HIGHWAY SAFETY
INFORMATION SYSTEM

GUIDEBOOK FOR THE MAINE STATE DATA FILES

Volume I:
SAS FILE FORMATS

HIGHWAY SAFETY
INFORMATION SYSTEM

GUIDEBOOK FOR THE MAINE STATE DATA FILES

Volume I:
SAS FILE FORMATS

INTRODUCTION

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

Maine's basic TINIS (Transportation Integrated Network Information System) brings together information data concerning accidents, road inventory, bridges, railroads, and project history/maintenance type information. Unlike other HSIS states in which the linkage variable is some form of route-milepoint, the Maine system is a county/link-node system in which a six-digit code defines a specific node (e.g. an intersection, bridge, or other boundary) in a specific county. Each roadway section, or "link," is then defined by the node numbers at each end. The single raw file which will be received from Maine each year for use in the HSIS will include the following records:

Accident Records (including information on general crash characteristics and on individual vehicles and occupants in the crash)
Link Records (inventory information concerning roadway segments)
Node Records (inventory information concerning junctions)
Project History Records
Railroad Crossing Records
Bridge Records

HSRC programmers divided this single raw file into subfiles containing each of the above types of records. Copies of these smaller files and copies of the documentation (variable listings, definitions, etc.) for these files has been provided to FHWA.

The Maine format for single crashes is then reformatted by HSIS programmers into the standard HSIS format – Accident, Vehicle, and Occupant subfiles. For additional consistency, variables related to drivers have been included both on the Occupant subfile and the Vehicle subfile.

Raw file data is provided to the Highway Safety Research Center where they are retained as backup information. The documentation (variable listings, definitions, etc.) for these raw files and for the SAS files that are developed from them are available at FHWA offices. Conversion programs developed by HSRC and LENDIS to convert the files into SQL and SAS formats are also available at the HSIS offices at FHWA.

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 Maine 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 accident data is in three separate files. The Accident subfile, containing basic information on accident type, location, environment, etc., can be linked with the Vehicle subfile (which contains information on each vehicle and each driver in the crash) and the Occupant subfile (which contains information on each occupant in each vehicle).

The Link Records File contains characteristics of approximately ***23,000*** miles of public road in Maine. This includes all public highways in the State, both rural roads and urban streets. Approximately 85 percent are rural in nature. (Note that this is different from other HSIS state files, where the "state system" of roadways do not include all public highways.) This file contains roadway characteristics including shoulder and median information, pavement type and width, lane information, etc. It is noted that in order to cover situations in which a roadway characteristic changed within a link, this raw file contains information on up to five possible changes for most variables within the link, and up to five "Distance From" variables which indicate the distance from the lower order node to the change. For ease of use, this file has been reformatted such that a record contains a "homogeneous" section (sublink) of roadway. This reformatted Link Records File also contains traffic information (AADT) for the link. This will eliminate the amount of merging that will have to be done by future users.

The Node Records File contains the six-digit node number (a two-digit county code and a four-digit code unique within a county) and limited information on the characteristics of approximately ***56,000*** junctions, bridges and/or other boundaries across the state. The file contains information related to the intersection configuration, number of legs, and linkage information concerning surrounding nodes. It also contains information concerning "Millions of Entering Vehicles" and the presence of signalization if the node is an intersection. As a supplement to this file, an Interchange File

has been developed which includes information on all interchanges on Maine Interstates -- location, type, etc.

The Railroad Grade Crossing File is a file containing information on all grade-crossings in the State, and is prepared and maintained according to FHWA requirements. As is the case with most States, the Bridge File contains information on bridge structures across the State. The data is considered quite accurate since it is based on the federal bridge inventory.

Due to established priorities of effort, HSRC staff did not work with the Railroad Grade-Crossing File or the Bridge File. Thus, these files were not converted into SAS files. Details of the three Accident subfiles, the Link Records File, and the Node Records File are presented in the following section.

DETAILS OF MAJOR FILES

The Accident Subfiles

The Maine accident data is collected by state police, local police and county sheriffs on a uniform accident report form. ***An accident was reported prior to 1999 if it involved $500 total damage/or personal injury. The dollar value changed from $500 to $1000 as of 9/18/1999.*** All crash reports are sent to the State Police who code and punch the data. Annual data tapes and hard copies are forwarded to the Bureau of Planning within the Maine DOT for further preparation before being entered in the TINIS system. Here, coders use the accident report forms to extract location information and to check and recode, if necessary, key items involving the "Accident Type," "Location Code" and "Fixed Object Struck." The items recoded are the primary items used by Maine in their high accident location analysis and in the development of accident diagrams. The consensus is that the state police data are of better quality than the local data, but the local data appears to be quite adequate for the uses made of it.

Currently there are ***thirteen*** years of accident data in the Maine HSIS files - ***1985-1997***. The data set includes approximately ***39,000*** accidents per year, ***66,000*** vehicles per year, and ***94,000*** occupant/pedestrians per year. As noted earlier, the occupant subfile contains information on each occupant in the crash whether injured or not, including the drivers. The driver information is also

placed on the Vehicle subfile. It is also noted that the number of accidents, vehicles and occupants in the three files has decreased from 1990 to 1994 , and then increased through the later years. Maine staff have had indicated that this represented actual decreases in statewide reportable accidents (rather than problems with the data), and could well result from changes in the State's economy in 1990-1994.

Unfortunately, there is no "Urban-Rural" variable in the accident data, and the "Investigating Agency" code does not distinguish between rural and urban crash investigations. Thus, there is no way to define the "ruralness" of the data (without linkage with the Link/Node files). However, given the large proportion of roads that are rural, it would be expected that Maine accidents are more rural than the accidents of other HSIS States.

Various single variable tabulations were run to look at the question of reporting completeness and accuracy among the accident variables. Here, we studied the percent of unknown or uncoded values for 23 key variables from the Accident subfile, 11 from the Vehicle subfile, and 3 from the Occupant subfile. These variables ranged from various accident descriptors including accident type, day of week, number of vehicles involved, accident severity, road surface, object struck, and investigating agency; to vehicle-related variables involving vehicle type, contributing factors, and driver information; to occupant variables related to age, sex and injury severity.

The quality control checks indicated that the overwhelming majority of the variables on the Accident subfiles appeared to be quite completely coded and quite accurate. There were virtually no cases in which the number of uncoded variables was greater than two percent, and most were uncoded in less than one percent of the cases.

With respect to the accuracy of the data, comparisons were made of pairs of variables in the file which should have been somewhat similar according to their definitions. In addition, the single-variable distributions were compared to the other HSIS States to see if large differences existed.

As with the case of completeness, these checks indicated that, in general, the Maine data are quite accurate. For example, the number of cases in which there is a second vehicle noted in the variable related to "Number of Vehicles" matches quite well with the proportion of accidents which would be considered multi-vehicle in the "Accident Type" variable. The distribution in "Weather" matched well with the distribution of "Road Condition." In similar fashion, the distributions for "Driver Condition" and "Severity" were as would be expected from the data of other States.

There were a few variables whose distributions raised some questions, either in terms of changes across time or "shape" of the distribution itself. For example, certain categories in the variables related to "Accident Type" and "Location Code" appear to change rather dramatically between the 1985-86 period and the ***1987-97*** period. At approximately the beginning of 1987, Maine staff began to recode the data in-house for their use. This means that there will be a few categories within these two variables which will change due to coding across the time period. However, the changes do not affect other variables, and do not appear to greatly affect many categories within these two variables. The data for all the files ***after 1987*** are consistent.

The Accident subfile variable related to "Non-Intersection" should not be used as an indicator of intersection crashes, and analysis and conversations with Maine staff indicated that 1985 accident data should not be used when performing intersection accident analyses. Instead of "Non-Intersection", the variable LOC_TYPE on the accident file should be used to define intersection-related crashes. (To be more conservative, one might require agreement between the LOC_TYPE variable on the Accident Subfile and the TYPEDESC variable on the Node File, after the interchange-related nodes are removed.)

Finally, it is noted that the definitions of categories within the variable related to "Vehicle Type" changed significantly in the 1989 data. This has resulted in significant changes in the number and percent of various truck types involved in crashes over the years (see Vehicle Type table in later section). More specifically, Maine has gone to a much more detailed set of codes related to truck type, changing from general codes related to "tractor trailer" and "tractor semi-trailer" to new codes as specific as "2-axle semi plus 3-axle trailer". Thus, the number of cases found in the earlier non-specific categories drops dramatically in the 1988 and 1989 data. Care will have to be taken in grouping these truck codes in future analyses.

For these and other variables which either have higher proportions of uncoded data or for which an accuracy issue has been raised by analysis efforts, a "NOTE" has been included under the variable in the later Format section of this Guidebook.

In summary, analysis of the Maine Accident, Vehicle, and Occupant subfiles indicated that these files are quite accurate in almost all cases, are quite internally consistent, and, with few exceptions, have very few uncoded cases.

The Link File

This file contains information on approximately ***23,000*** miles of public roads in Maine, and covers all public highways and streets in the State. Thus, in contrast to most other HSIS States which include only higher order routes, the Maine system covers all the mileage within the State. The table below provides a categorization of the mileage by certain roadway classes. Unpaved mileage is not included in this table, but will be in the full file.

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

Roadway Category	Mileage
Urban Freeways	121.81
Urban Freeways < 4 ln	26.00
Urban multilane divided non freeways	16.34
Urban multilane undivided non freeways	56.88
Urban 2 lane roads	2422.76
Rural Freeways	592.75
Rural Freeways < 4 ln	22.73
Rural multilane divided non freeways	2.49
Rural multilane undivided non freeways	21.81
Rural 2 lane roads	16824.94
Others	3067.50
Total	23176.01

Data on the file are updated by the Inventory Section of the Maine Bureau of Planning. The inventory information is felt to be quite accurate (perhaps with the exception of the variable related to median barriers). The data were originally updated by a two-person team who continually inventoried everything on public highways (even roads not under State control). They forwarded necessary changes to the Bureau for updating. This road inventory team covered the entire state on a five-year

cycle. Due to budget restrictions of the early 90's, inventory changes are now pulled from a continual review of construction and maintenance plans by internal rural planning staff and review of video logs, and everything that changes one of the inventory items is changed in the TINIS system as soon as the change is forwarded to the central office, almost always within a year of the change. In urban areas, the division engineering staff does inventory checks on a four-year cycle.

As noted above, the raw Link file has been reformatted such that the SAS Link Records File contains "homogeneous" (sub)links of roadway. That is, in the original file, many of the variables could have up to five changes within a given link, and a distance to each change was recorded. In the SAS file, any time any variable changes within a link, a new link begins. In terms of use, this makes this SAS file more nearly resemble the "route/milepost" files found in the other HSIS States. It is noted that, in some links, problems were found during the development of sublinks (e.g., a change in a variable was noted at a distance greater than the length of the link or two changes in the same variable "overlapped"). While these problems only occurred in a small percentage of the links, they could not be corrected. To identify these problem links, a "Distance Problem Flag" variable was added to each record in the file. For analysis and merging purposes, only those records where PROBLEMS is coded "0" should be used.

This Link file contains information on approximately ***83,000*** records within the state covering the ***23,000*** miles of total system roadway. It is noted that two separate links exist for each section of the approximately two percent of the roadway that is divided -- one link for each direction. This means that computer runs which accumulate mileage for all links will produce inflated mileage totals due to double-counting mileage for these sections. Approximately 61 percent of the mileage are local roadways, ***26*** percent of the mileage are collector routes, and the remaining ***14*** percent of the records concern Interstates, other principal arterials, and minor arterials. While 50 percent of the records are rural in nature, these represent approximately 85 percent of the total mileage in the system, with the remaining being roads in mixed areas or municipalities. As expected from the rural nature of the state, the majority of roadways carry relatively low volumes of traffic, with AADT's of 500 vehicles per day or less. The average length of a link in the rural areas is approximately 0.5 miles, and is 0.1 miles in the urban areas.

In terms of completeness of the data, most of the variables on the file are coded very

completely with very few missing values. While there are a limited number of variables with large percentages of uncoded ("blank") data, these are generally "default" values which imply the opposite code (e.g., a "blank" in the variable related to "55/65 Posted Speed Limit" indicates that a lower speed limit exists; a "blank" in "HPMS Section" indicates a non-HPMS section).

Two new variables, RODWYCLS and MVMT, have been created by HSIS staff in the roadway segment file of each of the HSIS states. For Maine, they are included in this Links 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 ten roadway types described in the later "Format" section. This variable is also included as a accident-file variable by matching each crash to its corresponding roadway segment. 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. Frequencies distributions of selected crash variables by RODWYCLS for the latest year of the data are also included in Volume II of each States' Guidebook.

With respect to accuracy of the data, in general, the variables on the Link File are also coded quite accurately. Comparisons of similar variables appear to give very consistent results, and the distributions are similar to what would be expected from other States. For example, the variables related to "Right Shoulder Type" and "Left Shoulder Type" both matched quite well with each other and with the respective variables concerning "Shoulder Width." The variable related to "Municipality" matched well with the "Urban-Rural Code." And, in general, the distributions were as expected.

With respect to traffic volumes, variables related to "factored AADT" are more accurate than variables related to "AADT" (including the "year" variables), according to the Maine staff. The information in the "factored" variables reflects the true traffic counting procedures and results. The non-factored variables contain some misleading information due to lack of accurate "update year" information for sections of local roads on the system, and other problems. As stated in the "Notes" in the SAS Formats, the "factored" variables should be used in all analyses.

Thus, in general, the variables on the Link file are quite accurate and very suitable for analysis efforts. Issues raised in subsequent analyses are included as a "NOTE" under the pertinent variable in the later format section.

The Node Records File

The Nodes File contains information on approximately ***56,000*** points on the roadway system which are used to define the ends of links. In over 96 percent of the cases, these points are either intersections, railroad crossings, bridges, ends of roads or routes, or State, county or town boundaries. In 2.1 percent of the cases, the node is a "dummy" node interjected into a route to limit the maximum length of a link to six miles. Approximately 63 percent of nodes are intersections of roadways, ***17.3*** percent are ends of roads, and 2.5 percent are bridges. The remainder are either railroad grade crossing, boundaries, or "dummy" nodes.

In terms of the completeness of the data, the quality control runs indicated that the variables are coded quite accurately. There are a few cases, however, where discussions with Maine staff indicated that the data is not accurately coded. These include variables related to "Number of Approaches," "Traffic Signal," and "Traffic Signal Indication." Again, a "NOTE" has been included under the variable in the later format section of the Guidebook which explains the problem or issue.

With respect to accuracy, while there are very few pairs of variables which measure similar attributes, the distributions of variables appear to show that the data is quite accurate. This accuracy is also supported by the amount of effort that Maine staff puts into inventorying the Statewide roadway system on a regular basis and in updating the data files. However, there are some points that should be noted in use of the Node file in intersection analyses.

Because of the nature of the node records (i.e., approximately 64 percent of the nodes represent intersections of roadways), the node file can in some senses be used as an "intersection" file in that it contains information on the geometric configuration of the intersection, the number of legs, and the number of annual entering vehicles. However, preliminary work with this file has indicated the following "warnings" for such future analyses.

First, while the variable related to "Geometric Configuration" (TYPEDESC) specifies the various types of intersections that can occur at a node (e.g., cross--90 degree, cross--skewed, tee,

etc.), there is no indication within this variable (or the entire file) that can be used to separate at-grade intersections from interchanges. This is due to the basic definition of a roadway-related node -- a point where two roads cross, converge, or diverge. Thus, for example, for a divided highway, each ramp entrance or exit on each side of the roadway will usually (but not always) be coded as a separate node (with the "Configuration" being "wye" or perhaps "tee"). However, there is no way of determining from the existing Node file which "Wye" intersections are "true" intersections of roadways, and which are ramps. If one is attempting to isolate non-ramp intersections, there is a variable on the Link file which indicates whether a road section is a ramp or not (i.e., "Ramp"). If all "wye" and "tee" nodes are merged with all incoming links, a check can be made to determine which nodes are "true" non-ramp locations.

However, a second (better) solution now results from the creation of a Maine Interchange File. As discussed in the following section, this file was created since there is no simple (programming) method to identify interchanges using the Node File. Each side of the divided roadway may have from two to four interchange-related nodes within varying distances of each other, in addition to all the nodes related to ramp ends on the crossing road. While the File itself will be described in detail below, it is now possible to identify all "true" intersections by the following method. First, identify all "intersection" nodes from the Node File. Second, match these intersection nodes (using the "County Key" and "Node Number") with the total listing of nodes in the Interchange File. (See detailed instruction for matching under variable I_NE01 in the Interchange File.) After eliminating all matches, any nodes remaining can be considered "true" at-grade intersections not related to interchanges. However, as discussed above, there will still be some disagreement between the "cleaned" intersection set and intersections as specified on the accident report using the ***LOC_TYPE*** variable. Again, it is recommended that the ***LOC_TYPE*** variable be the controlling variable.

Thus, with very few exceptions, the variables in the Node File are both coded a high percentage of the time and appear to be quite accurate.

Traffic Data

With respect to the traffic information on both the Link and the Node File, the traffic counts that are in the system are extracted from a traffic file again prepared within the ***Traffic Engineering***

Division. The counts are extracted from a series of ***57*** permanent count stations across the State, six of which do detailed vehicle classification counts. There are a total of ***11*** stations on Interstate routes (which collect counts in both directions), approximately ***16*** stations on U.S. routes, 24 stations on State routes, and ***six*** stations on other routes.

In addition to the continuous count stations, each summer ***24***-hour counts were done at between 1600-2200 locations on all US and State highways ***prior to 1994.*** Beginning in 1994, the number of coverage counts increased to between ***1800 and 3300.*** Approximately 10 percent of these counts include vehicle classification counts. Classification estimates exist for other locations that are not high priority locations.

Each year, these counts are done in either the northern, central, or southern areas of the State. The counters move to a different area the following summer, covering the entire State every five years. The southern and central areas are counted in alternate years for the first four years of a cycle. Then the northern area, where counts change less per year, is counted during the fifth year of the cycle. Seasonal adjustment factors for the coverage counts are based on continuous count stations which fall into the same "highway type" category as the coverage count. Based on extensive analysis in the late 1980's, the three categories used are Urban (including suburban locations), Arterial (including all Interstate locations plus other locations in rural areas), and Recreational locations (whether urban or rural). The actual adjustment factor for a given coverage count location is based on the weekly average ADT for all continuous count stations falling into that category.

For years in which no count data were collected within a given area of the state, historical daily traffic flows are factored up on a county by county basis. The growth factor used is based primarily on traffic changes at the continuous count stations falling into the same highway-type category described above. Other information used in developing a specific growth factor includes counts from nearby urbanized areas and special counts that may have been conducted at the location for other reasons. The final growth factor used is based on interpolation between points of known growth (such as two or more years at the similar continuous count stations), and is done by personnel with a working knowledge of the system's traffic patterns.

In summary, while some of the counts may be off due to the roadside development and/or roadway construction within a specific area of the state that occurred within the two year period, in

general, the count data are felt to be quite adequate for analysis purposes.

The Interchange File

As noted above, while the previously described Node File identifies certain locations as intersections (using the variable NODE1ST), there was no way to identify which intersection nodes were simple intersections and which were part of a more complex interchange. Because certain analyses are requiring specific identification of interchanges, the Interchange File was developed as a supplement to the Node File.

This file contains one entry per interchange, rest area, toll plaza or truck weigh station. (These non-interchange nodes can be screened from analysis runs using the variable I_TYPE.) Interchanges were located using Interstate node maps provided by the State of Maine, and each such interchange was assigned a unique number based on route and sequence. (Discussions with Maine staff indicated that all interchanges are located on Interstate routes.) Each entry includes descriptive information (such as unique identification number, county, interstate route number, descriptive name, exit number), the type of interchange, the presence of a toll facility at the interchange, the number of nodes, and a list of all node numbers for that location. A maximum of twenty eight nodes are possible (allowing for fourteen nodes on the northbound or eastbound direction and fourteen nodes on the southbound or westbound direction). These numbers for each node are as provided by Maine staff, and thus the order has no significance.

In addition, no attempt was made to define the component parts of the interchange. Therefore, there is no code to distinguish main-line interstate nodes, ramp terminators, ramp intersections, bridges, toll booths, etc. However, there is a "Ramp" variable on the Link File which indicates whether a specific link (between two nodes) is a ramp. This variable could be used in cases where the identification of ramps is of interest.

The accuracy of the development of this file was checked by generating a report after data entry and comparing the values to the original coding forms. To reduce error, a single coder was primarily responsible for locating the extent of each interchange, copying the node numbers to the coding form and entering the raw data onto a microcomputer. The more difficult locations were discussed with a database administrator and a highway engineer.

At this time, no attempt has been made to combine this database with either the Node File or the Link File, and there are no common variables which can be compared. It is noted that there are two important considerations for combining Maine files. First, nodes are only unique within a single county, meaning that the "County Key" is an essential element of any attempt at linkage. Second, link designations always list the lower numbered node first. (See detailed instruction for matching under variable I_NE01 in the Interchange File.)

Issues Related to Merging Files

As noted above, the accident data are subdivided into three subfiles -- accident, vehicle and occupant. These subfiles can be linked together using the "case number" variable (i.e., CASENO) present in each of the three files. When linking the occupant subfile, the additional linking variable "vehicle number" (i.e., VEHNO) must match so that the occupants are associated with the vehicle in which they were traveling. To link the Vehicle subfile with the Accident alone, first sort both subfiles by case number. To link the Occupant file with the other two subfiles, first sort both the Vehicle subfile and Occupant subfile by case number and vehicle position 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 presorted and the output will not be in any particular sort order unless ORDER BY is specified.

To link the Accident Subfile with the Node File (to capture accidents occurring only at the node), one needs to select accidents in which C_HNODE = '0000'. Then sort both the Accident and Node Files on B_LINK, and link with this variable.

The Accident Subfile can then be linked with the Link File using the appropriate county/link-node numbers and the appropriate distance from the low node. The latter is necessary since a given link, as defined by a low and high node, can be divided into sublinks with different roadway characteristics. This linkage is done by first sorting the Accident Subfile by C_LINK and the Link File by A_LINK. (Both of these variables contain information on both county and node number.) The linkage is then done by requiring that these two variables be equal, and that BEGMP $\leq$ MILEPOST and MILEPOST $\leq$ ENDMP. Here, MILEPOST is found on the Accident Subfile and BEGMP and

ENDMP are on the Link File.

Matching roadway characteristics information from the Link File with the appropriate node in the Node File is more complex, since the characteristics to be linked may fall on any of up to six incoming/outgoing links, and may fall in the first of last sublink of a given link. This linkage will require programming on the part of the user. Since this programming has been done for certain analysis tasks by the HSIS computer staff, the analyst is advised to contact the HSIS office at FHWA (202-493-3464) for assistance.

Finally, where appropriate and possible, a format which defines categories within a given variable has been developed for HSIS SAS variables. These categories are shown in the pages below. If you are a SAS user and wish to receive a formatting program which 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.

MAINE CONTACTS

State computer files -- Ron Emery (207-287-3223) -- Mr. Emery is our main contact within the State of Maine when questions arise concerning the data files in general or when new data is to be generated. He works in the Information Systems Division of the Maine DOT and is responsible for the development and maintenance of the entire TINIS system. He will often be able to answer questions on the specifics of many of the files.

Accident information -- Gregory Costello (207-287-3177) -- Mr. Costello is the contact for specific information related to accident variables. He works in the DOT Accident Records Section within Traffic Engineering and is responsible for all accident report coding and modifications to the accident subfiles.

Traffic information -- Traffic information -- Debbie Morgan (207-287-2037) -- Ms. Morgan is the contact for specific information related to traffic (AADT). She works in the DOT Traffic Section within Traffic Engineering and is responsible for the traffic counting program.

Roadway/traffic/accident formats -- Edward Beckwith (207-287-4662) -- Mr. Beckwith is the TINIS Manager and should be able to answer most questions concerning information placed in TINIS. He works in the DOT Planning, Research & Community Services and is responsible for any format changes to records or files in the TINIS system.

COMPOSITE LIST OF VARIABLES FOR ALL MAINE HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
A_HNODE	HIGH NODE OF LINK	Link	Char(5)	I-52	
A_LINK	LINK=BOTH NODES	Link	Char(12)	I-52	
A_LNODE	LOW NODE OF LINK	Link	Char(5)	I-52	
AADT	ANNUAL AVGE DAILY TRAFFIC	Link	Num	I-51	
AADT_TYP	AADT TYPE (EST. OR ACTUAL)	Link	Char(1)	I-51	II-108
AADT_YR	YR OF FACTORED AADT	Link	Char(4)	I-52	II-109
AADTF	FACTORED AADT	Link	Num	I-51	II-105
AADTF_YR	YEAR OF CURRENT AADT	Link	Char(4)	I-51	II-107
ACC_DATE	DATE OF ACCIDENT	Accident	Char(8)	I-23	
ACCESS	ACCESS CONTROL	Link	Num	I-52	II-112
ACCTYPE	TYPE OF ACCIDENT	Accident	Num	I-23	II-3
ACCYR	YEAR OF ACCIDENT	Accident	Char(4)	I-23	
AGE	OCCUPANT AGE	Occupant	Num	I-45	II-97
AGENCY	INVEST. AGENCY (?)	Accident	Char(5)	I-23	
B_LINK	LINK=BOTH NODES (MOD)	Accident	Char(7)	I-24	
B_LINK	KEY FOR MERGING	Node	Char(7)	I-63	
B_NODE	NODE NUMBER	Node	Char(5)	I-63	
BEGMP	POSITION WHERE SUBLINK BEGINS	Link	Num	I-52	
C_HNODE	HIGH NODE	Accident	Char(5)	I-24	
C_HNODE	HIGH NODE	Vehicle	Char(5)	I-36	
C_HNODE	HIGH NODE	Occupant	Char(5)	I-46	
C_LINK	LINK=BOTH NODES	Accident	Char(12)	I-24	
C_LINK	LINK=BOTH NODES	Vehicle	Char(12)	I-36	
C_LINK	LINK=BOTH NODES	Occupant	Char(12)	I-46	
C_LNODE	LOW NODE	Accident	Char(5)	I-24	
C_LNODE	LOW NODE	Vehicle	Char(5)	I-36	
C_LNODE	LOW NODE	Occupant	Char(5)	I-46	
CASENO	ACC CASE NUMBER	Accident	Char(9)	I-24	
CASENO	ACC CASE NUMBER	Vehicle	Char(9)	I-35	
CASENO	ACC CASE NUMBER	Occupant	Char(9)	I-45	
CONTRIB1	1ST APPART CONTRIB FACTOR	Vehicle	Num	I-35	II-65
CONTRIB2	2ND APPART CONTRIB FACTOR	Vehicle	Num	I-35	II-69
COUNTY	MAINE COUNTY KEY	Accident	Char(2)	I-24	II-6
COUNTY	MAINE COUNTY KEY	Vehicle	Char(2)	I-36	II-73
COUNTY	MAINE COUNTY KEY	Occupant	Char(2)	I-46	
COUNTY	MAINE COUNTY KEY	Link	Char(2)	I-53	II-113
COUNTY	MAINE COUNTY KEY	Node	Char(2)	I-63	II-143
DAYMTH	DAY OF MONTH	Accident	Num	I-25	
DRV_AGE	DRIVER AGE	Vehicle	Num	I-37	II-75
DRV_INJ	DRIVER INJURY TYPE	Vehicle	Char(1)	I-37	II-78
DRV_SEX	DRIVER SEX	Vehicle	Num	I-37	II-79
ENDMP	POSITION WHERE SUBLINK ENDS	Link	Num	I-53	
ENTVEHS	ANNUAL ENTERING VEHICLES (MILLIONS)	Node	Num	I-63	

(CON'T)

COMPOSITE LIST OF VARIABLES FOR ALL MAINE HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
FED_AID	FEDERAL AID DESIGNATION	Link	Char(1)	I-53	II-115
FIFTY5	POSTED 55/65 MPH ZONE	Link	Num	I-54	II-116
FUNC_CLS	FUNCTIONAL CLASS (1980 FEDERAL)	Link	Num	I-54	II-117
HOUR	HOUR OF ACC	Accident	Num	I-25	II-8
HPMS1	HPMSSAMPLE SECTION	Link	Num	I-54	II-118
I_CNTY	COUNTY	Interchange	Char(2)	I-71	
I_DESC	DESCRIPT NAME OF INTERCHANGE	Interchange	Char(30)	I-71	
I_EXIT	EXIT NUMBER (optional)	Interchange	Char(2)	I-71	
I_NE01	1st NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE02	2nd NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE03	3rd NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE04	4th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE05	5th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE06	6th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE07	7th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE08	8th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE09	9th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE10	10th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE11	11th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE12	12th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE13	13th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE14	14th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NECNT	NUMBER OF NODES ON NORTH/EASTBOUND SIDE	Interchange	Num	I-73	
I_RTE	INTERSTATE ROUTE NUMBER	Interchange	Char(3)	I-74	
I_SEQ	ASSIGNED SEQUENCE	Interchange	Char(2)	I-74	
I_SW01	1st SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-74	
I_SW02	2nd SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-74	
I_SW03	3rd SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW04	4th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW05	5th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW06	6th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW07	7th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW08	8th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW09	9th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW10	10th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW11	11th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW12	12th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW13	13th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-76	
I_SW14	14th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-76	
I_SWCNT	NUMBER OF NODES ON NORTH/EASTBOUND SIDE	Interchange	Num	I-76	
I_TOLL	TOLL BOOTH PRESENT?	Interchange	Char(1)	I-76	

(CON'T)

COMPOSITE LIST OF VARIABLES FOR ALL MAINE HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
I_TOTCNT	NUM OF NODES FOR INTERCHANGE	Interchange	Num	I-76	
I_TYPE	TYPE OF INTERCHANGE	Interchange	Char(4)	I-77	
INJ	OCCUPANT INJURY TYPE	Occupant	Char(1)	I-46	II-100
INTCHNG	UNIQUE INTERCHANGE NUMBER	Interchange	Char(7)	I-71	
INV_CNTL	ROUTE TYPE INDICATOR	Link	Char(5)	I-54	II-119
JURIS	JURISDICTION	Link	Num	I-55	II-120
LENGTH	OFFICIAL SUBLINK MILEAGE	Link	Num	I-55	
LIGHT	LIGHT CONDITION	Accident	Num	I-25	II-12
LOC_TYPE	LOCATION TYPE	Accident	Num	I-26	II-14
LSHL_TYP	LEFT SHOULDER TYPE	Link	Num	I-55	II-123
LSHLDWID	LEFT SHOULDER WIDTH	Link	Num	I-55	II-122
MILEPOST	DISTANCE FROM LOW NODE	Accident	Num	I-26	
MISCACT1	PRE-CRASH MANEUVER	Vehicle	Num	I-38	II-80
MONTH	MONTH OF ACC	Accident	Num	I-26	II-16
MVMT	MILLION VEHICLE MILES TRAVELED	Link	Num	I-56	
NBR_LEGS	NUM OF INTERSECTION LEGS	Node	Num	I-63	II-145
NHS_CODE	NATIONAL HIGHWAY SYSTEM CODE	Link	Num	I-56	II-124
NO_APPR	NUMBER OF APPROACHES	Node	Num	I-64	II-150
NO_LANES	NUMBER OF LANES	Link	Char(1)	I-56	II-125
NODE_C1	1ST CONNECTING NODE	Node	Char(5)	I-64	
NODE_C2	2ND CONNECTING NODE	Node	Char(5)	I-64	
NODE_C3	3RD CONNECTING NODE	Node	Char(5)	I-64	
NODE_C4	4TH CONNECTING NODE	Node	Char(5)	I-64	
NODE_C5	5TH CONNECTING NODE	Node	Char(5)	I-64	
NODE_C6	6TH CONNECTING NODE	Node	Char(5)	I-64	
NODE1ST	NODE TYPE 1	Node	Num	I-64	II-146
NODE2ND	NODE TYPE 2	Node	Num	I-64	II-148
NONINT	NON-INTERSECTION NODE ACC	Accident	Num	I-26	
NUM_OCCS	NUM OCCUPANTS IN VEHICLE	Vehicle	Num	I-39	II-86
NUMVEHS	SINGLE OR MULTI VEH CRASH	Accident	Num	I-27	II-18
OBJECT1	FIXED OBJECTS STRUCK	Accident	Num	I-27	II-19
ONEWAY	ONEWAY INDICATOR	Link	Num	I-57	II-127
PHYSCOND	APPARENT PHYSICAL CONDIT	Vehicle	Num	I-39	II-87
PROBLEM	DISTANCE PROBLEM FLAG (CREATED)	Link	Num	I-57	
RAMP	RAMP	Link	Num	I-57	
RATETYPE	RATE TYPE (LOCATION CODE)	Node	Num	I-65	II-151
RD_CHAR1	ROAD CHARACTER	Accident	Num	I-28	II-25
RDCONSTR	ROAD CONSTRUCTION/MAINT	Accident	Num	I-27	II-22

(CON'T)

COMPOSITE LIST OF VARIABLES FOR ALL MAINE HSIS FILES

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
RDSURF	SURFACE CONDITION	Accident	Num	I-28	II-23
RODWYCLS	ROADWAY CLASSIFICATION	Accident	Char(2)	I-28	II-27
RODWYCLS	ROADWAY CLASSIFICATION	Link	Char(2)	I-57	II-128
RSHL_TYP	RIGHT SHOULDER TYPE	Link	Num	I-58	II-131
RSHLDWID	RIGHT SHOULDER WIDTH	Link	Num	I-58	II-130
RTE_NBR	ROUTE OR INVENTORY NO	Link	Char(5)	I-58	
RTE_TYPE	STATE HIGHWAY DESCIGNATION NO	Link	Char(4)	I-58	
RURURB	RURAL/URBAN CODE	Link	Num	I-58	II-132
S_FUNC	STATE FUNCT CLASS (1981)	Link	Num	I-60	II-138
SEATPOS	OCCUPANT POSITION IN VEH	Occupant	Num	I-47	II-101
SEG_LNG	SUBLINK LENGTH IN MILES	Link	Num	I-59	
SEVERITY	ACCIDENT SEVERITY	Accident	Char(1)	I-29	II-29
SEX	OCCUPANT SEX	Occupant	Num	I-47	II-102
SIGNAL	TRAFFIC SIGNAL	Node	Num	I-66	II-156
SPDLMT	SPEED LIMIT	Accident	Num	I-29	II-30
ST_LIC	STATE OF LICENSE	Vehicle	Num	I-39	
STR_NAME	STREET NAME	Link	Char(15)	I-59	
SUBLINK	SEQUENCE WITHIN LINK	Link	Num	I-59	II-133
SURF_TYP	SURFACE TYPE	Link	Num	I-59	II-134
SURF_WD	PAVEMENT WIDTH	Link	Num	I-60	II-136
TEMPSEQ	*temp* DATA ENTRY RECORD ID	Interchange	Num	I-77	
TOT_KILL	NUM K IN ACC	Accident	Num	I-30	II-35
TOT_NON	NUM NON-INJ IN ACC	Accident	Num	I-30	II-36
TOTAINJ	NUM A INJ IN ACC	Accident	Num	I-29	II-32
TOTBINJ	NUM B INJ IN ACC	Accident	Num	I-30	II-33
TOTCINJ	NUM C INJ IN ACC	Accident	Num	I-30	II-34
TRF_CNTL	TRAFFIC CONTROL	Accident	Num	I-31	II-37
TRK_RTE	DESIGNATED TRUCK ROUTE	Link	Num	I-60	II-139
TYPEDESC	INTER TYPE + DESC	Node	Num	I-66	II-157
VEHNO	VEHICLE POSITION NUMBER	Vehicle	Num	I-41	
VEHNO	VEHICLE POSITION NUMBER	Occupant	Num	I-47	
VEHTYPE	TYPE OF UNIT	Vehicle	Num	I-41	II-89
WEATHER	WEATHER-ATMOSPHERE	Accident	Num	I-31	II-39
WEEKDAY	DAY OF WEEK	Accident	Num	I-31	II-41
	2 BY 2 TABLE CODE				
RODWYCLS	BY ACCTYPE	Accident			II-42
RODWYCLS	BY LIGHT	Accident			II-50
RODWYCLS	BY SEVERITY	Accident			II-54
RODWYCLS	BY WEATHER	Accident			II-58

Accident Sublime

LIST OF VARIABLES FOR MAINE ACCIDENT SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
ACCTYPE	TYPE OF ACCIDENT	Accident	Num	I-23	II-3
ACCYR	YEAR OF ACCIDENT	Accident	Char(4)	I-23	
ACC_DATE	DATE OF ACCIDENT	Accident	Char(8)	I-23	
AGENCY	INVEST. AGENCY (?)	Accident	Char(5)	I-23	
B_LINK	LINK=BOTH NODES (MOD)	Accident	Char(7)	I-24	
CASENO	ACC CASE NUMBER	Accident	Char(9)	I-24	
COUNTY	MAINE COUNTY KEY	Accident	Char(2)	I-24	II-6
C_HNODE	HIGH NODE	Accident	Char(5)	I-24	
C_LINK	LINK=BOTH NODES	Accident	Char(12)	I-24	
C_LNODE	LOW NODE	Accident	Char(5)	I-24	
DAYMTH	DAY OF MONTH	Accident	Num	I-25	
HOUR	HOUR OF ACC	Accident	Num	I-25	II-8
LIGHT	LIGHT CONDITION	Accident	Num	I-25	II-12
LOC_TYPE	LOCATION TYPE	Accident	Num	I-26	II-14
MILEPOST	DISTANCE FROM LOW NODE	Accident	Num	I-26	
MONTH	MONTH OF ACC	Accident	Num	I-26	II-16
NONINT	NON-INTERSECTION NODE ACC	Accident	Num	I-26	
NUMVEHS	SINGLE OR MULTI VEH CRASH	Accident	Num	I-27	II-18
OBJECT1	FIXED OBJECTS STRUCK	Accident	Num	I-27	II-19
RDCONSTR	ROAD CONSTRUCTION/MAINT	Accident	Num	I-27	II-22
RDSURF	SURFACE CONDITION	Accident	Num	I-28	II-23
RD_CHAR1	ROAD CHARACTER	Accident	Num	I-28	II-25
RODWYCLS	ROADWAY CLASSIFICATION	Accident	Char(2)	I-28	II-27
SEVERITY	ACCIDENT SEVERITY	Accident	Char(1)	I-29	II-29
SPDLMT	SPEED LIMIT	Accident	Num	I-29	II-30
TOTAINJ	NUM A INJ IN ACC	Accident	Num	I-29	II-32
TOTBINJ	NUM B INJ IN ACC	Accident	Num	I-30	II-33
TOTCINJ	NUM C INJ IN ACC	Accident	Num	I-30	II-34
TOT_KILL	NUM K IN ACC	Accident	Num	I-30	II-35
TOT_NON	NUM NON-INJ IN ACC	Accident	Num	I-30	II-36
TRF_CNTL	TRAFFIC CONTROL	Accident	Num	I-31	II-37
WEATHER	WEATHER-ATMOSPHERE	Accident	Num	I-31	II-39
WEEKDAY	DAY OF WEEK	Accident	Num	I-31	II-41
	2 BY 2 TABLE CODE				
RODWYCLS	BY ACCTYPE	Accident			II-42
RODWYCLS	BY LIGHT	Accident			II-50
RODWYCLS	BY SEVERITY	Accident			II-54
RODWYCLS	BY WEATHER	Accident			II-58

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE ACCIDENT SUBFILE

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

ACCTYPE **TYPE OF ACCIDENT**

01 = 'OBJECT IN ROAD'	Object in road
02 = 'REAR END/SDSWP'	Rear end/sideswipe
03 = 'HEAD ON/SDSWP'	Head on/sideswipe
04 = 'INTERSECTION'	Intersection
05 = 'PEDESTRIAN'	Pedestrian
06 = 'TRAIN'	Train
07 = 'RAN OFF ROAD'	Ran off road
08 = 'ANIMAL'	Animal
09 = 'SLED/BIKE'	Sled/Bike
10 = 'FIXED OBJECT'	Fixed object
11 = 'JACKKNIFE'	Jackknife
12 = 'ROLLOVER'	Rollover
13 = 'FIRE'	Fire
14 = 'SUBMERSION'	Submersion
15 = 'ROCK THROWN'	Rock thrown
*16 = 'BEAR'	Bear
*17 = 'MOOSE'	Moose
*18 = 'DEER'	Deer
*99 = 'UNKNOWN'	
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

*New codes added in 1997

NOTE: Inconsistencies in some categories between 1985-86 and later years due to coding change.

ACCYR **YEAR OF ACCIDENT -- YYYY**

NON-LABELED VARIABLE

ACC_DATE **DATE OF ACCIDENT -- YYYYMMDD**

NON-LABELED VARIABLE

AGENCY **INVESTIGATING AGENCY**

NON-LABELED VARIABLE

B_LINK ***KEY* FOR MERGING (MOD)**

NON-LABELED VARIABLE -- Used to link Accident File with Node File. See "Issues Related to Merging Files" in Discussion.

CASENO **CASE NUMBER**

NON-LABELED VARIABLE

NOTE: This variable has nine characters. The first four characters represent year of accident.

COUNTY **MAINE COUNTY KEY**

'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANKCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK';

C_HNODE **HIGH NODE**

NON-LABELED VARIABLE

C_LINK ***KEY* FOR MERGING**

NON-LABELED VARIABLE -- Used to link Accident File with Link File. See "Issues related to Merging Files" in Discussion.

C_LNODE **LOW NODE**

NON-LABELED VARIABLE

DAYMTH **DAY OF MONTH**

NON-LABELED VARIABLE

HOUR **TIME - HOUR OF ACC**

```
01 = '12 MID - 12:59AM'
02 = '1 AM - 1:59 AM'
03 = '2 AM  - 2:59 AM'
04 = '3 AM  - 3:59 AM'
05 = '4 AM  - 4:59 AM'
06 = '5 AM  - 5:59 AM'
07 = '6 AM  - 6:59 AM'
08 = '7 AM  - 7:59 AM'
09 = '8 AM  - 8:59 AM'
10 = '9 AM  - 9:59 AM'
11 = '10 AM -10:59 AM'
12 = '11 AM -11:59 AM'
13 = '12 NOON -11:59 PM'
14 = '1  PM - 1:59 PM'
15 = '2  PM - 2:59 PM'
16 = '3  PM - 3:59 PM'
17 = '4  PM - 4:59 PM'
18 = '5  PM - 5:59 PM'
19 = '6  PM - 6:59 PM'
20 = '7  PM - 7:59 PM'
21 = '8  PM - 8:59 PM'
22 = '9  PM - 9:59 PM'
23 = '10 PM -10:59 PM'
24 = '11 PM -11:59 PM'
99 = 'UNKNOWN'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

LIGHT **LIGHT CONDITION**

```
1 = 'DAWN-MORNING'          Dawn (morning)
2 = 'DAYLIGHT'              Daylight
3 = 'DUSK/EVENING'          Dusk (evening)
4 = 'DARK/STREET LGHT'      Dark (street lights on)
5 = 'DARK/NSTREET LGT'      Dark (no street lights)
6 = 'DARK/STRT LGT OF'      Dark (street lights off)
7 = 'OTHER'                 Other
9 = 'UNKNOWN'               Unknown
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

LOC_TYPE **LOCATION TYPE**

1 = 'STRIGHT ROAD'	Straight road
2 = 'CURVED ROAD'	Curved road
3 = '3-LEG INTERSECTN'	Three leg intersection
4 = '4-LEG INTERSECTN'	Four leg intersection
5 = '5-LEG INTERSECTN'	Five leg intersection
6 = 'DRIVEWAYS'	Driveways
7 = 'BRIDGE'	Bridges
8 = 'INTERCHANGES'	Interchanges
9 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Inconsistencies in some categories between 1985-86 and later years due to coding change. It is suggested that 1985 data not be used in intersection-related analyses.

MILEPOST **DISTANCE FROM LOW NODE ROUNDED TO THE NEAREST 10th**

NON-LABELED VARIABLE --	Used to link Accident File with Link File. See "Issues related to Merging Files" in Discussion.

MONTH **MONTH OF YEAR**

01 = 'JANUARY'	January
02 = 'FEBRUARY'	February
03 = 'MARCH'	March
04 = 'APRIL'	April
05 = 'MAY'	May
06 = 'JUNE'	June
07 = 'JULY'	July
08 = 'AUGUST'	August
09 = 'SEPTEMBER'	September
10 = 'OCTOBER'	October
11 = 'NOVEMBER'	November
12 = 'DECEMBER'	December
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NONINT **NON-INTERSECTION NODE ACC**

0 = 'INTERSECT ACC'	Intersection type accident
1 = 'NON-INTERS ACC'	Non-intersection type accident
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Inaccurate data. Do not use in analysis.

NUMVEHS **SINGLE OR MULTI VEH CRASH**

01 = 'SINGLE VEH'	Single vehicle
02 = '2 VEH CRASH'	2 vehicle crash
03 = '3 OR MORE'	3 or more vehicle crash
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

OBJECT1 **FIXED OBJECT STRUCK**

00 = 'NOT ACCTYPE 07'	Not ran-off-road accident
01 = 'CONST BARR/EQUIP'	Construction barricades, equip., etc
02 = 'TRAFFIC SIGNAL'	Traffic signal
03 = 'RR CRX DEVICE'	RR crossing device
04 = 'LIGHT POLE'	Light pole
05 = 'UTILITY POLE'	Utility pole
06 = 'SIGN STRUCT POST'	Sign structure post
07 = 'MAIL BOXES/POST'	Mail boxes or posts
08 = 'OTHER POLE/POST'	Other poles, posts, supports
09 = 'FIRE HYD/PRK METR'	Fire hydrant/parking meter
10 = 'TREE SHRUBBERY'	Tree/shrubbery
11 = 'CRASH CUSHION'	Crash cushion
12 = 'MEDIAN SAFY BARR'	Median safety barrier
13 = 'BRIDGE PIERS'	Bridge piers
14 = 'OTHER GUARDRAILS'	Other guardrails
15 = 'FENCE'	Fencing (not median barrier)
16 = 'CULVER HEADWALL'	Culvert headwall
17 = 'EMBANKMENT/DITCH'	Embankment, ditch, curb
18 = 'BUILDING/WALL'	Building, wall
19 = 'ROCK OUTCROPS/LDG'	Rock outcrops/ledge
20 = 'OTHER'	Other
99 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

RDCONSTR **ROAD CONSTRUCTION/MAINT**

1 = 'NONE' None	
2 = 'CONSTRUCTION'	Construction
3 = 'MAINTENANCE AREA'	Maintenance area
4 = 'UTILITY WRK AREA'	Utility work area
9 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

RDSURF **CONDITION OF ROAD SURFACE**

01 = 'DRY'	Dry
02 = 'WET'	Wet
03 = 'SNOW,SLUSH-SANDED'	Snow, slush-sanded
04 = 'ICE,PK SNW SANDED'	Ice, packed snow, sanded
05 = 'MUDDY'	Muddy
06 = 'DEBRIS'	Debris
07 = 'OILY'	Oily
08 = 'SNW,SLUS/N/SANDED'	Snow, slush - not sanded
09 = 'ICE,PK SNW N/SAND'	Ice packed snow - not sanded
10 = 'OTHER'	Other
99 = 'UNKNOW'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

RD_CHAR1 **ROAD CHARACTER**

1 = 'LEVEL STRAIGHT'	Level straight
2 = 'LEVEL CURVED'	Level curved
3 = 'ON GRDE STRAIGHT'	On grade straight
4 = 'ON GRADE CURVED'	On grade curved
5 = 'CREST-STRAIGHT'	Top of hill - straight
6 = 'CREST-CURVE'	Top of hill - curved
7 = 'SAG-STRAIGHT'	Bottom of hill - straight
8 = 'SAG-CURVE'	Bottom of hill - curved
9 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

RODWYCLS **ROADWAY CLASSIFICATION**

'01' = 'URB FREEWAYS'	Urban freeways > 4 lanes
'02' = 'URB FRWY < 4 LN'	Urban freeways, less than 4 lanes
'03' = 'URB 2-LANE ROADS'	Urban two-lane roads
'04' = 'URB MUL DIV NON-FREE'	Urban multi-lane divided, non-freeway
'05' = 'URB MUL UNDV NON-FREE'	Urban multilane undivided non freeways'
'06' = 'RUR FREEWAYS'	Rural freeways, > 4 lanes
'07' = 'RUR FRWY < 4 LN'	Rural freeways, less than 4 lanes
'08' = 'RUR 2-LANE ROADS'	Rural two-lane roads
'09' = 'RUR MUL DIV NON-FREE'	Rural multilane divided, non-freeway
'10' = 'RUR MUL UNDV NON-FREE'	Rural Multilane undivided, non-freeway
'99' = 'OTHERS'	Others
'00' = 'NODE CRASHES'	Node (intersection) crashes

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

SEVERITY **ACCIDENT SEVERITY**

'1' = 'FATAL'	Killed
'2' = 'A INJURY'	A injury
'3' = 'B INJURY'	B injury
'4' = 'C INJURY'	C injury
'5' = 'NO INJURY'	No injury (Property damage only)
'9' = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Created variable based on the most severe injury to any occupant in the crash.

SPDLMT **SPEED LIMIT**

```
01 = 'NOT POST-25 ZONE'
02 = 'NOT POST-45 ZONE'
10 = '10 MPH'
15 = '15 MPH'
20 = '20 MPH'
25 = '25 MPH'
30 = '30 MPH'
35 = '35 MPH'
40 = '40 MPH'
45 = '45 MPH'
50 = '50 MPH'
55 = '55 MPH'
*60 = '60 MPH'
*65 = '65 MPH'
99 = 'UNKNOWN'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TOTAINJ **NUMBER OF A INJ IN ACC**

```
0 = '0'
1 = '1'
2 = '2'
3 = '3'
4 = '4'
5-9 = '5-9'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TOTBINJ **NUMBER OF B INJ IN ACC**

```
  0 = '0'
  1 = '1'
  2 = '2'
  3 = '3'
  4 = '4'
5-9 = '5-9'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TOTCINJ **NUMBER OF C INJ IN ACC**

```
  0 = '0'
  1 = '1'
  2 = '2'
  3 = '3'
  4 = '4'
5-9 = '5-9'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TOT_KILL **NUMBER KILLED IN ACC**

```
  0 = '0'
  1 = '1'
  2 = '2'
  3 = '3'
  4 = '4'
5-9 = '5-9'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TOT_NON **NUMBER OF NON-INJRD IN ACC**

```
  0 = '0'
  1 = '1'
  2 = '2'
  3 = '3'
  4 = '4'
5-9 = '5-9'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TRF_CNTL **TRAFFIC CONTROL DEVICE**

01 = 'TRAF SIGL STP/GO'	Traffic signals (stop & go)
02 = 'TRAF SIGL FLASH'	Traffic signals (flashing)
03 = 'OVERHEAD FLASH'	Overhead flashers
04 = 'STP SGN ALL APPR'	Stop signs - all approaches
05 = 'STP SIGN - OTHER'	Stop sign - other
06 = 'YIELD SIGN'	Yield sign
07 = 'CURVE WARN SIGN'	Curve warning sign
08 = 'OFFICER/FLAGMAN'	Officer, flagman, school patrol
09 = 'SCH BUS STP ARM'	School bus stop arm
10 = 'SCH ZONE SIGN'	School zone sign
11 = 'RR CROSSING DEV'	RR crossing device
12 = 'NO PASSING ZONE'	No passing zone
13 = '13=NONE'	None
14 = '14=NONE'	None
99 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

WEATHER **WEATHER-ATMOSPHERE**

1 = 'CLEAR'	Clear
2 = 'RAIN'	Rain
3 = 'SNOW'	Snow
4 = 'SLEET,HAIL'	Sleet, hail, freezing rain
5 = 'FOG,SMOG,SMOKE'	Fog, smog, smoke
6 = 'SEVERE CROSS WIND'	Severe cross winds
7 = 'BLOWN SAND/DUST'	Blowing sand or dust
8 = 'CLOUDY'	Cloudy
9 = 'OTHER/UNKNOWN'	Other or unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

WEEKDAY **DAY OF WEEK**

1 = 'MONDAY'	Monday
2 = 'TUESDAY'	Tuesday
3 = 'WEDNESDAY'	Wednesday
4 = 'THURSDAY'	Thursday
5 = 'FRIDAY'	Friday
6 = 'SATURDAY'	Saturday
7 = 'SUNDAY'	Sunday
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

Vehicle Subline

LIST OF VARIABLES FOR MAINE VEHICLE SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
CASENO	ACC CASE NUMBER	Vehicle	Char(9)	I-35	
CONTRIB1	1ST APPART CONTRIB FACTOR	Vehicle	Num	I-35	II-65
CONTRIB2	2ND APPART CONTRIB FACTOR	Vehicle	Num	I-35	II-69
COUNTY	MAINE COUNTY KEY	Vehicle	Char(2)	I-36	II-73
C_HNODE	HIGH NODE	Vehicle	Char(5)	I-36	
C_LINK	LINK=BOTH NODES	Vehicle	Char(12)	I-36	
C_LNODE	LOW NODE	Vehicle	Char(5)	I-36	
DRV_AGE	DRIVER AGE	Vehicle	Num	I-37	II-75
DRV_INJ	DRIVER INJURY TYPE	Vehicle	Char(1)	I-37	II-78
DRV_SEX	DRIVER SEX	Vehicle	Num	I-37	II-79
MISCACT1	PRE-CRASH MANEUVER	Vehicle	Num	I-38	II-80
NUM_OCCS	NUM OCCUPANTS IN VEHICLE	Vehicle	Num	I-39	II-86
PHYSCOND	APPARENT PHYSICAL CONDIT	Vehicle	Num	I-39	II-87
ST_LIC	STATE OF LICENSE	Vehicle	Num	I-39	
VEHNO	VEHICLE POSITION NUMBER	Vehicle	Num	I-41	
VEHTYPE	TYPE OF UNIT	Vehicle	Num	I-41	II-89

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE VEHICLE SUBFILE

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

CASENO **ACC CASE NUMBER**

NON-LABELED VARIABLE

NOTE: This variable has nine characters. The first four characters represent year of accident.

CONTRIB1 **APPARENT CONTRIB FACTOR #1**
CONTRIB2 **APPARENT CONTRIB FACTOR #2**

01 = 'NO IMPROP DRV'	No improper driving
02 = 'FAIL TO YIELD'	Failed to yield right of way
03 = 'ILLEGAL,UNSAF SPD'	Illegal, unsafe speed
04 = 'FOLLOW TO CLOSE'	Follow too close
05 = 'IGNOR TRAF CTRL'	Disregard traffic control device
06 = 'DRV LEFT CENTER'	Driving left of center - not passing
07 = 'IMPROPER PASSING'	Improper pass - overtaking
08 = 'IMPR LANE CHANGE'	Improper, unsafe lane change
09 = 'IMPR PRK,STR/STP'	Improper parking, start, stop
10 = 'IMPROPER TURN'	Improper turn
11 = 'UNSAFE BACKING'	Unsafe backing
12 = 'NO,IMPR SIGNAL'	No signal or improper signal
13 = 'IMPEDING TRAFFIC'	Impeding traffic
14 = 'DRV INATTN/DISTR'	Driver inattention - distraction
15 = 'DRV INEXPERIENCE'	Driver inexperience
16 = 'PED VIOLATION'	Pedestrian violation
17 = 'PHYSICAL IMPAIR'	Physical impairment
18 = 'VIS OBS/WINDSHLD'	Vision obscured - windshield
19 = 'VIS OBS/SUN/HDLT'	Vision obscured - sun, headlights
20 = 'OTH VISION OBSTR'	Other vision obscurement
30 = 'OTH HUMAN VIOL'	Other human violation factor
31 = 'HIT AND RUN'	Hit and run
41 = 'DEFECT BRAKES'	Defective brakes
42 = 'DEFECT TIRES'	Defective tire - tire failure
43 = 'DEFECT LIGHTS'	Defective lights
44 = 'BROKEN WINDSHLD'	Inadequate windshield glass
45 = 'OVERSIZE/OVERWGHT'	Oversize - overweight vehicle
50 = 'OTH VEH DEFECT'	Other vehicle defect or factor
51 or 99 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

COUNTY **MAINE COUNTY KEY**

```
'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANKCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK';
```

C_HNODE **HIGH NODE**

NON-LABELED VARIABLE

C_LINK ***KEY* FOR MERGING**

NON-LABELED VARIABLE -- See Discussion.

C_LNODE **LOW NODE**

NON-LABELED VARIABLE

DRV_AGE **AGE - DRIVER**

```
01    = '1 YEAR'
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'
66-98 = '66 + YRS'
   99 = 'UNKNOWN'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

DRV_INJ **INJURY TYPE - DRIVER**

```
'1' = 'FATAL'                 Killed
'2' = 'A INJURY'              A injury
'3' = 'B INJURY'              B injury
'4' = 'C INJURY'              C injury
'5' = 'NO INJURY'             No injury (Property damange only)
'9' = 'UNKNOWN'               Unknown
' ' = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

DRV_SEX **SEX - DRIVER**

```
1 = 'MALE'                    Male
2 = 'FEMALE'                  Female
9 = 'UNKNOWN'                 Unknown
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

MISCACT1 PRE-CRASH MANEUVER

BY VEHICLE

01 = 'GOING STRAIGHT'	Going straight following roadway
02 = 'WRONG WAY OP/TRAF'	Wrong way into opposing traffic
03 = 'RT/TURN ON RED'	Right turn on red
04 = 'LF/TURN ON RED'	Left turn on red
05 = 'MAKING RGHT TRN'	Making right turn
06 = 'MAKING LFT TURN'	Making left turn
07 = 'MAKING U TURN'	Making U-turn
08 = 'START FROM PARK'	Starting from parked
09 = 'START IN TRAFFIC'	Starting in traffic
10 = 'SLOWING IN TRAF'	Slowing in traffic
11 = 'STOPPED IN TRAF'	Stopped in traffic
12 = 'ENTER PARK POSIT'	Entering parked position
13 = 'PARKED-LEGALLY'	Parked - legally
14 = 'PARKED ILLEGALLY'	Parked - illegally
15 = 'AVOIDING VEH/OBJ'	Avoiding vehicle, object or pedestrian in roadway
16 = 'SKIDDING'	Skidding
17 = 'CHANGING LANES'	Changing lanes
18 = 'OVERTAKING/PASS'	Overtaking, passing
19 = 'MERGING'	Merging
20 = 'BACKING'	Backing
30 = 'OTHER VEH ACTION'	Other vehicle action
93 = 'UNKN VEH MANEUV'	Unknown vehicle maneuver

BY PEDESTRIAN

41 = 'CROS W/SIGNAL'	Crossing with signal
42 = 'CROS A/SIGNAL'	Crossing against signal
43 = 'CROS MARKD/CRSWLK'	Crossing marked crosswalk - no signal
44 = 'CROS N/SIGNAL'	Crossing - no signal or crosswalk
45 = 'WLK IN RD W/TRAF'	Walking in road with traffic
46 = 'WLK IN RD A/TRAF'	Walking in road against traffic
47 = 'STANDING IN ROAD'	Standing in road
48 = 'EMRGNG FRM P/VEH'	Emerging from behind parked car
49 = 'CHLD GET OF BUS'	Child getting on-off school bus
50 = 'GETNG ON/OFF VEH'	Getting on-off vehicle
51 = 'PUSH/WRK VEH'	Pushing or working on vehicle
52 = 'WORKING IN ROAD'	Working in road
53 = 'PLAYING IN ROAD'	Playing in road
54 = 'NOT IN ROAD'	Not in road
60 = 'OTHER PED ACTION'	Other pedestrian action
96 = 'UNKN PED ACTION'	Unknown pedestrian action

BY BICYCLIST

71 = 'BYC RIDNG IN TRAF'	Riding with traffic

(CON'T)

74 = 'BYC MAKING L/TURN'	Making left turn
72 = 'BYC RIDNG A/TRAF'	Riding against traffic
73 = 'BYC MAKING R/TURN'	Making right turn
75 = 'BYC MAKING U/TURN'	Making U-turn
76 = 'BYC RDING ACRS RD'	Riding across road
77 = 'BYC SLOWING/STOP'	Slowing, stopping and starting in road
80 = 'OTH BICYC ACTION'	Other bicyclist action
98 = 'BICYCLE UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Higher than usual number of cases either uncoded or "unknown".

NUM_OCCS **NUM OCCUPANTS IN VEHICLE**

NON-LABELED VARIABLE --	This variable was created as a "check" variable to indicate the total number of occupants in the vehicle.

PHYSCOND **APPARENT PHYSICAL COND**

01 = 'NORMAL'	Normal
02 = 'UNDER INFLUENCE'	Under the influence
03 = 'HAD BEEN DRINK'	Had been drinking
04 = 'USING DRUGS'	Had been using drugs
05 = 'ASLEEP'	Asleep
06 = 'FATIGUED'	Fatigued
07 = 'ILL'	Ill
08 = 'HANDICAPPED'	Handicapped
09 = 'OTHER'	Other
99 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

ST_LIC **STATE CODE OF LICENSE**

01 = 'ALASKA'	Alaska
02 = 'ALABAMA'	Alabama
03 = 'ARIZONA'	Arizona
04 = 'ARKANSAS'	Arkansas
05 = 'CALIFORNIA'	California
06 = 'COLORADO'	Colorado
07 = 'CONNECTICUT'	Connecticut
08 = 'DELAWARE'	Delaware

(CON'T)

09 = 'DIST COLUMBIA'	District of Columbia
10 = 'FLORIDA'	Florida
11 = 'GEORGIA'	Georgia
12 = 'HAWAII'	Hawaii
13 = 'IDAHO'	Idaho
14 = 'ILLINOIS'	Illinois
15 = 'INDIANA'	Indiana
16 = 'IOWA'	Iowa
17 = 'KANSAS'	Kansas
18 = 'KENTUCKY'	Kentucky
19 = 'LOUISIANA'	Louisiana
20 = 'MAINE'	Maine
21 = 'MARYLAND'	Maryland
22 = 'MASS.'	Massachusetts
23 = 'MICHIGAN'	Michigan
24 = 'MINNESOTA'	Minnesota
25 = 'MISSISSIPPI'	Mississippi
26 = 'MISSOURI'	Missouri
27 = 'MONTANA'	Montana
28 = 'NEBRASKA'	Nebraska
29 = 'NEVADA'	Nevada
30 = 'NEW HAMPSHIRE'	New Hampshire
31 = 'NEW JERSEY'	New Jersey
32 = 'NEW MEXICO'	New Mexico
33 = 'NEW YORK'	New York
34 = 'N CAROLINA'	North Carolina
35 = 'N DAKOTA'	North Dakota
36 = 'OHIO'	Ohio
37 = 'OKLAHOMA'	Oklahoma
38 = 'OREGON'	Oregon
39 = 'PENNSYLVANIA'	Pennsylvania
40 = 'RHODE ISLAND'	Rhode Island
41 = 'S CAROLINA'	South Carolina
42 = 'S DAKOTA'	South Dakota
43 = 'TENNESSEE'	Tennessee
44 = 'TEXAS'	Texas
45 = 'UTAH'	Utah
46 = 'VERMONT'	Vermont
47 = 'VIRGINIA'	Virginia
48 = 'WASHINGTON'	Washington
49 = 'W VIRGINIA'	West Virginia
50 = 'WISCONSIN'	Wisconsin
51 = 'WYOMING'	Wyoming
60 = 'ALBERTA'	Alberta
61 = 'BRIT. COLUMBIA'	British Columbia
62 = 'MANITOBA'	Manitoba
63 = 'NEW BRUNSWICK'	New Brunswick
64 = 'NEWFOUNDLAND'	Newfoundland
65 = 'NOVA SCOTIA'	Nova Scotia
66 = 'ONTARIO'	Ontario

(CON'T)

67 = 'P.E. ISLAND'		Prince Edward Island
68 = 'QUEBEC'		Quebec
69 = 'SASKATCHEWAN'		Saskatchewan
98 = 'US GOV'T VEH		U.S. Government vehicles
99 = 'ALL OTHERS'		All others
. = 'NOT CODED'		
OTHER = 'ERROR/OTHER CODES'		

NOTE: The 1985 data is in error. In that year, 94% of the cases are coded as 99 = 'ALL OTHERS'.

VEHNO **VEHICLE POSITION NUMBER**

NON-LABELED VARIABLE -- Vehicle Number in Crash (1-9)

VEHTYPE **TYPE OF UNIT**

01 = '2-DOOR'	2-door passenger car
02 = '4-DOOR'	4-door passenger car
03 = 'CONVERTIBLE'	Convertible
04 = 'STATION WAGON'	Station wagon
05 = 'VAN/CAMPERS'	Van or camper
06 = 'PICKUP'	Pickup truck
07 = 'TRUCK'	Truck
08 = 'TR TRAILER'	Truck and trailer
09 = 'SEMI TRAIL'	Semi trailer
10 = 'SEMI TANK'	Semi tanker
11 = 'BUS'	Bus
12 = 'SCHOOL BUS'	School bus
13 = 'MOTOR HOME'	Motor home
14 = 'MOTORCYCLE'	Motorcycle
15 = 'MOPED'	Moped
16 = 'MOTOR BIKE'	Motor bike
17 = 'BICYCLE'	Bicycle
18 = 'SNOWMOBILE'	Snowmobile
19 = 'PEDESTRIAN'	Pedestrian
20 = '2-AXL TRK,2/TIRE'	2 axle tractor with dual tires
21 = '2-AXL S/AXL SEMI'	2 axle tractor - single axle semi
22 = '2-AXL T/AXL SEMI'	2 axle tractor - tandem axle semi
23 = 'ATV VEHICLE'	All terrain vehicle
25 = '2-AXL 1AS2A TRAL'	2 axle tractor - 1 axle semi - 2 axle trailer
30 = '3-AXLE/ONE UNIT'	3 axle (single unit)
31 = '3-AXL S/AXL/SEMI'	3 axle tractor - single axle semi
32 = '3-AXL T/AXL SEMI'	3 axle tractor - tandem axle semi
33 = '3-AXL TR/AX SEMI'	3 axle tractor - tri axle semi
35 = '3-AXL 1AS2A TRAL'	3 axle tractor - 1 axle semi - 2 axle trailer

(CON'T)

36 = '3-AXL 2AS2A TRAL'	3 axle tractor - 2 axle semi - 2 axle trailer
37 = '3-AXL 2AS3A TRAL'	3 axle tractor - 2 axle semi - 3 axle trailer rear
38 = '3-AXL 2AS3A TR/R'	3 axle tractor - 2 axle semi - 3 axle trailer front
39 = '3-AXL 2AS4A TRAL'	3 axle tractor - 2 axle semi - 4 axle trailer
40 = '4-AXLE/ONE UNIT'	4 axle truck single unit
42 = '4-AXL TRK T/AXL'	4 axle truck with a tandem axle semi
50 = '3 & 4 AXL N/LIST'	3 and 4 axle unit not listed above
60 = '5 AXL N/LIST'	5 axle unit not listed above
70 = 'ALL OTHER SEMI'	All other multi-axle units not listed above
98 = 'FARM VEHICLE'	Farm vehicles/tractors
99 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

Occupant Subline

LIST OF VARIABLES FOR MAINE OCCUPANT SUBFILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
AGE	OCCUPANT AGE	Occupant	Num	I-45	II-97
CASENO	ACC CASE NUMBER	Occupant	Char(9)	I-45	
COUNTY	MAINE COUNTY KEY	Occupant	Char(2)	I-46	
C_HNODE	HIGH NODE	Occupant	Char(5)	I-46	
C_LINK	LINK=BOTH NODES	Occupant	Char(12)	I-46	
C_LNODE	LOW NODE	Occupant	Char(5)	I-46	
INJ	OCCUPANT INJURY TYPE	Occupant	Char(1)	I-46	II-100
SEATPOS	OCCUPANT POSITION IN VEH	Occupant	Num	I-47	II-101
SEX	OCCUPANT SEX	Occupant	Num	I-47	II-102
VEHNO	VEHICLE POSITION NUMBER	Occupant	Num	I-47	

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

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE OCCUPANT SUBFILE

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

AGE **OCCUPANT AGE**

```
01    = '1 YEAR'
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'
66-98 = '66 + YRS'
99 = 'UNKNOWN'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

CASENO **ACC CASE NUMBER**

NON-LABELED VARIABLE

NOTE: This variable has nine characters. The first four characters represent year of accident.

COUNTY **MAINE COUNTY KEY**

'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANKCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK';

C_HNODE **HIGH NODE**

NON-LABELED VARIABLE

C_LINK ***KEY* FOR MERGING**

NON-LABELED VARIABLE -- See Discussion

C_LNODE **LOW NODE**

NON-LABELED VARIABLE

INJ **OCCUPANT INJURY TYPE**

'1' = 'FATAL'	Killed
'2' = 'A INJURY'	A injury
'3' = 'B INJURY'	B injury
'4' = 'C INJURY'	C injury
'5' = 'NO INJURY'	No injury (Property damange only)
'9' = 'UNKNOWN'	Unknown
' ' = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Approximately five percent of the data are uncoded.

SEATPOS **OCCUPANT POSITION IN VEHICLE**

1 = 'DRIVER'	Driver
2 = 'CENTER FRONT'	Center front
3 = 'RIGHT FRONT'	Right front
4 = 'LEFT REAR'	Left rear
5 = 'CENTER REAR'	Center rear
6 = 'RIGHT REAR'	Right rear
7 = 'OTHER'	Other
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

SEX **OCCUPANT SEX**

1 = 'MALE'	Male
2 = 'FEMALE'	Female
9 = 'UNKNOWN'	Unknown
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

VEHNO **VEHICLE POSITION NUMBER**

NON-LABELED VARIABLE -- Vehicle Number in Crash (1-9)

LIST OF VARIABLES FOR MAINE LINK RECORDS FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
AADT	ANNUAL AVGE DAILY TRAFFIC	Link	Num	I-51	
AADTF	FACTORED AADT	Link	Num	I-51	II-105
AADTF_YR	YEAR OF CURRENT AADT	Link	Char(4)	I-51	II-107
AADT_TYP	AADT TYPE (EST. OR ACTUAL)	Link	Char(1)	I-51	II-108
AADT_YR	YR OF FACTORED AADT	Link	Char(4)	I-52	II-109
ACCESS	ACCESS CONTROL	Link	Num	I-52	II-112
A_HNODE	HIGH NODE OF LINK	Link	Char(5)	I-52	
A_LINK	LINK=BOTH NODES	Link	Char(12)	I-52	
A_LNODE	LOW NODE OF LINK	Link	Char(5)	I-52	
BEGMP	POSITION WHERE SUBLINK BEGINS	Link	Num	I-52	
COUNTY	MAINE COUNTY KEY	Link	Char(2)	I-53	II-113
ENDMP	POSITION WHERE SUBLINK ENDS	Link	Num	I-53	
FED_AID	FEDERAL AID DESIGNATION	Link	Char(1)	I-53	II-115
FIFTY5	POSTED 55/65 MPH ZONE	Link	Num	I-54	II-116
FUNC_CLS	FUNCTIONAL CLASS (1980 FEDERAL)	Link	Num	I-54	II-117
HPMS1	HPMS SAMPLE SECTION	Link	Num	I-54	II-118
INV_CNTL	ROUTE TYPE INDICATOR	Link	Char(5)	I-54	II-119
JURIS	JURISDICTION	Link	Num	I-55	II-120
LENGTH	OFFICIAL SUBLINK MILEAGE	Link	Num	I-55	
LSHLDWID	LEFT SHOULDER WIDTH	Link	Num	I-55	II-122
LSHL_TYP	LEFT SHOULDER TYPE	Link	Num	I-55	II-123
MVMT	MILLION VEHICLE MILES TRAVELED	Link	Num	I-56	
NHS_CODE	NATIONAL HIGHWAY SYSTEM CODE	Link	Num	I-56	II-124
NO_LANES	NUMBER OF LANES	Link	Char(1)	I-56	II-125
ONEWAY	ONEWAY INDICATOR	Link	Num	I-57	II-127
PROBLEM	DISTANCE PROBLEM FLAG (CREATED)	Link	Num	I-57	
RAMP	RAMP	Link	Num	I-57	
RODWYCLS	ROADWAY CLASSIFICATION	Link	Char(2)	I-57	II-128
RSHLDWID	RIGHT SHOULDER WIDTH	Link	Num	I-58	II-130

(CON'T)

LIST OF VARIABLES FOR MAINE LINK RECORDS FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
RSHL_TYP	RIGHT SHOULDER TYPE	Link	Num	I-58	II-131
RTE_NBR	ROUTE OR INVENTORY NO	Link	Char(5)	I-58	
RTE_TYPE	STATE HIGHWAY DESCIGNATION NO	Link	Char(4)	I-58	
RURURB	RURAL/URBAN CODE	Link	Num	I-58	II-132
SEG_LNG	SUBLINK LENGTH IN MILES	Link	Num	I-59	
STR_NAME	STREET NAME	Link	Char(15)	I-59	
SUBLINK	SEQUENCE WITHIN LINK	Link	Num	I-59	II-133
SURF_TYP	SURFACE TYPE	Link	Num	I-59	II-134
SURF_WD	PAVEMENT WIDTH	Link	Num	I-60	II-136
S_FUNC	STATE FUNCT CLASS (1981)	Link	Num	I-60	II-138
TRK_RTE	DESIGNATED TRUCK ROUTE	Link	Num	I-60	II-139

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE LINK RECORDS FILE

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

AADT **ANNUAL AVG DAILY TRAFFIC**

NON-LABELED VARIABLE

NOTE: Do not use for analysis. See AADTF.

AADTF **FACTORED AVERAGE DAILY TRAFFIC**

```
00000       = 'ZERO'
00001-00100 = '    0 -   100'
00101-00500 = '  101 -   500'
00501-01000 = '  501 -  1000'
01001-02000 = ' 1001 -  2000'
02001-05000 = ' 2001 -  5000'
05001-10000 = ' 5,001 - 10,000'
10001-15000 = '10,001 - 15,000'
15001-20000 = '15,001 - 20,000'
20001-40000 = '20,001 - 40,000'
40001-99999 = 'OVER 40,000'
```

NOTE: This is the more accurate definition of AADT and should be used in all analyses. Quality control checks have indicated that sections with "0" AADT are usually dead-end segments with few if any houses. Thus, the data are accurate.

AADTF_YR **YEAR OF FACTORED AADT**

```
Four-digit year; otherwise,
. = 'NOT CODED'
'OTHE' = 'ERROR/OTHER CODES'
```

AADT_TYP **AADT TYPE (EST. OR ACTUAL)**

```
'E' = 'ESTIMATED'            Estimated
'B' = 'INTERPOLATED'         Interpolated
'A' = 'BASED ON ACTUAL'      Based on actual count
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

AADT_YR **YEAR OF CURRENT AADT**

Four-digit year; otherwise,

. = 'NOT CODED'
'OTHE' = 'ERROR/OTHER CODES'

NOTE: Do not use for analysis. See AADTF_YR.

ACCESS **ACCESS CONTROL**

1 = 'NO CONTROL'	No control
2 = 'PARTIAL CONTROL'	Partial control
3 = 'FULL CONTROL'	Full control
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

A_HNODE **HIGH NODE OF LINK**

NON-LABELED VARIABLE

A_LINK **BOTH NODES FOR MATCHING**

NON-LABELED VARIABLE -- Used to link Accident File with Node File. See "Issues related to Merging Files" in Discussion.

A_LNODE **LOW NODE OF LINK**

NON-LABELED VARIABLE

BEGMP **POSITION WHERE SUBLINK BEGINS**

NON-LABELED VARIABLE -- Created from "Distance from beginning of link" variable on raw file. Used in linking with Accident File.

COUNTY **MAINE COUNTY KEY**

```
'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANKCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK';
```

ENDMP **POSITION WHERE SUBLINK ENDS**

NON-LABELED VARIABLE -- Created from "Distance from beginning of link" variable on raw file. Used in linking with Accident File. See "Issues in Merging Files" in Discussion.

FED_AID **FEDERAL AID DESIGNATION -**

'I' = 'FAID INTERSTATE'	Federal Aid Interstate
'P' = 'FEDAID PRIMARY'	Federal Aid Primary
'R' = 'FEDAID PRIM SPUR'	Federal Aid Primary Spur
'S' = 'FEDAID SECONDARY'	Federal Aid Secondary
'T' = 'FEDAID SEC SPUR'	Federal Aid Secondary Spur
' ' or 'F' = 'NON-FEDAID'	Non-Federal Aid
'0' - '9' = 'FEDAID URBAN'	Federal Aid Urban

ALTERNATIVE FORMAT NAME - *$FEDAID*

'I' = 'F.A.I.'	Federal Aid Interstate
'P','R' = 'F.A.P.'	Federal Aid Primary
'S','T' = 'F.A.S.'	Federal Aid Secondary
'0'-'9' = 'F.A.U.'	Federal Aid Urban
' ','F' = 'NON-FED'	Non Federal Aid

NOTE: This alternative formatting groups Federal Aid classes.

FIFTY5 **POSTED 55/65 MPH ZONE**

1 = '55 MPH ZONE'	55 MPH zone
2 = '55 MPH ZONE 2+ LN'	55 MPH zone - 2 or more lanes
3 = '65 MPH ZONE 2+ LN'	65 MPH zone - 2 or more lanes
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Over 90% of the data in the 1990-97 files is coded as "0", which is defined as 'other' in 1999 guidebook. Based on inputs from the Maine staff in December, 1999, this variable is no longer coded or used. Maine has a "speed zone" file showing speed limits in approximately 6,000 miles of speed zones. HSIS programmers are trying to develop a linkage between this file and the Link File, but have not yet been successful. For special studies, manual linkage is possible.

FUNC_CLS **FUNCTIONAL CLASS (1980 FEDERAL)**

0 = 'LOCAL'	Local
1 = 'PRN ART-INTSTATE'	Principal arterial - interstate
2 = 'PRN ART FREEWAY '	Principal arterial - other freeways and expressways
3 = 'OTR PRN ARTERIAL'	Other principal arterials
4 = 'MINOR ARTERIALS'	Minor arterials
5 = 'MAJOR COLLECTORS'	Major collectors(includes all urban collectors)
6 = 'MINOR COLLECTORS'	Minor collectors

HPMS1 **HPMS SAMPLE SECTION**

0 or ' '= 'NOT PART OF HPMS'	Not part of HPMS section
1 = 'PART OF HPMS'	Part of HPMS section
2-9 = 'OTHER'	Other

INV_CNTL **ROUTE TYPE INDICATOR**

'X' = 'X=OFFICIAL SR'	Official mileage on State Route
'S' = 'SOUTHBOUND/UNOFF'	Southbound unofficial mileage
'W' = 'WESTBOUND/UNOFF'	Westbound unofficial mileage
'0'-'9' = 'OFFICIAL CNTY RT'	Official mileage on county routes
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: This is the 5th character of ROUTENO. For correct indication of official mileage, see LENGTH.

JURIS **JURISDICTION CODE**

1 = 'STATE HIGHWAY'	State highway
2 = 'STATE AID'	State aid
3 = 'TOWNWAY'	Townway
4 = 'TOLL'	Toll
5 = 'SEASONAL'	Seasonal
6 = 'RESERVATION'	Reservation
7 = 'SOUTH/WEST BOUND'	Southbound or westbound lanes
8 = 'SOUTHBOUND TOLL'	Southbound toll
9 = 'TOWNWAY SEASONAL'	Townway seasonal
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

LENGTH **OFFICIAL SUBLINK MILEAGE**

NON-LABELED VARIABLE-- This is a created variable which indicates "official" mileage. It is the same as SEG_LNG except that mileage on interchange ramps, on "Seasonal" roads, and on the opposing side of divided highways and toll roads is set to "0".

LSHLDWID **LEFT SHOULDER WIDTH**

0 = '0'	
1-3 = '1 - 3'	
4-6 = '4 - 6'	
7-9 = '7 - 9'	
10-13 = '10 - 13'	
14-99 = ' > 13'	

LSHL_TYP **LEFT SHOULDER TYPE**

0 = 'NO SHOULDER'	No shoulder
2 = 'GRAVEL'	Gravel
3 = 'PAVED'	Paved
5 = 'CURB PRESENT'	Curb present
. = 'NOT CODED'	
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.

NHS_CODE **NATIONAL HIGHWAY SYSTEM CODE**

1 = 'NHS-Interstate'	National Highway System Interstate
2 = 'NHS-Other'	National Highway System non-Interstate
3 = 'Fed aid non_NHS'	Federal aid non-NHS
4 = 'Non-fed aid non-NHS'	Non-federal aid, non-NHS
5 = 'NHS-Intmodal connect'	
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: Checked with Maine staff in Dec, 1999. The data was collected after 1995.

NO_LANES **NUMBER OF LANES**

'1' = '1 LANE, ONEWAY'	One lane (allows for traffic in one direction only)
'2' = '2 LANE UNDIV'	Two lanes undivided (normal highway)
'3' = '3 LANE UNDIV'	Three lanes undivided
'4' = '4 LANE UNDIV'	Four lanes undivided
'5' = '5+ LANES UNDIV'	Five or more lanes undivided
'6' = '2 LANE DIV'	Two lanes divided
'7' = '4 LANE DIV'	Four lanes divided
'8' = '6 LANE DIV'	Six lanes divided
'9' = '6+ LANE DIV'	More than six lanes divided
'L' = '2 UNDIV,TRK LFT'	Two lanes undivided - with truck lane on left
'R' = '2 UNDIV,TRK RGT'	Two lanes undivided - with truck lane on right
'B' = '2 UNDIV,TRK BTH'	Two lanes undivided - with truck lane on both sides
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

NOTE: This variable is not totally accurate according to Maine staff. Use with caution. New variables with more accurate coding will begin with the 1998 data.

ONEWAY **ONE WAY DIRECTION INDICA**

1 = 'TOWARD LO-NODE'	One-way in the direction of low node
2 = 'TOWARD HI-NODE'	One-way in the direction of high node
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

PROBLEM **DISTANCE PROBLEMS FLAG**

0 = 'GOOD LINK'	No problems with location of changes on link)
1 = 'AT END/AFTER ERR'	Change (erroneously) located at or beyond end of link
2 = 'OVERLAP ERROR'	Distances to changes (erroneously) overlap

NOTE: This variable was created to indicate problems with the "Distance from beginning of link" variable. These problems would prevent the creation of accurate sublinks. For analysis and merging purposes, only those links coded "0" should be used.

RAMP **RAMP**

1 = 'RAMP'	Ramp
0 or ' ' = 'NOT A RAMP'	Not a ramp

RODWYCLS **ROADWAY CLASSIFICATION**

'01' = 'URB FREEWAYS'	Urban freeways > 4 lanes
'02' = 'URB FRWY < 4 LN'	Urban freeways, less than 4 lanes
'03' = 'URB 2-LANE ROADS'	Urban two-lane roads
'04' = 'URB MUL DIV NON-FREE'	Urban multi-lane divided, non-freeway
'05' = 'URB MUL UNDV NON-FREE'	Urban multilane undivided non freeways'
'06' = 'RUR FREEWAYS'	Rural freeways, > 4 lanes
'07' = 'RUR FRWY < 4 LN'	Rural freeways, less than 4 lanes
'08' = 'RUR 2-LANE ROADS'	Rural two-lane roads
'09' = 'RUR MUL DIV NON-FREE'	Rural multilane divided, non-freeway
'10' = 'RUR MUL UNDV NON-FREE'	Rural Multilane undivided, non-freeway
'99' = 'OTHERS'	Others
'00' = 'NODE CRASHES'	Node (intersection) crashes

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

RSHLDWID **RIGHT SHOULDER WIDTH**

(Width of right shoulder in feet.)

```
0 = '0'
1-3 = '1 - 3'
4-6 = '4 - 6'
7-9 = '7 - 9'
10-13 = '10 - 13'
14-99 = ' > 13'
```

RSHL_TYP **RIGHT SHOULDER TYPE**

```
0 = 'NO SHOULDER'
2 = 'GRAVEL'
3 = 'PAVED'
5= 'CURB PRESENT'
. = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

RTE_NBR **RTE NUMBER OR INVENTORY NO.**

NON-LABELED VARIABLE

RTE_TYPE **STATE HGHWY DESIGNATION NO**

NON-LABELED VARIABLE

RURURB **RURAL/URBAN CODE**

```
1 = 'RURAL'                  Rural (Fed and State)
2 = 'URBAN'                  Urban (Fed and State)
3 = 'RURAL/URBAN'            Rural/Urban by State, Rural by Fed
4 = 'FED URB STAT/RUR'       Federal Urban, State Rural
5 = 'FED RUR STAT/URB'       Federal Rural, State Urban
 . = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

NOTE: This variable is a combination of State and Federal rural-urban classifications. State is based on township boundaries and populations, and Federal is based on clusters of populations. Maine staff suggest using codes 1,3,5 to define "rural," and 2,4 to define "urban."

SEG_LNG **SUBLINK LENGTH IN MILES**

NON-LABELED VARIABLE -- This is a computed variable which provides the sublink length (or link length where there are no sublinks) in miles. It was obtained by subtracting BEGMP from ENDMP and dividing by 100. It may be used as a "weight" factor in producing tables with mileage. It includes both official and unofficial mileage. For "official" mileage, see LENGTH.

STR_NAME **STREET NAME**

NON-LABELED VARIABLE -- Up to 15 characters giving name of street.

NOTE: New variable added in 1991.

SUBLINK **SEQUENCE WITHIN LINK**

NON-LABELED VARIABLE -- This is a created variable which was generated when links were subdivided into sublinks. The sublinks are numbered sequentially starting with "1". Thus, a value of zero indicates a link which was not subdivided (i.e., homogeneous throughout its entire length. This variable can be used to order the sublinks in increasing "milepost" order.

SURF_TYP **SURFACE TYPE**

20, 30, 31 = 'UNIMPROVED'	Unimproved
32, 40 = 'GRAVEL'	Gravel
41, 42, 51,52 = 'FLEXIBLE'	Flexible
60 = 'HIGH FLEXIBLE'	High flexible
70 = 'HIGH RIGID'	High rigid
80 = 'PRTLND CEMENT'	Portland cement composite
90 = 'OTHER'	Other
99 = 'DESIGNATED'	Designated
. = 'NOT CODED'	
OTHER = 'ERROR/OTHER CODES'	

SURF_WD **PAVEMENT WIDTH**

```
0  = '0'
1-15 = '1 -15'
16-18 = '16-18'
19-22 = '19-22'
23-25 = '23-25'
26-30 = '26-30'
31-40 = '31-40'
41-50 = '41-50'
51-60 = '51-60'
61-80 = '61-80'
81-151 = `81-151'
 . = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

S_FUNC **STATE FUNCTIONAL CLASS**

```
0 = 'LOCAL'                    Local
1 = 'PRN ART-INTERST'          Principal arterials - interstate
3 = 'OTH PRN ART'              Other principal arterials
4 = 'MINOR ARTERIAL'           Minor arterials
5 = 'COLLECTOR'                Collector
6 = 'COLL/HLD BACK'            Collector (Hold back)
 . = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

TRK_RTE **DESIGNATED TRUCK ROUTE**

```
0 = 'NOT DESIG TRK RT'
1 = 'DESIG TRUCK RTE';
 . = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

LIST OF VARIABLES FOR MAINE NODE RECORDS FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
B_LINK	KEY FOR MERGING	Node	Char(7)	I-63	
B_NODE	NODE NUMBER	Node	Char(5)	I-63	
COUNTY	MAINE COUNTY KEY	Node	Char(2)	I-63	II-143
ENTVEHS	ANNUAL ENTERING VEHICLES (MILLIONS)	Node	Num	I-63	
NBR_LEGS	NUM OF INTERSECTION LEGS	Node	Num	I-63	II-145
NODE1ST	NODE TYPE 1	Node	Num	I-64	II-146
NODE2ND	NODE TYPE 2	Node	Num	I-64	II-148
NODE_C1	1ST CONNECTING NODE	Node	Char(5)	I-64	
NODE_C2	2ND CONNECTING NODE	Node	Char(5)	I-64	
NODE_C3	3RD CONNECTING NODE	Node	Char(5)	I-64	
NODE_C4	4TH CONNECTING NODE	Node	Char(5)	I-64	
NODE_C5	5TH CONNECTING NODE	Node	Char(5)	I-64	
NODE_C6	6TH CONNECTING NODE	Node	Char(5)	I-64	
NO_APPR	NUMBER OF APPROACHES	Node	Num	I-64	II-150
RATETYPE	RATE TYPE (LOCATION CODE)	Node	Num	I-65	II-151
SIGNAL	TRAFFIC SIGNAL	Node	Num	I-66	II-156
TYPEDESC	INTER TYPE + DESC	Node	Num	I-66	II-157

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE NODE RECORDS FILE

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

B_LINK ***KEY* FOR MERGING**

NON-LABELED VARIABLE -- Created from COUNTY and B_NODE. Used in linking with Accident File. See "Issues Related to Merging Files" in Discussion.

B_NODE **NODE NUMBER**

NON-LABELED VARIABLE

COUNTY **MAINE COUNTY KEY**

```
'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANKCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK';
```

ENTVEHS **ANNUAL ENTERING VEHS (MILLIONS)**

NON-LABELED VARIABLE

NBR_LEGS **NUMBER OF INTERSECTION LEGS**

NON-LABELED VARIABLE

NODE1ST **NODE TYPE (1ST DIGIT)**

1 = 'INTERSECTION'	Intersection
2 = 'BRIDGE'	Bridge
3 = 'RAILROAD'	Railroad
4 = 'END PUBLIC WAY'	End of public way
5 = 'END OF ROAD'	End of road
6 = 'END PUBL @BRIDGE'	End of public way at bridge
7 = 'END PUBLIC @RRX'	End of public way at railroad
8 = 'CHANGE ROAD NUM'	Change in inventory road number
9 = 'INTERS @ RRX'	Intersection at railroad
0 = 'NONE OF BELOW'	None of the above

NODE2ND **NODE TYPE (2ND DIGIT)**

1 = 'URB/RUR LINE'	Urban/Rural line
2 = 'TOWN LINE'	Town line
3 = 'COUNTY LINE'	county line
4 = 'TOWN & RUR LINE'	Town line & urban/rural line
5 = 'STATE MAINT LINE'	State main line only
6 = 'DUMMY'	Dummy
7 = 'STATE LINE'	State line
8 = 'MAINT + OTR LINE'	State maint line @T/L or @C/L or @S/L
9 = 'RD END ON ITSELF'	Road ending on itself
0 = 'NONE OF BELOW'	None of the above

NODE_C1 **1ST CONNECTING NODE**
NODE_C2 **2ND CONNECTING NODE**
NODE_C3 **3RD CONNECTING NODE**
NODE_C4 **4TH CONNECTING NODE**
NODE_C5 **5TH CONNECTING NODE**
NODE_C6 **6TH CONNECTING NODE**

NON-LABELED VARIABLE

NO_APPR **NUMBER OF APPROACHES**

NON-LABELED VARIABLE

NOTE: Inaccurate data. Should not be used in analyses.

RATETYPE	LOCAT.CODE FOR STATEWIDE RATES	
	. = '*OVERALL TOTAL*'	
	1 = '4D FULL - RURAL'	Rural 4-lane divided with full access control
	2 = '4D FULL - URBAN'	Urban 4-lane divided with full access control
	3 = '4D FULL - R/U'	Rural/urban 4-lane divided with full access control
	4 = '4D FULL - FUSR'	Federal urban/State rural 4-lane divided with full access
	5 = '4D FULL - FRSU'	Federal rural/State urban 4-lane divided with full access
	7 = '4D P.A. - URBAN'	Urban principal arterial - 4-lane divided
	9 = '4D P.A. - FUSR'	Federal urban/State rural principal arterial - 4-lane divided
	11 = 'OTR P.A. - RURAL'	Rural, other principal arterial
	12 = 'OTR P.A. - URBAN'	Urban, other principal arterial
	13 = 'OTR P.A. - R/U'	Rural/urban, other principal arterial
	14 = 'OTR P.A. - FUSR'	Federal urban/State rural other prin. arterial
	16 = '2L P.A. - RURAL'	Rural 2-lane principal arterial
	17 = '2L P.A. - URBAN'	Urban 2-lane principal arterial
	18 = '2L P.A. - R/U'	Rural/urban 2-lane principal arterial
	19 = '2L P.A. - FUSR'	Federal urban/State rural 2-lane principal arterial
	20 = '2L P.A. - FRSU'	Federal rural/State urban 2-lane principal arterial
	21 = 'MIN ART - RURAL'	Rural minor arterial
	22 = 'MIN ART - URBAN'	Urban minor arterial
	23 = 'MIN ART - R/U'	Rural/urban minor arterial
	24 = 'MIN ART - FUSR'	Federal urban/State rural minor arterial
	25 = 'MIN ART - FRSU'	Federal rural/State urban minor arterial
	26 = 'MAJ COLL- RURAL'	Rural major collector
	27 = 'MAJ COLL- URBAN'	Urban major collector
	28 = 'MAJ COLL- R/U'	Rural/urban major collector
	29 = 'MAJ COLL- FUSR'	Federal urban/State rural major collector
	30 = 'MAJ COLL- FRSU'	Federal rural/State urban major collector
	31 = 'MIN COLL- RURAL'	Rural minor collector
	32 = 'MIN COLL- URBAN'	Urban minor collector
	33 = 'MIN COLL- R/U'	Rural/urban minor collector
	34 = 'MIN COLL- FUSR'	Federal urban/State rural minor collector
	35 = 'MIN COLL- FRSU'	Federal rural/State urban minor collector

(CON'T)

36 = 'LOCAL - RURAL'	Rural local
37 = 'LOCAL - URBAN'	Urban local
38 = 'LOCAL - R/U'	Rural/urban local
39 = 'LOCAL - FUSR'	Federal urban/State rural local
40 = 'LOCAL - FRSU'	Federal rural/State urban local
41 = 'SIGNALIZED'	Signalized

SIGNAL **TRAFFIC SIGNAL INDICATION**

1 = 'SIGNALIZED'

NOTE: Intersection cases which are uncoded or coded "0" should be considered unsignalized.

TYPEDESC **INTERSECTION TYPE + DESCRIPTION**

00 = 'NON-INTERSECTION'	Non-intersection
05 = 'PUBLIC ROADS'	Public roads
06 = 'L INTERS, 2 PUB'	L intersection (two public roads)
07 = 'CROSS,<4 LEG PRV'	Cross up to 3 legs private
08 = 'T,<3 LEG PRIVATE'	Tee up to 2 legs private
09 = 'RD END ON ITSELF'	Road ending on itself
10 = 'TEE, 90 DEG'	Tee (90')
11 = 'TEE, SKEWED'	Tee (Skewed)
12 = 'DOUBLE TEE'	Double (T)
20 = 'WYE'	WYE
30 = 'CROSS, 90 DEG'	Cross (90')
*31 = `RRX AT U-R LINE'	RAILROAD GRADE CROSSING AT A URBAN-RURAL LINE
32 = 'CROSS, SKEW <45'	Cross (Skewed less than 45')
33 = 'CROSS, ONE <45'	Cross (one leg skewed less than 45')
34 = 'CROSS, ONE >45'	Cross (one leg skewed more than 45')
35 = 'CROSS, BOTH <45'	Cross (both legs skewed less than 45')
36 = 'CROSS, BOTH >45'	Cross (both legs skewed more than 45')
50 = 'CROSS, MULTI 90'	Cross, multiple legs (90')
51 = 'CROSS, MULTI <45'	Cross, multiple legs (skewed less than 45')
52 = 'CROSS, MULTI >45'	Cross, multiple legs (skewed more than 45')
60 = 'ROTARY'	Rotary

<u>If Node Type (NODET1) is 2 = 'Bridge',</u>

61 = 'LARGE CULVERT'	Large culvert under roadway
62 = 'BRIDGE ON RDWY'	Bridge on roadway
63 = 'OVERPASS'	Overpass on roadway

(CON'T)

```
64 = 'CNTY LINE BRDG'          County line bridge
 . = 'NOT CODED'
OTHER = 'ERROR/OTHER CODES'
```

NOTE: For intersection-related analyses, the variable LOC_TYPE on the accident file should be used to define intersection-related crashes, rather than TYPEDESC (To be more conservative, one might require agreement between the LOC_TYPE and TYPEDESC variables, after the interchange-related nodes are removed.)

*New code added in 1999, but applicable to prior years.

Interchange File

LIST OF VARIABLES FOR MAINE INTERCHANGE FILE

SAS VARIABLE NAME	DESCRIPTION	FILE	SAS VARIABLE TYPE	FORMAT PAGE NO.	TABLE PAGE NO.
INTCHNG	UNIQUE INTERCHANGE NUMBER	Interchange	Char(7)	I-71	
I_CNTY	COUNTY	Interchange	Char(2)	I-71	
I_DESC	DESCRIPT NAME OF INTERCHANGE	Interchange	Char(30)	I-71	
I_EXIT	EXIT NUMBER (optional)	Interchange	Char(2)	I-71	
I_NE01	1st NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE02	2nd NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE03	3rd NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE04	4th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE05	5th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE06	6th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-72	
I_NE07	7th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE08	8th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE09	9th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE10	10th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE11	11th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE12	12th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE13	13th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NE14	14th NORTH/EASTBOUND NODE	Interchange	Char(5)	I-73	
I_NECNT	NUMBER OF NODES ON NORTH/EASTBOUND SIDE	Interchange	Num	I-73	
I_RTE	INTERSTATE ROUTE NUMBER	Interchange	Char(3)	I-74	
I_SEQ	ASSIGNED SEQUENCE	Interchange	Char(2)	I-74	
I_SW01	1st SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-74	
I_SW02	2nd SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-74	
I_SW03	3rd SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW04	4th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW05	5th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW06	6th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW07	7th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW08	8th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW09	9th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW10	10th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW11	11th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW12	12th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-75	
I_SW13	13th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-76	
I_SW14	14th SOUTH/WESTBOUND NODE	Interchange	Char(5)	I-76	
I_SWCNT	NUMBER OF NODES ON NORTH/EASTBOUND SIDE	Interchange	Num	I-76	
I_TOLL	TOLL BOOTH PRESENT?	Interchange	Char(1)	I-76	
I_TOTCNT	NUM OF NODES FOR INTERCHANGE	Interchange	Num	I-76	
I_TYPE	TYPE OF INTERCHANGE	Interchange	Char(4)	I-77	
TEMPSEQ	*temp* DATA ENTRY RECORD ID	Interchange	Num	I-77	

SAS FORMAT DEFINITIONS FOR VARIABLES FROM THE MAINE INTERCHANGE FILE

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

INTCHNG **UNIQUE INTERCHANGE NUMBER**

NON-LABELED VARIABLE -- 'CCRRRNN'
WHERE CC = MAINE COUNTY CODE
RRR = INTERSTATE ROUTE NUMBER
NN = SEQUENCE NUMBER

I_CNTY **COUNTY**

'01' = 'ANDROSCOGGIN'
'03' = 'AROOSTOOK'
'05' = 'CUMBERLAND'
'07' = 'FRANKLIN'
'09' = 'HANCOCK'
'11' = 'KENNEBEC'
'13' = 'KNOX'
'15' = 'LINCOLN'
'17' = 'OXFORD'
'19' = 'PENOBSCOT'
'21' = 'PISCATAQUIS'
'23' = 'SAGADAHOC'
'25' = 'SOMERSET'
'27' = 'WALDO'
'29' = 'WASHINGTON'
'31' = 'YORK'

NOTE: This is the same as the first two characters of INTCHNG.

I_DESC **DESCRIPT NAME OF INTERCHANGE**

NON-LABELED VARIABLE -- (OPT) INTERCHANGE NAME HAND-PRINTED ON MAPS

I_EXIT **EXIT NUMBER (optional)**

NON-LABELED VARIABLE -- (OPTIONAL) INTERSTATE EXIT NUMBER

I_NE01 **1st NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- The four character node number for one of the nodes in the northbound or eastbound direction of travel. This will contain BLANKs for "Not Applicable".

NOTE: No particular order was used to collect the north/eastbound nodes for an interchange. Specifically, I_NE01 need not be the highest or the lowest numbered nodes. However, the nodes were entered without skips. Therefore, a blank value indicates the end of the node list. For convenience, the variable I_NECNT was created to indicate the total number of north/eastbound nodes at this location.

Before matching to the HSIS MAINE NODE FILE, a complete (10 character) NODEID must be constructed by concatenating the two character COUNTY in front and concatenating the character string '0000' to the end.

Before matching to the HSIS MAINE LINK FILE, a complete (10 character) LINKID must be constructed by concatenating the two character COUNTY in front and concatenating a higher numbered north/eastbound node to the end. Only some of the potential links actually exist in the "real world".

I_NE02 **2nd NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_NE01)

I_NE03 **3rd NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_NE01)

I_NE04 **4th NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_NE01)

I_NE05 **5th NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_NE01)

I_NE06 **6th NORTH/EASTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_NE01)

I_NE07	**7th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE08	**8th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE09	**9th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE10	**10th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE11	**11th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE12	**12th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE13	**13th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NE14	**14th NORTH/EASTBOUND NODE**	
	NON-LABELED VARIABLE --	(SEE FORMAT AND CODING UNDER I_NE01)
I_NECNT	**NUMBER OF NODES ON NORTH/EASTBOUND SIDE**	
	NON-LABELED VARIABLE --	The number of non-blank nodes listed for the north/eastbound direction of travel.

I_RTE **INTERSTATE ROUTE NUMBER**

'095' = 'I-95'	Interstate 95
'195' = 'I-195'	Interstate 195
'295' = 'I-295'	Interstate 295
'495' = 'I-495'	Interstate 495

NOTE: This is the same as the 3rd-5th characters of INTCHNG.

I_SEQ **ASSIGNED SEQUENCE**

NON-LABELED VARIABLE --

NOTE: This is the same as the 6th-7th characters of INTCHNG.

I_SW01 **1st SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- The four character node number for one of the nodes in the southbound or westbound direction of travel. This will contain BLANKs for "Not Applicable".

NOTE: No particular order was used to collect the south/westbound nodes for an interchange. Specifically, I_SW01 need not be the highest or the lowest numbered nodes. However, the nodes were entered without skips. Therefore, a blank value indicates the end of the node list. For convenience, the variable I_SWCNT was created to indicate the total number of south/westbound nodes at this location.

Before matching to the HSIS MAINE NODE FILE, a complete (10 character) NODEID must be constructed by concatenating the two character COUNTY in front and concatenating the character string '0000' to the end.

Before matching to the HSIS MAINE LINK FILE, a complete (10 character) LINKID must be constructed by concatenating the two character COUNTY in front and concatenating a higher numbered south/westbound node to the end. Only some of the potential links actually exist in the "real world".

I_SW02 **2nd SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW03 **3rd SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW04 **4th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW05 **5th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW06 **6th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW07 **7th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW08 **8th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW09 **9th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW10 **10th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW11 **11th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW12 **12th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW13 **13th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SW14 **14th SOUTH/WESTBOUND NODE**

NON-LABELED VARIABLE -- (SEE FORMAT AND CODING UNDER I_SW01)

I_SWCNT **NUMBER OF NODES ON NORTH/EASTBOUND SIDE**

NON-LABELED VARIABLE -- The number of non-blank nodes listed for the south/westbound direction of travel.

I_TOLL **TOLL BOOTH PRESENT?**

'Y' = 'TOLL PRESENT' Toll Booth present at this interchange
'N' = 'NO TOLL BOOTH' No Toll Booth for this interchange

I_TOTCNT **NUM OF NODES FOR INTERCHANGE**

NON-LABELED VARIABLE -- The total number of nodes listed for the interchange. This number is computed by adding I_NECNT and I_SWCNT.

I_TYPE **TYPE OF INTERCHANGE**

'DIAM' = 'DIAMOND'	(SEE (e) on following figure)
'HDIA' = 'HALF DIAMOND'	
'CL ' = 'CLOVERLEAF'	(SEE (d) on following figure)
'PCL ' = 'PARTIAL CLOVERLEAF'	(SEE (c) on following figure) Also includes either 1/4, ½, or 3/4 cloverleaf
'TRUM' = 'TRUMPET'	(SEE (a) on following figure)
'DIR ' = 'DIRECTIONAL'	(SEE (f) on following figure)
'SPAG' = 'SPAGHETTI'	An "unofficial" designation for very complex interchange
'OTH ' = 'OTHER'	Often a mixed interchange (such as diamond on one side and partial cloverleaf on the other side)
'REST' = 'REST AREA'	
'TOLL' = 'TOLL PLAZA'	Toll plaza located in trafficway (i.e without exit ramps)
'WGT ' = 'WEIGH STATION'	

NOTE: A sketch of various general types for interchanges has been included at the end of this section.

NOTE: In analyses involving only interchanges, screen out all records in which I_TYPE = 'REST', 'TOLL', or 'WGT'.

TEMPSEQ ***temp* DATA ENTRY RECORD ID**

NON-LABELED VARIABLE

Fig. General types of interchanges (*Source:* A Policy on Geometric Design of Rural Highways. *AASHO, 1965. Figure IX-17*)