Safety Related File Linkage

Iowa Department of Transportation

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Prepared by:
Bureau of Transportation Safety
Iowa Department of Transportation

In Cooperation with
Federal Highway Administration
U. S. Department of Transportation

SUMMARY

The development of safety related file linkage capability involved several offices and divisions within the Iowa DOT. The offices and divisions with primary involvement are highlighted on the organization chart in Figure 1 on page 2. The involvement of each of these offices will be explained in this report.

The basic accident data system presently in use was implemented in January, 1977. Iowa contracted with the consulting firm of Wilbur Smith and Associates to develop and implement an Accident Location and Analysis System (ALAS). A link-node accident location system was adopted and basic analysis programs were developed.

Iowa's roadway inventory system, referred to as the Base Record Inventory System, was developed in the 1960's. The Base Record covers over 112,000 miles of public roads and streets. Roadway and structure files for Primary, Secondary, Municipal and State Parks and Institutional Roads are included in the Base Record System. A City Place File and the Rail-Highway Crossing File are also included.

File linkage was originally planned to be a part of the ALAS project. For various reasons ALAS was not developed beyond the basic system implemented in 1977. In 1980, an in-house feasibility study for file linkage was completed. A milepoint linkage concept based on county-wide mileage was recommended and approved for Primary, FAS and FAUS roads. This recommendation necessitated linking only about 23 percent of the mileage but provides coverage of over 80 percent of the accidents and vehicle miles of travel.

File linkage is established on an annual basis with calendar year accidents linked to year-end inventory files. File linkage was implemented beginning with 1982 accidents. An in-house report generator analysis system is being developed through the FOCUS software package.

DEPARTMENT OF TRANSPORTATION IOWA

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	BOB BORTLE	JIM BUMP	VAN SNYDER	BOB PERCIVAL	BOB HENELY

Figure 1

ACCIDENT DATA SYSTEM

Appendix A contains the following information relating to Iowa's Accident Data System:

1. Investigating Officers Report Form (pages A1-A3)
2. Drivers Report Form (Pages A5-A6)
3. Accident Statistics File Format (Pages A7-A10)
4. Description of the Iowa Link-Node Accident Locational System (Page A11)
5. County Node Map Example (Page A12)
6. Interstate Strip Map Example (Page A13)
7. ALAS Overview (Pages A15-A16)

The Accident Data System consists of two basic files. The Accident Statistics File is created from investigating officers' reports and/or driver reports of accidents involving personal injury or over $500 property damage. The second file is the ALAS file which is created from the Accident Statistics File and contains basically the same information.

The link-node accident location system is a quasi-coordinate system based on the six-mile square Congressional Townships as shown on page A11. Under the ALAS project, maps were prepared for all incorporated cities and node overlays were prepared for the existing county maps and the city maps. Strip maps were developed for the Interstate System and major four-lane Primary Expressways. One additional feature of the link-node system is the assignment of unique node numbers to identify interchanges and other multi-node complex intersections. This is illustrated on the Interstate Strip Map Example on page A13.

Two basic analysis programs were developed under ALAS. A high priority location program can select intersection, node, or link locations and rank them by number of accidents, value loss or severeity. A generalized request program can select and list accidents for intersections, nodes, links, node strings, or by accident characteristics. These programs are explained further in the ALAS overview on pages A15-A16.

Accident location coding is accomplished within the Office of Information Services in the Motor Vehicle Division in the following manner:

(1) Intersection Identifier - All "intersection" or "intersection related" accidents are coded to either the single node for normal intersections or the designated intersection identifier node for interchanges and other multiple node intersections. Non-intersection accidents are coded 999999 to indicate the field is not applicable.

(2) Reference Node - The reference node is either the node at which the accident occurred or the node from which the distance is measured, usually the closest node. In the case of single-node intersection accidents the Intersection Identifier node is repeated.

(3) Distance Indicator - This field indicates the distance in miles and hundredths-of-a-mile from the Reference Node toward the Direction Node to the point of the accident. If the accident occurred at a node the field is coded 999 to indicate the field is not applicable.

(4) Direction Node - The location of a non-node accident is tied to a specific link by coding the first node along the route from the Reference Node beyond the point of the accident. If the Direction Node is not applicable 999999 is coded.

Any of the above fields that cannot be determined from the accident reports are coded with zeros. In some cases the specific location may be unknown but the accident can be tied to the appropriate Congressional Township followed by zeros. Accidents that occur on new roads that do not appear on the node maps are coded to the appropriate Congressional Township followed by 9898. These accidents can then be identified and recoded when updated node maps become available.

The Iowa DOT has recently installed the Cullinet IDMS Data Base Management System, and plans are being developed to convert the accident data system to the data base. An in-house task force has been formed to coordinate this conversion with data users. The task force will also evaluate the basic ALAS analysis programs which have changed very little since 1977. A determination will be made to either revise the present programs to be compatible with data base management or to develop new analysis programs.

BASE RECORD INVENTORY SYSTEM

The Base Record was originally developed in the 1960's for documentation of Iowa's roadway systems and to provide data for highway needs

determination. The system grew over the years to support sufficiency rating analysis and federal reporting requirements. More recent expansions have added data for pavement management, linked accident data, and this year the file linkage system (referred to as the Base-ALAS Interface System) was placed directly onto the roadway inventory files instead of being carried as a separate support file.

Appendix B contains file formats for the following Base Record Files:
1. Primary Road File (Pages B1-B2)
2. Primary Road Structures Files (Pages B3-B4)
3. Secondary Road File (Pages B5-B6)
4. Secondary Road Structures File (Pages B7-B8)
5. Municipal Street File (Pages B9-B10)
6. Municipal Street Structures File (Pages B11-B12)

The roadway and structure files each have their own basic format, but location controls and selected data items vary for the different road systems.

Primary System

The major location controls for the Primary roadway file are county number, route number and sequence number. The four digit sequence numbers start at the south or west limits of the route within each county. For the original sequencing of a route across the county, the numbers increase by tens (i.e. 0010, 0020, 0030, 0040, etc.). When new control breaks are necessary to split existing records, the last digit is changed as shown in Figure 2.

Figure 2: Base Record Sequence Numbering

Original Sequencing

0010		0020	0030		0040
0010	0017	0020	0030	0035	0040

Revised Sequencing
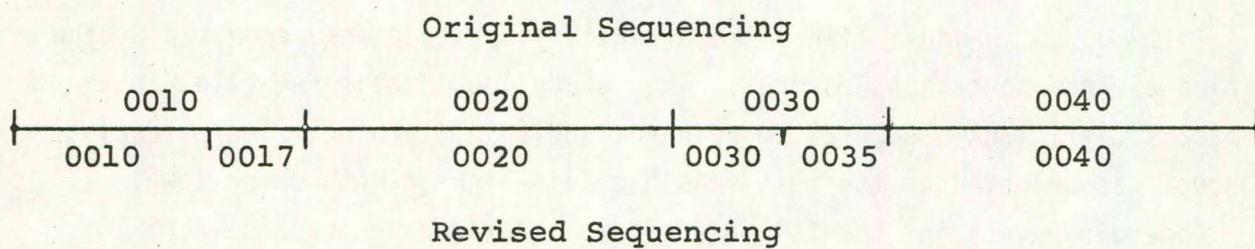
When the Base-ALAS Interface System was adopted a county-based milepoint for the beginning of each sequence was added to the file.

Secondary System

The basic controls for roads on the Secondary System are county number, township, range, section and road number. This type of control does not lend itself to file linkage since there are no distinct route numbers with which to associate milepoints. As explained below, the federal-aid routes within the Secondary System do carry route numbers and sequencing similar to the Primary System.

Municipal Street System

The basic controls for municipal streets are county number, city number, street number and sequence number. As with the Secondary System these controls do not provide sequencing for assigning milepoints although they do carry street numbers. The federal-aid routes carry the necessary route numbering and sequencing for milepoint file linkage.

Federal-Aid Routes

In each of the three files federal-aid routes have their own additional controls based on county number, federal-aid route number and sequence. This sequencing is similar to the Primary Road System and lends itself to the same type of milepoint assignment as was done on the Primary System.

Structure Files

The structure file for each road system is set up with the same basic control fields as the respective road file. Structures within each roadway record are numbered (01, 02, 03, etc.) from west to east or south to north to identify each structure within the respective sequence.

FILE LINKAGE METHODOLOGY

In 1980, an in-house file linkage feasibility study was conducted by the Office of Transportation Research. This study looked at three file linkage concepts: (1) link-node, (2) coordinate, and (3) milepoint. The milepoint concept was selected as the most feasible file-linkage method for Iowa.

Appendix C contains the following items relating to the Base-ALAS Interface System:

1. Comparison of ALAS and Base Record Breaks (C1)
2. Outline of SAS Programs (C2)
3. Base-ALAS Interface File Format (C3)
4. Accident Node Intersection Identifer Literal Description File (C4)
5. Sample listing from Interface Edit File (C5)
6. Interfaced Accident File Format (C6-C9)

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Feasibility Study

The feasibility study also analyzed the extent to which road system should be linked. It was found that linking the Primary, FAS and FAUS Systems would require interface coding for only about 23 percent of the mileage but would provide coverage of our 80 percent of the accidents and vehicle miles of travel. This is illustrated in Table 1 from the feasibility study report. The study recommended manual coding of Base Record Controls for fatal and injury accidents on non-federal aid roads and streets.

Table 1

MILEAGE, TRAVEL AND ACCIDENTS BY FEDERAL AID STATUS (1978)

Federal Aid Status	Mileage		Vehicle Miles		Average Daily Traffic	Accidents					
	Miles	Per cent	Millions	Per cent		Fatal	Per cent	Non Fatal	Per cent	Total	Per cent
Federal Aid	25,281	23	16,316	84	1,768	459	82	74,861	83	75,320	83
Non-Federal Aid	86,441	77	3,151	16	100	104	18	15,789	17	15,893	17
Totals	111,722	100	19,467	100	477	563	100	90,650	100	91,213	100

Iowa's milepoint file linkage involves the assignment of milepoints to each node along the route. This work was accomplished in the Office of Transportation Inventory. Primary highways are interfaced using county, primary route and sequence milepointing. FAS and FAUS routes are interfaced using county, federal-aid route, and federal-aid sequence milepointing. Divided highways are interfaced by lane of travel even though they are sequenced in the base record as a single route. One-way pairs are sequenced and milepointed separately in the base record and also carry separate file linkage controls.

Many of the nodes along a route coincide with base record sequence breaks. Milepoints for most structure nodes and many municipal intersections must be scaled from maps. Slight errors in the assignment of these scaled milepoints are not carried along the route because milepoints are corrected as soon as a matching node-base record break occurs. The general interface concept is illustrated below in Figure 3, and the comparison of major sequence breaks for the two systems is shown in Appendix C.

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Figure 3: Route-Mile-Reference Interface Concept

Base Record Sequence and Mileage

0010	0020	0025	0030	0040	0050	0060	0070
0.60	0.40	0.30	0.40	0.50	0.30	0.40	0.40

0.00 0.60 0.75 1.00 1.30 1.70 2.20 2.50 2.70 2.90 3.30

210117 210128 210144 210164 210169

ALAS Nodes
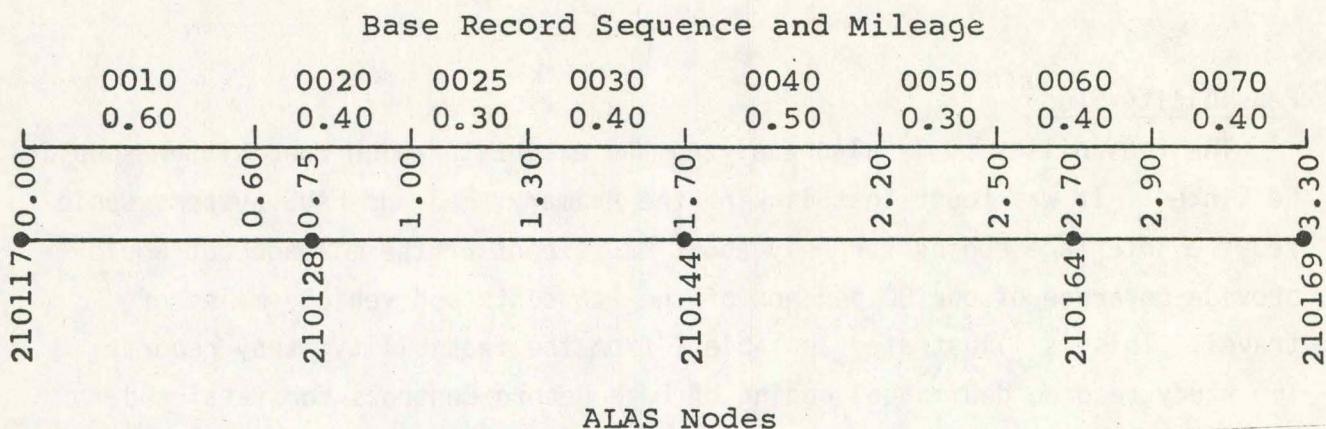
For the years 1982 through 1985 the file linkage is carried on separate
Base-ALAS Interface Files. Earlier this year the interface was transferred to
the base record to create a more direct system of file linkage. The interface
controls are carried in fields 401-590 on the base record roadway formats.
For reference purposes the dates of pertinent changes to interface controls
are indicated in fields 583-590.

One complicating factor in creating the file linkage was the difference
between the accident location system and the base record in the manner in
which county line coding is handled. The county line roads along the
west/east side of adjacent counties are coded to the county to the east under
both systems. However, the county line roads along the north/south edge of
adjacent counties are coded to the county to the north under the accident
system and to the county to the south under the base record system. Also,
cities that lie in more than one county are all coded to the major county
(most population) in the base record. Under the accident system the accidents
are coded to the proper county in accordance with above-mentioned
guidelines. A county line identifier is coded to indicate the proper county
for the accident system when it is different than the base record county.

Another complication with the file linkage is the fact that current year
accidents are eventually tied to base record controls existing at the end of
the year. Current year accidents are edited using the previous years
interface all through the year and then are re-edited based on the year-end
base record when it is completed in April of the following year.

File Linkage Programming

Much of the file linkage was accomplished with user written Statistical
Analysis System (SAS) programming as outlined briefly in Appendix C. SAS

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programs combine the necessary data from several files and create an Interface Edit file that is used to edit the Primary route accidents and also to assign milepoints and other control information to all Primary, FAS, and FAUS route accidents. The assignment of the accident summary data added to the Base Record is accomplished by a COBOL program written by Information Services. As a result of the transfer of the Base-ALAS Interface File to the base record, SAS programs mentioned above will also be converted to COBOL by Information Services prior to next year's file updates.

FILE LINKAGE ANALYSIS CAPABILITIES

After studying ther possibility of contracting with a consulting firm, it was decided to develop analysis capabilities in-house. The objective was to standardize annual file maintenance, develop cross-referenced files to enable query versatility, and implement a user friendly report generating system.

File creation and maintenance programming are being performed by the Bureau of Information Services. FOCUS report generator programming was chosen to provide greater access and user friendliness. Focus data systems provide the features of self-instruction courses, user friendly programming and menu driven options. Appendix D contains the following information and examples concerning the file linkage system:

1. FOCUS Overview (D1)
2. FOCUS File Linkage Structures (D2-D3)
3. FOCUS File Field Descriptions
    a. Master Description for Road/Structure File (D4-D7)
    b. Master Description for Accident File (D8-D9)
4. Example of menu driven FOCUS program (D10-D11)
5. SAS Accident Listing Example (D12)
6. Rail-Highway Crossing FOCUS Files
    a. Railroad Crossing FOCUS Master File Description (D13-D14)
    b. Railroad Accident FOCUS Master File Description (D15-D19)

The on-line FOCUS report generator for the accident linkage system consists of two Primary System Focus files that have been cross referenced to each other to enable versatility in the query data. These files are explained further in the first three items in Appendix D. One of the two files contains the road and structure data from the Base Record while the other file contains

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the accident statistics data. Five years of history data will be available on these files. The on-line files will be backed up on tape. The same set of tape files will be available for the FAS/FAUS systems and can be loaded for on-line query as needed.

Cross referencing allows flexibility of access to the files. The programmer can access the data through the road/structure file or accidents file depending on the type of request and best route for programming efficiency. Accident data can thus be linked to roadway or structure features through the cross referenced files.

One important feature of using FOCUS programming is its user friendliness. Menu driven programs will be developed to provide accident data to many users. An example of one simple menu driven program is given in Appendix D. The user is prompted for the accident case number and then selects data from the A (accident), B (driver/vehicle) or C (injury) record. Although it is too early to draw any final conclusions on the capabilities of the FOCUS system, early indications are promising. As we become more familiar with the software capabilities we will be able to better judge the analysis system.

A few analysis programs have been done with SAS programming. One of these studies analyzed accident rates on Primary two-lane rural highways as they relate to shoulder width, ADT ranges, pavement width and roadway width. The same study was run against paved Secondary Roads. These two studies utilized the accident summary data on the Base Record so they did not require file linkage within the programs.

A SAS program has been set up to select and list Primary Road accidents by county, route, and milepoint. This program combines accident data and interface file data to provide an accident listing with node, milepoints and literal descriptions within the list of accidents. An example of a listing from this program is shown on page D12. This program will be converted to a menu driven FOCUS program in the near future.

Rail-Highway Crossing File

The Rail and Water Division has developed its own FOCUS analysis system for rail-highway crossing and accident data. One file contains crossing data from the Rail-Highway Crossing Base Record File and the other file contains rail related accident data pulled off the Accident Statistics File. The file

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linkage procedure is based on a cross-reference file relating to accident node numbers with the Iowa rail-highway crossing number. The FOCUS Accident File also includes FRA incident report data on all rail related incidents. This file provides, among other things, the capability to automate the calculation of predicted accident rates for prioritizing rail-highway crossing improvements.

FILE LINKAGE PROBLEMS

Development and Implementation Problems

One of the problems encountered in creating file linkage was the fact that so many offices and divisions were involved. Each office has its own prioroties and also their own ideas on how to accomplish a particular work task. Although there was a coordinating committee formed, it was difficult to reach agreement on issues and even more difficult to carry them out. Budget cuts and staff reductions created manpower shortages during the implementation phase.

Another related factor is that the safety functions have gone through a number of reorganizing efforts during the time period in which the file linkage system was being considered. The Iowa DOT has also gone from a central data processing system in which users relied almost totally on data processing for support to a user oriented system where each division has a data processing support team and users are encouraged to do as much of their own work as feasible. File linkage was being planned just prior to this transition period and the comprehensive analysis system design which was layed out to the central data processing unit was considered too expensive to develop and implement. As an alternative, the APL software package was installed and tested, but was dropped after about one year. FOCUS was installed and seems to be working quite well in several areas.

Other problems in creating the interface file involved the discrepencies between the base record and accident location methodologies handled. Minor exceptions to the normal procedures in either system caused a disproportionate share of the manpower needs. Most of these exceptions were relatively rare occurrences but they had to be resolved or there would have been gaps in the interface system.

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File Linkage Analysis Problems

One of the drawbacks of the system is the creation of annual files with no ready access to changes. For statewide analysis of roadway features this will not create any problem. However, for location oriented studies the user must check for changes during the time period of the study. Milepoint changes can be identified on a year-to-year basis but it still takes a manual effort to look up the changes.

Iowa does not have an intersection data file. The Base Record is segment oriented and does not lend itself to intersection analysis. Although an intersection data file has been proposed for major intersections, manpower has not been available for its development.

Another problem is the availability of safety related critical data elements on the road and structure file. Some of the more critical data items that are not available are as follows:

Roadway File Data Needs

(1) roadway cross section data - foreslope, height, transverse slope, roadside obstacles

(2) roadway surface characteristics - friction numbers, texture type

(3) horizontal curve location

(4) vertical curve location structure file data needs

Structure File Data Needs

(1) guardrail data - type, end treatment, bridge connection length

(2) structure handrail type

(3) bridge deck - friction number

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Appendix A

Form 433003
10-79 - H 4980

MAIL REPORTS TO:
Iowa Department of Transportation
Office of Driver License
Lucas State Office Building
Des Moines, Iowa 50319

STATE OF IOWA
INVESTIGATING OFFICERS REPORT
OF MOTOR VEHICLE ACCIDENT
PLEASE TYPE OR PRINT

ACCIDENT NUMBER

SUMMARY	Total Number of Persons Killed	Total Number of Persons Injured	Total Number of Vehicles Involved

R ☐ County ⊔⊔ City ⊔⊔ U ☐

LOCATION

Date of Accident

Day of Week Code:
Sun Mon Tues Wed Thu Fri Sat ⊔
1   2   3   4   5   6   7

Time of Accident   Hrs.

Total Amount of Property Damage

County

Accident occurred within corporate limits of (city)

Route ⊔⊔ Road Class ⊔ Inter-Class ⊔

If accident occurred outside of city limits show general vicinity _____ miles

N ☐ NE ☐ E ☐ SE ☐ S ☐ SW ☐ W ☐ NW ☐   of nearest city _____

On Road, Street or Highway

Road Class Code ☐

ROAD CLASS CODE
1. Interstate/Freeway
2. U.S. or State Highway
3. County Road
4. City Street
5. Other   0. Unknown

Intersection Identifier ⊔⊔⊔⊔

At Inter-section with

Road Class Code ☐

Reference Node ⊔⊔⊔

Note: Unless accident occurred at an intersection which is completely described above, use the space below to give the exact location from a milepost or definable intersection, bridge or railroad crossing, using two distances and directions if necessary.

Distance Indicator ⊔⊔

Feet   Miles   N NE E SE S SW W NW   Feet   Miles   N NE E SE S SW W NW
_____ or ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐   and _____ or _____ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐   of

Direction Node ⊔⊔⊔⊔

Milepost Number   Or   Definable, intersection, bridge or railroad crossing

UNIT 1

Driver's Name - Last, First, Middle   Address   City   State   Zip

Date of Birth   Male ☐ Female ☐   Driver License Number   State   License Restrictions   Restriction Complied With ⊔   1 = Yes   2 = No   0 = Unknown

Citation Number   Citation Charge   Phone   Chemical Test Given? ⊔   1. None   2. Breath   3. Blood   4. Urine   5. Refused   Test Results _____ %

Owner's Full Name - Last, First, Middle   Address   City   State   Zip

Year   Make   Model   Style   License Plate No.   State   Year   VIN No.

Vehicle Removed by

Vehicle Type Code ⊔⊔   Special Use Code ⊔   Total occupants ⊔⊔   Attachment ⊔⊔   Fire Explosion ⊔   Hit & Run ⊔

Removal Authority ⊔   Point of Initial Impact ⊔⊔   Damaged Area of Vehicle ⊔⊔⊔⊔⊔⊔   Damage Severity Code ⊔

Vehicle Removed to $ _____ Approximate Cost to Repair or Replace   Vehicle Defect ⊔⊔   Initial Direction Travel ⊔   Speed Limit ⊔⊔

UNIT 2

Driver's Name - Last, First, Middle   Address   City   State   Zip

Date of Birth   Male ☐ Female ☐   Driver License Number   State   License Restrictions   Restriction Complied With ⊔   1 = Yes   2 = No   0 = Unknown

Citation Number   Citation Charge   Phone   Chemical Test Given? ⊔   1. None   2. Breath   3. Blood   4. Urine   5. Refused   Test Results _____ %

Owner's Full Name - Last, First, Middle   Address   City   State   Zip

Year   Make   Model   Style   License Plate No.   State   Year   VIN No.

Vehicle Removed by

Vehicle Type Code ⊔⊔   Special Use Code ⊔   Total occupants ⊔⊔   Attachment ⊔⊔   Fire Explosion ⊔   Hit & Run ⊔

Removal Authority ⊔   Point of Initial Impact ⊔⊔   Damaged Area of Vehicle ⊔⊔⊔⊔⊔⊔   Damage Severity Code ⊔

Vehicle Removed to $ _____ Approximate Cost to Repair or Replace   Vehicle Defect ⊔⊔   Initial Direction Travel ⊔   Speed Limit ⊔⊔

If Property other than vehicles Damaged explain   Object Damaged   Estimate of Damage $ Was owner or tenant notified ⊔   1-Yes   2-No   0-Unknown

Name of Owner   Street or RFD   City & State, Zip Code

ACCIDENT ENVIRONMENT

Location of Accident	⊔
Type of Accident	⊔⊔
Roadway Geometrics	⊔
Character of Roadway	⊔
Locality	⊔
Light Conditions	⊔
Weather Conditions (up to two)	⊔⊔

CIRCUMSTANCES   Veh. 1   Veh. 2

	Veh. 1	Veh. 2
Roadway/Environment Related Contributing Circumstances	⊔⊔	⊔⊔
Driver Condition	⊔⊔	⊔⊔
Driver/Vehicle Related Contributing Circumstances (up to two)	⊔⊔	⊔⊔

ROADWAY CHARACTERISTICS   Veh. 1   Veh. 2

	Veh. 1	Veh. 2
Traffic Controls	⊔⊔	⊔⊔
Type of Trafficway	⊔	⊔
Traffic Flow	⊔	⊔
Type of Surface	⊔	⊔
Vehicle Action	⊔	⊔
Fixed Object Struck	⊔	⊔
Location of Fixed Object Struck if Applicable	⊔	⊔
Surface Conditions (up to two)	⊔⊔	⊔⊔
Vision Obscured	⊔	⊔

Collision Type ⊔⊔

01   07   13
02   08   14
03   09   15
04   10   16
05   11   17 - Other
06   12   18 - Single Veh.
    19 - Pedestrian

A1

SEVERITY	INJURED AREA	POSITION OF INJURED PERSON	PROTECTIVE DEVICE	EJECTION	Sex

SEVERITY
1-Fatal
2-Major
  (incapacitating)
3-Minor
  (Bruises and abrasions)
4-Possible
  (Complaint of pain)
0-Unknown

INJURED AREA
1-Upper torso
2-Lower torso
3-Internal
4-Head
5-Arms
6-Legs
7-Multiple
0-Unknown

POSITION OF INJURED PERSON

1	2	3
4	5	6
7	8	9

M-Motorcycle/
  Moped driver
S-Motorcycle/
  Moped Passenger
U-Bus Pass
B-Bicycle   E-Riding on
P-Pedestrian   exterior
T-Other   O-Unknown

PROTECTIVE DEVICE
1-None
2-Lap belt used
3-Lap and shoulder
4-Airbag deployed
5-Child restraint
6-Motorcycle helmet
7-Passive belt
8-Other
0-Unknown

EJECTION
1-Not ejected
2-Partially ejected
3-Totally ejected
4-Extricated
0-Unknown

Sex
M-Male
F-Female

		Age	Sex	Unit No.	Severity	Injured Area	Position	Protect. Devices	Ejection

PERSON INJURED

	Name	Address	Age	Sex	Unit No.	Severity	Injured Area	Position	Protect. Devices	Ejection
1										
2										
3										
4										
5										

Injured Transported

To: _____

By: _____

PEDESTRIAN ACTION ⎵ ⎵

COLOR OF CLOTHING ⎵

Check if pedestrian is also listed as a driver on this report ⎵

APPARENT PEDESTRIAN SOBRIETY ⎵

Test Results _____ %

DIAGRAM

DIAGRAM WHAT HAPPENED:
  Instruction

INDICATE NORTH ◯

Number each vehicle and show direction of travel by arrow.

Use solid line to show path before accident

Dotted line after accident.

Show pedestrian by: ———O

Show railroad by: ++++++

Show utility poles by: φ

Show motorcycle by: O—O

Show animal by: Ŗ

NARRATIVE

Describe What Happened (Refer to vehicles by number)

WITNESS

Name, Last, First	Street or RFD	City	State	Zip	Phone

Signature of Officer

Badge No.

Report Given To All Drivers 1-Yes 2-No ⎵

Was Investigation made at scene? 1-Yes 2-No ⎵

Name of Department

Date of Report

Time Officer Notified of Accident _____ Hrs.

Investigation Completed?

Report Reviewed by

A2

Date Reviewed

Time Officer Arrived At Scene _____ Hrs.

1-Yes 2-No ⎵

VEHICLE TYPE CODE

01-Passenger Car
02-Car & Trailer
03-Panel Truck
04-Pickup Truck
05-Pickup & Trailer
06-Pickup Camper
07-Straight Truck
08-Truck Tractor
09-Truck Tractor/Semi
10-Double Bottom Truck
11-Tow Truck/Wrecker
12-Motor Home
13-Bus
14-School Bus
15-Farm Veh/Equip
16-Motorcycle
17-Bicycle, Etc.
18-Recreation Veh.
19-Maint/Const Veh.
20-Train
21-Other (Describe)
22-Moped
00-Unknown

SPECIAL USE CODE

1-None   6-Ambulance
2-Police   7-Towing
3-Fire   8-Driver Trng.
4-Taxi   9-Other
5-Gov't   (Describe)
                0-Unknown

ATTACHMENT

01-None
02-Single Trailer
03-Double
04-Semi
05-Farm
06-Utility
07-Camping
08-Boat Trailer
09-Mobile Home
10-Mobile Home (Oversize)
11-Oversize Load
12-Towed Vehicle
13-Other
00-Unknown

FIRE/EXPLOSION

1-None   2-Yes   0-Unknown

HIT AND RUN

1- None
2- With MV
3- With Non-Occupant
4- Driver Left Scene
0- Unknown

REMOVAL AUTHORITY

1-None   5-Occupant
2-Owner   6-Other
3-Driver   0-Unknown
4-Officer

INDICATE POINT OF INITIAL IMPACT

INDICATE DAMAGED AREA OF VEHICLE

10 -- Under-Carriage
00 -- Unknown

DAMAGE SEVERITY CODE

1-None   3-Moderate
2-Light   4-Severe
              0-Unknown

VEHICLE DEFECT

01-None
02-Brakes
03-Steering
04-Blowout
05-Smooth Tires
06-Other Tire Defect
07-Wipers
08-Trailer Hitch
09-Exhaust
10-Headlights
11-Tail Lights
12-Turn Signal
13-Suspension
14-Other
15-Glass
00-Unknown

INITIAL DIRECTION TRAVEL

1-North   6-Southwest
2-Northeast   7-West
3-East   8-Northwest
4-Southeast   0-Unknown
5-South

ACCIDENT ENVIRONMENT

Location of Accident

1-On Roadway
2-Shoulder
3-Median
4-Roadside/Ditch
5-Outside of Right of Way
0-Unknown

TYPE OF ACCIDENT

Non-Collision

01-Overturned in Roadway
02-Jackknifed
03-Carbon Monoxide
04-Fire/Explosion
05-Immersion
06-Other

Collision of Motor Vehicle with:

10-Pedestrian
11-Vehicle in Traffic
12-Motorcycle in Traffic
13-Vehicle in Other Roadway
14-Parked Vehicle
15-Train
16-Pedacycle
17-Animal
18-Fixed Object
19-Other Object

ROADWAY GEOMETRICS

1-Straight, Level
2-Straight, Up/Downgrade
3-Straight, Hillcrest
4-Curve, Level
5-Curve, Up/Downgrade
6-Curve, Hillcrest
7-Intersection, Level
8-Intersection, Up/Downgrade
9-Intersection, Hillcrest
0-Unknown

CHARACTER OF ROADWAY

Not an Intersection

01-No Special Feature
02-Bridge/Overpass/Underpass
03-Railroad Crossing
04-Business Drive
05-Farm/Residential Drive
06-Other, Non-Intersection

Intersection

11-Within intersection
12-Not Within Intersection but Intersection Related
13-Alley Intersection
14-Other (Intersection)

Interchange

21-Intersection of Ramp and Minor Road
22-Ramp
23-On Major Road, Between Ramps
24-On Minor Road, Between Ramps
25-Entrance Ramp at Major Road
26-Major Road at Exit Ramp
27-Bridge/Overpass/Underpass
28-Not Within Interchange but Interchange Related
29-Other (Interchange)
00-Unknown

Locality

1-Business District (Central)
2-Manufacturing District
3-Residential District
4-Business District (Outlying)
5-School/Playground Zone
6-Recreational Area
7-Open Country (Rural
8-Other
9-Parking Lot/Private Prop.
0-Unknown

Light Conditions

1-Daylight
2-Dusk
3-Dawn
4-Darkness (Roadway Lighted)
5-Darkness (Roadway Not Lighted)
0—Unknown

Weather Conditions

1-Clear   6-Sleet/hail
2-Cloudy   7-Snow
3-Fog   8-Strong Wind
4-Mist   9-Other
5-Rain   0-Unknown
(Indicate up to two conditions)

CIRCUMSTANCES

Roadway/Environment Related Contributing Circumstances

01-None Apparent
02-Weather Conditions
03-Surface Conditions
04-Roadway Defect
05-Pedestrian Action
06-Pedestrian Drinking
07-Previous Accident
08-Animal in Roadway
09-Frost Covered Bridge Floor (Only)
10-Traffic Control not in Place or not Functioning
11-Non-Contact Vehicle
12-Road under Construction
13-Other
00-Unknown

Driver Condition

01-Apparently Normal
02-Physical Defect
03-Fatigued
04-Apparently Asleep
05-Ill
06-Under Medication
07-Infirmities of Age
08-Drinking (Not Impaired)
09-Drinking (Impaired)
10-Drugs
11-Other
00-Unknown

Driver/Vehicle Related Contributing Circumstances

(For each vehicle, indicate up to two circumstances which caused or contributed to the accident)

01-None Apparent
02-Ran Traffic Signal
03-Ran Stop Sign
04-Passed Stopped School Bus
05-Passing Where Prohibited
06-Passing, Interfered with other Vehicle
07-Left of Center, Not Passing
08-Failed to Yield Row (FTYROW), at Uncontrolled Intersection
09-FTYROW, From Stop Sign
10-FTYROW, From Yield Sign
11-FTYROW, Making Left Turn
12-FTYROW, From Driveway
13-FTYROW, From Parked Position
14-FTYROW, to Pedestrian
15-FTYROW, Other
16-Wrong Way on One-Way Road
17-Speed Too Fast for Conditions
18-Exceeding Speed Limit
19-Drag Racing
20-Improper Turn
21-Improper Lane Change
22-Following too Close
23-No Signal or Improper Signal
24-Disregarded Railroad Signal
25-Disregarded Warning Signal
26-Reckless Driving
27-Improper Backing
28-Illegal or Improper Parking
29-Failure to have Control
30-Head Lights Not On
31-Inattentive or Distracted
32-Driver Confused
33-Vision Obscured
34-Oversized Vehicle
35-Overloaded with Passengers/Cargo
36-Inexperienced Driver
38-Other
00-Unknown

ROADWAY CHARACTERISTICS

Traffic Controls

01-No Controls Present
02-Traffic Signals
03-Stop Sign
04-Yield Sign
05-Warning Sign
06-School Signals
07-No Passing Zone (Marked)
08-School Stop Sign
09-Stop Arm on School Bus
10-Railroad Warning Sign
11-Railroad Automatic Signal
12-Railroad Crossing Gate
13-Peace Officer
14-Other Traffic Director
15-Other Control
16-Control Not Functioning/Not in Place
00-Unknown

Type of Traffic Way

1-One Lane or Ramp
2-Two Lanes
3-Three Lanes
4-Four or More, Undivided
5-Four or More, Divided
6-Alley
7-Driveway
8-Other
0-Unknown

Traffic Flow

1-One-Way Traffic
2-Two-Way Traffic
0-Unknown

Type of Surface

1-Cement/Concrete
2-Asphalt
3-Gravel/Rock
4-Dirt
5-Brick
6-Steel (Bridge Floor)
7-Wood (Bridge Floor)
8-Other (Explain in Narrative)
0-Unknown

Vehicle Action

01-Going Straight
02-Turning Left
03-Turning Right
04-Making U-Turn
05-Passing
06-Changing Lanes
07-Merging
08-Parking
09-Slowing - Stopping
10-Backing
11-Stopped for Stop Sign/Signal
12-Stopped in Traffic Lane
13-Stalled in Traffic Lane
14-Properly Parked
15-Improperly Parked
16-Other (Explain in Narrative)
17-Unattended moving Vehicle
00-Unknown

Fixed Object Struck

01-None
02-Bridge or Overpass
03-Underpass or Bridge Supports
04-Building
05-Culvert
06-Curb
07-Ditch
08-Island or Raised Median
09-Embankment or Retaining Wall
10-Fence
11-Guardrail
12-Light Pole
13-Sign Post
14-Tree or Shrubbery
15-Utility Pole
16-Other Pole or Support
17-Mailbox
18-Impact Attenuator
19-Other
00-Unknown

Location of Fixed Object Struck if Applicable

1-On Roadway
2-Shoulder
3-Median
4-Roadside/Ditch
5-Outside of Right-of-Way
0-Unknown

Surface Conditions

1-Dry   6-Mud
2-Wet   7-Debris
3-Ice   8-Other
4-Snow   0-Unknown
5-Loose Gravel
(Indicate up to two conditions)

Vision Obscured

01-Not Obscured
02-Trees/Crops
03-Buildings
04-Embankment
05-Sign/Billboard
06-Hillcrest
07-Parked Vehicles
08-Moving Vehicles
09-Person/Object In or on Vehicle
10-Blinded by Sun or Headlights
11-Frosted Windows or Windshield
12-Blowing Snow
13-Fog/Smoke/Dust
14-Other (Explain in Narrative)
00—Unknown

PEDESTRIAN

Pedestrian Action

01-Crossing, Against Signal
02-Crossing, Not At Crosswalk
03-Walking, Improper Position on Roadway
04-Soliciting Rides on Road
05-Walking With Traffic
06-Walking Against Traffic
07-Crossing, With Signal
08-Crossing, In Crosswalk
09-Onto Road Between Parked Cars
10-Ran Onto Roadway
11-Directing Traffic
12-Playing
13-Lying or Sitting on Roadway
14-Pushing, Working on Vehicle
15-Getting On or Off Vehicle
16-Maint/Const Project
17-Walking, Off Roadway
00-Unknown

COLOR OF CLOTHING

1-Generally Light
2-Generally Dark
0-Unknown

APPARENT PEDESTRIAN SOBRIETY

1-Had Not Been Drinking
2-Drinking (Not Impaired)
3-Drinking (Impaired)
4-Drugs
0-Unknown

A3

REPORT OF MOTOR VEHICLE ACCIDENT

HAVE YOU READ THE INSTRUCTIONS IN SECTION A ON THE BACK?

ACCIDENT DATE MO / DAY / YEAR	DAY OF WEEK	TIME	☐ AM ☐ PM	NUMBER OF VEHICLES	TOTAL KILLED	TOTAL INJURED	TOTAL PROPERTY DAMAGE

YOUR VEHICLE NO. 1 | **OTHER VEHICLE NO. 2**

DATE OF BIRTH MO / DAY / YEAR	SEX	DR. LIC. STATE	DATE OF BIRTH MO / DAY / YEAR	SEX	DR. LIC. STATE

DRIVER'S LICENSE NO. EXACTLY AS PRINTED ON LICENSE | DRIVER'S LICENSE NO. EXACTLY AS PRINTED ON LICENSE

LAST NAME OF DRIVER 1   FIRST NAME   MIDDLE INITIAL | **DRIVER** | LAST NAME OF DRIVER 2   FIRST NAME   MIDDLE INITIAL

NUMBER AND STREET | NUMBER AND STREET

CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE

LAST NAME OF OWNER 1   FIRST NAME   MIDDLE INITIAL | LAST NAME OF OWNER 2   FIRST NAME   MIDDLE INITIAL

NUMBER AND STREET | **OWNER** | NUMBER AND STREET

CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE

NO. OF OCCUPANTS	PLATE NUMBER	VEHICLE TYPE CODE	NO. OF OCCUPANTS	PLATE NUMBER	VEHICLE TYPE CODE

ESTIMATED COST OF REPAIRS	VEHICLE YEAR & MAKE	STATE OF REG	**VEH.**	ESTIMATED COST OF REPAIRS	VEHICLE YEAR & MAKE	STATE OF REG

ACCIDENT NUMBER

R	COUNTY	CITY	U

ROUTE | ROAD CLASS | INTER-CLASS

INTERSECTION IDENTIFIER

REFERENCE NODE

DISTANCE INDICATOR

DIRECTION NODE

INDICATE ON THIS DIAGRAM WHAT HAPPENED

INDICATE NORTH BY ARROW

Direction of Travel Vehicle No. 1 _____

DESCRIPTION

_____
_____
_____
_____
_____

DID POLICE OFFICER INVESTIGATE? ☐ YES ☐ NO

DEPARTMENT _____

IDENTIFY DAMAGED PROPERTY OTHER THAN VEHICLES | OWNER | AMOUNT OF DAMAGE

PLACE WHERE ACCIDENT OCCURRED:
IF ACCCIDENT WAS OUTSIDE CITY LIMITS INDICATE DISTANCE FROM NEAREST TOWN. USE TWO DISTANCES AND TWO DIRECTIONS, IF NECESSARY.

COUNTY _____   CITY, TOWN OR TOWNSHIP _____

_____ MILES   NORTH-SOUTH
_____ MILES   EAST-WEST   OF   ☐ LIMITS OF   ☐ CENTER OF   _____ CITY OR TOWN

ROAD ON WHICH ACCIDENT OCCURRED _____
GIVE NAME OF STREET OR HIGHWAY NUMBER (U.S. OR STATE) IF NO HIGHWAY NUMBER IDENTIFY BY NAME

AT ITS INTERSECTION WITH _____
NAME OF INTERSECTING STREET OR HIGHWAY NUMBER

IF NOT AT INTERSECTION _____ FEET ☐ ☐ ☐ ☐ OF _____
                                    N S E W
SHOW NEAREST INTERSECTING STREET OR HIGHWAY, HOUSE NUMBER, BRIDGE, RAILROAD CROSSING, ALLEY, DRIVEWAY CULVERT, MILEPOST UNDERPASS, OR OTHER LANDMARK

VEH. 1

VEH. 2

INJURY SECTION: FILL OUT SPACE BELOW FOR EVERY PERSON INJURED OR KILLED IN THE ACCIDENT

NAME & ADDRESS	IN VEHICLE NUMBER	AGE	DESCRIBE INJURIES	1	2	3	4	DATE OF DEATH

CHECK PROPER COLUMN(S) INSTRUCTION 8 ON BACK

VEH. 1

VEH. 2

NAME OF INSURANCE COMPANY WHICH ISSUED POLICY (NOT AGENT) | POLICY NUMBER
NAME AND ADDRESS OF POLICY HOLDER | POLICY FROM PERIOD

DATE FILED	SIGNATURE OF DRIVER OF VEHICLE NO 1	IF SIGNED BY PERSON OTHER THAN DRIVER GIVE REASON.

FILL IN BUT DO NOT DETACH | **INSURANCE COVERAGE FORM SR-21** | SR-21 MAILED CASE NO.

NAME OF INSURANCE COMPANY AFFORDING INSURANCE TO COVER YOUR LIABILITY FOR DAMAGE OR INJURY TO OTHERS: _____

NAME OF AGENT WHO SOLD POLICY _____ ADDRESS _____

POLICY NO. _____ POLICY PERIOD: FROM _____ TO _____

DATE OF ACCIDENT _____ IN OR NEAR _____

MAKE OF YOUR VEHICLE NO. 1 _____ TYPE _____ YEAR _____ FACTORY SERIAL OR MOTOR NO _____

DRIVER _____ ADDRESS _____

OWNER _____ ADDRESS _____

NAME OF POLICYHOLDER _____ YOUR SIGNATURE _____

IMPORTANT: THIS ACCIDENT SHOULD ALSO BE REPORTED DIRECTLY TO YOUR INSURANCE COMPANY. FAILURE TO REPORT MAY JEOPARDIZE YOUR AUTOMOBILE LIABILITY INSURANCE

Drivers Report Form

Front Page

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IOWA ACCIDENT REPORT FORM

An accident in the state of Iowa causing death, personal injury or total property damage $250.00 or more must be reported within 72 hours. Failure to report within 72 hours may result in suspension of your driving privilege. Caution: You must attempt to completely fill out this report.

Instructions

Please print or type all information. Use black or dark blue ink. Begin by folding along dotted line and complete the items by placing the appropriate numbered code in the box that appears to the right side of that item. When complete return here.

1. Begin completing the reverse of this form by entering accident date, day of week, time, number of vehicles involved, total number killed, number injured and the total amount of property damage done to all vehicles, and personal property in the accident. When step 1 is complete go to step 2.

2. After completing step 1 enter the information pertaining to all drivers and vehicles involved in the accident. Important: Be sure to include the driver's name, drivers license number and drivers license state. Also the vehicle owners name, license plate number and license plate state. If more than two drivers or two vehicles were involved use an extra report form or sheet of paper making sure that the extra vehicles and drivers are numbered 3, 4, 5, etc. If you were involved in an accident with a pedestrian use the driver block of the space provided for vehicle No. 2 and after the individual's name print the word PEDESTRIAN. If vehicle involved was parked at the time of the accident print PARKED in the driver information and complete the vehicle owner information only. When step 2 is complete go to step 3.

3. Under the vehicle information please use the following codes when completing the box marked "vehicle type code."

01 = Passenger Car	09 = Truck Tractor/Semi	16 = Motorcycle
02 = Car & Trailer	10 = Double Bottom Truck	17 = Bicycle, Etc.
03 = Panel Truck	11 = Tow Truck/Wrecker	18 = Recreation Veh.
04 = Pickup Truck	12 = Motor Home	19 = Maint/Const. Veh.
05 = Pickup & Trailer	13 = Bus	20 = Train
06 = Pickup Camper	14 = School Bus	21 = Other (Describe)
07 = Straight Truck	15 = Farm Veh/Equip	22 = Moped
08 = Truck Tractor		00 = Unknown

When step 3 is complete go to step 4.

4. To the best of your ability complete the accident diagram and describe what occurred in the accident description as briefly as possible. Important: If you are vehicle No. 1 in step 2 make sure that your vehicle is vehicle No. 1 in the description and diagram. When step 4 is complete go to step 5.

5. The location of the accident is very important, please be as specific as possible. When completed with step 5 go to step 6.

6. Injury information should be entered in the space provided. Make sure that the vehicle number in which the injured party was riding is complete, describe the nature of the injury and check the box under the column most appropriate for the injury severity. The codes are: 1 for fatal, 2 for major injuries such as broken bones, severe cuts, head injuries, etc., 3 for minor - small cuts, bruises and abrasions, 4 for possible - no visible injury but individual complaints of pain or discomfort. When step 6 is complete go to step 7.

7. Complete the insurance information, especially the company and policy number. DO NOT TEAR OFF THE PERFORATED PORTION OF THE FORM. Go to step 8.

8. Please sign the form and mail to:

    Iowa Department of Transportation
    Office of Driver License
    Lucas State Office Building
    Des Moines, Iowa 50319

LOCATION OF ACCIDENT
(Where did first damage or injury event occur?)

1 = On Roadway	3 = Median	5 = Outside of Right
2 = Shoulder	4 = Roadside	of Way
		0 = Unknown

TYPES OF ACCIDENT

Non-Collision

Collision of Motor Vehicle with:

01 = Overturned	10 = Pedestrian	15 = Train
02 = Jackknifed	11 = Vehicle in Traffic	16 = Pedalcycle
03 = Carbon Monoxide	12 = Motorcycle in	17 = Animal
04 = Fire/Explosion	Traffic	18 = Fixed Object
05 = Immersion	13 = Vehicle in Other	19 = Other Object
06 = Other	Roadway	
	14 = Parked Vehicle	

VEHICLE ACTION

01 = Going Straight	08 = Parking	14 = Property Parked
02 = Turning Left	09 = Slowing-Stopping	15 = Improperly
03 = Turning Right	10 = Backing	Parked
04 = Making U-Turn	11 = Stopped for Stop	16 = Other (Explain in
05 = Passing	Sign/Signal	Narrative)
06 = Changing Lanes	12 = Stopped in Traffic	17 = Unattended mov-
07 = Merging	Lane	ing Vehicle
	13 = Stalled in Traffic	00 = Unknown
	Lane	

FIXED OBJECT STRUCK

00 = Unknown	06 = Curb	12 = Light Pole
01 = None	07 = Ditch	13 = Sign Post
02 = Bridge or	08 = Island or Raised	14 = Tree or Shrubbery
Overpass	Median	15 = Utility Pole
03 = Underpass or	09 = Embankment or	16 = Other Pole or
Bridge Support	Retaining Wall	Support
04 = Building	10 = Fence	17 = Mailbox
05 = Culvert	11 = Guardrail	18 = Impact Attenu-
		ator
		19 = Other

ROADWAY GEOMETRICS

1 = Straight, Level	5 = Curve, Up/Down-	8 = Intersection,
2 = Straight, Up/Down-	grade	Up/Downgrade
grade	6 = Curve, Hillcrest	9 = Intersection, Hill-
3 = Straight, Hillcrest	7 = Intersection, Level	crest
4 = Curve, Level		0 = Unknown

CHARACTER OF ROADWAY

Not at Intersection	12 = Not Within Inter-	24 = On Minor Road,
01 = No Special	section but Inter-	Between Ramps
Feature	section Related	25 = Entrance Ramp
02 = Bridge/Overpass/	13 = Alley Inter-	at Major Road
Underpass	section	26 = Major Road at
03 = Railroad Crossing	14 = Other (Inter-	Exit Ramp
04 = Business Drive	section)	27 = Bridge/Overpass/
05 = Farm/Residential	Interchange	Underpass
Drive	21 = Intersection of	28 = Not Within Inter-
06 = Other (Non-	Ramp and	interchange but
Intersection	Minor Road	Interchange
Intersection	22 = Ramp	Related
11 = Within Inter-	23 = On Major Road,	29 = Other
section	Between Ramps	(Interchange)
		00 = Unknown

TRAFFIC CONTROLS

01 = No Controls	07 = No Passing Zone	12 = Railroad Crossing
Present	(Marked)	Gate
02 = Traffic Signals	08 = School Stop Sign	13 = Police Officer
03 = Stop Sign	09 = Stop Arm on	14 = Other Traffic
04 = Yield Sign	School Bus	Director
05 = Warning Sign	10 = Railroad Warning	15 = Other Control
06 = School Signals	Sign	16 = Controls Not
	11 = Railroad Automa-	Functioning/Not
	tic Signal	in Place
		00 = Unknown

LOCALITY

1 = Business District	4 = Business District	7 = Open Country
(Central)	(Outlying)	(Rural)
2 = Manufacturing	5 = School/Play-	8 = Other
District	ground Zone	9 = Parking Lot/
3 = Residential	6 = Recreational	Private Prop.
District	Area	0 = Unknown

LIGHT CONDITIONS

1 = Daylight	4 = Darkness	5 = Darkness
2 = Dusk	(Roadway Lighted)	(Roadway Not
3 = Dawn		Lighted)
		6 = Unknown

WEATHER CONDITIONS

1 = Clear	5 = Rain	8 = Strong Wind
2 = Cloudy	6 = Sleet/Hail	9 = Other
3 = Fog	7 = Snow	0 = Unknown
4 = Mist		

TYPE OF TRAFFICWAY

1 = One Lane or Ramp	4 = Four or More,	7 = Driveway
2 = Two Lanes	Undivided	8 = Other (Creeper
3 = Three Lanes	5 = Four or More,	Lane etc.)
	Divided	0 = Unknown
	6 = Alley	

SURFACE CONDITIONS

(Indicate up to two	3 = Ice	7 = Debris
conditions)	4 = Snow	8 = Other
1 = Dry	5 = Loose Gravel	0 = Unknown
2 = Wet	6 = Mud	

SURFACE TYPE

1 = Portland Cement	4 = Dirt	7 = Wood (Bridge
Concrete	5 = Brick	Floor)
2 = Asphalt Bitumi-	6 = Steel (Bridge	8 = Other
nous	Floor)	0 = Unknown
3 = Gravel/Rock		

VISION OBSCURED

01 = Not Obscured	08 = Moving Vehicles	11 = Frosted Windows
02 = Trees/Crops	09 = Person/Object in	or Windshield
03 = Buildings	or on Vehicle	12 = Blowing Snow
04 = Embankment	10 = Blinded by Sun	13 = Fog/Smoke/Dust
05 = Sign/Billboard	or Headlights	14 = Other (Explain in
06 = Hillcrest		Narrative)
07 = Parked Vehicles		00 = Unknown

APPARENT DRIVER CONDITION

1 = Apparently Normal	5 = Ill	9 = Drinking (Im-
2 = Physical Defect	6 = Under Medication	paired)
3 = Fatigued	7 = Infirmities of Age	10 = Drugs
4 = Apparently Asleep	8 = Drinking (Not	11 = Other (Describe)
	Impaired)	0 = Unknown

DRIVER/VEHICLE RELATED CONTRIBUTING CIRCUMSTANCES

(For each vehicle, indicate up to two circumstances which caused or contributed to the accident)

00 = Unknown	11 = FTYROW, Making	25 = Disregarded
01 = None Apparent	Left Turn	Warning Signal
02 = Ran Traffic Signal	12 = FTYROW, From	26 = Reckless Driving
03 = Ran Stop Sign	Driveway	27 = Improper Backing
04 = Passed Stopped	13 = FTYROW, From	28 = Illegal or Im-
School Bus	Parked Position	proper Parking
05 = Passing Where	14 = FTYROW, to	29 = Failure to have
Prohibited	Pedestrian	Control
06 = Passing, Inter-	15 = FTYROW, Other	30 = Failed to Turn
fered with	16 = Wrong Way on	on Lights
Other Vehicle	One-Way Road	31 = Inattentive or
07 = Left of Center,	17 = Speed To Fast	Distracted
Not Passing	For Conditions	32 = Driver Confused
08 = Failed to Yield	18 = Exceeding Speed	33 = Vision Obscured
ROW (FTYROW),	Limit	34 = Oversized Vehicle
at Uncontrolled	19 = Drag Racing	35 = Overload Pas-
Intersection	20 = Improper Turn	senger/Cargo
09 = FTYROW, From	21 = Improper Lane	36 = Inexperienced
Stop Sign	Change	Driver
10 = FTYROW, From	22 = Following too	37 = Vehicle Defect or
Yield Sign	Close	Faulty Equipment
	23 = No Signal or	38 = Other
	Improper Signal	
	24 = Disregarded Rail-	
	road Signal	

PLEASE RETURN TO INSTRUCTIONS STEP 1.

Drivers Report Form

Back Page

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STATE OF IOWA RECORD FORMAT

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case	G-CSE		8			1-8
2		Case Year			1		N	1
3		Case Prefix			1		N	2
4		Case Number			6		N	3-8
5		Record Type 'A'	G-RCT		1		A	9
6		Record Number 'Ø1'	G-RNO		2		N	10-11
7		Accident Severity Code	G-SEV		1		N	12
8		Report Type	G-REP		1		N	13
9		Total Killed	G-KID		2		N	14-15
10		Total Injured	G-INJ		2		N	16-17
11		Total Vehicles	G-VEH		2		N	18-19
12		Total Property Damage	G-PRP		8		N	20-27
13		Date of Accident MMDDYY	G-DTA		6		N	28-33
14		Day of Week	G-DAY		1		N	34
15		Time of Day	G-TME		4		N	35-38
16		Rural/Urban Code	G-RU		1		A	39
17		County	G-CO		2		N	40-41
18		City	G-CTY		2		N	42-43
19		Route	G-RTE		4		A/N	44-47
20		Road Class	G-RDC		1		N	48
21		Intersection Class	G-ITC		1		N	49
22		Intersection Identifier	G-ITI		6		N	50-55
23		Reference Node	G-REF		6		N	56-61
24		Distance Indicator	G-DIS		3		N	62-64
25		Direction Node	G-DIR		6		N	65-70
26		Type of Accident	G-ATY		2		N	71-72
27		Character of Roadway	G-CHR		2		N	73-74
28		Roadway Geometrics	G-GEO		1		N	75
29		Light Conditions	G-LGT		1		N	76
30		Weather Conditions 1 & 2	G-WEA		2		N	77-78
31		Locality	G-LCL		1		N	79
32		Location	G-LOC		1		N	80
33		Collision Type	G-COL		2		N	81-82
34		ALAS Flag	G-ALAS		1		N	83
35		Date Added/Updated YYDDD	G-UPD		5		N	84-88
36		Filler			12		A	89-100
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51			A6					
52								

INTERNAL MODE:

B	= Binary
P	= Packed Unsigned
PS	= Packed Signed
A	= Alphabetic
N	= Numeric
A N	= Alpha-Numeric
R	= Right Justified
L	= Left Justified
b	= Blanks

APPLICATION Traffic Accidents   SYSTEM NO. 388T600
RECORD NAME Acc. Statistics - Vehicle/Driver   D.S.N. X388.T613
CREATED BY   Ruth Quinn   DATE   4-09-79
REVISED BY   Ruth Quinn   DATE   4-16-79
MODE fixed   CHAR/REC_____ REC/BLK_____ LABELS Standard
ACCESS METHOD sequential   DEVICE 3330V   VOL. SER._____ DISP_____

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case Number	V-CSE		8		N	1-8
2		Record Type 'B'	V-RCT		1		A	9
3		Record Number	V-RNO		2		N	10-11
4		Vehicle Number	V-VNO		2		N	12-13
5		Vehicle Type	V-TYP		2		N	14-15
6		Vehicle Year	V-YR		2		N	16-17
7		Special Use	V-USE		1		N	18
8		Number of Occupants	V-OCC		2		N	19-20
9		Attachment	V-ATT		2		N	21-22
10		Fire/Explosion	V-FIRE		1		N	23
11		Hit & Run	V-H/R		1		N	24
12		Point of Initial Impact	V-IMP		2		N	25-26
13		Damaged Areas 1, 2, 3 & 4	V-AREA		8		N	27-34
14		Damage Severity	V-DSEV		1		N	35
15		Vehicle Defects	V-DEF		2		N	36-37
16		Initial Direction of Travel	V-DIR		1		N	38
17		Speed Limit	V-SPD		2		N	39-40
18		Roadway/Environment Contrib. Circ.	V-RD/ENV		2		N	41-42
19		Traffic Controls	V-CNT		2		N	43-44
20		Type of Trafficway	V-TTR		1		N	45
21		Traffic Flow	V-FLOW		1		N	46
22		Type of Surface	V-STYP		1		N	47
23		Vehicle Action	V-ACT		2		N	48-49
24		Fixed Object Struck	V-FIX		2		N	50-51
25		Location of Fixed Object	V-FLOC		1		N	52
26		Surface Conditions 1 & 2	V-SCND		2		N	53-54
27		Filler			10		A	55-64
28		Driver's Age	D-AGE		2		N	65-66
29		Driver's Sex	D-SEX		1		A	67
30		License Restrictions	D-RSTR		4		A/N	68-71
31		Restrictions Complied With	D-CMP		1		N	72
32		Driver Charged	D-CHD		1		A	73
33		Sobriety Test Given	D-TEST		1		N	74
34		Sobriety Test Results	D-RSLT		3		N	75-77
35		Driver Condition	D-DCND		2		N	78-79
36		Drv/Veh Contrib. Circ. 1 & 2	D-DR/VEH		4		N	80-83
37		Vision Obscured	D-VISN		2		N	84-85
38		Filler			15		A	86-100
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52				A7				

INTERNAL MODE:
B = Binary
P = Packed Unsigned
PS = Packed Signed
A = Alphabetic
N = Numeric
A N = Alpha-Numeric
R = Right Justified
L = Left Justified
b = Blanks

APPLICATION **Traffic Accidents**   SYSTEM NO. 388T600

RECORD NAME **Acc. Statistics - Injury/Pedestrian**   D.S.N. X388.T613

CREATED BY **Ruth Quinn**   DATE 4-09-79

REVISED BY   DATE

MODE **fixed**   CHAR/REC **100**   REC/BLK   LABELS **Standard**

ACCESS METHOD **sequential**   DEVICE **3330V**   VOL. SER.   DISP

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case Number	I-CSE		8		N	1-8
2		Record Type 'C'	I-RCT		1		A	9
3		Record Number	I-RNO		2		N	10-11
4		Injury/Pedestrian Data Block 1			25			12-36
5		Unit Number	I-UNO-1		2		N	12-13
6		Age	I-AGE-1		2		N	14-15
7		Sex	I-SEX-1		1		A	16
8		Injury Severity	I-SEV-1		1		N	17
9		Injuried Area	I-AREA-1		1		N	18
10		Position of Injured Person	I-POS-1		1		N	19
11		Protective Device	I-PDEV-1		1		N	20
12		Ejection	I-EJCT-1		1		N	21
13		Filler			7		A	22-28
14		Pedestrian Action	P-ACT-1		2		N	29-30
15		Color of Clothing	P-CLR-1		1		N	31
16		Pedestrian also Driver	P-P/DRV-1		1		A	32
17		Sobriety	P-SOB-1		1		N	33
18		Test Results	P-TEST-1		3		N	34-36
19		Irjury/Ped. Data Block 2			25			37-61
20		Unit Number	I-UNO-2		2		N	37-38
21.		Age	I-AGE-2		2		N	39-40
22		Sex	I-SEX-2		1		A	41
23		Injury Severity	I-SEV-2		1		N	42
24		Injured Area	I-AREA-2		1		N	43
25		Position	I-POS-2		1		N	44
26		Protective Device	I-PDEV-2		1		N	45
27		Ejection	I-EJCT-2		1		N	46
28		Filler			7		A	47-53
29		Ped. Action	P-ACT-2		2		N	54-55
30		Color of Clothing	P-CLR-2		1		N	56
31		Ped. Also Driver	P-P/DRV-2		1		A	57
32		Sobriety	P-SOB-2		1		N	58
33		Test Results	P-TEST-2		3		N	59-61
34		Injury/Ped. Data Block 3			25			62-86
35		Unit Number	I-UNO-3		2		N	62-63
36		Age	I-AGE-3		2		N	64-65
37		Sex	I-SEX-3		1		A	66
38		Injury Severity	I-SEV-3		1		N	67
39		Injured Area	I-AREA-3		1		N	68
40		Position	I-POS-3		1		N	69
41		Protective Device	I-PDEV-3		1		N	70
42		Ejection	I-EJCT-3		1		N	71
43		Filler			7		A	72-78
44		Ped. Action	P-ACT-3		2		N	79-80
45		Color of Clothing	P-CLR-3		1		N	81
46		Ped. also Driver	P-P/DRV-3		1		A	82
47		Sobriety	P-SOB-3		1		N	83
48		Test Results	P-TEST-3		3		N	84-86
49		Filler			14		A	87-100
50								
51								
52			A8					

COMPOSITION OF EIGHT-DIGIT NODE NUMBER

12	3	4	56	78
County Number	South-North Township Tier	West-East Township Range	South-North Coordinates	West-East Coordinates
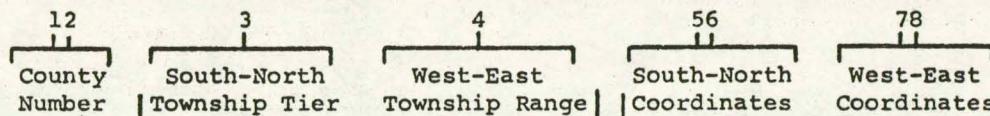
EXAMPLE OF CONGRESSIONAL TOWNSHIP NUMBERING
(Digits Three and Four)
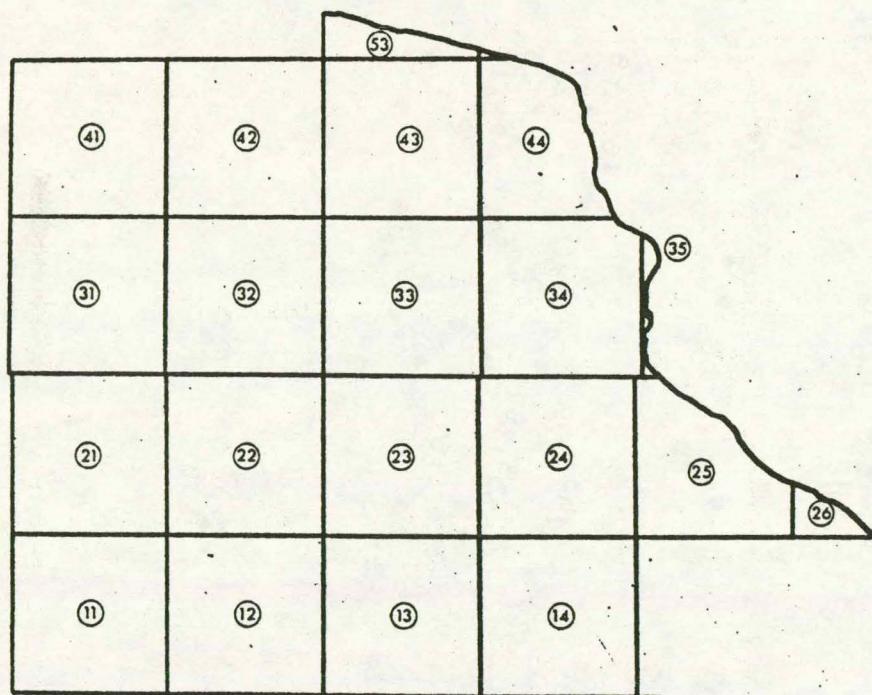
COORDINATE SYSTEM NUMBERING ON
SECTION LINES WITHIN A CONGRESSIONAL TOWNSHIP
(Digits Five thru Eight)

South-North Coordinates
(Digits Five and Six)

West-East Coordinates
(Digits Seven and Eight)

* If Township Line is on County Line

ROADWAY ELEMENTS TO WHICH NODE NUMBERS ARE ASSIGNED

1. All Intersections (Except Alleys)
2. Ramp Terminals
3. Railroad Crossings
4. Grade Separation Structures
5. Major Bridges
6. Road Ends
7. 90 Degree Turns (When Each Leg is at Least ¼ Mile Long)
8. County Lines

DESCRIPTION OF THE
IOWA LINK-NODE ACCIDENT LOCATIONAL SYSTEM

IOWA DEPARTMENT OF TRANSPORTATION

A9

R-22W

POLK CO

DE LINE CO.
EAT LAKES

13

INTERSTATE NODE MAPS

418734 TO ADAIR

418433

418535

418538

418337

418335

418233

OLD US-6

MP 75

B

C.R.I.P. RR.

418546

418442

MP 76

418649

US-6 TO ADAIR

418347

N-64

418249

A

418449

418551

418351

MP 77

COUNTY ROAD

428801

428910

REST AREA

428912

N-72

428817

428721

REST AREA

428723

MP 80

MP 81
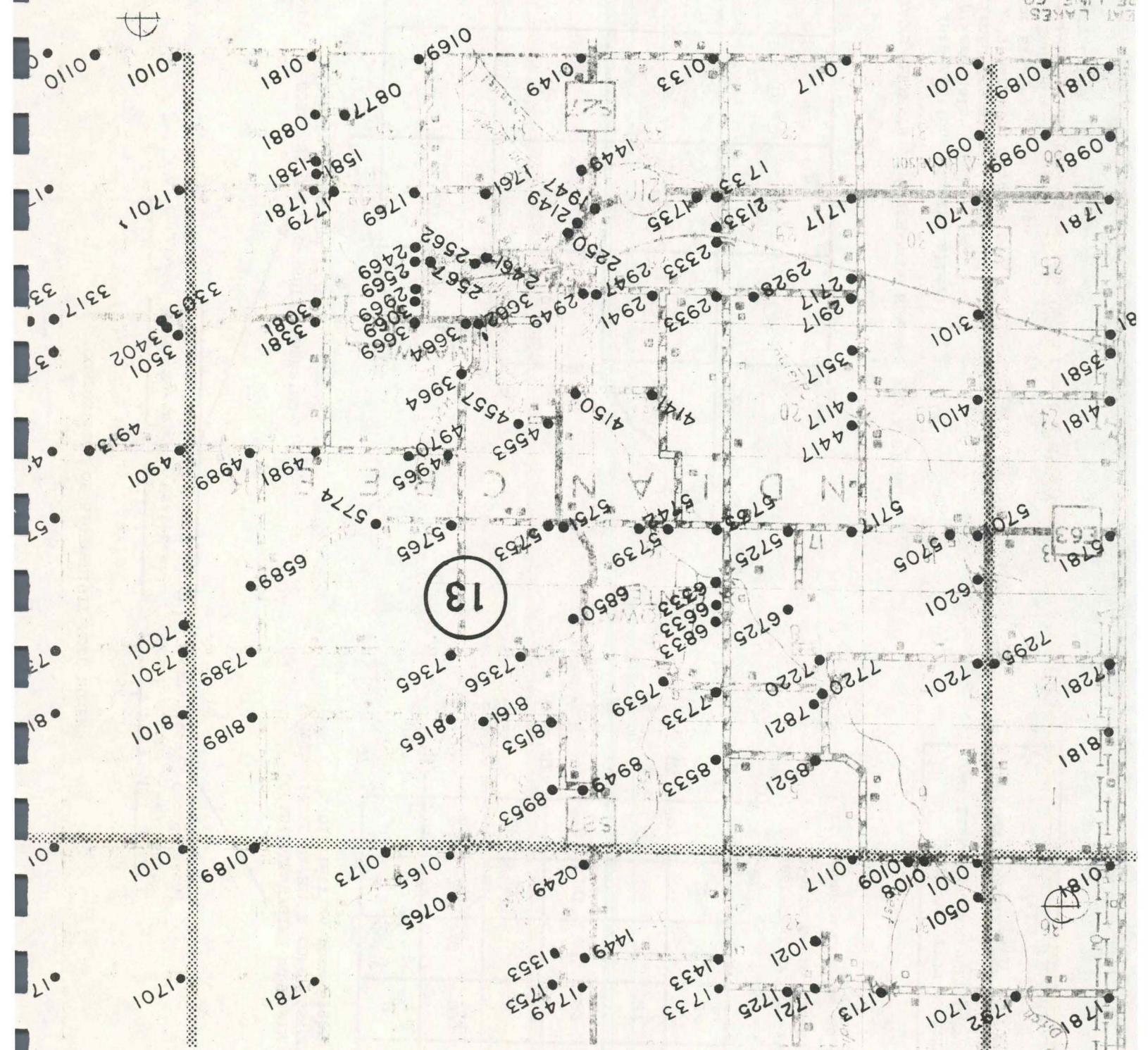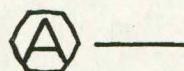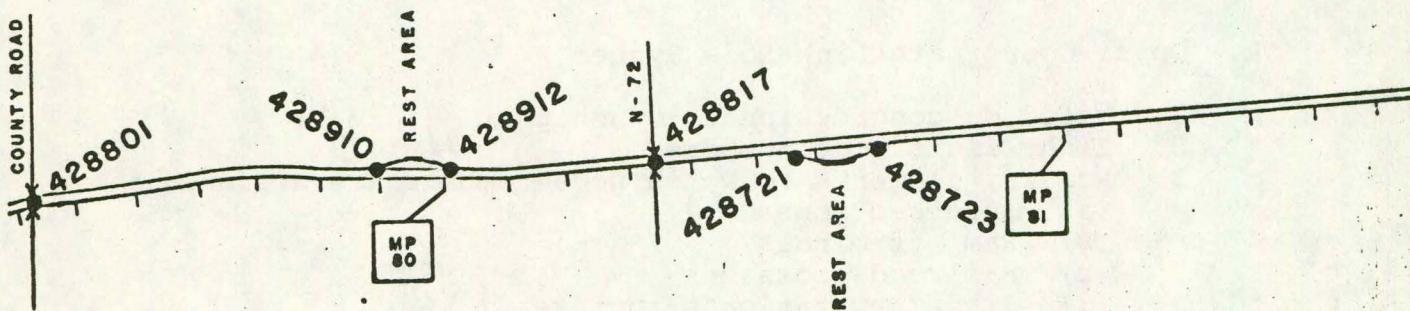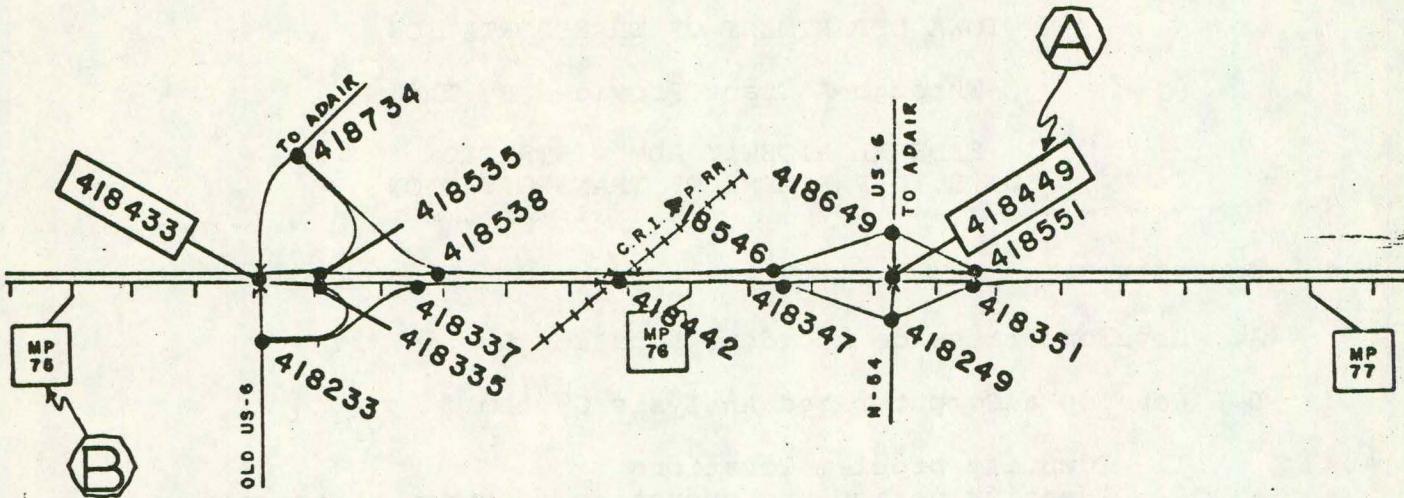
(A) — **COMPLEX INTERSECTION IDENTIFIER:** Last six digits of node number, boxed in to identify it as the Intersection Identifier for that inter-change.
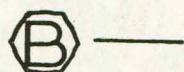
(B) — **MILEPOST VALUES:** Milepost markers at even mile intervals as posted in field. Tick marks along mainline indicate one-tenth mile intervals.

A11

ACCIDENT LOCATION AND ANALYSIS SYSTEM

"ALAS"

Developed For The

IOWA DEPARTMENT OF TRANSPORTATION

Through A Grant Provided By The

FEDERAL HIGHWAY ADMINISTRATION
U. S. DEPARTMENT OF TRANSPORTATION

I. OBJECTIVES

A. Develop Statewide Accident Location System

B. Develop a Computerized Analysis System

    1. Identify problem locations.
    2. Identify design and operating features associated
        with high accident frequencies.
    3. Compile accident summaries.

II. ACCIDENT LOCATION SYSTEM

A. Quasi-Coordinate Link-Node System

    1. Based on congressional townships.
    2. Eight digit node numbers.
    3. Roadway elements to which node numbers are assigned.
        (a) Intersections
        (b) Ramp terminals
        (c) Railroad crossings
        (d) Grade separation structures
        (e) Major bridges
        (f) Road ends
        (g) Ninety degree turns
        (h) County lines
    4. Literal descriptions are assigned to all nodes which
        can be readily described.

III. ACCIDENT ANALYSIS SYSTEM

A. High Priority Location Rankings -- Selects all locations
    with at least a certain number of Fatal Accidents, Injury
    Accidents or Total Accidents as specified by the user.

    1. Selection by road system.
        (a) Rural primary
        (b) Total primary
        (c) Municipal (includes municipal primary)
        (d) Secondary
        (e) Total rural

A12

2. Jurisdictions
   (a) Statewide
   (b) Iowa DOT districts
   (c) Iowa Highway Patrol Posts
   (d) Counties
   (e) Cities
3. Locations
   (a) Intersections
   (b) Nodes
   (c) Links
4. Rankings by
   (a) Number of accidents
   (b) Accident severity
   (c) Total value loss
   (d) Accident rates (future)
5. Output format
   (a) Intersections
   (b) Nodes
   (c) Links

B. Generalized Request Programs

1. Compilation of accident listings by location.
   (a) Intersections
   (b) Nodes
   (c) Links
   (d) Node strings (road sections)
2. Compilation of accident listings by jurisdiction
   (a) Statewide
   (b) County
   (c) City
   (d) Any road system by jurisdiction
3. Compilation of accident listings from special
   select program.
   (a) Selects accidents with specific attributes from
        up to three data fields on the accident file.
4. Output formats
   (a) Abbreviated literal format showing basic data
        elements.
   (b) Coded format showing all data elements from
        accident file.
   (c) Summary information only.

Appendix B

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE !000   BLOCK SIZE _____   DSNAME •SEE BELOW   PRIMARY ROAD _____

PRIMARY ROAD BASE RECORD
GENERATION DATA GROUP
•DSN-X!2!.PRIMROAD.CUR( )
DCB-DSCB.TFB.L!000

Record positions 0–100

CONTROL IDENTIFICATION		STATE PRIMARY				FEDERAL AID					STATE CONTROL SECTION		FHWA URBAN				DOMAIN CODE			FUNCTIONAL CLASSIFICATION			POLITICAL CODE			ROAD NUMBER		ROADWAY WIDTH	ADJ COUNTY NO.	INTERSECTIONS AT GRADE					NEED SECTION I.D.

Columns (left to right): COUNTY NUMBER, SERIAL NUMBER, ZEROS, HIWAY SYSTEM, ROUTE / SEQUENCE (ROUTE, SEGMENT), COUNTY, INDICATOR, ROUTE (NUMBER, SEQUENCE, COUNTY SEQ, CONT'L SEC. NO., STATUS), INTERSTATE TRAV'D WAY, NUMBER, SUB SECTION, IOWA CITY NUMBER, AREA CODE, CLASS CODE, FUNCTION, RURAL/MUNICIPAL CODE, TYPE SECTION, TOLL STATUS, SPEC SYS DESIGNATION, CENSUS CATEGORY, PRESENT, FUTURE, FEDERAL, TOWNSHIP, RANGE, SECTION, ROAD NUMBER, ATR LOCATION, CONTROL LENGTH 9V99, ROADWAY WIDTH, DISTRICT NUMBER, ADJ COUNTY NO., ACCESS CONTROL, SIGNALS, STOP SIGNS, OTHER, NO. INTERCHANGES, NO. SEPARATIONS, NO. OTHER BRIDGES, NUMBER, TYPICAL

Record positions 100–200

NEEDS DATA | SUFFICIENCY DATA | MILEPOST DATA

NEEDS DATA					SUFFICIENCY DATA																		MILEPOST DATA				

NEEDS DATA: INVENTORY YEAR, COST AREA, TERRAIN CODE, TYPE AREA, TYPE, MEDIAN (COST GROUP, WIDTH), ROW WIDTH
SUFFICIENCY DATA: INTERSECTIONS (MAJOR, MINOR), UNUSED, DIVIDED (BUSINESS, PRIVATE), MAJOR ROUTE (CONT CTL SEC, SUFF SEC NO., SUFF TYPICAL, SUFF G.M.I., CONT CONTROL, HIGHWAY SYSTEM), FIRST DUPLICATE ROUTE (ROUTE, SEGMENT, COUNTY, SUFF SECTION, G.M.I., CONT CONTROL, HIGHWAY SYSTEM), SECOND DUPLICATE ROUTE (ROUTE, SEGMENT, COUNTY, SUFF SECTION, G.M.I., NON-MAIN I.D.), BEGINNING MILEPOINT 999V99
MILEPOST DATA: FIRST (NUMBER, MILEPOINT 999V99), SECOND (NUMBER, MILEPOINT 999V99), THIRD (NUMBER)

Record positions 200–300

• ZEROS •
THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS, IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.

THIRD		TRAFFIC														ONE YEAR EXPANSION FACTORS					ACCIDENT DATA	

THIRD: MILEPOINT 999V99, UNUSED, ZEROS
TRAFFIC: YEAR COUNTED, ADT, TRUCKS, AUTOS, MOTORCYCLES, PICKUPS & PANELS, SINGLE UNIT-2 AX, RECREATION VEH., SINGLE UNIT-3 AX, TRUCK TRAILERS, BUSES, TTST-3 AXLES, TTST-4 AXLES, TTST-5 AXLES, DOUBLE BOTTOMS
ONE YEAR EXPANSION FACTORS: ADT SV9999, AUTO PICKUP PANEL SV9999, SINGLE UNIT & REC. VEH. SV9999, 3 & 4 AXLE TTST SV9999, 5 AX & DBL BOT'M SV9999
ACCIDENTS: FATAL, NONFATAL INJURY

Record positions 300–400

ACCIDENT DATA						IOWA RAILROAD CROSSING NUMBERS			CULTURE NUMBER OF												MAINTENANCE			SPECIAL STUDY	CURVES				PHOTO LOG DATE			UNIQUE ID.	CRIT. INTER-SECTION	

ACCIDENT DATA: FATALITIES (NON-PEDEST, PEDEST), INJURIES (NON-PEDEST, PEDEST), ACCIDENTS (NON-INJURY, TOTAL)
IOWA RAILROAD CROSSING NUMBERS: FIRST, SECOND, THIRD
CULTURE NUMBER OF: FARM UNITS, YR RD DWELL, SEAS DWELL/HMS, BUSINESSES, INDUSTRIES, SCHOOLS, CHURCHES, INSTITUTIONS, REC AREAS, JUNK YARDS, DISTRICT, RESIDENCY
MAINTENANCE: GARAGE, DIV/BAY OR ROAD, DIV SB/MB
SERVICE LEVEL, CONTRACT HIGHWAY RESPON CODE
SPECIAL STUDY
CURVES: 0-29 BPH, 30-39 BPH, 40-49 BPH, 50-59 BPH
PHOTO LOG DATE: MONTH, DAY, YEAR
UNIQUE ID.: SECTION NO.
CRIT. INTER-SECTION: INTERSECTION, H.P.M.S. SAMPLE ROUTE, FEDERAL TRUCK ROUTE, TURN LANES, PROT TURNS, THRU WIDTH

Record positions 400–500

ACCIDENT DATA REFERENCE NODES

1		2		3		4		5		6		7		8		9		10		11	

Each node: TYPE, NUMBER, MILEPOINT

ACCIDENT DATA REFERENCE NODES

12		13		14		15		16		17		18		19		20		CO. LINE ID.	DATE PERTINENT CHANGES MADE (MM/DD/YYYY)	UNUSED

Each node: TYPE, NUMBER, MILEPOINT

B1

1

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE :000   BLOCK SIZE _____   DSNAME :SEE BELOW

NORTHBOUND OR EASTBOUND LANE   PRIMARY ROAD

NORTHBOUND OR EASTBOUND LANE

- LANE LGTH — 99V9
- SURF WIDTH
- MATERIAL
- SUBBASE — THICK 99V9
- PRED MATERIAL
- BASE — THICK 99V9
- SURFACE
  - TYPE & RESURF
  - THICK 99V9
- CONST YEAR
- MAJ RECONST YEAR
- MAJ RECONST TYPE
- CURB/SHD TYPE — OUTSIDE
- SHD WIDTH
- CURB/SHD TYPE — INSIDE
- SHD WIDTH
- GRADE
  - 1.0- 1.9%
  - 2.0- 2.9%
  - 3.0- 3.9%
  - 4.0- 4.9%
  - 5.0- 5.9%
  - 6.0- 6.9%
  - 7.0- 7.9%
  - 8.0- 8.9%
  - 9.0- 9.9%
  - 10.0-11.9%
  - 12.0-14.9%
  - 15% & OVER
  - 1.0-4.9% LGTH — 99V9
  - 5.0-9.9% LGTH — 99V9
  - 10 & OVER LGTH — 99V9
  - LGTH PASS REST — 99V9
- NO. STOP REST
  - TOTL LGTH STOP REST — 99V9
- CURVES
  - 0-1.4° NO. — 9A
  - LENGTH 9A
  - 1.5-2.4° NO. — 9A
  - LENGTH 9A
  - 2.5-3.4° NO. — 9A
  - LENGTH 9A
  - 3.5-4.4° NO. — 9A
  - LENGTH 9A
  - 4.5-5.4° NO. — 9A
  - LENGTH 9A
  - 5.5-6.9° NO. — 9A
  - LENGTH 9A
  - 7.0-8.4° NO. — 9A
  - LENGTH 9A
  - 8.5-10.9° NO. — 9A
  - LENGTH 9A
  - 11.0-13.9° NO. — 9A
  - LENGTH 9A
  - 14.0-18.4° NO. — 9A
  - LENGTH 9A
  - 19.5-27.9° NO. — 9A
  - LENGTH 9A
  - 28° & OVER NO. — 9A
  - LENGTH 9A

UNUSED

COUNTY   ROUTE   SEGMENT   ALT. KEY :   STATE CNTL

SOUTHBOUND OR WESTBOUND LANE

- SPEED
  - LIMIT(MPH)
  - AVERAGE(MPH)
- COM-IND-REC ACC
  - SAFETY STUDY
  - PARKING TYPE
  - DRAINAGE TYPE
  - TURN LANES
  - % TURNS
  - TRAFFIC FLOW
- THRU WIDTH
- STR ADQ
  - % SURF.
  - % ROAD.
  - % DRAIN.
  - % MAINT.
- NEED STDY SURF
- NEED STDY CRB/SHD
- VERT ALGN ADQ
- HORI ALGN ADQ
- BN NO. OR SLAB THK
- PSR NO.
- PSI RATING — 99V9
- TRANS SLOPE — 9A9X
- SHORT ROUGHNESS
- LONG ROUGHNESS

NORTHBOUND OR EASTBOUND LANE (duplicate section)

- SPEED
  - LIMIT(MPH)
  - AVERAGE(MPH)
- COM-IND-REC ACC
  - SAFETY STUDY
  - PARKING TYPE
  - DRAINAGE TYPE
  - TURN LANES
  - % TURNS
  - TRAFFIC FLOW
- THRU WIDTH
- STR ADQ
  - % SURF.
  - % ROAD.
  - % DRAIN.
  - % MAINT.
- NEED STDY SURF
- NEED STDY CRB/SHD
- VERT ALGN ADQ
- HORI ALGN ADQ
- BN NO. OR SLAB THK
- PSR NO.
- PSI RATING — 99V9
- TRANS SLOPE — 9A9X
- SHORT ROUGHNESS
- LONG ROUGHNESS

SOUTHBOUND OR WESTBOUND LANE

- LANE LGTH — 99V9
- SURF WIDTH
- MATERIAL
- SUBBASE — THICK 99V9
- PRED MATERIAL
- BASE — THICK 99V9
- SURFACE
  - TYPE & RESURF
  - THICK 99V9
- CONST YEAR
- MAJ RECONST YEAR
- MAJ RECONST TYPE
- CURB/SHD TYPE — OUTSIDE
- SHD WIDTH
- CURB/SHD TYPE — INSIDE
- SHD WIDTH
- GRADE
  - 1.0- 1.9%
  - 2.0- 2.9%
  - 3.0- 3.9%
  - 4.0- 4.9%
  - 5.0- 5.9%
  - 6.0- 6.9%
  - 7.0- 7.9%
  - 8.0- 8.9%
  - 9.0- 9.9%
  - 10.0-11.9%
  - 12.0-14.9%
  - 15% & OVER
  - 1.0-4.9% LGTH — 99V9
  - 5.0-9.9% LGTH — 99V9
  - 10 & OVER LGTH — 99V9
  - LGTH PASS REST — 99V9
- NO. STOP REST
  - TOTL LGTH STOP REST — 99V9
- CURVES

UNUSED

COUNTY   ROUTE   SEGMENT   ALT. KEY 2   FEDERAL CNTL   INDICATOR

B2

2

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME •SEE BELOW   PRIMARY STRUCTURE

PRIMARY STRUCTURE
BASE RECORD
GENERATION DATA GROUP
•DSN-X122.PRISTRUC.CUR( )
DCB-DSCB.TFB.L1000

Row 1 (offset 0):

CONTROL IDENTIFICATION			STATE PRIMARY				FEDERAL AID				STATE CONTROL SECTION				FHWA URBAN						FUNCTIONAL CLASSIFICATION		POLITICAL CODE				DEFENSE DATA				UNUSED
COUNTY NUMBER	SERIAL NUMBER	STRUCTURE NO.	HIWAY SYSTEM	ROUTE	SEQUENCE: SEGMENT	COUNTY	INDICATOR	ROUTE: NUMBER	SEQUENCE	COUNTY SEQ	CONT'L REC. NO.	STATUS	INTERSTATE TRAV'D WAY	NUMBER	SUB SECTION	IOWA CITY NUMBER	AREA CODE	CLASS CODE	RURAL/MUNICIPAL CODE	DOMAIN CODE	TYPE RECORD	TOLL STATUS	SPEC SYS DESIGNATION	CENSUS CATEGORY	FUNCTION	PRESENT	FUTURE	FEDERAL	TOWNSHIP	RANGE	SECTION	ROAD NUMBER	UNUSED	BRIDGE: SECTION 9999A	SEQUENCE	MILEAGE	SECT. LGTH 99V9	UNUSED

Row 2 (offset 100):

FHWA STRUCTURE NUMBER	BYPASS CODE	STRUCTURE DATA					UNUSED	FIRST DUPLICATE ROUTE					SECOND DUPLICATE ROUTE					DESCRIPTION OF FEATURE CROSSED	KIND OF CROSSING	UNUSED
		NUMBER: DESIGN 99999A	MAINT. BRIDGE 99V9X999	CONSTRUCTED	YEAR: MAJOR RECONST	LAST INV.		HWY SYS	ROUTE	SEQUENCE	CO. SEQ.	STRUC. NO.	HWY SYS	ROUTE	SEQUENCE	CO. SEQ.	STRUC. NO.			

Row 3 (offset 200):

FACILITY CARRIED	TYPE OF STRUCTURE	MAIN STRUC. TYPE	TYPE SERVICE	TOT NO. MAIN SPANS	TOTAL LGTH STRUC.	LONGEST MAIN SPAN	DECK MATERIAL / DECK BEARING SURF. / SUPERSTRUCTURE / SUBSTRUCTURE	EB/NB LANE		THRU/DIVIDED CODE	WB/SB LANE		APPR. WIDTH	APPROACH DATA					S.I. & A. DATA		BRIDGE MEDIAN TYP	STRUC. FLARED	SKEW ANGLE / CONTROL	NAVIGATIONAL DATA		BRIDGE ROADWAY WIDTH 999V9	UNUSED
								CLEARANCE: HORIZ. 99V9	VERT. 99V9	APPR. WIDTH	CLEARANCE: HORIZ. 99V9	VERT. 99V9		NEAR: TYPE STRUC.	LONG. SPAN	NO. OF SPANS SUPERSTRUC.	FAR: TYPE STRUC.	LONG. SPAN / NO. OF SPANS SUPERSTRUC.	APPROACH: NEAR ST. TYPE	FAR ST. TYPE	LANES: ON STRUC / UNDER STRUC	APPR. RDWAY WIDTH		CLEARANCE: VERTICAL / HORIZONTAL		

Row 4 (offset 300):

DECK WIDTH 999V9	UNDERCLEARANCE			VERT. CLEAR. 10" LANE 99V99	BRIDGE DESCRIPTION	UNUSED / CUSTODIAN CODE / OWNER CODE	SIDEWALK WIDTH		DETOUR LENGTH	UNUSED	LATITUDE 9999V9	LONGITUDE 9999V9	SPECIAL STUDY / SAFETY STUDY	UNUSED	HISTORICAL SIGNIFICANCE	S.I. & A. DATA													
	VERTICAL 999V99	LATERAL: OUTSIDE 99V9	INSIDE 99V9				LEFT 99V9	RIGHT 99V9								CONDITION: DECK / SUPERSTRU. / SUBSTRU. / CHANNEL / CULVERT	EST NEW LIFE	OPERATING RAT	INVENT RATING	POSTED LOAD LIMIT: FIRST / SECOND / THIRD	APPRAISAL							YEAR NEEDED

Row 5 (offset 400):

TYPE		PROPOSED IMPROVEMENTS				ADT		ADJ ROAD		COST ($1000'S)				INSPECTION				TRAF SAFETY		BARREL LENGTH	H LOAD	YEAR COUNTED	TRAFFIC		
SERVICE	WORK	LENGTH	DESIGN LOAD	ROADWAY WIDTH	LANES	DESIGN	YEAR	YEAR	TYPE IMP	IMPROVEMENTS	PREENGIN'R	DEMOLITION	SUBSTRUC	SUPERSTRUC	MONTH	DAY	YEAR	TYPE / NEXTTYPE / QUARTER / PAINT CODE / PHY. VULN. / P'P'AL/OTHER / DESIGN LOAD					ADT	TRUCKS	AUTOS

Row 6 (offset 500):

TRAFFIC							TTST			DOUBLE BOTTOMS	ONE YEAR EXPANSION FACTORS					ACCIDENT DATA						
MOTORCYCLES	PICKUPS & PANELS	SINGLE UNIT-2 AX	RECREATION VEH.	SINGLE UNIT-3 AX	TRUCK TRAILERS	BUSES	3 AXLES	4 AXLES	5 AXLES		ADT SV9999	AUTO PICKUP PANEL SV9999	SINGLE UNIT & REC. VEH. SV9999	3 & 4 AXLE TTST SV9999	5 AX DBL BOT'M SV9999	ACCIDENTS: FATAL / NONFATAL INJURY	FATALITIES: NON-PEDEST / PEDEST	INJURIES: NON-PEDEST / PEDEST	NON-INJURY ACCIDENTS

B3

1

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME ●SEE BELOW   PRIMARY STRUCTURE

HGH-INJ ACC.	MAINT. DISTRICT NO.	MAINT. RESIDENCY NO.	CIVIL TOWNSHIP	DISTRICT NUMBER	UNUSED	MILEPOINT		FEDERAL AID PROJECT NUMBER	S.I.&A. SUFFICIENCY			RAILROAD CROSSING NUMBER	CONDITIONS				PAINT CONTRACTOR	UNUSED	ACCIDENT DATA REF. NODES					
						BEGIN 999V99	END 999V99		RATING	MONTH	YEAR		DECK OVLY		PAINT				1			2		
													RATING	YEAR	RATING	YEAR			TYPE	NUMBER	MILEPOINT	TYPE	NUMBER	MILEPOINT

			ALT. KEY								
			STATE CNTL								
COUNTY	ROUTE	SEGMENT	STRUC. NO.				UNUSED				

UNUSED

UNUSED

B4

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME #SEE BELOW   SECONDARY ROAD

SECONDARY ROAD BASE RECORD
GENERATION DATA GROUP
#DSN-X121.SECROAD.CUR( )
DCB-DSCB.TFB.L1000

Row 1 (positions 0–100):

CONTROL IDENTIFICATION			SECONDARY			FEDERAL AID																				
			HIWAY SYSTEM	SEQUENCE		COUNTY	INDICATOR	ROUTE		COUNTY SEQ	CONT'L REC. NO.	STATUS / INTERSTATE TRAV'D WAY	#ZEROS#	IOWA CITY NUMBER	FHWA URBAN		#ZEROS#	RURAL/MUNICIPAL CODE	DOMAIN CODE		SPEC SYS DESIGNATION	CENSUS CATEGORY	FUNCTIONAL CLASSIFICATION			POLITICAL CODE
COUNTY NUMBER	SERIAL NUMBER	ZEROS		ROUTE	SEGMENT			NUMBER	SEQUENCE						AREA CODE	CLASS CODE				TYPE SECTION	TOLL STATUS		PRESENT	FUTURE	FEDERAL	TOWNSHIP RANGE SECTION

ROAD NUMBER	ATT LOCATION	CONTROL LENGTH 9V99	ROADWAY WIDTH	DISTRICT NUMBER	ADJ COUNTY NO.	INTERSECTIONS AT GRADE			NO. INTERCHANGES	NO. SEPARATIONS	#ZEROS#	NO. OTHER BRIDGES
						SIGNALS	STOP SIGNS	OTHER				

Row 2 (positions 100–200):

NEEDS DATA																	
INVENTORY YEAR	COST AREA	TERRAIN CODE	TYPE AREA	TYPE	MEDIAN WIDTH	COST GROUP	ROW WIDTH	INTERSECTIONS MAJOR	MINOR	UNUSED	ENTRANCES BUSINESS	PRIVATE	NEEDS ROUTE NUMBER	SEQUENCE	NEED SECTION NUMBER	TYPICAL	#ZEROS#

IMP. MILE INDICATOR	#ZEROS#	BEGINNING MILEPOINT 999V99	#ZEROS#

Row 3 (positions 200–300):

#ZEROS#
THIS AREA OF THE RECORD IS
BEING USED IN ANOTHER SYSTEM.
THE SAME DATA SHOULD BE STORED
IN THESE POSITIONS FOR ALL
SYSTEMS, IF IT APPLIES. ELSE,
THE POSITIONS WILL CONTAIN
ZEROS.

#ZEROS#	UNUSED	#ZEROS#	TRAFFIC																ONE YEAR EXPANSION FACTORS					ACCIDENT DATA ACCIDENTS	
			YEAR COUNTED	ADT	TRUCKS	AUTOS	MOTORCYCLES	PICKUPS & PANELS	SINGLE UNIT-2 AX	RECREATION VEH.	SINGLE UNIT-3 AX	TRUCK TRAILERS	BUSES	TTST-3 AXLES	TTST-4 AXLES	TTST-5 AXLES	DOUBLE BOTTOMS	ADT SV9999	AUTO PICKUP PANEL SV9999	SINGLE UNIT & REC. VEH. SV9999	3 & 4 AXLE TTST SV9999	5 AX & DBL BOT'M SV9999	FATAL	NONFATAL INJURY

Row 4 (positions 300–400):

R5

ACCIDENT DATA						IOWA RAILROAD CROSSING NUMBERS			CULTURE NUMBER OF							#ZEROS#	HIGHWAY RESPON CODE	SPECIAL STUDY	CURVES			PHOTO LOG DATE			UNIQUE ID.	INTERSECTION	M.P.N.S. SAMPLE CODE	GRADED	#ZEROS#
FATALITIES		INJURIES		ACCIDENTS					FARM UNITS	YR RD DWELL	SEAS DWELLINGS	BUSINESSES	INDUSTRIES SCHOOLS CHURCHES	INSTITUTIONS	REC. AREAS JUNK YARDS				0-29 MPH	30-39 MPH	40-49 MPH	50-55 MPH	MONTH	DAY	YEAR	SECTION NO.				
NON-PEDEST	PEDEST	NON-PEDEST	PEDEST	NON-INJURY	TOTAL	FIRST	SECOND	THIRD																					

Row 5 (positions 400–500):

ACCIDENT DATA REFERENCE NODES																						
1		2		3		4		5		6		7		8		9		10		11	
TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT / TYPE

Row 6 (positions 500–...):

ACCIDENT DATA REFERENCE NODES																		
12		13		14		15		16		17		18		19		20		
TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	TYPE NUMBER	MILEPOINT	CO. LINE ID.

DATE PERTINENT CHANGES MADE (MM/DD/YYYY)	UNUSED

1

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY — RECORD SIZE 1000 — BLOCK SIZE _____ — DSNAME *SEE BELOW — SECONDARY ROAD

2

Note (left block):

* ZEROS *
THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.

B6

NORTHBOUND OR EASTBOUND LANE

LANE LGTH — 99V99
SURF WIDTH

SUBBASE: MATERIAL; THICK 99V9
BASE: PRED MATERIAL; THICK 99V9
SURFACE: TYPE & RESURF; THICK 99V9

CONST YEAR
MAJ RECONST YEAR
MAJ RECONST TYPE

OUTSIDE: CURB/SHD TYPE; SHD WIDTH
INSIDE: CURB/SHD TYPE; SHD WIDTH

GRADE
% Range	LGTH	PASS REST	STOP REST
1.0–1.9%			
2.0–2.9%			
3.0–3.9%			
4.0–4.9%			
5.0–5.9%			
6.0–6.9%			
7.0–7.9%			
8.0–8.9%			
9.0–9.9%			
10.0–11.9%			
12.0–14.9%			
15% & OVER			

1.0–4.9% LGTH 99V9 / 5.0–9.9% LGTH 99V9 / 10 & OVER LGTH 99V9
LGTH PASS REST 99V9
NO. STOP REST
TOTL LGTH STOP REST 99V9

CURVES
Degree	NO.	LENGTH
0–1.4°		V99
1.5–2.4°		V99
2.5–3.4°		V99
3.5–4.4°		V99
4.5–5.4°		V99
5.5–6.9°		V99
7.0–8.4°		V99
8.5–10.9°		V99
11.0–13.9°		V99
14.0–19.4°		V99
19.5–27.9°		V99
28° & OVER		V99

ALT. KEY 1 — POL. CODE: COUNTY, TOWNSHIP, RANGE, SECTION, ROAD NUMBER

NEEDS RATING — NORTHBOUND OR EASTBOUND LANE

SPEED: LIMIT (MPH), AVERAGE (MPH)
COM-IND-REC ACC
SAFETY STUDY
PARKING TYPE
DRAINAGE TYPE
TURN LANES
% TURNS
TRAFFIC FLOW
THRU WIDTH
FOUNDATION
SURFACE
DRAINAGE
ZERO
NEED STDY CRB/SHD
VERT ALGN ADQ
HORI ALGN ADQ
SN NO. OR SLAB THK
PSR NO.
PSI RATING 99V9
TRANS SLOPE 99V9X
SHORT ROUGHNESS
LONG ROUGHNESS

UNUSED

SOUTHBOUND OR WESTBOUND LANE

LANE LGTH — 99V99
SURF WIDTH
SUBBASE: MATERIAL; THICK 99V9
BASE: PRED MATERIAL; THICK 99V9
SURFACE: TYPE & RESURF; THICK 99V9
CONST YEAR
MAJ RECONST YEAR
MAJ RECONST TYPE
OUTSIDE: CURB/SHD TYPE; SHD WIDTH
INSIDE: CURB/SHD TYPE; SHD WIDTH

GRADE
% Range	
1.0–1.9%	
2.0–2.9%	
3.0–3.9%	
4.0–4.9%	
5.0–5.9%	
6.0–6.9%	
7.0–7.9%	
8.0–8.9%	
9.0–9.9%	
10.0–11.9%	
12.0–14.9%	
15% & OVER	

1.0–4.9% LGTH 99V9 / 5.0–9.9% LGTH 99V9 / 10 & OVER LGTH 99V9
LGTH PASS REST 99V9
NO. STOP REST
TOTL LGTH STOP REST 99V9

CURVES
Degree	NO.	LENGTH
0–1.4°		V99
1.5–2.4°		V99
2.5–3.4°		V99
3.5–4.4°		V99
4.5–5.4°		V99
5.5–6.9°		V99
7.0–8.4°		V99
8.5–10.9°		V99
11.0–13.9°		V99
14.0–19.4°		V99
19.5–27.9°		V99
28° & OVER		V99

ALT. KEY 2 — FEDERAL CNTL: COUNTY, ROUTE, SEGMENT, INDICATOR

NEEDS RATING — SOUTHBOUND OR WESTBOUND LANE

SPEED: LIMIT (MPH), AVERAGE (MPH)
COM-IND-REC ACC
SAFETY STUDY
PARKING TYPE
DRAINAGE TYPE
TURN LANES
% TURNS
TRAFFIC FLOW
THRU WIDTH
FOUNDATION
SURFACE
DRAINAGE
ZERO
NEED STDY CRB/SHD
VERT ALGN ADQ
HORI ALGN ADQ
SN NO. OR SLAB THK
PSR NO.
PSI RATING 99V9
TRANS SLOPE 99V9X
SHORT ROUGHNESS
LONG ROUGHNESS

UNUSED

Scale markers: 700, 800, 900, 1000, 1100

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY · RECORD SIZE 1000 ___ BLOCK SIZE ___ DSNAME •SEE BELOW ___ SECONDARY STRUCTURE

SECONDARY STRUCTURE BASE RECORD GENERATION DATA GROUP
•DSN-X122.SECSTRUC.CUR( )
DCB-DSCB.TFB.L1000

Row 1 (positions 0–100)

CONTROL IDENTIFICATION		SECONDARY			FEDERAL AID							FHWA URBAN						FUNCTIONAL CLASSIFICATION			POLITICAL CODE							
			SEQUENCE		ROUTE						IOWA CITY NUMBER															•ZEROS•		
COUNTY NUMBER	SERIAL NUMBER	STRUCTURE NO.	HIWAY SYSTEM	ROUTE	SEGMENT	COUNTY	INDICATOR	NUMBER	SEQUENCE	COUNTY SEQ	CONT'L REC. NO.	STATUS / INTERSTATE TRAV'D WAY	•ZEROS•	AREA CODE	CLASS CODE	FUNCTION	RURAL/MUNICIPAL CODE / TYPE RECORD	DOMAIN CODE	TOLL STATUS	SPEC SYS DESIGNATION / CENSUS CATEGORY	PRESENT	FUTURE	FEDERAL	TOWNSHIP	RANGE	SECTION	ROAD NUMBER	•ZEROS•	ADJ. COUNTY NO.	COORD-INATES (EAST / SOUTH)	UNUSED

Row 2 (positions 100–200)

FHWA STRUCTURE NUMBER	OVERPASS CODE	STRUCTURE DATA						UNUSED	•ZEROS•	DESCRIPTION OF FEATURE CROSSED	KIND OF CROSSING	UNUSED
		NUMBER		YEAR								
		DESIGN 99999A	MAINT. BRIDGE 99V9X999	CONSTRUCTED	MAJOR RECONST	LAST INV.						

Row 3 (positions 200–300)

• ZEROS •
THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.

FACILITY CARRIED	TYPE OF STRUCTURE	MAIN STRUC. TYPE	TYPE SERVICE	TOT NO. MAIN SPANS	TOTAL LGTH STRUC.	LONGEST MAIN SPAN	DECK MATERIAL / DECK BEARING SURF. / SUPERSTRUCTURE / SUBSTRUCTURE	EB/NB LANE			WB/SB LANE			APPROACH DATA					S.I. & A. DATA			NAVIGATIONAL DATA		
								CLEARANCE		APPR. WIDTH	CLEARANCE		APPR. WIDTH	NEAR		FAR			APPROACH LANES			CLEARANCE		
								HORIZ. 99V9	VERT. 99V9		HORIZ. 99V9	VERT. 99V9		TYPE STRUC.	LONG. SPAN	NO. OF SPANS SUPERSTRUC.	TYPE STRUC.	LONG. SPAN	NO. OF SPANS SUPERSTRUC.	APPROACH ON STRUC	APPROACH LANES UNDER STRUC	APPR. ROADWAY WIDTH / BRIDGE MEDIAN TYPE	SKEW ANGLE / STRUC. FLARED CONTROL	VERTICAL / HORIZONTAL	BRIDGE ROADWAY WIDTH 999V9	UNUSED

(NEAR ST. TYPE / FAR ST. TYPE)

Row 4 (positions 300–400) — **B7**

DECK WIDTH 999V9	UNDERCLEARANCE			VERT. CLEAR. 10" LANE 99V99	BRIDGE DESCRIPTION	BOARD / CUSTODIAN CODE / OWNER CODE	SIDEWALK WIDTH		DETOUR LENGTH	UNUSED	LATITUDE 9999V9	LONGITUDE 9999V9	SPECIAL STUDY / SAFETY STUDY	UNUSED	HISTORICAL SIGNIFICANCE	CONDITION							POSTED LOAD LIMIT		APPRAISAL			YEAR NEEDED
	VERTICAL 999V99	LATERAL					LEFT 99V9	RIGHT 99V9								DECK / SUPERSTRU. / SUBSTRU. / CHANNEL / CULVERT			EST REMAIN LIFE	OPERATING RAT	AP INVNT ALIGN	IMPRT RATING	FIRST	SECOND	THIRD	STRUC OPRO / DECK GEOMETRY / UNDRCLR V & H / SAFE LOAD / WTRWAY ADEQ / AP INVNT ALIGN	
		OUTSIDE 99V9	INSIDE 99V9																									

Row 5 (positions 400–500) — S.I. & A. DATA / TRAFFIC

TYPE		PROPOSED IMPROVEMENTS				ADT		ADJ ROAD		COST ($1000'S)				INSPECTION				TRAF SAFETY	OPEN/CLOSED TRAF OR FLAG	BARREL LENGTH	H LOAD	YEAR COUNTED	TRAFFIC		
SERVICE	WORK	LENGTH	DESIGN LOAD	ROADWAY WIDTH	LANES	DESIGN	YEAR	YEAR	TYPE IMP	IMPROVEMENTS	PREENGIN'R	DEMOLITION	SUBSTRUC	SUPERSTRUC	MONTH	DAY	YEAR	TYPE / RECTIFIE / GRATED / PAINT CODE / PNT VEH. / P'PAINTED / DESIGN LOAD						ADT	TRUCKS	AUTOS

Row 6 (positions 500–600) — TRAFFIC / ACCIDENT DATA

TRAFFIC							TTST				ONE YEAR EXPANSION FACTORS					ACCIDENT DATA					
																ACCIDENTS		FATALITIES		INJURIES		NON-INJURY
MOTORCYCLES	PICKUPS & PANELS	SINGLE UNIT-2 AX	RECREATION VEH.	SINGLE UNIT-3 AX	TRUCK TRAILERS	BUSES	3 AXLES	4 AXLES	5 AXLES	DOUBLE BOTTOMS	ADT SV9999	AUTO PICKUP PANEL SV9999	SINGLE UNIT & REC. VEH. SV9999	3 & 4 AXLE TTST SV9999	5 AX & DBL BOT'M SV9999	FATAL	NONFATAL INJURY	NON-PEDEST	PEDEST	NON-PEDEST	PEDEST	ACCIDENTS

1

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME ●SEE BELOW   SECONDARY STRUCTURE

	NON-INJ ACC.	MAINT. DISTRICT NO.	MAINT. RESIDENCY NO.	CIVIL TOWNSHIP	DISTRICT NUMBER	UNUSED	MILEPOINT		FEDERAL AID PROJECT NUMBER	S.I. & A. SUFFICIENCY			RAILROAD CROSSING NUMBER	CONDITIONS				PAINT CONTRACTOR	UNUSED	ACCIDENT DATA REF. NODES					
														DECK OVLY		PAINT				1			2		
							BEGIN 999V99	END 999V99		RATING	MONTH	YEAR		RATING	YEAR	RATING	YEAR			TYPE	NUMBER	MILEPOINT	TYPE	NUMBER	MILEPOINT

Position ruler: 600 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 700

●ZEROS● THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.	ALT. KEY						UNUSED
	COUNTY	POL. CODE			ROAD NUMBER	STRUC. NO.	
		TOWNSHIP	RANGE	SECTION			

Position ruler: 700 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 800

UNUSED

Position ruler: 800 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 900

UNUSED

Position ruler: 900 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 1000

Position ruler: 1000 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 1100

Position ruler: 1100 ... 1 ... 5 ... 10 ... 15 ... 20 ... 25 ... 30 ... 35 ... 40 ... 45 ... 50 ... 55 ... 60 ... 65 ... 70 ... 75 ... 80 ... 85 ... 90 ... 95 ... 1200

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000 ___   BLOCK SIZE _____   DSNAME •SEE BELOW ___   MUNICIPAL ROAD _

MUNICIPAL ROAD BASE RECORD
GENERATION DATA GROUP
•DSN-X!21.MUNIROAD.CUR( )
DCB-DSCB.TFB.L!000

Row 1 (positions 0–90):

CONTROL IDENTIFICATION			HI WAY SYSTEM	MUNICIPAL STREET			INDICATOR	FEDERAL AID ROUTE					IOWA CITY NUMBER	FHWA URBAN			DOMAIN CODE			FUNCTIONAL CLASSIFICATION			POLITICAL CODE			ROAD NUMBER		ROADWAY WIDTH	ADJ COUNT/NO.		SIGNALS	STOP SIGNS	OTHER	

CONTROL IDENTIFICATION: COUNTY NUMBER, SERIAL NUMBER, ZEROS
MUNICIPAL STREET: NUMBER, SEQUENCE, •ZEROS•
FEDERAL AID ROUTE: NUMBER, SEQUENCE, COUNTY SEQ, CONT'L REC. NO., STATUS, INTERSTATE TRAV'D WAY, •ZEROS•
FHWA URBAN: AREA CODE, CLASS CODE, •ZEROS•
DOMAIN CODE: RURAL/MUNICIPAL, TYPE SECTION, TOLL STATUS, SPEC SYS DESIGNATION, CENSUS CATEGORY
FUNCTIONAL CLASSIFICATION: PRESENT, FUTURE, FEDERAL
POLITICAL CODE: TOWNSHIP, RANGE, SECTION
ROAD NUMBER: ATR LOCATION, CONTROL LENGTH 9/99
NO. INTERCHANGES, NO. SEPARATIONS, NO. OTHER BRIDGES, •ZEROS•

Positions: 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

Row 2 (positions 100–190):

NFEDS DATA — INVENTORY YEAR, COST AREA, TERRAIN CODE, COST AREA, TYPE, MEDIAN (WIDTH, COST GROUP), ROW WIDTH, INTERSECTIONS (MAJOR, MINOR), UNUSED, UNUSED, NEEDS ROUTE (BUSINESS, PRIVATE, NUMBER, SEQUENCE), NEED SECTION (NUMBER, TYPICAL)

STREET NAME

DUP. MILE INDICATOR, •ZEROS•, BEGINNING MILEPOINT 999V99

•ZEROS•

Positions: 100, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

Left note box:

•ZEROS
THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.

B9

Row 3 (positions 200–290) — TRAFFIC:

•ZEROS•, UNUSED, ACTUAL ESTIMATE, YEAR COUNTED, ADT, TRUCKS, AUTOS, MOTORCYCLES, PICKUPS & PANELS, SINGLE UNIT-2 AX, RECREATION VEH., SINGLE UNIT-3 AX, TRUCK TRAILERS, BUSES, TTST-3 AXLES, TTST-4 AXLES, TTST-5 AXLES, DOUBLE BOTTOMS

ONE YEAR EXPANSION FACTORS: ADT SV9999, AUTO PICKUP PANEL SV9999, SINGLE UNIT & REC. VEH. SV9999, 3 & 4 AXLE TTST S/9999, 5 AX & DBL BOTTOM S/9999

ACCIDENTS: FATAL, NONFATAL INJURY

Positions: 200, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

Row 4 (positions 300–390):

ACCIDENT DATA:
FATALITIES (NON-PEDEST, PEDEST), INJURIES (NON-PEDEST, PEDEST), ACCIDENTS (NON-INJURY, TOTAL)

IOWA RAILROAD CROSSING NUMBERS: FIRST, SECOND, THIRD

CULTURE NUMBER OF: FARM UNITS, YR RD DWELL, SEAS DWELLINGS, BUSINESSES, INDUSTRIES, SCHOOLS, CHURCHES, INSTITUTIONS, REC AREAS, JUNK YARDS

•ZEROS•

HIGHWAY NETWORK CODE, SPECIAL STUDY, •ZEROS•

PHOTO LOG DATE: MONTH, DAY, YEAR, SECTION NO.

UNIQUE ID., •ZEROS•

Positions: 300, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

Row 5 (positions 400–490) — ACCIDENT DATA REFERENCE NODES:

1	2	3	4	5	6	7	8	9	10	11
TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT

Positions: 400, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

Row 6 (positions 500–590) — ACCIDENT DATA REFERENCE NODES:

12	13	14	15	16	17	18	19	20	LINE ID.	DATE PERTINENT CHANGE MADE	UNUSED
TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT	TYPE NUMBER MILEPOINT			

Positions: 500, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME *SEE BELOW   MUNICIPAL ROAD

NORTHBOUND OR EASTBOUND LANE

9V99 LANE LGTH		
SURF WIDTH		
MATERIAL		SUBBASE
9999 THICK		
PRED MATERIAL		BASE
99V9 THICK	TYPE & RESURF	
THRU WIDTH		
FOUNDATION		SURFACE
SURFACE	99V9 THICK	
DRAINAGE		
ZERO	CONST YEAR	
	MAJ RECONST YEAR	
VERT ALGN ADQ	MAJ RECONST TYPE	
HORI ALGN ADQ	CURB/SHD TYPE	OUTSIDE
SN NO. OR SLAB THK.	SHD WIDTH	
	CURB/SHD TYPE	INSIDE
PSR NO.	SHD WIDTH	

SPEED: LIMIT(MPH), AVERAGE(MPH), COM-IND-REC ACC, SAFETY STUDY, PARKING TYPE, DRAINAGE TYPE, TURN LANES, X TURNS, TRAFFIC FLOW

NEEDS RATING

GRADE

9696 PSI RATING	1.0- 1.9%
X6X9 TRANS SLOPE	2.0- 2.9%
	3.0- 3.9%
	4.0- 4.9%
SHORT ROUGHNESS	5.0- 5.9%
	6.0- 6.9%
	7.0- 7.9%
	8.0- 8.9%
	9.0- 9.9%
LONG ROUGHNESS	10.0-11.9%
	12.0-14.9%
	15% & OVER

9V99 9V99 9V99 LGTH ... 1.0- 5.0- :10 &, 4.9% 9.9% OVER, LGTH LGTH LGTH

* ZEROS *

UNUSED

COUNTY | CITY STREET | SEQUENCE
MUNICIPAL CNT.
ALT. KEY:

SOUTHBOUND OR WESTBOUND LANE

9V99 LANE LGTH		
SURF WIDTH		
MATERIAL		SUBBASE
9999 THICK		
PRED MATERIAL		BASE
99V9 THICK	TYPE & RESURF	
99V9 THICK		
CONST YEAR		SURFACE
MAJ RECONST YEAR		
MAJ RECONST TYPE		
CURB/SHD TYPE	OUTSIDE	
SHD WIDTH		
CURB/SHD TYPE	INSIDE	
SHD WIDTH		

GRADE

| 1.0- 1.9% |
| 2.0- 2.9% |
| 3.0- 3.9% |
| 4.0- 4.9% |
| 5.0- 5.9% |
| 6.0- 6.9% |
| 7.0- 7.9% |
| 8.0- 8.9% |
| 9.0- 9.9% |
| 10.0-11.9% |
| 12.0-14.9% |
| 15% & OVER |

.1.0- 5.0- :10 &, 4.9% 9.9% OVER, LGTH LGTH LGTH
9V99 9V99 9V99 LGTH

SPEED: LIMIT(MPH), AVERAGE(MPH), COM-IND-REC ACC, SAFETY STUDY, PARKING TYPE, DRAINAGE TYPE, TURN LANES, X TURNS, TRAFFIC FLOW
THRU WIDTH, FOUNDATION, SURFACE, DRAINAGE

NEEDS RATING
ZERO
NEED STDY CRB/SHD
VERT ALGN ADQ
HORI ALGN ADQ
SN NO. OR SLAB THK.
PSR NO.
9696 PSI RATING
X6X9 TRANS SLOPE
SHORT ROUGHNESS
LONG ROUGHNESS

* ZEROS *

UNUSED

COUNTY | ROUTE SEGMENT | INDICATOR
FEDERAL CNT.
ALT. KEY 2

* ZEROS *
THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.

B10

UNUSED

2

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY RECORD SIZE 1000 ___ BLOCK SIZE ___ DSNAME •SEE BELOW ___ **MUNICIPAL STRUCTURE**

MUNICIPAL STRUCTURE
BASE RECORD
GENERATION DATA GROUP
•DSN-X122.MUNSTRUC.CUR( )
DCB-DSCB.TFB.L1000

B11

* ZEROS -
THIS AREA OF THE RECORD IS
BEING USED IN ANOTHER SYSTEM.
THE SAME DATA SHOULD BE STORED
IN THESE POSITIONS FOR ALL
SYSTEMS. IF IT APPLIES, ELSE,
THE POSITIONS WILL CONTAIN
ZEROS.

CONTROL IDENTIFICATION

COUNTY NUMBER	SERIAL NUMBER	STRUCTURE NO.

FHWA STRUCTURE NUMBER
UNDERPASS CODE

MUNICIPAL STREET
HIWAY SYSTEM
NUMBER / SEQUENCE
• ZEROS •
INDICATOR
NUMBER / SEQUENCE

FEDERAL AID ROUTE
COUNTY SEQ
CONT'L SEC. NO.
STATUS
INTERSTATE TRAV'D WAY

IOWA CITY NUMBER

FHWA URBAN
AREA CODE
CLASS CODE
• ZEROS •
RURAL/MUNICIPAL CODE
TYPE RECORD
DOMAIN CODE
TOLL STATUS
SPEC SYS DESIGNATION
CENSUS CATEGORY

FUNCTIONAL CLASSIFICATION
PRESENT
FUTURE
FEDERAL

POLITICAL CODE
TOWNSHIP
RANGE
SECTION
ROAD NUMBER

STRUCTURE DATA
DESIGN 99999A
MAINT BRIDGE 99V9X999
NUMBER

TYPE OF STRUCTURE
MAIN STRUC. TYPE
TYPE SERVICE
TOT NO. MAIN SPANS
TOTAL LGTH STRUC.
LONGEST MAIN SPAN
DECK MATERIAL
DECK BEARING SURF.
SUPERSTRUCTURE
SUBSTRUCTURE

CONSTRUCTED
YEAR
MAJOR RECONST
LAST INV.

FACILITY CARRIED

UNUSED

STREET NAME
DESCRIPTION OF FEATURE CROSSED
KIND OF CROSSING

• ZEROS •

ADJ. COUNTY NO.
COORDINATES
EAST
SOUTH
UNUSED

FHWA STRUCTURE NUMBER
DESIGN 99999A
99999

DECK WIDTH
999V9 VERTICAL
999V99 999V9 999V99 999V99
UNDERCLEARANCE LATERAL
VERT. CLEAR. 10' LANE

BRIDGE DESCRIPTION
UNUSED
CUSTODIAN CODE
OWNER CODE
999V9 LEFT 999V9 RIGHT
SIDEWALK WIDTH
LATITUDE LONGITUDE
9999V9 9999V9
SPECIAL STUDY
SAFETY STUDY

EB/NB LANE
CLEARANCE
999V9 HORIZ.
999V9 VERT.
APPR. WDTH
TWIN/DIVIDED CODE

WB/SB LANE
CLEARANCE
999VP HORIZ.
999V9 VERT.
APPR. WDTH

APPROACH DATA NEAR
TYPE STRUC.
LONG. SPAN
NO. OF SPANS SUPERSTRUC.

APPROACH DATA FAR
TYPE STRUC.
LONG. SPAN
NO. OF SPANS SUPERSTRUC.

S.I. & A. DATA
NEAR ST. TYPE
FAR ST. TYPE
ON STRUC
UNDER STRUC
APPR. RDWAY WIDTH
BRIDGE MEDIAN TYPE
SKEW ANGLE
STRUC. FLARED
CONTROL
VERTICAL CLEARANCE
999V9

APPROACH LANES

NAVIGATIONAL DATA
HORIZONTAL
VERTICAL
BRIDGE ROADWAY WIDTH

DETOUR LENGTH
UNUSED
LATITUDE LONGITUDE
SPECIAL STUDY

HISTORICAL SIGNIFICANCE
DECK
SUPERSTRU.
SUBSTRU.
CHANNEL
CULVERT
EST REMAIN LIFE
OPERATING RAT
AP RDWY ALIGN
INVENT RATING

CONDITION
S.I. & A. DATA

POSTED LOAD LIMIT APPRAISAL
FIRST
SECOND
THIRD
STRUC COND
DECK GEOMETRY
UNDERCLR V & H
SAFE LOAD
WATERWAY ADEQ
AP RDWY ALIGN

TYPE PROPOSED IMPROVEMENTS
SERVICE
WORK / LENGTH
DESIGN LOAD
ROADWAY WIDTH
LANES
DESIGN YEAR
YEAR
TYPE IMP
IMPROVEMENTS

ADT ADJ ROAD
PREENGIN'R
DEMOLITION
SUBSTRUC
SUPERSTRUC

S.I. & A. DATA
COST ($1000'S)
MONTH
DAY YEAR
TYPE
NEXT TYPE
QUARTER
PRINT CODE
PHY VULN.
P'PAL/OTHER
DESIGN LOAD

INSPECTION
TRAF SAFETY
OPEN/CLOSED
TRAF ON SLAB
BARREL LENGTH

H LOAD
YEAR COUNTED
ADT TRUCKS AUTOS

TRAFFIC

TYPE
MOTORCYCLES
PICKUPS & PANELS
SINGLE UNIT-2 AX
RECREATION VEH.
SINGLE UNIT-3 AX
TRUCK TRAILERS

BUSES
3 AXLES 4 AXLES 5 AXLES

TTST
DOUBLE BOTTOMS

TRAFFIC

ONE YEAR EXPANSION FACTORS
ADT
SV9999
AUTO PICKUP PANEL
SV9999
SINGLE UNIT 6 AXLE TTST
SV9999
3 6 4 5 AX 6 DBL BOT'M
SV9999
SV9999

ACCIDENTS
FATAL
NONFATAL INJURY

FATALITIES
NON-PEDEST
PEDEST

INJURIES
NON-PEDEST
PEDEST
NON-INJURY ACCIDENTS

ACCIDENT DATA

YEAR NEEDED

EXTERNAL STORAGE FORMAT

BASE REC. INVENTORY   RECORD SIZE 1000   BLOCK SIZE _____   DSNAME #SEE BELOW   MUNICIPAL STRUCTURE

	NON-INJ ACC.	MAINT. DISTRICT NO.	MAINT. RESIDENCY NO.	CIVIL TOWNSHIP	DISTRICT NUMBER	UNUSED	MILEPOINT		FEDERAL AID PROJECT NUMBER	S.I.C.A. SUFFICIENCY			RAILROAD CROSSING NUMBER	CONDITIONS				PAINT CONTRACTOR	UNUSED	ACCIDENT DATA REF. NODES					
														DECK OVLY		PAINT				1			2		
							BEGIN 999V99	END 999V99		RATING	MONTH	YEAR		RATING	YEAR	RATING	YEAR			TYPE	NUMBER	MILEPOINT	TYPE	NUMBER	MILEPOINT

000 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   7

• ZEROS • THIS AREA OF THE RECORD IS BEING USED IN ANOTHER SYSTEM. THE SAME DATA SHOULD BE STORED IN THESE POSITIONS FOR ALL SYSTEMS. IF IT APPLIES. ELSE, THE POSITIONS WILL CONTAIN ZEROS.	ALT. KEY				
	MUNICIPAL CNTL				
	COUNTY	CITY	STREET	SEQUENCE	STRUC. NO.

UNUSED

700 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   8

UNUSED

800 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   9

B12

UNUSED

900 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   10

1000 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   11

1100 1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   12

2

Appendix C

1. Comparison of ALAS and Base Record Breaks (C1)
2. Outline of SAS Programs (C2)
3. Base-ALAS Interface File Format (C3)
4. Accident Node Intersection Identifer Literal Description File (C4)
5. Sample listing from Interface Edit File (C5)
6. Interfaced Accident File Format (C6-C9)

COMPARISON OF ALAS AND BASE RECORD BREAKS

SEQUENCE BREAKS	BASE RECORD			ALAS	SEQUENCE BREAKS	BASE RECORD			ALAS
	P	S	M	N		P	S	M	N
1. County boundary	X	X	X	X	13. Interchange ramp connections	X	X		X
2. Change in functional classification	X	X	X		14. Section line	X	X		
3. Change in federal aid route number & control section	X	X	X		15. Change in type section	X		X	
					16. Change in type area	X		X	
4. Present Urban area line	X	X	X		17. Change in function code	X			
5. Change in surface type, surface width or roadway width	X	X	X		18. Changes in maintenance contract area	X			
6. Intersection with corporation lines	X	X	X		19. Point of intersection at interchange	X			X
7. Traffic volume changes	X	X	X		20. Bridges				X
8. Junction with a primary road	X	X	X	X	21. Railroad grade crossings				X
9. Change in condition ratings	X	X	X		22. All local city street intersections				X
10. Intersections with higher priority streets	X	X	X	X	23. Grade separations				X
11. Road or street termini	X	X	X	X	24. Ninety degree road turns				X
12. Intersection with local road (rural-rural and rural-urban only)	X	X		X					

P = Primary; S = Secondary; M = Municipal; N = Node; X = Break

Base-ALAS Inferface System
Outline of SAS Programs

<u>FABR</u> - Pulls the necessary data items from the Primary Road Base Record File, and the necessary data items for the FAS and FAUS systems from the Secondary and Municipal Base Record Files and combines the data into one file.

<u>EDIT1</u> - Manipulates the Base-ALAS Interface File (format shown on page C3) to create flags for duplicate route jumps and merges this file with the Accident Node Intersection Identifier and Literal Description File (format shown on page C4).

<u>EDIT2</u> - Combines the FABR file and the EDIT1 file, assigns several variables and creates the Interface Edit File. An example printout is shown on page C5.

<u>EDITDM</u> - Utilizing the Primary Road portion of the Base-ALAS Interface Edit File, edits the Primary Road accidents for route, proper node and intersection identifier coding and city code assignment. This program is run weekly against the accident file and error lists are printed out and corrections are then made.

<u>EDITMPNT</u> - Assigns milepoints to Primary, FAS and FAUS accidents and creates the Interface Accident File (format shown on pages C6-C9).

EXTERNAL STORAGE FORMAT

BASE-ALAS INTERFACE   RECORD SIZE 100   BLOCK SIZE _____   DSNAME ●SEE BELOW

BASE-ALASE INTERFACE RECORD GENERATION DATA GROUP ●DSN-X141.PO010.BASEALAS( )	COUNTY NUMBER	ROUTE		SEGMENT SEQUENCE	SYSTEM CODE	REFERENCE NODE NUMBER	REFERENCE NODE MILEPOINT		STRUCTURE NO.	RAILROAD CROSSING NUMBER	INTERSECTION NODE IDENTIFIER	COUNTY LINE ID.	UNUSED
		NON-MAIN ID	NUMBER				SIGN	NUMBER 99V99						

0   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

100   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

C3

200   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

300   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

400   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

500   1   5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95   100

EXTERNAL STORAGE FORMAT

08/19/85

BASE REC. INVENTORY   RECORD SIZE 46 _____   BLOCK SIZE _____   DSNAME ● SEE BELOW _____ _____

ACCIDENT NODE INTERSECTION IDENTIFIER AND LITERAL DESC. THE VSAM FILE IS: ● DSN-V121.C121010100.NODEDESC THE TAPE FILE IS: ● DSN-X121.NODEDESC.CUR( ) GENERATION DATA GROUP	COUNTY NUMBER	NODE NUMBER	INTERSECTION IDENTIFIER	LITERAL DESCRIPTION	
0	1	5	10	15 20 25 30 35 40 45	50 55 60 65 70 75 80 85 90 95
100					
200					
300					
400					
500					

C4

1

ALASCO=99   FRTE=69   ORDER=0   ADJCNT=1

C5

ALASRTE	MPNT	MP	INTFCODE	JUMPFLAG	RTEFLAG	ALASNODE	NODESEQ	NODEIND	INTID	SYS	RRCO	SER	RPSEQ	RU	ALASCITY	CITYNAME	LITDES
0069	0	154	A	0		130181	1			1	99	1770	10	R	0		US 69 AT HAMILTON CO LINE
0069	20			0		130981	2			1	99	1770	10	R	0		
0069	50			0		130981	2			1	99	1780	20	R	0		
0069	100			2		131781	3			1	99	1790	30	R	0		INT US 69 & CO C70
0069	121	155		0						1	99	1790	30	R	0		
0069	200			0		133381	4			1	99	1800	40	R	0		
0069	221	156		0						1	99	1800	40	R	0		
0069	300			0		134981	5			1	99	1810	50	R	0		
0069	321	157		0						1	99	1810	50	R	0		
0069	325			0		135381	6			1	99	1810	50	R	0		
0069	350			0		135781	7			1	99	1820	60	R	0		
0069	400			0		136581	8			1	99	1830	70	R	0		
0069	421	158		0						1	99	1840	80	P	0		
0069	498			0		138181	9			1	99	1850	90	R	0		INT US 69 & CO C62
0069	520	159		0						1	99	1850	90	R	0		
0069	600			0		230181	10			1	99	1860	100	R	0		
0069	620	160		0						1	99	1870	110	R	0		
0069	650			0		230981	11			1	99	1880	120	R	0		
0069	700			0		231781	12			1	99	1890	130	R	0		INT US 69 & CO C54
0069	720	161		0						1	99	1890	130	R	0		
0069	740			0		232481	13		232583	1	99	1900	140	P	0		JCT US 69 & IA 72, S Y-INT
0069	759			0		232681	14		232593	1	99	1910	150	R	0		JCT US 69 & IA 72, N Y-INT
0069	800			0		233381	15			1	99	1920	160	R	0		
0069	820	162		0						1	99	1920	160	P	0		
0069	826			0		233781	16			1	99	1920	160	R	0		
0069	900			0		234981	17			1	99	1930	170	P	0		
0069	920	163		0						1	99	1930	170	R	0		
0069	950			0		235792	18			1	99	1930	180	R	0		INT US 69 & FAS 3011
0069	998			0		236591	19			1	99	1960	200	P	0		
0069	1021	164		0						1	99	1960	200	R	0		
0069	1034			0		237181	20			1	99	1960	200	R	0		US 69 AT CRISP RR
0069	1099			0		238181	21			1	99	1970	210	P	0		
0069	1121	165		0						1	99	1970	210	R	0		
0069	1184			0		239380	22		330181	1	99	1970	220	R	0		
0069	1214			0		330185	23		330181	1	99	2040	280	P	0		
0069	1223	166		0						1	99	2050	285	R	0		
0069	1277			0		330195	24		340101	1	99	2080	310	R	0		
0069	1311			0		340301	25		340101	1	99	2090	320	P	0		
0069	1324	167		0						1	99	2100	323	P	0		
0069	1398			0		341703	26			1	99	2140	336	P	0		N JCT US 69 & IA 3, E Y-INT
0069	1392			0		341901	27			1	99	2150	339	R	0		N JCT US 69 & IA 3, N Y-INT
0069	1420	168		0						1	99	2160	342	R	0		
0069	1429			0		342001	28			1	99	2160	342	R	0		
0069	1431			0		342501	29			1	99	2170	345	R	0		
0069	1434			0		342601	30			1	99	2170	345	R	0		US 69 AT IOWA RIV
0069	1481			0		343301	31			1	99	2180	360	R	0		INT US 69 & CO C38
0069	1488			0		344901	32			1	99	2190	370	R	0		

INTERNAL MODE:
B = Binary
P = Packed Unsigned
PS = Packed Signed
A = Alphabetic
N = Numeric
A N = Alpha-Numeric
R = Right Justified
L = Left Justified
b = Blanks

PROGRAM DSAFETY.SAS.DATA (EDITMPNT)
RECORD NAME Interfaced Accident File   D.S.N. INTFACC. YR
     General Record (Record Type 'A')   DATE December, 1984
REVISED BY _____ DATE _____
MODE Fixed   CHAR/REC _____ REC/BLK _____ LABELS Standard
ACCESS METHOD Sequential DEVICE 3330V VOL. SER. _____ DISP _____

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case	G-CSE		8			1-8
2		Case Year			1		N	1
3		Case Prefix			1		N	2
4		Case Number			6		N	3-8
5		Record Type 'A'	G-RCT		1		A	9
6		Record Number 'Ø1'	G-RNO		2		N	10-11
7		Accident Severity Code	G-SEV		1		N	12
8		Report Type	G-REP		1		N	13
9		Total Killed	G-KLD		2		N	14-15
10		Total Injured	G-INJ		2		N	16-17
11		Total Vehicles	G-VEH		2		N	18-19
12		Total Property Damage	G-PRP		8		N	20-27
13		Date of Accident MMDDYY	G-DTA		6		N	28-33
14		Day of Week	G-DAY		1		N	34
15		Time of Day	G-TME		4		N	35-38
16		Rural/Urban Code	G-RU		1		A	39
17		County	G-CO		2		N	40-41
18		City	G-CTY		2		N	42-43
19		Route	G-RTE		4		A/N	44-47
20		Road Class	G-RDC		1		N	48
21		Intersection Class	G-ITC		1		N	49
22		Intersection Identifier	G-ITI		6		N	50-55
23		Reference Node	G-REF		6		N	56-61
24		Distance Indicator	G-DIS		3		N	62-64
25		Direction Node	G-DIR		6		N	65-70
26		Type of Accident	G-ATY		2		N	71-72
27		Character of Roadway	G-CHR		2		N	73-74
28		Roadway Geometrics	G-GEO		1		N	75
29		Light Conditions	G-LGT		1		N	76
30		Weather Conditions 1 & 2	G-WEA		2		N	77-78
31		Locality	G-LCL		1		N	79
32		Location	G-LCC		1		N	80
33		Collision Type	G-COL		2		N	81-82
34		ALAS Flag	G-ALAS		1		N	83
35		Date Added/Updated YYDDD	G-UPD		5		N	84-88
35		~~Filler~~			~~12~~		~~A~~	~~89-100~~
37								
38								
39		REVISIONS FOR BASE RECORD ACCIDENT ASSIGNMENT (See Page 4)						
40								
41		Base Record County	G-BRCO		2		N	89-90
42		System Code	G-SYS		1		N	91
43		Direction/Non Mainline Code	G-NMID		1		A/N	92
44		Primary/Federal-Aid Route Number	G-FRTE		4		N	93-96
45		Milepoint	G-MPNT		4		N	97-100
46								
47		* Fields 89-100 will be filled with Ø's for accidents that do not occur on the						
48		Primary, FAS or FAUS Road Systems.						
49								
50								
51			C6					
52								

PROGRAM DSAFETY.SAS.DATA (EDITMPNT)

RECORD NAME __Interfaced Accident File__ D.S.N. INTFACC. YR
__Vehicle/Driver Record (Record Type 'B')__ DATE December, 1984

REVISED BY ___Ruth Quinn___ DATE____

MODE ___fixed___ CHAR/REC_____ REC/BLK_____ LABELS ___Standard___

ACCESS METHOD ___sequential___ DEVICE 3330V VOL.SER._____ DISP_____

INTERNAL MODE:
- B = Binary
- P = Packed Unsigned
- PS = Packed Signed
- A = Alphabetic
- N = Numeric
- A N = Alpha-Numeric
- R = Right Justified
- L = Left Justified
- b = Blanks

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case Number	V-CSE		8		N	1-8
2		Record Type 'B'	V-RCT		1		A	9
3		Record Number	V-RNO		2		N	10-11
4		Vehicle Number	V-VNO		2		N	12-13
5		Vehicle Type	V-TYP		2		N	14-15
6		Vehicle Year	V-YR		2		N	16-17
7		Special Use	V-USE		1		N	18
8		Number of Occupants	V-OCC		2		N	19-20
9		Attachment	V-ATT		2		N	21-22
10		Fire/Explosion	V-FIRE		1		N	23
11		Hit & Run	V-H/R		1		N	24
12		Point of Initial Impact	V-IMP		2		N	25-26
13		Damaged Areas 1, 2, 3 & 4	V-AREA		8		N	27-34
14		Damage Severity	V-DSEV		1		N	35
15		Vehicle Defects	V-DEF		2		N	36-37
16		Initial Direction of Travel	V-DIR		1		N	38
17		Speed Limit	V-SPD		2		N	39-40
18		Roadway/Environment Contrib. Circ.	V-RD/ENV		2		N	41-42
19		Traffic Controls	V-CNT		2		N	43-44
20		Type of Trafficway	V-TTR		1		N	45
21		Traffic Flow	V-FLOW		1		N	46
22		Type of Surface	V-STYP		1		N	47
23		Vehicle Action	V-ACT		2		N	48-49
24		Fixed Object Struck	V-FIX		2		N	50-51
25		Location of Fixed Object	V-FLOC		1		N	52
26		Surface Conditions 1 & 2	V-SCND		2		N	53-54
27		Filler			10		A	55-64
28		Driver's Age	D-AGE		2		N	65-66
29		Driver's Sex	D-SEX		1		A	67
30		License Restrictions	D-RSTR		4		A/N	68-71
31		Restrictions Complied With	D-CMP		1		N	72
32		Driver Charged	D-CHD		1		A	73
33		Sobriety Test Given	D-TEST		1		N	74
34		Sobriety Test Results	D-RSLT		3		N	75-77
35		Driver Condition	D-DCND		2		N	78-79
36		Drv/Veh Contrib. Circ. 1 & 2	D-DR/VEH		4		N	80-83
37		Vision Obscured	D-VISN		2		N	84-85
38		Filler			15		A	86-100
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52			C7					

INTERNAL MODE:
B = Binary
P = Packed Unsigned
PS = Packed Signed
A = Alphabetic
N = Numeric
A N = Alpha-Numeric
R = Right Justified
L = Left Justified
b = Blanks

PROGRAM DSAFETY.SAS.DATA (EDITMPNT)
RECORD NAME Interfaced Accident File
Injury/Pedestrian Record (Record Type 'C')
D.S.N. INTFACC. YR
DATE December, 1984
REVISED BY_____ DATE_____
MODE fixed   CHAR/REC 100   REC/BLK_____   LABELS Standard
ACCESS METHOD sequential   DEVICE 3330V   VOL. SER._____   DISP_____

No.	'X' if Chg.	Field Description	Mnemonic	Sort Seq.	External Length	Internal Length	Int. Mode	Relative Position
1		Case Number	I-CSE		8		N	1-8
2		Record Type 'C'	I-RCT		1		A	9
3		Record Number	I-RNO		2		N	10-11
4		Injury/Pedestrian Data Block 1			25			12-36
5		Unit Number	I-UNO-1		2		N	12-13
6		Age	I-AGE-1		2		N	14-15
7		Sex	I-SEX-1		1		A	16
8		Injury Severity	I-SEV-1		1		N	17
9		Injuried Area	I-AREA-1		1		N	18
10		Position of Injured Person	I-POS-1		1		N	19
11		Protective Device	I-PDEV-1		1		N	20
12		Ejection	I-EJCT-1		1		N	21
13		Filler			7		A	22-28
14		Pedestrian Action	P-ACT-1		2		N	29-30
15		Color of Clothing	P-CLR-1		1		N	31
16		Pedestrian also Driver	P-P/DRV-1		1		A	32
17		Sobriety	P-SOB-1		1		N	33
18		Test Results	P-TEST-1		3		N	34-36
19		Injury/Ped. Data Block 2			25			37-61
20		Unit Number	I-UNO-2		2		N	37-38
21.		Age	I-AGE-2		2		N	39-40
22		Sex	I-SEX-2		1		A	41
23		Injury Severity	I-SEV-2		1		N	42
24		Injured Area	I-AREA-2		1		N	43
25		Position	I-POS-2		1		N	44
26		Protective Device	I-PDEV-2		1		N	45
27		Ejection	I-EJCT-2		1		N	46
28		Filler			7		A	47-53
29		Ped. Action	P-ACT-2		2		N	54-55
30		Color of Clothing	P-CLR-2		1		N	56
31		Ped. Also Driver	P-P/DRV-2		1		A	57
32		Sobriety	P-SOB-2		1		N	58
33		Test Results	P-TEST-2		3		N	59-61
34		Injury/Ped. Data Block 3			25			62-86
35		Unit Number	I-UNO-3		2		N	62-63
36		Age	I-AGE-3		2		N	64-65
37		Sex	I-SEX-3		1		A	66
38		Injury Severity	I-SEV-3		1		N	67
39		Injured Area	I-AREA-3		1		N	68
40		Position	I-POS-3		1		N	69
41		Protective Device	I-PDEV-3		1		N	70
42		Ejection	I-EJCT-3		1		N	71
43		Filler			7		A	72-78
44		Ped. Action	P-ACT-3		2		N	79-80
45		Color of Clothing	P-CLR-3		1		N	81
46		Ped. also Driver	P-P/DRV-3		1		A	82
47		Sobriety	P-SOB-3		1		N	83
48		Test Results	P-TEST-3		3		N	84-86
49		Filler			14		A	87-100
50								
51				C8				
52								

EXPLANATION OF ADDITIONS TO GENERAL RECORD OF ACCIDENT
STATISTICS FILE TO DEVELOP THE INTERFACE ACCIDENT FILE (INTFACC. YR__)

The following data fields will be added to the last 12 positions of the
general record of the Accident Statistics file for accidents on Primary
Roads, FAS and FAUS routes. These positions are not being used at the
present time. The ALAS-Base Record Interface file will be cross
-matched with the accident file to provide the data for these fields.
These fields will provide capability to assign accidents to Base Record
sequences for HPMS and also to interface accident data with Base Record
Data.

1. Base Record County: The county of record within the Base Record
    file. On north or south county lines or within cities which lie in
    more than one county, the Base Record county may be different than
    the county coded on the accident file.

2. System Code: This code reflects the Primary or Federal-Aid System:

        1 - Primary Road System
        2 - Primary Road System, One-Way, Off-Direction
            (Southbound or Westbound)
        3 - Federal-Aid Secondary (FAS)
        4 - Federal-Aid Urban System (FAUS)

3. Direction/Non-Mainline Code: Indicates direction of travel for
    divided highways or one-way pairs and non-mainline ramp mileage:

        Ø - Normal two-lane
        E - Eastbound
        N - Northbound
        R - Ramp
        S - Southbound
        U - Unknown
        W - Westbound

4. Primary/Federal-Aid Route Number: If on Primary System, the Primary
    Road Route will be coded. For other Federal-Aid systems, the Federal-
    Aid Route Number will be coded.

5. Milepoint: The milepoint reflects the mileage from the south or
    west county line or from beginning of route within the county.
    The following conversions will be used in the milepoint assignment:

        1. If a Primary Road route number is shown but node location
            of accident is unknown, the milepoint will be shown as
            9999.
        2. If the accident is coded between two nodes with an unknown
            (000) distance, the milepoint will be assigned halfway
            between the two nodes.

NOTE:These fields will be filled with Ø's for accidents that do not occur
on the Primary, FAS or FAUS road systems.

Appendix D

FOCUS OVERVIEW

The FOCUS on-line files are structured such that they are permanently cross-referenced. This cross-referencing allows access through either the road file or accident file. Cross-referencing is accomplished through file indexing. Each file contains like data fields (year of data, system code, county, route and sequence) that are grouped together to be used as an index.

When accessing through the road file, one road record will be associated with or linked to all of the accident records for that roadway sequence. When accessing through the accident file one and only one roadway sequence will be linked to each accident record.

Page D2 illustrates the file structure when accessing through the road file. The Road 1 segment is the parent segment containing the majority of the base record fields. Road 2 is a unique child segment containing lesser used base record fields. The unique Road 2 segment was created to improve run time. The structure segment contains data fields pertaining to bridges and major culverts that occur on the road segment.

Cross-referencing the accident file is accomplished through indexing to the A record segment. The accident file A record segment contains type of accident data fields. The A record then is the entry point to the B and C record segments of the accident file. The B segment contains vehicle data while the C segment contains personal injury data. Page D3 illustrates the file structure when accessing through the accident file. The A record becomes the parent segment and is cross-referenced through indexing to the Road 1 segment of the road file.

D1

```
              ROAD1
     01       S1
     **************
     *BRINDEX      **I
     *DATA_YR      **
     *SYSTEM       **
     *COUNTY       **
     *             **
     **************
      **************
              I
     +-----------------+-------------------+
     I                 I                   I
     I ROAD2           I STRUC             I ARECORD
 02  I U          03   I S1           04   I KM
 **************        **************       .............
 *HWY_SYS      *       *STRUCNO      **     :CASENO      ::
 *FUNCTION     *       *TYPE_REC     **     :DUPREC      ::
 *IA_FC        *       *FHWA_STR_NO  **     :BRINDEX     ::K
 *FED_FC       *       *UNDERPASS    **     :DATA_YEAR   ::
 *             *       *             **     :            ::
 **************        **************       :............::
                        **************      .............:
                                                I M1410030
                    +------------------+
                    I                  I
                    I BRECORD          I CRECORD
               05   I KL          06   I KL
               .............          .............
               :VEHICLE_NO   ::       :UNITNO      ::
               :VEHICLE_TYPE::        :AGE         ::
               :VEHICLE_YEAR::        :SEX         ::
               :SPECIAL_USE  ::       :SEVERITY    ::
               :            ::        :            ::
               :...........::         :...........::
               :...........:          :...........:
                    M1410030              M1410030
```

FOCUS FILE STRUCTURE FOR ACCESS THROUGH ACCIDENT FILE

```
            ARECORD
 01         S1
 **************
 *CASENO        **
 *BRINDEX       **I
 *DUPREC        **
 *DATA_YEAR     **
 *              **
 **************
 **************
        I
        +-------------------------+-------------------------+
        I                         I                         I
        I ROAD1                   I BRECORD                 I CRECORD
 02     I KU           05         I S1         06           I S0
 .............          **************           **************
 :BRINDEX    :K        *VEHICLE_NO   **        *UNITNO        **
 :DATA_YR    :         *VEHICLE_TYPE**         *AGE           **
 :SYSTEM     :         *VEHICLE_YEAR**         *SEX           **
 :COUNTY     :         *SPECIAL_USE **         *SEVERITY      **
 :           :         *             **        *             **
 :..........:          **************           **************
        I M1410000     **************           **************
        I
        +--------------------+
        I                    I
        I ROAD2              I STRUC
 03     I KLU       04       I KL
 ............         ............
 :HWY_SYS    :       :STRUCNO     ::
 :FUNCTION   :       :TYPE_REC    ::
 :IA_FC      :       :FHWA_STR_NO ::
 :FED_FC     :       :UNDERPASS   ::
 :           :       :            ::
 :..........:        :...........::
        M1410000     :...........:
                          M1410000
```

```
FILE=M1410000, SUFFIX=FOC, $
   SEGNAME=ROAD1, SEGTYPE=S1, $
     FIELD=BRINDEX,        ALIAS=BRI,      FORMAT=A13, FIELDTYPE=I, $
       FIELD=DATA_YR,      ALIAS=DYR,      FORMAT=P3,    $
       FIELD=SYSTEM,       ALIAS=SYS,      FORMAT=P2,    $
       FIELD=COUNTY,       ALIAS=BRCO,     FORMAT=P3,    $
       FIELD=ROUTE,        ALIAS=FRTE,     FORMAT=A4,    $
       FIELD=SEQU,         ALIAS=FSEQ,     FORMAT=P5,    $
     FIELD=SERIAL,         ALIAS=SER,      FORMAT=P6,    $
     FIELD=BR_RTE,         ALIAS=BRRTE,    FORMAT=A4,    $
     FIELD=BR_SEQU,        ALIAS=BRSEQ,    FORMAT=P5,    $
     FIELD=CO_SEQ,         ALIAS=COSEQ,    FORMAT=P3,    $
     FIELD=CITY_NO,        ALIAS=CITY,     FORMAT=P5,    $
     FIELD=UAC,            ALIAS=UAC,      FORMAT=P4,    $
     FIELD=RM_CODE,        ALIAS=RM,       FORMAT=P2,    $
     FIELD=TYPE_SEC,       ALIAS=TYPSEC,   FORMAT=P2,    $
     FIELD=CNTL_LENG,      ALIAS=LENG,     FORMAT=P9.2,  $
     FIELD=RDWY_WID,       ALIAS=RDWY,     FORMAT=A4,    $
     FIELD=DISTRICT,       ALIAS=DIST,     FORMAT=P2,    $
     FIELD=ACCESS_CNTL,    ALIAS=ACCTL,    FORMAT=P2,    $
     FIELD=TYPE_AREA,      ALIAS=TAREA,    FORMAT=P2,    $
     FIELD=MED_TYPE,       ALIAS=MTYP,     FORMAT=P2,    $
     FIELD=MED_WID,        ALIAS=MWID,     FORMAT=P5,    $
     FIELD=BEG_MILEPNT,    ALIAS=BMPNT,    FORMAT=P6.2,  $
     FIELD=ADT,            ALIAS=ADT,      FORMAT=P7,    $
     FIELD=TRUCKS,         ALIAS=TRCK,     FORMAT=P5,    $
     DEFINE PCTTRKS/D5.2 = (TRUCKS/ADT) * 100;$
     FIELD=FATAL,          ALIAS=FATAL,    FORMAT=P5,    $
     FIELD=NON_FATAL,      ALIAS=NONFAT,   FORMAT=P7,    $
     FIELD=FATAL_NPED,     ALIAS=FNONP,    FORMAT=P5,    $
     FIELD=FATAL_PED,      ALIAS=FPED,     FORMAT=P5,    $
     FIELD=INJ_NONP,       ALIAS=INONP,    FORMAT=P8,    $
     FIELD=INJ_PED,        ALIAS=IPED,     FORMAT=P5,    $
     FIELD=NONINJ_ACC,     ALIAS=NONINJ,   FORMAT=P7,    $
     FIELD=TOTAL_ACC,      ALIAS=TOTACC,   FORMAT=P7,    $
     FIELD=HWY_RESPON,     ALIAS=RESPON,   FORMAT=A1,    $
     FIELD=C_029MPH,       ALIAS=C00,      FORMAT=P2,    $
     FIELD=C_3039MPH,      ALIAS=C30,      FORMAT=P2,    $
     FIELD=C_4049MPH,      ALIAS=C40,      FORMAT=P2,    $
     FIELD=C_5055MPH,      ALIAS=C50,      FORMAT=P2,    $
     FIELD=FED_TRK_RTE,    ALIAS=FTRK,     FORMAT=P2,    $
     FIELD=CI_THRU_WID,    ALIAS=CITWID,   FORMAT=P3,    $
     FIELD=N_SURF_WD,      ALIAS=NSWD,     FORMAT=P3,    $
     FIELD=N_OUT_TYP,      ALIAS=NOSTYP,   FORMAT=P2,    $
     FIELD=N_OUT_WID,      ALIAS=NOSWID,   FORMAT=P3,    $
     FIELD=N_IN_TYP,       ALIAS=NISTYP,   FORMAT=P2,    $
     FIELD=N_IN_WID,       ALIAS=NISWID,   FORMAT=P3,    $
     FIELD=N_GR_LEN1,      ALIAS=NGL1,     FORMAT=P4.2,  $
     FIELD=N_GR_LEN2,      ALIAS=NGL2,     FORMAT=P4.2,  $
     FIELD=N_GR_LEN3,      ALIAS=NGL3,     FORMAT=P4.2,  $
     FIELD=N_PASS_LENG,    ALIAS=NPASS,    FORMAT=P4.2,  $
     DEFINE NPCTPASS = (NPASS/LENG) * 100;$
     FIELD=N_SPD_LMT,      ALIAS=NSPLMT,   FORMAT=P3,    $
     FIELD=N_SAFETY_ST,    ALIAS=NSAFST,   FORMAT=P2,    $
     FIELD=N_THRU_WID,     ALIAS=NTHRU,    FORMAT=P3,    $
```

```
      FIELD=S_SURF_WD,        ALIAS=SSWD,    FORMAT=P3,    $
      FIELD=S_OUT_TYP,        ALIAS=SOSTYP,  FORMAT=P2,    $
      FIELD=S_OUT_WID,        ALIAS=SOSWID,  FORMAT=P3,    $
      FIELD=S_IN_TYP,         ALIAS=SISTYP,  FORMAT=P2,    $
      FIELD=S_IN_WID,         ALIAS=SISWID,  FORMAT=P3,    $
      FIELD=S_GR_LEN1,        ALIAS=SGL1,    FORMAT=P4.2,  $
      FIELD=S_GR_LEN2,        ALIAS=SGL2,    FORMAT=P4.2,  $
      FIELD=S_GR_LEN3,        ALIAS=SGL3,    FORMAT=P4.2,  $
      FIELD=S_PASS_LENG,      ALIAS=SPASS,   FORMAT=P4.2,  $
      DEFINE SPCTPASS = (SPASS/LENG) * 100;$
      FIELD=S_SPD_LMT,        ALIAS=SSPLMT,  FORMAT=P3,    $
      FIELD=S_SAFETY_ST,      ALIAS=SSAFST,  FORMAT=P2,    $
      FIELD=S_THRU_WID,       ALIAS=STHRU,   FORMAT=P3,    $
      FIELD=BR_FILE,          ALIAS=BRF,     FORMAT=A1,    $
      FIELD=RAMP_IND,         ALIAS=RAMP,    FORMAT=A1,    $
      FIELD=ATR_GROUP,        ALIAS=ATRGP,   FORMAT=P2,    $
      FIELD=HWY_TYPE,         ALIAS=HTYP,    FORMAT=P3,    $
      FIELD=END_MPNT,         ALIAS=EMPNT,   FORMAT=P6.2,  $
      FIELD=END_NODE1,        ALIAS=ENODE1,  FORMAT=P7,    $
      FIELD=END_NODE2,        ALIAS=ENODE2,  FORMAT=P7,    $
      FIELD=BEG_MPST,         ALIAS=BMPST,   FORMAT=P6.2,  $

SEGNAME=ROAD2, SEGTYPE=U, PARENT=ROAD1,$
      FIELD=HWY_SYS,          ALIAS=HSYS,    FORMAT=P3,    $
      FIELD=FUNCTION,         ALIAS=FUNC,    FORMAT=P3,    $
      FIELD=IA_FC,            ALIAS=IFC,     FORMAT=P3,    $
      FIELD=FED_FC,           ALIAS=FFC,     FORMAT=P4,    $
      FIELD=TOWNSHIP,         ALIAS=TWN,     FORMAT=P4,    $
      FIELD=RANGE,            ALIAS=RNG,     FORMAT=A2,    $
      FIELD=SECTION,          ALIAS=SEC,     FORMAT=P3,    $
      FIELD=ROAD_NO,          ALIAS=ROAD,    FORMAT=P3,    $
      FIELD=ATR_LOC,          ALIAS=ATRLOC,  FORMAT=P2,    $
      FIELD=ADJ_CO,           ALIAS=ADJCO,   FORMAT=P3,    $
      FIELD=SIGNALS,          ALIAS=SIGNAL,  FORMAT=P3,    $
      FIELD=STOP_SIGNS,       ALIAS=STOPS,   FORMAT=P3,    $
      FIELD=OTHER_IAG,        ALIAS=OTHER,   FORMAT=P3,    $
      FIELD=NO_INT,           ALIAS=INTCHG,  FORMAT=P2,    $
      FIELD=NO_SEP,           ALIAS=SEPAR,   FORMAT=P2,    $
      FIELD=NO_OTHER_BR,      ALIAS=OBR,     FORMAT=P3,    $
      FIELD=INV_YEAR,         ALIAS=INVYR,   FORMAT=P5,    $
      FIELD=TERRAIN,          ALIAS=TERAIN,  FORMAT=P2,    $
      FIELD=ROW_WIDTH,        ALIAS=ROWWD,   FORMAT=P5,    $
      FIELD=MAJ_INT,          ALIAS=MAJINT,  FORMAT=P3,    $
      FIELD=MIN_INT,          ALIAS=MININT,  FORMAT=P3,    $
      FIELD=ENT_BUS,          ALIAS=EBUS,    FORMAT=P3,    $
      FIELD=ENT_PRI,          ALIAS=EPRI,    FORMAT=P3,    $
      FIELD=NON_MAIN_ID,      ALIAS=NMID,    FORMAT=A1,    $
      FIELD=TRF_YR,           ALIAS=TYR,     FORMAT=P5,    $
      FIELD=AUTOS,            ALIAS=AUTO,    FORMAT=P7,    $
      FIELD=CYCLES,           ALIAS=CYCLE,   FORMAT=P5,    $
      FIELD=PKUP,             ALIAS=PKUP,    FORMAT=P5,    $
      FIELD=SU_2AX,           ALIAS=SU2,     FORMAT=P5,    $
      FIELD=REC_VEH,          ALIAS=RVEH,    FORMAT=P5,    $
      FIELD=SU_3AX,           ALIAS=SU3,     FORMAT=P5,    $
      FIELD=TRK_TRLR,         ALIAS=TRLR,    FORMAT=P5,    $
      FIELD=BUSES,            ALIAS=BUSES,   FORMAT=P5,    $
      FIELD=TTST_3AX,         ALIAS=TTST3,   FORMAT=P5,    $
      FIELD=TTST_4AX,         ALIAS=TTST4,   FORMAT=P5,    $
      FIELD=TTST_5AX,         ALIAS=TTST5,   FORMAT=P5,    $
      FIELD=DBL_BTM,          ALIAS=DBTM,    FORMAT=P5,    $
```

```
FIELD=M_DIST,           ALIAS=MDIST,  FORMAT=P2,    $
FIELD=M_RESID,          ALIAS=MRES,   FORMAT=P2,    $
FIELD=M_SERV_LVL,       ALIAS=MSERV,  FORMAT=A1,    $
FIELD=CI_TURN_LNS,      ALIAS=CITURN, FORMAT=P2,    $
FIELD=CI_PCT_TURN,      ALIAS=CIPCT,  FORMAT=P2,    $
FIELD=N_LENG,           ALIAS=NLENG,  FORMAT=P4.2,  $
FIELD=N_SUR_TYPE,       ALIAS=NSURF,  FORMAT=P6,    $
FIELD=N_SUR_THK,        ALIAS=NSTHK,  FORMAT=P4.1,  $
FIELD=N_CONST_YR,       ALIAS=NCONYR, FORMAT=P3,    $
FIELD=N_RECON_YR,       ALIAS=NRECYR, FORMAT=P3,    $
FIELD=N_RECON_TY,       ALIAS=NRECTY, FORMAT=P3,    $
FIELD=N_STOP_REST,      ALIAS=NSTRST, FORMAT=P3,    $
FIELD=N_STOP_LENG,      ALIAS=NSTLEN, FORMAT=P4.2,  $
FIELD=N_TYP_PARK,       ALIAS=NTYPRK, FORMAT=P2,    $
FIELD=N_TYP_DRAIN,      ALIAS=NTYDRN, FORMAT=P2,    $
FIELD=N_TURN_LANE,      ALIAS=NTURN,  FORMAT=P2,    $
FIELD=N_PCT_TURNS,      ALIAS=NPCTTN, FORMAT=P2,    $
FIELD=N_TRAF_FLOW,      ALIAS=NTRFLO, FORMAT=P2,    $
FIELD=S_LENG,           ALIAS=SLENG,  FORMAT=P4.2,  $
FIELD=S_SUR_TYPE,       ALIAS=SSURF,  FORMAT=P6,    $
FIELD=S_SUR_THK,        ALIAS=SSTHK,  FORMAT=P4.1,  $
FIELD=S_CONST_YR,       ALIAS=SCONYR, FORMAT=P3,    $
FIELD=S_RECON_YR,       ALIAS=SRECYR, FORMAT=P3,    $
FIELD=S_RECON_TY,       ALIAS=SRECTY, FORMAT=P3,    $
FIELD=S_STOP_REST,      ALIAS=SSTRST, FORMAT=P3,    $
FIELD=S_STOP_LENG,      ALIAS=SSTLEN, FORMAT=P4.2,  $
FIELD=S_TYP_PARK,       ALIAS=STYPRK, FORMAT=P2,    $
FIELD=S_TYP_DRAIN,      ALIAS=STYDRN, FORMAT=P2,    $
FIELD=S_TURN_LANE,      ALIAS=STURN,  FORMAT=P2,    $
FIELD=S_PCT_TURNS,      ALIAS=SPCTTN, FORMAT=P2,    $
FIELD=S_TRAF_FLOW,      ALIAS=STRFLO, FORMAT=P2,    $
```

MASTER DESCRIPTION FOR STRUCTURE SEGMENT

```
SEGNAME=STRUC, SEGTYPE=S1, PARENT=ROAD1, $
    FIELD=STRUCNO,          ALIAS=STRUC,  FORMAT=P3,     $
    FIELD=TYPE_REC,         ALIAS=TYPREC, FORMAT=P2,     $
    FIELD=FHWA_STR_NO,      ALIAS=FHWANO, FORMAT=P7,     $
    FIELD=UNDERPASS,        ALIAS=UND,    FORMAT=P2,     $
    FIELD=DESIGN_NO,        ALIAS=DSGNNO, FORMAT=A6,     $
    FIELD=MAINT_BRIDGE,     ALIAS=MBRDG,  FORMAT=A8,     $
    FIELD=YR_CONST,         ALIAS=YRCON,  FORMAT=P3,     $
    FIELD=YR_RECON,         ALIAS=YRREC,  FORMAT=P3,     $
    FIELD=FEATURE_XED,      ALIAS=FXED,   FORMAT=A25,    $
    FIELD=KIND_XING,        ALIAS=KXING,  FORMAT=P3,     $
    FIELD=TYPE_STRUC,       ALIAS=TYPST,  FORMAT=P3,     $
    FIELD=MAIN_STR_TY,      ALIAS=MSTRTY, FORMAT=P4,     $
    FIELD=TYPE_SERV,        ALIAS=TYPSER, FORMAT=A2,     $
    FIELD=TOT_STR_LENG,     ALIAS=TSTRL,  FORMAT=P5,     $
    FIELD=EBNB_HORIZ,       ALIAS=ENHORI, FORMAT=P5.1,   $
    FIELD=EBNB_VERTI,       ALIAS=ENVERT, FORMAT=P5.1,   $
    FIELD=EBNB_APPRO,       ALIAS=ENAPPR, FORMAT=P3,     $
    FIELD=TWIN_DIV,         ALIAS=TDCODE, FORMAT=A1,     $
    FIELD=WBSB_HORIZ,       ALIAS=WSHORI, FORMAT=P5.1,   $
    FIELD=WBSB_VERTI,       ALIAS=WSVERT, FORMAT=P5.1,   $
    FIELD=WBSB_APPRO,       ALIAS=WSAPPR, FORMAT=P3,     $
    FIELD=LANES_ON,         ALIAS=LANEON, FORMAT=P3,     $
    FIELD=LANES_UNDER,      ALIAS=LANEUN, FORMAT=P3,     $
    FIELD=APPROCH_ROAD,     ALIAS=APROAD, FORMAT=P5,     $
    FIELD=BR_MEDIAN,        ALIAS=MEDIAN, FORMAT=P2,     $
    FIELD=STRUC_FLARE,      ALIAS=STFLAR, FORMAT=P2,     $
    FIELD=BRIDGE_RDWAY,     ALIAS=BRDWAY, FORMAT=P6.1,   $
    FIELD=DECK_WIDTH,       ALIAS=DECKWD, FORMAT=P6.1,   $
    FIELD=VER_CLEAR10F,     ALIAS=VC10F,  FORMAT=P6.2,   $
    FIELD=CUSTODIAN,        ALIAS=CUSTOD, FORMAT=A1,     $
    FIELD=DETOUR_LENG,      ALIAS=DETOUR, FORMAT=P3,     $
    FIELD=SPEC_STUDY,       ALIAS=SPST,   FORMAT=P3,     $
    FIELD=SAFE_STUDY,       ALIAS=SAFEST, FORMAT=P2,     $
    FIELD=1_LOADLIMIT,      ALIAS=S1LOAD, FORMAT=P4,     $
    FIELD=2_LOADLIMIT,      ALIAS=S2LOAD, FORMAT=P4,     $
    FIELD=3_LOADLIMIT,      ALIAS=S3LOAD, FORMAT=P4,     $
    FIELD=YEAR_NEEDED,      ALIAS=YRNEED, FORMAT=P3,     $
    FIELD=TYPE_WORK,        ALIAS=TYPWRK, FORMAT=P4,     $
    FIELD=ADJ_RDYEAR,       ALIAS=ADJYR,  FORMAT=P5,     $
    FIELD=ADJ_TYP_IMP,      ALIAS=TYIMP,  FORMAT=P2,     $
    FIELD=DESIGN_LOAD,      ALIAS=DSGNLD, FORMAT=P2,     $
    FIELD=TRAF_SAFE,        ALIAS=TRSAFE, FORMAT=A4,     $
    FIELD=OPEN_CLOSE,       ALIAS=OPENCL, FORMAT=A1,     $
    FIELD=H_LOAD,           ALIAS=HLOAD,  FORMAT=A4,     $
    FIELD=DISTRICT,         ALIAS=DIST,   FORMAT=P2,     $
    FIELD=BEG_MILEPNT,      ALIAS=BMPNT,  FORMAT=P7.2,   $
    FIELD=END_MILEPNT,      ALIAS=EMPNT,  FORMAT=P7.2,   $
    FIELD=RR_XINGNO,        ALIAS=RRXING, FORMAT=P6,     $
    FIELD=ACC1_TYPE,        ALIAS=ACTYP1, FORMAT=A2,     $
    FIELD=ACC1_NODE,        ALIAS=ACNOD1, FORMAT=P7,     $
    FIELD=ACC1_MPNT,        ALIAS=ACMPT1, FORMAT=P7.2,   $
    FIELD=ACC2_TYPE,        ALIAS=ACTYP2, FORMAT=A2,     $
    FIELD=ACC2_NODE,        ALIAS=ACNOD2, FORMAT=P7,     $
    FIELD=ACC2_MPNT,        ALIAS=ACMPT2, FORMAT=P7.2,   $
SEGNAME=ARECORD,CRFILE=M1410030,CRKEY=BRI,PARENT=ROAD1,SEGTYPE=KM,$
SEGNAME=BRECORD,CRFILE=M1410030,PARENT=ARECORD,SEGTYPE=KL,$
SEGNAME=CRECORD,CRFILE=M1410030,PARENT=ARECORD,SEGTYPE=KL,$
END
```

MASTER DESCRIPTION ACCIDENT FILE

```
FILENAME=M1410030,SUFFIX=FOC,
SEGNAME=ARECORD,SEGTYPE=S1,$
FIELD=CASENO,CN,A8,$
FIELD=DUPREC,DR,I1,$
GROUP=BRINDEX,ALIAS=BRI,FORMAT=A13,FIELDTYPE=I,$
   FIELD=DATA_YEAR,YR,A2,$
   FIELD=SYS_CODE,SC,A1,$
   FIELD=COUNTY_NO,CONO,A2,$
   FIELD=ROUTE_NO,RNO,A4,$
   FIELD=SEQ_CNTY_NO,SEQNO,A5,$
FIELD=STRUCTURE_NO,STR,A2,$
FIELD=RUR_URB_CODE,RUC,A1,$
FIELD=MILEPOST,MPST,F6.2,$
FIELD=FATALS,FTL,I2,$
FIELD=MAJOR,MJR,I2,$
FIELD=MINOR,MNR,I2,$
FIELD=POSSIBLE,PBLE,I2,$
FIELD=CAUSE,CAUSE,I2,$
FIELD=SURF_COND_RE,SCR,I1,$
FIELD=FISCAL_YEAR,FY,I2,$
FIELD=ACC_SEVERITY,ACCSEV,I1,$
FIELD=REPORT_TYPE,REPTYP,I1,$
FIELD=TOT_KILLED,KILLED,I2,$
FIELD=TOT_INJURED,INJURED,I2,$
FIELD=TOT_VEHICLE,VEHICLE,I2,$
FIELD=TOT_DAMAGE,DAMAGE,I2,$
FIELD=ACCDNT_DATE,ADATE,MDY,$
FIELD=TIME_OF_DAY,TOD,I4,$
FIELD=ACCIDENT_CO,ACNTY,I2,$
FIELD=ACCIDENT_CTY,ACITY,I2,$
FIELD=ALAS_ROUTE,ARTE,A4,$
FIELD=ROAD_CLASS,RCLASS,I1,$
FIELD=INT_CLASS,ICLASS,I1,$
FIELD=INTRSCTN_ID,IID,I6,$
FIELD=REF_NODE,RNODE,I6,$
FIELD=DISTANCE_IND,DISIND,I3,$
FIELD=DIR_NODE,DNODE,I6,$
FIELD=ACCDNT_TYPE,ATYPE,I2,$
FIELD=CHAR_OF_ROAD,CHROAD,I2,$
FIELD=GEO_ROAD,GROAD,I1,$
FIELD=LITE_COND,LCW,I1,$
FIELD=WEATHER,WEATHER,I2,$
FIELD=LOCALITY,LOCY,I1,$
FIELD=LOCATION,LOCN,I1,$
FIELD=COLSN_TYPE,CTYPE,I2,$
FIELD=DIR_NONMAIN,DIRNMN,A1,$
FIELD=MILEPNT,MPNT,P5.2,$

SEGNAME=BRECORD,SEGTYPE=S1,PARENT=ARECORD,$
FIELD=VEHICLE_NO,VNO,I2,$
FIELD=VEHICLE_TYPE,VTYPE,I2,$
FIELD=VEHICLE_YEAR,VYEAR,I2,$
FIELD=SPECIAL_USE,SPUSE,I1,$
FIELD=OCCUPANT_NO,ONO,I2,$
FIELD=ATTACHMENT,ATTACH,I2,$
FIELD=FIRE,FIRE,I2,$
FIELD=HIT_AND_RUN,HR,I1,$            D8
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FIELD=IMPACT,IMPACT,I2,$
FIELD=DAMAGE_AREA,DAMAREA,I8,$
FIELD=DAMAGE_SEV,DSEV,I1,$
FIELD=VEHICLE_DEF,VDEF,I2,$
FIELD=DIRECTION,DIR,I1,$
FIELD=ROAD_ENV,RE,I2,$
FIELD=TRAFFIC_CNTL,TCNTL,I2,$
FIELD=TRAFFIC_TYPE,TTYPE,I1,$
FIELD=TRAFFIC_FLOW,TFLOW,I1,$
FIELD=SURFACE_TYPE,STYPE,I1,$
FIELD=VEHICLE_ACT,VACT,I2,$
FIELD=FIX_OBJECT,FO,I2,$
FIELD=FIX_OBJ_LOC,FOL,I1,$
FIELD=SURFACE_COND,SCOND,I2,$
FIELD=DRIVER_AGE,DRAGE,I2,$
FIELD=DRIVER_SEX,DRSEX,A1,$
FIELD=LICENSE_REST,LREST,A4,$
FIELD=RESTRCT_COMP,RCOMP,I1,$
FIELD=DRIVER_CHRGD,DCHRG,A1,$
FIELD=SOBRIETY_TST,STEST,I1,$
FIELD=SOBRIETY_RST,SREST,I3,$
FIELD=DRIVER_COND,DCOND,I2,$
FIELD=DRIVER_CONT,DCONT,I4,$
FIELD=VISION_OBSC,VISOB,I2,$

SEGNAME=CRECORD,SEGTYPE=S1,PARENT=ARECORD,$
FIELD=UNIT_SEQ,USEQ,I2,$
FIELD=UNITNO,UNO,I2,$
FIELD=AGE,AGE,I2,$
FIELD=SEX,SEX,A1,$
FIELD=SEVERITY,SEVER,I1,$
FIELD=INJURED_AREA,INJAREA,A1,$
FIELD=INJURED_POS,INJPOS,A1,$
FIELD=PROT_DEVICE,PDEV,A1,$
FIELD=EJECTION,EJECT,A1,$
FIELD=PED_ACTION,PACTION,A2,$
FIELD=CLOTH_COLOR,CCOLOR,A1,$
FIELD=PED_DRIVER,PEDDRIV,A1,$
FIELD=PED_SOBER,PSOBER,A1,$
FIELD=PED_TEST,PTEST,A3,$
SEGNAME=ROAD1,CRFILE=M1410000,CRKEY=BRI,PARENT=ARECORD,SEGTYPE=KU,$
SEGNAME=ROAD2,CRFILE=M1410000,PARENT=ROAD1,SEGTYPE=KLU,$
SEGNAME=STRUC,CRFILE=M1410000,PARENT=ROAD1,SEGTYPE=KL,$
END
```

I O W A   D E P A R T M E N T   O F   T R A N S P O R T A T I O N

BUREAU OF TRANSPORTATION SAFETY
ACCIDENT ANALYSIS SYSTEM

VIEW ACCIDENT STATISTICS RECORDS

PF4 = VIEW ACCIDENT DATA   (A RECORD)
PF5 = VIEW DRIVER/VEHICLE DATA   (B RECORD)
PF6 = VIEW PEDESTRIAN/INJURY DATA   (C RECORD)
PF3 = END APPLICATION

ENTER CASE NUMBER OF THE ACCIDENT YOU WISH TO VIEW AND PRESS A PFKEY

CASE NUMBER   50002849

(A RECORD)

CASE NUMBER:	50002849		ALAS COUNTY:	85
DATE:	010985		RURAL/URBAN:	R
TIME OF DAY:	2155		CITY:	0
			ALAS ROUTE:	N035
SEVERITY:	2		ROAD CLASS:	1
REPORT TYPE:	4		INT. CLASS:	0
TOTAL KILLED:	0			
TOTAL INJURED:	2		INT. IDENTIFIER:	999999
TOTAL VEHICLES:	2		REFERENCE NODE:	123409
PROPERTY DAMAGE:		95200	DISTANCE IND:	15
TYPE OF ACCIDENT:	11		DIRECTION NODE:	126411
CHAR OF ROADWAY:	1			
ROAD GEOMETRICS:	2		BASE RECORD DATA--	
LIGHT CONDITIONS:	5		COUNTY:	85
WEATHER CONDITIONS:	70		SYSTEM CODE:	1
LOCALITY:	7		NON-MAIN ID:	N
LOCATION:	1		PRIMARY/FA ROUTE:	0035
COLLISION TYPE:	17		MILEPOINT:	2.19

(B RECORD)

CASE NUMBER: 50002849
VEHICLE NUMBER: 2
VEHICLE TYPE: 9
VEHICLE YEAR: 84

SPECIAL USE: 1
NO. OF OCCUPANTS: 1
ATTACHMENT: 1
FIRE/EXPLOSION: 1
HIT & RUN: 1
POINT OF IMPACT: 1
DAMAGE AREAS 1-4:   1080210
DAMAGE SEVERITY: 4
VEHICLE DEFECTS: 1
DIRECTION OF TRAVEL: 1
VEHICLE ACTION: 1
FIXED OBJECT STRUCK: 9
LOCATION FIXED OBJ: 4

DRIVER'S AGE: 59
DRIVER'S SEX: M
LICENSE RESTRICTION: 0000
RESTRICTION COMPILE: 0
DRIVER CHARGED: N
SOBR. TEST GIVEN: 1
SOBR. TEST RESULT: 0
DRIVER CONDITION: 1
DRIVER CONTRIB CIRC: 4039
VISION OBSCURED: 1

ROADWAY ENVIRON: 3
TRAFFIC CONTROL: 1
TYPE TRAFFICWAY: 5
TRAFFIC FLOW: 1
TYPE SURFACE: 1

(B RECORD)

CASE NUMBER: 50002849
VEHICLE NUMBER: 1
VEHICLE TYPE: 9
VEHICLE YEAR: 73

SPECIAL USE: 1
NO. OF OCCUPANTS: 1
ATTACHMENT: 1
FIRE/EXPLOSION: 1
HIT & RUN: 1
POINT OF IMPACT: 1
DAMAGE AREAS 1-4:   1020304
DAMAGE SEVERITY: 4
VEHICLE DEFECTS: 1
DIRECTION OF TRAVEL: 5
VEHICLE ACTION: 1
FIXED OBJECT STRUCK: 1
LOCATION FIXED OBJ: 0

DRIVER'S AGE: 44
DRIVER'S SEX: M
LICENSE RESTRICTION: 0000
RESTRICTION COMPILE: 0
DRIVER CHARGED: N
SOBR. TEST GIVEN: 1
SOBR. TEST RESULT: 0
DRIVER CONDITION: 1
DRIVER CONTRIB CIRC: 2939
VISION OBSCURED: 1

ROADWAY ENVIRON: 3
TRAFFIC CONTROL: 1
TYPE TRAFFICWAY: 5
TRAFFIC FLOW: 1
TYPE SURFACE: 1

(C RECORD)

CASE NUMBER: 50002849

UNIT SEQUENCE: 1
UNIT NUMBER: 1
AGE: 44
SEX: M

INJURY SEVERITY: 2
INJURED AREA: 4
POSITION OF INJURED: 1
PROTECTIVE DEVICE: 1
EJECTION: 1
PEDESTRIAN ACTION:
COLOR OF CLOTHING:
PED. ALSO DRIVER:
SOBRIETY:
TEST RESULTS:

--------------------------------------- BRCU=62 FRTE=63 ORDER=1 ---------------------------------------

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ALASCO	ALASNODE	MLPOST	CITYNAME	LITDES	MPNT	FY	KLD	INJ	SEVERITY	DATE	TIME	CITY	ALASRTE	SURFCOND	RDGECM	ACCLOC	ACCTYPE	COLTYPE	LIGHT	MAJCAUSE	CASEYR	ACCNO
62	226993	64.88		INT US 63 & CO T65	16.32	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	227094	64.91		INT US 63 W GLENDALE RD	16.35	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	227094	64.91			16.35	84	0	0	PDO	31984	950	60	0063	WET	7	1	11	0	1	40	4	16390
62	226993	65.03			16.57	82	0	0	PDO	91681	1525	0	0063	DRY	1	1	11	3	1	23	1	55549
62	227994	65.00		INT US 63 & COWEN AVE W	16.63	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	228192	65.30			16.93	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	228292	65.36			16.99	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	.	65.56			17.19	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	228292	65.76			17.39	85	0	1	MAJ	90184	1115	0	0063	DRY	1	1	12	3	5	29	4	47419
62	228292	65.86			17.49	85	0	0	PDO	21185	1545	0	0063	ICE	1	4	19	18	1	40	5	11680
62	.	66.00			17.50	85	.	.		.	.	0	C063		.	.	.	.	.	.	.	.
62	320190	66.06			17.70	83	0	3	MAJ	32683	145	0	0063	ICE	2	1	11	1	5	7	3	16795
62	320190	66.35			17.85	85	0	0	PDO	92784	640	0	0063	DRY	5	1	17	17	3	40	4	51660
62	320190	66.21			17.85	83	1	1	FAT	60483	250	0	0063	DRY	1	1	11	1	5	7	3	28422
62	320190	66.45		SE INT US 63 & CO G39	17.95	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	320190	66.41			17.95	83	0	1	POS	71782	2330	0	0063	WET	7	1	11	3	5	29	2	42445
62	320190	66.31			17.95	83	0	3	MIN	11583	1615	0	0063	DRY	8	1	11	2	1	40	3	3635
62	320289	66.53		US 63 AT C&NW RR OVERPASS	18.03	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	320289	66.49			18.03	82	0	0	PDO	11082	215	0	0063	ICE	3	1	11	1	5	25	2	4238
62	320289	66.55			18.05	85	0	0	PDO	83184	715	0	0063	DRY	1	1	11	17	1	15	4	46969
62	320387	66.65		NW INT US 63 & CO G39	18.15	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.
62	320987	67.00			18.51	85	.	.		.	.	0	0063		.	.	.	.	.	.	.	.

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FILENAME=M6230625,  SUFFIX=VSAM
  SEGNAME=ROOT
    GROUP=PRIMEKEY,          ALIAS=KEY,          USAGE=A7,   ACTUAL=A7,   $
        FIELD=CROSSINGNO,    ALIAS=XNO,          USAGE=A7,   ACTUAL=A7,   $
        FIELD=STATECODE,     ALIAS=SCODE,        USAGE=A2,   ACTUAL=A2,   $
        FIELD=COUNTYCODE,    ALIAS=COCODE,       USAGE=I3,   ACTUAL=A3,   $
        FIELD=CITYCODE,      ALIAS=CICODE,       USAGE=A4,   ACTUAL=A4,   $
        FIELD=IACITY,        ALIAS=CITY,         USAGE=A4,   ACTUAL=A4,   $
        FIELD=TOWNSHIP,      ALIAS=TWNSHP,       USAGE=I3,   ACTUAL=F3,   $
        FIELD=RANGE,         ALIAS=RNG,          USAGE=A2,   ACTUAL=A2,   $
        FIELD=SECTION,       ALIAS=SEC,          USAGE=I2,   ACTUAL=Z2,   $
        FIELD=NRCITYIND,     ALIAS=CITYIND,      USAGE=A1,   ACTUAL=A1,   $
        FIELD=AARCODE,       ALIAS=RCODE,        USAGE=A4,   ACTUAL=A4,   $
        FIELD=TIMESTACODE,   ALIAS=TIMCODE,      USAGE=I6,   ACTUAL=Z6,   $
        FIELD=RRMILEPOST,    ALIAS=MILPOST,      USAGE=A8,   ACTUAL=A8,   $
        FIELD=RRIDNO,        ALIAS=IDNO,         USAGE=A10,  ACTUAL=A10,  $
        FIELD=HWYNO,         ALIAS=HNO,          USAGE=A7,   ACTUAL=A7,   $
        FIELD=STRNAME,       ALIAS=SNAME,        USAGE=A20,  ACTUAL=A20,  $
        FIELD=IACROSSNO,     ALIAS=IAXNO,        USAGE=A5,   ACTUAL=A5,   $
        FIELD=DUPLIND,       ALIAS=DUPIND,       USAGE=A1,   ACTUAL=A1,   $
        FIELD=RRDIVISION,    ALIAS=RRDIV,        USAGE=A14,  ACTUAL=A14,  $
        FIELD=RRSUBDIV,      ALIAS=SUBDIV,       USAGE=A14,  ACTUAL=A14,  $
        FIELD=BRANCH,        ALIAS=BRCH,         USAGE=A15,  ACTUAL=A15,  $
        FIELD=PEDCROSS,      ALIAS=PEDX,         USAGE=I1,   ACTUAL=Z1,   $
        FIELD=PRIVLOC,       ALIAS=PRIVL,        USAGE=I1,   ACTUAL=Z1,   $
        FIELD=PRIVCROSS,     ALIAS=PRIVC,        USAGE=I1,   ACTUAL=Z1,   $
        FIELD=PRIVVEH,       ALIAS=PRIVV,        USAGE=I1,   ACTUAL=Z1,   $
        FIELD=PRIVDESCP,     ALIAS=PRIVD,        USAGE=A15,  ACTUAL=A15,  $
        FIELD=PUBCROSS,      ALIAS=PUBC,         USAGE=I1,   ACTUAL=A1,   $
        FIELD=CONT,          ALIAS=CNT,          USAGE=I1,   ACTUAL=Z1,   $
        FIELD=DAYTHRU,       ALIAS=DTHRU,        USAGE=I2,   ACTUAL=Z2,   $
        FIELD=DAYSWITCH,     ALIAS=DSWITCH,      USAGE=I2,   ACTUAL=Z2,   $
        FIELD=NIGHTTHRU,     ALIAS=NTHRU,        USAGE=I2,   ACTUAL=Z2,   $
        FIELD=NIGHTSWITCH,   ALIAS=NSWITCH,      USAGE=I2,   ACTUAL=Z2,   $
        FIELD=TRAINMOVE,     ALIAS=RMOVE,        USAGE=I1,   ACTUAL=Z1,   $
        FIELD=MAXTABLE,      ALIAS=MAXTBLE,      USAGE=I3,   ACTUAL=Z3,   $
        FIELD=MINTYPICAL,    ALIAS=MINTYP,       USAGE=I3,   ACTUAL=A3,   $
        FIELD=MAXTYPICAL,    ALIAS=MAXTYP,       USAGE=I3,   ACTUAL=A3,   $
        FIELD=MAINTRKS,      ALIAS=MNTRK,        USAGE=I1,   ACTUAL=A1,   $
        FIELD=OTHERTRKS,     ALIAS=OTRKS,        USAGE=I2,   ACTUAL=A2,   $
        FIELD=OTHERDESCP,    ALIAS=ODESCP,       USAGE=A10,  ACTUAL=A10,  $
        FIELD=SEPTRKS,       ALIAS=SPTRK,        USAGE=I1,   ACTUAL=A1,   $
        FIELD=TRACK1,        ALIAS=TRK1,         USAGE=A4,   ACTUAL=A4,   $
        FIELD=TRACK2,        ALIAS=TRK2,         USAGE=A4,   ACTUAL=A4,   $
        FIELD=TRACK3,        ALIAS=TRK3,         USAGE=A4,   ACTUAL=A4,   $
        FIELD=TRACK4,        ALIAS=TRK4,         USAGE=A4,   ACTUAL=A4,   $
        FIELD=OTHERRR,       ALIAS=ORR,          USAGE=I1,   ACTUAL=Z1,   $
        FIELD=RR1,           ALIAS=R1,           USAGE=A4,   ACTUAL=A4,   $
        FIELD=RR2,           ALIAS=R2,           USAGE=A4,   ACTUAL=A4,   $
        FIELD=RR3,           ALIAS=R3,           USAGE=A4,   ACTUAL=A4,   $
        FIELD=RR4,           ALIAS=R4,           USAGE=A4,   ACTUAL=A4,   $
        FIELD=REFLECT,       ALIAS=RFLC,         USAGE=I1,   ACTUAL=A1,   $
        FIELD=NON_REFLECT,   ALIAS=NRFLC,        USAGE=I1,   ACTUAL=A1,   $
        FIELD=STDSTOP,       ALIAS=SSTOP,        USAGE=I1,   ACTUAL=A1,   $
        FIELD=NONSTDSTOP,    ALIAS=NSSTOP,       USAGE=I1,   ACTUAL=A1,   $
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FIELD=SIGNSTYPE1,     ALIAS=STYPE1,     USAGE=I1,   ACTUAL=A1,    $
FIELD=DESPTYPE1,      ALIAS=DTYPE1,     USAGE=A10,  ACTUAL=A10,   $
FIELD=SIGNSTYPE2,     ALIAS=STYPE2,     USAGE=I1,   ACTUAL=A1,    $
FIELD=DESPTYPE2,      ALIAS=DTYPE2,     USAGE=A10,  ACTUAL=A10,   $
FIELD=RWREFGATE,      ALIAS=RWGATE,     USAGE=I1,   ACTUAL=A1,    $
FIELD=OTHERGATE,      ALIAS=OGATE,      USAGE=I1,   ACTUAL=A1,    $
FIELD=CANTTRAF,       ALIAS=CTRAF,      USAGE=I1,   ACTUAL=A1,    $
FIELD=NONCANTTRAF,    ALIAS=NCTRAF,     USAGE=I1,   ACTUAL=A1,    $
FIELD=MOUNTLIGHT,     ALIAS=MLIGHT,     USAGE=I1,   ACTUAL=A1,    $
FIELD=OTHERLIGHT,     ALIAS=OLIGHT,     USAGE=I1,   ACTUAL=A1,    $
FIELD=DESCPLIGHT,     ALIAS=DLIGHT,     USAGE=A9,   ACTUAL=A9,    $
FIELD=HWYTRAFSIGN,    ALIAS=HTSIGN,     USAGE=I1,   ACTUAL=A1,    $
FIELD=WICWAGS,        ALIAS=WW,         USAGE=I1,   ACTUAL=A1,    $
FIELD=BELLS,          ALIAS=BELL,       USAGE=I1,   ACTUAL=A1,    $
FIELD=SPECNONTRAIN,   ALIAS=SPTR,       USAGE=A20,  ACTUAL=A20,   $
FIELD=SIGNCODE,       ALIAS=SGNCD,      USAGE=I1,   ACTUAL=A1,    $
FIELD=POWERCODE,      ALIAS=PWRCD,      USAGE=I1,   ACTUAL=A1,    $
FIELD=SPEEDSEL,       ALIAS=SPSEL,      USAGE=I1,   ACTUAL=A1,    $
FIELD=TRAINSIG,       ALIAS=TRSIG,      USAGE=I1,   ACTUAL=A1,    $
FIELD=DEVELOP,        ALIAS=DEV,        USAGE=I1,   ACTUAL=A1,    $
FIELD=CROSSANGLE,     ALIAS=XANG,       USAGE=A2,   ACTUAL=A2,    $
FIELD=TRAFLANE,       ALIAS=TLAN,       USAGE=I1,   ACTUAL=A1,    $
FIELD=PULLOUTLANE,    ALIAS=PLAN,       USAGE=I1,   ACTUAL=A1,    $
FIELD=PAVE,           ALIAS=PAV,        USAGE=I1,   ACTUAL=A1,    $
FIELD=PAVESTOP,       ALIAS=PAVST,      USAGE=I1,   ACTUAL=A1,    $
FIELD=PAVERRSYM,      ALIAS=PAVSY,      USAGE=I1,   ACTUAL=A1,    $
FIELD=PAVEMARK,       ALIAS=PAVMK,      USAGE=I1,   ACTUAL=A1,    $
FIELD=RRADVANCE,      ALIAS=RADVN,      USAGE=I1,   ACTUAL=A1,    $
FIELD=SURFACETYPE,    ALIAS=STYPE,      USAGE=A2,   ACTUAL=A2,    $
FIELD=PARALLEL,       ALIAS=PARAL,      USAGE=I1,   ACTUAL=A1,    $
FIELD=HWYCROSS,       ALIAS=HCROS,      USAGE=I1,   ACTUAL=A1,    $
FIELD=HWYSYSCODE,     ALIAS=HSCDE,      USAGE=I2,   ACTUAL=A2,    $
FIELD=STATEHWY,       ALIAS=SHWY,       USAGE=I1,   ACTUAL=A1,    $
FIELD=FUNC,           ALIAS=FNC,        USAGE=I2,   ACTUAL=A2,    $
FIELD=AADT,           ALIAS=ADT,        USAGE=I6,   ACTUAL=A6,    $
FIELD=ESTPERTRK,      ALIAS=PERTRK,     USAGE=I2,   ACTUAL=A2,    $
FIELD=IANAME,         ALIAS=CNAME,      USAGE=A25,  ACTUAL=A25,   $
FIELD=FILLER,         ALIAS=FILL,       USAGE=A162,ACTUAL=A162,   $
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FILENAME=M6230670, SUFFIX=VSAM
  SEGNAME=ROOT
  GROUP=ACC_NO, Accno         ALIAS=ANUM,           USAGE=A18,  ACTUAL=A18,  $
      FIELD=ACC_YEAR,         ALIAS=YEAR,           USAGE=A2,   ACTUAL=A2,   $
      FIELD=ACC_MONTH,        ALIAS=MONTH,          USAGE=A2,   ACTUAL=A2,   $
      FIELD=RR_ALPHA,         ALIAS=RR,             USAGE=A4,   ACTUAL=A4,   $
      FIELD=ACC_NUMBER,       ALIAS=ACC_NO,         USAGE=A10,  ACTUAL=A10,  $
      FIELD=RECORD_TYPE,      ALIAS=REC_TYPE,       USAGE=A1,   ACTUAL=A1,   $
      FIELD=REPORT_USED,      ALIAS=FORM,           USAGE=A4,   ACTUAL=A4,   $
  GROUP=ACC_DATE,             ALIAS=DATE,           USAGE=A6,   ACTUAL=A6,   $
      FIELD=ACC_YY,           ALIAS=YY,             USAGE=A2,   ACTUAL=A2,   $
      FIELD=ACC_MM,           ALIAS=MM,             USAGE=A2,   ACTUAL=A2,   $
      FIELD=ACC_DD,           ALIAS=DD,             USAGE=A2,   ACTUAL=A2,   $
  GROUP=ACC_TIME,             ALIAS=TIME,           USAGE=A4,   ACTUAL=A4,   $
      FIELD=ACC_HR,           ALIAS=HR,             USAGE=A2,   ACTUAL=A2,   $
      FIELD=ACC_MN,           ALIAS=MIN,            USAGE=A2,   ACTUAL=A2,   $
      FIELD=DAY_OF_WEEK,      ALIAS=WDAY,           USAGE=A2,   ACTUAL=A2,   $
      FIELD=ACC_TYPE,         ALIAS=ACC_TYPE,       USAGE=A2,   ACTUAL=A2,   $
      FIELD=CIRCUMSTANCE,     ALIAS=CIRC,           USAGE=A1,   ACTUAL=A1,   $
      FIELD=RPT_RR_ALPHA,     ALIAS=REP_RR_A,       USAGE=A4,   ACTUAL=A4,   $
      FIELD=RPT_RR_NAME,      ALIAS=REP_RR,         USAGE=A20,  ACTUAL=A20,  $
      FIELD=INV_RR_ALPHA,     ALIAS=INV_RR_A,       USAGE=A4,   ACTUAL=A4,   $
      FIELD=INV_RR_NAME,      ALIAS=INV_RR,         USAGE=A20,  ACTUAL=A20,  $
      FIELD=TRK_RR_ALPHA,     ALIAS=TRK_RR_A,       USAGE=A4,   ACTUAL=A4,   $
      FIELD=TRK_RR_NAME,      ALIAS=TRK_RR,         USAGE=A20,  ACTUAL=A20,  $
      FIELD=STATE,            ALIAS=ST,             USAGE=A2,   ACTUAL=A2,   $
      FIELD=COUNTY_NO,        ALIAS=CO,             USAGE=A2,   ACTUAL=A2,   $
      FIELD=WITHIN_CITY,      ALIAS=CITY_W/I,       USAGE=A10,  ACTUAL=A10,  $
      FIELD=RURAL_URBAN,      ALIAS=R_U,            USAGE=A1,   ACTUAL=A1,   $
      FIELD=NEAREST_CITY,     ALIAS=CITY_NEAR,      USAGE=A10,  ACTUAL=A10,  $
      FIELD=DIVISION,         ALIAS=DIV,            USAGE=A10,  ACTUAL=A10,  $
      FIELD=NEAREST_STA,      ALIAS=RR_STA,         USAGE=A10,  ACTUAL=A10,  $
      FIELD=LOCALFILL,        ALIAS=LOFIL,          USAGE=A1,   ACTUAL=A1,   $
      FIELD=LOCALITY_CD,      ALIAS=LOCAL,          USAGE=A1,   ACTUAL=A1,   $
      FIELD=RD_NAME_NO,       ALIAS=RD_NAME,        USAGE=A15,  ACTUAL=A15,  $
      FIELD=ROAD_CLASS,       ALIAS=RD_CLASS,       USAGE=A1,   ACTUAL=A1,   $
      FIELD=CROSSINGNO,       ALIAS=XNO,            USAGE=A7,   ACTUAL=A7,   $
      FIELD=IACROSSNO,        ALIAS=IAXNO,          USAGE=A5,   ACTUAL=A5,   $
      FIELD=PUB_PRIV,         ALIAS=PU/XX,          USAGE=A2,   ACTUAL=A2,   $
      FIELD=REF_NODE_NO,      ALIAS=NODE,           USAGE=A6,   ACTUAL=A6,   $
      FIELD=FILLER,           ALIAS=F41,            USAGE=A1,   ACTUAL=A1,   $
      FIELD=LINE_SEGMENT,     ALIAS=LIC,            USAGE=A5,   ACTUAL=A5,   $
      FIELD=RR_MILEPOST,      ALIAS=RR_MP,          USAGE=A8,   ACTUAL=A8,   $
      FIELD=REF_NODE_MP,      ALIAS=NODE_MP,        USAGE=A4,   ACTUAL=A4,   $
      FIELD=ACC_TYPE_OTH,     ALIAS=ACC_OT,         USAGE=A20,  ACTUAL=A20,  $
      FIELD=FILLER,           ALIAS=F42,            USAGE=A1,   ACTUAL=A1,   $
      FIELD=HAZ_MATERIAL,     ALIAS=HAZ_MAT,        USAGE=A1,   ACTUAL=A1,   $
      FIELD=CARS_CARRY,       ALIAS=CCARRY,         USAGE=A3,   ACTUAL=A3,   $
      FIELD=CARS_DM_DR,       ALIAS=CDER,           USAGE=A3,   ACTUAL=A3,   $
      FIELD=CARS_LEAKING,     ALIAS=CREL,           USAGE=A3,   ACTUAL=A3,   $
      FIELD=PEOPLE_EVAC,      ALIAS=PEO_EV,         USAGE=A6,   ACTUAL=A6,   $
      FIELD=TEMPERATURE,      ALIAS=TEMP,           USAGE=A3,   ACTUAL=A3,   $
      FIELD=VISIBILITY,       ALIAS=LIGHT,          USAGE=A2,   ACTUAL=A2,   $
      FIELD=WEATHER1,         ALIAS=WEAT1,          USAGE=A1,   ACTUAL=A1,   $
      FIELD=WEATHER2,         ALIAS=WEAT2,          USAGE=A1,   ACTUAL=A1,   $
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FIELD=RD_SRF_TYPE,     ALIAS=SURF_TYPE,      USAGE=A1,   ACTUAL=A1,    $
FIELD=RD_SRF_COND1,    ALIAS=SURF_COND1,     USAGE=A1,   ACTUAL=A1,    $
FIELD=RD_SRF_COND2,    ALIAS=SURF_COND2,     USAGE=A1,   ACTUAL=A1,    $
FIELD=TRAF_TYPE,       ALIAS=TRAF_WAY,       USAGE=A1,   ACTUAL=A1,    $
FIELD=TRAF_FLOW,       ALIAS=FLOW,           USAGE=A1,   ACTUAL=A1,    $
FIELD=SPEED_LMT,       ALIAS=POST_SP,        USAGE=A2,   ACTUAL=A2,    $
FIELD=ROAD_GEOM,       ALIAS=RD_GEO,         USAGE=A2,   ACTUAL=A2,    $
FIELD=TRAF_CNTL,       ALIAS=MV_CONTR,       USAGE=A2,   ACTUAL=A2,    $
FIELD=ACC_CAUSE,       ALIAS=CAUSE,          USAGE=A3,   ACTUAL=A3,    $
FIELD=ACC_OTHCAUSE,    ALIAS=CAUSE_OT,       USAGE=A20,  ACTUAL=A20,   $
FIELD=ROAD_ENV,        ALIAS=RD_ENV,         USAGE=A2,   ACTUAL=A2,    $
FIELD=DR_COND,         ALIAS=DR_COND,        USAGE=A2,   ACTUAL=A2,    $
FIELD=DR_VEH1,         ALIAS=DR_VEH1,        USAGE=A2,   ACTUAL=A2,    $
FIELD=DR_VEH2,         ALIAS=DR_VEH2,        USAGE=A2,   ACTUAL=A2,    $
FIELD=INIT_PT_IMP,     ALIAS=PT_IMP,         USAGE=A2,   ACTUAL=A2,    $
FIELD=MV_ACTION,       ALIAS=MV_ACT,         USAGE=A2,   ACTUAL=A2,    $
FIELD=FIX_OBJ_STRK,    ALIAS=FO,             USAGE=A2,   ACTUAL=A2,    $
FIELD=LOC_FIX_OBJ,     ALIAS=LOC_FO,         USAGE=A1,   ACTUAL=A1,    $
FIELD=VIS_OBS_CD,      ALIAS=VIS_OBS,        USAGE=A2,   ACTUAL=A2,    $
FIELD=VIS_OBS_OTH,     ALIAS=VIS_OBS_OT,     USAGE=A20,  ACTUAL=A20,   $
FIELD=DR_IN_VEH,       ALIAS=IN_VEH,         USAGE=A1,   ACTUAL=A1,    $
FIELD=DR_K_I_U,        ALIAS=DR_KIU,         USAGE=A1,   ACTUAL=A1,    $
FIELD=TOT_INJ,         ALIAS=INJ,            USAGE=A3,   ACTUAL=A3,    $
FIELD=TOT_KILL,        ALIAS=KIL,            USAGE=A3,   ACTUAL=A3,    $
FIELD=TOT_OCCU,        ALIAS=OCC,            USAGE=A3,   ACTUAL=A3,    $
FIELD=TOT_PED_INJ,     ALIAS=PED_I,          USAGE=A3,   ACTUAL=A3,    $
FIELD=TOT_PED_KILL,    ALIAS=PED_K,          USAGE=A3,   ACTUAL=A3,    $
FIELD=P_STAND_VEH,     ALIAS=PASS_VEH,       USAGE=A1,   ACTUAL=A1,    $
FIELD=SECOND_TRAIN,    ALIAS=SEC_TRN,        USAGE=A1,   ACTUAL=A1,    $
FIELD=DR_ACTION,       ALIAS=MO_ACT,         USAGE=A1,   ACTUAL=A1,    $
FIELD=DR_OTHACTION,    ALIAS=MO_ACT_OT,      USAGE=A20,  ACTUAL=A20,   $
FIELD=CASUAL_INJ,      ALIAS=RE_INJ,         USAGE=A4,   ACTUAL=A4,    $
FIELD=CASUAL_KILL,     ALIAS=RE_KIL,         USAGE=A4,   ACTUAL=A4,    $
FIELD=DAYS_DISABL,     ALIAS=DAY_DIS,        USAGE=A4,   ACTUAL=A4,    $
FIELD=TOT_ACC_DAM,     ALIAS=TOT_PD,         USAGE=A10,  ACTUAL=A10,   $
FIELD=TOT_SGNL_DAM,    ALIAS=VEH_PD,         USAGE=A10,  ACTUAL=A10,   $
FIELD=TOT_MV_DAM,      ALIAS=OT_PD,          USAGE=A10,  ACTUAL=A10,   $
FIELD=CIT_ISSUED,      ALIAS=CIT,            USAGE=A1,   ACTUAL=A1,    $
FIELD=CIT_REMARKS,     ALIAS=CIT_COM,        USAGE=A20,  ACTUAL=A20,   $
FIELD=CH_TST_USED,     ALIAS=CH_TEST,        USAGE=A1,   ACTUAL=A1,    $
FIELD=CH_TST_RLTS,     ALIAS=TEST_RES,       USAGE=A1,   ACTUAL=A1,    $
FIELD=FILLER,          ALIAS=E90,            USAGE=A3,   ACTUAL=A3,    $
FIELD=TRK_OBS_CD,      ALIAS=TRCK_OBS,       USAGE=A1,   ACTUAL=A1,    $
FIELD=TRK_OTH_OBS,     ALIAS=TRCK_OBS_OT,    USAGE=A20,  ACTUAL=A20,   $
FIELD=XX_WARN_OP,      ALIAS=WARN_OP,        USAGE=A1,   ACTUAL=A1,    $
FIELD=XX_WARN_INT,     ALIAS=INTER_HWY,      USAGE=A1,   ACTUAL=A1,    $
FIELD=XX_ILLUM,        ALIAS=ILLUM,          USAGE=A1,   ACTUAL=A1,    $
FIELD=LOCO_DERAIL,     ALIAS=LOCO_DER,       USAGE=A2,   ACTUAL=A2,    $
FIELD=POS_TRN_HIT,     ALIAS=UNIT_HIT,       USAGE=A3,   ACTUAL=A3,    $
FIELD=TRAIN_SPEED,     ALIAS=TRN_SP,         USAGE=A4,   ACTUAL=A4,    $
FIELD=TRAIN_DIRECT,    ALIAS=TI_TAB,         USAGE=A1,   ACTUAL=A1,    $
FIELD=TRAIN_UNATT,     ALIAS=EQ_ATT,         USAGE=A1,   ACTUAL=A1,    $
FIELD=MV1_TYPE,        ALIAS=VEH_TYPE1,      USAGE=A2,   ACTUAL=A2,    $
FIELD=MV2_TYPE,        ALIAS=VEH_TYPE2,      USAGE=A2,   ACTUAL=A2,    $
FIELD=MV_OTHTYPE,      ALIAS=VEH_OT,         USAGE=A10,  ACTUAL=A10,   $
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      FIELD=MV_SPEC_USE,    ALIAS=SP_USE,       USAGE=A2,   ACTUAL=A2,    $
      FIELD=MV_SPEED,       ALIAS=MV_SP,        USAGE=A3,   ACTUAL=A3,    $
      FIELD=MV_POSITION,    ALIAS=MV_POS,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=MV_DIRECT,      ALIAS=MV_DIR,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=MV_DAM_AREA,    ALIAS=DAM_AREA,     USAGE=A8,   ACTUAL=A8,    $
      FIELD=TRAIN_TYPE,     ALIAS=TRN_TYPE,     USAGE=A1,   ACTUAL=A1,    $
      FIELD=TRAIN_NO,       ALIAS=TRN_NO,       USAGE=A15,  ACTUAL=A15,   $
      FIELD=TYPE_EQUIP,     ALIAS=EQUIP,        USAGE=A1,   ACTUAL=A1,    $
      FIELD=OTHER_EQUIP,    ALIAS=EQUIP_OT,     USAGE=A20,  ACTUAL=A20,   $
      FIELD=OP_METHOD,      ALIAS=METHOD,       USAGE=A17,  ACTUAL=A17,   $
      FIELD=OTHER_METHOD,   ALIAS=METHOD_OT,    USAGE=A20,  ACTUAL=A20,   $
      FIELD=LOCO_UNITS,     ALIAS=LOCOS,        USAGE=A2,   ACTUAL=A2,    $
      FIELD=GATES,          ALIAS=GATE,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=CANTILEVER,     ALIAS=CANTI,        USAGE=A1,   ACTUAL=A1,    $
      FIELD=STANDARD,       ALIAS=FLASHERS,     USAGE=A1,   ACTUAL=A1,    $
      FIELD=WIG_WAG,        ALIAS=WAGS,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=HWY_SIGNAL,     ALIAS=HSIG,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=AUDIBLE,        ALIAS=AUDI,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=CROSSBUCKS,     ALIAS=XBUCK,        USAGE=A1,   ACTUAL=A1,    $
      FIELD=STOP_SIGNS,     ALIAS=STOP,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=WATCHMAN,       ALIAS=WATCHM,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=FLAG_CREW,      ALIAS=CREW,         USAGE=A1,   ACTUAL=A1,    $
      FIELD=WARN_OTH,       ALIAS=XOTHER,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=NO_WARN,        ALIAS=NOWARN,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=ADV_WARN_SIG,   ALIAS=ADV_W,        USAGE=A1,   ACTUAL=A1,    $
      FIELD=OTHWARN_TYPE,   ALIAS=XOTEXP,       USAGE=A9,   ACTUAL=A9,    $
      FIELD=WARN_LOC,       ALIAS=DEV_LOC,      USAGE=A1,   ACTUAL=A1,    $
      FIELD=TRK_NAME_NO,    ALIAS=TRCK_NAME,    USAGE=A15,  ACTUAL=A15,   $
      FIELD=TRKTYPE,        ALIAS=TRCK_TYPE,    USAGE=A1,   ACTUAL=A1,    $
      FIELD=TRK_DENSITY,    ALIAS=TRCK_DENS,    USAGE=A10,  ACTUAL=A10,   $
      FIELD=TRK_CLASS,      ALIAS=TRCK_CLASS,   USAGE=A2,   ACTUAL=A2,    $
      FIELD=IT_LD_FRGT,     ALIAS=TOT_LD_FRE,   USAGE=A3,   ACTUAL=A3,    $
      FIELD=IT_LD_PASG,     ALIAS=TOT_LD_PASS,  USAGE=A3,   ACTUAL=A3,    $
      FIELD=IT_EM_FRGT,     ALIAS=TOT_EMP_FRE,  USAGE=A3,   ACTUAL=A3,    $
      FIELD=IT_EM_PASG,     ALIAS=TOT_EMP_PASS, USAGE=A3,   ACTUAL=A3,    $
      FIELD=IT_CABOOSE,     ALIAS=TOT_CAB,      USAGE=A3,   ACTUAL=A3,    $
      FIELD=IT_TOT_CARS,    ALIAS=CARS,         USAGE=A6,   ACTUAL=A6,    $
      FIELD=DRL_LD_FRGT,    ALIAS=DER_LD_FRE,   USAGE=A3,   ACTUAL=A3,    $
      FIELD=DRL_LD_PASG,    ALIAS=DER_LD_PASS,  USAGE=A3,   ACTUAL=A3,    $
      FIELD=DRL_EM_FRGT,    ALIAS=DER_EMP_FRE,  USAGE=A3,   ACTUAL=A3,    $
      FIELD=DRL_EM_PASG,    ALIAS=DER_EMP_PASS, USAGE=A3,   ACTUAL=A3,    $
      FIELD=DRL_CABOOSE,    ALIAS=DER_CAB,      USAGE=A3,   ACTUAL=A3,    $
      FIELD=DRL_TOT-CARS,   ALIAS=DER_CARS,     USAGE=A6,   ACTUAL=A6,    $
      FIELD=GR_TRL_TONS,    ALIAS=TRAIL_TONS,   USAGE=A8,   ACTUAL=A8,    $
      FIELD=CREW_ENG,       ALIAS=ENG,          USAGE=A2,   ACTUAL=A2,    $
      FIELD=CREW_FIREMN,    ALIAS=FIRE,         USAGE=A2,   ACTUAL=A2,    $
      FIELD=CREW_CONDCR,    ALIAS=COND,         USAGE=A2,   ACTUAL=A2,    $
      FIELD=CREW_BRAKMN,    ALIAS=BR_MEN,       USAGE=A2,   ACTUAL=A2,    $
      FIELD=HR_ENG,         ALIAS=HR_ENG,       USAGE=A2,   ACTUAL=A2,    $
      FIELD=MN_ENG,         ALIAS=MN_ENG,       USAGE=A2,   ACTUAL=A2,    $
      FIELD=HR_CONDCR,      ALIAS=HR_COND,      USAGE=A2,   ACTUAL=A2,    $
      FIELD=MN_CONDCR,      ALIAS=MN_COND,      USAGE=A2,   ACTUAL=A2,    $
      FIELD=REPORT_FILED,   ALIAS=RE_REP,       USAGE=A1,   ACTUAL=A1,    $
      FIELD=NARRATIVE1,     ALIAS=NARR1,        USAGE=A20,  ACTUAL=A20,   $
      FIELD=INCIDENT_NO,    ALIAS=INC_NO,       USAGE=A10,  ACTUAL=A10,   $
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FIELD=COMMENTS,      ALIAS=COMM,       USAGE=A30, ACTUAL=A30, $
FIELD=NARRATIVE2,    ALIAS=NARR2,      USAGE=A48, ACTUAL=A48, $
FIELD=OCC1AGE,       ALIAS=E146,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC1SEX,       ALIAS=E147,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC1MVUNT,     ALIAS=E148,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC1SVRTY,     ALIAS=E149,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC1AREA,      ALIAS=E150,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC1POSTN,     ALIAS=E151,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC1PDTYP,     ALIAS=E152,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC1OTHER,     ALIAS=E153,       USAGE=A10, ACTUAL=A10, $
FIELD=OCC1EJECT,     ALIAS=E154,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2AGE,       ALIAS=E164,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC2SEX,       ALIAS=E165,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2MVUNT,     ALIAS=E166,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC2SVRTY,     ALIAS=E167,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2AREA,      ALIAS=E168,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2POSTN,     ALIAS=E169,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2PDTYP,     ALIAS=E170,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC2OTHER,     ALIAS=E171,       USAGE=A10, ACTUAL=A10, $
FIELD=OCC2EJECT,     ALIAS=E172,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3AGE,       ALIAS=E173,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC3SEX,       ALIAS=E174,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3MVUNT,     ALIAS=E175,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC3SVRTY,     ALIAS=E176,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3AREA,      ALIAS=E177,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3POSTN,     ALIAS=E178,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3PDTYP,     ALIAS=E179,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC3OTHER,     ALIAS=E180,       USAGE=A10, ACTUAL=A10, $
FIELD=OCC3EJECT,     ALIAS=E181,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4AGE,       ALIAS=E182,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC4SEX,       ALIAS=E183,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4MVUNT,     ALIAS=E184,       USAGE=A1,  ACTUAL=A2,  $
FIELD=OCC4SVRTY,     ALIAS=E185,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4AREA,      ALIAS=E186,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4POSTN,     ALIAS=E187,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4PDTYP,     ALIAS=E188,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC4OTHER,     ALIAS=E189,       USAGE=A10, ACTUAL=A10, $
FIELD=OCC4EJECT,     ALIAS=E190,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5AGE,       ALIAS=E191,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC5SEX,       ALIAS=E192,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5MVUNT,     ALIAS=E193,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC5SVRTY,     ALIAS=E194,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5AREA,      ALIAS=E195,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5POSTN,     ALIAS=E196,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5PDTYP,     ALIAS=E197,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC5OTHER,     ALIAS=E198,       USAGE=A10, ACTUAL=A10, $
FIELD=OCC5EJECT,     ALIAS=E199,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6AGE,       ALIAS=E200,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC6SEX,       ALIAS=E201,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6MVUNT,     ALIAS=E202,       USAGE=A2,  ACTUAL=A2,  $
FIELD=OCC6SVRTY,     ALIAS=E203,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6AREA,      ALIAS=E204,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6POSTN,     ALIAS=E205,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6PDTYP,     ALIAS=E206,       USAGE=A1,  ACTUAL=A1,  $
FIELD=OCC6OTHER,     ALIAS=E207,       USAGE=A10, ACTUAL=A10, $
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    FIELD=OCC6EJECT,      ALIAS=E208,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7AGE,        ALIAS=E209,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC7SEX,        ALIAS=E210,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7MVUNT,      ALIAS=E211,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC7SVRTY,      ALIAS=E212,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7AREA,       ALIAS=E213,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7POSTN,      ALIAS=E214,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7PDTYP,      ALIAS=E215,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC7OTHER,      ALIAS=E216,        USAGE=A10,  ACTUAL=A10,  $
    FIELD=OCC7EJECT,      ALIAS=E217,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8AGE,        ALIAS=E218,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC8SEX,        ALIAS=E219,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8MVUNT,      ALIAS=E220,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC8SVRTY,      ALIAS=E221,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8AREA,       ALIAS=E222,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8POSTN,      ALIAS=E223,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8PDTYP,      ALIAS=E224,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC8OTHER,      ALIAS=E225,        USAGE=A10,  ACTUAL=A10,  $
    FIELD=OCC8EJECT,      ALIAS=E226,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9AGE,        ALIAS=E227,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC9SEX,        ALIAS=E228,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9MVUNT,      ALIAS=E229,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=OCC9SVRTY,      ALIAS=E230,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9AREA,       ALIAS=E231,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9POSTN,      ALIAS=E232,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9PDTYP,      ALIAS=E233,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=OCC9OTHER,      ALIAS=E234,        USAGE=A10,  ACTUAL=A10,  $
    FIELD=OCC9EJECT,      ALIAS=E235,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRIVER_AGE,     ALIAS=DR_AGE,      USAGE=A2,   ACTUAL=A2,   $
    FIELD=DRIVER_SEX,     ALIAS=DR_SEX,      USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRFILL1,        ALIAS=E238,        USAGE=A2,   ACTUAL=A2,   $
    FIELD=DR_INJ_SVRTY,   ALIAS=DR_SEVER,    USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRFILL2,        ALIAS=E240,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRFILL3,        ALIAS=E241,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRFILL4,        ALIAS=E242,        USAGE=A1,   ACTUAL=A1,   $
    FIELD=DRFILL5,        ALIAS=E243,        USAGE=A10,  ACTUAL=A10,  $
    FIELD=DRFILL6,        ALIAS=E244,        USAGE=A1,   ACTUAL=A1,   $
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