	I-74	
NAT_LND	NATIONAL LANDS	Road	CHA(1)	I-74	II-178

(CON'T)
LIST OF VARIABLES FOR CALIFORNIA ROADLOG FILE

NOTE: SAS variable names and explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

AADT   **AADT**

```
0                       =      '0'
1-100                   =      '1-100'
101-500                 =      '101-500'
501-1000                =      '501-1,000'
1001-2000               =      '1,001-2,000'
2001-5000               =      '2,001-5,000'
5001-10000              =      '5,001-10,000'
10001-15000             =      '10,001-15,000'
15001-20000             =      '15,001-20,000'
20001-40000             =      '20,001-40,000'
40001-999999            =      '>= 40,001'
. = 'NO DATA';
```

ACCESS   **ACCESS CONTROL**

```
'C' = 'NO ACCESS CONTRL'      Conventional - No access control
'E' = 'PART ACESS CNTRL'      Expressway - Partial access control
'F' = 'FULL ACESS CNTRL'      Freeway - Full access control
'S' = '1-WAY N0 AC CNTL'      One-way city street - no access
                              control
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

ACC_DTE   **ACCESS CONTROL DATE**

NON-LABELED VARIABLE – Date of last change in some variable related to access control (YYYYMMDD). See Discussion.

ACC_HIST   **ACCESS CONTROL HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable related to access-control. See Discussion.

ADT_DTE   **ADT DATE**

NON-LABELED VARIABLE – Date of last change in some variable related to ADT (YYYYMMDD). See Discussion.

ADT_DVM   **DAILY VEHICLE MILES(DVM)**

        NON-LABELED VARIABLE – Daily vehicle miles

ADT_HST   **ADT HISTORY**

        NON-LABELED VARIABLE – A "flag" indicating a change in some variable
        related to ADT. See Discussion.

ADT_MSG   **ALPHA MESSAGE**

        NON-LABELED VARIABLE - all miles are blank.

ADT_STUS   **ADT STATUS PROFILE**

```
'P' = 'ADT PROVIDED'
'S' = 'ADT CALCULATED'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


BEGMP   **POSTMILE-BEGMP**

        NON-LABELED VARIABLE – Beginning milepoint in miles (XXX.XXX)

CITY   **CITY**

        NON-LABELED VARIABLE – City code

CNTYRTE   **HGWY COUNTY ROUTE**

        NON-LABELED VARIABLE – Linkage variable, consisting of DISTRICT+
        RTE_NBR+RTE_SUF+COUNTY+PSMILPRF+HWY_GRP

COUNTY   **COUNTY**

```
'01' = 'ALAMEDA'
'02' = 'ALPINE'
'03' = 'AMADOR'
'04' = 'BUTTE'
'05' = 'CALAVERAS'
'06' = 'COLUSA'
'07' = 'CONTRA COSTA'
'08' = 'DEL NORTE'
```

```
'09' = 'EL DORADO'
'10' = 'FRESNO'

(CON'T)
'11' = 'GLENN'
'12' = 'HUMBOLDT'
'13' = 'IMPERIAL'
'14' = 'INYO'
'15' = 'KERN'
'16' = 'KINGS'
'17' = 'LAKE'
'18' = 'LASSEN'
'19' = 'LOS ANGELES'
'20' = 'MADERA'
'21' = 'MARIN'
'22' = 'MARIPOSA'
'23' = 'MENDOCINO'
'24' = 'MERCED'
'25' = 'MODOC'
'26' = 'MONO'
'27' = 'MONTEREY'
'28' = 'NAPA'
'29' = 'NEVADA'
'30' = 'ORANGE'
'31' = 'PLACER'
'32' = 'PLUMAS'
'33' = 'RIVERSIDE'
'34' = 'SACRAMENTO'
'35' = 'SAN BENITO'
'36' = 'SAN BERNARDINO'
'37' = 'SAN DIEGO'
'38' = 'SAN FRANCISCO'
'39' = 'SAN JOAQUIN'
'40' = 'SAN LUIS OBISPO'
'41' = 'SAN MATEO'
'42' = 'SANTA BARBARA'
'43' = 'SANTA CLARA'
'44' = 'SANTA CRUZ'
'45' = 'SHASTA'
'46' = 'SIERRA'
'47' = 'SISKIYHOU'
'48' = 'SOLANO'
'49' = 'SONOMA'
'50' = 'STANISLAUS'
'51' = 'SUTTER'
'52' = 'TEHAMA'
'53' = 'TRINITY'
'54' = 'TULARE'
'55' = 'TUOLUME'
'56' = 'VENTURA'
'57' = 'YOLO'
'58' = 'YUBA'   ;
```

CURB1   CURB AND LANDSCAPE

```
'1' = 'CURB MEDIAN      '
'2' = 'CURB MED W/TREES'
'3' = 'CURB MED W/SHRUB'
'4' = 'RAISED TRAFF BAR'
'5' = 'MEDIAN W/TREES  '
'6' = 'MEDIAN W/SHRUBS '
'7' = 'N/CURBS/SHRUBS  '
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

DESG_SPD   DESIGN SPEED

```
'A' = '< 30 MPH'
'B' = '30 MPH'
'C' = '35 MPH'
'D' = '40 MPH'
'E' = '45 MPH'
'F' = '50 MPH'
'G' = '55 MPH'
'H' = '60 MPH'
'J' = '65 MPH'
'K' = '70 MPH'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```

DES_NBR   ROAD DESC NUMBER

NON-LABELED VARIABLE - zero = no added description records; (1-9) = added description records.

DISTRICT   DISTRICT

```
'01' =  'DISTRICT ONE'
'02' =  'DISTRICT TWO'
'03' =  'DISTRICT THREE'
'04' =  'DISTRICT FOUR'
'05' =  'DISTRICT FIVE'
'06' =  'DISTRICT SIX'
'07' =  'DISTRICT SEVEN'
'08' =  'DISTRICT EIGHT'
'09' =  'DISTRICT NINE'
'10' =  'DISTRICT TEN'
'11' =  'DISTRICT ELEVEN'
'12' =  'DISTRICT TWELVE'
'-' =   'INVALID DATA'
```

```
                   '+' =   'NO DATA';


DIVIDED      DIVIDED HIGHWAY

             1 = 'DIVIDED'
             0 = 'NOT DIVIDED';


             NOTE:  Based on MED_TYPE



ENDMP        POSTMILE + SEG_LNG

             NON-LABELED VARIABLE – Ending milepost in miles, based on BEGMP plus
             SEG_LNG (XXX.XXX)



FEAT_LF      LEFT RDBD SPECIAL FEATURE
FEAT_RG      RIGHT RDBD SPECIAL FEATURE

             'A' = '1 LNE W/TRN OUT'    One lane road with turnouts for passing
             'B' = 'LANE TRANSITIONS'   Lane transitions
             'C' = 'PASS /TRK CLIMB'    Passing or truck climbing lane
             'D' = 'BUS LANE'           Bus lane
             'E' = 'SINGLE AUX LANE'    Auxiliary lane (included in no.lanes
                                        field)
             'F' = 'MULTI AUX LANES'    Auxiliary lanes (included in no. lanes
                                        field)
             'G' = 'TUNNEL'             Tunnel
             'H' = 'TOLL PLAZA & APP'   Toll plaza and approaches
             'J' = 'BUG/BORDER PATRL'   "Bug" or border patrol station
             'K' = 'BOTM DECK-TWO DK'   Bottom deck of two-deck structure
             'L' = 'TOP DECK-TWO DK'    Top deck of two-deck structure
             'M' = 'CONST ZNE- OPEN'    Construction zone open to traffic
             'N' = 'SINGLE HOV LANE'    Median lane is HOV lane
             'P' = 'MULTIPLE HOV LN'    Median lanes are HOV lanes
             'Q' = 'REVERSIBLE LN'      Reversible peak-hour lane(s)
             'Z' = 'NO SPECIAL FEATR'   No special feature
             '-' = 'INVALID DATA'
             '+' = 'NO DATA'
             OTHER = 'ERROR/OTHER CODES';
```

NOTE: Unlike most of the other surface and width descriptor varibles, these variables are keyed to the "roadbed" rather than the roadway. For undivided roadways, the "right" variable concerns the right "half" of the total roadway. The "left" variable concerns the left "half." For undivided roads with auxiliary lanes, the lanes will be referenced to the right "half." For divided roadways, the "right" variable concerns roadway 1, the right-hand roadway in the direction of inventory (usually north or east). The "left" variable concerns roadway 2.

FED_AID   **FEDERAL AID (IN LIEU)**

```
'0' = 'NONE'
'2' = 'IN LIEU INTERST'       In lieu of Interstate
'3' = 'IN LIEU PRIMARY'       In lieu of primary
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


FED_PREF   **FEDERAL AID RTE PREFIX**

```
'$' = 'NO FEDERAL AID'
'I' = 'INTERSTATE'
'P' = 'PRIMARY'
'5' = 'FAS OR FAU'            FAS or FAU - Final alignment
'6' = 'FAS/FAU N/FINAL'       FAS or FAU - Not final alignment
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```


FED_RTE   **FEDERAL AID RTE**

```
'000' = 'NOT FED AID'
'001'-'980' = 'VALID FED AID'
'-' = 'INVALID DATA'
'+'   = 'NO DATA';
```


FILETYP   **FILE TYPE**

```
'H' = 'HIGHWAY RECORD'
'I' = 'INTERSECTION'
'R' = 'RAMP'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


FUNC_CLS   **FUNCTIONAL CLASS COMPONENT**

```
'1' = 'PA W/URB PA EXTN'      Rural Principal arterial with extension
                             into urban area Principal Arterial
'2' = 'PA W/URB MA EXTN'      Rural Principal Arterial with extension
                             into urban area Minor Arterial
'3' = 'PA W/O EXTENTION'      Principal Arterial lying entirely in
                             urban or rural area
'4' = 'MINOR ARTERIAL'        Minor Arterial
```

-72

```
'5' = 'MAJOR COLLECTOR'        Major Collector
'6' = 'MINOR COLLECTOR'        Minor Collector
'7' = 'LOCAL'                  Local road
'0' = 'NONE';
```

HIST_ADD   HISTORY ELEMENTS RELATIVE ADDR

NON-LABELED VARIABLE – This provides the address in a separate
"History Elements" file where the past configuration of this roadway
section can be found. HSIS does not have this History Elements file,
but California does.

HWY_GRP   HIGHWAY GROUP

```
'R' = 'INDEP ALIGN RGHT'       Right independent alignment
'L' = 'INDEP ALIGN LEFT'       Left independent alignment
'D' = 'DIVIDED HIGHWAY'
'U' = 'UNIDIVIDED HIGHWY'
'X' = 'UNCONSTRUCTED'
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NOTE: In the HSIS version of the Roadlog File, codes "D", "U", and
"X" do not appear. They are combined by CA DOT into "Z". In other
data files provided by California to other users, these codes may
occur. To link with crash data, they must be recoded to "Z".

INS_OTS   INSIDE OUTSIDE CITY

```
'I' = 'INSIDE'
'O' = 'OUTSIDE'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NOTE: See RU_IO for additional urban/rural codes.

LANEWID   AVERAGE LANE WIDTH

```
 0     = 'ZERO'
1-7    = '1 - 7'
 8     = '8 FEET'
 9     = '9 FEET'
10     = '10 FEET'
11     = '11 FEET'
12     = '12 FEET'
13     = '13 FEET'
14     = '14 FEET'
```

```
15-999 ='15-999 FEET'
. = 'NOT STATED';
```

NOTE: Average lane width. Calculated by dividing total traveled way width by total number of lanes.

LSHLDWID   **LEFT SHOULDER WIDTH RD1**
LSHL_WD2   **LEFT SHOULDER WDTH RD2**

```
0  = 'ZERO'
1-3  = '1-3 FT'
4-6  = '4-6  '
7-9  = '7-9  '
10-13 = '10-13 '
14-99 = '14-99 '
. = 'NOT STATED';
```


LTRD_DTE   **LEFT ROADBED DATE**

NON-LABELED VARIABLE – Date of last change in some variable related to Road 2 (left roadbed)(YYYYMMDD). See Discussion.

LTRD_HST   **LEFT ROADBED HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable related to Road 2 (left roadbed). See Discussion.

MEDBARTY   **MEDIAN BARRIER TYPE**

```
'A' = 'CABLE BARRIER'
'B' = 'CAB BAR/GLR SCRN'      Cable barrier with glare screen
'C' = 'METAL BEAM BARR'
'D' = 'MET BM/GLAR SCRN'      Metal beam barrier with glare screen
'E' = 'CONCRETE BARRIER'
'F' = 'CONC BR/GLR SCRN'      Concrete barrier with glare screen
'G' = 'BRIDGE BAR RAIL'       Bridge barrier railing
'H' = 'CHAIN LINK FENCE'
'J' = 'GRDRL IN MED BTH'      Guardrail in median, both roadways
'K' = 'GRDRL IN MED LFT'      Guardrail in median, left roadway
'L' = 'GRDRL IN MED RGT'      Guardrail in median, right roadway
'M' = '2 WAY - 1 LNE RD'      Two-way, one-lane road as median
'N' = 'THRIE BEAM BARR'
'P' = 'THRIE BM/GLR SCR'      Thrie beam barrier with glare screen
'Q' = 'CONC BR/BOTH SHL'      Concrete barrier, both ways inside
                                  both shoulders
'R' = 'CONC BR/RD2 SHL'       Concrete barrier on inside shoulder of
```

```
                                            road 2 (left roadway)
      'S' = 'CONC BR/RD1 SHL'        Concrete barrier on inside shoulder of
                                            road 1 (right roadway)
      'X' = 'EXTERNAL/CONCR'         External barriers on concrete barrier
      'Y' = 'OTHER -NO LISTED'
      'Z' = 'NO BARRIER'
      '-' = 'INVALID DATA'
      '+' = 'NO DATA';
```

MEDWID   **MEDIAN WIDTH**

```
      . = 'UNKNOWN'
      0 = 'ZERO'
      1-10 = '1-10  FT'
      11-20 = '11-20 FT'
      21-30 = '21-30 FT'
      31-40 = '31-40 FT'
      41-60 = '41-60 FT'
      61-90 = '61-90 FT'
      91-99 = '91-99 FT';
```

NOTE: Median width is measured from the edge of the traveled-way to the opposite edge of traveled-way. Thus, it includes inside shoulder widths. 00 to 04 feet medians are normally considered "undivided." 04 to 99 feet are divided.

MED_DTE   **MEDIAN DATE**

NON-LABELED VARIABLE – Date of last change in some variable related to the median(YYYYMMDD). See Discussion.

MED_HIST   **MEDIAN HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable related to the median. See Discussion.

MED_TYPE   **MEDIAN TYPE**

```
      'A' = 'UDIV-N/SEPRATED'      Undivided, not separated or striped
      'B' = 'UDIV-STRIPED'         Undivided, striped
      'C' = 'UDIV REV PRK HR'      Undivided, reversible peak hour lane(s)
      'E' = 'DIV REV PK HR'        Divided, reversible peak hour lane(s)
      'F' = 'DIV-2-WAY LF TRN'     Divided, two-way left turn lane
      'G' = 'DIV CONTIN LF LN'     Divided, continuous left-turn lane
      'H' = 'DIV PAVED MEDN'       Divided, paved median
      'J' = 'DIV UNPAVD MEDN'      Divided, unpaved median
      'K' = 'DIV SEP GRADES'       Divided, separate grades
      'L' = 'DIV SEP GRD W/WAL'    Divided, separate grades with retaining
                                        wall
      'M' = 'DIV SAWTOOTH UPAV'    Divided, sawtooth (unpaved)
```

```
'N' = 'DIV SAWTOOTH PAV'     Divided, sawtooth (paved)
'P' = 'DIV DITCH'            Divided, ditch
'Q' = 'DIV SEP STRUCTUR'     Divided, separate structure
'R' = 'DIV RR/RAPID TRN'     Divided, railroad or rapid transit
'S' = 'DIV BUS LANES'        Divided, bus lanes
'T' = 'DIV OCCS TRAF LNE'    Divided, paved area, occasional traffic
                                         lane
'U' = 'DIV RR + BUS LN'      Divided, railroad and bus lane
'V' = 'DIV REV PRK HR'       Divided, contains reversible peak-hour
                                         lane(s)

(CON'T)
'Z' = 'DIV OTHER'            Divided, other
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

MED_VAR   **MEDIAN VARIANCE**

```
'V' = 'VARIABLE MED WDT'     Variable median width
'P' = 'NO VAR/GT 100 FT'     Over 100' median with no variance
'Z' = 'MED CONSTANT WDT'     Median constant width - no variance
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```

MVMT   **MILLION VEHICLE MILES TRAVELED**

```
NON-LABELED VARIABLE -- Million Vehicle Miles Traveled on road
                             segment
```

NOTE: Created variable added in 1999 for all HSIS roadway-inventory
files. See Discussion.

NAT_LND   **NATIONAL LANDS**

```
'0' = 'NONE'
'1' = 'NATNL MONUMENTS'
'2' = 'NATNL REC AREAS'
'3' = 'NATNL FOREST'
'4' = 'NATNL MILT RESV'
'5' = 'NATNL INDN RESV'
'6' = 'BUREU OF NAT LND'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NA_MILE   **NON-ADD MILEAGE**

```
'A' = 'NORMAL'
```

```
'N' = 'NON-ADD'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

```
NO_LANE1      NUMBER OF LANES RD1
NO_LANE2      NUMBER OF LANES RD2
NO_LANES      TOTAL NUMBER OF LANES


              0   = 'ZERO'
              1   = 'ONE LANE'
              2   = 'TWO LANES'
              3   = 'THREE LANES'
              4-6 = '4 TO 6 LANES'
              7-8 = '7 TO 8 LANES'
              9-99 = '9-99 LANES'
              . = 'NOT STATED';
```

NOTE: Number of lanes includes through lanes plus HOV and other auxiliary lanes greater than 0.2 miles in length. See FEAT_LF and FEAT_RG for codes identifying special lanes/features. These special lanes only occur in less than four percent of the mileage, and are almost exclusively on sections with six or more total lanes.


```
PAV_WDL       LEFT PAVED SHLD WDTH RD1
PAV_WDL2      LEFT PAVED SHLD WIDTH RD2
PAV_WDR2      RIGHT PAVED SHLD WIDTH RD2
PAV_WIDR      RIGHT PAVED SHLD WDTH RD1


              0    = 'ZERO'
              1-3  = '1-3 FT'
              4-6  = '4-6 FT'
              7-9  = '7-9   '
              10-13 = '10-13  '
              14-99 = '14-99  '
              . = 'NOT STATED';


PSMILPRF      POSTMILE PREFIX


              ' ' = 'NO PREFIX'
              'A' = 'REPOSTED'
              'B' = 'BUS LANE'
              'C' = 'COMMERCIAL'
              'D' = 'DUP MEANDERING'       Duplicate (meandering)
              'F' = 'REPOS -COMMERC'       Reposted - Commercial (C)
              'G' = 'REPOS -DUP'           Reposted - Duplicate (D)
              'H' = 'RELGNED DUP'          Realigned - Duplicate (D)
              'J' = 'REPOS RELGN DUP'      Reposted, realigned - Duplicate
              'K' = 'REPOSTED-OVERLAP'     Reposted - Overlap (L)
              'L' = 'OVERLAPING PSTML'     Overlapping Postmiles
              'M' = 'REALIGND REALIGN'     Realigned realignment (R)
              'N' = 'REP/REALG REALGN'     Reposted, realighned realignment (M)
              'P' = 'REPOSTED REALIGN'     Reposted realignment (R)
```

```
(CON'T)
'Q' = 'REPOSTED - SPUR'         Reposted - Spur (S)
'R' = 'REALIGNMENT'
'S' = 'SPUR'
'T' = 'TEMP CONNECTION'         Temporary Connection
'U' = 'REPOST -TMP CONN'        Reposted - Temporary connection (T)
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NOTE: Roadways can be realigned in the middle of a year (see "R" above). Thus, there may appear to be overlapping records in the same milepost range in a given year, except for this variable. Accidents are correctly mileposted to the correct record by California. RD_DATE can be used to determine when the new alignment was opened. However, if one is trying to match prior year's crashes to such a section, the older crash records (not having the "R") will not be computer matched to the new alignment (with the "R") even though the roads are virtually the same piece of pavement. One can see how the Roadlog sections actually fall on the ground in a given year by sorting by RO_SEQ (Route Order Sequence). However, in multi-year before/after studies, the analyst may have to manually match the pertinent sections across years to conduct his/her analysis. Contact HSIS staff for assistance.

PSMILSUF   **POSTMILE SUFFIX**

```
' ' = 'NO SUFFIX'
'E' = 'EQUATION'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


RD_DATE   **ROAD DATE**

NON-LABELED VARIABLE – Date when a realigned roadway section was opened to traffic (YYYYMMDD). See further discussion under PSMILPRF.

RD_DESC   **ROAD DESCRIPTION**

NON-LABELED VARIABLE - 25 character verbal description of route name

RECTYPE   **RECORD TYPE**

NON-LABELED VARIABLE – used to identify file type.

RGRD_DTE   **RIGHT ROADBED DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to Road 1 (right roadbed) (YYYYMMDD). See Discussion.

RGRD_HSR   **RIGHT ROADBED HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to Road 1 (right roadbed). See Discussion.

RODWYCLS   **ROADWAY CLASSIFICATION**

```
'01' = 'URB FRWY >=4 LN'     Urban freeways, four or more lanes
'02' = 'URB FRWY < 4 LN'     Urban freeways less than four lanes
'03' = 'URB 2-LANE ROADS'    Urban two-lane roads
'04' = 'URB ML DV N-FRE'      Urban multilane divided non-freeway
'05' = 'URB ML UND N-FRE'    Urban multilane undivided non-freeway
'06' = 'RUR FRWY >=4 LN'     Rural freeways, four or more lanes
'07' = 'RUR FRWY < 4 LN'     Rural freeways less than four lanes
'08' = 'RUR 2-LANE ROADS'    Rural two-lane roads
'09' = 'RUR ML DV N-FRE'     Rural multilane divided non-freeway
'10' = 'RUR ML UND N-FRE'    Rural multilane undivided non-freeway
'99' = 'OTHERS';             Others
```

NOTE: Created variable added to HSIS accident and roadway inventory
files in all States in 1999. See Discussion.

RO_SEQ   **ROUTE ORDER SEQUENCE**

NON-LABELED VARIABLE

NOTE: This variable can help one decide the order in which
homogeneous sections laid out. Routes can be sorted by this variable
to get adjacent segments in order.

RSHLDWID   **RIGHT SHOULDER WIDTH RD1**
RSHL_WD2   **RIGHT SHOULDER WIDTH RD2**

```
 0   = 'ZERO'
1-3  = '1-3 FT'
4-6  = '4-6 FT'
7-9  = '7-9   '
10-13 = '10-13 '
14-99 = '14-99 '
. = 'NOT STATED';
```


RTE_NBR   **ROUTE**

RTE_SUF   ROUTE SUFFIX

```
'P' = 'ALIGNMENT PRIOR'    Alignment prior to conversion
'S' = 'SUPPLEM MILEAGE'    Supplemental mileage
'U' = 'UNRELINQUISHED'     Unrelinquished
'Z' = 'UNDER CONSTRU'      Budgeted or under construction
' ' = 'NO SUFFIX';
OTHER = 'ERROR/OTHER CODES';
```

RURURB   RURAL URBAN

```
'R' = 'RURAL'
'U' = 'URBAN'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NOTE: See RU_IO for additional rural-urban codes. Note that "URBAN" in this variable also contains "Urbanized" in RU_IO.

RU_IO   RURAL/URBAN - INSIDE OUTSIDE CITY

```
'A' = 'RUR-IN ONE CITY'    Rural, totally in one city
'B' = 'RUR-HF IN,HF OUT'   Rural, ½ in and ½ outside city
'C' = 'RUR-HF CTY1,CTY2'   Rural, ½ in one city, ½ in another
'D' = 'RUR-CITY,HF CNT1'   Rural, inside city,1/2 in one county, ½
                             in another county
'E' = 'RUR-CITY, CNT2'     Rural, inside city, independent
                             alignment in other county
'F' = 'RUR-HF CNTY1'       Rural, outside city, ½ in one county, ½
                             in another county
'G' = 'RUR-TOTALLY'        Rural, totally outside city
'H' = 'RUR-IND ALG CNTY'   Rural, outside city, independent
                             alignment in other county
'J' = 'URB-TOTALLY'        Urban, totally in one city
'K' = 'URB-HF IN,HF OUT'   Urban, inside city, ½ in and ½ outside
                             city
'L' = 'URB-HF CTY1,CTY2'   Urban, inside city, ½ in one city, ½ in
                             another city
'M' = 'URB-CITY,HF CNT1'   Urban, inside city, ½ in one county, ½
                             in another county
'N' = 'URB-CITY, CNT2'     Urban, inside city, independent
                             alignment in other county
'P' = 'URB-OUT,HF CNTY1'   Urban, outside city, ½ in one county, ½
```

```
                                      in another county
         'Q' = 'URB-OUTSD CITY'       Urban, totally outside city
         'R' = 'URB-OUT, IA CNTY'     Urban, outside city, independent
                                      alignment in other county
         'S' = 'URBZ-IN ONE CITY'     Urbanized, totally in one city



         (CON'T)
         'T' = 'URBZ-HF IN CITY'      Urbanized, inside city, ½ in and ½
                                      outside city
         'U' = 'URBZ-HF CTY1&2'       Urbanized, inside city, ½ in one city,
                                      ½ in another city
         'V' = 'URBZ-CITY,CNT1&2'     Urbanized, inside city, ½ in one
                                      county, ½ in another county
         'W' = 'URBZ-CITY, CNTY2'     Urbanized, inside city, independent
                                      alignment in other county
         'X' = 'URBZ-OUT,CNTY1&2'     Urbanized, outside city, ½ in one
                                      county, ½ in another county
         'Y' = 'URBZ-OUTSIDE CTY'     Urbanized, totally outside city
         'Z' = 'URBZ-OUT, IA CNTY'    Urbanized, outside city, independent
                                      alignment in other county
         '-' = 'INVALID DATA'
         '+' = 'NO DATA';



SCN_FRWY     SCENIC FREEWAY


         '0' = 'N/FRWY/SCENIC'        Non-freeway, non-scenic, non-
                                      expressway
         '1' = 'SCENIC N/FRWY'        Scenic (non-freeway, non-expressway)
         '2' = 'FRWY/EXPSWY N/SC'     Freeway & Expwy system (non-scenic)
         '3' = 'SCEN FRWY EXPSWY'     Freeway & Expwy system (scenic)
         '-' = 'INVALID DATA'
         '+' = 'NO DATA';



SEG_LNG      SECTION LENGTH


         NON-LABELED VARIABLE - length of section in miles (XXX.XXX)



SURF_TYP     SURFACE TYPE RD1
SURF_TY2     SURFACE TYPE RD2


         'B' = 'PCC-BRDG DECK'        PCC, bridge deck
         'C' = 'PCC- CONC'           PCC, concrete
         'H' = 'AC-7" THICK'          AC, Base & Surface 7" thick
         'M' = 'AC-LT 7" THICK'       AC, Base & Surface < 7" thick
         'O' = 'AC-EARTH-GRAVEL'      AC, Oiled earth-gravel
         'P' = 'AC-BRDG DECK'         AC, Bridge deck (2" or greater)
         'E' = 'UNPAVED- EARTH'
```

```
'F' = 'UNP- UNDETERMD'
'G' = 'UNP- BRDG DECK'          Unpaved, bridge deck (all not codes B
                                or P)
'-' = 'INVALID DATA'
' ','+' = 'NO DATA';
```

SURF_WD2   TRAVELED WAY WIDTH RD2
SURF_WID   TRAVELED WAY WIDTH RD1

```
0  = 'ZERO'
1-9 = '1-9 FEET'
10 = '10 FEET'
11 = '11 FEET'
12 = '12 FEET'
13-14 = '13-14 FEET'
15-16 = '15-16 FEET'
17-999 = '17-999 FEET'
. = 'NOT STATED';
```

NOTE: Traveled-way width includes widths of through lanes plus
auxiliary lanes greater than 0.2 miles in length. On some bridges,
the shoulder widths may be erroneously included in this measurement.
 California staff is correcting these error as they find them.
Sections which are bridges can be identified using SURF_TYP.

TERRAIN   TERRAIN

```
'M' = 'MOUNTAINOUS'
'R' = 'ROLLING'
'F' = 'FLAT'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

TOLL   TOLL AND FOREST RDS

```
'0' = 'NONE'
'1' = 'TOLL RDS & BRDG'
'2' = 'FOREST HIGHWAYS'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

TRKCNTFL   TRUCK COUNT FLAG

NON-LABELED VARIABLE - This indicates whether actual truck counts

were made in this roadway section. Here, "1" indicates a count or verified estimate at that location, and a "0" indicates no count ("carry forward" data). A blank indicates both no count and that it was not legitimate to carry-forward the data. See Discussion and "NOTE" under TRK2AX.

TRKTOT   **TOTAL TRUCK AADT**

AADT COUNT FOR TOTAL TRUCKS – the sum of TRK2AX, TRK3AX, TRK4AX, and TRK5AX. See Note under TRK2AX.

TRK2AX   **2-AXLE TRUCK AADT**

AADT COUNT FOR 2-AXLE TRUCKS

NOTE: This is one of seven variables extracted from the CA DOT web site beginning with the 1996 Roadlog File (see TRK3AX, TRK4AX, TRK5AX, TRKTOT, and TRKCNTFL). For each of these variables, truck count data are converted into AADT's at certain points along the roadway. Since the count points on the truck AADT file shown on the web page are only at a limited set of locations (when complared to the huge number of sections/records in the Roadlog File), a computer program was developed which averages counts if in the same roadlog section, attaches individual counts or averages to sections where they occur, and then "carries forward" the single count or the last (downstream)count from that section to all subsequent sections on a given route until a new count is reached. See section on "Truck Count Data" in Discussion for more details.

TRK3AX   **3-AXLE TRUCK AADT**

AADT COUNT FOR 3-AXLE TRUCKS – see note under TRK2AX.

TRK4AX   **4-AXLE TRUCK AADT**

AADT COUNT FOR 4-AXLE TRUCKS – see note under TRK2AX.

TRK5AX   **5+-AXLE TRUCK AADT**

AADT COUNT FOR TRUCKS WITH FIVE OR MORE AXLES – see note under TRK2AX.

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LIST OF VARIABLES FOR CALIFORNIA INTERSECTION FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
CNTYRTE	INTERSECTION COUNTY ROUTE	Intersection	CHA(9)	I-85	
COUNTY	COUNTY	Intersection	CHA(2)	I-85	II-207
DISTRICT	DISTRICT	Intersection	CHA(2)	I-85	II-215
HWY_GRP	HIGHWAY GROUP	Intersection	CHA(1)	I-85	II-217
INTY_RTE	INTERSECTION COUNTY ROUTE	Intersection	CHA(9)	I-86	
INT_ADDR	HISTORY ELEMENTS RELATIVE ADDR	Intersection	NUM	I-86	
INT_DESC	INTERSECTION DESCRIPTION	Intersection	CHA(23)	I-86	
INT_DTE	INTERSECTION EFFECTIVE DATE	Intersection	CHA(6)	I-86	
INT_HST	INTERSECTION TYPE HISTORY	Intersection	CHA(1)	I-86	
INT_PRF	INTERSECTING RTE PREFIX	Intersection	CHA(1)	I-86	
INT_RSUF	INTERSECTING RTE SUFFIX	Intersection	CHA(1)	I-86	
INT_RTE	INTERSECTING RTE NBR	Intersection	CHA(3)	I-86	
INT_SEQ	INTERSECTING RTE ORDER SEQ NBR	Intersection	NUM	I-87	
LGHT_DTE	INTERSECTION LIGHT TYPE DATE	Intersection	CHA(6)	I-87	
LGHT_HST	INTERSECTION LIGHT TYPE HISTORY	Intersection	CHA(1)	I-87	
LGHT_TYP	INTERSECTION LIGHT TYPE	Intersection	CHA(1)	I-87	II-218
LOG_ERR	LOG ERROR INDICATOR	Intersection	CHA(1)	I-87	
MED_DTE	RAMP MEDIAN DATE	Intersection	CHA(6)	I-87	
MED_HIST	MEDIAN HISTORY	Intersection	CHA(1)	I-88	
MED_IND	RAMP MEDIAN INDICATOR	Intersection	CHA(1)	I-88	II-219
MILEPOST	RAMP MILEPOST	Intersection	NUM	I-88	
ML_AADT	MAINLINE AADT	Intersection	NUM	I-88	II-220
ML_ADTDT	MAINLINE ADT DATE	Intersection	CHA(6)	I-88	
ML_ADTHS	MAINLINE ADT HISTORY	Intersection	CHA(1)	I-88	
ML_DATE	MAINLINE HISTORY DATE	Intersection	CHA(6)	I-88	
ML_HIST	MAINLINE HISTORY	Intersection	CHA(1)	I-89	
ML_LANES	MAINLINE NUMBER OF LANES	Intersection	CHA(1)	I-89	II-222
ML_LEFT	MAINLINE LEFT TURN CHANNELIZATION	Intersection	CHA(1)	I-89	II-224
ML_LNGT	MAINLINE SECTION LENGTH	Intersection	CHA(3)	I-89	
ML_MAST	MAINLINE SIGNAL MASTARM CHANNELIZATION	Intersection	CHA(1)	I-89	
ML_RIGHT	MAINLINE RIGHT TURN CHANNELIZATION	Intersection	CHA(1)	I-90	II-225
ML_TRFLO	MAINLINE TRAFFIC FLOW	Intersection	CHA(1)	I-90	II-226
PSMILPRF	POSTMILE PREFIX	Intersection	CHA(1)	I-91	II-227
PSMILSUF	POSTMILE SUFFIX	Intersection	CHA(1)	I-91	II-228
RECTYPE	RECORD TYPE	Intersection	CHA(1)	I-91	
RO_SEQ	ROUTE ORDER SEQUENCE	Intersection	NUM	I-91	
RTE_NBR	RDWAY ROUTE NUMBER	Intersection	CHA(3)	I-91	
RTE_SUF	RDWAY ROUTE SUFFIX	Intersection	CHA(1)	I-91	II-229

LIST OF VARIABLES FOR CALIFORNIA INTERSECTION FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
TRFCTLDT	TRAFFIC CONTROL TYPE DATE	Intersection	CHA(6)	I-91	
TRFCTLHS	TRAFFIC CONTROL TYPE HISTORY	Intersection	CHA(1)	I-91	
TRF_CNTL	TRAFFIC CONTROL TYPE	Intersection	CHA(1)	I-92	II-230
TYPEDESC	INTERSECTION TYPE	Intersection	CHA(1)	I-92	II-233
XSTAADT	X-STREET AADT	Intersection	NUM	I-93	II-234
XSTADTDT	X-STREET ADT DATE	Intersection	CHA(6)	I-93	
XSTADTHS	X-STREET ADT HISTORY	Intersection	CHA(1)	I-93	
XSTLANES	X-STREET NUMBER OF LANES	Intersection	CHA(1)	I-93	II-236
XSTLNGT	X-STREET SECTION LENGTH	Intersection	CHA(3)	I-93	
XSTRTDTE	X-STREET DATE	Intersection	CHA(6)	I-94	
XSTRTHST	X-STREET HISTORY	Intersection	CHA(1)	I-94	
XSTRTLFT	X-STREET LEFT TURN CHANNELIZATION	Intersection	CHA(1)	I-94	II-238
XSTRTMST	X-STREET SIGNAL MASTARM CHANNELIZATION	Intersection	CHA(1)	I-94	II-239
XSTRTRGH	X-STREET RIGHT TURN	Intersection	CHA(1)	I-94	II-240
XSTSTRT	X-STREET STATE ROUTE INDICATOR	Intersection	NUM	I-94	II-241
XSTTRFLO	X-STREET TRAFFIC FLOW	Intersection	CHA(1)	I-95	II-242

NOTE: SAS variable names and explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

CNTYRTE   **COUNTY ROUTE**

NON-LABELED VARIABLE – Linkage variable, consisting of DISTRICT+ RTE_NBR+RTE_SUF+COUNTY+PSMILPRF+HWY_GRP

COUNTY   **COUNTY**

See Listing under Roadlog or Accident File.

DISTRICT   **DISTRICT**

```
'01' =  'DISTRICT ONE'
'02' =  'DISTRICT TWO'
'03' =  'DISTRICT THREE'
'04' =  'DISTRICT FOUR'
'05' =  'DISTRICT FIVE'
'06' =  'DISTRICT SIX'
'07' =  'DISTRICT SEVEN'
'08' =  'DISTRICT EIGHT'
'09' =  'DISTRICT NINE'
'10' =  'DISTRICT TEN'
'11' =  'DISTRICT ELEVEN'
'12' =  'DISTRICT TWELVE'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


HWY_GRP   **HIGHWAY GROUP**

```
'R' = 'INDEP ALIGN RGHT'      Right independent alignment
'L' = 'INDEP ALIGN LEFT'      Left independent alignment
'D' = 'DIVIDED HIGHWAY'
'U' = 'UNIDIVIDED HIGHWY'
'X' = 'UNCONSTRUCTED'
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

NOTE: In the HSIS version of the Roadlog File, codes "D", "U", and "X" do not appear. They are combined by CA DOT into "Z". In other data files provided by California to other users, these codes may

occur. To link with crash data, they must be recoded to "Z".

INTY_RTE   **INTERSECTION COUNTY ROUTE**

NON-LABELED VARIABLE – Linkage variable, consisting of DISTRICT+
RTE_NBR+RTE_SUF+COUNTY+PSMILPRF+HWY_GRP

INT_ADDR   **HISTORY ELEMENTS RELATIVE ADDR**

NON-LABELED VARIABLE –This provides the address in a separate
"History Elements" file where the past configuration of this
intersection can be found. HSIS does not have this History Elements
file, but California does.

INT_DESC   **INTERSECTION DESCRIPTION**

NON-LABELED VARIABLE – Character description of intersection location

NOTE: New variable from 1997.

INT_DTE   **INTERSECTION EFFECTIVE DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to intersection type (YYYYMMDD). See Discussion.

INT_HST   **INTERSECTION TYPE HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to intersection type. See Discussion.

INT_PRF   **INTERSECTING RTE PREFIX**

NON-LABELED VARIABLE - Intersection route prefix

INT_RSUF   **INTERSECTING RTE SUFFIX**

```
'P' = 'ALIGNMENT PRIOR'       Alignment prior to conversion
'S' = 'SUPPLEM MILEAGE'       Supplemental mileage
'U' = 'UNRELINQUISHED'        Unrelinquished
'Z' = 'UNDER CONSTRU  '       Budgeted or under construction
' ' = 'NO SUFFIX';
```


INT_RTE   **INTERSECTING RTE NBR**

NON-LABELED VARIABLE -- Intersecting route number

INT_SEQ   **INTERSECTING RTE ORDER SEQ NBR**

NON-LABELED VARIABLE – See RO_SEQ

JUNCTYPE   **JUNCTION TYPE**

```
'1' = 'INTERSECTIONS'        Intersections
'2' = 'RAMPS'                Ramps
'3' = 'DIRT/GRAVEL/ACCESS RD' Dirt/Gravel/Access roads
'4' = 'CAMP/CAMPGROUNDS/PARKS'Camp/Campgrounds/Parks
'5' = 'FOREST/FOREST SERV RDS'Forest/Forest Service, USFS oads
'6' = 'NAMED ROADS'          Named Roads
'7' = 'PUB/PRIV/HIGH VOLUME'  Public/Private high volume roads
'8' = 'PUB/PRIV/LOW VOLUME'   Public/Private low volume roads
```

NOTE: This variable is currently being created. See Discussion.

LGHT_DTE   **INTERSECTION LIGHT TYPE DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to intersection lighting (YYYYMMDD). See Discussion.

LGHT_HST   **INTERSECTION LIGHT TYPE HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to intersection lighting. See Discussion.

LGHT_TYP   **INTERSECTION LIGHT TYPE**

```
'N' = 'NO LIGHTING'
'Y' = 'LIGHTED'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```


LOG_ERR   **LOG ERROR INDICATOR**

NON-LABELED VARIABLE - All level is blank from 1993-1997.

MED_DTE   **MEDIAN DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to the median(YYYYMMDD). See Discussion.

MED_HIST   **MEDIAN HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to the median. See Discussion.

MED_IND   **MEDIAN INDICATOR**

```
'U' = 'UNDIVIDED'
'D' = 'DIVIDED'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```


MILEPOST   **INTERSECTION MILEPOST**

NON-LABELED VARIABLE -- Milepost of intersection in miles (XXX.XXX)

ML_AADT   **MAINLINE AADT**

```
0           = '0'
1-100    = '1-100'
101-500    = '101-500'
501-1000    = '501-1,000'
1001-2000    = '1,001-2,000'
2001-5000    = '2,001-5,000'
5001-10000  = '5,001-10,000'
10001-15000  = '10,001-15,000'
15001-20000  = '15,001-20,000'
20001-40000  = '20,001-40,000'
40001-999999 = ' >= 40,001'
. = 'NO DATA';
```


ML_ADTDT   **MAINLINE ADT DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to mainline ADT (YYYYMMDD). See Discussion.

ML_ADTHS   **MAINLINE ADT HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable

related to mainline ADT. See Discussion.

ML_DATE   MAINLINE HISTORY DATE

NON-LABELED VARIABLE – Date of last change in some variable related
to the mainline (YYYYMMDD). See Discussion.

ML_HIST   MAINLINE HISTORY

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to the mainline. See Discussion.

ML_LANES   MAINLINE NUMBER OF LANES

```
'0' = 'ZERO'
'1' = 'ONE LANE'
'2' = 'TWO LANES'
'3' = 'THREE LANES'
'4'-'6' = '4 TO 6 LANES'
'7'-'9' = '7 TO 9 LANES'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```

NOTE: This is the number of "thru" lanes on the mainline approaches.
 It includes all lanes with thru movements (including thru and left
turn, or thru and right turn), but does not contain exclusive turn
lanes.

ML_LEFT   MAINLINE LEFT TURN CHANNELIZATION

```
'C' = 'CURB MED LFT TRN'      Curbed median left turn
                                  channelization
'N' = 'NO LFT TRN CHANN'      No left turn channelization
'P' = 'PAINTED LFT TRN'       Painted left turn channelization
'R' = 'RAISED BARS'           Raised bars left turn channelization
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```


ML_LNGT   MAINLINE SECTION LENGTH

NON-LABELED VARIABLE - 000-999 (feet) from centerline of intersection
in each direction

ML_MAST   MAINLINE SIGNAL MASTARM

```
                    'N' = 'NO MASTARM'
                    'Y' = 'YES,MASTARM'
                    '-' = 'INVALID DATA'
                    '+' = 'NO DATA'
                    OTHER = 'ERROR/OTHER CODES';




        ML_RIGHT    MAINLINE RIGHT TRUN CHANNELIZATION

                    'N' = 'NO RGHT TRN CHAN'      No right turn channelization
                    'Y' = 'RGHT TRN CHANNEL'      Channelization provided for right
                                                  turns
                    '-' = 'INVALID DATA'
                    '+' = 'NO DATA'
                    OTHER = 'ERROR/OTHER CODES';


        ML_TRFLO    MAINLINE TRAFFIC FLOW

                    'N' = '2-WAY N/LEFT TRN'      2-way traffic, no left turns
                                                  permitted
                    'P' = '2-WAY W/LEFT TRN'      2-way traffic, left turn permitted
                    'R' = '2-WAY W/TURN RES'      2-way traffic, left turn restricted
                                                  during peak hours
                    'W' = 'ONE-WAY'               One-way traffic
                    'Z' = 'OTHER'
                    '-' = 'INVALID DATA'
                    '+' = 'NO DATA'
                     OTHER = 'ERROR/OTHER CODES';


        PSMILPRF    POSTMILE PREFIX

                    ' ' = 'NO PREFIX'
                    'A' = 'REPOSTED'
                    'B' = 'BUS LANE'
                    'C' = 'COMMERCIAL'
                    'D' = 'DUP MEANDERING'        Duplicate (meandering)
                    'F' = 'REPOS -COMMERC'        Reposted - Commercial (C)
                    'G' = 'REPOS -DUP'            Reposted - Duplicate (D)
                    'H' = 'RELGNED DUP'           Realigned - Duplicate (D)
                    'J' = 'REPOS RELGN DUP'       Reposted, realigned - Duplicate
                    'K' = 'REPOSTED-OVERLAP'      Reposted - Overlap (L)
                    'L' = 'OVERLAPING PSTML'      Overlapping Postmiles
                    'M' = 'REALIGND REALIGN'      Realigned realignment (R)
                    'N' = 'REP/REALG REALGN'      Reposted, realighned realignment (M)
                    'P' = 'REPOSTED REALIGN'      Reposted realignment (R)
                    'Q' = 'REPOSTED - SPUR'       Reposted - Spur (S)
```

```
              'R' = 'REALIGNMENT'
              'S' = 'SPUR'
              'T' = 'TEMP CONNECTION'        Temporary Connection
              'U' = 'REPOST -TMP CONN'       Reposted - Temporary connection (T)
              '-' = 'INVALID DATA'
              '+' = 'NO DATA';
```

PSMILSUF   POSTMILE SUFFIX

```
              ' ' = 'NO SUFFIX'
              'E' = 'EQUATION'
              '-' = 'INVALID DATA'
              '+' = 'NO DATA';
```

RECTYPE   RECORD TYPE

NON-LABELED VARIABLE **-** This variable is used to identify file type.

RO_SEQ   ROUTE ORDER SEQUENCE

NON-LABELED VARIABLE – See RO_SEQ in Roadlog File

RTE_NBR   RDWAY ROUTE NUMBER

NON-LABELED VARIABLE -- Mainline route number

RTE_SUF   RDWAY ROUTE SUFFIX

```
              'P' = 'ALIGNMENT PRIOR'     Alignment prior to conversion
              'S' = 'SUPPLEM MILEAGE'     Supplemental mileage
              'U' = 'UNRELINQUISHED'      Unrelinquished
              'Z' = 'UNDER CONSTRU  '     Budgeted or under construction
              ' ' = 'NO SUFFIX'
```

TRFCTLDT   TRAFFIC CONTROL TYPE DATE

NON-LABELED VARIABLE – Date of last change in some variable related
to traffic control type (YYYYMMDD). See Discussion.

TRFCTLHS   TRAFFIC CONTROL TYPE HISTORY

NON-LABELED VARIABLE – A "flag" indicating a change in some variable related to the traffic control type. See Discussion.

TRF_CNTL   **TRAFFIC CONTROL TYPE**

```
'A' = 'NO CONTROL'          No control
'B' = 'STP SGN X/STRET'     Stop signs on cross street only
'C' = 'STP SGN MAINLNE'     Stop signs on mainline only
'D' = '4 WAY STOP SGNS'     Four-way stop signs
'E' = '4 WAY FLSH RED-X'    Four-way flasher (Red on cross
                            street)
'F' = '4 WAY FLSH RED-M'    Four-way flasher (Red on mainline)
'G' = '4 WAY FLSH RED-A'    Four-way flasher (Red on all)
'H' = 'YIELD SGN X-STRT'    Yield signs on cross street only
'I' = 'YIELD SGN MNLINE'    Yield signs on mainline only
'J' = 'SGNL PRETIME -2P'    Signals pretimed (2 phase)
'K' = 'SGNL PRETIME -MP'    Signals pretimed (multi-phase)
'L' = 'SGNL SEMI-ACT 2P'    Signals semi-traffic actuated, 2
                            phase
'M' = 'SGNL SEMI-ACT MP'    Signals semi-traffic actuated,
                                 multi-phase
'N' = 'SGNL FULL-ACT 2P'    Signals full traffic actuated, 2
                            phase
'P' = 'SGNL FULL-ACT MP'    Signals full traffic actuated,
                            multi-phase
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

TYPEDESC   **INTERSECTION TYPE**

```
'F' = '4 - LEGGED'
'M' = '> 4 LEGS'
'S' = 'OFFSET'
'T' = 'TEE'
'Y' = 'WYE'
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```

XSTAADT   X-STREET AADT

```
0          = '0'
1-100      = '1-100'
101-500     = '101-500'
501-1000    = '501-1,000'
1001-2000    = '1,001-2,000'
2001-5000    = '2,001-5,000'
5001-10000   = '5,001-10,000'
10001-15000   = '10,001-15,000'
15001-20000   = '15,001-20,000'
20001-40000   = '20,001-40,000'
40001-999999 = '>= 40,001'
. = 'NO DATA';
```

XSTADTDT   X-STREET ADT DATE

NON-LABELED VARIABLE – Date of last change in some variable related to cross-street ADT (YYYYMMDD). See Discussion.

XSTADTHS   X-STREET ADT HISTORY

NON-LABELED VARIABLE – A "flag" indicating a change in some variable related to the cross-street ADT. See Discussion.

XSTLANES   X-STREET NUMBER OF LANES

```
'0' = 'ZERO'
'1'     = 'ONE LANE'
'2'      = 'TWO LANES'
'3'      = 'THREE LANES'
'4'-'6' = '4 TO 6 LANES'
'7'-'9' = '7 TO 9 LANES'
'-'      = 'INVALID DATA'
'+'      = 'NO DATA';
```

NOTE: This is the number of "thru" lanes on the cross street approaches. It includes all lanes with thru movements (including thru and left turn, or thru and right turn), but does not contain exclusive turn lanes.

XSTLNGT   X-STREET SECTION LENGTH

NON-LABELED VARIABLE – section length of cross-street segment

XSTRTDTE   X-STREET DATE

NON-LABELED VARIABLE – Date of last change in some variable related
to the cross-street (YYYYMMDD). See Discussion.

XSTRTHST   X-STREET HISTORY

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to the cross-street. See Discussion.

XSTRTLFT   X-STREET LEFT TURN CHANNELIZATION

```
'C' = 'CURB MED LFT TRN'     Curbed median left turn
                             channelization
'N' = 'NO LFT TRN CHANN'     No left turn channelization
'P' = 'PAINTED LFT TRN'      Painted left turn channelization
'R' = 'RAISED BARS'          Raised bars left turn channelization
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER   = 'ERROR/OTHER CODES';
```

XSTRTMST   X-STREET SIGNAL MASTARM

```
'N' = 'NO MASTARM'
'Y' = 'YES,MASTARM'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```


XSTRTRGH   X-STREET RIGHT TURN CHANNELIZATION

```
'N' = 'NO RGHT TRN CHAN'     No right turn channelization
'Y' = 'RGHT TRN CHANNEL'     Channelization provided for right
                             turns
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```


XSTSTRT   X-STREET STATE ROUTE INDICATOR

```
1 = 'STATE ROUTE'
0 = 'NOT STATE RTE';
```

XSTTRFLO   X-STREET TRAFFIC FLOW

```
'N' = '2-WAY N/LEFT TRN'      2-way traffic, no left turns permitted
'P' = '2-WAY W/LEFT TRN'      2-way traffic, left turn permitted
'R' = '2-WAY W/TURN RES'      2-way traffic, left turn restricted
                              during peak hours
'W' = 'ONE-WAY'               One-way traffic
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```

<u>LIST OF VARIABLES FOR CALIFORNIA INTERCHANGE RAMP FILE</u>

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
AREA4	RAMP AREA 4 INDICATOR	Ramp	CHA(1)	I-99	II-245
CNTYRTE	RAMP COUNTY ROUTE	Ramp	CHA(10)	I-99	
HWY_GRP	HIGHWAY GROUP	Ramp	CHA(1)	I-99	
MED_DTE	RAMP MEDIAN DATE	Ramp	CHA(8)	I-100	
MED_HST	RAMP MEDIAN HISTORY	Ramp	CHA(1)	I-100	
MED_IND	RAMP MEDIAN INDICATOR	Ramp	CHA(1)	I-100	II-246
MILEPOST	RAMP MILEPOST	Ramp	NUM	I-100	
ON_OFFRP	ON/OFF RAMP INDICATOR	Ramp	CHA(1)	I-100	II-247
RECTYPE	RECORD TYPE	Ramp	CHA(1)	I-100	
RMADTDTE	RAMP ADT DATE	Ramp	CHA(8)	I-100	
RMADTHST	RAMP ADT HISTORY	Ramp	CHA(1)	I-100	
RMP_ADT	RAMP AADT	Ramp	NUM	I-101	II-248
RMP_DTE	RAMP TYPE DATE	Ramp	CHA(8)	I-101	
RMP_HST	RAMP HISTORY	Ramp	CHA(1)	I-101	
RMP_SEQ	RAMP SEQUENCE NUMBER	Ramp	NUM	I-101	
RMP_TYPE	RAMP TYPE	Ramp	CHA(1)	I-102	II-250

NOTE: SAS variable names and explanatory names are shown above each listing. (See Discussion for information on SAS formats.)

AREA4   **RAMP AREA 4 INDICATOR**

```
'Y' = 'YES'
'N' = 'NO'
' ' = 'NOT STATED';
OTHER = 'ERROR/OTHER CODES';
```

NOTE: This variable indicates whether the ramp in question is associated with an "area 4" for accident location purposes. This will occur when the intersecting (non-mainline) route is a (non-mileposted) county route. In these cases, all crashes which occur on the intersecting route between 150 ft "outside" the ramp-related intersection to the center of the bridge structure will be mileposted to this ramp. In contrast, when a ramp intersects a (mileposted) State route, the same crashes will be mileposted to the crossing route. This variable will allow for identification of such "area 4" locations if desirable in the analysis. See INT_RMP in the Accident File.

CNTYRTE   **COUNTY ROUTE**

NON-LABELED VARIABLE – Linkage variable, consisting of DISTRICT+ RTE_NBR+RTE_SUF+COUNTY+PSMILPRF+HWY_GRP

HWY_GRP   **HIGHWAY GROUP**

```
'R' = 'INDEP ALIGN RGHT'      Right independent alignment
'L' = 'INDEP ALIGN LEFT'      Left independent alignment
'D' = 'DIVIDED HIGHWAY'
'U' = 'UNIDIVIDED HIGHWY'
'X' = 'UNCONSTRUCTED'
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA'
OTHER = 'ERROR/OTHER CODES';
```

NOTE: In the HSIS version of the Roadlog File, codes "D", "U", and "X" do not appear. They are combined by CA DOT into "Z". In other data files provided by California to other users, these codes may occur. To link with crash data, they must be recoded to "Z".

MED_DTE   RAMP MEDIAN DATE

       NON-LABELED VARIABLE – Date of last change in some variable related
       to the median associated with the ramp (YYYYMMDD). See Discussion.

MED_HST   RAMP MEDIAN HISTORY

       NON-LABELED VARIABLE – A "flag" indicating a change in some variable
       related to the median associated with the ramp. See Discussion.

MED_IND   RAMP MEDIAN INDICATOR

       'U' = 'UNDIVIDED'
       'D' = 'DIVIDED'
       '-' = 'INVALID DATA'
       '+' = 'NO DATA';

MILEPOST   RAMP MILEPOST

       NON-LABELED VARIABLE – Milepost of "nose" of ramp in miles (XXX.XXX).
       See Discussion.

ON_OFFRP   ON/OFF RAMP INDICATOR

       'O' = 'ON RAMP'
       'F' = 'OFF RAMP'
       'Z' = 'OTHER'
       '-' = 'INVALID DATA'
       '+' = 'NO DATA';

RECTYPE   RECORD TYPE

       NON-LABELED VARIABLE – Variable used to identify file type.

RMADTDTE   RAMP ADT DATE

       NON-LABELED VARIABLE – Date of last change in some variable related
       to ramp ADT (YYYYMMDD). See Discussion.

RMADTHST   RAMP ADT HISTORY

       NON-LABELED VARIABLE – A "flag" indicating a change in some variable

related to the ramp ADT. See Discussion.

RMP_ADT   **RAMP AADT**

```
0          = '0'
1-100    = '1-100'
101-500    = '101-500'
501-1000   = '501-1,000'
1001-2000   = '1,001-2,000'
2001-5000   = '2,001-5,000'
5001-10000  = '5,001-10,000'
10001-15000  = '10,001-15,000'
15001-20000  = '15,001-20,000'
20001-40000  = '20,001-40,000'
40001-999999 = ' >= 40,001'
. = 'NO DATA';
```


RMP_DTE   **RAMP TYPE DATE**

NON-LABELED VARIABLE – Date of last change in some variable related
to ramp type (YYYYMMDD). See Discussion.

RMP_HST   **RAMP HISTORY**

NON-LABELED VARIABLE – A "flag" indicating a change in some variable
related to the ramp. See Discussion.

RMP_SEQ   **RAMP SEQUENCE NUMBER**

NON-LABELED VARIABLE – See RO_SEQ in Roadlog File

RMP_TYPE   RAMP TYPE

```
'A' = 'FRONTAGE ROAD'
'B' = 'COLLECTOR ROAD'
'C' = 'DIR/SEMI LFT RMP'     Direct or semi-direct connector
                                   (left)
'D' = 'DIAMOND INTERCHG'     Diamond type ramp
'E' = 'SLIP RAMP'            Slip ramp
'F' = 'DIR/SEMI RGT RMP'     Direct or semi-direct connector
                                   (right)
'G' = 'LOOP W/LFT TRN'       Loop with left turn
'H' = 'BUTTONHOOK RAMP'      Bottonhook ramp
'J' = 'SCISSORS RAMP'        Scissors ramp
'K' = 'SPLIT RAMP'           Split ramp
'L' = 'LOOP W/O LFT TRN'     Loop without left turn
'M' = 'TWO-WAY RAMP'         Two-way ramp segment
'P' = 'DUMMY-PAIRED RMP'     Dummy-paired
'R' = 'REST AREA/VISTA'      Rest area, vista point, truck
                                scale
'V' = 'DUMMY-VOLUME ONL'     Dummy-volumes only
'Z' = 'OTHER'
'-' = 'INVALID DATA'
'+' = 'NO DATA';
```