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ANALYSIS OF TRAFFIC ACCIDENT DATA IN KENTUCKY (1986 - 1990)

by

Kenneth R. Agent
Transportation Research Engineer

and

Jerry G. Pigman
Transportation Research Engineer

Kentucky Transportation Center
College of Engineering
University of Kentucky
Lexington, Kentucky

in cooperation with
Kentucky State Police
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16. Abstract

This report includes an analysis of traffic accident data in Kentucky for the years of 1986-1990. A primary objective of this study was to determine average accident statistics for Kentucky highways. Average and critical number and rates of accidents were calculated for various types of highways in rural and urban areas. These data can be used in Kentucky's procedure to identify locations that have abnormal rates or numbers of accidents.

Another objective of this study was to provide data which can be used in the preparation of the problem identification portion of Kentucky's Annual Highway Safety Plan. County and city accident statistics were analyzed. A summary of results and recommendations in several problem identification areas is presented. These general areas include alcohol, occupant protection, speed, pedestrians, bicycles, motorcycles, and vehicle defects. Other areas included in the analysis included drugs, school bus accidents, and truck accidents.

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TABLE OF CONTENTS

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INTRODUCTION

Several reports have previously been prepared dealing with calculating traffic accident rates for Kentucky (1, 2, 3, 4, 5, 6) and preparation of the problem identification portion of Kentucky's Annual Highway Safety Plan (7, 8, 9, 10, 11, 12). This is the fifth report providing a combination of those two report areas (13,14,15,16). Traffic accident data for the five-year period of 1986 through 1990 were used in the preparation of this report.

Kentucky has a systematic procedure to identify locations that have abnormal rates or numbers of traffic accidents. However, before that procedure may be utilized, average accident rates and numbers must be determined for appropriate highway categories and for rural and urban areas. A primary objective of this study was to determine average traffic accident statistics for Kentucky. Those statistics may then be used in the high-accident location identification program to identify high-accident locations. Those locations are then inspected and their accidents are summarized and recommendations are presented, when applicable, for improvements. A past study involved development of accident reduction factors that may be used in the cost-optimization procedure to rank proposed safety improvements (17).

A highway safety program is prepared each year for Kentucky in order to comply with Section 402, Title 23 of the United States Code. This program includes the identification, programming, budgeting, and evaluation of safety projects having the objective of reducing the number and severity of traffic accidents. The data presented in this report may be included as the problem identification portion of Kentucky's Annual Highway Safety Plan.

PROCEDURE

Accident and volume data bases were used to obtain traffic accident statistics. Traffic accident data are currently obtained from the computer accident tape containing all police-reported accidents. Prior to 1987, accident data were obtained from the computer software package "Records Analysis for Problem Identification and Definition (RAPID)". The format of Kentucky's Uniform Police Traffic Accident Report form was modified in 1987. That change resulted in the RAPID file not being available after 1986 so summaries were prepared from an analysis of the accident tapes. Volume data were obtained from a computer file containing traffic volumes for all state maintained highways. The traffic volume for a given year was placed in the statewide mileage tape. The statewide mileage tape was used to obtain the roadway information needed to compute accident rates as a function of various roadway characteristics such as number of lanes and the rural or urban designation.

A computer program using the accident tape and the statewide mileage tape was used to calculate rates for the state-maintained system. A separate computer program was used to obtain additional accident summaries considering all reported traffic accidents.

Rates were calculated for: 1) state-maintained roads having known traffic volumes, route numbers, and mileposts and 2) all streets and highways on and off the state-maintained system. Rates were provided in terms of accidents per 100 million vehicle-miles (ACC/100 MVM) where traffic volumes could be determined. Population was used as the measure of exposure in instances where traffic volume could not be used as the exposure measure. Population data from the 1990 census were used.

In addition to average accident rates, critical rates and numbers of accidents are required for the high-accident location program. Both types of rates were calculated. The following formula was used to calculate critical accident rates:

$$A_c = A_a + K(\text{sqrt}(A_a/M)) + 1/(2M) \quad (1)$$

in which

A_c = critical accident rate,
A_a = average accident rate,
sqrt = square root,
K = constant related to level of statistical significance selected (a probability of 0.995 was used wherein K = 2.576), and
M = exposure (for sections, M was in terms of 100 million vehicle-miles (100 MVM); for spots, M was in terms of million vehicles).

To determine the critical number of accidents, the following formula was used:

$$Nc = N_a + K(\text{sqrt}(N_a)) + 0.5 \quad (2)$$

in which

N_c = critical number of accidents and
N_a = average number of accidents.

There are 18 highway safety problem areas (standards) identified by the National Highway Traffic Safety Administration. Problem areas recently identified for emphasis include alcohol and occupant protection. To identify problems in these areas, as well as any of the other "highway standard" areas, the analyses focused on the following:

1. County Accident Statistics,
2. City Accident Statistics,
3. Alcohol-and Drug-Related Accidents,
4. Occupant Protection,
5. Speed-Related Accidents,
6. Pedestrian Accidents,
7. Bicycle Accidents,
8. Motorcycle Accidents,
9. School Bus Accidents,
10. Truck Accidents,
11. Vehicle Defects, and
12. General Trend Analysis.

STATEWIDE ACCIDENT RATES

All of the rates referred to in this section apply to state-maintained roads having known traffic volumes, route numbers, and mileposts. Accident rates are given in terms of accidents per 100 million vehicle-miles (ACC/100 MVM).

A comparison of 1986, 1987, 1988, 1989 and 1990 accident statistics is shown in Table 1. It should be noted that, in 1988, there was an increase in the number of miles for which data were analyzed. The reason for the increase in the number of miles included in the analysis was that the maintenance responsibility for over 2,000 miles of highways was transferred to the Kentucky Transportation Cabinet from various local agencies. It should also be noted that, in addition to the analysis of 1990 accidents, new traffic volumes were used for 1987 through 1989 which resulted in small changes in the rates previously reported. In some cases, there were large fluctuations in traffic volumes from one year to the next which were apparently due to the estimating procedure used where actual counts were not available. Therefore, the decision was made to use the current volume tape which contained estimates of traffic volumes for the preceding years. This method was used to produce more consistent results.

The number of accidents increased in 1990 compared to the average of the previous four years. This increase in total accidents was more than offset with an increase in vehicle miles driven. The overall accident rate in 1990 was 273 accidents per 100 million vehicle-miles (ACC/100 MVM). This was the lowest accident rate in the five-year study period. The highest rate was in 1986 (320 ACC/100 MVM) with a general decreasing trend in the accident rate. The decrease in the overall rate corresponded with the increase in mileage. The number of accidents per mile has decreased slightly with a range of from 3.18 accidents per mile in 1987 to 3.00 accidents per mile in 1988. The number of vehicle miles driven increased substantially in 1990 compared to the previous four-year average as a result of both the increase in the number of miles and an increase in traffic volume (AADT). The

fatal and injury accident rates also showed a decrease in 1990 compared to the previous four-year average. As with the overall accident rate, the fatal and injury rates were lower in 1988 through 1990 compared to 1986 and 1987. The fatal accident rate for 1989 and 1990 was approximately 2 ACC/100 MVM which was a decrease from the maximum of 2.47 ACC/100 MVM in 1987. The injury accident rate has remained fairly stable from the lowest rate of 83 ACC/100 MVM in 1990 to the maximum of 90 ACC/100 MVM in 1986.

An analysis of statewide accident rates as a function of several variables, such as highway system classification, was conducted. Also included is information concerning the percentage of accidents occurring for various road conditions and during darkness. Results are presented in APPENDIX A.

Accident rates required to implement the high-accident spot-improvement program in Kentucky are average rural and urban rates by highway type. Current classification is basically by number of lanes, with an additional separation of four-lane highways by divided and undivided highways. Also, interstates and parkways are classified separately. Rates for rural highways for the five-year period (1986-1990) are listed in Table 2, and Table 3 contains rates for urban highways. Highways were placed into either the rural or urban category based upon the rural-urban designation denoted on the Statewide Mileage File. For sections having a volume, route, and milepost cited in the Statewide Mileage File, the rural or urban and highway type classifications were determined. The number of accidents for each section was then obtained from the accident file. The total accident rate per 100 million vehicle miles, as well as injury and fatal accident rates, were calculated.

On rural highways, four-lane undivided and one-lane highways had the highest rates (Table 2). These two highway types also had the smallest number of miles except for three-lane highways. Four-lane undivided highways had the highest injury accident rate. The highest fatal accident rates were on one-lane and four-lane undivided highways. Interstates had the lowest rates, followed closely by parkways. The advantage of median-separated highways is shown when comparing rates for four-lane divided (non-interstate or parkway) and four-lane undivided highways. The overall accident rate for the divided highway (which would not typically have access control) was less than one half that of the undivided highway.

On urban highways, the highest overall accident rate was on four-lane undivided highways, followed by two-lane highways (Table 3). Those two highway types also had the highest injury accident rates while two-lane highways had the highest fatal accident rates. The lowest rates were on interstates and parkways.

Tables 2 and 3 show that the overall total accident rate on urban highways was over twice that on rural highways. Also, the injury rate on urban highways was

over 60 percent greater than that for rural highways. However, the fatal accident rate on urban highways was less than one half that for rural highways.

Variations in accident rates by rural and urban highway-type classifications over the five-year period are listed in Table 4. The decrease in accident rates in 1990 compared to the 1986 through 1989 average was shown to have occurred on both rural and urban highways. The decrease in the overall accident rate in rural areas (3.9 percent) was less than in urban areas (12.6 percent). The largest variations in rates tended to occur for the roadway types having the lowest number of miles. The largest decreases in rates occurred on rural three-lane and one-lane roadways and on urban interstates. The largest increases in rates occurred on both urban and rural parkways and rural four-lane undivided highways. Trends in overall accident rates representative of rural and urban areas are shown graphically in Figure 1 for the period 1986 through 1990. In addition, trends in accident rates for types of highways are shown for rural highways (Figure 2) and urban highways (Figure 3).

Average rates listed in Tables 2 and 3 may be used to determine critical accident rates for sections of highway of various lengths. In addition to highway sections, Kentucky's high-accident location procedure uses highway spots, defined as having a length of 0.3 mile and representing a specific identifiable point on a highway. Statewide accident rates for "spots", by highway-type classification, are listed in Table 5 using 1986 through 1990 data.

The first step in Kentucky's procedure for identifying high-accident locations involves identifying spots and sections that have more than the critical numbers of accidents. Then, the accident rates for those locations are compared to critical accident rates. Statewide averages and critical numbers of accidents for "spots" and 1-mile sections by highway-type classification are presented in Table 6 for 1986 through 1990. Critical numbers of accidents, such as those listed in Table 6, are used to establish the "number of accidents" criterion for determining the initial list of locations. For example, six accidents in this time period would be a critical number of accidents for a 0.3-mile spot for a rural, two-lane highway. Critical numbers of accidents for various section lengths were determined for each highway type using Equation 2. Results are presented in tables in APPENDIX B. Section lengths up to 20 miles for rural roads and up to 10 miles for urban roads are included.

After the initial list of locations meeting the critical number criterion is compiled, comparisons between accident rates for those locations and critical accident rates are made. Critical accident-rate tables for highway sections are presented in APPENDIX C. Critical accident rates for the various rural and urban highways were determined as a function of section length and traffic volume (AADT). The rates are listed in units of accidents per 100 MVM and were calculated using Equation 1.

Critical accident-rate tables for "spots" are contained in APPENDIX D. Those rates are presented in units of accidents per million vehicles and also were determined using Equation 1.

COUNTY ACCIDENT STATISTICS

Accident rates were calculated for each county considering 1) only the state-maintained system and 2) all roads within the county. The accident rates are presented in terms of ACC/100 MVM. Total accident rates were calculated for both categories. Also, using all roads in the county, accident rates were calculated considering fatal accidents only and fatal-or-injury accidents only. Those rates are presented in Table 7. Total miles travelled in each county were determined by combining miles travelled on roads having known traffic volumes with those having no recorded volumes. The statewide mileage tape was used to tabulate vehicle-miles travelled by county on roads having traffic volume counts. The difference between this statewide total of vehicle-miles travelled on roads having known traffic volumes and the total estimated miles driven in the state was then distributed to each county based upon the proportion of registered vehicles in each county to the total in the state. The total miles driven in each county was then obtained by adding the known miles driven on the state-maintained highway system and the estimated miles driven on the remaining streets and highways.

To assist in the analysis of county accident statistics, county populations in descending order were tabulated and presented in Table 8. The populations use data from the 1990 census. The counties were then grouped into five categories based upon population. Using accidents on all roads in the county, average and critical accident rates were calculated (Table 9). The total accident rate and injury-or-fatal accident rates increased as population increased while the fatal accident rate decreased with increased population. The critical accident rate was calculated using Equation 1. Critical rates (in terms of accidents per 100 million vehicle-miles) were calculated for total accidents, fatal accidents, and injury-or-fatal accidents. The numbers of counties having rates above critical in each population category were determined. The total number was 41 for total accidents, 31 for injury-or-fatal accidents, and none for fatal accidents. The consistency in accident data that has been observed during the past few years is shown in that 38 of the 41 counties determined to have a critical accident rate when total accidents were considered were also identified as having a critical accident rate in the previous report (16).

Table 10 contains a list of numbers of accidents and total accident rates for all counties grouped by population category (considering all roads in the county). Counties within each population category are listed in order of descending accident rate, with the critical rates identified.

Accident rates also were calculated by county considering only the state-maintained system. Those rates, grouped by population category, are presented in Table 11. The rankings of counties in Tables 10 and 11 are similar. In three of the five population categories, the same county had the highest rate considering all roads or state-maintained roads. For both cases, Mason County (15,000 to 24,999 population category), Boyle County (25,000 to 50,000 population category), and Daviess County (over 50,000 population category) had the highest rate in its population category. In the under 10,000 population category, Fulton County had the highest rate when all roads were considered while Bracken County had the highest rate when considering only state-maintained roads. In the 10,000 to 14,999 population category, Allen County had the highest rate when all roads were considered while Pendleton County had the highest rate considering only state-maintained roads. For all roads, Daviess County, followed by Fayette, Jefferson, and Kenton Counties, had the highest rates in the state. Mason County, followed by Daviess County, had the highest rates when considering only state-maintained roads. Lyon County had the lowest rate in the state in both cases. Accident rates were higher when all roads were considered compared to rates for only the state-maintained system.

Using accidents on all roads in the county, injury or fatal accident rates are listed in Table 12 in descending order by population category. Counties having critical rates are identified. Counties having the highest rates for their population categories were Owen, Lewis, Harrison, Jessamine, and Daviess. Daviess County had the highest rate in the state while Lyon County had the lowest rate.

Similar rates for fatal accidents are listed in Table 13. Counties having the highest rates for their population categories were Menifee, Estill, Marion, Perry, and Pike. Except for Marion County, these counties are all in the southeastern section of Kentucky. The highest rates were generally for the smallest counties. No county was identified as having a critical fatal accident rate.

A summary of other miscellaneous accident data used in the problem identification process is presented by county in Table 14. This table includes the number of accidents by county by year; percent change in the 1990 accident total from the previous four-year average; percentages of accidents involving alcohol, drugs, and speeding; percentage of fatal accidents; percentage of injury-or-fatal accidents; and percentage of drivers using safety belts.

CITY ACCIDENT STATISTICS

Accident statistics were analyzed for cities by using the 1986 through 1990 accident data. The primary group of cities included in the analysis were those having a population over 2,500 that were incorporated and had a police agency. Incorporated cities were eliminated if they did not have a police agency. Incorporated cities in

Jefferson County, such as St. Matthews, Jeffersontown, and Shively, were included separately from Louisville because of a desire to analyze accidents for each police reporting agency. Therefore, for Louisville, only the population of the city area was included instead of a metropolitan area population.

Table 15 is a summary of accident rates for cities having populations more than 2,500 that are incorporated and have police agencies. The cities also had to be included in the 1990 census. That table included 113 cities. Rates in terms of ACC/100 MVM are listed for the state-maintained system while rates in terms of accidents per 1,000 population are listed using all streets in the city. The number of accidents in a city on the state-maintained system was obtained using the city code given on the statewide mileage tape. The number of accidents in a city on all roads was obtained using the code given on the accident tape. The table notes the few cities in which a code was not available on the statewide mileage tape such that data for only the state-maintained system could not be obtained.

Additional statistics are listed for each of those cities in Table 16. Rates for fatal accidents, pedestrian-motor vehicle accidents, bicycle-related motor vehicle accidents, and motorcycle accidents are provided. Those rates are in terms of accidents per 10,000 population. Percentages of accidents involving speeding or alcohol are also listed.

Total accident rates for all cities listed in the 1990 census are summarized in APPENDIX E (Table E-1). A total of 435 cities were listed in the census. Included for 343 cities were population, number of accidents, and accident rate (accidents per 1,000 population). In order to obtain accident information, a code for the city must be available. No such code was available for 92 of the cities. These were generally the smallest cities.

Accidents on the state-maintained system of highways within a city generally consisted of approximately one-third of all the accidents occurring within a city. Therefore, total accident rates were used to determine critical accident rates. Accident rates on the state-maintained system, by city and by population category, are shown in Table 17. The cities are listed in descending order by accident rate. As noted in Table 15, the cities that did not have a city code listed in the statewide mileage tape would not be listed in Table 17 since data could not be obtained for the state-maintained system only. Lexington, Richmond, Erlanger, Morehead, Grayson, and Falmouth had the highest accident rate on state-maintained streets in their population category. Cities in the 1,000 to 2,499 population category are also included in this table. A total of 162 cities is listed in this table. The average accident rate for all cities in a category is also listed. The rates were higher for cities in the population categories between 5,000 and 55,000. The rates were lower for the highest and lowest population categories (the lowest rate was for the 1,000 to 2,499 population category).

Total accident rates for cities by population category are listed in Table 18. They are tabulated in order of descending accident rates and critical rates are identified. Thirty nine cities were identified as having total accident rates above critical. Louisville, Paducah, Florence, London, and Prestonsburg had the highest total accident rates in their respective population ranges. Fatal accident rates, by city and population category, are listed in Table 19. They also are tabulated in order of descending fatal accident rates. Lexington, Paducah, Elizabethtown, Hazard, and Hartford had the highest fatal accident rates in their respective population ranges with Paducah the only city identified as having a critical accident rate.

ALCOHOL- AND DRUG-RELATED ACCIDENTS

Alcohol- and drug-related accidents continue to be one of the highest priority problem identification areas and considerable emphasis is being placed on programs to impact those problems. In Kentucky, the number of traffic accidents in which alcohol was listed as a contributing factor on the accident report has averaged about 7,800 per year for the past five years. Alcohol-related fatal accidents (fatal accidents with alcohol listed as a contributing factor on the police report) have averaged 186 per year during the past five years. If the cost of an average motor-vehicle accident is used, the estimated annual cost of alcohol-related accidents in Kentucky is about $109 million.

The effectiveness of alcohol enforcement programs has varied throughout the years for various parts of the country. Several enforcement programs have been conducted in Kentucky and evaluations of some of the programs have been documented (18). Results from the programs of increased enforcement in Fayette, McCracken, and Warren counties indicated a significant reduction in alcohol-related accidents during enforcement hours of the program. There were dramatic increases in DUI arrests in the three areas evaluated. DUI conviction rates varied from 90 percent in Fayette County to 77 percent in McCracken County and 55 percent in Warren County. Approximately 90 percent of the respondents to a survey questionnaire were in favor of Traffic Alcohol Programs as a means of reducing alcohol-related accidents. Benefit-cost ratios were calculated and were determined as being greater than 1.0 for all areas evaluated. Very similar results were obtained after an impact evaluation of traffic alcohol programs in Jefferson County (19).

The number of alcohol-related accidents has remained fairly constant during the period from 1985 through 1990. There had been a higher number of alcohol-related accidents prior to this time period. In 1984, there were 9,007 alcohol-related accidents (6.6 percent of all accidents). This number decreased to the relatively constant level of 7,760 in 1986; 7,671 in 1987; 7,890 in 1988; 7,669 in 1989; and 8,052 in 1990. The number of alcohol-related accidents increased by 3.8 percent in 1990 compared to the previous four-year average and was the highest number since 1984. Alcohol-related accidents represent 5.4 percent of all accidents during this five-year

period. The number of alcohol-related fatal accidents in 1990 (196) increased by 6.3 percent over the 1986-1989 average (184).

To identify alcohol-related accident problem areas, percentages of accidents involving alcohol were summarized for counties and cities as shown in Tables 20 and 21, respectively. In Table 20, number and percentage of accidents involving alcohol were determined by considering all drivers and two age categories (16 through 18 years and 19 through 20 years). This allowed a separate analysis for young drivers. The counties are listed by county population group in order of descending percentages of alcohol accidents for all drivers. Counties in each population category having the highest percentage of accidents, considering all drivers, involving alcohol are Elliott, Casey, McCreary, Floyd, and Christian.

The information provided in Table 20 also may be used to determine the counties that have the highest percentages of accidents involving alcohol for young drivers by county population category. The counties identified as having the highest percentages of alcohol-related accidents, considering only young drivers, were not typically the same as those identified when all drivers were considered. For the 16 through 18 years of age category, the counties in each population category having the highest percentages of accidents involving alcohol are Robertson, Casey, Clay, Floyd, and Madison. For the 19 to 20 age category, counties having the highest percentage are Robertson, Morgan, McCreary, Nelson, and Christian. No county had the highest percentage for each group of drivers.

Table 21 is a summary of number and percentage of accidents involving alcohol for cities. For each population category, cities having the highest percentages of accidents involving alcohol are Lexington, Covington, Independence, Villa Hills, and Hickman.

Additional analyses were performed to show the number and rate of alcohol convictions by county (Table 22). Rates are in terms of convictions per 1,000 licensed drivers and convictions per alcohol-related accident. Five years of conviction data (1986 through 1990) were used in the analysis. Those same rates are presented in Table 23 with counties grouped by population ranges and rates are listed in order of descending percentages. Counties in each population group having the lowest rates of alcohol convictions per 1,000 licensed drivers were Hickman, Green, Harrison, Boyle, and Campbell. Counties having the lowest rates of alcohol convictions per alcohol-related accident were Wolfe, Edmonson, Harrison and Marion, Graves, and Campbell. Counties having low rates for either convictions per 1,000 licensed drivers or convictions per alcohol-related accident may be candidates for increased enforcement or other special programs (especially if they have a high percentage of alcohol-related accidents). Data in Table 22 show that, statewide, the number of alcohol convictions increased in 1990 compared to the previous four years. The

number of alcohol convictions in 1990 represents a 16 percent increase from the average of the previous four years.

A comparison was also made between the total alcohol arrests and total alcohol convictions, by county, for the five years of 1985 and 1986 and 1988 through 1990 (Table 24). Accurate arrest data were not available for 1987. The statewide percentage of alcohol convictions per arrest over these five years was 68.4 percent. The percentages varied from a low of 34.0 percent in Breathitt County to a high of over 100 percent in Lyon County. The percentages could be affected, especially in counties having low numbers of arrests and convictions, by the overlapping effects of arrests being made and convictions being prosecuted in different calendar years. This would be the reason the conviction percentage could be over 100 percent. Twenty-five other counties had a conviction percentage over 80 percent. Only four other counties had a conviction rate over 85 percent (Bracken, Butler, Fayette, and Mason). In addition to Breathitt County, five other counties had a conviction rate under 50 percent (McLean, Marion, Marshall, Spencer, and Todd). The counties are grouped by population category and are placed in decreasing order of conviction percentage in Table 25. The average conviction percentage did not vary substantially by population category with a 69.5 conviction percent for the highest population category compared to 65.2 percent for the lowest. Counties having the highest conviction percentages in the various population categories were Fayette, Jessamine, Mason, Butler, and Lyon. Counties having the lowest conviction percentages for the various population categories were Hardin, Marshall, Breathitt, Todd, and Spencer.

An important intervention into the pattern of arresting and prosecuting drunk driving cases was revision of the DUI law that resulted in increased penalties. The law became effective July 15, 1984, with the potential for significant impact upon the previous trends of conviction rates. The numbers of arrests, convictions, and conviction rates for the two calendar years immediately after the law became effective (1985 and 1986) as well as 1988 through 1990 were compiled and presented in Table 24. The statewide conviction percentage for these five years after the DUI law was 68 percent compared to a percentage of 44 percent for the two-year period of 1982 and 1983 before the law. There was an average of 43,166 DUI arrests per year in the five-year study period after revision to the DUI law. The conviction rate remained fairly stable after enactment of the DUI law with conviction rates ranging from 64 percent in 1984 and 1988 to 72 percent in 1990.

A drunk-driving offense may be reduced to a charge of reckless driving. This could occur when a person is arrested for drunk driving, because of erratic driving behavior, and field sobriety or BAC tests fail to confirm the drunk-driving charge. In addition, the severity of the penalty for drunk driving could influence police officers and they might reduce a drunk-driving charge to reckless driving. Similarly, in some instances, the judicial system has been responsible for reducing charges from drunk driving to reckless driving. For those reasons, it was determined that a

summary of reckless driving convictions would be beneficial. Numbers of reckless driving convictions and the rate of convictions per 1,000 licensed drivers for each county are presented in Table 26. In the time period of 1986 through 1990 the highest number of convictions was in 1990. The number of reckless driving convictions remained fairly stable over this time period. There had been a general trend of a reduction in reckless driving convictions over the past several years but the trend was reversed with the increase in 1990. Because of the increase in alcohol convictions and the relationship between alcohol convictions and reckless driving convictions, a decrease in reckless driving convictions should be expected. The highest rates occurred in Marion, Boone, and Harlan Counties.

Drugs continue to be listed as a contributing factor in a relatively small percentage of all accidents. There had been a general downward trend in this type of accident until 1987 when there was a slight increase. There was a larger increase in this type of accident in 1988 with the level in 1989 and 1990 similar to that in 1988. There was a slight increase (5.6 percent) in this type of accident in 1990 compared to the 1986-1989 average which would be related to the lower number of such accidents in 1986 and 1987. The lowest number of drug-related accidents occurred in 1986 with 297 accidents (0.21 percent of all accidents) compared to a high of 387 in 1988 (0.26 percent of all accidents). As can be seen, the percentage of accidents in which drugs are identified as a contributing factor is very small.

Percentages of accidents involving drugs by county and population category are presented in Table 27. Counties having the highest percentages of drug-related accidents by population category were Robertson; Casey, Russell and Leslie; Clay; Knox; and McCracken.

Another summary was prepared to show percentages of accidents involving drugs by city population categories (Table 28). Within each population category, cities having the highest percentages of drug-related accidents were Lexington, Paducah, Middlesboro, Fort Wright, and Cumberland. Several of the cities having the higher rates were located in the northern Kentucky area.

OCCUPANT PROTECTION

The percentages of drivers of passenger cars involved in traffic accidents who wore safety belts were listed by county in Table 14. Those percentages are listed in descending order by county population category in Table 29. Those percentages are for the five-year period of 1986 through 1990. The rates varied from a high of 52.4 percent in Fayette County to a low of 7.9 percent in Green County. Considering only 1990 data, the rates varied from a high of 77 percent in Fayette County to a low of 6.9 percent in Clinton County. Considering only 1990 accident data, seven counties (Boone, Campbell, Fayette, Hardin, Jefferson, Scott, and Trimble) had usage rates over 50 percent while ten counties (Bracken, Clinton, Crittenden, Cumberland,

Elliott, Green, Monroe, Owsley, Taylor, and Wayne) had usage rates under 15 percent. It should be noted that local ordinances were enacted in Fayette County effective July 1, 1990 and in the city of Louisville effective July 1, 1991. Observational surveys conducted since enactment of the ordinances have revealed usage rates of about 70 percent in both Lexington and Louisville.

Counties having potential for intensive promotional campaigns are identified in Table 29. Those counties were selected on the basis of their safety belt usage rate, accident rate, location in the state, and accident rate. Counties having low usage rates were identified with the criterion of selecting one county from within each of the 16 Kentucky State Police Posts areas of jurisdiction. When possible, an attempt was made to select counties with high accident rates. Since the usage rate has increased over the past several years, the usage rate considering 1990 accident data was utilized in order to consider the most recent data.

The variance of safety belt usage rate, by year, from 1986 through 1990 is presented in Table 30 along with the relationship between county population and safety belt usage rate. The percentage using safety belts has increased steadily from 1986 through 1990 with large percentage increases each year. Usage by accident-involved drivers in 1990 (44.6 percent) was over two times the usage in 1986 (19.3 percent). This table also shows the higher usage percentages for counties with over 50,000 population. Counties in the over 50,000 population category had a usage rate basically double that for counties in the under 10,000 population category.

Safety belts are recognized as an effective method of reducing accident severity. This is confirmed by data presented in Table 31. This table shows that, when a driver of a motor vehicle is wearing a safety belt at the time of an accident, the chance of being fatally injured is reduced by 78 percent. Also, the chance of receiving an incapacitating injury is reduced by 46 percent and the chance of receiving a non-incapacitating injury is reduced by 31 percent. Safety belts will greatly decrease the possibility of injury in accidents involving large deceleration forces, but some injury or complaint of soreness or discomfort may persist. In many instances, use of seat belts will reduce a severe injury to a less severe injury. In fact, the category of "possible injury", which involves a complaint of pain without visible signs of injury, decreased only eight percent (from 5.82 percent for drivers not wearing safety belts to 5.33 percent for drivers wearing safety belts). The chance of receiving either a fatal or incapacitating injury was reduced by 49 percent. This percentage agrees with national statistics concerning the effectiveness of safety belts in reducing fatal or serious injuries. The reductions in accident severity were found to be statistically significant (probability of 0.99) (20).

The change in accident severity for drivers wearing and not wearing a safety belt is presented in Table 32 for the years 1986 through 1990. The reduction in severity from the use of safety belts has remained consistent. There appears to have

been a trend toward a slight increase in the severity of injuries to drivers not wearing a safety belt over the time period.

Potential savings associated with increased safety belt usage were estimated and are shown in Table 33. This table lists the annual potential reduction in the number of fatalities, serious injuries (those listed as incapacitating on the accident report), and the associated accident cost savings resulting from that reduction. Those savings are given for driver usage rates from 40 to 100 percent. To obtain the current results, 1990 safety belt statistics and cost estimates recommended by the Federal Highway Administration (21) were used (as shown in the footnote in Table 33). An actual usage rate of 32.2 percent (22), as determined in the 1990 statewide usage survey, was used along with a reduction associated with safety belt usage of 78 percent for fatalities and 46 percent for incapacitating injuries. Accident cost estimates were $1,500,000 for a fatality and $39,000 for an incapacitating injury (21). For example, if 70 percent of all drivers involved in accidents in Kentucky wore safety belts, there would be a potential annual reduction of about 183 fatalities and a potential annual reduction in the cost of fatalities and serious injuries of approximately 322 million dollars.

A summary of usage and effectiveness of child safety seats for children under the age of four who were involved in traffic accidents is presented in Table 34. Data are for 1986 through 1990. Age categories in the accident file governed the age category that was used. Most children three years of age or younger would be placed in a child safety seat rather than a seatbelt or harness. However, many were coded as wearing a safety belt, so the categories of restraint used were 1) none, 2) safety belt or harness, 3) child safety seat, and 4) any restraint.

Of the 41 fatalities (children age three and under) occurring during the study period, only 14 involved use of a restraint. Also, of 657 incapacitating injuries, only 180 involved use of a restraint. A better measure of effectiveness would be the percentage sustaining a specific injury. This analysis revealed the percentages of fatalities and incapacitating and non-incapacitating injuries were much lower for children who were in a child safety seat or safety belt compared to those using no restraint. Comparison of the "any restraint" and "none" categories revealed there was a 55-percent reduction in fatalities for children in restraints, a 67-percent reduction in incapacitating injuries, a 45-percent reduction in non-incapacitating injuries, and a 38-percent reduction in possible injuries. All reductions, except that for fatal injuries, were determined to be statistically significant (probability of 0.99) (19).

An analysis of the percentage of children in restraints revealed the percentage was highest for rear-seat locations. A comparison of percent usage by year shows that there was a substantial increase in 1988 through 1990 compared to 1986 and 1987. This increase could be related to the addition in 1988 of a penalty to the child restraint law. The most recent usage rate was 63 percent in 1990.

Additional analysis of accident data related to safety belt usage is included in APPENDIX F.

SPEED-RELATED ACCIDENTS

Speed is one of the most common contributing factors in total accidents and fatal accidents. Speed-related accidents, as a percentage of total accidents, has remained relatively constant for the period 1986 through 1990 at between seven and eight percent. The number of speed-related accidents was slightly higher in 1989 and 1990 compared to 1986 through 1988. The number of speed-related accidents increased slightly in 1990 compared to the previous four years. Speed-related fatal accidents have also remained fairly steady during this period, with the largest number in 1986 and the lowest in 1988.

As a means of analyzing speed-related accidents, accidents having "unsafe speed" coded as a contributing factor were summarized by county and population category in Table 35. When arranged in order of decreasing percentages of speed-related accidents, those counties having the highest percentages in each population category were Robertson, Leslie, McCreary, Floyd, and Pike. There appears to be a concentration of counties having a high percentage of speed-related accidents in the southeastern section of the state. A similar summary of accidents involving unsafe speeds for cities was prepared and is presented in Table 36. Those cities having the highest percentages in each population category were Lexington, Hopkinsville, Fort Thomas, Villa Hills, and Hartford.

In addition to accident analysis, the other major area of analysis for unsafe speed was speed convictions. Areas having large percentages of accidents involving speeding and low conviction rates are candidates for increased enforcement. Table 37 presents a summary of speeding convictions by county. Numbers of speed convictions, speed convictions per 1,000 licensed drivers, and speeding convictions per speed-related accident are included. To assist in identifying areas having the potential for increased enforcement, Table 38 was prepared with speeding conviction rates listed in descending order by county population categories. Within each population category, those counties having the lowest speeding conviction rates per 1,000 licensed drivers are Elliott, Monroe, Knott, Letcher, and Jefferson. Counties having the lowest rates of speeding convictions per speed-related accident are Elliott, Jackson, Knott, Letcher, and Pike. There was a predominance of counties having high percentages of speed-related accidents and low rates of convictions in the southeastern section of Kentucky.

The percentage of vehicles exceeding the 55-mph speed limit has been monitored and reported by the Kentucky Department of Highways on a quarterly basis since 1978. The speed limit on rural interstates was raised to 65 mph in June 1987. A summary of data collected as part of the speed monitoring program for 1990

is presented in Table 39. That summary shows 590,289 vehicles were monitored at 29 locations. The percentage of vehicles exceeding 55 mph on all monitored roads, except rural interstates, (using weighting factors to reflect vehicle miles traveled) was 45.9 percent. The percentage of vehicles exceeding the 65 mph speed limit on rural interstates was 35.6 percent.

Another summary was prepared to show overall compliance with the 55-mph speed limit from 1986 through 1990 (Table 40). The speed limit on rural interstates and parkways was increased to 65 mph in 1987. The speed data on both rural and urban interstates show the increase in speeds that occurred after the increase in the speed limit in 1987. A comparison of 85th percentile speeds on rural interstates before and after start of the 65 mph speed limit in June 1987 shows speeds of 65 mph for 1986 compared to 70 mph for 1988, 1989 and 1990. The 85th percentile speeds on urban interstates increased from 64 mph in 1986 to the range of 65 to 66 mph in 1988, 1989 and 1990. The state total percentage of vehicles exceeding 55 mph decreased in 1987 since rural interstates were excluded that year.

GENERAL ACCIDENT STATISTICS

Several types of general statistics were developed for use in analyses of specific problem areas. Included were accident trends over a five-year period, a summary of accidents by police reporting agency, and several types of statistics for accidents involving pedestrians, bicycles, motorcycles, school buses, and trucks.

ACCIDENT TREND ANALYSIS

An analysis of accident trends over the five-year period is summarized in Table 41. The 1990 accidents were compared to an average of the preceding four years (1986-1989). There was a slight increase in total accidents (1.8 percent) when comparing 1990 to the previous four years. The highest number of accidents occurred in 1989 (151,422) with the lowest number occurring in 1986 (140,421). There were also increases in the numbers of fatal and injury accidents as well as the numbers of fatalities and injuries. There were more fatalities and injuries in 1990 than in any of the preceding four years. The number of fatalities ranged from 776 in 1989 to 851 in 1990. The number of injuries varied from 46,807 in 1986 to 54,057 in 1990.

Trends in the number of specific types of accidents also are presented in Table 41. Those trends are discussed in the section dealing with that accident category.

There was a total of 729,888 accidents in the five-year period, of which 3,666 (0.5 percent) were fatal accidents and 169,520 (23.2 percent) were injury accidents. Those accidents resulted in 4,124 fatalities and 254,980 injuries. Using accident cost

estimates recommended by the Federal Highway Administration (20) yields an average annual cost of 2.0 billion dollars for motor-vehicle accidents in Kentucky for the period 1986 through 1990. The average cost of a motor-vehicle accident was approximately $14,000.

Additional general statistics compiled by county for accidents involving pedestrians, bicycles, motorcycles, school buses, and trucks are included in Table 42. Numbers of accidents and average annual accidents per 10,000 population were included.

PEDESTRIAN ACCIDENTS

The number of pedestrian accidents decreased in 1990 compared to the period 1986 through 1989. The number of pedestrian accidents has remained fairly stable over the time period with a slight downward trend. A summary of pedestrian accident statistics by county and population category is presented in Table 43. Numbers of accidents and annual accident rates per 10,000 population are included. From the listing of accident rates in descending order, the following counties had the highest rates in each population category: Carroll, Anderson, Mason, Henderson, and Kenton. A similar analysis was performed for pedestrian accidents by city and population category. Results are summarized in Table 44 and the following cities had the highest rates in their respective population categories: Louisville, Covington, Newport, Monticello, and Carrollton.

BICYCLE ACCIDENTS

Numbers and rates of motor-vehicle accidents involving bicycles by county are listed in Table 45. Counties were grouped by population category. The counties having the highest accident rate in each category are Carroll, Anderson, Union, Henderson, and Daviess. A similar summary was prepared for cities and the results are presented in Table 46. Cities having the highest rate of bicycle-related accidents in each population category are Louisville, Covington, Madisonville, Elsmere, and Ludlow.

The number of bicycle accidents decreased substantially in 1990 compared to the average of 1986 through 1989. This resulted from the higher number of accidents in 1986 and 1987. The number of bicycle accidents has ranged from 730 in 1989 to 971 in 1986. There has been a general downward trend in the number of motor-vehicle accidents involving bicycles.

MOTORCYCLE ACCIDENTS

County and city statistics for accidents involving motorcycles are presented in Tables 47 and 48, respectively. For each population category, counties having the

highest rates for motorcycle accidents per 10,000 population were Carroll, Leslie, Wayne, Henderson, and McCracken (Table 47). From Table 48, those cities having the highest rates in each population category were Louisville, Paducah, Glasgow, London, and Harlan.

There has been a general decline in the annual number of motorcycle accidents over the five-year period from a high of 1,661 in 1986 to a low of 1,084 in 1989. There was a large decrease (22 percent) in 1990 compared to the 1986 to 1989 average.

SCHOOL BUS ACCIDENTS

School bus accident statistics were summarized for counties and cities and results are presented in Tables 49 and 50. Table 49 lists numbers and rates of school bus accidents by county and population category. Counties having the highest rates in each population category are Metcalfe, Pendleton, Breathitt, Clark, and Fayette. A similar summary was prepared for cities by population categories, as shown in Table 50. Those cities having the highest rates in each population category are Louisville, Ashland, Shively, Lebanon, and Prestonsburg.

The trend analysis presented in Table 41 indicates there has been a general increasing trend in school bus accidents. The annual number of this type of accident ranged from 658 in 1987 to 822 in 1990. The number of this type of accident in 1990 was 11.5 percent higher than for the 1986 through 1989 average.

TRUCK ACCIDENTS

Truck accidents included both single unit and combination trucks. A summary of those accidents by county is given in Table 51. Counties having the highest rates in each population category were Gallatin, Henry, Simpson, Floyd, and Boone. All of these counties except Floyd County have at least one interstate highway within their borders. There is a large amount of coal truck traffic in Floyd County.

The trend analysis shows a steady number of truck accidents over the five-year study period. The number of truck accidents ranged from 10,815 in 1987 to 11,642 in 1986. The number of truck accidents in 1990 represented a 1.6-percent decrease compared to the previous four-year average (Table 41).

VEHICLE DEFECTS

The requirement for an annual vehicle inspection was repealed in 1978. A summary of the involvement of vehicle defects in accidents before and after repeal of that law is presented in Table 52. The percent of accidents involving a vehicle defect

was 5.86 percent before repeal of the vehicle inspection law. The percent increased to 7.09 in the first 19 months after repeal of the law and has averaged 7.0 percent for 1980 through 1990. There has been a general decrease in this percentage since a maximum of 7.55 percent in 1981 with the 6.24 percent in 1990 the lowest since repeal of the vehicle inspection law.

Applying the "before" percentage of accidents involving a vehicle defect (5.86 percent) to the 1986 through 1990 data provides an estimate of the increase in the number of "vehicle defect" related accidents that may be attributed to repeal of the vehicle inspection law. Applying that "before" percentage yielded 5,945 fewer accidents in the five-year period or an average of about 1,189 accidents per year. The average cost of an accident was about $14,000 using the accident cost estimates recommended by the Federal Highway Administration (21). Therefore, 1,189 additional accidents would result in approximately 16.6 million dollars per year in accident costs that could be partially attributed to repeal of the vehicle inspection law.

SUMMARY AND RECOMMENDATIONS

STATEWIDE ACCIDENT RATES

For the high-accident-location safety improvement program in Kentucky to be successful, procedures for identifying high-accident locations and scheduling improvements should be used. A computer program has been developed to identify high-accident locations. Vital inputs into this program are average and critical accident numbers and rates for rural and urban highway classifications, as presented in this report.

COUNTY AND CITY ACCIDENT STATISTICS

The various types of accident rates calculated and included in this report were used in the analysis of various problem identification areas.

A program currently exists to provide funds for the purchase of appropriate signs to bring signing on city and county streets and roadways into compliance with the standards included in the Manual on Uniform Traffic Control Devices. A large number of cities have taken advantage of this program which has been expanded to include counties. The following cities have critical accident rates (as shown in Table 18) but have not been included in this signing program. It is recommended that they be considered as candidates for participation in the program.

1. Richmond
2. Shively
3. Shelbyville

4. Versailles
5. Prestonsburg
6. Harlan
7. Cold Spring
8. Russell
9. Columbia
10. Scottsville
11. Shepherdsville
12. Leitchfield
13. Oak Grove
14. Highland Heights

ALCOHOL-RELATED ACCIDENTS

1. The number of alcohol-related accidents has remained fairly constant from 1986 to 1990. While there was an increase in the number of this type of accident in 1990, the number of accidents has decreased from the level prior to 1985. This may be related to increased enforcement and public information campaigns that have increased public awareness.

As part of the analysis, percentages of alcohol-related accidents were tabulated for counties and cities. In addition, alcohol conviction rates were tabulated by county. Those counties having relatively high percentages of alcohol-related accidents and low average numbers of alcohol convictions per alcohol accident were identified as potential locations where increased enforcement may be beneficial. Counties were also required to have 150 or more alcohol-related accidents during the five-year analysis period to be considered as potential counties for the increased alcohol-related enforcement program. Following is a list of those counties by State Police Post.

Post Number	County
1	McCracken
2	Caldwell
3	Warren
4	Meade
5	Carroll
6	Boone
7	Lincoln
8	Montgomery
9	Floyd
10	Knox
11	Rockcastle
12	Shelby
13	Breathitt

14	Greenup
15	Taylor
16	Henderson

2. An analysis was performed for cities similar to that for counties. However, alcohol conviction rates were not available for cities and consideration was given to conviction rates for counties within which a city was located. Again, the criterion of 150 or more alcohol-related accidents within a five-year period was applied. The following are candidate cities for a program of increased alcohol enforcement.

1. Covington,
2. Richmond,
3. Paducah, and
4. Newport.

OCCUPANT PROTECTION

1. The large potential for reduction in injury and accident costs associated with increased use of safety belts continues to warrant programs having the objective of increasing safety belt usage. Safety belt programs such as those described by the National Highway Traffic Safety Administration (NHTSA) have been conducted in several locations in the past and should continue, with the objectives of increasing awareness of risks of traffic accidents, increasing understanding of benefits of safety belt usage, and providing assistance to organizations willing to promote safety belt usage. This should be implemented on a statewide level. Counties that are candidates for more intensive promotion campaigns were identified in Table 29. A list of those counties, by State Police Post, follows:

Post Number	County
1	Fulton
2	Muhlenburg
3	Allen
4	Breckinridge
5	Carroll
6	Bracken
7	Jackson
8	Lewis
9	Pike
10	Bell
11	Clay
12	Anderson
13	Breathitt

14	Boyd
15	Clinton
16	Daviess

2. Surveys of the use of child safety seats after implementation of the mandatory usage law which became effective in July 1982 have been conducted. Usage has increased, especially after the addition of a penalty provision in 1988. Additional modifications to the current child safety seat law could be enacted to strengthen it further. For example, the driver of a vehicle in which a child subject to the law is riding should be responsible for placing the child in a proper restraint whether or not the driver is the parent or legal guardian.

3. A mandatory seat belt usage law for all drivers would provide the greatest potential for increasing safety belt usage. Such laws have been enacted in almost all the states. Data summarized in this report could be used to document potential benefits of increased seat belt usage. A statewide mandatory seat belt law should be considered by the Kentucky General Assembly. In lieu of a statewide law, individual local governments should consider such a law. Observational surveys in Lexington and Louisville show that enactment of a local ordinance can result in a significant increase in safety belt usage.

4. To maintain up-to-date usage statistics and to determine the effect of new or modified laws or promotional campaigns, annual statewide observational surveys should be conducted.

5. The age at which a child may safely be placed in a safety belt rather than a child safety seat has not been determined. While accident statistics (Table 34) indicate the accident severities between child safety seats and safety belts are similar, a more detailed investigation is needed. An analysis should be conducted through use of a report supplement to be completed by investigating officers when a child in a restraint is involved in an accident.

6. More detailed information should be obtained for accidents in which a driver or passenger wearing a safety belt is either fatally or severely injured. A report supplement should be developed for use when an occupant wearing a safety belt receives a fatal or incapacitating injury. With increased safety belt usage, there is likely to be increased injuries and fatalities when a safety belt is used and it would be beneficial to document the circumstances involved.

SPEED-RELATED ACCIDENTS

1. Unsafe speed has been shown to be the primary contributing factor in fatal accidents and the fourth most frequent contributing factor in all accidents (13). Problems were identified for counties and cities by determining the percentages of

speed-related accidents. In addition, speeding conviction rates were tabulated by county. Those counties having high percentages of speed-related accidents and low average number of speeding convictions per speed-related accident were identified as possible locations for increased enforcement. Locations meeting the criteria for accidents and convictions also were required to have at least 200 speed-related accidents during the five-year study period and speed-related accidents were at least 10 percent of total accidents. Following is a list of counties (tabulated by State Police Post) recommended for programs of increased speed enforcement (some posts had no counties listed while others had several):

Post Number	Counties
2	Muhlenburg
3	Edmonson
4	Meade
5	Henry
6	Grant
7	Lincoln, Madison
8	Bath, Lewis, Rowan
9	Floyd, Magoffin, Martin, Pike
10	Bell, Harlan, Knox
11	Clay, Laurel, Whitley
13	Breathitt, Knott, Leslie, Letcher
14	Carter
15	Marion
16	Ohio

2. By analyzing speed-related accident rates for cities and applying the criterion of at least 200 accidents during the five-year period and speed related accidents were at least five percent of total accidents, the following cities were recommended for additional programs of speed enforcement:

1. Hopkinsville,
2. Frankfort, and
3. Newport.

GENERAL ACCIDENT STATISTICS

Pedestrians

The accident rate analyses identified Louisville, Covington, and Newport as cities having a high accident rate for pedestrian accidents as well as a large number of such accidents (Table 44). A study to determine factors contributing to this problem in those cities and recommendations for improved traffic control measures,

increased police enforcement, or driver and pedestrian education programs is warranted.

Bicycles

Louisville and Covington also had a high accident rate and number of this type of accident compared to other cities in the state (as with pedestrian accidents). A study of this type of accident could be included with the previously mentioned study of pedestrian accidents.

Motorcycles

Paducah had the highest percentage of this type of accident while McCracken County had the highest percentage in its population category. An evaluation of these accidents in this city and county is warranted.

Vehicle Defects

The percentage of accidents involving vehicle defects has increased since repeal of the vehicle inspection law. It could be concluded that the repeal of that law resulted in additional accidents involving vehicle defects, but a detailed study of defects involved should be conducted to verify such a conclusion. There is a need for such a study to determine whether the defects that have contributed to accidents since repeal of the vehicle inspection law were of the type that might have been detected under the previous inspection program. That study could also reveal types of inspections necessary to detect defects contributing to accidents.

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TABLE 1. Comparison of 1986, 1987, 1988, 1989 and, 1990 Accidents Rates*

STATISTIC	1986	1987	1988	1989	1986-1989 Average	1990	Percent Change***
Accidents	77,443	79,222	82,213	85,086	80,991	83,240	2.8
Mileage	24,905	24,947	27,390	27,407	26,162	27,411	4.8
Accidents Per Mile	3.11	3.18	3.00	3.10	3.10	3.04	-1.9
Vehicle Miles (Billion)	24.20	26.32	28.59	29.42	27.13	30.46	12.3
AADT	2,662	2,890	2,859	2,941	2,838	3,045	7.3
Accident Rate**	320	301	288	289	300	273	-8.8
Fatal Accident Rate**	2.43	2.47	2.10	1.92	2.23	2.07	-7.2
Injury Accident Rate**	90	89	85	86	88	83	-5.1

* Data apply to streets and highways having known traffic volumes, route numbers, and mileposts.

** Accidents Rates are given in terms of accidents per 100 million vehicle-miles (ACC/100 MVM).

*** Percent change from 1986-1989 average to 1990.

Table 2. Statewide Rural Accident Rates By Highway Type Classification (1986-1990)

HIGHWAY TYPE	TOTAL MILEAGE*	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) AADT	ALL	INJURY	FATAL
One-Lane	193	410	378	98	4.2
Two-Lane	22,789	1,430	262	93	3.5
Three-Lane	16	6,640	286	93	3.1
Four-Lane Divided (Non-Interstate or Parkway)	354	8,090	161	60	1.6
Four-Lane Undivided	48	8,150	435	128	4.1
Interstate	577	19,830	60	18	0.8
Parkway	530	4,850	81	22	1.5
All	24,507	2,040	202	71	2.7

* Average for the five years.

Table 3. Statewide Urban Accident Rates By Highway Type Classification (1986-1990)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENTS RATES (ACCIDENTS PER 100 MVM) ALL	INJURY	FATAL
Two-Lane	1,203	6,550	652	168	1.9
Three-Lane	13	9,110	541	142	1.3
Four-Lane Divided (Non-Interstate or Parkway)	320	20,370	494	120	1.3
Four-Lane Undivided	143	17,470	943	222	1.3
Interstate	178	48,790	140	34	0.6
Parkway	40	5,750	159	45	1.2
All	1,908	13,710	467	116	1.2

* Average for the five years.

** Includes small number of one-,five-, and six-lane Highways.

Table 4. COMPARISON OF 1986, 1987, 1988, 1989 and 1990 ACCIDENT RATES BY RURAL AND URBAN HIGHWAY TYPE CLASSIFICATION

LOCATION	HIGHWAY TYPE	ACCIDENTS RATES (ACC/100 MVM) 1986	1987	1988	1989	1986-1989 AVERAGE	1990	PERCENT CHANGE*
Rural	One-Lane	606	342	285	383	404	313	-22.6
	Two-Lane	291	271	246	257	266	253	-4.9
	Three-Lane	882	209	233	238	390	288	-26.2
	Four-Lane Divided (Non-Interstate or Parkway)	154	157	160	173	161	159	-1.0
	Four-Lane Undivided	347	490	453	470	440	478	8.7
	Interstate	53	59	61	67	60	58	-3.5
	Parkway	72	72	82	85	78	89	14.1
	All	214	207	193	203	204	196	-3.9
Urban	Two-Lane	701	678	640	637	664	611	-8.0
	Three-Lane	474	674	546	508	550	509	-7.6
	Four-Lane Divided	548	496	509	479	508	454	-10.6
	Four-Lane Undivided	831	1,011	1,036	970	962	919	-4.4
	Interstate	165	138	143	144	148	115	-21.7
	Parkway	88	155	159	213	154	204	32.4
	All	516	479	472	456	481	420	-12.6

* Percent change from 1986-1989 to 1990

Table 5. STATEWIDE ACCIDENT RATES FOR "SPOTS" BY HIGHWAY TYPE CLASSIFICATION (1986-1990)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER YEAR	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	540	643	0.15	1.13
	Two-Lane	155,671	75,965	0.52	0.79
	Three-Lane	554	53	2.42	0.86
	Four-Lane Divided (Non-Interstate or Parkway)	8,396	1,179	2.95	0.48
	Four-Lane Undivided	3,097	159	2.98	1.31
	Interstate	12,458	1,923	7.24	0.18
	Parkway	3,775	1,767	1.77	0.24
	All Rural	184,491	81,691	0.74	0.61
Urban	Two-Lane	93,764	4,010	2.39	1.96
	Three-Lane	1,212	45	3.33	1.62
	Four-Lane Divided	58,744	1,067	7.44	1.48
	Four-Lane Undivided	42,860	475	6.38	2.83
	Interstate	22,137	594	17.81	0.42
	Parkway	668	133	2.10	0.48
	All Urban**	222,783	6,361	5.00	1.40

* Average for the five years. The length of a spot is defined to be 0.3 mile.

** Includes small number of miles of one-,five-, and six-lane highways.

Table 6. STATEWIDE AVERAGE AND CRITICAL NUMBERS OF ACCIDENTS FOR "SPOTS" AND ONE-MILE SECTIONS BY HIGHWAY TYPE CLASSIFICATION (1986-1990)*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE-MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	0.84	4	2.80	8
	Two-Lane	2.05	6	6.83	14
	Three-Lane	10.39	19	34.63	50
	Four-Lane Divided (Non-Interstate or Parkway)	7.12	14	23.74	37
	Four-Lane Undivided	19.44	31	64.79	86
	Interstate	6.48	14	21.59	34
	Parkway	2.14	6	7.12	14
	All Rural	2.26	7	7.53	15
Urban	Two-Lane	23.38	36	77.95	101
	Three-Lane	26.99	41	89.95	115
	Four-Lane Divided	55.05	75	183.49	219
	Four-Lane Undivided	90.18	115	300.59	346
	Interstate	37.27	53	124.24	153
	Parkway	5.02	11	16.73	28
	All Urban**	35.03	51	116.75	145

* The length of a spot is defined to be 0.3 mile.

** Includes small number of miles of one-,five-, and six-lane highways.

Table 7. ACCIDENT RATES BY COUNTY FOR STATE-MAINTAINED SYSTEM AND ALL ROADS (1986-1990)

COUNTY	STATE-MAINTAINED		ALL ROADS					
			TOTAL ACCIDENTS		FATAL ACCIDENTS		FATAL OR INJURY ACCIDENTS	
	TOTAL ACCIDENT	ACCIDENT RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Adair	1,635	305	2,436	380	16	2.50	540	84
Allen	1,009	237	2,755	524	25	4.76	741	141
Anderson	1,523	286	2,429	380	13	2.03	619	97
Ballard	856	231	1,081	248	18	4.13	358	82
Barren	3,474	230	6,752	384	46	2.62	1,748	99
Bath	1,100	200	1,561	254	15	2.44	482	78
Bell	3,057	293	5,022	416	32	2.65	1,365	113
Boone	9,957	318	16,601	469	57	1.61	3,836	108
Bourbon	2,365	352	4,138	513	20	2.48	1,042	129
Boyd	5,395	363	12,241	660	29	1.56	2,514	136
Boyle	3,176	434	5,521	603	21	2.29	1,270	139
Bracken	653	349	986	418	9	3.81	224	95
Breathitt	1,479	230	2,142	294	21	2.89	843	116
Breckinridge	1,233	250	1,795	289	22	3.55	565	91
Bullitt	4,035	208	6,361	277	49	2.14	1,982	86
Butler	1,291	255	1,847	315	20	3.42	528	90
Caldwell	1,467	228	2,279	305	19	2.54	602	81
Calloway	2,916	373	5,121	516	35	3.53	1,458	147
Campbell	9,049	415	16,544	612	42	1.55	3,659	135
Carlisle	295	133	357	135	5	1.89	158	60
Carroll	1,374	204	2,256	304	24	3.23	618	83
Carter	2,164	194	3,313	260	23	1.81	901	71
Casey	578	145	803	163	19	3.85	319	65
Christian	6,686	305	11,414	450	66	2.60	2,559	101
Clark	3,428	252	6,292	399	38	2.41	1,438	91
Clay	1,703	244	2,558	314	32	3.92	780	96
Clinton	839	275	1,191	326	18	4.92	287	78
Crittenden	867	236	1,344	310	16	3.69	394	91
Cumberland	353	139	577	191	9	2.98	136	45
Daviess	9,481	475	20,287	772	63	2.40	4,736	180
Edmonson	833	229	1,245	287	15	3.45	367	85
Elliott	386	236	487	246	4	2.02	234	118
Estill	1,295	360	1,892	407	26	5.60	537	116
Fayette	28,385	412	63,443	756	151	1.80	11,861	141
Fleming	991	259	1,721	359	19	3.96	527	110
Floyd	4,874	290	6,733	348	54	2.79	2,343	121
Franklin	5,859	367	10,154	527	29	1.51	1,995	104
Fulton	716	226	1,591	429	10	2.69	376	101
Gallatin	812	125	1,010	145	11	1.58	332	48
Garrard	896	213	1,330	266	11	2.20	322	64
Grant	2,479	180	3,496	234	26	1.74	991	66
Graves	3,856	321	6,145	422	38	2.61	1,506	104
Grayson	2,249	286	3,436	363	24	2.53	962	102
Green	933	293	1,380	353	9	2.30	377	96
Greenup	2,867	258	5,029	366	36	2.62	1,349	98
Hancock	609	219	920	272	4	1.18	273	81
Hardin	8,838	258	16,060	401	83	2.07	3,373	84
Harlan	3,398	266	5,081	341	38	2.55	1,421	95
Harrison	1,603	435	3,025	627	18	3.73	663	137
Hart	1,302	108	1,966	151	21	1.61	586	45
Henderson	5,437	295	11,241	521	32	1.48	2,713	126
Henry	1,546	201	2,283	262	19	2.18	568	65
Hickman	372	147	439	149	9	3.05	176	60
Hopkins	5,640	283	10,475	450	43	1.85	2,295	99
Jackson	618	210	924	255	18	4.96	281	78
Jefferson	76,997	418	164,997	724	329	1.44	33,607	148
Jessamine	2,721	395	5,458	599	31	3.40	1,351	148
Johnson	2,003	233	3,139	312	30	2.98	917	91
Kenton	17,469	455	33,041	702	74	1.57	7,152	152
Knott	1,212	203	1,581	229	23	3.34	622	90

Table 7. ACCIDENT RATES BY COUNTY FOR STATE-MAINTAINED SYSTEM AND ALL ROADS (1986-1990) (continued)

COUNTY	STATE-MAINTAINED		ALL ROADS					
			TOTAL ACCIDENTS		FATAL ACCIDENTS		FATAL OR INJURY ACCIDENTS	
	TOTAL ACCIDENT	ACCIDENT RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*
Knox	2,297	246	4,092	378	33	3.05	1,182	109
Larue	1,112	196	1,673	250	16	2.39	440	66
Laurel	4,625	215	7,130	295	49	2.03	1,827	76
Lawrence	1,025	164	1,532	216	32	4.51	509	72
Lee	420	220	697	294	9	3.79	144	61
Leslie	680	142	888	163	23	4.23	391	72
Letcher	2,002	236	2,873	283	33	3.25	884	87
Lewis	976	323	1,658	431	20	5.20	551	143
Lincoln	1,745	243	2,421	288	24	2.85	704	84
Livingston	831	175	1,081	199	8	1.47	380	70
Logan	2,483	288	4,061	392	21	2.03	973	94
Lyon	499	72	687	93	6	0.81	207	28
McCracken	8,630	401	16,297	622	74	2.82	4,060	155
McCreary	654	152	919	179	18	3.51	308	60
McLean	872	235	1,117	248	11	2.44	367	81
Madison	7,615	304	13,748	483	78	2.74	2,780	98
Magoffin	1,081	248	1,312	260	26	5.16	565	112
Marion	1,793	429	2,917	553	23	4.36	689	131
Marshall	2,409	160	4,035	235	41	2.39	1,277	74
Martin	1,026	283	1,320	302	14	3.20	488	112
Mason	2,841	504	4,603	673	19	2.78	903	132
Meade	2,044	290	2,853	337	26	3.07	910	108
Menifee	325	233	433	250	10	5.76	192	111
Mercer	1,973	322	3,665	489	21	2.80	973	130
Metcalfe	729	232	1,061	279	12	3.15	335	88
Monroe	672	190	1,004	233	13	3.01	297	69
Montgomery	2,459	285	4,167	412	29	2.87	1,015	100
Morgan	848	244	1,153	273	15	3.55	495	117
Muhlenberg	3,514	299	5,433	389	35	2.51	1,507	108
Nelson	3,405	305	5,608	422	49	3.69	1,540	116
Nicholas	340	174	548	226	13	5.35	155	64
Ohio	2,168	211	3,021	255	37	3.12	984	83
Oldham	3,056	258	4,702	331	27	1.90	1,262	89
Owen	866	346	1,183	379	11	3.52	401	128
Owsley	331	261	492	318	7	4.52	177	114
Pendleton	1,040	377	1,721	478	18	5.00	500	139
Perry	3,483	317	5,674	438	58	4.48	1,594	123
Pike	7,799	336	11,932	424	81	2.88	3,817	135
Powell	1,150	202	1,675	263	22	3.45	546	86
Pulaski	5,519	318	8,829	419	52	2.47	2,080	99
Robertson	76	127	96	126	3	3.95	38	50
Rockcastle	1,702	128	2,301	161	24	1.68	703	49
Rowan	2,769	340	4,450	480	20	2.16	1,159	125
Russell	1,243	245	1,890	307	20	3.25	510	83
Scott	3,297	187	5,477	284	27	1.40	1,301	67
Shelby	3,639	236	5,341	309	37	2.14	1,206	70
Simpson	1,791	178	3,200	287	17	1.52	800	72
Spencer	473	204	648	229	10	3.53	232	82
Taylor	1,837	309	3,689	493	16	2.14	677	91
Todd	819	217	1,162	256	22	4.85	355	78
Trigg	1,302	213	1,857	270	16	2.33	532	77
Trimble	593	289	771	310	14	5.63	272	109
Union	1,634	250	2,559	334	21	2.74	733	96
Warren	9,586	286	21,917	566	82	2.12	5,130	132
Washington	868	191	1,314	247	18	3.39	300	57
Wayne	849	178	2,258	382	17	2.88	508	86
Webster	1,465	215	2,207	278	19	2.39	626	79
Whitley	3,126	144	5,367	224	59	2.46	1,524	63
Wolfe	817	153	1,109	192	19	3.30	420	73
Woodford	2,708	246	4,337	349	34	2.74	972	78

* Accidents per 100 million vehicle miles (ACC/100 MVM)

Table 8. COUNTY POPULATIONS (1990 CENSUS) IN DESCENDING ORDER

COUNTY	POPULATION	COUNTY	POPULATION	COUNTY	POPULATION
Jefferson	664,937	Meade	24,170	Fleming	12,292
Fayette	225,366	Scott	23,867	Pendleton	12,036
Kenton	142,031	Johnson	23,248	Jackson	11,955
Hardin	89,240	Clay	21,746	Powell	11,686
Daviess	87,189	Taylor	21,146	Larue	11,679
Campbell	83,866	Ohio	21,105	Morgan	11,648
Warren	76,673	Grayson	21,050	Garrard	11,579
Pike	72,583	Rowan	20,353	Monroe	11,401
Christian	68,941	Lincoln	20,045	Butler	11,245
McCracken	62,879	Woodford	19,955	Todd	10,940
Boone	57,589	Montgomery	19,561	Washington	10,441
Madison	57,508	Bourbon	19,236	Green	10,371
Boyd	51,150	Mercer	19,148	Trigg	10,361
Pulaski	49,489	Knott	17,906	Edmonson	10,357
Bullitt	47,567	Wayne	17,468	Bath	9,692
Hopkins	46,126	Mason	16,666	McLean	9,628
Franklin	43,781	Union	16,557	Carroll	9,292
Floyd	43,586	Marion	16,499	Crittenden	9,196
Laurel	43,438	Breckinridge	16,312	Clinton	9,135
Henderson	43,044	Harrison	16,248	Livingston	9,062
Greenup	36,742	Grant	15,737	Owen	9,035
Harlan	36,574	Breathitt	15,703	Metcalfe	8,963
Barren	34,001	McCreary	15,603	Fulton	8,271
Graves	33,550	Adair	15,360	Ballard	7,902
Whitley	33,326	Simpson	15,145	Hancock	7,864
Oldham	33,263	Hart	14,890	Bracken	7,766
Bell	31,506	Rockcastle	14,803	Lee	7,422
Muhlenberg	31,318	Russell	14,716	Spencer	6,801
Calloway	30,735	Allen	14,628	Cumberland	6,784
Jessamine	30,508	Estill	14,614	Nicholas	6,725
Perry	30,283	Anderson	14,571	Lyon	6,624
Nelson	29,710	Casey	14,211	Wolfe	6,503
Knox	29,676	Lawrence	13,998	Elliott	6,455
Clark	29,496	Webster	13,955	Trimble	6,090
Marshall	27,205	Leslie	13,642	Hickman	5,566
Letcher	27,000	Caldwell	13,232	Gallatin	5,393
Boyle	25,641	Magoffin	13,077	Carlisle	5,238
Shelby	24,824	Lewis	13,029	Menifee	5,092
Logan	24,416	Henry	12,823	Owsley	5,036
Carter	24,340	Martin	12,526	Robertson	2,124

Table 9. AVERAGE AND CRITICAL ACCIDENT RATES BY POPULATION CATEGORY
(1986-1990 DATA)

POPULATION CATEGORY	NUMBER OF COUNTIES IN CATEGORY	TOTAL POPULATION	TOTAL MILEAGE DRIVEN (100/MVM)
UNDER 10,000	26	187,659	97.129
10,000 - 14,999	29	366,706	174.033
15,000 - 24,999	28	543,414	259.429
25,000 - 50,000	24	847,565	384.971
OVER 50,000	13	1,739,952	653.005

POPULATION CATEGORY	TOTAL NUMBER OF ACCIDENTS	ACCIDENTS PER 100 MVM	CRITICAL ACCIDENT RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	23,723	244	291	9
10,000 - 14,999	47,521	273	312	8
15,000 - 24,999	90,997	351	386	9
25,000 - 50,000	149,128	387	416	11
OVER 50,000	418,522	641	662	4

POPULATION CATEGORY	TOTAL NUMBER OF FATAL ACCIDENTS	FATAL ACCIDENTS PER 100 MVM	CRITICAL FATAL RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	285	2.93	8.71	0
10,000 - 14,999	552	3.17	7.78	0
15,000 - 24,999	662	2.55	5.84	0
25,000 - 50,000	958	2.49	4.91	0
OVER 50,000	1,209	1.85	3.01	0

POPULATION CATEGORY	TOTAL NUMBER OF FATAL OR INJURY ACCIDENTS	FATAL OR INJURY ACCIDENTS PER 100 MVM	CRITICAL FATAL OR INJURY ACCIDENT RATE (ACC/100 MVM)	NUMBER OF COUNTIES AT OR ABOVE CRITICAL RATE
UNDER 10,000	7,368	75.9	102.5	5
10,000 - 14,999	14,182	81.5	103.1	8
15,000 - 24,999	23,641	91.1	109.5	7
25,000 - 50,000	38,911	101.1	115.7	7
OVER 50,000	89,084	136.4	146.0	4

TABLE 10. ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1986-1990 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Fulton	1591	429	*
Bracken	986	418	*
Owen	1183	379	*
Clinton	1191	326	*
Owsley	492	318	*
Crittenden	1344	310	*
Trimble	771	310	*
Carroll	2256	304	*
Lee	697	294	*
Metcalfe	1061	279	
Hancock	920	272	
Bath	1561	254	
Menifee	433	250	
Ballard	1081	248	
McLean	1117	248	
Elliott	487	246	
Spencer	648	229	
Nicholas	548	226	
Livingston	1081	199	
Wolfe	1109	192	
Cumberland	577	191	
Hickman	439	149	
Gallatin	1010	145	
Carlisle	357	135	
Robertson	96	126	
Lyon	687	93	
POPULATION CATEGORY 10,000-14,999			
Allen	2755	524	*
Pendleton	1721	478	*
Lewis	1658	431	*
Estill	1892	407	*
Anderson	2429	380	*
Fleming	1721	359	*
Green	1380	353	*
Butler	1847	315	*
Russell	1890	307	
Caldwell	2279	305	
Martin	1320	302	
Edmonson	1245	287	
Webster	2207	278	
Morgan	1153	273	
Trigg	1857	270	
Garrard	1330	266	
Powell	1675	263	
Henry	2283	262	
Magoffin	1312	260	
Todd	1162	256	
Jackson	924	255	
Larue	1673	250	
Washington	1314	247	
Monroe	1004	233	
Lawrence	1532	216	
Casey	803	163	
Leslie	888	163	
Rockcastle	2301	161	
Hart	1966	151	
POPULATION CATEGORY 15,000-24,999			
Mason	4603	673	*
Harrison	3025	627	*
Marion	2917	553	*
Bourbon	4138	513	*
Taylor	3689	493	*
Mercer	3665	489	*
Rowan	4450	480	*
Montgomery	4167	412	*
Logan	4061	392	*
Wayne	2258	382	
Adair	2436	380	
Grayson	3436	363	
Woodford	4337	349	
Meade	2853	337	
Union	2559	334	
Clay	2558	314	
Johnson	3139	312	
Shelby	5341	309	
Breathitt	2142	294	
Breckinridge	1795	289	
Lincoln	2421	288	
Simpson	3200	287	
Scott	5477	284	
Carter	3313	260	
Ohio	3021	255	
Grant	3496	234	
Knott	1581	229	
McCreary	919	179	
POPULATION CATEGORY 25,000-50,000			
Boyle	5521	603	*
Jessamine	5458	599	*
Franklin	10154	527	*
Henderson	11241	521	*
Calloway	5121	516	*
Hopkins	10475	450	*
Perry	5674	438	*
Nelson	5608	422	*
Graves	6145	422	*
Pulaski	8829	419	*
Bell	5022	416	*
Clark	6292	399	
Muhlenberg	5433	389	
Barren	6752	384	
Knox	4092	378	
Greenup	5029	366	
Floyd	6733	348	
Harlan	5081	341	
Oldham	4702	331	
Laurel	7130	295	
Letcher	2873	283	
Bullitt	6361	277	
Marshall	4035	235	
Whitley	5367	224	
POPULATION CATEGORY OVER 50,000			
Daviess	20287	772	*
Fayette	63443	756	*
Jefferson	164997	724	*
Kenton	33041	702	*
Boyd	12241	660	
McCracken	16297	622	
Campbell	16544	612	
Warren	21917	566	
Madison	13748	483	
Boone	16601	469	
Christian	11414	450	
Pike	11932	424	
Hardin	16060	401	

* Critical accident rate

TABLE 11. ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1986-1990 DATA)(STATE-MAINTAINED SYSTEM)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Bracken	653	349	*
Owen	866	346	*
Trimble	593	289	*
Clinton	839	275	*
Owsley	331	261	*
Crittenden	867	236	
Elliott	386	236	
McLean	872	235	
Menifee	325	233	
Metcalfe	729	232	
Ballard	856	231	
Fulton	716	226	
Lee	420	220	
Hancock	609	219	
Spencer	473	204	
Carroll	1374	204	
Bath	1100	200	
Livingston	831	175	
Nicholas	340	174	
Wolfe	817	153	
Hickman	372	147	
Cumberland	353	139	
Carlisle	295	133	
Robertson	76	127	
Gallatin	812	125	
Lyon	499	72	
POPULATION CATEGORY 10,000-14,999			
Pendleton	1040	377	*
Estill	1295	360	*
Lewis	976	323	*
Green	933	293	*
Anderson	1523	286	*
Martin	1026	283	*
Fleming	991	259	*
Butler	1291	255	*
Magoffin	1081	248	*
Russell	1243	245	
Morgan	848	244	
Allen	1009	237	
Edmonson	833	229	
Caldwell	1467	228	
Todd	819	217	
Webster	1465	215	
Trigg	1302	213	
Garrard	896	213	
Jackson	618	210	
Powell	1150	202	
Henry	1546	201	
Larue	1112	196	
Washington	868	191	
Monroe	672	190	
Lawrence	1025	164	
Casey	578	145	
Leslie	680	142	
Rockcastle	1702	128	
Hart	1302	108	
POPULATION CATEGORY 15,000-24,999			
Mason	2841	504	*
Harrison	1603	435	*
Marion	1793	429	*
Bourbon	2365	352	*
Rowan	2769	340	*
Mercer	1973	322	*
Taylor	1837	309	*
Adair	1635	305	*
Meade	2044	290	*
Logan	2483	288	*
Grayson	2249	286	
Montgomery	2459	285	
Union	1634	250	
Breckinridge	1233	250	
Woodford	2708	246	
Clay	1703	244	
Lincoln	1745	243	
Shelby	3639	236	
Johnson	2003	233	
Breathitt	1479	230	
Ohio	2168	211	
Knott	1212	203	
Carter	2164	194	
Scott	3297	187	
Grant	2479	180	
Wayne	849	178	
Simpson	1791	178	
McCreary	654	152	
POPULATION CATEGORY 25,000-50,000			
Boyle	3176	434	*
Jessamine	2721	395	*
Calloway	2916	373	*
Franklin	5859	367	*
Graves	3856	321	*
Pulaski	5519	318	*
Perry	3483	317	*
Nelson	3405	305	*
Muhlenberg	3514	299	*
Henderson	5437	295	
Bell	3057	293	
Floyd	4874	290	
Hopkins	5640	283	
Harlan	3398	266	
Oldham	3056	258	
Greenup	2867	258	
Clark	3428	252	
Knox	2297	246	
Letcher	2002	236	
Barren	3474	230	
Laurel	4625	215	
Bullitt	4035	208	
Marshall	2409	160	
Whitley	3126	144	
POPULATION CATEGORY OVER 50,000			
Daviess	9481	475	*
Kenton	17469	455	*
Jefferson	76997	418	*
Campbell	9049	415	*
Fayette	28385	412	*
McCracken	8630	401	*
Boyd	5395	363	
Pike	7799	336	
Boone	9957	318	
Christian	6686	305	
Madison	7615	304	
Warren	9586	286	
Hardin	8838	258	

* Critical accident rate

TABLE 12. INJURY OR FATAL ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED) (1986-1990 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)	
POPULATION CATEGORY UNDER 10,000			
Owen	401	128	*
Elliott	234	118	*
Owsley	177	114	*
Menifee	192	111	*
Trimble	272	109	*
Fulton	376	101	
Bracken	224	95	
Crittenden	394	91	
Metcalfe	335	88	
Carroll	618	83	
Ballard	358	82	
Spencer	232	82	
Hancock	273	81	
McLean	367	81	
Clinton	287	78	
Bath	482	78	
Wolfe	420	73	
Livingston	380	70	
Nicholas	155	64	
Lee	144	61	
Hickman	176	60	
Carlisle	158	60	
Robertson	38	50	
Gallatin	332	48	
Cumberland	136	45	
Lyon	207	28	
POPULATION CATEGORY 10,000-14,999			
Lewis	551	143	*
Allen	741	141	*
Pendleton	500	139	*
Morgan	495	117	*
Estill	537	116	*
Martin	488	112	*
Magoffin	565	112	*
Fleming	527	110	*
Anderson	619	97	
Green	377	96	
Butler	528	90	
Powell	546	86	
Edmonson	367	85	
Russell	510	83	
Caldwell	602	81	
Webster	626	79	
Jackson	281	78	
Todd	355	78	
Trigg	532	77	
Leslie	391	72	
Lawrence	509	72	
Monroe	297	69	
Larue	440	66	
Henry	568	65	
Casey	319	65	
Garrard	322	64	
Washington	300	57	
Rockcastle	703	49	
Hart	586	45	
POPULATION CATEGORY 15,000-24,999			
Harrison	663	137	*
Mason	903	132	*
Marion	689	131	*
Mercer	973	130	*
Bourbon	1042	129	*
Rowan	1159	125	*
Breathitt	843	116	*
Meade	910	108	
Grayson	962	102	
Montgomery	1015	100	
Union	733	96	
Clay	780	96	
Logan	973	94	
Johnson	917	91	
Taylor	677	91	
Breckinridge	565	91	
Knott	622	90	
Wayne	508	86	
Adair	540	84	
Lincoln	704	84	
Ohio	984	83	
Woodford	972	78	
Simpson	800	72	
Carter	901	71	
Shelby	1206	70	
Scott	1301	67	
Grant	991	66	
McCreary	308	60	
POPULATION CATEGORY 25,000-50,000			
Jessamine	1351	148	*
Calloway	1458	147	*
Boyle	1270	139	*
Henderson	2713	126	*
Perry	1594	123	*
Floyd	2343	121	*
Nelson	1540	116	*
Bell	1365	113	
Knox	1182	109	
Muhlenberg	1507	108	
Franklin	1995	104	
Graves	1506	104	
Barren	1748	99	
Hopkins	2295	99	
Pulaski	2080	99	
Greenup	1349	98	
Harlan	1421	95	
Clark	1438	91	
Oldham	1262	89	
Letcher	884	87	
Bullitt	1982	86	
Laurel	1827	76	
Marshall	1277	74	
Whitley	1524	63	
POPULATION CATEGORY OVER 50,000			
Daviess	4736	180	*
McCracken	4060	155	*
Kenton	7152	152	*
Jefferson	33607	148	*
Fayette	11861	141	
Boyd	2514	136	
Campbell	3659	135	
Pike	3817	135	
Warren	5130	132	
Boone	3836	108	
Christian	2559	101	
Madison	2780	98	
Hardin	3373	84	

* Critical accident rate

TABLE 13. FATAL ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1986-1990 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 100 MVM)
POPULATION CATEGORY UNDER 10,000		
Menifee	10	5.76
Trimble	14	5.63
Nicholas	13	5.35
Clinton	18	4.92
Owsley	7	4.52
Ballard	18	4.13
Robertson	3	3.95
Bracken	9	3.81
Lee	9	3.79
Crittenden	16	3.69
Spencer	10	3.53
Owen	11	3.52
Wolfe	19	3.30
Carroll	24	3.23
Metcalfe	12	3.15
Hickman	9	3.05
Cumberland	9	2.98
Fulton	10	2.69
Bath	15	2.44
McLean	11	2.44
Elliott	4	2.02
Carlisle	5	1.89
Gallatin	11	1.58
Livingston	8	1.47
Hancock	4	1.18
Lyon	6	0.81
POPULATION CATEGORY 10,000-14,999		
Estill	26	5.60
Lewis	20	5.20
Magoffin	26	5.16
Pendleton	18	5.00
Jackson	18	4.96
Todd	22	4.85
Allen	25	4.76
Lawrence	32	4.51
Leslie	23	4.23
Fleming	19	3.96
Casey	19	3.85
Morgan	15	3.55
Edmonson	15	3.45
Powell	22	3.45
Butler	20	3.42
Washington	18	3.39
Russell	20	3.25
Martin	14	3.20
Monroe	13	3.01
Caldwell	19	2.54
Larue	16	2.39
Webster	19	2.39
Trigg	16	2.33
Green	9	2.30
Garrard	11	2.20
Henry	19	2.18
Anderson	13	2.03
Rockcastle	24	1.68
Hart	21	1.61
POPULATION CATEGORY 15,000-24,999		
Marion	23	4.36
Clay	32	3.92
Harrison	18	3.73
Breckinridge	22	3.55
McCreary	18	3.51
Knott	23	3.34
Ohio	37	3.12
Meade	26	3.07
Johnson	30	2.98
Breathitt	21	2.89
Wayne	17	2.88
Montgomery	29	2.87
Lincoln	24	2.85
Mercer	21	2.80
Mason	19	2.78
Woodford	34	2.74
Union	21	2.74
Grayson	24	2.53
Adair	16	2.50
Bourbon	20	2.48
Rowan	20	2.16
Taylor	16	2.14
Shelby	37	2.14
Logan	21	2.03
Carter	23	1.81
Grant	26	1.74
Simpson	17	1.52
Scott	27	1.40
POPULATION CATEGORY 25,000-50,000		
Perry	58	4.48
Nelson	49	3.69
Calloway	35	3.53
Jessamine	31	3.40
Letcher	33	3.25
Knox	33	3.05
Floyd	54	2.79
Bell	32	2.65
Greenup	36	2.62
Barren	46	2.62
Graves	38	2.61
Harlan	38	2.55
Muhlenberg	35	2.51
Pulaski	52	2.47
Whitley	59	2.46
Clark	38	2.41
Marshall	41	2.39
Boyle	21	2.29
Bullitt	49	2.14
Laurel	49	2.03
Oldham	27	1.90
Hopkins	43	1.85
Franklin	29	1.51
Henderson	32	1.48
POPULATION CATEGORY OVER 50,000		
Pike	81	2.88
McCracken	74	2.82
Madison	78	2.74
Christian	66	2.60
Daviess	63	2.40
Warren	82	2.12
Hardin	83	2.07
Fayette	151	1.80
Boone	57	1.61
Kenton	74	1.57
Boyd	29	1.56
Campbell	42	1.55
Jefferson	329	1.44

TABLE 14. MISCELLANEOUS ACCIDENT DATA FOR EACH COUNTY

COUNTY	NUMBER OF ACCIDENTS BY YEAR 1986	1987	1988	1989	1990	1986-1990 AVERAGE	1990 PERCENT CHANGE*	PERCENT OF ACCIDENTS INVOLVING ALCOHOL	PERCENT OF ACCIDENTS INVOLVING DRUGS	PERCENT FATAL ACCIDENTS	PERCENT INJURY OR FATAL ACCIDENTS	PERCENT OF DRIVERS USING SAFETY BELTS	PERCENT OF ACCIDENTS INVOLVING SPEEDING
Adair	435	465	498	506	532	476	11.8	6.0	0.2	0.66	22.2	12.0	6.0
Allen	582	539	511	591	532	556	-4.3	6.0	0.5	0.91	26.9	15.2	9.5
Anderson	440	468	492	498	531	475	11.9	6.0	0.2	0.54	25.5	23.1	10.1
Ballard	217	217	218	217	212	217	-2.4	7.3	0.1	1.67	33.1	30.7	14.4
Barren	1,298	1,337	1,344	1,428	1,345	1,352	-0.5	3.7	0.3	0.68	25.9	19.7	3.8
Bath	230	289	327	379	336	306	9.7	6.5	0.3	0.96	30.9	16.9	14.3
Bell	1,017	1,013	1,033	1,034	925	1,024	-9.7	6.4	0.6	0.64	27.2	23.7	10.0
Boone	3,216	3,232	3,297	3,574	3,282	3,330	-1.4	5.3	0.2	0.34	23.1	40.3	8.6
Bourbon	789	810	804	937	798	835	-4.4	7.0	0.3	0.48	25.2	22.9	11.6
Boyd	2,308	2,302	2,424	2,614	2,593	2,412	7.5	4.1	0.2	0.24	20.5	26.8	6.2
Boyle	1,000	1,092	1,123	1,149	1,157	1,091	6.0	3.7	0.1	0.38	23.0	21.6	6.5
Bracken	181	199	192	203	211	194	8.9	6.7	0.1	0.91	22.7	16.2	10.3
Breathitt	409	432	410	450	441	425	3.7	7.0	0.3	0.98	39.4	15.1	13.1
Breckinridge	354	396	357	328	360	359	0.3	4.6	0.1	1.23	31.5	17.1	6.5
Bullitt	1,305	1,268	1,205	1,266	1,317	1,261	4.4	5.2	0.1	0.77	31.2	26.0	8.4
Butler	345	361	369	410	362	371	-2.5	4.0	0.3	1.08	28.6	15.4	7.4
Caldwell	427	462	453	449	488	448	9.0	7.4	0.3	0.83	26.4	16.4	8.7
Calloway	1,022	1,050	1,128	1,088	833	1,072	-22.3	4.7	0.3	0.68	28.5	15.4	8.1
Campbell	3,423	3,195	3,255	3,351	3,320	3,306	0.4	5.6	0.3	0.25	22.1	38.5	6.1
Carlisle	57	77	57	61	105	63	66.7	8.7	0.6	1.40	44.3	19.6	15.4
Carroll	426	465	422	447	496	440	12.7	8.2	0.2	1.06	27.4	24.2	12.1
Carter	483	673	673	714	770	636	21.1	7.0	0.1	0.69	27.2	12.5	14.0
Casey	83	115	143	218	244	140	74.6	11.0	0.6	2.37	39.7	15.1	18.7
Christian	2,265	2,251	2,295	2,329	2,274	2,285	-0.5	6.8	0.2	0.58	22.4	28.9	9.5
Clark	1,194	1,284	1,321	1,320	1,173	1,280	-8.3	5.8	0.3	0.60	22.9	23.8	9.4
Clay	457	517	529	524	531	507	4.8	9.4	2.7	1.25	30.5	12.2	13.9
Clinton	251	249	253	239	199	248	-19.8	5.6	0.4	1.51	24.1	8.2	4.7
Crittenden	268	257	305	262	252	273	-7.7	4.5	0.5	1.19	29.3	8.8	5.4
Cumberland	131	97	113	99	137	110	24.5	7.1	0.3	1.56	23.6	8.4	6.1
Daviess	4,091	3,565	4,046	4,382	4,203	4,021	4.5	5.0	0.3	0.31	23.3	23.2	5.1
Edmonson	235	262	253	232	263	246	7.1	6.2	0.2	1.20	29.5	19.6	16.9
Elliott	50	85	125	107	120	92	30.8	16.0	0.4	0.82	48.0	14.4	13.6
Estill	348	354	407	387	396	374	5.9	6.1	0.2	1.37	28.4	9.5	7.3
Fayette	12,087	12,364	13,086	13,149	12,757	12,672	0.7	5.0	0.2	0.24	18.7	52.4	3.7
Fleming	305	343	363	365	345	344	0.3	5.3	0.3	1.10	30.6	13.1	7.9
Floyd	1,150	1,280	1,375	1,458	1,470	1,316	11.7	7.8	0.4	0.80	34.8	26.2	15.3
Franklin	1,922	2,081	2,056	2,150	1,945	2,052	-5.2	5.6	0.2	0.29	19.6	30.9	9.4
Fulton	199	359	345	349	339	313	8.3	6.5	0.4	0.63	23.6	15.5	5.0
Gallatin	152	182	214	230	232	195	19.3	8.4	0.1	1.09	32.9	29.4	17.4
Garrard	254	287	253	289	247	271	-8.8	4.4	0.2	0.83	24.2	20.0	14.9
Grant	635	625	719	829	688	702	-2.0	6.1	0.1	0.74	28.3	35.7	16.7
Graves	1,203	1,245	1,193	1,297	1,207	1,235	-2.2	5.7	0.2	0.62	24.5	15.9	7.5
Grayson	698	638	667	685	748	672	11.3	4.5	0.1	0.70	28.0	19.1	5.2
Green	252	251	293	272	312	267	16.9	2.6	0.2	0.65	27.3	7.9	3.1
Greenup	975	961	991	1,038	1,064	991	7.3	5.6	0.2	0.72	26.8	27.4	8.0
Hancock	150	189	173	196	212	177	19.8	6.5	0.0	0.43	29.7	26.7	8.5
Hardin	3,103	2,982	3,399	3,324	3,252	3,202	1.6	4.5	0.1	0.52	21.0	37.1	6.8
Harlan	1,091	1,056	962	940	1,032	1,012	2.0	6.4	0.5	0.75	28.0	20.8	13.0
Harrison	505	568	623	696	633	598	5.9	5.5	0.2	0.60	21.9	16.4	6.7
Hart	330	358	390	471	417	387	7.7	5.0	0.3	1.07	29.8	30.9	5.6
Henderson	2,104	2,193	2,190	2,303	2,451	2,198	11.5	4.9	0.1	0.28	24.1	24.7	5.8
Henry	371	422	507	496	487	449	8.5	8.5	0.4	0.83	24.9	26.3	19.2
Hickman	75	96	93	90	85	89	-4.0	6.4	0.7	2.05	40.1	19.7	12.5
Hopkins	1,894	1,840	2,162	2,210	2,369	2,027	16.9	4.0	0.1	0.41	21.9	23.3	9.0
Jackson	168	209	171	193	183	185	-1.2	6.3	0.3	1.95	30.4	9.6	12.1
Jefferson	33,606	32,672	34,314	32,846	31,559	33,360	-5.4	4.1	0.1	0.20	20.4	43.8	4.3
Jessamine	1,108	1,067	990	1,156	1,137	1,080	5.3	4.5	0.1	0.57	24.8	33.6	8.1
Johnson	619	596	624	641	659	620	6.3	5.1	0.4	0.96	29.2	20.5	8.8
Kenton	6,650	6,566	6,703	6,704	6,418	6,656	-3.6	5.8	0.3	0.22	21.6	36.5	5.8
Knott	284	291	310	318	378	301	25.7	7.4	0.3	1.45	39.3	22.6	13.1
Knox	853	854	837	776	772	830	-7.0	7.6	0.9	0.81	28.9	15.3	14.5

TABLE 14. MISCELLANEOUS ACCIDENT DATA FOR EACH COUNTY

COUNTY	NUMBER OF ACCIDENTS BY YEAR 1986	1987	1988	1989	1990	1986-1990 AVERAGE	1990 PERCENT CHANGE*	PERCENT OF ACCIDENTS INVOLVING ALCOHOL	PERCENT OF ACCIDENTS INVOLVING DRUGS	PERCENT FATAL ACCIDENTS	PERCENT INJURY OR FATAL ACCIDENTS	PERCENT OF DRIVERS USING SAFETY BELTS	PERCENT OF ACCIDENTS INVOLVING SPEEDING
Larue	318	302	349	333	371	326	14.0	6.1	0.1	0.96	26.3	14.4	9.4
Laurel	1,400	1,383	1,449	1,467	1,431	1,425	0.4	5.7	0.6	0.69	25.6	21.8	10.5
Lawrence	270	310	311	354	287	311	-7.8	7.7	0.2	2.09	33.2	19.1	9.9
Lee	122	133	139	154	149	137	8.8	5.9	0.6	1.29	20.7	15.8	10.5
Leslie	189	201	158	189	151	184	-18.0	10.6	0.6	2.59	44.0	17.7	27.4
Letcher	506	523	591	572	681	548	24.3	6.8	0.4	1.15	30.8	22.0	13.3
Lewis	270	320	365	368	335	331	1.3	7.8	0.2	1.21	33.2	13.7	13.8
Lincoln	460	455	458	512	536	471	13.7	7.1	0.2	0.99	29.1	18.3	13.1
Livingston	184	239	210	222	226	214	5.7	8.2	0.4	0.74	35.2	15.3	8.9
Logan	818	759	827	853	804	814	-1.3	4.9	0.2	0.52	24.0	18.1	5.6
Lyon	91	137	150	106	203	121	67.8	6.6	0.3	0.87	30.1	32.3	16.6
McCracken	3,185	3,235	3,303	3,302	3,272	3,256	0.5	6.3	0.4	0.45	24.9	26.6	4.7
McCreary	156	171	161	162	269	163	65.5	10.3	0.2	1.96	33.5	17.3	20.3
McLean	228	225	207	209	248	217	14.2	6.6	0.0	0.98	32.9	22.2	12.9
Madison	2,463	2,663	2,827	3,089	2,706	2,761	-2.0	6.8	0.2	0.57	20.2	31.2	11.6
Magoffin	233	253	272	269	285	257	11.0	10.7	0.4	1.98	43.1	24.5	19.6
Marion	632	577	592	538	578	585	-1.2	8.8	0.2	0.79	23.6	14.9	10.2
Marshall	745	800	795	833	862	793	8.7	5.4	0.1	1.02	31.6	20.0	9.0
Martin	182	196	222	352	368	238	54.6	4.4	0.5	1.06	37.0	15.3	16.4
Mason	806	877	927	1,044	949	914	3.9	5.3	0.2	0.41	19.6	21.3	4.3
Meade	578	564	545	575	591	566	4.5	10.1	0.2	0.91	31.9	30.8	10.5
Menifee	67	85	84	88	109	81	34.6	9.2	0.0	2.31	44.3	15.3	15.9
Mercer	722	717	722	762	742	731	1.5	6.3	0.6	0.57	26.5	18.5	9.7
Metcalfe	177	166	240	253	225	209	7.7	3.4	0.1	1.13	31.6	15.5	12.1
Monroe	165	204	211	205	219	196	11.6	5.3	0.1	1.29	29.6	7.9	8.9
Montgomery	826	786	829	883	843	831	1.4	5.5	0.2	0.70	24.4	11.3	4.6
Morgan	113	189	212	303	336	204	64.5	10.4	0.3	1.30	42.9	20.8	15.0
Muhlenberg	983	1,014	1,062	1,155	1,219	1,054	15.7	5.8	0.2	0.64	27.7	17.6	11.6
Nelson	1,079	1,130	1,099	1,165	1,135	1,118	1.5	6.4	0.2	0.87	27.5	25.5	7.8
Nicholas	101	100	105	111	131	104	25.7	10.6	0.2	2.37	28.3	23.5	9.7
Ohio	538	618	601	619	645	594	8.6	6.5	0.2	1.22	32.6	19.1	10.8
Oldham	821	926	994	1,034	927	944	-1.8	5.8	0.3	0.57	26.8	39.6	9.5
Owen	205	265	202	262	249	234	6.6	6.0	0.3	0.93	33.9	29.5	10.9
Owsley	74	86	99	108	125	92	36.2	13.0	0.8	1.42	36.0	8.1	15.9
Pendleton	295	358	355	353	360	340	5.8	5.5	0.1	1.05	29.1	23.0	7.6
Perry	1,112	1,055	1,101	1,212	1,194	1,120	6.6	6.0	0.3	1.02	28.1	18.6	8.3
Pike	2,258	2,165	2,279	2,579	2,651	2,320	14.3	6.1	0.3	0.68	32.0	23.0	14.6
Powell	284	330	353	395	313	341	-8.1	6.5	0.2	1.31	32.6	21.6	12.8
Pulaski	1,581	1,718	1,762	1,945	1,823	1,752	4.1	4.6	0.2	0.59	23.6	25.2	7.7
Robertson	23	19	19	21	14	21	-31.7	11.5	2.1	3.13	39.6	17.1	21.9
Rockcastle	419	393	493	488	508	448	13.3	7.3	0.2	1.04	30.6	29.9	17.0
Rowan	782	803	871	978	1,016	859	18.3	6.1	0.5	0.45	26.0	21.3	11.6
Russell	284	306	369	432	499	348	43.5	6.2	0.6	1.06	27.0	17.6	10.2
Scott	806	1,141	1,181	1,203	1,146	1,083	5.8	4.0	0.2	0.49	23.8	37.2	6.6
Shelby	856	1,007	1,134	1,150	1,194	1,037	15.2	6.9	0.2	0.69	22.6	30.0	11.7
Simpson	667	639	594	701	599	650	-7.9	4.3	0.2	0.53	25.0	25.7	4.9
Spencer	106	126	151	146	119	132	-10.0	11.9	0.2	1.54	35.8	22.8	18.2
Taylor	750	748	691	765	735	739	-0.5	4.8	0.2	0.43	18.4	8.8	5.0
Todd	215	223	215	225	284	220	29.4	7.1	0.0	1.89	30.6	21.5	17.0
Trigg	372	377	370	380	358	375	-4.5	5.7	0.4	0.86	28.6	25.9	6.8
Trimble	127	147	146	191	160	153	4.7	4.7	0.1	1.82	35.3	37.1	13.5
Union	489	485	531	529	525	509	3.2	6.0	0.3	0.82	28.6	15.0	9.2
Warren	4,135	4,446	4,073	4,594	4,669	4,312	8.3	5.1	0.3	0.37	23.4	40.8	7.2
Washington	237	238	253	278	308	252	22.5	5.9	0.1	1.37	22.8	25.2	9.4
Wayne	400	438	431	441	548	428	28.2	5.8	0.0	0.75	22.5	9.6	9.5
Webster	390	416	433	457	511	424	20.5	5.5	0.3	0.86	28.4	22.3	6.4
Whitley	1,033	1,072	1,010	1,107	1,145	1,056	8.5	6.7	0.4	1.10	28.4	22.7	14.6
Wolfe	206	203	241	244	215	224	-3.8	8.4	0.1	1.71	37.9	23.1	13.5
Woodford	807	888	828	893	921	854	7.8	6.5	0.3	0.78	22.4	32.8	12.3

TABLE 15. ACCIDENT RATES FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500
(FOR STATE-MAINTAINED SYSTEM AND ALL ROADS FOR 1986-1990 DATA)

CITY	POPULATION	STATE MAINTAINED SYSTEM TOTAL ACCIDENTS	STATE MAINTAINED SYSTEM ACCIDENT RATE*	ALL ROADS TOTAL ACCIDENTS	ALL ROADS ACCIDENT RATE**
Louisville	269,063	38,060	437	91,091	67.7
Lexington	225,366	15,256	893	62,783	55.7
Owensboro	53,549	3,445	1,045	15,177	56.7
Covington	43,264	7,867	651	15,050	69.6
Bowling Green	40,641	4,811	776	17,135	84.3
Hopkinsville	29,809	2,987	696	7,869	52.8
Paducah	27,256	3,579	674	11,789	86.5
Frankfort	25,968	2,629	510	7,312	56.3
Henderson	25,945	1,206	711	8,389	64.7
Ashland	23,622	2,514	726	8,181	69.3
Jeffersontown	23,221	370	978	4,679	40.3
Richmond	21,155	1,623	1,186	7,630	72.1
Radcliff	19,772	1,422	546	4,252	43.0
Newport	18,871	3,973	707	5,609	59.4
Florence	18,624	2,459	1,108	9,592	103.0
Elizabethtown	18,167	2,646	549	7,252	79.8
Madisonville	16,200	1,241	737	6,249	77.1
Fort Thomas	16,032	248	160	1,653	20.6
Erlanger	15,979	1,549	1,210	4,196	52.5
Saint Matthews	15,800	573	884	5,886	74.5
Winchester	15,799	1,370	548	4,057	51.4
Shively	15,535	1,234	901	5,588	71.9
Murray	14,439	1,314	842	3,593	49.8
Nicholasville	13,603	464	395	2,752	40.5
Danville	12,420	1,130	824	3,979	64.1
Glasgow	12,351	1,170	467	4,052	65.6
Georgetown	11,414	883	1,052	2,968	52.0
Middlesboro	11,328	1,221	578	2,701	47.7
Somerset	10,733	1,673	779	4,739	88.3
Independence	10,444	148	340	1,769	33.9
Mayfield	9,935	1,016	1,119	3,543	71.3
Campbellsville	9,577	639	744	2,791	58.3
Berea	9,126	750	683	1,777	38.9
Paris	8,730	1,037	570	2,449	56.1
Morehead	8,357	768	1,325	2,543	60.9
Edgewood	8,143	***	***	1,167	28.7
Lyndon	8,037	***	***	72	1.8
Flatwoods	7,799	38	220	1,052	27.0
Villa Hills	7,739	***	***	387	10.0
Franklin	7,607	589	749	1,970	51.8
Russellville	7,454	891	494	2,325	62.4
Fort Mitchell	7,438	31	673	1,396	37.5
Corbin	7,419	1,025	723	2,969	80.0
Harrodsburg	7,335	969	863	2,259	61.6
Versailles	7,269	1,075	847	2,264	62.3
Maysville	7,169	1,379	1,154	3,183	88.8
Bellevue	6,997	14	50	1,165	33.3
Princeton	6,940	674	508	1,442	41.6
Elsmere	6,847	***	***	1,025	29.9
Bardstown	6,801	914	978	2,831	83.3
Dayton	6,576	***	***	811	24.7
Fort Wright	6,570	36	828	1,995	60.7
Cynthiana	6,497	396	1,057	1,684	51.8
Pikeville	6,324	643	385	2,229	70.5
Shelbyville	6,238	888	1,216	2,334	74.8
Lawrenceburg	5,911	514	1,020	1,231	41.7
London	5,757	907	670	3,033	105.4
Lebanon	5,695	728	944	1,809	63.5
Alexandria	5,592	293	882	1,161	41.5
Taylor Mill	5,530	***	***	799	28.9
Williamsburg	5,493	308	216	1,303	47.4
Hazard	5,416	484	363	2,291	84.6
Mount Sterling	5,362	505	637	2,308	86.1
Monticello	5,357	348	294	1,752	65.4

TABLE 15. ACCIDENT RATES FOR INCORPORATED CITIES HAVING POPULATION OVER 2,500
(FOR STATE-MAINTAINED SYSTEM AND ALL ROADS FOR 1986-1990 DATA)(continued)

CITY	POPULATION	STATE MAINTAINED SYSTEM TOTAL ACCIDENTS	STATE MAINTAINED SYSTEM ACCIDENT RATE*	ALL ROADS TOTAL ACCIDENTS	ALL ROADS ACCIDENT RATE**
Mount Washington	5,226	156	669	740	28.3
Middletown	5,016	***	***	196	7.8
Central City	4,979	582	806	1,518	61.0
Leitchfield	4,965	732	963	1,772	71.4
Shepherdsville	4,805	321	607	1,785	74.3
Ludlow	4,736	14	444	609	25.7
Greenville	4,689	396	535	1,039	44.3
Paintsville	4,354	321	486	1,818	83.5
Scottsville	4,278	377	587	1,597	74.7
Highland Heights	4,223	518	481	1,436	68.0
Wilmore	4,215	61	895	180	8.5
Providence	4,123	172	570	710	34.4
Russell	4,014	77	385	1,659	82.7
Benton	3,899	636	758	1,264	64.8
Lagrange	3,853	227	687	1,160	60.2
Columbia	3,845	490	905	1,450	75.4
Morganfield	3,776	350	989	861	45.6
Carrollton	3,715	217	786	1,012	54.5
Barbourville	3,658	423	601	1,031	56.4
Vine Grove	3,586	222	467	386	21.5
Prestonsburg	3,558	649	867	1,905	107.1
Grayson	3,510	320	1,519	1,029	58.6
Lancaster	3,421	327	936	723	42.3
Park Hills	3,321	***	***	386	23.2
Marion	3,320	358	967	798	48.1
Southgate	3,266	54	46	494	30.3
Lakeside Park	3,131	576	1,321	471	30.1
Dawson Springs	3,129	192	449	497	31.8
Cumberland	3,112	50	170	528	33.9
Fulton	3,078	184	257	889	57.8
Flemingsburg	3,071	65	170	692	45.1
Williamstown	3,023	127	499	587	38.8
Graymoor	2,911	***	***	21	1.4
Beaver Dam	2,904	152	626	792	54.5
Cold Spring	2,880	947	1,264	1,321	91.7
Springfield	2,875	256	642	750	52.2
Oak Grove	2,863	***	***	984	68.7
Tompkinsville	2,861	284	914	720	50.3
Irvine	2,836	293	577	859	60.6
Stanton	2,795	192	1,075	607	43.4
Jenkins	2,751	126	249	293	21.3
Hodgenville	2,721	180	326	677	49.8
Hickman	2,689	33	195	322	23.9
Stanford	2,686	231	380	768	57.2
Harlan	2,686	420	378	1,409	104.9
Mount Vernon	2,654	166	530	706	53.2
Crestview Hills	2,546	***	***	759	59.6
Hartford	2,532	23	79	96	7.6
Calvert City	2,531	51	169	370	29.2

* Accidents per 100 million vehicle miles.
** Accidents per 1,000 population.
*** No data available.

TABLE 16. MISCELLANEOUS ACCIDENT DATA FOR INCORPORATED CITYIES HAVING POPULATION OVER 2,500 (1986-1990 DATA FOR ALL ROADS)

CITY	POPULATION	FATAL ACCIDENTS		PEDESTRIAN-MOTOR VEHICLE ACCIDENTS		BICYCLE-RELATED MOTOR VEHICLE ACCIDENTS		MOTORCYCLE ACCIDENTS		PERCENT OF ACCIDENTS INVOLVING SPEEDING	PERCENT OF ACCIDENTS INVOLVING ALCOHOL
		NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*		
LOUISVILLE	269,063	134	1.00	1,540	11.4	881	6.5	698.0	5.2	3.30	3.8
LEXINGTON	225,366	147	1.30	748	6.6	484	4.3	547.0	4.9	3.60	5.1
OWENSBORO	53,549	11	0.41	147	5.5	162	6.1	117.0	4.4	2.40	4.4
COVINGTON	43,264	22	1.02	397	18.4	176	8.1	133.0	6.1	4.20	6.0
BOWLING GREEN	40,641	12	0.59	164	8.1	103	5.1	132.0	6.5	3.70	4.2
HOPKINSVILLE	29,809	11	0.74	82	5.5	71	4.8	69.0	4.6	6.60	5.0
PADUCAH	27,256	30	2.20	95	7.0	89	6.5	143.0	10.5	3.40	5.2
FRANKFORT	25,968	10	0.77	89	6.9	27	2.1	41.0	3.2	5.10	4.2
HENDERSON	25,945	5	0.39	100	7.7	93	7.2	86.0	6.6	3.80	4.0
ASHLAND	23,622	5	0.42	97	8.2	49	4.1	67.0	5.7	4.20	3.4
JEFFERSONTOWN	23,221	3	0.26	33	2.8	34	2.9	32.0	2.8	4.50	2.3
RICHMOND	21,155	11	1.04	79	7.5	32	3.0	38.0	3.6	4.80	5.3
RADCLIFF	19,772	13	1.31	24	2.4	27	2.7	65.0	6.6	2.60	4.4
NEWPORT	18,871	6	0.64	169	17.9	64	6.8	42.0	4.5	5.50	6.2
FLORENCE	18,624	21	2.26	67	7.2	26	2.8	55.0	5.9	4.90	3.5
ELIZABETHTOWN	18,167	24	2.64	34	3.7	30	3.3	44.0	4.8	3.00	2.6
MADISONVILLE	16,200	7	0.86	47	5.8	56	6.9	26.0	3.2	4.40	2.2
FORT THOMAS	16,032	1	0.12	23	2.9	29	3.6	9.0	1.1	7.80	4.8
ERLANGER	15,979	9	1.13	47	5.9	31	3.9	52.0	6.5	4.70	3.7
SAINT MATTHEWS	15,800	5	0.63	51	6.5	37	4.7	26.0	3.3	1.80	1.8
WINCHESTER	15,799	7	0.89	57	7.2	27	3.4	21.0	2.7	2.50	4.1
SHIVELY	15,535	10	1.29	79	10.2	45	5.8	48.0	6.2	3.60	3.7
MURRAY	14,439	2	0.28	36	5.0	27	3.7	30.0	4.2	4.60	2.4
NICHOLASVILLE	13,603	4	0.59	13	1.9	14	2.1	27.0	4.0	3.50	3.4
DANVILLE	12,420	1	0.16	44	7.1	17	2.7	21.0	3.4	3.10	2.3
GLASGOW	12,351	7	1.13	29	4.7	8	1.3	42.0	6.8	2.00	3.1
GEORGETOWN	11,414	3	0.53	20	3.5	19	3.3	21.0	3.7	4.30	2.4
MIDDLESBORO	11,328	10	1.77	45	7.9	24	4.2	29.0	5.1	4.50	4.2
SOMERSET	10,733	7	1.30	42	7.8	10	1.9	17.0	3.2	3.90	2.6
INDEPENDENCE	10,444	5	0.96	14	2.7	9	1.7	15.0	2.9	6.30	6.4
MAYFIELD	9,935	2	0.40	32	6.4	30	6.0	29.0	5.8	2.10	2.4
CAMPBELLSVILLE	9,577	3	0.63	10	2.1	13	2.7	24.0	5.0	3.10	3.5
BEREA	9,126	5	1.10	19	4.2	16	3.5	11.0	2.4	3.60	4.6
PARIS	8,730	1	0.23	23	5.3	19	4.4	22.0	5.0	4.70	5.2
MOREHEAD	8,357	1	0.24	27	6.5	12	2.9	14.0	3.4	3.70	3.1
EDGEWOOD	8,143	0	0.00	17	4.2	9	2.2	6.0	1.5	3.40	1.7
LYNDON	8,037	0	0.00	0	0.0	0	0.0	0.0	0.0	0.00	0.0
FLATWOODS	7,799	3	0.77	17	4.4	3	0.8	9.0	2.3	3.10	3.3
VILLA HILLS	7,739	0	0.00	1	0.3	4	1.0	3.0	0.8	10.90	8.5
FRANKLIN	7,607	2	0.53	16	4.2	15	3.9	16.0	4.2	2.70	2.9
RUSSELLVILLE	7,454	2	0.54	24	6.4	8	2.1	20.0	5.4	3.00	5.0
FORT MITCHELL	7,438	4	1.08	17	4.6	5	1.3	11.0	3.0	5.10	6.3
CORBIN	7,419	10	2.70	31	8.4	16	4.3	14.0	3.8	5.10	3.4
HARRODSBURG	7,335	2	0.55	26	7.1	8	2.2	25.0	6.8	3.20	3.7
VERSAILLES	7,269	3	0.83	20	5.5	7	1.9	7.0	1.9	4.80	3.6
MAYSVILLE	7,169	2	0.56	41	11.4	12	3.3	17.0	4.7	1.70	3.9
BELLEVUE	6,997	1	0.29	29	8.3	22	6.3	10.0	2.9	4.50	6.3
PRINCETON	6,940	5	1.44	13	3.7	8	2.3	9.0	2.6	4.60	6.2
ELSMERE	6,847	0	0.00	16	4.7	27	7.9	10.0	2.9	7.10	6.6
BARDSTOWN	6,801	5	1.47	31	9.1	14	4.1	16.0	4.7	2.90	3.9
DAYTON	6,576	2	0.61	22	6.7	14	4.3	10.0	3.0	3.90	4.8
FORT WRIGHT	6,570	2	0.61	16	4.9	6	1.8	17.0	5.2	6.90	7.2
CYNTHIANA	6,497	4	1.23	26	8.0	8	2.5	12.0	3.7	3.80	3.0
PIKEVILLE	6,324	2	0.63	18	5.7	7	2.2	11.0	3.5	5.40	5.1
SHELBYVILLE	6,238	6	1.92	20	6.4	15	4.8	14.0	4.5	3.30	3.2
LAWRENCEBURG	5,911	6	2.03	29	9.8	11	3.7	5.0	1.7	5.20	4.4
LONDON	5,757	6	2.08	24	8.3	9	3.1	22.0	7.6	4.40	2.7
LEBANON	5,695	6	2.11	21	7.4	13	4.6	14.0	4.9	5.50	5.6
ALEXANDRIA	5,592	1	0.36	4	1.4	2	0.7	4.0	1.4	3.70	2.1
TAYLOR MILL	5,530	6	2.17	4	1.4	1	0.4	5.0	1.8	10.40	3.9
WILLIAMSBURG	5,493	4	1.46	20	7.3	5	1.8	13.0	4.7	7.20	3.5
HAZARD	5,416	12	4.43	16	5.9	4	1.5	12.0	4.4	1.70	3.4

TABLE 16. MISCELLANEOUS ACCIDENT DATA FOR INCORPORATED CITYIES HAVING POPULATION OVER 2,500 (1986-1990 DATA FOR ALL ROADS)(continued)

CITY	POPULATION	FATAL ACCIDENTS		PEDESTRIAN-MOTOR VEHICLE ACCIDENTS		BICYCLE-RELATED MOTOR VEHICLE ACCIDENTS		MOTORCYCLE ACCIDENTS		PERCENT OF ACCIDENTS INVOLVING SPEEDING	PERCENT OF ACCIDENTS INVOLVING ALCOHOL
		NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*	NUMBER	RATE*		
MOUNT STERLING	5,362	4	1.49	24	9.0	5	1.9	12.0	4.5	2.90	5.2
MONTICELLO	5,357	1	0.37	31	11.6	10	3.7	12.0	4.5	5.00	4.2
MOUNT WASHINGTON	5,226	4	1.53	8	3.1	9	3.4	9.0	3.4	4.50	3.9
MIDDLETOWN	5,016	0	0.00	0	0.0	0	0.0	0.0	0.0	0.00	0.0
CENTRAL CITY	4,979	2	0.80	13	5.2	5	2.0	9.0	3.6	3.30	4.5
LEITCHFIELD	4,965	2	0.81	9	3.6	1	0.4	9.0	3.6	3.20	2.0
SHEPHERDSVILLE	4,805	10	4.16	18	7.5	11	4.6	16.0	6.7	5.00	4.5
LUDLOW	4,736	1	0.42	22	9.3	24	10.1	7.0	3.0	2.00	5.1
GREENVILLE	4,689	0	0.00	6	2.6	0	0.0	7.0	3.0	3.90	2.3
PAINTSVILLE	4,354	1	0.46	13	6.0	9	4.1	3.0	1.4	2.40	2.7
SCOTTSVILLE	4,278	5	2.34	16	7.5	2	0.9	13.0	6.1	4.90	3.3
HIGHLAND HEIGHTS	4,223	2	0.95	13	6.2	11	5.2	7.0	3.3	4.30	1.8
WILMORE	4,215	0	0.00	1	0.5	0	0.0	2.0	0.9	4.40	2.8
PROVIDENCE	4,123	2	0.97	14	6.8	4	1.9	8.0	3.9	3.90	5.4
RUSSELL	4,014	7	3.49	5	2.5	5	2.5	9.0	4.5	3.30	3.1
BENTON	3,899	2	1.03	10	5.1	2	1.0	10.0	5.1	2.50	2.3
LAGRANGE	3,853	2	1.04	9	4.7	8	4.2	4.0	2.1	2.90	4.0
COLUMBIA	3,845	1	0.52	10	5.2	3	1.6	9.0	4.7	3.40	3.2
MORGANFIELD	3,776	2	1.06	10	5.3	7	3.7	2.0	1.1	4.30	3.4
CARROLLTON	3,715	4	2.15	26	14.0	18	9.7	10.0	5.4	5.10	5.7
BARBOURVILLE	3,658	0	0.00	10	5.5	5	2.7	9.0	4.9	5.60	4.7
VINE GROVE	3,586	4	2.23	7	3.9	4	2.2	5.0	2.8	11.40	9.6
PRESTONSBURG	3,558	5	2.81	17	9.6	3	1.7	12.0	6.7	2.60	3.5
GRAYSON	3,510	1	0.57	4	2.3	2	1.1	3.0	1.7	3.00	2.7
LANCASTER	3,421	0	0.00	6	3.5	3	1.8	3.0	1.8	4.60	3.0
PARK HILLS	3,321	0	0.00	3	1.8	0	0.0	2.0	1.2	7.00	7.8
MARION	3,320	0	0.00	3	1.8	5	3.0	3.0	1.8	2.40	2.5
SOUTHGATE	3,266	1	0.61	7	4.3	2	1.2	4.0	2.4	6.30	3.2
LAKESIDE PARK	3,131	0	0.00	3	1.9	3	1.9	4.0	2.6	12.10	5.1
DAWSON SPRINGS	3,129	0	0.00	4	2.6	1	0.6	6.0	3.8	4.00	4.2
CUMBERLAND	3,112	3	1.93	3	1.9	0	0.0	8.0	5.1	10.20	5.7
FULTON	3,078	1	0.65	10	6.5	8	5.2	4.0	2.6	4.50	4.9
FLEMINGSBURG	3,071	1	0.65	5	3.3	1	0.7	2.0	1.3	3.90	2.0
WILLIAMSTOWN	3,023	3	1.98	5	3.3	2	1.3	6.0	4.0	5.10	3.7
GRAYMOOR	2,911	0	0.00	0	0.0	0	0.0	0.0	0.0	0.00	0.0
BEAVER DAM	2,904	2	1.38	6	4.1	3	2.1	6.0	4.1	2.40	4.0
COLD SPRING	2,880	5	3.47	4	2.8	3	2.1	1.0	0.7	1.80	1.4
SPRINGFIELD	2,875	5	3.48	13	9.0	0	0.0	4.0	2.8	4.30	3.5
OAK GROVE	2,863	0	0.00	0	0.0	0	0.0	0.0	0.0	0.00	0.0
TOMPKINSVILLE	2,861	1	0.70	9	6.3	0	0.0	2.0	1.4	4.00	3.3
IRVINE	2,836	2	1.41	9	6.3	3	2.1	3.0	2.1	1.50	4.9
STANTON	2,795	5	3.58	4	2.9	3	2.1	4.0	2.9	4.10	2.5
JENKINS	2,751	1	0.73	4	2.9	0	0.0	6.0	4.4	7.20	6.1
HODGENVILLE	2,721	2	1.47	6	4.4	1	0.7	0.0	0.0	0.50	0.7
HICKMAN	2,689	0	0.00	6	4.5	2	1.5	3.0	2.2	3.10	10.9
STANFORD	2,686	3	2.23	7	5.2	4	3.0	5.0	3.7	3.60	4.0
HARLAN	2,686	3	2.23	18	13.4	9	6.7	12.0	8.9	2.20	2.1
MOUNT VERNON	2,654	2	1.51	7	5.3	0	0.0	1.0	0.8	1.80	1.2
CRESTVIEW HILLS	2,546	0	0.00	0	0.0	0	0.0	0.0	0.0	0.00	0.0
HARTFORD	2,532	7	5.53	3	2.4	0	0.0	0.0	0.0	29.20	3.1
CALVERT CITY	2,531	2	1.58	1	0.8	2	1.6	4.0	3.2	3.80	1.6

* Accidents per 10,000 population

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1986-1990)

POPULATION CATEGORY	NUMBER OF CITIES	AVERAGE RATE (ACC/100 MVM)	CITY	NUMBER OF ACCIDENTS (1986-1990)	ACCIDENT RATE (ACC/100 MVM)
OVER 200,000	2	512	Lexington	15256	893
			Louisville	38060	437
20,000-55,000	10	718	Richmond	1623	1186
			Owensboro	3445	1045
			Jeffersontown	370	978
			Bowling Green	4811	776
			Ashland	2514	726
			Henderson	1206	711
			Hopkinsville	2987	696
			Paducah	3579	674
			Covington	7867	651
			Frankfort	2629	510
10,000-19,999	18	678	Erlanger	1549	1210
			Florence	2459	1108
			Georgetown	883	1052
			Shively	1234	901
			Saint Matthews	573	884
			Murray	1314	842
			Danville	1130	824
			Somerset	1673	779
			Madisonville	1241	737
			Newport	3973	707
			Middlesboro	1221	578
			Elizabethtown	2646	549
			Winchester	1370	548
			Radcliff	1422	546
			Glasgow	1170	467
			Nicholasville	464	395
			Independence	148	340
			Fort Thomas	248	160
5,000-9,999	29	683	Morehead	768	1325
			Shelbyville	888	1216
			Maysville	1379	1154
			Mayfield	1016	1119
			Cynthiana	396	1057
			Lawrenceburg	514	1020
			Bardstown	914	978
			Lebanon	728	944
			Alexandria	293	882
			Harrodsburg	969	863
			Versailles	1075	847
			Fort Wright	36	828
			Franklin	589	749
			Campbellsville	639	744
			Corbin	1025	723
			Berea	750	683
			Fort Mitchell	31	673
			London	907	670
			Mount Washington	156	669
			Mount Sterling	505	637
			Paris	1037	570
			Princeton	674	508
			Russellville	891	494
			Pikeville	643	385
			Hazard	484	363
			Monticello	348	294
			Flatwoods	38	220
			Williamsburg	308	216
			Bellevue	14	50
2,500-4,999	43	595	Grayson	320	1519
			Lakeside Park	576	1321

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1986-1990)(continued)

POPULATION CATEGORY	NUMBER OF CITIES	AVERAGE RATE (ACC/100 MVM)	CITY	NUMBER OF ACCIDENTS (1986-1990)	ACCIDENT RATE (ACC/100 MVM)
2,500-4,999 (cont.)	43	595	Cold Spring	947	1264
			Stanton	192	1075
			Morganfield	350	989
			Marion	358	967
			Leitchfield	732	963
			Lancaster	327	936
			Tompkinsville	284	914
			Columbia	490	905
			Wilmore	61	895
			Prestonsburg	649	867
			Central City	582	806
			Carrollton	217	786
			Benton	636	758
			Lagrange	227	687
			Springfield	256	642
			Beaver Dam	152	626
			Shepherdsville	321	607
			Barbourville	423	601
			Scottsville	377	587
			Irvine	293	577
			Providence	172	570
			Greenville	396	535
			Mount Vernon	166	530
			Williamstown	127	499
			Paintsville	321	486
			Highland Heights	518	481
			Vine Grove	222	467
			Dawson Springs	192	449
			Ludlow	14	444
			Russell	77	385
			Stanford	231	380
			Harlan	420	378
			Hodgenville	180	326
			Fulton	184	257
			Jenkins	126	249
			Hickman	33	195
			Cumberland	50	170
			Flemingsburg	65	170
			Calvert City	51	169
			Hartford	23	79
			Southgate	54	46
1,000-2,499	60	424	Falmouth	149	1739
			Morgantown	184	1164
			Dry Ridge	303	1054
			Eminence	197	999
			Owingsville	131	993
			Jackson	121	947
			Albany	366	897
			Augusta	20	846
			Munfordville	113	832
			Carlisle	76	799
			Elkton	178	773
			Warsaw	83	719
			Evarts	47	673
			Louisa	149	649
			Cadiz	232	632
			Muldraugh	25	622
			Walton	120	589
			Junction City	40	578
			Brandenburg	107	563
			Greensburg	96	560

TABLE 17. ACCIDENT RATES ON STATE-MAINTAINED STREETS BY CITY AND POPULATION CATEGORY (1986-1990)(continued)

POPULATION CATEGORY	NUMBER OF CITIES	AVERAGE RATE (ACC/100 MVM)	CITY	NUMBER OF ACCIDENTS (1986-1990)	ACCIDENT RATE (ACC/100 MVM)
1,000-2,499 (cont.)	60	424	Lacenter	16	558
			Hardinsburg	93	557
			Raceland	39	552
			Vanceburg	109	551
			Jamestown	51	548
			Manchester	191	521
			Sturgis	117	513
			Pineville	275	513
			Russell Springs	197	490
			West Point	16	477
			Salyersville	107	447
			Edmonton	88	417
			Owenton	85	417
			Livermore	44	406
			Earlington	54	404
			Loyall	15	399
			Uniontown	24	357
			Cave City	93	352
			Beattyville	70	337
			Clay City	69	334
			Burkesville	91	321
			South Shore	995	293
			Catlettsburg	503	292
			Olive Hill	69	288
			Liberty	167	282
			Lewisport	15	265
			Auburn	58	253
			Sebree	39	249
			Worthington	16	234
			Clay	28	222
			West Liberty	45	213
			Cloverport	41	201
			Clinton	41	201
			Eddyville	4	187
			Nortonville	38	184
			Burgin	19	134
			Anchorage	28	121
			Lebanon Junction	9	107
			Horse Cave	6	29
			Whitesburg	7	24

TABLE 18. TOTAL ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1986-1990 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 1000 POPULATION)	
POPULATION CATEGORY OVER 200,000			
Louisville	91091	67.7	*
Lexington	62783	55.7	
POPULATION CATEGORY 20,000-55,000			
Paducah	11789	86.5	*
Bowling Green	17135	84.3	*
Richmond	7630	72.1	*
Covington	15050	69.6	*
Ashland	8181	69.3	
Henderson	8389	64.7	
Owensboro	15177	56.7	
Frankfort	7312	56.3	
Hopkinsville	7869	52.8	
Jeffersontown	4679	40.3	
POPULATION CATEGORY 10,000-19,999			
Florence	9592	103.0	*
Somerset	4739	88.3	*
Elizabethtown	7252	79.8	*
Madisonville	6249	77.1	*
Saint Matthews	5886	74.5	*
Shively	5588	71.9	*
Glasgow	4052	65.6	
Danville	3979	64.1	
Newport	5609	59.4	
Erlanger	4196	52.5	
Georgetown	2968	52.0	
Winchester	4057	51.4	
Murray	3593	49.8	
Middlesboro	2701	47.7	
Radcliff	4252	43.0	
Nicholasville	2752	40.5	
Independence	1769	33.9	
Fort Thomas	1653	20.6	
POPULATION CATEGORY 5,000-9,999			
London	3033	105.4	*
Maysville	3183	88.8	*
Mount Sterling	2308	86.1	*
Hazard	2291	84.6	*
Bardstown	2831	83.3	*
Corbin	2969	80.0	*
Shelbyville	2334	74.8	*
Mayfield	3543	71.3	*
Pikeville	2229	70.5	*
Monticello	1752	65.4	*
Lebanon	1809	63.5	*
Russellville	2325	62.4	*
Versailles	2264	62.3	*
Harrodsburg	2259	61.6	*
Morehead	2543	60.9	*
Fort Wright	1995	60.7	*
Campbellsville	2791	58.3	
Paris	2449	56.1	
Franklin	1970	51.8	
Cynthiana	1684	51.8	
Williamsburg	1303	47.4	
Lawrenceburg	1231	41.7	
Princeton	1442	41.6	
Alexandria	1161	41.5	
Berea	1777	38.9	
Fort Mitchell	1396	37.5	
Bellevue	1165	33.3	
Elsmere	1025	29.9	
Taylor Mill	799	28.9	
Edgewood	1167	28.7	
Mount Washington	740	28.3	
Flatwoods	1052	27.0	
Dayton	811	24.7	
Villa Hills	387	10.0	
Middletown	196	7.8	
Lyndon	72	1.8	
POPULATION CATEGORY 2,500-4,999			
Prestonsburg	1905	107.1	*
Harlan	1409	104.9	*
Cold Spring	1321	91.7	*
Paintsville	1818	83.5	*
Russell	1659	82.7	*
Columbia	1450	75.4	*
Scottsville	1597	74.7	*
Shepherdsville	1785	74.3	*
Leitchfield	1772	71.4	*
Oak Grove	984	68.7	*
Highland Heights	1436	68.0	*
Benton	1264	64.8	*
Central City	1518	61.0	
Irvine	859	60.6	
Lagrange	1160	60.2	
Crestview Hills	759	59.6	
Grayson	1029	58.6	
Fulton	889	57.8	
Stanford	768	57.2	
Barbourville	1031	56.4	
Beaver Dam	792	54.5	
Carrollton	1012	54.5	
Mount Vernon	706	53.2	
Springfield	750	52.2	
Tompkinsville	720	50.3	
Hodgenville	677	49.8	
Marion	798	48.1	
Morganfield	861	45.6	
Flemingsburg	692	45.1	
Greenville	1039	44.3	
Stanton	607	43.4	
Lancaster	723	42.3	
Williamstown	587	38.8	
Providence	710	34.4	
Cumberland	528	33.9	
Dawson Springs	497	31.8	
Southgate	494	30.3	
Lakeside Park	471	30.1	
Calvert City	370	29.2	
Ludlow	609	25.7	
Hickman	322	23.9	
Park Hills	386	23.2	
Vine Grove	386	21.5	
Jenkins	293	21.3	
Wilmore	180	8.5	
Hartford	96	7.6	
Graymoor	21	1.4	

* Critical accident rate

TABLE 19. FATAL ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN DESCENDING ORDER WITH CRITICAL RATES IDENTIFIED)(1986-1990 DATA)(ALL ROADS)

COUNTY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Lexington	147	1.30
Louisville	134	1.00
POPULATION CATEGORY 20,000-55,000		
Paducah	30	2.20 *
Richmond	11	1.04
Covington	22	1.02
Frankfort	10	0.77
Hopkinsville	11	0.74
Bowling Green	12	0.59
Ashland	5	0.42
Owensboro	11	0.41
Henderson	5	0.39
Jeffersontown	3	0.26
POPULATION CATEGORY 10,000-19,999		
Elizabethtown	24	2.64
Florence	21	2.26
Middlesboro	10	1.77
Radcliff	13	1.31
Somerset	7	1.30
Shively	10	1.29
Glasgow	7	1.13
Erlanger	9	1.13
Independence	5	0.96
Winchester	7	0.89
Madisonville	7	0.86
Newport	6	0.64
Saint Matthews	5	0.63
Nicholasville	4	0.59
Georgetown	3	0.53
Murray	2	0.28
Danville	1	0.16
Fort Thomas	1	0.12
POPULATION CATEGORY 5,000-9,999		
Hazard	12	4.43
Corbin	10	2.70
Taylor Mill	6	2.17
Lebanon	6	2.11
London	6	2.08
Lawrenceburg	6	2.03
Shelbyville	6	1.92
Mount Washington	4	1.53
Mount Sterling	4	1.49
Bardstown	5	1.47
Williamsburg	4	1.46
Princeton	5	1.44
Cynthiana	4	1.23
Berea	5	1.10
Fort Mitchell	4	1.08
Versailles	3	0.83
Flatwoods	3	0.77
Campbellsville	3	0.63
Pikeville	2	0.63
Fort Wright	2	0.61
Dayton	2	0.61
Maysville	2	0.56
Harrodsburg	2	0.55
Russellville	2	0.54
Franklin	2	0.53
Mayfield	2	0.40
Monticello	1	0.37
Alexandria	1	0.36
Bellevue	1	0.29
Morehead	1	0.24
Paris	1	0.23
POPULATION CATEGORY 2,500-4,999		
Hartford	7	5.53
Shepherdsville	10	4.16
Stanton	5	3.58
Russell	7	3.49
Springfield	5	3.48
Cold Spring	5	3.47
Prestonsburg	5	2.81
Scottsville	5	2.34
Stanford	3	2.23
Harlan	3	2.23
Vine Grove	4	2.23
Carrollton	4	2.15
Williamstown	3	1.98
Cumberland	3	1.93
Calvert City	2	1.58
Mount Vernon	2	1.51
Hodgenville	2	1.47
Irvine	2	1.41
Beaver Dam	2	1.38
Morganfield	2	1.06
Lagrange	2	1.04
Benton	2	1.03
Providence	2	0.97
Highland Heights	2	0.95
Leitchfield	2	0.81
Central City	2	0.80
Jenkins	1	0.73
Tompkinsville	1	0.70
Fulton	1	0.65
Flemingsburg	1	0.65
Southgate	1	0.61
Grayson	1	0.57
Columbia	1	0.52
Paintsville	1	0.46
Ludlow	1	0.42

* Critical accident rate

TABLE 20. ACCIDENTS INVOLVING ALCOHOL BY COUNTY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF ALCOHOL-RELATED ACCIDENTS (1986-1990)			PERCENT OF TOTAL ACCIDENTS INVOLVING ALCOHOL		
	ALL	AGES 16-18	AGES 19-20	ALL	AGES 16-18	AGES 19-20
			POPULATION CATEGORY UNDER 10,000			
Elliott	78	13	9	16.0	12.0	18.4
Owsley	64	3	5	13.0	3.8	9.8
Spencer	77	11	5	11.9	7.6	6.4
Robertson	11	3	3	11.5	13.0	18.8
Nicholas	58	4	9	10.6	3.3	12.2
Menifee	40	6	5	9.2	6.1	11.6
Carlisle	31	4	2	8.7	5.8	6.7
Gallatin	85	5	8	8.4	3.5	8.2
Wolfe	93	10	11	8.4	7.0	10.2
Carroll	186	24	26	8.2	6.8	11.0
Livingston	89	8	7	8.2	3.4	6.9
Ballard	79	4	5	7.3	2.1	5.4
Cumberland	41	8	3	7.1	7.9	5.1
Bracken	66	7	11	6.7	3.8	9.5
McLean	74	8	8	6.6	3.6	5.6
Lyon	45	4	5	6.6	3.8	7.5
Hancock	60	7	3	6.5	3.3	3.6
Fulton	103	11	13	6.5	4.1	8.7
Bath	101	17	15	6.5	5.8	8.1
Hickman	28	3	4	6.4	4.5	10.5
Owen	71	5	2	6.0	2.1	1.9
Lee	41	2	6	5.9	1.7	8.7
Clinton	67	6	11	5.6	1.9	8.5
Trimble	36	5	2	4.7	3.2	1.9
Crittenden	61	12	5	4.5	3.5	3.2
Metcalfe	36	3	6	3.4	1.4	4.5
			POPULATION CATEGORY 10,000 - 14,999			
Casey	88	13	12	11.0	8.2	12.0
Magoffin	141	14	14	10.7	5.7	8.0
Leslie	94	7	4	10.6	6.3	5.5
Morgan	120	12	16	10.4	5.3	12.3
Henry	193	27	24	8.5	6.2	8.6
Lewis	129	12	11	7.8	4.1	6.8
Lawrence	118	12	10	7.7	5.2	6.8
Caldwell	169	22	14	7.4	4.4	6.3
Rockcastle	167	11	18	7.3	3.1	5.8
Todd	83	7	11	7.1	3.1	8.0
Powell	109	10	9	6.5	2.8	4.0
Jackson	58	11	9	6.3	4.8	7.9
Russell	118	21	15	6.2	4.8	7.0
Edmonson	77	5	10	6.2	1.7	6.3
Estill	116	14	14	6.1	3.1	5.1
Larue	102	9	8	6.1	2.5	4.5
Anderson	146	17	24	6.0	2.8	7.6
Allen	165	22	10	6.0	3.6	3.1
Washington	77	7	6	5.9	2.7	3.7
Trigg	105	11	10	5.7	3.4	4.9
Webster	122	14	11	5.5	3.1	4.6
Pendleton	95	15	10	5.5	3.8	5.2
Fleming	92	14	10	5.3	4.3	5.0
Monroe	53	6	7	5.3	2.4	5.5
Hart	98	13	3	5.0	4.5	1.5
Martin	58	5	9	4.4	2.1	6.8
Garrard	58	4	4	4.4	1.8	2.9
Butler	74	9	10	4.0	2.4	4.4
Green	36	5	4	2.6	2.0	3.4
			POPULATION CATEGORY 15,000 - 24,999			
McCreary	95	5	11	10.3	3.0	10.9
Meade	288	35	29	10.1	5.3	8.8
Clay	240	26	18	9.4	6.1	6.3
Marion	256	37	28	8.8	5.9	7.6
Knott	117	9	11	7.4	3.3	6.8
Lincoln	172	15	14	7.1	3.6	6.6
Breathitt	151	8	15	7.0	2.5	6.0
Bourbon	289	33	26	7.0	4.2	6.0
Carter	231	25	25	7.0	3.9	5.5

TABLE 20. ACCIDENTS INVOLVING ALCOHOL BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES) (continued)

COUNTY	NUMBER OF ALCOHOL-RELATED ACCIDENTS (1986-1990)			PERCENT OF TOTAL ACCIDENTS INVOLVING ALCOHOL		
	ALL	AGES 16-18	AGES 19-20	ALL	AGES 16-18	AGES 19-20
Shelby	366	29	49	6.9	3.1	8.8
Woodford	283	29	41	6.5	3.2	7.9
Ohio	195	23	22	6.5	3.7	7.0
Mercer	231	23	24	6.3	2.9	5.8
Rowan	272	33	45	6.1	4.1	5.6
Grant	213	21	28	6.1	3.0	6.3
Union	153	18	16	6.0	3.2	5.6
Adair	145	13	16	6.0	2.5	5.4
Wayne	130	15	22	5.8	2.7	7.8
Harrison	167	22	26	5.5	4.2	7.7
Montgomery	230	33	18	5.5	3.7	3.6
Mason	242	26	21	5.3	3.6	4.3
Johnson	161	16	22	5.1	2.6	6.2
Logan	201	21	25	4.9	2.4	5.3
Taylor	177	35	20	4.8	4.1	4.2
Breckinridge	82	11	12	4.6	2.7	5.6
Grayson	156	17	10	4.5	2.2	2.5
Simpson	137	15	19	4.3	2.1	5.0
Scott	219	20	27	4.0	1.9	4.7
POPULATION CATEGORY 25,000 - 50,000						
Floyd	526	61	48	7.8	5.1	6.2
Knox	309	39	35	7.6	4.8	6.9
Letcher	196	22	21	6.8	4.9	6.6
Whitley	358	27	33	6.7	3.1	5.6
Harlan	327	37	38	6.4	4.1	6.6
Nelson	359	46	50	6.4	3.5	7.0
Bell	319	35	25	6.4	4.2	4.6
Perry	339	34	37	6.0	3.4	5.2
Oldham	274	43	31	5.8	3.5	6.5
Muhlenberg	316	45	29	5.8	3.6	4.7
Clark	363	38	35	5.8	3.1	5.2
Graves	351	38	29	5.7	2.9	4.3
Laurel	403	55	37	5.7	4.1	4.5
Franklin	573	66	65	5.6	3.8	5.9
Greenup	282	36	30	5.6	3.3	5.6
Marshall	217	30	19	5.4	3.3	4.4
Bullitt	331	42	58	5.2	2.7	6.6
Henderson	551	57	60	4.9	2.6	5.2
Calloway	239	32	32	4.7	2.8	3.8
Pulaski	404	45	52	4.6	2.5	4.8
Jessamine	246	26	20	4.5	2.4	3.0
Hopkins	414	48	49	4.0	2.1	4.4
Barren	251	33	35	3.7	2.4	5.0
Boyle	204	23	21	3.7	2.3	3.5
POPULATION CATEGORY OVER 50,000						
Christian	774	74	103	6.8	3.9	7.5
Madison	932	100	126	6.8	4.3	6.1
McCracken	1019	107	90	6.3	3.1	4.7
Pike	725	80	75	6.1	4.0	5.3
Kenton	1925	152	184	5.8	2.8	5.2
Campbell	924	68	112	5.6	2.3	5.5
Boone	887	97	89	5.3	2.9	4.6
Warren	1116	106	129	5.1	2.5	4.1
Fayette	3163	274	328	5.0	3.2	4.2
Daviess	1011	166	132	5.0	3.6	5.2
Hardin	717	81	96	4.5	2.8	4.9
Boyd	508	63	40	4.1	3.0	3.2
Jefferson	6808	599	642	4.1	2.3	3.5

TABLE 21. ACCIDENTS INVOLVING ALCOHOL BY CITY AND POPULATION CATEGOTY(IN ORDER OF DECREASING PRECENTAGES)

CITY	NUMBER OF ALCOHOL-RELATED ACCIDENTS (1986-1990)	PERCENTAGE OF ACCIDENTS INVOLVING ALCOHOL
POPULATION CATEGORY OVER 200,000		
Lexington	3173	5.1
Louisville	3420	3.8
POPULATION CATEGORY 20,000-55,000		
Covington	903	6.0
Richmond	402	5.3
Paducah	608	5.2
Hopkinsville	392	5.0
Owensboro	665	4.4
Bowling Green	723	4.2
Frankfort	309	4.2
Henderson	333	4.0
Ashland	279	3.4
Jeffersontown	107	2.3
POPULATION CATEGORY 10,000-19,999		
Independence	114	6.4
Newport	350	6.2
Fort Thomas	79	4.8
Radcliff	189	4.4
Middlesboro	114	4.2
Winchester	166	4.1
Erlanger	156	3.7
Shively	206	3.7
Florence	334	3.5
Nicholasville	94	3.4
Glasgow	124	3.1
Somerset	121	2.6
Elizabethtown	191	2.6
Georgetown	71	2.4
Murray	85	2.4
Danville	90	2.3
Madisonville	136	2.2
Saint Matthews	107	1.8
POPULATION CATEGORY 5,000-9,999		
Villa Hills	33	8.5
Fort Wright	143	7.2
Elsmere	68	6.6
Bellevue	73	6.3
Fort Mitchell	88	6.3
Princeton	89	6.2
Lebanon	102	5.6
Mount Sterling	120	5.2
Paris	127	5.2
Pikeville	114	5.1
Russellville	117	5.0
Dayton	39	4.8
Berea	82	4.6
Lawrenceburg	54	4.4
Monticello	73	4.2
Mount Washington	29	3.9
Maysville	123	3.9
Bardstown	111	3.9
Taylor Mill	31	3.9
Harrodsburg	84	3.7
Versailles	82	3.6
Williamsburg	45	3.5
Campbellsville	97	3.5
Corbin	102	3.4
Hazard	77	3.4
Flatwoods	35	3.3
Shelbyville	75	3.2
Morehead	78	3.1
Cynthiana	51	3.0
Franklin	57	2.9
London	83	2.7
Mayfield	85	2.4
Alexandria	24	2.1
Edgewood	20	1.7
Lyndon	0	0.0
Middletown	0	0.0
POPULATION CATEGORY 2,500-4,999		
Hickman	35	10.9
Vine Grove	37	9.6
Park Hills	30	7.8
Jenkins	18	6.1
Cumberland	30	5.7
Carrollton	58	5.7
Providence	38	5.4
Ludlow	31	5.1
Lakeside Park	24	5.1
Irvine	42	4.9
Fulton	44	4.9
Barbourville	48	4.7
Shepherdsville	80	4.5
Central City	69	4.5
Dawson Springs	21	4.2
Lagrange	46	4.0
Beaver Dam	32	4.0
Stanford	31	4.0
Williamstown	22	3.7
Springfield	26	3.5
Prestonsburg	67	3.5
Morganfield	29	3.4
Tompkinsville	24	3.3
Scottsville	53	3.3
Columbia	47	3.2
Southgate	19	3.2
Hartford	3	3.1
Russell	52	3.1
Lancaster	22	3.0
Wilmore	5	2.8
Paintsville	49	2.7
Grayson	28	2.7
Marion	20	2.5
Stanton	15	2.5
Benton	29	2.3
Greenville	24	2.3
Harlan	30	2.1
Flemingsburg	14	2.0
Leitchfield	35	2.0
Highland Heights	26	1.8
Calvert City	5	1.6
Cold Spring	16	1.4
Mount Vernon	7	1.2
Hodgenville	4	0.7
Oak Grove	0	0.0
Crestview Hills	0	0.0
Graymoor	0	0.0

TABLE 22. SUMMARY OF ALCOHOL CONVICTIONS BY COUNTY (1986-1990 DATA)

COUNTY	ALCOHOL CONVICTIONS PER CALENDER YEAR					TOTAL ALCOHOL CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
	1986	1987	1988	1989	1990			
Adair	99	113	99	77	96	484	10.3	3.3
Allen	102	96	84	89	73	444	9.6	2.7
Anderson	79	99	95	105	126	504	10.4	3.5
Ballard	64	69	51	47	118	349	11.5	4.4
Barren	262	281	205	213	241	1,202	10.7	4.8
Bath	68	30	57	70	87	312	10.0	3.1
Bell	483	359	319	270	293	1,724	19.4	5.4
Boone	484	464	348	375	418	2,089	11.2	2.4
Bourbon	167	174	174	148	241	904	14.3	3.1
Boyd	349	331	309	275	331	1,595	9.0	3.1
Boyle	129	148	115	98	129	619	7.3	3.0
Bracken	22	34	32	36	51	175	7.1	2.7
Breathitt	98	109	67	91	93	458	10.7	3.0
Breckinridge	80	58	82	74	77	371	6.8	4.5
Bullitt	390	304	192	154	249	1,289	8.2	3.9
Butler	66	40	45	80	60	291	8.1	3.9
Caldwell	107	89	90	81	97	464	10.1	2.7
Calloway	179	152	180	134	247	892	9.1	3.7
Campbell	558	440	361	370	373	2,102	7.9	2.3
Carlisle	14	14	16	19	49	112	5.7	3.6
Carroll	101	81	116	106	153	557	17.8	3.0
Carter	195	136	116	134	240	821	11.0	3.6
Casey	76	129	124	93	112	534	11.9	6.1
Christian	802	576	396	337	358	2,469	15.6	3.2
Clark	308	241	289	317	380	1,535	15.4	4.2
Clay	252	269	243	224	284	1,272	21.9	5.3
Clinton	88	63	55	53	114	373	12.5	5.6
Crittenden	54	27	45	44	49	219	7.1	3.6
Cumberland	53	48	67	52	57	277	12.4	6.8
Daviess	726	722	772	743	828	3,791	12.8	3.7
Edmonson	38	31	31	34	35	169	4.9	2.2
Elliott	29	17	20	21	73	160	8.4	2.1
Estill	89	106	119	94	107	515	11.3	4.4
Fayette	1,460	1,957	2,128	2,081	2,395	10,021	13.6	3.2
Fleming	47	67	60	63	79	316	8.0	3.4
Floyd	750	629	519	552	518	2,968	23.0	5.6
Franklin	439	365	403	445	437	2,089	14.2	3.6
Fulton	132	85	64	69	88	438	16.0	4.3
Gallatin	43	21	36	44	51	195	11.1	2.3
Garrard	109	92	51	44	67	363	9.7	6.3
Grant	227	245	169	143	149	933	18.1	4.4
Graves	162	162	188	167	243	922	8.0	2.6
Grayson	108	111	141	102	109	571	8.2	3.7
Green	28	26	20	20	27	121	3.4	3.4
Greenup	322	265	263	257	307	1,414	11.3	5.0
Hancock	21	32	30	57	16	156	5.7	2.6
Hardin	352	448	494	536	718	2,548	10.2	3.6
Harlan	372	334	345	383	400	1,834	16.4	5.6
Harrison	64	40	58	46	86	294	5.5	1.8
Hart	114	100	71	96	69	450	8.9	4.6
Henderson	473	404	380	287	367	1,911	13.0	3.5
Henry	103	102	120	112	94	531	12.1	2.8
Hickman	19	10	12	12	20	73	3.7	2.6
Hopkins	376	456	309	324	443	1,908	12.2	4.6
Jackson	95	78	51	37	75	336	9.8	5.8
Jefferson	6,006	5,745	4,949	5,464	7,187	29,351	13.1	4.3
Jessamine	199	203	166	162	233	963	10.2	3.9
Johnson	245	170	183	144	196	938	12.8	5.8
Kenton	1,182	985	938	777	887	4,769	10.6	2.5
Knott	177	125	125	38	94	559	11.7	4.8
Knox	300	236	302	292	388	1,518	19.8	4.9
Larue	69	99	98	111	107	484	11.8	4.7
Laurel	554	475	505	475	557	2,566	19.8	6.4
Lawrence	124	101	125	126	126	602	15.0	5.1
Lee	104	91	66	57	81	399	18.5	9.7
Leslie	111	58	70	106	107	452	11.9	4.8
Letcher	171	134	161	166	234	866	10.4	4.4
Lewis	94	80	74	66	112	426	10.4	3.3
Lincoln	119	123	124	148	162	676	11.2	3.9

TABLE 22. SUMMARY OF ALCOHOL CONVICTIONS BY COUNTY (1986-1990 DATA) (continued)

COUNTY	ALCOHOL CONVICTIONS PER CALENDER YEAR					TOTAL ALCOHOL CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
	1986	1987	1988	1989	1990			
Livingston	76	51	52	57	71	307	9.5	3.4
Logan	270	220	195	245	261	1,191	14.8	5.9
Lyon	46	39	28	56	64	233	11.2	5.2
McCracken	765	626	598	705	972	3,666	16.4	3.6
McCreary	105	136	112	114	238	705	15.7	7.4
McLean	35	33	31	29	29	157	4.4	2.1
Madison	701	754	624	615	798	3,492	21.0	3.7
Magoffin	155	134	143	63	113	608	16.6	4.3
Marion	95	125	72	83	74	449	8.4	1.8
Marshall	148	138	148	173	164	771	7.9	3.6
Martin	167	109	143	78	96	593	15.2	10.2
Mason	200	133	131	106	150	720	13.2	3.0
Meade	165	115	132	147	170	729	12.4	2.5
Menifee	23	20	15	15	28	101	6.0	2.5
Mercer	158	131	142	154	179	764	11.6	3.3
Metcalfe	48	48	59	54	52	261	8.8	7.3
Monroe	87	91	59	34	68	339	8.9	6.4
Montgomery	189	225	189	148	163	914	14.3	4.0
Morgan	84	56	108	90	119	457	13.5	3.8
Muhlenberg	204	211	196	187	316	1,114	10.5	3.5
Nelson	193	162	194	201	245	995	10.1	2.8
Nicholas	24	32	46	43	56	201	8.7	3.5
Ohio	171	132	109	97	95	604	8.5	3.1
Oldham	213	189	182	152	142	878	8.6	3.2
Owen	33	36	38	56	56	219	8.1	3.1
Owsley	59	53	25	56	59	252	16.4	3.9
Pendleton	39	49	61	38	47	234	6.2	2.5
Perry	506	364	330	362	369	1,931	20.9	5.7
Pike	944	611	447	463	623	3,088	13.8	4.3
Powell	92	58	56	87	97	390	10.8	3.6
Pulaski	283	267	224	388	485	1,647	10.6	4.1
Robertson	4	10	3	7	18	42	5.8	3.8
Rockcastle	145	103	73	128	135	584	13.0	3.5
Rowan	309	401	450	314	283	1,757	32.7	6.5
Russell	104	99	97	138	137	575	11.9	4.9
Scott	238	231	168	188	200	1,025	13.3	4.7
Shelby	239	206	209	158	212	1,024	12.5	2.8
Simpson	124	98	80	63	96	461	9.1	3.4
Spencer	21	26	29	39	45	160	6.8	2.1
Taylor	142	119	155	153	140	709	10.0	4.0
Todd	62	69	47	45	61	284	8.1	3.4
Trigg	115	73	104	86	106	484	13.2	4.6
Trimble	27	19	22	16	16	100	4.8	2.8
Union	159	116	117	165	220	777	14.4	5.1
Warren	1,146	954	833	787	936	4,656	23.1	4.2
Washington	44	35	33	47	47	206	6.4	2.7
Wayne	83	52	53	43	80	311	6.7	2.4
Webster	58	62	79	51	94	344	7.9	2.8
Whitley	211	210	220	181	201	1,023	11.6	2.9
Wolfe	36	24	36	50	36	182	9.0	2.0
Woodford	165	162	171	228	230	956	16.3	3.4
TOTAL	31,592	28,921	26,980	27,050	33,160	147,703	12.6	3.8

TABLE 23. ALCOHOL CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1986-1990)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
UNDER 10,000	Lee	18.5	Lee	9.7
	Carroll	17.8	Metcalfe	7.3
	Owsley	16.4	Cumberland	6.8
	Fulton	16.0	Clinton	5.6
	Clinton	12.5	Lyon	5.2
	Cumberland	12.4	Ballard	4.4
	Ballard	11.5	Fulton	4.3
	Lyon	11.2	Owsley	3.9
	Gallatin	11.1	Robertson	3.8
	Bath	10.0	Carlisle	3.6
	Livingston	9.5	Crittenden	3.6
	Wolfe	9.0	Nicholas	3.5
	Metcalfe	8.8	Livingston	3.4
	Nicholas	8.7	Bath	3.1
	Elliott	8.4	Owen	3.1
	Owen	8.1	Carroll	3.0
	Bracken	7.1	Trimble	2.8
	Crittenden	7.1	Bracken	2.7
	Spencer	6.8	Hickman	2.6
	Menifee	6.0	Hancock	2.6
	Robertson	5.8	Menifee	2.5
	Carlisle	5.7	Gallatin	2.3
	Hancock	5.7	McLean	2.1
	Trimble	4.8	Spencer	2.1
	McLean	4.4	Elliott	2.1
	Hickman	3.7	Wolfe	2.0
10,000 - 14,999	Magoffin	16.6	Martin	10.2
	Martin	15.2	Monroe	6.4
	Lawrence	15.0	Garrard	6.3
	Morgan	13.5	Casey	6.1
	Trigg	13.2	Jackson	5.8
	Rockcastle	13.0	Lawrence	5.1
	Henry	12.1	Russell	4.9
	Casey	11.9	Leslie	4.8
	Russell	11.9	Larue	4.7
	Leslie	11.9	Trigg	4.6
	Larue	11.8	Hart	4.6
	Estill	11.3	Estill	4.4
	Powell	10.8	Magoffin	4.3
	Anderson	10.4	Butler	3.9
	Lewis	10.4	Morgan	3.8
	Caldwell	10.1	Powell	3.6
	Jackson	9.8	Rockcastle	3.5
	Garrard	9.7	Anderson	3.5
	Allen	9.6	Fleming	3.4
	Hart	8.9	Todd	3.4
	Monroe	8.9	Green	3.4
	Butler	8.1	Lewis	3.3
	Todd	8.1	Webster	2.8
	Fleming	8.0	Henry	2.8
	Webster	7.9	Caldwell	2.7
	Washington	6.4	Allen	2.7
	Pendleton	6.2	Washington	2.7
	Edmonson	4.9	Pendleton	2.5
	Green	3.4	Edmonson	2.2
15,000 - 24,999	Rowan	32.7	McCreary	7.4
	Clay	21.9	Rowan	6.5
	Grant	18.1	Logan	5.9
	Woodford	16.3	Johnson	5.8
	McCreary	15.7	Clay	5.3
	Logan	14.8	Union	5.1
	Union	14.4	Knott	4.8
	Montgomery	14.3	Scott	4.7
	Bourbon	14.3	Breckinridge	4.5
	Scott	13.3	Grant	4.4
	Mason	13.2	Taylor	4.0
	Johnson	12.8	Montgomery	4.0
	Shelby	12.5	Lincoln	3.9

TABLE 23. ALCOHOL CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1986-1990) (continued)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE ALCOHOL CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	ALCOHOL CONVICTIONS PER ALCOHOL-RELATED ACCIDENT
15,000 - 24,999 (cont.)	Meade	12.4	Grayson	3.7
	Knott	11.7	Carter	3.6
	Mercer	11.6	Woodford	3.4
	Lincoln	11.2	Simpson	3.4
	Carter	11.0	Adair	3.3
	Breathitt	10.7	Mercer	3.3
	Adair	10.3	Bourbon	3.1
	Taylor	10.0	Ohio	3.1
	Simpson	9.1	Breathitt	3.0
	Ohio	8.5	Mason	3.0
	Marion	8.4	Shelby	2.8
	Grayson	8.2	Meade	2.5
	Breckinridge	6.8	Wayne	2.4
	Wayne	6.7	Harrison	1.8
	Harrison	5.5	Marion	1.8
25,000 - 50,000	Floyd	23.0	Laurel	6.4
	Perry	20.9	Perry	5.7
	Knox	19.8	Floyd	5.6
	Laurel	19.8	Harlan	5.6
	Bell	19.4	Bell	5.4
	Harlan	16.4	Greenup	5.0
	Clark	15.4	Knox	4.9
	Franklin	14.2	Barren	4.8
	Henderson	13.0	Hopkins	4.6
	Hopkins	12.2	Letcher	4.4
	Whitley	11.6	Clark	4.2
	Greenup	11.3	Pulaski	4.1
	Barren	10.7	Jessamine	3.9
	Pulaski	10.6	Bullitt	3.9
	Muhlenberg	10.5	Calloway	3.7
	Letcher	10.4	Franklin	3.6
	Jessamine	10.2	Marshall	3.6
	Nelson	10.1	Muhlenberg	3.5
	Calloway	9.1	Henderson	3.5
	Oldham	8.6	Oldham	3.2
	Bullitt	8.2	Boyle	3.0
	Graves	8.0	Whitley	2.9
	Marshall	7.9	Nelson	2.8
	Boyle	7.3	Graves	2.6
OVER 50,000	Warren	23.1	Jefferson	4.3
	Madison	21.0	Pike	4.3
	McCracken	16.4	Warren	4.2
	Christian	15.6	Daviess	3.7
	Pike	13.8	Madison	3.7
	Fayette	13.6	McCracken	3.6
	Jefferson	13.1	Hardin	3.6
	Daviess	12.8	Christian	3.2
	Boone	11.2	Fayette	3.2
	Kenton	10.6	Boyd	3.1
	Hardin	10.2	Kenton	2.5
	Boyd	9.0	Boone	2.4
	Campbell	7.9	Campbell	2.3

TABLE 24. PERCENTAGE OF DRIVERS CONVICTED OF DUI ARREST (BY COUNTY) (1985 - 1986, 1988 - 1990)

COUNTY	TOTAL DUI ARRESTS	TOTAL DUI CONVICTIONS	CONVICTION PERCENTAGE
Adair	749	456	60.9
Allen	511	415	81.2
Anderson	697	462	66.3
Ballard	436	319	73.2
Barren	1,751	1,245	71.1
Bath	451	366	81.2
Bell	2,599	1,792	68.9
Boone	3,814	2,099	55.0
Bourbon	1,144	958	83.7
Boyd	2,577	1,737	67.4
Boyle	745	605	81.2
Bracken	225	192	85.3
Breathitt	1,175	399	34.0
Breckinridge	437	371	84.9
Bullitt	2,759	1,405	50.9
Butler	360	307	85.3
Caldwell	677	484	71.5
Calloway	1,191	976	81.9
Campbell	3,403	2,268	66.6
Carlisle	159	113	71.1
Carroll	966	601	62.2
Carter	1,255	861	68.6
Casey	817	444	54.3
Christian	4,408	2,649	60.1
Clark	2,497	1,636	65.5
Clay	2,008	1,137	56.6
Clinton	657	372	56.6
Crittenden	299	251	83.9
Cumberland	395	260	65.8
Daviess	4,830	3,870	80.1
Edmonson	299	181	60.5
Elliott	291	175	60.1
Estill	840	523	62.3
Fayette	11,325	10,004	88.3
Fleming	393	306	77.9
Floyd	3,839	2,802	73.0
Franklin	3,527	2,264	64.2
Fulton	690	463	67.1
Gallatin	406	239	58.9
Garrard	485	330	68.0
Grant	1,293	818	63.3
Graves	1,166	895	76.8
Grayson	728	604	83.0
Green	215	133	61.9
Greenup	2,446	1,497	61.2
Hancock	172	157	91.3
Hardin	4,932	2,619	53.1
Harlan	3,223	1,870	58.0
Harrison	427	323	75.6
Hart	585	456	77.9
Henderson	2,615	2,015	77.1
Henry	665	533	80.2
Hickman	178	108	60.7
Hopkins	2,534	1,876	74.0
Jackson	557	355	63.7
Jefferson	38,331	27,855	72.7
Jessamine	1,140	968	84.9
Johnson	1,084	896	82.7
Kenton	8,467	4,917	58.1
Knott	1,088	604	55.5
Knox	2,165	1,579	72.9
Larue	527	441	83.7

TABLE 24. PERCENTAGE OF DRIVERS CONVICTED OF DUI ARREST (BY COUNTY) (1985-1986, 1988-1990) (continued)

COUNTY	TOTAL DUI ARRESTS	TOTAL DUI CONVICTIONS	CONVICTION PERCENTAGE
Laurel	3,138	2,514	80.1
Lawrence	935	602	64.4
Lee	551	351	63.7
Leslie	875	530	60.6
Letcher	1,424	883	62.0
Lewis	600	440	73.3
Lincoln	825	668	81.0
Livingston	470	313	66.6
Logan	1,639	1,183	72.2
Lyon	222	238	107.2
McCracken	5,501	3,882	70.6
McCreary	1,121	728	64.9
McLean	376	171	45.5
Madison	5,221	3,434	65.8
Magoffin	819	515	62.9
Marion	967	443	45.8
Marshall	1,805	811	44.9
Martin	902	597	66.2
Mason	831	757	91.1
Meade	1,450	811	55.9
Menifee	119	99	83.2
Mercer	992	806	81.3
Metcalfe	363	246	67.8
Monroe	471	285	60.5
Montgomery	1,059	896	84.6
Morgan	588	444	75.5
Muhlenberg	1,481	1,095	73.9
Nelson	1,537	1,069	69.6
Nicholas	244	176	72.1
Ohio	715	563	78.7
Oldham	1,384	828	59.8
Owen	343	212	61.8
Owsley	487	254	52.2
Pendleton	411	213	51.8
Perry	3,251	1,932	59.4
Pike	5,580	3,159	56.6
Powell	730	392	53.7
Pulaski	2,240	1,561	69.7
Robertson	71	38	53.5
Rockcastle	1,049	575	54.8
Rowan	2,067	1,588	76.8
Russell	897	588	65.6
Scott	1,445	990	68.5
Shelby	1,795	1,156	64.4
Simpson	611	470	76.9
Spencer	339	154	45.4
Taylor	1,129	727	64.4
Todd	585	255	43.6
Trigg	698	490	70.2
Trimble	184	101	54.9
Union	960	791	82.4
Warren	7,202	4,763	66.1
Washington	353	218	61.8
Wayne	435	352	80.9
Webster	397	334	84.1
Whitley	1,758	1,044	59.4
Wolfe	339	184	54.3
Woodford	1,226	953	77.7
TOTAL	215,832	147,728	68.4

TABLE 25. DUI ARREST CONVICTION RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER)(1985-1986 & 1988-1990)

POPULATION CATEGORY	AVERAGE CONVICTION PERCENTAGE	COUNTY	TOTAL ARRESTS	TOTAL CONVICTIONS	CONVICTION PERCENTAGE
UNDER 10,000	65.2	Lyon	222	238	107.2
		Hancock	172	157	91.3
		Bracken	225	192	85.3
		Crittenden	299	251	83.9
		Menifee	119	99	83.2
		Bath	451	366	81.2
		Ballard	436	319	73.2
		Nicholas	244	176	72.1
		Carlisle	159	113	71.1
		Metcalfe	363	246	67.8
		Fulton	690	463	67.1
		Livingston	470	313	66.6
		Cumberland	395	260	65.8
		Lee	551	351	63.7
		Carroll	966	601	62.2
		Owen	343	212	61.8
		Hickman	178	108	60.7
		Elliott	291	175	60.1
		Gallatin	406	239	58.9
		Clinton	657	372	56.6
		Trimble	184	101	54.9
		Wolfe	339	184	54.3
		Robertson	71	38	53.5
		Owsley	487	254	52.2
		McLean	376	171	45.5
		Spencer	339	154	45.4
10,000 - 14,999	66.0	Butler	360	307	85.3
		Webster	397	334	84.1
		Larue	527	441	83.7
		Allen	511	415	81.2
		Henry	665	533	80.2
		Hart	585	456	77.9
		Fleming	393	306	77.9
		Morgan	588	444	75.5
		Lewis	600	440	73.3
		Caldwell	677	484	71.5
		Trigg	698	490	70.2
		Garrard	485	330	68.0
		Anderson	697	462	66.3
		Martin	902	597	66.2
		Russell	897	588	65.6
		Lawrence	935	602	64.4
		Jackson	557	355	63.7
		Magoffin	819	515	62.9
		Estill	840	523	62.3
		Green	215	133	61.9
		Washington	353	218	61.8
		Leslie	875	530	60.6
		Edmonson	299	181	60.5
		Monroe	471	285	60.5
		Rockcastle	1,049	575	54.8
		Casey	817	444	54.3
		Powell	730	392	53.7
		Pendleton	411	213	51.8
		Todd	585	255	43.6
15,000 - 24,999	69.5	Mason	831	757	91.1
		Breckinridge	437	371	84.9
		Montgomery	1,059	896	84.6
		Bourbon	1,144	958	83.7
		Grayson	728	604	83.0

TABLE 25. DUI ARREST CONVICTION RATES BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER)(1985-1986 & 1988-1990)(continued)

POPULATION CATEGORY	AVERAGE CONVICTION PERCENTAGE	COUNTY	TOTAL ARRESTS	TOTAL CONVICTIONS	CONVICTION PERCENTAGE
15,000 - 24,999 (cont.)	69.5	Johnson	1,084	896	82.7
		Union	960	791	82.4
		Mercer	992	806	81.3
		Lincoln	825	668	81.0
		Wayne	435	352	80.9
		Ohio	715	563	78.7
		Woodford	1,226	953	77.7
		Simpson	611	470	76.9
		Rowan	2,067	1,588	76.8
		Harrison	427	323	75.6
		Logan	1,639	1,183	72.2
		Carter	1,255	861	68.6
		Scott	1,445	990	68.5
		McCreary	1,121	728	64.9
		Shelby	1,795	1,156	64.4
		Taylor	1,129	727	64.4
		Grant	1,293	818	63.3
		Adair	749	456	60.9
		Clay	2,008	1,137	56.6
		Meade	1,450	811	55.9
		Knott	1,088	604	55.5
		Marion	967	443	45.8
		Breathitt	1,175	399	34.0
25,000 - 50,000	67.3	Jessamine	1,140	968	84.9
		Calloway	1,191	976	81.9
		Boyle	745	605	81.2
		Laurel	3,138	2,514	80.1
		Henderson	2,615	2,015	77.1
		Graves	1,166	895	76.8
		Hopkins	2,534	1,876	74.0
		Muhlenberg	1,481	1,095	73.9
		Floyd	3,839	2,802	73.0
		Knox	2,165	1,579	72.9
		Barren	1,751	1,245	71.1
		Pulaski	2,240	1,561	69.7
		Nelson	1,537	1,069	69.6
		Bell	2,599	1,792	68.9
		Clark	2,497	1,636	65.5
		Franklin	3,527	2,264	64.2
		Letcher	1,424	883	62.0
		Greenup	2,446	1,497	61.2
		Oldham	1,384	828	59.8
		Perry	3,251	1,932	59.4
		Whitley	1,758	1,044	59.4
		Harlan	3,223	1,870	58.0
		Bullitt	2,759	1,405	50.9
		Marshall	1,805	811	44.9
OVER 50,000	69.4	Fayette	11,325	10,004	88.3
		Daviess	4,830	3,870	80.1
		Jefferson	38,331	27,855	72.7
		McCracken	5,501	3,882	70.6
		Boyd	2,577	1,737	67.4
		Campbell	3,403	2,268	66.6
		Warren	7,202	4,763	66.1
		Madison	5,221	3,434	65.8
		Christian	4,408	2,649	60.1
		Kenton	8,467	4,917	58.1
		Pike	5,580	3,159	56.6
		Boone	3,814	2,099	55.0
		Hardin	4,932	2,619	53.1

TABLE 26. SUMMARY OF RECKLESS DRIVING CONVICTIONS BY COUNTY (1986-1990 DATA)

COUNTY	RECKLESS DRIVING CONVICTIONS PER CALENDAR YEAR					TOTAL RECKLESS DRIVING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE RECKLESS DRIVING CONVICTIONS PER 1,000 LICENSED DRIVERS
	1986	1987	1988	1989	1990		
Adair	15	32	43	46	43	179	3.8
Allen	39	22	26	24	26	137	3.0
Anderson	17	29	26	35	18	125	2.6
Ballard	15	10	7	9	20	61	2.0
Barren	74	76	60	90	81	381	3.4
Bath	10	11	5	14	17	57	1.8
Bell	40	27	15	19	12	113	1.3
Boone	324	341	328	262	261	1,516	8.1
Bourbon	54	62	44	40	76	276	4.4
Boyd	76	79	65	89	86	395	2.2
Boyle	23	18	17	21	39	118	1.4
Bracken	23	10	18	11	15	77	3.1
Breathitt	32	17	15	18	29	111	2.6
Breckinridge	19	9	5	15	18	66	1.2
Bullitt	128	122	79	74	80	483	3.1
Butler	12	7	17	10	8	54	1.5
Caldwell	30	21	30	15	35	131	2.9
Calloway	23	49	45	33	61	211	2.2
Campbell	170	146	193	190	197	896	3.4
Carlisle	0	7	3	11	10	31	1.6
Carroll	7	8	16	17	24	72	2.3
Carter	21	26	24	14	33	118	1.6
Casey	18	12	17	13	30	90	2.0
Christian	179	124	136	112	120	671	4.2
Clark	32	22	42	15	19	130	1.3
Clay	23	22	73	56	58	232	4.0
Clinton	4	34	33	25	41	137	4.6
Crittenden	20	13	9	9	14	65	2.1
Cumberland	25	20	17	17	31	110	4.9
Daviess	92	101	99	99	114	505	1.7
Edmonson	15	11	8	17	14	65	1.9
Elliott	6	4	17	7	19	53	2.8
Estill	18	29	18	16	18	99	2.2
Fayette	309	398	480	525	589	2,301	3.1
Fleming	24	19	23	21	33	120	3.0
Floyd	70	58	76	130	106	440	3.4
Franklin	110	123	108	154	167	662	4.5
Fulton	8	11	4	8	6	37	1.4
Gallatin	7	7	14	14	21	63	3.6
Garrard	33	41	34	25	13	146	3.9
Grant	24	13	24	19	20	100	1.9
Graves	7	45	52	67	58	229	2.0
Grayson	22	25	40	29	30	146	2.1
Green	15	12	21	16	23	87	2.5
Greenup	85	51	58	83	69	346	2.8
Hancock	3	7	3	4	1	18	0.7
Hardin	135	116	224	171	163	809	3.2
Harlan	179	244	161	162	150	896	8.0
Harrison	22	27	28	34	29	140	2.6
Hart	10	21	11	19	10	71	1.4
Henderson	89	78	77	52	56	352	2.4
Henry	8	13	7	11	4	43	1.0
Hickman	8	3	5	5	5	26	1.3
Hopkins	99	146	113	99	147	604	3.9
Jackson	7	12	7	6	13	45	1.3
Jefferson	2,418	1,871	1,758	1,899	2,069	10,015	4.5
Jessamine	39	50	44	31	47	211	2.2
Johnson	71	25	43	24	51	214	2.9
Kenton	320	345	441	473	427	2,006	4.5
Knott	44	42	43	14	27	170	3.6
Knox	52	50	60	59	100	321	4.2
Larue	15	25	23	22	24	109	2.7
Laurel	79	101	87	79	78	424	3.3
Lawrence	36	22	26	33	24	141	3.5
Lee	6	6	25	20	28	85	4.0
Leslie	24	11	17	28	23	103	2.7
Letcher	42	53	29	29	44	197	2.4
Lewis	25	17	14	16	26	98	2.4
Lincoln	44	24	46	38	38	190	3.1

TABLE 26. SUMMARY OF RECKLESS DRIVING CONVICTIONS BY COUNTY (1986-1990 DATA)(continued)

COUNTY	RECKLESS DRIVING CONVICTIONS PER CALENDAR YEAR					TOTAL RECKLESS DRIVING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE RECKLESS DRIVING CONVICTIONS PER 1,000 LICENSED DRIVERS
	1986	1987	1988	1989	1990		
Livingston	7	16	17	14	22	76	2.3
Logan	65	67	49	50	93	324	4.0
Lyon	5	2	1	5	13	26	1.2
McCracken	178	168	157	164	144	811	3.6
McCreary	30	14	39	25	44	152	3.4
McLean	23	21	15	11	14	84	2.4
Madison	92	96	81	91	73	433	2.6
Magoffin	24	17	44	11	19	115	3.1
Marion	117	79	110	81	78	465	8.7
Marshall	19	21	23	30	24	117	1.2
Martin	32	20	40	22	32	146	3.7
Mason	31	15	30	26	45	147	2.7
Meade	17	25	34	44	71	191	3.2
Menifee	4	2	1	7	6	20	1.2
Mercer	31	32	31	30	59	183	2.8
Metcalfe	14	14	32	15	22	97	3.3
Monroe	23	42	36	27	41	169	4.4
Montgomery	31	54	34	29	27	175	2.7
Morgan	4	7	10	7	15	43	1.3
Muhlenberg	34	51	42	53	67	247	2.3
Nelson	59	54	104	64	64	345	3.5
Nicholas	16	12	21	24	20	93	4.0
Ohio	41	43	36	37	26	183	2.6
Oldham	15	17	25	16	10	83	0.8
Owen	7	4	13	7	9	40	1.5
Owsley	8	10	6	3	6	33	2.1
Pendleton	16	18	18	39	24	115	3.0
Perry	108	64	112	98	91	473	5.1
Pike	232	209	212	173	259	1,085	4.9
Powell	17	13	9	9	9	57	1.6
Pulaski	57	72	61	100	186	476	3.1
Robertson	5	6	5	10	6	32	4.4
Rockcastle	43	44	28	31	27	173	3.8
Rowan	72	58	84	62	49	325	6.1
Russell	20	19	32	37	31	139	2.9
Scott	89	80	72	76	73	390	5.1
Shelby	71	56	41	39	35	242	3.0
Simpson	31	24	23	12	14	104	2.1
Spencer	18	33	14	16	12	93	3.9
Taylor	62	80	101	121	103	467	6.6
Todd	15	21	20	20	17	93	2.6
Trigg	17	12	15	22	20	86	2.4
Trimble	0	2	4	4	1	11	0.5
Union	19	31	33	19	41	143	2.3
Warren	148	150	230	227	226	981	4.0
Washington	32	30	20	27	18	127	3.6
Wayne	27	18	22	27	26	120	2.3
Webster	10	14	21	8	29	82	1.7
Whitley	47	45	51	38	41	222	2.1
Wolfe	19	11	8	6	11	55	2.7
Woodford	39	42	58	71	71	281	4.2
TOTAL	8,214	7,688	8,101	8,047	8,850	40,900	3.5

TABLE 27. PERCENTAGE OF ACCIDENTS INVOLVING DRUGS BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF DRUG-RELATED ACCIDENTS (1986-1990)	PERCENT OF TOTAL ACCIDENTS INVOLVING DRUGS
POPULATION CATEGORY UNDER 10,000		
Robertson	2	2.1
Owsley	4	0.8
Hickman	3	0.7
Lee	4	0.6
Carlisle	2	0.6
Crittenden	7	0.5
Clinton	5	0.4
Elliott	2	0.4
Fulton	6	0.4
Livingston	4	0.4
Cumberland	2	0.3
Owen	4	0.3
Bath	5	0.3
Lyon	2	0.3
Carroll	5	0.2
Nicholas	1	0.2
Spencer	1	0.2
Trimble	1	0.1
Bracken	1	0.1
Gallatin	1	0.1
Metcalfe	1	0.1
Ballard	1	0.1
Wolfe	1	0.1
Hancock	0	0.0
McLean	0	0.0
Menifee	0	0.0
POPULATION CATEGORY 10,000-14,999		
Casey	5	0.6
Russell	11	0.6
Leslie	5	0.6
Allen	15	0.5
Martin	7	0.5
Magoffin	5	0.4
Trigg	7	0.4
Henry	8	0.4
Morgan	4	0.3
Jackson	3	0.3
Hart	6	0.3
Fleming	5	0.3
Webster	6	0.3
Butler	5	0.3
Caldwell	6	0.3
Edmonson	3	0.2
Powell	4	0.2
Green	3	0.2
Rockcastle	5	0.2
Estill	4	0.2
Lawrence	3	0.2
Lewis	3	0.2
Anderson	4	0.2
Garrard	2	0.2
Larue	2	0.1
Pendleton	2	0.1
Monroe	1	0.1
Washington	1	0.1
Todd	0	0.0
POPULATION CATEGORY 15,000-24,999		
Clay	70	2.7
Mercer	22	0.6
Rowan	24	0.5
Johnson	14	0.4
Union	8	0.3
Breathitt	6	0.3
Bourbon	11	0.3
Woodford	11	0.3
Knott	4	0.3
Adair	6	0.2
Ohio	7	0.2
Shelby	12	0.2
McCreary	2	0.2
Taylor	8	0.2
Scott	11	0.2
Harrison	6	0.2
Mason	9	0.2
Simpson	6	0.2
Meade	5	0.2
Logan	7	0.2
Marion	5	0.2
Montgomery	7	0.2
Lincoln	4	0.2
Carter	4	0.1
Grayson	4	0.1
Grant	3	0.1
Breckinridge	1	0.1
Wayne	1	0.0
POPULATION CATEGORY 25,000-50,000		
Knox	35	0.9
Bell	32	0.6
Laurel	42	0.6
Harlan	24	0.5
Letcher	11	0.4
Floyd	24	0.4
Whitley	19	0.4
Clark	21	0.3
Oldham	15	0.3
Perry	18	0.3
Calloway	15	0.3
Barren	17	0.3
Greenup	12	0.2
Pulaski	20	0.2
Franklin	22	0.2
Graves	13	0.2
Muhlenberg	9	0.2
Nelson	9	0.2
Marshall	6	0.1
Jessamine	8	0.1
Boyle	8	0.1
Hopkins	15	0.1
Henderson	16	0.1
Bullitt	7	0.1
POPULATION CATEGORY OVER 50,000		
McCracken	72	0.4
Kenton	112	0.3
Daviess	67	0.3
Pike	37	0.3
Campbell	46	0.3
Warren	55	0.3
Boyd	30	0.2
Fayette	148	0.2
Christian	24	0.2
Boone	31	0.2
Madison	25	0.2
Jefferson	197	0.1
Hardin	17	0.1

TABLE 28. PERCENTAGE OF ACCIDENTS INVOLVING DRUGS BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES

CITY	NUMBER OF DRUG-RELATED ACCIDENTS (1986-1990)	PERCENTAGE OF ACCIDENTS INVOLVING DRUGS
POPULATION CATEGORY OVER 200,000		
Lexington	148	0.2
Louisville	103	0.1
POPULATION CATEGORY 20,000-55,000		
Paducah	49	0.4
Covington	56	0.4
Owensboro	48	0.3
Hopkinsville	18	0.2
Bowling Green	35	0.2
Ashland	20	0.2
Richmond	13	0.2
Frankfort	10	0.1
Henderson	12	0.1
Jeffersontown	4	0.1
POPULATION CATEGORY 10,000-19,999		
Middlesboro	17	0.6
Newport	20	0.4
Fort Thomas	7	0.4
Winchester	13	0.3
Florence	17	0.2
Independence	3	0.2
Erlanger	10	0.2
Murray	8	0.2
Georgetown	7	0.2
Somerset	11	0.2
Glasgow	9	0.2
Shively	4	0.1
Madisonville	7	0.1
Nicholasville	3	0.1
Danville	4	0.1
Radcliff	5	0.1
Elizabethtown	3	0.0
Saint Matthews	0	0.0
POPULATION CATEGORY 5,000-9,999		
Fort Wright	16	0.8
London	15	0.5
Mount Washington	3	0.4
Corbin	12	0.4
Williamsburg	5	0.4
Morehead	9	0.4
Bellevue	5	0.4
Harrodsburg	8	0.4
Campbellsville	7	0.3
Villa Hills	1	0.3
Franklin	5	0.3
Versailles	7	0.3
Princeton	4	0.3
Taylor Mill	2	0.3
Pikeville	4	0.2
Maysville	5	0.2
Flatwoods	2	0.2
Mount Sterling	5	0.2
Hazard	4	0.2
Paris	5	0.2
Cynthiana	3	0.2
Russellville	2	0.1
Bardstown	3	0.1
Elsmere	1	0.1
Fort Mitchell	2	0.1
Lawrenceburg	1	0.1
Berea	2	0.1
Lebanon	2	0.1
Alexandria	1	0.1
Edgewood	1	0.1
Mayfield	5	0.1
Shelbyville	1	0.0
Dayton	0	0.0
Monticello	0	0.0
Lyndon	0	0.0
Middletown	0	0.0
POPULATION CATEGORY 2,500-4,999		
Cumberland	5	0.9
Barbourville	8	0.8
Marion	5	0.6
Fulton	5	0.6
Prestonsburg	11	0.6
Park Hills	2	0.5
Harlan	5	0.4
Beaver Dam	3	0.4
Lakeside Park	2	0.4
Scottsville	7	0.4
Providence	2	0.3
Hickman	1	0.3
Lancaster	2	0.3
Jenkins	1	0.3
Vine Grove	1	0.3
Ludlow	1	0.2
Central City	3	0.2
Leitchfield	3	0.2
Russell	3	0.2
Paintsville	3	0.2
Lagrange	1	0.1
Flemingsburg	1	0.1
Highland Heights	1	0.1
Columbia	2	0.1
Irvine	1	0.1
Dawson Springs	0	0.0
Carrollton	0	0.0
Greenville	0	0.0
Grayson	0	0.0
Williamstown	0	0.0
Graymoor	0	0.0
Shepherdsville	0	0.0
Cold Spring	0	0.0
Springfield	0	0.0
Oak Grove	0	0.0
Tompkinsville	0	0.0
Wilmore	0	0.0
Stanton	0	0.0
Morganfield	0	0.0
Hodgenville	0	0.0
Benton	0	0.0
Stanford	0	0.0
Southgate	0	0.0
Mount Vernon	0	0.0
Crestview Hills	0	0.0
Hartford	0	0.0
Calvert City	0	0.0

TABLE 29. SAFETY BELT USAGE (DRIVERS OF PASSENGER CARS IN VOLVED IN ACCIDENTS BY COUNTY AND POPULATION CATEGORY (IN DESCENDING ORDER)(1986-1990)

COUNTY	PERCENT SEAT BELT USAGE		COUNTY	PERCENT SEAT BELT USAGE	
POPULATION CATEGORY UNDER 10,000			POPULATION CATEGORY 15,000-24,999		
Trimble	37.1		Scott	37.2	
Lyon	32.3		Grant	35.7	
Ballard	30.7		Woodford	32.8	
Owen	29.5		Meade	30.8	
Gallatin	29.4		Shelby	30.0	
Hancock	26.7		Simpson	25.7	
Carroll	24.2	*	Bourbon	22.9	
Nicholas	23.5		Knott	22.6	
Wolfe	23.1		Rowan	21.3	
Spencer	22.8		Mason	21.3	
McLean	22.2		Johnson	20.5	
Hickman	19.7		Ohio	19.1	
Carlisle	19.6		Grayson	19.1	
Robertson	17.1		Mercer	18.5	
Bath	16.9		Lincoln	18.3	
Bracken	16.2	*	Logan	18.1	
Lee	15.8		McCreary	17.3	
Fulton	15.5		Breckinridge	17.1	*
Metcalfe	15.5	*	Harrison	16.4	
Livingston	15.3		Breathitt	15.1	*
Menifee	15.3		Union	15.0	
Elliott	14.4		Marion	14.9	
Crittenden	8.8		Carter	12.5	
Cumberland	8.4		Clay	12.2	*
Clinton	8.2	*	Adair	12.0	
Owsley	8.1		Montgomery	11.3	
POPULATION CATEGORY 10,000-14,999			Wayne	9.6	
Hart	30.9		Taylor	8.8	
Rockcastle	29.9		POPULATION CATEGORY 25,000-50,000		
Henry	26.3		Oldham	39.6	
Trigg	25.9		Jessamine	33.6	
Washington	25.2		Franklin	30.9	
Magoffin	24.5		Greenup	27.4	
Anderson	23.1	*	Floyd	26.2	
Pendleton	23.0		Bullitt	26.0	
Webster	22.3		Nelson	25.5	
Powell	21.6		Pulaski	25.2	
Todd	21.5		Henderson	24.7	
Morgan	20.8		Clark	23.8	
Garrard	20.0		Bell	23.7	*
Edmonson	19.6		Hopkins	23.3	
Lawrence	19.1		Whitley	22.7	
Leslie	17.7		Letcher	22.0	
Russell	17.6		Laurel	21.8	
Caldwell	16.4		Boyle	21.6	
Butler	15.4		Harlan	20.8	
Martin	15.3		Marshall	20.0	
Allen	15.2	*	Barren	19.7	
Casey	15.1		Perry	18.6	
Larue	14.4		Muhlenberg	17.6	*
Lewis	13.7	*	Graves	15.9	
Fleming	13.1		Calloway	15.4	
Jackson	9.6	*	Knox	15.3	
Estill	9.5		POPULATION CATEGORY OVER 50,000		
Monroe	7.9		Fayette	52.4	
Green	7.9		Jefferson	43.8	
			Warren	40.8	
			Boone	40.3	
			Campbell	38.5	
			Hardin	37.1	
			Kenton	36.5	
			Madison	31.2	
			Christian	28.9	
			Boyd	26.8	*
			McCracken	26.6	
			Daviess	23.2	*
			Pike	23.0	*

* Counties with potential for intensive promotional campaigns. Selected based on safety belt usage, accident rate, and location in states.

TABLE 30. CHANGE IN SAFETY BELT USAGE FOR 1986-1990 (PASSENGER CAR DRIVERS INVOLVED IN ACCIDENTS) BY POPULATION CATEGORY

	PERCENT USAGE					
	POPULATION CATEGORY					
YEAR	UNDER 10,000-	10,000- 14,999-	15,000- 24,999-	25,000- 50,000	OVER 50,000	ALL
1986	12.0	10.5	10.4	13.6	24.2	19.3
1987	16.5	16.0	15.8	19.5	34.4	27.5
1988	19.8	19.7	20.3	24.1	41.1	33.2
1989	23.3	22.4	24.8	28.9	46.6	37.9
1990	26.3	25.3	30.7	34.5	54.5	44.6
All	21.0	20.1	21.7	25.4	41.6	33.3

TABLE 31. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE (ALL DRIVERS)*

	NOT WEARING SAFETY BELT		WEARING SAFETY BELT		
TYPE OF INJURY	NUMBER	PERCENT	NUMBER	PERCENT	PERCENT REDUCTION
Fatal	2,094	0.28	227	0.06	78**
Incapacitating	23,340	3.12	6,247	1.69	46**
Non-Incapacitating	40,415	5.40	13,798	3.73	31**
Possible Injury	43,543	5.82	19,756	5.34	8**
Fatal or Incapacitating	25,434	3.46	6,474	1.75	49**

* Based on 1986 through 1990 accident data. Total sample size for not wearing a safety belt was 747,911 compared to 370,268 for wearing a safety belt

** Statistically significant reduction (probability of 0.99).

TABLE 32. CHANGE IN SEVERITY OF INJURIES BY YEAR
(1986-1990 DATA)

Type of Injury	PERCENTAGE DRIVERS SUSTAINING A GIVEN INJURY				
	1986	1987	1988	1989	1990
	NOT WEARING SAFETY BELT				
Fatal	0.25	0.28	0.27	0.28	0.28
Incapacitating	2.66	3.05	3.21	3.37	3.13
Non-Incapacitating	4.86	5.20	5.52	5.62	5.41
Possible Injury	5.04	5.71	5.81	6.07	5.83
	WEARING SAFETY BELT				
Fatal	0.06	0.04	0.07	0.06	0.06
Incapacitating	1.73	1.69	1.68	1.69	1.69
Non-Incapacitating	3.60	3.63	3.68	3.74	3.73
Possible Injury	5.01	5.05	5.30	5.43	5.35

TABLE 33. POTENTIAL ANNUAL REDUCTION IN TRAFFIC ACCIDENT FATALITIES AND ACCIDENT SAVINGS FROM INCREASE IN DRIVER SAFETY BELT USAGE*

DRIVER USAGE RATE (PERCENT)	POTENTIAL ANNUAL REDUCTION IN NUMBER OF		ANNUAL ACCIDENT SAVING (MILLION $) FROM REDUCTION IN		
	FATALITIES	SERIOUS INJURIES**	FATALITIES	SERIOUS INJURIES	TOTAL
40	38	249	57.0	9.7	66.7
50	86	569	129.0	22.2	151.2
60	134	888	201.0	34.6	235.6
70	183	1,208	274.5	47.1	321.6
80	231	1,527	346.5	59.6	406.1
90	279	1,847	418.5	72.0	490.5
100	328	2,166	492.0	84.5	576.5

* Based on increase from the 32.2 usage rate determined in the 1990 survey, the percent reductions listed in Table 15, and accident cost estimates recommended by the Federal Highway Administration (11). These costs are $1,500,000 for a fatality and $39,000 for an incapacitating injury.

** Serious injuries were defined as those listed as incapacitating on the accident report.

TABLE 34. USAGE AND EFFECTIVENESS OF CHILD SAFETY SEATS (1986-1990) ACCIDENT DATA FOR CHILDREN (AGE THREE AND UNDER)

		RESTRAINT USED			
VARIABLE	CATEGORY	NONE	SAFETY BELT OR OTHER	CHILD SAFETY SEAT	ANY RESTRAINT
Number With Given Injury	Fatal	27	6	8	14
	Incapacitating	477	93	87	180
	Non-Incapacitating	1,311	346	484	830
	Possible Injury	1,770	568	696	1,264
	None Detected	21,036	10,933	14,933	25,866
Percent With Given Injury	Fatal	0.11	0.05	0.05	0.05
	Incapacitating	1.94	0.78	0.54	0.64
	Non-Incapacitating	5.32	2.90	2.99	2.95
	Possible Injury	7.19	4.75	4.29	4.49
	None Detected	85.44	91.52	92.13	91.87
Percent Usage By Seat Position	Middle Front	62.2	16.6	21.2	37.8
	Right Front	53.9	26.6	19.5	46.1
	Left Rear	32.6	24.0	43.5	67.4
	Middle Rear	40.4	16.8	42.7	59.6
	Right Rear	29.5	23.1	47.3	70.5
	All Positions	46.7	22.6	30.7	53.3
Percent With Given Injury By Seat Position					
(Middle Front)	Fatal	0.08	0.06	0.05	0.05
	Incapacitating	1.87	1.00	0.65	0.80
	Non-Incapacitating	5.74	4.18	3.00	3.52
	Possible Injury	7.73	5.18	5.08	5.12
	None Detected	84.58	89.59	91.22	90.50
(Right Front)	Fatal	0.15	0.04	0.05	0.04
	Incapacitating	2.25	1.04	0.54	0.83
	Non-Incapacitating	5.61	3.31	3.36	3.33
	Possible Injury	8.17	5.50	5.09	5.32
	None Detected	83.82	90.12	90.97	90.48
(Left Rear)	Fatal	0.04	0.05	0.06	0.06
	Incapacitating	1.89	0.54	0.38	0.44
	Non-Incapacitating	4.06	2.57	2.83	2.74
	Possible Injury	5.36	3.32	4.37	4.00
	None Detected	88.66	93.52	92.35	92.77
(Middle Rear)	Fatal	0.13	0.11	0.04	0.06
	Incapacitating	1.49	0.32	0.54	0.48
	Non-Incapacitating	5.09	0.74	2.45	1.96
	Possible Injury	5.79	3.79	3.40	3.51
	None Detected	87.49	95.05	93.57	93.99
(Right Rear)	Fatal	0.07	0.05	0.05	0.05
	Incapacitating	1.28	0.37	0.59	0.52
	Non-Incapacitating	4.62	2.10	3.06	2.75
	Possible Injury	4.95	4.26	3.64	3.84
	None Detected	89.07	93.22	92.66	92.84
YEAR	1986	4,274	1,252	2,381	3,633
	1987	6,000	2,096	2,572	4,668
	1988	5,071	2,398	3,089	5,487
	1989	4,849	2,944	3,873	6,817
	1990	4,427	3,256	4,293	7,549

TABLE 35. PERCENTAGE OF ACCIDENTS INVOLVING UNSAFE SPEED BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF SPEED-RELATED ACCIDENTS (1986-1990)	PERCENT OF TOTAL ACCIDENTS INVOLVING SPEEDING
POPULATION CATEGORY UNDER 10,000		
Robertson	21	21.9
Spencer	118	18.2
Gallatin	176	17.4
Lyon	114	16.6
Menifee	69	15.9
Owsley	78	15.9
Carlisle	55	15.4
Ballard	156	14.4
Bath	224	14.3
Elliott	66	13.6
Wolfe	150	13.5
Trimble	104	13.5
McLean	144	12.9
Hickman	55	12.5
Carroll	273	12.1
Metcalfe	128	12.1
Owen	129	10.9
Lee	73	10.5
Bracken	102	10.3
Nicholas	53	9.7
Livingston	96	8.9
Hancock	78	8.5
Cumberland	35	6.1
Crittenden	73	5.4
Fulton	79	5.0
Clinton	56	4.7
POPULATION CATEGORY 10,000-14,999		
Leslie	243	27.4
Magoffin	257	19.6
Henry	439	19.2
Casey	150	18.7
Todd	198	17.0
Rockcastle	391	17.0
Edmonson	211	16.9
Martin	217	16.4
Morgan	173	15.0
Garrard	198	14.9
Lewis	229	13.8
Powell	215	12.8
Jackson	112	12.1
Russell	192	10.2
Anderson	246	10.1
Lawrence	151	9.9
Allen	261	9.5
Larue	158	9.4
Washington	123	9.4
Monroe	89	8.9
Caldwell	199	8.7
Fleming	136	7.9
Pendleton	131	7.6
Butler	137	7.4
Estill	139	7.3
Trigg	127	6.8
Webster	141	6.4
Hart	111	5.6
Green	43	3.1
POPULATION CATEGORY 15,000-24,999		
McCreary	187	20.3
Grant	584	16.7
Carter	465	14.0
Clay	355	13.9
Lincoln	317	13.1
Knott	207	13.1
Breathitt	280	13.1
Woodford	534	12.3
Shelby	624	11.7
Rowan	517	11.6
Bourbon	480	11.6
Ohio	327	10.8
Meade	299	10.5
Marion	298	10.2
Mercer	357	9.7
Wayne	215	9.5
Union	235	9.2
Johnson	277	8.8
Harrison	204	6.7
Scott	363	6.6
Breckinridge	116	6.5
Adair	145	6.0
Logan	226	5.6
Grayson	180	5.2
Taylor	184	5.0
Simpson	158	4.9
Montgomery	190	4.6
Mason	199	4.3
POPULATION CATEGORY 25,000-50,000		
Floyd	1,032	15.3
Whitley	783	14.6
Knox	594	14.5
Letcher	383	13.3
Harlan	662	13.0
Muhlenberg	630	11.6
Laurel	749	10.5
Bell	504	10.0
Oldham	449	9.5
Clark	593	9.4
Franklin	952	9.4
Hopkins	941	9.0
Marshall	362	9.0
Bullitt	532	8.4
Perry	473	8.3
Jessamine	444	8.1
Calloway	414	8.1
Greenup	403	8.0
Nelson	440	7.8
Pulaski	677	7.7
Graves	458	7.5
Boyle	358	6.5
Henderson	657	5.8
Barren	258	3.8
POPULATION CATEGORY OVER 50,000		
Pike	1,748	14.6
Madison	1,596	11.6
Christian	1,079	9.5
Boone	1,422	8.6
Warren	1,576	7.2
Hardin	1,085	6.8
Boyd	760	6.2
Campbell	1,013	6.1
Kenton	1,903	5.8
Daviess	1,026	5.1
McCracken	768	4.7
Jefferson	7,044	4.3
Fayette	2,355	3.7

TABLE 36. PERCENTAGE OF ACCIDENTS INVOLVING UNSAFE SPEED BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1986-1990 DATA)

CITY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Lexington	2281	3.6
Louisville	3042	3.3
POPULATION CATEGORY 20,000-55,000		
Hopkinsville	520	6.6
Frankfort	370	5.1
Richmond	368	4.8
Jeffersontown	212	4.5
Covington	628	4.2
Ashland	341	4.2
Henderson	321	3.8
Bowling Green	627	3.7
Paducah	402	3.4
Owensboro	362	2.4
POPULATION CATEGORY 10,000-19,999		
Fort Thomas	129	7.8
Independence	111	6.3
Newport	311	5.5
Florence	468	4.9
Erlanger	198	4.7
Murray	164	4.6
Middlesboro	122	4.5
Madisonville	276	4.4
Georgetown	128	4.3
Somerset	187	3.9
Shively	203	3.6
Nicholasville	95	3.5
Danville	122	3.1
Elizabethtown	218	3.0
Radcliff	111	2.6
Winchester	102	2.5
Glasgow	82	2.0
Saint Matthews	106	1.8
POPULATION CATEGORY 5,000-9,999		
Villa Hills	42	10.9
Taylor Mill	83	10.4
Williamsburg	94	7.2
Elsmere	73	7.1
Fort Wright	137	6.9
Lebanon	100	5.5
Pikeville	120	5.4
Lawrenceburg	64	5.2
Fort Mitchell	71	5.1
Corbin	151	5.1
Monticello	87	5.0
Versailles	109	4.8
Paris	114	4.7
Princeton	66	4.6
Mount Washington	33	4.5
Bellevue	53	4.5
London	134	4.4
Dayton	32	3.9
Cynthiana	64	3.8
Morehead	93	3.7
Alexandria	43	3.7
Berea	64	3.6
Edgewood	40	3.4
Shelbyville	77	3.3
Harrodsburg	73	3.2
Campbellsville	86	3.1
Flatwoods	33	3.1
Russellville	69	3.0
Bardstown	82	2.9
Mount Sterling	68	2.9
Franklin	54	2.7
Mayfield	73	2.1
Hazard	39	1.7
Maysville	55	1.7
POPULATION CATEGORY 2,500-4,999		
Hartford	28	29.2
Lakeside Park	57	12.1
Vine Grove	44	11.4
Cumberland	54	10.2
Jenkins	21	7.2
Park Hills	27	7.0
Southgate	38	6.3
Barbourville	58	5.6
Carrollton	52	5.1
Williamstown	30	5.1
Shepherdsville	90	5.0
Scottsville	78	4.9
Lancaster	33	4.6
Fulton	40	4.5
Wilmore	8	4.4
Morganfield	37	4.3
Highland Heights	62	4.3
Springfield	32	4.3
Stanton	25	4.1
Tompkinsville	29	4.0
Dawson Springs	20	4.0
Flemingsburg	27	3.9
Providence	28	3.9
Greenville	41	3.9
Calvert City	12	3.8
Stanford	28	3.6
Columbia	49	3.4
Russell	55	3.3
Central City	50	3.3
Leitchfield	56	3.2
Hickman	10	3.1
Grayson	31	3.0
Lagrange	34	2.9
Prestonsburg	49	2.6
Benton	32	2.5
Beaver Dam	19	2.4
Paintsville	43	2.4
Marion	19	2.4
Harlan	31	2.2
Ludlow	12	2.0
Mount Vernon	11	1.8
Cold Spring	20	1.8
Irvine	13	1.5
Hodgenville	3	0.5

TABLE 37. SUMMARY OF SPEEDING CONVICTIONS BY COUNTY (1986-1990 DATA)

COUNTY	SPEEDING CONVICTIONS PER CALENDAR YEAR					TOTAL SPEEDING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
	1986	1987	1988	1989	1990			
Adair	356	372	353	262	280	1,623	34.5	11.2
Allen	147	117	158	97	96	615	13.3	2.4
Anderson	1,040	1,081	772	707	670	4,270	88.4	17.4
Ballard	189	104	76	59	219	647	21.3	4.1
Barren	1,225	1,293	999	933	900	5,350	47.5	20.7
Bath	222	135	132	98	114	701	22.5	3.1
Bell	239	331	394	235	190	1,389	15.7	2.8
Boone	1,941	2,267	2,886	2,598	3,356	13,048	69.9	9.2
Bourbon	1,216	1,067	820	1,174	941	5,218	82.7	10.9
Boyd	2,137	1,870	1,738	1,836	968	8,549	48.4	11.2
Boyle	409	232	497	344	392	1,874	22.0	5.2
Bracken	44	74	94	104	155	471	19.1	4.6
Breathitt	232	68	72	81	70	523	12.2	1.9
Breckinridge	190	207	202	191	166	956	17.6	8.2
Bullitt	1,400	1,399	1,150	853	664	5,466	34.7	10.3
Butler	240	173	101	162	145	821	22.9	6.0
Caldwell	592	431	349	432	498	2,302	50.2	11.6
Calloway	967	489	523	448	519	2,946	30.1	7.1
Campbell	2,517	2,353	2,229	2,241	2,454	11,794	44.4	11.6
Carlisle	148	89	62	104	135	538	27.5	9.8
Carroll	766	446	288	300	528	2,328	74.6	8.5
Carter	1,126	488	111	158	168	2,051	27.5	4.4
Casey	133	170	179	114	51	647	14.5	4.3
Christian	1,853	1,672	1,725	1,865	1,964	9,079	57.4	8.4
Clark	1,222	1,021	885	621	687	4,436	44.6	7.5
Clay	274	152	121	50	91	688	11.8	1.9
Clinton	123	110	52	39	83	407	13.7	7.3
Crittenden	122	138	148	61	96	565	18.2	7.7
Cumberland	161	115	135	96	142	649	29.1	18.5
Daviess	2,234	2,216	1,710	1,779	1,709	9,648	32.5	9.4
Edmonson	171	94	81	43	69	458	13.4	2.2
Elliott	4	15	5	7	8	39	2.0	0.6
Estill	98	83	98	128	80	487	10.7	3.5
Fayette	5,384	8,407	9,013	8,985	8,245	40,034	54.5	17.0
Fleming	225	206	239	215	236	1,121	28.4	8.2
Floyd	531	495	435	321	174	1,956	15.1	1.9
Franklin	2,925	2,438	1,942	1,869	1,262	10,436	70.9	11.0
Fulton	110	77	46	56	50	339	12.4	4.3
Gallatin	280	442	251	145	241	1,359	77.6	7.7
Garrard	198	203	161	167	138	867	23.1	4.4
Grant	1,217	1,081	1,118	958	748	5,122	99.2	8.8
Graves	392	442	338	169	559	1,900	16.4	4.1
Grayson	729	614	763	429	197	2,732	39.3	15.2
Green	84	59	99	57	46	345	9.8	8.0
Greenup	534	438	481	463	362	2,278	18.3	5.7
Hancock	206	144	123	128	181	782	28.5	10.0
Hardin	4,424	4,420	4,910	4,063	3,255	21,072	84.4	19.4
Harlan	310	288	201	143	178	1,120	10.0	1.7
Harrison	338	503	294	282	316	1,733	32.3	8.5
Hart	363	224	194	123	139	1,043	20.7	9.4
Henderson	1,235	1,116	1,096	635	806	4,888	33.3	7.4
Henry	1,015	930	643	500	479	3,567	81.0	8.1
Hickman	123	58	43	68	71	363	18.3	6.6
Hopkins	1,330	2,064	1,655	1,159	1,404	7,612	48.8	8.1
Jackson	68	56	18	12	7	161	4.7	1.4
Jefferson	9,085	8,756	7,082	2,282	3,176	30,381	13.6	4.3
Jessamine	440	372	891	980	1,019	3,702	39.2	8.3
Johnson	512	272	275	239	262	1,560	21.5	5.6
Kenton	4,357	3,978	4,182	3,643	3,890	20,050	44.5	10.5
Knott	79	22	46	70	74	291	6.1	1.4
Knox	300	410	497	446	463	2,116	27.7	3.6
Larue	465	411	410	386	164	1,836	44.7	11.6

TABLE 37. SUMMARY OF SPEEDING CONVICTIONS BY COUNTY (1986-1990 DATA)(continued)

COUNTY	SPEEDING CONVICTIONS PER CALENDAR YEAR 1986	1987	1988	1989	1990	TOTAL SPEEDING CONVICTIONS (FIVE YEARS)	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
Laurel	817	729	898	950	754	4,148	32.0	5.5
Lawrence	448	285	246	290	176	1,445	36.1	9.6
Lee	26	25	75	28	25	179	8.3	2.5
Leslie	237	128	144	73	88	670	17.7	2.8
Letcher	161	97	61	42	47	408	4.9	1.1
Lewis	59	53	72	53	120	357	8.7	1.6
Lincoln	689	398	492	499	435	2,513	41.6	7.9
Livingston	245	185	140	260	277	1,107	34.1	11.5
Logan	508	267	226	248	587	1,836	22.8	8.1
Lyon	374	322	305	390	528	1,919	92.1	16.8
McCracken	1,537	1,219	1,562	1,572	1,587	7,477	33.4	9.7
McCreary	144	128	146	118	285	821	18.3	4.4
McLean	227	178	156	142	119	822	23.2	5.7
Madison	1,627	1,866	1,589	1,586	1,456	8,124	48.9	5.1
Magoffin	201	103	283	171	110	868	23.8	3.4
Marion	588	345	441	270	254	1,898	35.5	6.4
Marshall	990	749	798	747	1,116	4,400	45.0	12.2
Martin	49	83	96	50	86	364	9.3	1.7
Mason	393	298	408	190	279	1,568	28.8	7.9
Meade	263	295	243	269	294	1,364	23.2	4.6
Menifee	68	20	35	7	7	137	8.1	2.0
Mercer	447	429	598	593	582	2,649	40.2	7.4
Metcalfe	652	567	374	443	396	2,432	82.1	19.0
Monroe	44	34	36	30	31	175	4.6	2.0
Montgomery	300	215	251	80	95	941	14.8	5.0
Morgan	161	152	122	131	154	720	21.3	4.2
Muhlenberg	1,050	1,038	749	687	1,097	4,621	43.7	7.3
Nelson	1,381	1,273	1,157	670	770	5,251	53.5	11.9
Nicholas	71	145	102	161	253	732	31.6	13.8
Ohio	456	501	447	362	256	2,022	28.5	6.2
Oldham	1,615	1,589	1,443	1,337	1,248	7,232	70.9	16.1
Owen	34	64	80	66	78	322	11.9	2.5
Owsley	31	29	33	21	13	127	8.3	1.6
Pendleton	235	352	373	364	341	1,665	44.1	12.7
Perry	657	282	242	158	159	1,498	16.2	3.2
Pike	1,062	871	841	530	520	3,824	17.1	2.2
Powell	1,337	343	187	101	109	2,077	57.6	9.7
Pulaski	1,108	936	992	945	1,079	5,060	32.5	7.5
Robertson	41	56	77	90	85	349	47.8	16.6
Rockcastle	334	255	308	361	846	2,104	46.7	5.4
Rowan	645	548	515	390	268	2,366	44.1	4.6
Russell	310	156	112	166	103	847	17.6	4.4
Scott	2,280	1,958	1,442	1,736	1,504	8,920	116.1	24.6
Shelby	2,708	2,059	1,380	921	730	7,798	95.1	12.5
Simpson	380	218	213	237	242	1,290	25.4	8.2
Spencer	167	172	154	171	195	859	36.3	7.3
Taylor	358	345	464	592	772	2,531	35.7	13.8
Todd	182	121	134	71	248	756	21.5	3.8
Trigg	337	293	288	246	209	1,373	37.6	10.8
Trimble	35	40	54	33	61	223	10.8	2.1
Union	1,147	722	608	717	752	3,946	73.2	16.8
Warren	2,911	1,511	2,605	1,550	1,413	9,990	49.7	6.3
Washington	248	193	210	224	265	1,140	35.5	9.3
Wayne	98	114	120	149	186	667	14.3	3.1
Webster	167	202	176	118	130	793	18.2	5.6
Whitley	358	195	223	188	245	1,209	13.7	1.5
Wolfe	201	246	305	366	369	1,487	73.2	9.9
Woodford	1,223	1,506	1,612	2,516	2,035	8,892	151.8	16.7
TOTAL	95,419	87,301	84,034	72,689	73,219	412,662	35.1	7.7

TABLE 38. SPEEDING CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1986-1990)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
UNDER 10,000	Lyon	92.1	Metcalfe	19.0
	Metcalfe	82.1	Cumberland	18.5
	Gallatin	77.6	Lyon	16.8
	Carroll	74.6	Robertson	16.6
	Wolfe	73.2	Nicholas	13.8
	Robertson	47.8	Livingston	11.5
	Spencer	36.3	Hancock	10.0
	Livingston	34.1	Wolfe	9.9
	Nicholas	31.6	Carlisle	9.8
	Cumberland	29.1	Carroll	8.5
	Hancock	28.5	Crittenden	7.7
	Carlisle	27.5	Gallatin	7.7
	McLean	23.2	Spencer	7.3
	Bath	22.5	Clinton	7.3
	Ballard	21.3	Hickman	6.6
	Bracken	19.1	McLean	5.7
	Hickman	18.3	Bracken	4.6
	Crittenden	18.2	Fulton	4.3
	Clinton	13.7	Ballard	4.1
	Fulton	12.4	Bath	3.1
	Owen	11.9	Owen	2.5
	Trimble	10.8	Lee	2.5
	Lee	8.3	Trimble	2.1
	Owsley	8.3	Menifee	2.0
	Menifee	8.1	Owsley	1.6
	Elliott	2.0	Elliott	0.6
10,000 - 14,999	Scott	116.1	Scott	24.6
	Anderson	88.4	Anderson	17.4
	Henry	81.0	Pendleton	12.7
	Powell	57.6	Larue	11.6
	Caldwell	50.2	Caldwell	11.6
	Rockcastle	46.7	Trigg	10.8
	Larue	44.7	Powell	9.7
	Pendleton	44.1	Lawrence	9.6
	Trigg	37.6	Hart	9.4
	Lawrence	36.1	Washington	9.3
	Washington	35.5	Fleming	8.2
	Fleming	28.4	Henry	8.1
	Magoffin	23.8	Green	8.0
	Garrard	23.1	Butler	6.0
	Butler	22.9	Webster	5.6
	Todd	21.5	Rockcastle	5.4
	Morgan	21.3	Russell	4.4
	Hart	20.7	Garrard	4.4
	Webster	18.2	Casey	4.3
	Leslie	17.7	Morgan	4.2
	Russell	17.6	Todd	3.8
	Casey	14.5	Estill	3.5
	Edmonson	13.4	Magoffin	3.4
	Allen	13.3	Leslie	2.8
	Estill	10.7	Allen	2.4
	Green	9.8	Edmonson	2.2
	Martin	9.3	Monroe	2.0
	Lewis	8.7	Martin	1.7
	Jackson	4.7	Lewis	1.6
	Monroe	4.6	Jackson	1.4
15,000 - 24,999	Woodford	151.8	Union	16.8
	Grant	99.2	Woodford	16.7
	Shelby	95.1	Grayson	15.2
	Bourbon	82.7	Taylor	13.8

TABLE 38. SPEEDING CONVICTION RATES IN DECREASING ORDER (BY COUNTY POPULATION CATEGORIES) (1986-1990) (continued)

POPULATION CATEGORY	COUNTY	ANNUAL AVERAGE SPEEDING CONVICTIONS PER 1,000 LICENSED DRIVERS	COUNTY	SPEEDING CONVICTIONS PER SPEED-RELATED ACCIDENT
15,000 - 24,999 (cont.)	Union	73.2	Shelby	12.5
	Rowan	44.1	Adair	11.2
	Lincoln	41.6	Bourbon	10.9
	Mercer	40.2	Grant	8.8
	Grayson	39.3	Harrison	8.5
	Taylor	35.7	Breckinridge	8.2
	Marion	35.5	Simpson	8.2
	Adair	34.5	Logan	8.1
	Harrison	32.3	Lincoln	7.9
	Mason	28.8	Mason	7.9
	Ohio	28.5	Mercer	7.4
	Carter	27.5	Marion	6.4
	Simpson	25.4	Ohio	6.2
	Meade	23.2	Johnson	5.6
	Logan	22.8	Montgomery	5.0
	Johnson	21.5	Rowan	4.6
	McCreary	18.3	Meade	4.6
	Breckinridge	17.6	Carter	4.4
	Montgomery	14.8	McCreary	4.4
	Wayne	14.3	Wayne	3.1
	Breathitt	12.2	Clay	1.9
	Clay	11.8	Breathitt	1.9
	Knott	6.1	Knott	1.4
25,000 - 50,000	Oldham	70.9	Barren	20.7
	Franklin	70.9	Oldham	16.1
	Nelson	53.5	Marshall	12.2
	Hopkins	48.8	Nelson	11.9
	Barren	47.5	Franklin	11.0
	Marshall	45.0	Bullitt	10.3
	Clark	44.6	Jessamine	8.3
	Muhlenberg	43.7	Hopkins	8.1
	Jessamine	39.2	Clark	7.5
	Bullitt	34.7	Pulaski	7.5
	Henderson	33.3	Henderson	7.4
	Pulaski	32.5	Muhlenberg	7.3
	Laurel	32.0	Calloway	7.1
	Calloway	30.1	Greenup	5.7
	Knox	27.7	Laurel	5.5
	Boyle	22.0	Boyle	5.2
	Greenup	18.3	Graves	4.1
	Graves	16.4	Knox	3.6
	Perry	16.2	Perry	3.2
	Bell	15.7	Bell	2.8
	Floyd	15.1	Floyd	1.9
	Whitley	13.7	Harlan	1.7
	Harlan	10.0	Whitley	1.5
	Letcher	4.9	Letcher	1.1
OVER 50,000	Hardin	84.4	Hardin	19.4
	Boone	69.9	Fayette	17.0
	Christian	57.4	Campbell	11.6
	Fayette	54.5	Boyd	11.2
	Warren	49.7	Kenton	10.5
	Madison	48.9	McCracken	9.7
	Boyd	48.4	Daviess	9.4
	Kenton	44.5	Boone	9.2
	Campbell	44.4	Christian	8.4
	McCracken	33.4	Warren	6.3
	Daviess	32.5	Madison	5.1
	Pike	17.1	Jefferson	4.3
	Jefferson	13.6	Pike	2.2

TABLE 39. SUMMARY OF SPEED MONITORING PROGRAM FOR 1990

HIGHWAY TYPE	MILES	NUMBER OF MONITOR LOCATIONS	NUMBER OF VEHICLES MEASURED
Urban Interstate	136	4	340,163
Urban Other Freeway & Expressways	48	2	107,000
Urban Arterials	385	8	56,937
Rural Interstates *	580	6	138,048
Rural Arterials	2,524	8	78,335
Rural Major Collector	7,034	7	7,854
State Total **	10,127	29	590,289

HIGHWAY TYPE	AVERAGE SPEED (MPH)	MEDIAN SPEED (MPH)	85TH PERCENTILE SPEED (MPH)	PERCENT OF MOTORISTS EXCEEDING 55 MPH	60 MPH	65 MPH
Urban Interstate	58.0	58.5	64.7	68.1	32.2	9.2
Urban Other Freeway & Expressways	56.4	56.8	63.6	55.0	23.1	7.4
Urban Arterials	52.5	53.7	62.0	38.1	17.2	6.3
Rural Interstates *	62.8	63.5	70.3	88.4	64.9	35.6
Rural Arterials	57.1	57.1	67.5	54.3	33.9	18.3
Rural Major Collector	50.9	50.9	59.7	27.1	10.6	3.6
State Total **	54.8	54.8	63.5	45.9	23.3	9.7

* 65 mph speed zones.

** This average is computed using weighted factors to reflect vehicle miles travelled. (Rural interstates were excluded from the State Total because all data were collected in 65 mph zones.)

TABLE 40. COMPLIANCE WITH 55-SPEED LIMIT (COMPARISON OF 1986 THROUGH 1990 DATA)

HIGHWAY TYPE	MEDIAN SPEED 1986	1987	1988	1989	1990	85TH PERCENTILE SPEED 1986	1987	1988	1989	1990
Urban Interstate	55.8	51.0	59.4	59.0	58.5	63.8	60.6	65.8	65.2	64.7
Rural Interstate	57.1	*	63.5	62.8	63.5	64.8	*	70.3	70.1	70.3
State Total	54.3	*	53.6	55.2	54.8	62.9	*	60.8	62.2	63.5

HIGHWAY TYPE	PERCENT OF MOTORISTS EXCEEDING 55 MPH 1986	1987	1988	1989	1990
Urban Interstate	54.6	49.6	73.4	71.0	68.1
Rural Interstate	62.1	*	87.4	84.6	88.4
State Total **	48.3	36.6	39.9	46.8	45.9

* No annual summary for rural interstates was prepared in 1987 since the speed limit increased to 65 mph in June 1987.

** This average is computed using weighted factors to reflect vehicle miles travelled. (Rural interstates were excluded after 1986 from the State Total because all data were collected in 65 mph zones.)

TABLE 41. ACCIDENT TREND ANALYSIS

ACCIDENT STATISTIC	NUMBER IN GIVEN YEAR				4-YEAR AVERAGE		1990 PERCENT
	1986	1987	1988	1989	1986-89	1990	CHANGE*
Total Accidents	140,421	142,300	147,587	151,422	145,433	148,158	1.8
Fatal Accidents	726	773	719	690	727	758	4.1
Fatalities	808	849	840	776	818	851	3.8
Injury Accidents	31,019	33,163	34,164	35,504	33,463	35,670	6.2
Injuries	46,807	49,291	51,442	53,383	50,231	54,057	7.1
Fatal and Injury Accidents	31,745	33,936	34,883	36,194	34,190	36,428	6.1
Speed-Related Accidents	9,811	10,617	10,433	11,787	10,662	11,120	4.1
Speed-Related Fatal Accidents	265	237	234	244	245	242	-1.2
Alcohol-Related Accidents	7,760	7,671	7,890	7,669	7,748	8,052	3.8
Alcohol-Related Fatal Accidents	171	198	194	172	184	196	6.3
Drug-Related Accidents	297	327	387	378	347	368	5.6
Pedestrian Accidents	1,622	1,564	1,534	1,542	1,566	1,486	-5.3
Bicycle Accidents	971	967	827	807	893	730	-22.3
Motorcycle Accidents	1,661	1,482	1,295	1,084	1,381	1,132	-22.0
School Bus Accidents	679	658	755	819	728	822	11.5
Truck Accidents	11,642	10,815	11,110	11,566	11,283	11,103	-1.6

* Percent change from 1986-1989 average to 1990.

TABLE 42. NUMBER OF ACCIDENTS AND RATES BY ACCIDENT TYPE FOR EACH COUNTY

	PEDESTRIAN ACCIDENTS		BICYCLE ACCIDENTS		MOTORCYCLE ACCIDENTS		SCHOOL BUS ACCIDENTS		TRUCK ACCIDENTS	
COUNTY	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**
Adair	12	1.6	6	0.8	26	3.4	13	1.7	158	20.6
Allen	19	2.6	3	0.4	27	3.7	11	1.5	156	21.3
Anderson	32	4.4	12	1.6	16	2.2	14	1.9	194	26.6
Ballard	11	2.8	4	1.0	15	3.8	4	1.0	158	40.0
Barren	35	2.1	15	0.9	60	3.5	23	1.4	536	31.5
Bath	3	0.6	4	0.8	11	2.3	7	1.4	108	22.3
Bell	72	4.6	33	2.1	63	4.0	25	1.6	462	29.3
Boone	124	4.3	49	1.7	163	5.7	48	1.7	2,065	71.7
Bourbon	31	3.2	18	1.9	29	3.0	21	2.2	285	29.6
Boyd	123	4.8	57	2.2	115	4.5	64	2.5	1,017	39.8
Boyle	55	4.3	28	2.2	42	3.3	18	1.4	324	25.3
Bracken	3	0.8	1	0.3	8	2.1	3	0.8	56	14.4
Breathitt	30	3.8	5	0.6	29	3.7	29	3.7	237	30.2
Breckinridge	8	1.0	2	0.2	15	1.8	15	1.8	152	18.6
Bullitt	56	2.4	43	1.8	73	3.1	45	1.9	617	25.9
Butler	13	2.3	4	0.7	13	2.3	8	1.4	125	22.2
Caldwell	15	2.3	8	1.2	21	3.2	12	1.8	169	25.5
Calloway	48	3.1	30	2.0	51	3.3	17	1.1	248	16.1
Campbell	315	7.5	152	3.6	125	3.0	56	1.3	1,088	25.9
Carlisle	4	1.5	0	0.0	6	2.3	3	1.1	47	17.9
Carroll	28	6.0	18	3.9	34	7.3	8	1.7	227	48.9
Carter	22	1.8	9	0.7	39	3.2	27	2.2	248	20.4
Casey	9	1.3	2	0.3	21	3.0	2	0.3	79	11.1
Christian	99	2.9	78	2.3	136	3.9	41	1.2	802	23.3
Clark	67	4.5	34	2.3	45	3.1	52	3.5	447	30.3
Clay	19	1.7	10	0.9	33	3.0	16	1.5	238	21.9
Clinton	15	3.3	3	0.7	9	2.0	3	0.7	74	16.2
Crittenden	5	1.1	4	0.9	10	2.2	11	2.4	66	14.4
Cumberland	2	0.6	3	0.9	3	0.9	1	0.3	25	7.4
Daviess	179	4.1	202	4.6	201	4.6	91	2.1	1,160	26.6
Edmonson	8	1.5	2	0.4	10	1.9	16	3.1	69	13.3
Elliott	4	1.2	1	0.3	15	4.6	2	0.6	43	13.3
Estill	20	2.7	2	0.3	19	2.6	21	2.9	66	9.0
Fayette	773	6.9	485	4.3	546	4.8	320	2.8	4,197	37.2
Fleming	13	2.1	4	0.7	11	1.8	6	1.0	128	20.8
Floyd	68	3.1	21	1.0	77	3.5	69	3.2	867	39.8
Franklin	101	4.6	36	1.6	67	3.1	47	2.1	615	28.1
Fulton	24	5.8	13	3.1	9	2.2	5	1.2	91	22.0
Gallatin	9	3.3	3	1.1	6	2.2	4	1.5	161	59.7
Garrard	8	1.4	3	0.5	16	2.8	4	0.7	86	14.9
Grant	20	2.5	7	0.9	23	2.9	22	2.8	361	45.9
Graves	42	2.5	32	1.9	74	4.4	29	1.7	371	22.1
Grayson	25	2.4	8	0.8	24	2.3	20	1.9	245	23.3
Green	6	1.2	3	0.6	13	2.5	7	1.3	85	16.4
Greenup	37	2.0	16	0.9	43	2.3	24	1.3	338	18.4
Hancock	4	1.0	6	1.5	11	2.8	3	0.8	82	20.9
Hardin	106	2.4	88	2.0	185	4.1	68	1.5	1,260	28.2
Harlan	71	3.9	26	1.4	63	3.4	34	1.9	540	29.5
Harrison	31	3.8	10	1.2	27	3.3	22	2.7	223	27.4
Hart	15	2.0	3	0.4	25	3.4	8	1.1	281	37.7
Henderson	107	5.0	96	4.5	126	5.9	41	1.9	823	38.2
Henry	13	2.0	4	0.6	16	2.5	14	2.2	286	44.6
Hickman	5	1.8	0	0.0	4	1.4	3	1.1	41	14.7
Hopkins	71	3.1	66	2.9	82	3.6	65	2.8	743	32.2
Jackson	5	0.8	1	0.2	14	2.3	14	2.3	76	12.7
Jefferson	2,311	7.0	1,410	4.2	1,270	3.8	715	2.2	11,723	35.3
Jessamine	34	2.2	22	1.4	46	3.0	41	2.7	419	27.5
Johnson	32	2.8	15	1.3	16	1.4	15	1.3	277	23.8
Kenton	574	8.1	318	4.5	300	4.2	181	2.5	2,539	35.8
Knott	17	1.9	6	0.7	18	2.0	26	2.9	194	21.7
Knox	34	2.3	24	1.6	48	3.2	34	2.3	272	18.3
Larue	12	2.1	3	0.5	10	1.7	14	2.4	127	21.7
Laurel	47	2.2	15	0.7	75	3.5	43	2.0	825	38.0

TABLE 42. NUMBER OF ACCIDENTS AND RATES BY ACCIDENT TYPE FOR EACH COUNTY (continued)

	PEDESTRIAN ACCIDENTS		BICYCLE ACCIDENTS		MOTORCYCLE ACCIDENTS		SCHOOL BUS ACCIDENTS		TRUCK ACCIDENTS	
COUNTY	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**	NUMBER*	RATE**
Lawrence	7	1.0	1	0.1	25	3.6	8	1.1	248	35.4
Lee	4	1.1	1	0.3	4	1.1	5	1.3	61	16.4
Leslie	7	1.0	0	0.0	38	5.6	4	0.6	137	20.1
Letcher	32	2.4	3	0.2	44	3.3	26	1.9	380	28.1
Lewis	20	3.1	6	0.9	23	3.5	16	2.5	102	15.7
Lincoln	11	1.1	5	0.5	28	2.8	15	1.5	226	22.5
Livingston	9	2.0	3	0.7	10	2.2	2	0.4	96	21.2
Logan	31	2.5	12	1.0	33	2.7	26	2.1	326	26.7
Lyon	2	0.6	3	0.9	3	0.9	2	0.6	85	25.7
McCracken	121	3.8	112	3.6	209	6.6	52	1.7	913	29.0
McCreary	6	0.8	1	0.1	14	1.8	15	1.9	62	7.9
McLean	5	1.0	10	2.1	14	2.9	6	1.2	94	19.5
Madison	126	4.4	52	1.8	111	3.9	55	1.9	1,239	43.1
Magoffin	23	3.5	4	0.6	12	1.8	8	1.2	156	23.9
Marion	33	4.0	13	1.6	25	3.0	29	3.5	141	17.1
Marshall	27	2.0	8	0.6	56	4.1	20	1.5	380	27.9
Martin	17	2.7	2	0.3	9	1.4	13	2.1	205	32.7
Mason	43	5.2	15	1.8	30	3.6	18	2.2	305	36.6
Meade	24	2.0	8	0.7	36	3.0	15	1.2	171	14.1
Menifee	5	2.0	3	1.2	6	2.4	2	0.8	34	13.4
Mercer	30	3.1	13	1.4	47	4.9	22	2.3	232	24.2
Metcalfe	10	2.2	1	0.2	12	2.7	17	3.8	70	15.6
Monroe	10	1.8	1	0.2	9	1.6	6	1.1	53	9.3
Montgomery	42	4.3	7	0.7	23	2.4	22	2.2	262	26.8
Morgan	4	0.7	0	0.0	18	3.1	13	2.2	80	13.7
Muhlenberg	38	2.4	11	0.7	58	3.7	26	1.7	427	27.3
Nelson	52	3.5	24	1.6	44	3.0	24	1.6	342	23.0
Nicholas	10	3.0	1	0.3	6	1.8	3	0.9	35	10.4
Ohio	27	2.6	6	0.6	30	2.8	15	1.4	251	23.8
Oldham	24	1.4	22	1.3	35	2.1	35	2.1	387	23.3
Owen	10	2.2	4	0.9	13	2.9	10	2.2	67	14.8
Owsley	4	1.6	1	0.4	4	1.6	8	3.2	32	12.7
Pendleton	14	2.3	7	1.2	11	1.8	19	3.2	136	22.6
Perry	47	3.1	14	0.9	69	4.6	36	2.4	600	39.6
Pike	108	3.0	27	0.7	97	2.7	98	2.7	1,584	43.6
Powell	10	1.7	5	0.9	18	3.1	11	1.9	132	22.6
Pulaski	59	2.4	15	0.6	62	2.5	47	1.9	549	22.2
Robertson	0	0.0	0	0.0	2	1.9	0	0.0	5	4.7
Rockcastle	19	2.6	0	0.0	19	2.6	16	2.2	252	34.0
Rowan	44	4.3	17	1.7	40	3.9	18	1.8	283	27.8
Russell	16	2.2	5	0.7	18	2.4	3	0.4	79	10.7
Scott	32	2.7	22	1.8	41	3.4	42	3.5	531	44.5
Shelby	36	2.9	21	1.7	40	3.2	28	2.3	599	48.3
Simpson	23	3.0	12	1.6	21	2.8	9	1.2	378	49.9
Spencer	6	1.8	2	0.6	13	3.8	4	1.2	33	9.7
Taylor	22	2.1	16	1.5	34	3.2	9	0.9	186	17.6
Todd	15	2.7	3	0.5	18	3.3	4	0.7	95	17.4
Trigg	6	1.2	5	1.0	28	5.4	11	2.1	125	24.1
Trimble	10	3.3	2	0.7	11	3.6	6	2.0	65	21.3
Union	29	3.5	20	2.4	28	3.4	10	1.2	183	22.1
Warren	167	4.4	122	3.2	185	4.8	87	2.3	1,372	35.8
Washington	14	2.7	2	0.4	9	1.7	10	1.9	110	21.1
Wayne	32	3.7	8	0.9	84	9.6	13	1.5	113	12.9
Webster	23	3.3	6	0.9	31	4.4	20	2.9	266	38.1
Whitley	60	3.6	21	1.3	45	2.7	40	2.4	539	32.3
Wolfe	11	3.4	2	0.6	11	3.4	7	2.2	103	31.7
Woodford	30	3.0	12	1.2	22	2.2	22	2.2	297	29.8

*Five-year (1986-1990) total.

** Rates are annual accidents per 10,000 population.

TABLE 43. PEDESTRIAN ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF PEDESTRIAN ACCIDENTS (1986-1990)	ANUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY UNDER 10,000		
Carroll	28	6.0
Fulton	24	5.8
Wolfe	11	3.4
Gallatin	9	3.3
Trimble	10	3.3
Clinton	15	3.3
Nicholas	10	3.0
Ballard	11	2.8
Metcalfe	10	2.2
Owen	10	2.2
Livingston	9	2.0
Menifee	5	2.0
Hickman	5	1.8
Spencer	6	1.8
Owsley	4	1.6
Carlisle	4	1.5
Elliott	4	1.2
Crittenden	5	1.1
Lee	4	1.1
McLean	5	1.0
Hancock	4	1.0
Bracken	3	0.8
Bath	3	0.6
Lyon	2	0.6
Cumberland	2	0.6
Robertson	0	0.0
POPULATION CATEGORY 10,000-14,999		
Anderson	32	4.4
Magoffin	23	3.5
Webster	23	3.3
Lewis	20	3.1
Todd	15	2.7
Estill	20	2.7
Martin	17	2.7
Washington	14	2.7
Allen	19	2.6
Rockcastle	19	2.6
Pendleton	14	2.3
Butler	13	2.3
Caldwell	15	2.3
Russell	16	2.2
Fleming	13	2.1
Larue	12	2.1
Henry	13	2.0
Hart	15	2.0
Monroe	10	1.8
Powell	10	1.7
Edmonson	8	1.5
Garrard	8	1.4
Casey	9	1.3
Trigg	6	1.2
Green	6	1.2
Leslie	7	1.0
Lawrence	7	1.0
Jackson	5	0.8
Morgan	4	0.7
POPULATION CATEGORY 15,000-24,999		
Mason	43	5.2
Rowan	44	4.3
Montgomery	42	4.3
Marion	33	4.0
Breathitt	30	3.8
Harrison	31	3.8
Wayne	32	3.7
Union	29	3.5
Bourbon	31	3.2
Mercer	30	3.1
Simpson	23	3.0
Woodford	30	3.0
Shelby	36	2.9
Johnson	32	2.8
Scott	32	2.7
Ohio	27	2.6
Grant	20	2.5
Logan	31	2.5
Grayson	25	2.4
Taylor	22	2.1
Meade	24	2.0
Knott	17	1.9
Carter	22	1.8
Clay	19	1.7
Adair	12	1.6
Lincoln	11	1.1
Breckinridge	8	1.0
McCreary	6	0.8
POPULATION CATEGORY 25,000-50,000		
Henderson	107	5.0
Franklin	101	4.6
Bell	72	4.6
Clark	67	4.5
Boyle	55	4.3
Harlan	71	3.9
Whitley	60	3.6
Nelson	52	3.5
Calloway	48	3.1
Floyd	68	3.1
Perry	47	3.1
Hopkins	71	3.1
Graves	42	2.5
Muhlenberg	38	2.4
Pulaski	59	2.4
Letcher	32	2.4
Bullitt	56	2.4
Knox	34	2.3
Jessamine	34	2.2
Laurel	47	2.2
Barren	35	2.1
Greenup	37	2.0
Marshall	27	2.0
Oldham	24	1.4
POPULATION CATEGORY OVER 50,000		
Kenton	574	8.1
Campbell	315	7.5
Jefferson	2,311	7.0
Fayette	773	6.9
Boyd	123	4.8
Madison	126	4.4
Warren	167	4.4
Boone	124	4.3
Daviess	179	4.1
McCracken	121	3.8
Pike	108	3.0
Christian	99	2.9
Hardin	106	2.4

TABLE 44. PEDESTRIAN ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1986-1990 DATA)

CITY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	1540	11.4
Lexington	748	6.6
POPULATION CATEGORY 20,000-55,000		
Covington	397	18.4
Ashland	97	8.2
Bowling Green	164	8.1
Henderson	100	7.7
Richmond	79	7.5
Paducah	95	7.0
Frankfort	89	6.9
Hopkinsville	82	5.5
Owensboro	147	5.5
Jeffersontown	33	2.8
POPULATION CATEGORY 10,000-19,999		
Newport	169	17.9
Shively	79	10.2
Middlesboro	45	7.9
Somerset	42	7.8
Winchester	57	7.2
Florence	67	7.2
Danville	44	7.1
Saint Matthews	51	6.5
Erlanger	47	5.9
Madisonville	47	5.8
Murray	36	5.0
Glasgow	29	4.7
Elizabethtown	34	3.7
Georgetown	20	3.5
Fort Thomas	23	2.9
Independence	14	2.7
Radcliff	24	2.4
Nicholasville	13	1.9
POPULATION CATEGORY 5,000-9,999		
Monticello	31	11.6
Maysville	41	11.4
Lawrenceburg	29	9.8
Bardstown	31	9.1
Mount Sterling	24	9.0
Corbin	31	8.4
London	24	8.3
Bellevue	29	8.3
Cynthiana	26	8.0
Lebanon	21	7.4
Williamsburg	20	7.3
Harrodsburg	26	7.1
Dayton	22	6.7
Morehead	27	6.5
Russellville	24	6.4
Mayfield	32	6.4
Shelbyville	20	6.4
Hazard	16	5.9
Pikeville	18	5.7
Versailles	20	5.5
Paris	23	5.3
Fort Wright	16	4.9
Elsmere	16	4.7
Fort Mitchell	17	4.6
Flatwoods	17	4.4
Edgewood	17	4.2
Franklin	16	4.2
Berea	19	4.2
Princeton	13	3.7
Mount Washington	8	3.1
Campbellsville	10	2.1
Taylor Mill	4	1.4
Alexandria	4	1.4
Villa Hills	1	0.3
POPULATION CATEGORY 2,500-4,999		
Carrollton	26	14.0
Harlan	18	13.4
Prestonsburg	17	9.6
Ludlow	22	9.3
Springfield	13	9.0
Scottsville	16	7.5
Shepherdsville	18	7.5
Providence	14	6.8
Fulton	10	6.5
Tompkinsville	9	6.3
Irvine	9	6.3
Highland Heights	13	6.2
Paintsville	13	6.0
Barbourville	10	5.5
Morganfield	10	5.3
Mount Vernon	7	5.3
Central City	13	5.2
Columbia	10	5.2
Stanford	7	5.2
Benton	10	5.1
Lagrange	9	4.7
Hickman	6	4.5
Hodgenville	6	4.4
Southgate	7	4.3
Beaver Dam	6	4.1
Vine Grove	7	3.9
Leitchfield	9	3.6
Lancaster	6	3.5
Flemingsburg	5	3.3
Williamstown	5	3.3
Stanton	4	2.9
Jenkins	4	2.9
Cold Spring	4	2.8
Greenville	6	2.6
Dawson Springs	4	2.6
Russell	5	2.5
Hartford	3	2.4
Grayson	4	2.3
Lakeside Park	3	1.9
Cumberland	3	1.9
Marion	3	1.8
Park Hills	3	1.8
Calvert City	1	0.8
Wilmore	1	0.5

TABLE 45. BICYCLE ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF BICYCLE ACCIDENTS (1986-1990)	ANUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY UNDER 10,000		
Carroll	18	3.9
Fulton	13	3.1
McLean	10	2.1
Hancock	6	1.5
Menifee	3	1.2
Gallatin	3	1.1
Ballard	4	1.0
Lyon	3	0.9
Owen	4	0.9
Cumberland	3	0.9
Crittenden	4	0.9
Bath	4	0.8
Livingston	3	0.7
Trimble	2	0.7
Clinton	3	0.7
Wolfe	2	0.6
Spencer	2	0.6
Owsley	1	0.4
Elliott	1	0.3
Nicholas	1	0.3
Lee	1	0.3
Bracken	1	0.3
Metcalfe	1	0.2
Robertson	0	0.0
Hickman	0	0.0
Carlisle	0	0.0
POPULATION CATEGORY 10,000-14,999		
Anderson	12	1.6
Caldwell	8	1.2
Pendleton	7	1.2
Trigg	5	1.0
Lewis	6	0.9
Webster	6	0.9
Powell	5	0.9
Butler	4	0.7
Russell	5	0.7
Fleming	4	0.7
Henry	4	0.6
Magoffin	4	0.6
Green	3	0.6
Todd	3	0.5
Garrard	3	0.5
Larue	3	0.5
Allen	3	0.4
Hart	3	0.4
Edmonson	2	0.4
Washington	2	0.4
Martin	2	0.3
Casey	2	0.3
Estill	2	0.3
Monroe	1	0.2
Jackson	1	0.2
Lawrence	1	0.1
Morgan	0	0.0
Rockcastle	0	0.0
Leslie	0	0.0
POPULATION CATEGORY 15,000-24,999		
Union	20	2.4
Bourbon	18	1.9
Scott	22	1.8
Mason	15	1.8
Shelby	21	1.7
Rowan	17	1.7
Simpson	12	1.6
Marion	13	1.6
Taylor	16	1.5
Mercer	13	1.4
Johnson	15	1.3
Harrison	10	1.2
Woodford	12	1.2
Logan	12	1.0
Clay	10	0.9
Wayne	8	0.9
Grant	7	0.9
Adair	6	0.8
Grayson	8	0.8
Carter	9	0.7
Montgomery	7	0.7
Knott	6	0.7
Meade	8	0.7
Breathitt	5	0.6
Ohio	6	0.6
Lincoln	5	0.5
Breckinridge	2	0.2
McCreary	1	0.1
POPULATION CATEGORY 25,000-50,000		
Henderson	96	4.5
Hopkins	66	2.9
Clark	34	2.3
Boyle	28	2.2
Bell	33	2.1
Calloway	30	2.0
Graves	32	1.9
Bullitt	43	1.8
Franklin	36	1.6
Knox	24	1.6
Nelson	24	1.6
Jessamine	22	1.4
Harlan	26	1.4
Oldham	22	1.3
Whitley	21	1.3
Floyd	21	1.0
Perry	14	0.9
Barren	15	0.9
Greenup	16	0.9
Muhlenberg	11	0.7
Laurel	15	0.7
Pulaski	15	0.6
Marshall	8	0.6
Letcher	3	0.2
POPULATION CATEGORY OVER 50,000		
Daviess	202	4.6
Kenton	318	4.5
Fayette	485	4.3
Jefferson	1,410	4.2
Campbell	152	3.6
McCracken	112	3.6
Warren	122	3.2
Christian	78	2.3
Boyd	57	2.2
Hardin	88	2.0
Madison	52	1.8
Boone	49	1.7
Pike	27	0.7

TABLE 46. BICYCLE ACCIDENT RATES BY CITY AND POPULATION CATEGORY
(IN ORDER OF DECREASING PERCENTAGES)(1986-1990 DATA)

CITY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	881	6.5
Lexington	484	4.3
POPULATION CATEGORY 20,000-55,000		
Covington	176	8.1
Henderson	93	7.2
Paducah	89	6.5
Owensboro	162	6.1
Bowling Green	103	5.1
Hopkinsville	71	4.8
Ashland	49	4.1
Richmond	32	3.0
Jeffersontown	34	2.9
Frankfort	27	2.1
POPULATION CATEGORY 10,000-19,999		
Madisonville	56	6.9
Newport	64	6.8
Shively	45	5.8
Saint Matthews	37	4.7
Middlesboro	24	4.2
Erlanger	31	3.9
Murray	27	3.7
Fort Thomas	29	3.6
Winchester	27	3.4
Elizabethtown	30	3.3
Georgetown	19	3.3
Florence	26	2.8
Danville	17	2.7
Radcliff	27	2.7
Nicholasville	14	2.1
Somerset	10	1.9
Independence	9	1.7
Glasgow	8	1.3
POPULATION CATEGORY 5,000-9,999		
Elsmere	27	7.9
Bellevue	22	6.3
Mayfield	30	6.0
Shelbyville	15	4.8
Lebanon	13	4.6
Paris	19	4.4
Dayton	14	4.3
Corbin	16	4.3
Bardstown	14	4.1
Franklin	15	3.9
Monticello	10	3.7
Lawrenceburg	11	3.7
Berea	16	3.5
Mount Washington	9	3.4
Maysville	12	3.3
London	9	3.1
Morehead	12	2.9
Campbellsville	13	2.7
Cynthiana	8	2.5
Princeton	8	2.3
Harrodsburg	8	2.2
Pikeville	7	2.2
Edgewood	9	2.2
Russellville	8	2.1
Versailles	7	1.9
Mount Sterling	5	1.9
Fort Wright	6	1.8
Williamsburg	5	1.8
Hazard	4	1.5
Fort Mitchell	5	1.3
Villa Hills	4	1.0
Flatwoods	3	0.8
Alexandria	2	0.7
Taylor Mill	1	0.4
POPULATION CATEGORY 2,500-4,999		
Ludlow	24	10.1
Carrollton	18	9.7
Harlan	9	6.7
Highland Heights	11	5.2
Fulton	8	5.2
Shepherdsville	11	4.6
Lagrange	8	4.2
Paintsville	9	4.1
Morganfield	7	3.7
Marion	5	3.0
Stanford	4	3.0
Barbourville	5	2.7
Russell	5	2.5
Vine Grove	4	2.2
Cold Spring	3	2.1
Stanton	3	2.1
Beaver Dam	3	2.1
Irvine	3	2.1
Central City	5	2.0
Lakeside Park	3	1.9
Providence	4	1.9
Lancaster	3	1.8
Prestonsburg	3	1.7
Columbia	3	1.6
Calvert City	2	1.6
Hickman	2	1.5
Williamstown	2	1.3
Southgate	2	1.2
Grayson	2	1.1
Benton	2	1.0
Scottsville	2	0.9
Hodgenville	1	0.7
Flemingsburg	1	0.7
Dawson Springs	1	0.6
Leitchfield	1	0.4

TABLE 47. MOTORCYCLE ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF MOTORCYCLE ACCIDENTS (1986-1990)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY UNDER 10,000		
Carroll	34	7.3
Elliott	15	4.6
Spencer	13	3.8
Ballard	15	3.8
Trimble	11	3.6
Wolfe	11	3.4
McLean	14	2.9
Owen	13	2.9
Hancock	11	2.8
Metcalfe	12	2.7
Menifee	6	2.4
Carlisle	6	2.3
Bath	11	2.3
Gallatin	6	2.2
Livingston	10	2.2
Fulton	9	2.2
Crittenden	10	2.2
Bracken	8	2.1
Clinton	9	2.0
Robertson	2	1.9
Nicholas	6	1.8
Owsley	4	1.6
Hickman	4	1.4
Lee	4	1.1
Lyon	3	0.9
Cumberland	3	0.9
POPULATION CATEGORY 10,000-14,999		
Leslie	38	5.6
Trigg	28	5.4
Webster	31	4.4
Allen	27	3.7
Lawrence	25	3.6
Lewis	23	3.5
Hart	25	3.4
Todd	18	3.3
Caldwell	21	3.2
Morgan	18	3.1
Powell	18	3.1
Casey	21	3.0
Garrard	16	2.8
Estill	19	2.6
Rockcastle	19	2.6
Green	13	2.5
Henry	16	2.5
Russell	18	2.4
Jackson	14	2.3
Butler	13	2.3
Anderson	16	2.2
Edmonson	10	1.9
Magoffin	12	1.8
Pendleton	11	1.8
Fleming	11	1.8
Washington	9	1.7
Larue	10	1.7
Monroe	9	1.6
Martin	9	1.4
POPULATION CATEGORY 15,000-24,999		
Wayne	84	9.6
Mercer	47	4.9
Rowan	40	3.9
Breathitt	29	3.7
Mason	30	3.6
Scott	41	3.4
Adair	26	3.4
Union	28	3.4
Harrison	27	3.3
Shelby	40	3.2
Taylor	34	3.2
Carter	39	3.2
Clay	33	3.0
Marion	25	3.0
Bourbon	29	3.0
Meade	36	3.0
Grant	23	2.9
Ohio	30	2.8
Lincoln	28	2.8
Simpson	21	2.8
Logan	33	2.7
Montgomery	23	2.4
Grayson	24	2.3
Woodford	22	2.2
Knott	18	2.0
Breckinridge	15	1.8
McCreary	14	1.8
Johnson	16	1.4
POPULATION CATEGORY 25,000-50,000		
Henderson	126	5.9
Perry	69	4.6
Graves	74	4.4
Marshall	56	4.1
Bell	63	4.0
Muhlenberg	58	3.7
Hopkins	82	3.6
Floyd	77	3.5
Barren	60	3.5
Laurel	75	3.5
Harlan	63	3.4
Calloway	51	3.3
Boyle	42	3.3
Letcher	44	3.3
Knox	48	3.2
Bullitt	73	3.1
Franklin	67	3.1
Clark	45	3.1
Jessamine	46	3.0
Nelson	44	3.0
Whitley	45	2.7
Pulaski	62	2.5
Greenup	43	2.3
Oldham	35	2.1
POPULATION CATEGORY OVER 50,000		
McCracken	209	6.6
Boone	163	5.7
Fayette	546	4.8
Warren	185	4.8
Daviess	201	4.6
Boyd	115	4.5
Kenton	300	4.2
Hardin	185	4.1
Christian	136	3.9
Madison	111	3.9
Jefferson	1,270	3.8
Campbell	125	3.0
Pike	97	2.7

TABLE 48. MOTORCYCLE ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1986-1990 DATA)

CITY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	698	5.2
Lexington	547	4.9
POPULATION CATEGORY 20,000-55,000		
Paducah	143	10.5
Henderson	86	6.6
Bowling Green	132	6.5
Covington	133	6.1
Ashland	67	5.7
Hopkinsville	69	4.6
Owensboro	117	4.4
Richmond	38	3.6
Frankfort	41	3.2
Jeffersontown	32	2.8
POPULATION CATEGORY 10,000-19,999		
Glasgow	42	6.8
Radcliff	65	6.6
Erlanger	52	6.5
Shively	48	6.2
Florence	55	5.9
Middlesboro	29	5.1
Elizabethtown	44	4.8
Newport	42	4.5
Murray	30	4.2
Nicholasville	27	4.0
Georgetown	21	3.7
Danville	21	3.4
Saint Matthews	26	3.3
Somerset	17	3.2
Madisonville	26	3.2
Independence	15	2.9
Winchester	21	2.7
Fort Thomas	9	1.1
POPULATION CATEGORY 5,000-9,999		
London	22	7.6
Harrodsburg	25	6.8
Mayfield	29	5.8
Russellville	20	5.4
Fort Wright	17	5.2
Paris	22	5.0
Campbellsville	24	5.0
Lebanon	14	4.9
Williamsburg	13	4.7
Maysville	17	4.7
Bardstown	16	4.7
Mount Sterling	12	4.5
Monticello	12	4.5
Shelbyville	14	4.5
Hazard	12	4.4
Franklin	16	4.2
Corbin	14	3.8
Cynthiana	12	3.7
Pikeville	11	3.5
Morehead	14	3.4
Mount Washington	9	3.4
Dayton	10	3.0
Fort Mitchell	11	3.0
Bellevue	10	2.9
Elsmere	10	2.9
Princeton	9	2.6
Berea	11	2.4
Flatwoods	9	2.3
Versailles	7	1.9
Taylor Mill	5	1.8
Lawrenceburg	5	1.7
Edgewood	6	1.5
Alexandria	4	1.4
Villa Hills	3	0.8
POPULATION CATEGORY 2,500-4,999		
Harlan	12	8.9
Shepherdsville	16	6.7
Prestonsburg	12	6.7
Scottsville	13	6.1
Carrollton	10	5.4
Cumberland	8	5.1
Benton	10	5.1
Barbourville	9	4.9
Columbia	9	4.7
Russell	9	4.5
Jenkins	6	4.4
Beaver Dam	6	4.1
Williamstown	6	4.0
Providence	8	3.9
Dawson Springs	6	3.8
Stanford	5	3.7
Leitchfield	9	3.6
Central City	9	3.6
Highland Heights	7	3.3
Calvert City	4	3.2
Greenville	7	3.0
Ludlow	7	3.0
Stanton	4	2.9
Springfield	4	2.8
Vine Grove	5	2.8
Lakeside Park	4	2.6
Fulton	4	2.6
Southgate	4	2.4
Hickman	3	2.2
Lagrange	4	2.1
Irvine	3	2.1
Marion	3	1.8
Lancaster	3	1.8
Grayson	3	1.7
Tompkinsville	2	1.4
Paintsville	3	1.4
Flemingsburg	2	1.3
Park Hills	2	1.2
Morganfield	2	1.1
Wilmore	2	0.9
Mount Vernon	1	0.8
Cold Spring	1	0.7

TABLE 49. SCHOOL BUS ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF SCHOOL BUS ACCIDENTS (1986-1990)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY UNDER 10,000		
Metcalfe	17	3.8
Owsley	8	3.2
Crittenden	11	2.4
Owen	10	2.2
Wolfe	7	2.2
Trimble	6	2.0
Carroll	8	1.7
Gallatin	4	1.5
Bath	7	1.4
Lee	5	1.3
McLean	6	1.2
Fulton	5	1.2
Spencer	4	1.2
Carlisle	3	1.1
Hickman	3	1.1
Ballard	4	1.0
Nicholas	3	0.9
Menifee	2	0.8
Bracken	3	0.8
Hancock	3	0.8
Clinton	3	0.7
Elliott	2	0.6
Lyon	2	0.6
Livingston	2	0.4
Cumberland	1	0.3
Robertson	0	0.0
POPULATION CATEGORY 10,000-14,999		
Pendleton	19	3.2
Edmonson	16	3.1
Estill	21	2.9
Webster	20	2.9
Lewis	16	2.5
Larue	14	2.4
Jackson	14	2.3
Morgan	13	2.2
Henry	14	2.2
Rockcastle	16	2.2
Trigg	11	2.1
Martin	13	2.1
Anderson	14	1.9
Washington	10	1.9
Powell	11	1.9
Caldwell	12	1.8
Allen	11	1.5
Butler	8	1.4
Green	7	1.3
Magoffin	8	1.2
Lawrence	8	1.1
Hart	8	1.1
Monroe	6	1.1
Fleming	6	1.0
Todd	4	0.7
Garrard	4	0.7
Leslie	4	0.6
Russell	3	0.4
Casey	2	0.3
POPULATION CATEGORY 15,000-24,999		
Breathitt	29	3.7
Scott	42	3.5
Marion	29	3.5
Knott	26	2.9
Grant	22	2.8

COUNTY	NUMBER OF SCHOOL BUS ACCIDENTS (1986-1990)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY 15,000-24,999 (CONTINUED)		
Harrison	22	2.7
Mercer	22	2.3
Shelby	28	2.3
Montgomery	22	2.2
Carter	27	2.2
Woodford	22	2.2
Bourbon	21	2.2
Mason	18	2.2
Logan	26	2.1
McCreary	15	1.9
Grayson	20	1.9
Breckinridge	15	1.8
Rowan	18	1.8
Adair	13	1.7
Lincoln	15	1.5
Wayne	13	1.5
Clay	16	1.5
Ohio	15	1.4
Johnson	15	1.3
Meade	15	1.2
Union	10	1.2
Simpson	9	1.2
Taylor	9	0.9
POPULATION CATEGORY 25,000-50,000		
Clark	52	3.5
Floyd	69	3.2
Hopkins	65	2.8
Jessamine	41	2.7
Whitley	40	2.4
Perry	36	2.4
Knox	34	2.3
Franklin	47	2.1
Oldham	35	2.1
Laurel	43	2.0
Letcher	26	1.9
Henderson	41	1.9
Pulaski	47	1.9
Bullitt	45	1.9
Harlan	34	1.9
Graves	29	1.7
Muhlenberg	26	1.7
Nelson	24	1.6
Bell	25	1.6
Marshall	20	1.5
Boyle	18	1.4
Barren	23	1.4
Greenup	24	1.3
Calloway	17	1.1
POPULATION CATEGORY OVER 50,000		
Fayette	320	2.8
Pike	98	2.7
Kenton	181	2.5
Boyd	64	2.5
Warren	87	2.3
Jefferson	715	2.2
Daviess	91	2.1
Madison	55	1.9
Boone	48	1.7
McCracken	52	1.7
Hardin	68	1.5
Campbell	56	1.3
Christian	41	1.2

TABLE 50. SCHOOL BUS ACCIDENT RATES BY CITY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)(1986-1990 DATA)

CITY	NUMBER OF ACCIDENTS	ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY OVER 200,000		
Louisville	389	2.9
Lexington	315	2.8
POPULATION CATEGORY 20,000-55,000		
Ashland	45	3.8
Covington	81	3.7
Bowling Green	57	2.8
Frankfort	37	2.8
Paducah	31	2.3
Richmond	24	2.3
Hopkinsville	31	2.1
Owensboro	57	2.1
Henderson	24	1.9
Jeffersontown	19	1.6
POPULATION CATEGORY 10,000-19,999		
Shively	35	4.5
Somerset	23	4.3
Winchester	33	4.2
Georgetown	23	4.0
Madisonville	30	3.7
Independence	18	3.4
Nicholasville	22	3.2
Elizabethtown	20	2.2
Florence	19	2.0
Middlesboro	11	1.9
Murray	10	1.4
Danville	9	1.4
Glasgow	8	1.3
Radcliff	12	1.2
Newport	11	1.2
Erlanger	8	1.0
Fort Thomas	7	0.9
Saint Matthews	7	0.9
POPULATION CATEGORY 5,000-9,999		
Lebanon	16	5.6
Versailles	18	5.0
Corbin	15	4.0
Fort Wright	12	3.7
Taylor Mill	10	3.6
Harrodsburg	13	3.5
Mount Sterling	9	3.4
Cynthiana	11	3.4
Williamsburg	9	3.3
Paris	14	3.2
Alexandria	9	3.2
London	9	3.1
Lawrenceburg	9	3.0
Shelbyville	9	2.9
Maysville	10	2.8
Mayfield	13	2.6
Mount Washington	6	2.3
Morehead	9	2.2
Monticello	6	2.2
Fort Mitchell	8	2.2
Bardstown	7	2.1
Hazard	5	1.8
Princeton	6	1.7
Campbellsville	8	1.7
Russellville	6	1.6
Elsmere	5	1.5
Berea	7	1.5
Flatwoods	5	1.3
Franklin	5	1.3
Edgewood	5	1.2
Pikeville	3	0.9
Villa Hills	3	0.8
Bellevue	1	0.3
Dayton	1	0.3
POPULATION CATEGORY 2,500-4,999		
Prestonsburg	15	8.4
Marion	9	5.4
Shepherdsville	12	5.0
Stanton	7	5.0
Vine Grove	8	4.5
Grayson	7	4.0
Carrollton	7	3.8
Harlan	5	3.7
Irvine	5	3.5
Park Hills	5	3.0
Scottsville	6	2.8
Springfield	4	2.8
Barbourville	5	2.7
Russell	5	2.5
Stanford	3	2.2
Columbia	4	2.1
Benton	4	2.1
Greenville	5	2.1
Beaver Dam	3	2.1
Tompkinsville	3	2.1
Wilmore	4	1.9
Leitchfield	4	1.6
Morganfield	3	1.6
Jenkins	2	1.5
Providence	3	1.5
Highland Heights	3	1.4
Flemingsburg	2	1.3
Williamstown	2	1.3
Dawson Springs	2	1.3
Lakeside Park	2	1.3
Cumberland	2	1.3
Lagrange	2	1.0
Hartford	1	0.8
Hickman	1	0.7
Fulton	1	0.6
Southgate	1	0.6
Lancaster	1	0.6
Paintsville	1	0.5

TABLE 51. TRUCK ACCIDENT RATES BY COUNTY AND POPULATION CATEGORY (IN ORDER OF DECREASING PERCENTAGES)

COUNTY	NUMBER OF TRUCK ACCIDENTS (1986-1990)	ANNUAL ACCIDENT RATE (ACCIDENTS PER 10,000 POPULATION)
POPULATION CATEGORY UNDER 10,000		
Gallatin	161	59.7
Carroll	227	48.9
Ballard	158	40.0
Wolfe	103	31.7
Lyon	85	25.7
Bath	108	22.3
Fulton	91	22.0
Trimble	65	21.3
Livingston	96	21.2
Hancock	82	20.9
McLean	94	19.5
Carlisle	47	17.9
Lee	61	16.4
Clinton	74	16.2
Metcalfe	70	15.6
Owen	67	14.8
Hickman	41	14.7
Bracken	56	14.4
Crittenden	66	14.4
Menifee	34	13.4
Elliott	43	13.3
Owsley	32	12.7
Nicholas	35	10.4
Spencer	33	9.7
Cumberland	25	7.4
Robertson	5	4.7
POPULATION CATEGORY 10,000-14,999		
Henry	286	44.6
Webster	266	38.1
Hart	281	37.7
Lawrence	248	35.4
Rockcastle	252	34.0
Martin	205	32.7
Anderson	194	26.6
Caldwell	169	25.5
Trigg	125	24.1
Magoffin	156	23.9
Pendleton	136	22.6
Powell	132	22.6
Butler	125	22.2
Larue	127	21.7
Allen	156	21.3
Washington	110	21.1
Fleming	128	20.8
Leslie	137	20.1
Todd	95	17.4
Green	85	16.4
Lewis	102	15.7
Garrard	86	14.9
Morgan	80	13.7
Edmonson	69	13.3
Jackson	76	12.7
Casey	79	11.1
Russell	79	10.7
Monroe	53	9.3
Estill	66	9.0
POPULATION CATEGORY 15,000-24,999		
Simpson	378	49.9
Shelby	599	48.3
Grant	361	45.9
Scott	531	44.5
Mason	305	36.6
Breathitt	237	30.2
Woodford	297	29.8
Bourbon	285	29.6
Rowan	283	27.8
Harrison	223	27.4
Montgomery	262	26.8
Logan	326	26.7
Mercer	232	24.2
Johnson	277	23.8
Ohio	251	23.8
Grayson	245	23.3
Lincoln	226	22.5
Union	183	22.1
Clay	238	21.9
Knott	194	21.7
Adair	158	20.6
Carter	248	20.4
Breckinridge	152	18.6
Taylor	186	17.6
Marion	141	17.1
Meade	171	14.1
Wayne	113	12.9
McCreary	62	7.9
POPULATION CATEGORY 25,000-50,000		
Floyd	867	39.8
Perry	600	39.6
Henderson	823	38.2
Laurel	825	38.0
Whitley	539	32.3
Hopkins	743	32.2
Barren	536	31.5
Clark	447	30.3
Harlan	540	29.5
Bell	462	29.3
Letcher	380	28.1
Franklin	615	28.1
Marshall	380	27.9
Jessamine	419	27.5
Muhlenberg	427	27.3
Bullitt	617	25.9
Boyle	324	25.3
Oldham	387	23.3
Nelson	342	23.0
Pulaski	549	22.2
Graves	371	22.1
Greenup	338	18.4
Knox	272	18.3
Calloway	248	16.1
POPULATION CATEGORY OVER 50,000		
Boone	2,065	71.7
Pike	1,584	43.6
Madison	1,239	43.1
Boyd	1,017	39.8
Fayette	4,197	37.2
Warren	1,372	35.8
Kenton	2,539	35.8
Jefferson	11,723	35.3
McCracken	913	29.0
Hardin	1,260	28.2
Daviess	1,160	26.6
Campbell	1,088	25.9
Christian	802	23.3

TABLE 52. ACCIDENTS INVOLVING VEHICLE DEFECT BEFORE AND AFTER REPEAL OF VEHICLE INSPECTION LAW

TIME PERIOD	TOTAL NUMBER OF ACCIDENTS*	NUMBER OF ACCIDENTS INVOLVING VEHICLE DEFECTS	PERCENT OF ALL ACCIDENTS INVOLVING VEHICLE DEFECTS
October 1976 - May 1978 (20 Months Before Repeal of Law)	246,500	14,440	5.86
June 1978 - December 1979 (19 Months After Repeal of Law)	233,155	16,527	7.09
January 1980 - December 1980	124,503	9,176	7.37
January 1981 - December 1981	121,810	9,196	7.55
January 1982 - December 1982	121,080	9,074	7.49
January 1983 - December 1983	124,228	9,307	7.49
January 1984 - December 1984	133,240	9,644	7.24
January 1985 - December 1985	137,877	9,415	6.83
January 1986 - December 1986	135,173	9,866	7.30
January 1987 - December 1987	138,031 **	9,812	7.11
January 1988 - December 1988	143,159 **	9,380	6.55
January 1989 - December 1989	151,422	9,591	6.33
January 1990- December 1990	148,158	9,252	6.24

* Does not include accidents in which the vehicle defect code was unknown.

** Total accidents based on factor obtained from previous years' data.

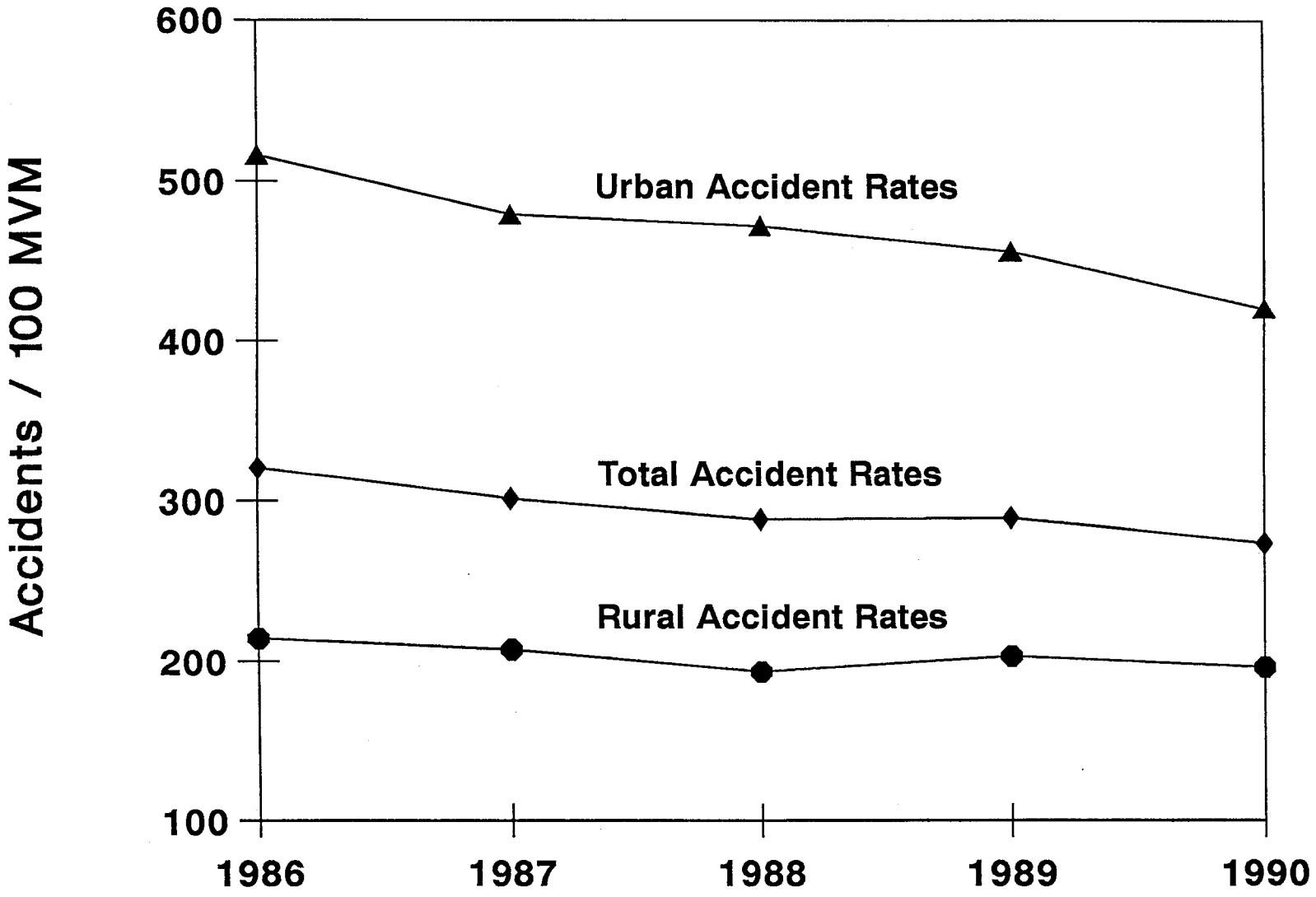

Figure 1. Trends in Accident Rates

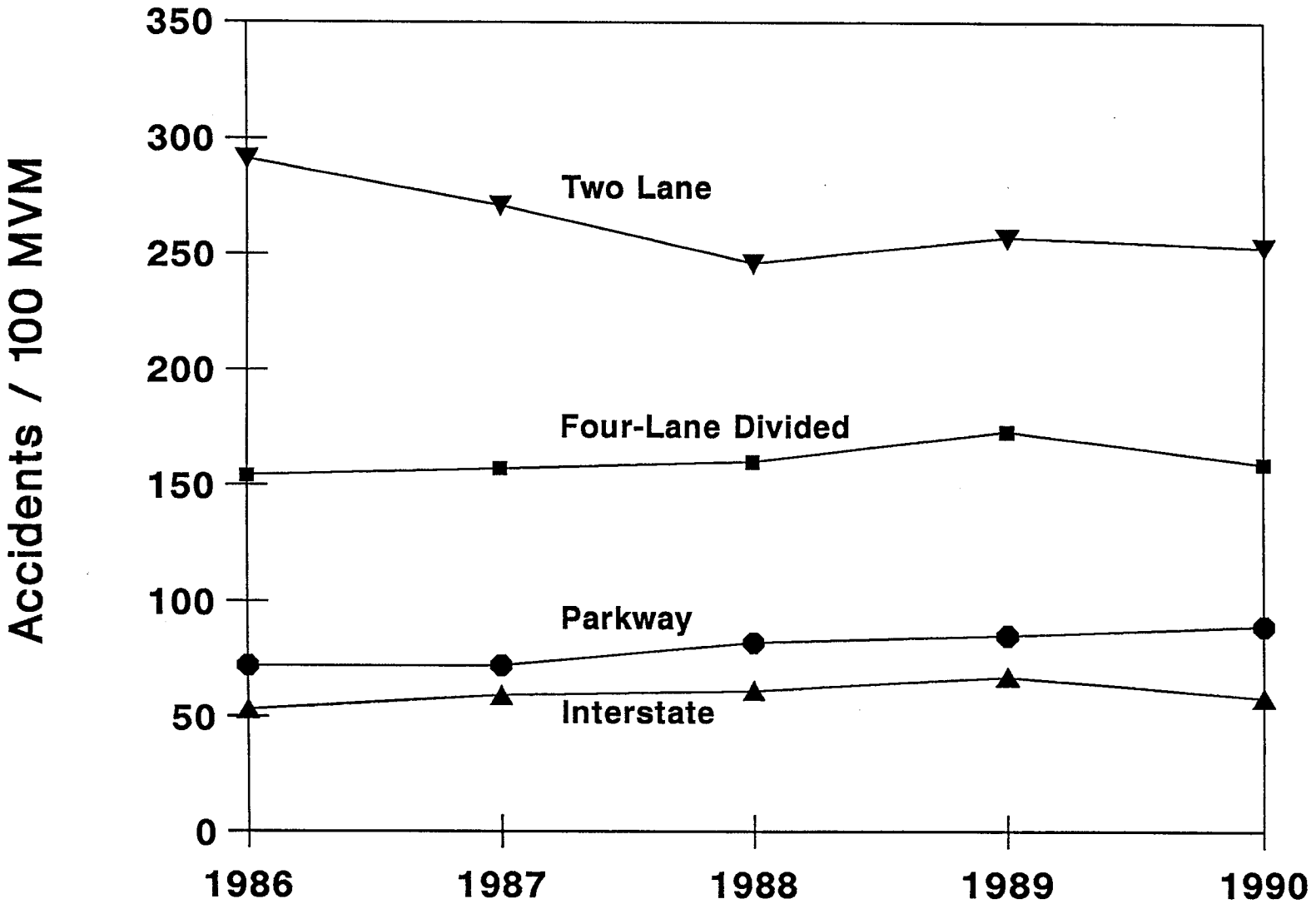

Figure 2. Trends in Rural Accident Rates

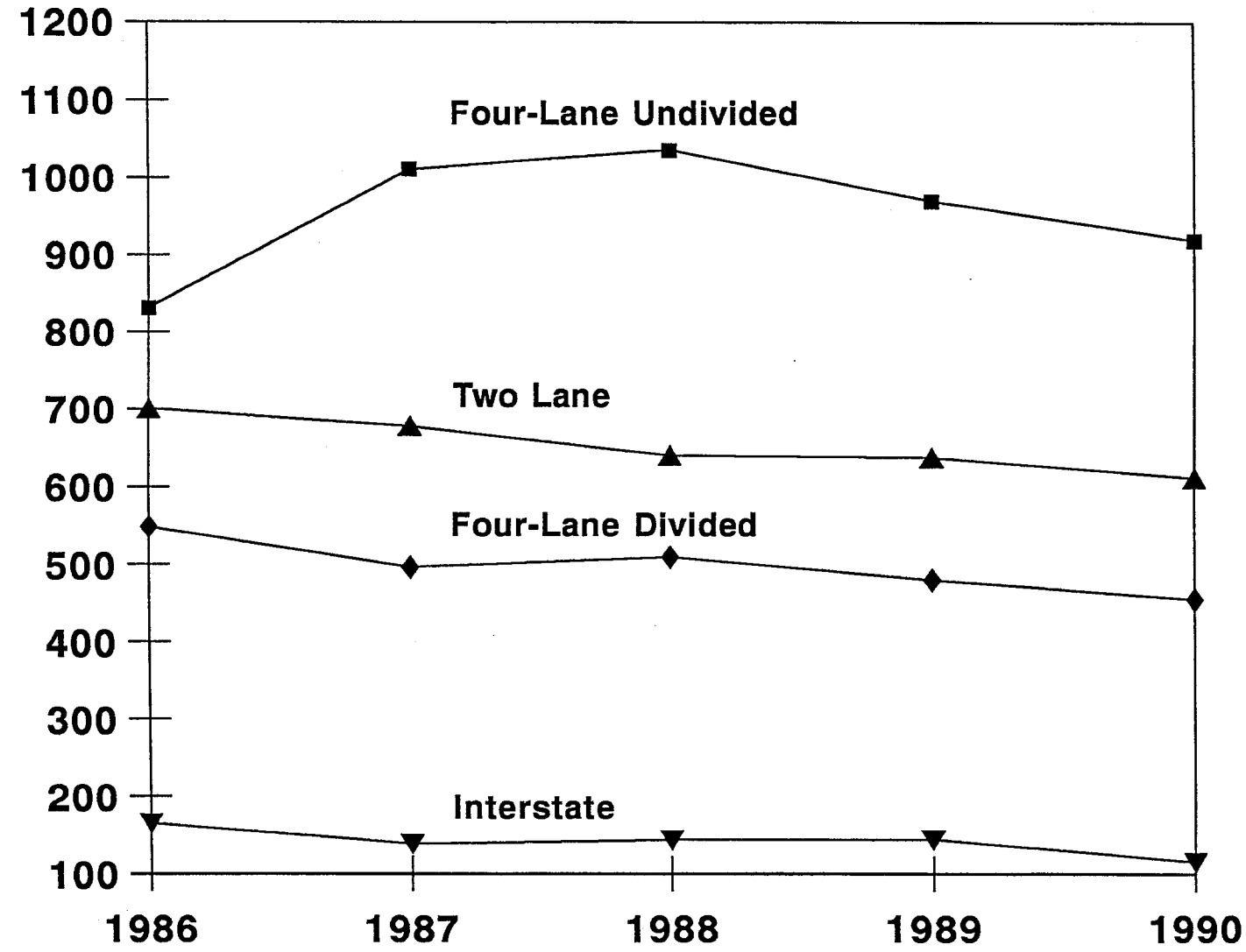

Figure 3. Trends in Urban Accident Rates

APPENDIX A

STATEWIDE ACCIDENT RATES AS A FUNCTION OF SEVERAL VARIABLES

Highways are grouped into various system classifications. Three common types of grouping include 1) functional classification, 2) federal-aid system, and 3) administrative classification. Statewide accident rates were determined for each of those groupings. Following is a summary of the findings.

Average statewide rates by functional classification are listed in Table A-1. Highways were grouped into a rural or urban category and then into systems such as arterial, collector, and local. Rates were determined considering all accidents, injury accidents only, and fatal accidents only. The highest overall accident rates were for urban principal arterials (non-interstate or freeway) followed by urban minor arterials and urban collectors. The lowest overall rate was for rural principal arterials (interstate) followed by urban principal arterials (interstate and other freeway). Urban principal arterials (other freeway) and the rural local system also had relatively low total accident rates. Injury accident rates for the various categories were ordered similar to overall accident rates. However, the ordering for the fatal accident rates was different. The highest fatal accident rates were for rural collectors and minor arterials. The lowest fatal accident rates were for urban principal arterials (interstate and other freeway), rural principal arterials (interstate), and the local urban system.

Statewide accident rates by federal-aid system are shown in Table A-2. The highest rate was for the federal-aid urban system and the lowest rate was for the interstate system. The federal-aid primary (non-interstate), federal-aid secondary (rural), and non-federal-aid systems had similar rates.

Statewide accident rates by administrative classification are listed in Table A-3. The rate for the primary system was lowest with the rate for the secondary system highest. Rates for the rural secondary and unclassified systems were between these two levels and were similar.

The benefits of providing a median and increasing the median width are shown in Table A-4. The accident rate is decreased by over one-half when comparing a highway which is divided with a median width of less than 30 feet to an undivided highway. The accident rate is decreased even farther (by over one-half) when comparing a highway which is divided with a median width of more than 30 feet to a highway with a median width of less than 30 feet.

The effect of access control is described in Table A-5. The large reduction in the accident rate for highways with full control of access compared to those with partial or no access control is shown. However, the accident rate for partial control of access is not dramatically below that for no access control.

An analysis of accident rates for rural highways by federal-aid system and terrain is presented in Table A-6. Each county was given a terrain classification as either flat, rolling, or mountainous since a classification was not available for each

road segment. Considering the entire system, the lowest rate was for flat terrain with the mountainous terrain next and rolling terrain highest.

Rates by rural-urban designation are shown in Table A-7. The lowest rate was for rural areas. The highest rate was for small urban areas rather than urbanized areas, although the average traffic volume was much higher in urbanized areas. The presence of more freeway-type highways in the urbanized areas may account for this finding.

The summary of accident rates by route signing identifier reveals that US-signed routes have a higher rate than state-marked routes, with interstates having a much lower rate (Table A-8). The US-signed routes have a higher average volume than state-marked routes, which may account for the higher accident rate.

The relationship between accident rate and traffic volume for various federal-aid highway classifications is illustrated in Table A-9. For interstates, which have high design criteria, the accident rate was fairly constant up until the volume range of over 40,000 vehicles per day where a large increase occurred. For each of the other highway classifications, the highest rate was for the lowest volume category (AADT under 1,000). One reason for a high rate at low-volume locations is the fact that a few accidents may increase the rate substantially. Lower volume roads also are constructed to less stringent design standards, which could contribute to a higher accident rate. For the federal-aid urban category, there was a constant decrease in accident rate as volume increased. There was no definite pattern for the other highway classifications.

The percentage of accidents occurring during wet or snow or icy pavement conditions or during darkness by rural or urban highway type classification is given in Table A-10. There was not a large fluctuation in the percentage of accidents occurring during wet pavement conditions with an overall percentage of 21 percent. There were large variations in the percentage of accidents occurring on the various highway types during snow or icy conditions. This percentage would tend to change by year depending on the amount of snowfall any given year. The percentage on rural roads (5.4 percent) was higher than on urban roads (2.8 percent). The highest percentages were on interstates and parkways with the highest being 13 percent. There were also large variations in the percentage of accidents occurring during darkness. The percentage was higher on rural roads (32 percent) than urban roads (23 percent). The highest percentages were on interstates and parkways with the highest being 44 percent. This would be expected given the level of nighttime driving on these types of roadway.

TABLE A-1. STATEWIDE ACCIDENT RATES BY FUNCTIONAL CLASSIFICATION (1986-1990 DATA)

LOCATION	FUNCTIONAL CLASSIFICATION	AVERAGE TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM) ALL	INJURY	FATAL
Rural	Principal Arterial, Interstate	577	19,810	59	18	0.8
	Principal Arterial, Other	1,537	5,930	157	54	2.3
	Minor Arterial	1,777	3,630	270	89	3.2
	Major Collector	7,297	1,970	286	102	3.7
	Minor Collector	9,225	630	291	110	4.1
	Local System	4,090	660	159	54	2.1
Urban	Principal Arterial, Interstate	197	47,180	130	31	0.6
	Principal Arterial, Other Freeway	86	15,350	137	39	0.6
	Principal Arterial, Other	454	15,680	750	181	1.7
	Minor Arterial	780	8,750	683	173	1.7
	Collector	268	3,950	515	141	1.6
	Local System	118	2,970	281	77	0.9

TABLE A-2. STATEWIDE ACCIDENT RATES BY FEDERAL-AID SYSTEM (1986-1990 DATA)

FEDERAL-AID SYSTEM	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Interstate	34379	765	27130	91
Federal-Aid Primary (other than Interstate)	133654	3772	5940	327
Federal-Aid Urban	122843	1126	8590	696
Federal-Aid Secondary (Rural only)	75240	7285	1980	286
Non-Federal Aid	41086	13462	670	251

TABLE A-3. STATEWIDE ACCIDENT RATES BY ADMINISTRATIVE CLASSIFICATION (1986-1990 DATA)

ADMINISTRATIVE CLASSIFICATION	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Primary	192,667	4,638	10,700	213
Secondary	158,238	7,968	2,650	411
Rural Secondary	46,421	11,208	750	302
Unclassified	9,854	2,531	740	286

TABLE A-4. STATEWIDE ACCIDENT RATES BY MEDIAN TYPE (RURAL ROADS) (WITH FOUR OR MORE LANES)(1986-1990 DATA)

MEDIAN TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Undivided, No Median	3,143	52	8,630	385
Divided, Median Less than 30 Feet, No Barrier	6,207	272	8,750	143
Divided, Median Greater than 30 Feet, No Barrier	16,156	1,081	12,290	67

TABLE A-5. STATEWIDE ACCIDENT RATES BY ACCESS CONTROL (1986-1990 DATA)

MEDIAN TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Full Control	42,239	1,487	16,830	93
Partial Control	4,691	135	5,600	340
No Control	360,213	24,789	2,030	392

TABLE A-6. ACCIDENT RATES FOR RURAL HIGHWAYS BY FEDERAL-AID SYSTEM AND TERRAIN (1986-1990 DATA)

	ACCIDENT RATE (ACC/100 MVM) BY TERRAIN CLASSIFICATION		
FEDERAL-AID SYSTEM	FLAT	ROLLING	MOUNTAINOUS
Interstate	50	70	59
Federal-Aid Primary	172	223	188
Federal-Aid Secondary	223	304	279
Non-Federal Aid	237	243	244
All	180	221	210

TABLE A-7. STATEWIDE ACCIDENT RATES BY RURAL-URBAN DESIGNATION (1986-1990 DATA)

AREA TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Rural	184,417	24,505	2,040	202
Small Urban Area	70,952	888	8,050	544
Urbanized Area	151,831	1,020	18,630	438

TABLE A-8. STATEWIDE ACCIDENT RATES BY ROUTE SIGNING IDENTIFIER (1986-1990 DATA)

ROUTE SIGNING IDENTIFIER	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Interstate	34,379	776	26,750	91
US	175,065	3,529	6,130	444
State	197,621	22,106	1,530	321

TABLE A-9. RELATIONSHIP BETWEEN ACCIDENT RATE AND TRAFFIC VOLUME (1986-1990 DATA)

VOLUME RANGE (AADT)	ACCIDENT RATE (ACC/100 MVM)				
	INTERSTATE	FEDERAL-AID PRIMARY	FEDERAL-AID URBAN	FEDERAL-AID SECONDARY	NON-FEDERAL AID
0 - 999	*	813	1,623	495	350
1,000-2,499	*	211	851	332	284
2,500-4,999	*	211	763	234	302
5,000-9,999	60	251	722	162	120
10,000-19,999	62	359	718	237	317
20,000-29,999	60	682	701	*	*
30,000-39,999	62	598	527	*	*
40,000 or more	150	292	373	*	*

* No data in this volume range.

TABLE A-10. PERCENTAGE OF ACCIDENTS OCCURRING DURING WET OR SNOW OR ICE PAVEMENT CONDITIONS OR DURING DARKNESS BY RURAL AND URBAN HIGHWAY TYPE CLASSIFICATION (1986-1990 DATA)

LOCATION	HIGHWAY TYPE	PERCENT OF ALL ACCIDENTS		
		WET PAVEMENT	SNOW OR ICE CONDITIONS	DARKNESS
RURAL	One-Lane	22	5.2	27
	Two-lane	22	4.8	31
	Three-Lane	29		21
	Four-Lane Divided (Non-Interstate or Parkway)	23	4.7	27
	Four-Lane Undivided	20	2.7	23
	Interstate	17	11.7	42
	Parkway	17	11.0	44
	All Rural	21	5.4	32
URBAN	Two-Lane	21	2.7	23
	Three-Lane	23	1.8	24
	Four-Lane Divided (Non-Interstate or Parkway)	21	2.4	21
	Four-Lane Undivided	21	1.9	20
	Interstate	23	6.0	31
	Parkway	18	13.2	37
	All Urban	21	2.8	23

APPENDIX B

CRITICAL "NUMBERS OF ACCIDENTS" TABLES

TABLE B-1. CRITICAL NUMBERS OF ACCIDENTS ON RURAL HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (FIVE-YEAR PERIOD) (1986-1990)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)						
	0.4	1	2	5	10	15	20
One-Lane	4	8	12	24	42	59	76
Two-Lane	7	14	24	50	90	129	167
Three-Lane	24	51	92	210	400	587	772
Four-Lane Divided (Non-Interstate and Parkway)	18	37	66	147	278	405	531
Four-Lane Undivided	40	86	160	372	715	1,055	1,392
Interstate	17	34	60	134	253	368	483
Parkway	8	14	24	51	93	134	174

TABLE B-2. CRITICAL NUMBERS OF ACCIDENTS ON URBAN HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (FIVE-YEAR PERIOD) (1986-1990)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)					
	0.4	1	2	5	8	10
Two-Lane	46	101	189	441	688	852
Three-Lane	52	115	215	505	789	977
Four-Lane Divided (Non-Interstate and Parkway)	96	219	417	996	1,567	1,946
Four-Lane Undivided	149	346	665	1,603	2,532	3,148
Interstate	68	153	290	686	1,076	1,334
Parkway	14	28	49	107	164	201

APPENDIX C

CRITICAL ACCIDENT RATE TABLES FOR HIGHWAY SECTIONS

TABLE C-1. CRITICAL ACCIDENT RATES FOR RURAL ONE-LANE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
100	2,583	1,824	1,344	957	776
200	1,824	1,344	1,032	776	654
300	1,518	1,146	902	699	601
400	1,344	1,032	827	654	570
500	1,229	957	776	623	549
700	1,083	860	711	584	522
1,000	957	776	654	549	498
1,500	842	699	601	517	475
2,000	776	654	570	498	462
2,500	731	623	549	485	453
3,000	699	601	534	475	446

TABLE C-2. CRITICAL ACCIDENT RATES FOR RURAL TWO-LANE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
100	2,190	1,512	1,089	753	598	494
300	1,242	917	706	532	449	393
500	989	753	598	468	406	362
1,000	753	598	494	406	362	332
1,500	655	532	449	378	344	319
2,000	598	494	423	362	332	311
3,000	532	449	393	344	319	302
4,000	494	423	375	332	311	297
5,000	468	406	362	325	306	293
6,000	449	393	353	319	302	290
7,000	435	383	346	315	299	288
8,000	423	375	341	311	297	287
9,000	414	368	336	309	295	285
10,000	406	362	332	306	293	284

TABLE C-3. CRITICAL ACCIDENT RATES FOR RURAL THREE-LANE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	3	5
100	2,275	1,579	1,143	965	796
300	1,301	965	747	656	567
500	1,040	796	635	567	501
1,000	796	635	527	481	435
1,500	694	567	481	444	407
2,000	635	527	454	422	390
3,000	567	481	422	396	371
4,000	527	454	403	381	359
5,000	501	435	390	371	351
6,000	481	422	381	363	345
7,000	466	411	374	357	341
8,000	454	403	368	353	337
9,000	444	396	363	349	334
10,000	435	390	359	345	332

TABLE C-4. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE DIVIDED SECTIONS (NON-INTERSTATE AND PARKWAY) SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	754	558	430	325	275
1,000	558	430	346	275	240
2,500	399	325	275	231	210
5,000	325	275	240	210	196
7,500	293	253	225	201	189
10,000	275	240	216	196	185
15,000	253	225	206	189	181
20,000	240	216	200	185	178
30,000	225	206	193	181	175
40,000	216	200	188	178	173
50,000	210	196	185	176	172

TABLE C-5. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE UNDIVIDED SECTIONS (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
500	1,341	1,053	861	698	619
1,000	1,053	861	730	619	564
2,500	813	698	619	550	516
5,000	698	619	564	516	492
7,500	648	584	540	501	482
10,000	619	564	526	492	475
20,000	564	526	499	475	464
30,000	540	509	487	468	458
40,000	526	499	480	464	455
50,000	516	492	475	461	453

TABLE C-6. CRITICAL ACCIDENT RATES FOR RURAL INTERSTATE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10	20
500	464	323	234	164	131	109
1,000	323	234	178	131	109	94
2,500	213	164	131	104	90	81
5,000	164	131	109	90	81	75
7,500	143	117	100	84	77	72
10,000	131	109	94	81	75	70
20,000	109	94	84	75	70	67
30,000	100	87	79	72	68	66
40,000	94	84	76	70	67	65
50,000	90	81	75	69	66	64

TABLE C-7. CRITICAL ACCIDENT RATES FOR RURAL PARKWAY SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

AADT	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
	0.5	1	2	5	10	20
400	632	445	327	232	188	158
700	474	346	263	195	162	140
1,000	401	299	232	177	150	132
1,500	336	256	204	160	139	124
2,000	299	232	188	150	132	119
3,000	256	204	169	139	124	114
4,000	232	188	158	132	119	111
5,000	216	177	150	127	116	109
7,000	195	162	140	122	112	106
10,000	177	150	132	116	109	103
20,000	150	132	119	109	103	99
40,000	132	119	111	103	99	97

TABLE C-8. CRITICAL ACCIDENT RATES FOR URBAN TWO-LANE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

AADT	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
	0.5	1	2	5	10
500	1,735	1,395	1,166	971	875
1,000	1,395	1,166	1,010	875	809
2,500	1,109	971	875	792	750
5,000	971	875	809	750	721
7,500	911	833	779	732	708
10,000	875	809	762	721	701
15,000	833	779	742	708	692
20,000	809	762	730	701	686
30,000	779	742	715	692	680
40,000	762	730	707	686	676
50,000	750	721	701	683	674

TABLE C-9. CRITICAL ACCIDENT RATES FOR URBAN THREE-LANE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

AADT	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
	0.5	1	2	5	10
500	1,537	1,223	1,012	832	745
1,000	1,223	1,012	868	745	684
2,500	959	832	745	668	631
5,000	832	745	684	631	604
10,000	745	684	641	604	585
15,000	706	657	623	592	577
20,000	684	641	612	585	572
25,000	668	631	604	581	569
30,000	657	623	598	577	566
40,000	641	612	591	572	563
50,000	631	604	585	569	561

TABLE C-10. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE DIVIDED SECTIONS (NON-INTERSTATE AND PARKWAY) (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	1,147	945	807	688	630
2,500	894	772	688	616	579
5,000	772	688	630	579	554
10,000	688	630	590	554	536
15,000	652	605	572	543	528
20,000	630	590	561	536	524
25,000	616	579	554	532	520
30,000	605	572	549	528	518
40,000	590	561	541	524	515
50,000	579	554	536	520	513
60,000	572	549	532	518	511

TABLE C-11. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE UNDIVIDED SECTIONS (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	1,826	1,556	1,370	1,210	1,131
2,500	1,488	1,324	1,210	1,111	1,061
5,000	1,324	1,210	1,131	1,061	1,026
10,000	1,210	1,131	1,075	1,026	1,002
15,000	1,160	1,096	1,051	1,011	991
20,000	1,131	1,075	1,036	1,002	984
25,000	1,111	1,061	1,026	995	980
30,000	1,096	1,051	1,019	991	977
40,000	1,075	1,036	1,009	984	972
50,000	1,061	1,026	1,002	980	969
60,000	1,051	1,019	996	977	967

TABLE C-12. CRITICAL ACCIDENT RATES FOR URBAN INTERSTATE SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)				
AADT	0.5	1	2	5	10
1,000	513	392	312	246	213
5,000	293	246	213	186	172
10,000	246	213	191	172	162
20,000	213	191	176	162	156
30,000	199	182	169	158	153
40,000	191	176	165	156	151
50,000	186	172	162	154	150
60,000	182	169	160	153	149
70,000	178	167	159	152	148
80,000	176	165	157	151	148
90,000	174	164	156	150	147
100,000	172	162	156	150	147

TABLE C-13. CRITICAL ACCIDENT RATES FOR URBAN PARKWAY SECTIONS (FIVE-YEAR PERIOD)(1986-1990)

AADT	CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
	0.5	1	2	5	10	20
500	749	554	427	322	272	238
1,000	554	427	343	272	238	214
2,500	396	322	272	229	208	193
5,000	322	272	238	208	193	183
7,500	290	250	223	199	187	179
10,000	272	238	214	193	183	176
15,000	250	223	204	187	179	173
20,000	238	214	198	183	176	171
30,000	223	204	190	179	173	169
40,000	214	198	186	176	171	167
50,000	208	193	183	174	170	167

APPENDIX D

CRITICAL ACCIDENT RATE TABLES FOR "SPOTS" (SPOT IS DEFINED AS 0.3 MILE IN LENGTH)

TABLE D-1. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL ONE-LANE, TWO-LANE, AND THREE-LANE HIGHWAYS (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/MVM) BY HIGHWAY TYPE		
AADT	ONE-LANE	TWO-LANE	THREE-LANE
100	10.29	8.87	9.18
500	4.55	3.72	3.90
1,000	3.44	2.75	2.90
2,500	2.53	1.96	2.08
5,000	2.10	1.60	1.70
7,500	1.91	1.44	1.54
10,000	1.80	1.35	1.44
15,000	1.68	1.24	1.33
20,000	1.60	1.18	1.27

TABLE D-2. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	INTERSTATE	PARKWAY
500	4.94	2.90	1.86	2.22
1,000	3.76	2.08	1.26	1.54
2,500	2.79	1.43	0.80	1.01
5,000	2.34	1.13	0.59	0.77
10,000	2.02	0.93	0.46	0.61
15,000	1.89	0.84	0.40	0.54
20,000	1.81	0.79	0.37	0.51
30,000	1.71	0.73	0.33	0.46
40,000	1.66	0.70	0.31	0.43
50,000	1.62	0.68	0.30	0.42

TABLE D-3. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN OTHER, TWO-LANE, AND THREE-LANE HIGHWAYS (FIVE-YEAR PERIOD)(1986-1990)

	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE	
AADT	TWO-LANE	THREE-LANE
500	6.27	5.61
1,000	4.90	4.33
2,500	3.75	3.27
5,000	3.20	2.76
7,500	2.97	2.55
10,000	2.83	2.42
15,000	2.66	2.27
20,000	2.57	2.18
30,000	2.45	2.07
40,000	2.38	2.01

TABLE D-4. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN FOUR-LANE HIGHWAYS, INTERSTATES AND PARKWAYS (FIVE-YEAR PERIOD) (1986-1990)

	CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE DIVIDED (NON-INTERSTATE AND PARKWAY)	INTERSTATE	PARKWAY
1,000	6.31	4.07	1.93	2.07
5,000	4.32	2.57	1.03	1.12
10,000	3.87	2.24	0.84	0.92
15,000	3.67	2.10	0.76	0.83
20,000	3.56	2.01	0.71	0.78
30,000	3.42	1.91	0.65	0.73
40,000	3.34	1.85	0.62	0.69
50,000	3.29	1.81	0.60	0.67
60,000	3.25	1.78	0.58	0.65
70,000	3.22	1.76	0.57	0.64
80,000	3.19	1.74	0.56	0.63
90,000	3.17	1.73	0.55	0.62
100,000	3.15	1.72	0.54	0.61

APPENDIX E

TOTAL ACCIDENT RATES FOR ALL INCORPORATED CITIES

TABLE E-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1986-1990 DATA)

CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION
Adairville	906	32	7.1	Burnside	695	210	60.4
Albany	2062	766	74.3	Butler	625	58	18.6
Alexandria	5592	1161	41.5	Cadiz	2148	709	66.0
Allen	229	186	162.4	Calhoun	854	93	21.8
Anchorage	2082	194	18.6	California	130	*	*
Annville	470	*	*	Calvert City	2531	370	29.2
Arlington	449	33	14.7	Camargo	1022	48	9.4
Ashland	23622	8181	69.3	Cambridge	193	*	*
Auburn	1273	145	22.8	Campbellsburg	604	93	30.8
Audubon Park	1520	10	1.3	Campbellsville	9577	2791	58.3
Augusta	1336	146	21.9	Campton	484	385	159.1
Bancroft	582	*	*	Caneyville	549	128	46.6
Barbourmeade	1402	16	2.3	Carlisle	1639	333	40.6
Barbourville	3658	1031	56.4	Carrollton	3715	1012	54.5
Bardstown	6801	2831	83.3	Carrsville	98	*	*
Bardwell	819	61	14.9	Catlettsburg	2231	749	67.1
Barlow	706	61	17.3	Cave City	1953	576	59.0
Beattyville	1131	453	80.1	Centertown	383	39	20.4
Beaver Dam	2904	792	54.5	Central City	4979	1518	61.0
Bedford	761	168	44.2	Cherrywood Village	340	*	*
Beechwood Village	1263	*	*	Clarkson	611	46	15.1
Bellefonte	838	63	15.0	Clay	1173	139	23.7
Bellemeade	927	*	*	Clay City	1276	*	*
Bellevue	6997	1165	33.3	Clinton	1720	*	*
Bellewood	329	*	*	Cloverport	1207	170	28.2
Benham	717	51	14.2	Coal Run	262	149	113.7
Benton	3899	1264	64.8	Cold Spring	2880	1321	91.7
Berea	9126	1777	38.9	Coldstream	862	*	*
Berry	240	2	1.7	Columbia	3845	1450	75.4
Blaine	271	11	8.1	Columbus	252	*	*
Blandville	95	*	*	Concord	65	5	15.4
Bloomfield	845	128	30.3	Corbin	7419	2969	80.0
Blue Ridge Manor	565	*	*	Corinth	137	109	159.1
Bonnieville	300	76	50.7	Corydon	790	117	29.6
Booneville	232	132	113.8	Covington	43264	15050	69.6
Bowling Green	40641	17135	84.3	Crab Orchard	825	88	21.3
Bradfordsville	199	30	30.2	Creekside	323	*	*
Brandenburg	1857	680	73.2	Crescent Park	364	167	91.8
Bremen	267	81	60.7	Crescent Springs	2179	1277	117.2
Briarwood	658	*	*	Crestview	356	7	3.9
Broadfields	273	*	*	Crestview Hills	2546	759	59.6
Brodhead	1140	*	*	Crestwood	1435	523	72.9
Broeck Point	325	*	*	Crittenden	731	204	55.8
Bromley	1137	156	27.4	Crofton	699	135	38.6
Brooksville	670	199	59.4	Crossgate	261	*	*
Brownsboro Farm	670	*	*	Cumberland	3112	528	33.9
Brownsboro Village	361	*	*	Cynthiana	6497	1684	51.8
Brownsville	897	308	68.7	Danville	12420	3979	64.1
Burgin	1009	71	14.1	Dawson Springs	3129	497	31.8
Burkesville	1815	393	43.3	Dayton	6576	811	24.7

TABLE E-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1986-1990 DATA)(continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION
Dixon	552	174	63.0	Glenview Hills	353	*	*
Douglass Hills	5549	*	*	Glenview Manor	197	*	*
Dover	297	19	12.8	Goose Creek	321	*	*
Drakesboro	565	125	44.2	Grand Rivers	351	52	29.6
Druid Hills	305	*	*	Gratz	65	13	40.0
Dry Ridge	1601	881	110.1	Graymoor	2911	21	1.4
Earlington	1833	166	18.1	Grayson	3510	1029	58.6
Eddyville	1889	90	9.5	Green Spring	768	*	*
Edgewood	8143	1167	28.7	Greensburg	1990	569	57.2
Edmonton	1477	441	59.7	Greenup	1158	271	46.8
Ekron	110	15	27.3	Greenville	4689	1039	44.3
Elizabethtown	18167	7252	79.8	Guthrie	1504	37	4.9
Elkhorn City	813	153	37.6	Hanson	450	70	31.1
Elkton	1789	461	51.5	Hardin	595	68	22.9
Elsmere	6847	1025	29.9	Hardinsburg	1906	536	56.2
Eminence	2055	541	52.7	Harlan	2686	1409	104.9
Erlanger	15979	4196	52.5	Harrodsburg	7335	2259	61.6
Eubank	354	29	16.4	Hartford	2532	96	7.6
Evarts	1063	151	28.4	Hawesville	998	163	32.7
Ewing	268	35	26.1	Hazard	5416	2291	84.6
Fairfield	142	26	36.6	Hazel	460	36	15.7
Fairmeade	280	*	*	Hebron Estates	930	*	*
Fairview	119	57	95.8	Henderson	25945	8389	64.7
Falmouth	2378	581	48.9	Hickman	2689	322	23.9
Ferguson	934	45	9.6	Hickory Hill	152	4	5.3
Fincastle	838	*	*	Highland Heights	4223	1436	68.0
Flatwoods	7799	1052	27.0	Hills And Dales	154	*	*
Fleming-neon	759	*	*	Hillview	6119	*	*
Flemingsburg	3071	692	45.1	Hindman	798	226	56.6
Florence	18624	9592	103.0	Hiseville	220	27	24.5
Fordsville	522	107	41.0	Hodgenville	2721	677	49.8
Forest Hills	454	35	15.4	Hollow Creek	991	*	*
Fort Mitchell	7438	1396	37.5	Hollyvilla	649	*	*
Fort Thomas	16032	1653	20.6	Hopkinsville	29809	7869	52.8
Fort Wright	6570	1995	60.7	Horse Cave	2284	85	7.4
Foster	65	*	*	Houston Acres	496	*	*
Fountain Run	259	14	10.8	Hunters Hollow	286	*	*
Fox Chase	528	*	*	Hurstbourne	4420	*	*
Frankfort	25968	7312	56.3	Hurstbourne Acres	1072	14	2.6
Franklin	7607	1970	51.8	Hustonville	313	52	33.2
Fredonia	490	57	23.3	Hyden	375	111	59.2
Frenchburg	625	109	34.9	Independence	10444	1769	33.9
Fulton	3078	889	57.8	Indian Hills	1074	49	9.1
Gamaliel	462	16	6.9	Indian Hills Ch. Sec.	1005	*	*
Georgetown	11414	2968	52.0	Inez	511	174	68.1
Germantown	213	60	56.3	Irvine	2836	859	60.6
Ghent	365	30	16.4	Irvington	1180	112	19.0
Glasgow	12351	4052	65.6	Island	446	71	31.8
Glencoe	257	51	39.7	Jackson	2466	793	64.3
Glenview	653	*	*	Jamestown	1641	329	40.1

TABLE E-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1986-1990 DATA)(continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION
Jeffersontown	23221	4679	40.3	Meadowvale	798	*	*
Jeffersonville	1854	79	8.5	Meadowview Estates	259	*	*
Jenkins	2751	293	21.3	Melbourne	660	79	23.9
Junction City	1983	338	34.1	Mentor	169	34	40.2
Keeneland	393	*	*	Middlesboro	11328	2701	47.7
Kenton Vale	358	17	9.5	Middletown	5016	196	7.8
Kevil	337	78	46.3	Midway	1290	179	27.8
Kingsley	399	1	0.5	Millersburg	937	57	12.2
Kuttawa	535	22	8.2	Milton	563	143	50.8
Lacenter	1040	105	20.2	Minor Lane Heights	1675	27	3.2
Lafayette	106	*	*	Mockingbird Valley	177	15	16.9
Lagrange	3853	1160	60.2	Monterey	164	4	4.9
Lakeside Park	3131	471	30.1	Monticello	5357	1752	65.4
Lakeview Heights	252	*	*	Moorland	467	*	*
Lancaster	3421	723	42.3	Morehead	8357	2543	60.9
Langdon Place	874	*	*	Morganfield	3776	861	45.6
Latonia Lakes	410	49	23.9	Morgantown	2284	853	74.7
Lawrenceburg	5911	1231	41.7	Mortons Gap	987	89	18.0
Lebanon	5695	1809	63.5	Mount Olivet	384	31	16.1
Lebanon Junction	1741	116	13.3	Mount Sterling	5362	2308	86.1
Leitchfield	4965	1772	71.4	Mount Vernon	2654	706	53.2
Lewisburg	772	121	31.3	Mount Washington	5226	740	28.3
Lewisport	1778	120	13.5	Muldraugh	1376	486	70.6
Lexington	225366	62783	55.7	Munfordville	1556	480	61.7
Liberty	1937	97	10.0	Murray	14439	3593	49.8
Lincolnshire	125	*	*	Murray Hill	619	*	*
Livermore	1534	175	22.8	Nebo	227	53	46.7
Livingston	241	30	24.9	New Castle	893	63	14.1
London	5757	3033	105.4	New Haven	796	132	33.2
Lone Oak	465	221	95.1	Newport	18871	5609	59.4
Loretto	820	100	24.4	Nicholasville	13603	2752	40.5
Louisa	1990	602	60.5	Norbourne Estates	461	*	*
Louisville	269063	91091	67.7	North Middletown	602	44	14.6
Loyall	1100	83	15.1	Northfield	898	81	18.0
Ludlow	4736	609	25.7	Nortonville	1209	134	22.2
Lynch	1166	63	10.8	Norwood	372	*	*
Lyndon	8037	72	1.8	Oak Grove	2863	984	68.7
Lynnview	1017	7	1.4	Oakland	202	1	1.0
Mackville	200	14	14.0	Old Brownboro Place	348	*	*
Madisonville	16200	6249	77.1	Olive Hill	1809	361	39.9
Manchester	1634	891	109.1	Orchard Grass Hills	1058	*	*
Manor Creek	179	*	*	Owensboro	53549	15177	56.7
Marion	3320	798	48.1	Owenton	1306	341	52.2
Martin	694	269	77.5	Owingsville	1491	415	55.7
Maryhill Estates	177	*	*	Paducah	27256	11789	86.5
Mayfield	9935	3543	71.3	Paintsville	4354	1818	83.5
Maysville	7169	3183	88.8	Paris	8730	2449	56.1
Mchenry	414	30	14.5	Park City	549	87	31.7
Mckee	870	217	49.9	Park Hills	3321	386	23.2
Meadowbrook Farm	163	*	*	Park Lake	263	*	*

TABLE E-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1986-1990 DATA)(continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION
Parkway Village	707	*	*	Seneca Gardens	684	*	*
Pembroke	640	43	13.4	Sharpsburg	315	71	45.1
Perryville	815	102	25.0	Shelbyville	6238	2334	74.8
Pewee Valley	1283	234	36.5	Shepherdsville	4805	1785	74.3
Pikeville	6324	2229	70.5	Shively	15535	5588	71.9
Pineville	2198	755	68.7	Silver Grove	1102	228	41.4
Pioneer Village	1130	*	*	Simpsonville	907	98	21.6
Pippa Passes	195	55	56.4	Slaughters	235	40	34.0
Plantation	830	20	4.8	Smithfield	115	13	22.6
Pleasureville	761	52	13.7	Smithland	384	314	163.5
Plum Springs	361	1	0.6	Smiths Grove	703	191	54.3
Plymouth Village	162	1	1.2	Somerset	10733	4739	88.3
Poplar Hills	377	*	*	Sonora	295	166	112.5
Powderly	748	134	35.8	South Carrollton	202	52	51.5
Prestonsburg	3558	1905	107.1	South Parkview	214	34	31.8
Prestonville	205	30	29.3	South Shore	1318	183	27.8
Princeton	6940	1442	41.6	Southgate	3266	494	30.3
Prospect	2788	*	*	Sparta	133	26	39.1
Providence	4123	710	34.4	Spring Mill	342	*	*
Raceland	2256	240	21.3	Spring Valley	400	*	*
Radcliff	19772	4252	43.0	Springfield	2875	750	52.2
Ravenna	804	106	26.4	Springlee	451	1	0.4
Raywick	157	*	*	Stamping Ground	698	61	17.5
Richlawn	435	*	*	Stanford	2686	768	57.2
Richmond	21155	7630	72.1	Stanton	2795	607	43.4
River Bluff	452	*	*	Strathmoor Gardens	300	*	*
Riverwood	506	*	*	Strathmoor Manor	391	*	*
Robinswood	250	*	*	Strathmoor Village	361	*	*
Rochester	191	4	4.2	Sturgis	2184	377	34.5
Rockport	385	24	12.5	Sycamore	70	*	*
Rolling Fields	593	*	*	Taylor Mill	5530	799	28.9
Rolling Hills	1135	18	3.2	Taylorsville	774	137	35.4
Russell	4014	1659	82.7	Ten Broeck	128	*	*
Russell Springs	2363	850	71.9	Thornhill	146	*	*
Russellville	7454	2325	62.4	Tompkinsville	2861	720	50.3
Ryland Heights	279	*	*	Trenton	378	22	11.6
Sacramento	563	74	26.3	Union	1001	180	36.0
Sadieville	255	27	21.2	Uniontown	1008	99	19.6
Saint Charles	316	42	26.6	Upton	719	85	23.6
Saint Matthews	15800	5886	74.5	Vanceburg	1713	245	28.6
Saint Regis Park	1756	24	2.7	Versailles	7269	2264	62.3
Salem	770	95	24.7	Vicco	244	79	64.8
Salt Lick	342	83	48.5	Villa Hills	7739	387	10.0
Salyersville	1917	382	39.9	Vine Grove	3586	386	21.5
Sanders	231	2	1.7	Visalia	190	54	56.8
Sandy Hook	548	90	32.8	Wallins Creek	261	93	71.3
Sardis	171	12	14.0	Walton	2034	397	39.0
Science Hill	628	50	15.9	Warfield	364	77	42.3
Scottsville	4278	1597	74.7	Warsaw	1202	180	30.0
Sebree	1510	166	22.0	Washington	795	70	17.6

TABLE E-1. ACCIDENTS AND ACCIDENT RATES FOR ALL CITIES LISTED IN THE 1990 CENSUS (1986-1990 DATA)(continued)

CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION	CITY	POPULATION	NUMBER OF ACCIDENTS (86-90)	ANNUAL ACCIDENTS PER 1000 POPULATION
Water Valley	321	30	18.7	Williamsburg	5493	1303	47.4
Waterson Park	1542	*	*	Williamstown	3023	587	38.8
Waverly	345	81	47.0	Willisburg	223	17	15.2
Wayland	359	43	24.0	Wilmore	4215	180	8.5
Wellington	593	*	*	Winchester	15799	4057	51.4
West Buechel	1587	566	71.3	Winding Falls	657	*	*
West Liberty	1887	266	28.2	Windy Hills	2452	*	*
West Point	1216	345	56.7	Wingo	568	83	29.2
Westwood	734	124	33.8	Woodburg	117	*	*
Wheatcroft	206	34	33.0	Woodburn	343	28	16.3
Wheelwright	721	66	18.3	Woodland Hills	714	*	*
Whipps Millgate	454	*	*	Woodlawn	308	*	*
White Plains	598	66	22.1	Woodlawn Park	1099	*	*
Whitesburg	1636	624	76.3	Worthington	1751	81	9.3
Whitesville	682	143	41.9	Worthington Hills	973	*	*
Wickliffe	851	244	57.3	Worthville	191	20	20.9
Wilder	691	324	93.8	Wurtland	1221	117	19.2
Wildwood	266	*	*				

* Data Not Available

APPENDIX F

SAFETY BELT SUMMARY DATA

A comparison of the accident severity, in terms of the percentage of drivers sustaining a given injury, and the type of accident is presented in Table F-1. The use of a safety belt was shown to be effective in all types of accidents. As would be expected, the largest reductions occurred as a result of wearing a safety belt in the most severe accident types. For example, non-intersection "fixed object", "ran off road", and "overturned in road" accidents were some of the most severe accident types, and there was a large reduction in severity when a safety belt was used when those types of accidents occurred. In contrast, parking lot accidents were not severe and there was little difference in accident severity when wearing or not wearing a safety belt.

Accident severity versus safety belt usage by speed was analyzed and tabulated in Table F-2. It was shown that safety belts are effective in reducing serious injuries for speed limits in the range of 25 to 55 mph. Accident severity was less for the 25-mph speed limit, as would be expected.

The severity of injury versus ejection from the vehicle was investigated, as shown in Table F-3, since a major benefit associated with wearing a safety belt is greatly reducing the chances of ejection from the vehicle. The serious consequences of ejection are shown with the percent of fatalities involving ejection being 67 times that if not ejected.

Safety belt usage by age and sex of the driver is shown in Table F-4. Usage for females was slightly above that for males. When age was considered, usage was highest for the age range of 35 through 44 years and lowest for the age range of 16 through 19 years. Usage was lower for the youngest and oldest age categories.

TABLE F-1. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE BY ACCIDENT TYPE (DRIVERS OF PASSENGER CARS) (1986-1990)

ACCIDENT TYPE	TYPE OF INJURY	NUMBER SUSTAINING A GIVEN INJURY		PERCENTAGE SUSTAINING A GIVEN INJURY		PERCENT REDUCTION*
		NOT WEARING SAFETY BELT	WEARING SAFETY BELT	NOT WEARING SAFETY BELT	WEARING SAFETY BELT	
Intersection Angle	Fatal	150	35	0.12	0.06	50**
	Incapacitating	3,892	1,258	3.24	2.08	36**
	Non-Incapacitating	7,512	2,889	6.26	4.79	23**
	Possible	8,050	3,636	6.71	6.02	10**
Intersection Rear End	Fatal	8	4	0.01	0.01	0
	Incapacitating	970	466	1.28	0.92	28**
	Non-Incapacitating	2,344	1,134	3.10	2.24	28**
	Possible	4,492	2,826	5.93	5.57	6**
Intersection Left Turn	Fatal	13	3	0.10	0.05	50
	Incapacitating	537	153	4.08	2.34	43**
	Non-Incapacitating	919	324	6.99	4.95	29**
	Possible	855	375	6.50	5.73	12
Intersection Fixed Object	Fatal	32	2	0.55	0.08	85**
	Incapacitating	577	77	9.86	3.14	68**
	Non-Incapacitating	916	230	15.66	9.39	40**
	Possible	647	190	11.06	7.76	30**
Intersection Side Swipe	Fatal	5	0	0.03	0.00	100
	Incapacitating	129	49	0.77	0.48	38**
	Non-Incapacitating	300	135	1.79	1.32	26**
	Possible	438	235	2.61	2.30	12
Non-Intersection Rear End	Fatal	44	5	0.04	0.01	75**
	Incapacitating	1,705	723	1.53	1.07	30**
	Non-Incapacitating	3,963	1,770	3.57	2.62	27**
	Possible	7,345	4,131	6.61	6.10	8**
Non-Intersection Head On	Fatal	438	50	4.29	1.71	60**
	Incapacitating	1,313	299	12.87	10.24	20**
	Non-Incapacitating	1,363	350	13.36	11.98	10
	Possible	1,095	336	10.73	11.50	-7
Non-Intersection Sideswipe	Fatal	115	11	0.25	0.07	72**
	Incapacitating	2,002	375	4.27	2.36	45**
	Non-Incapacitating	3,060	664	6.52	4.17	36**
	Possible	3,070	761	6.55	4.78	27**
Non-Intersection Vehicle Parked	Fatal	14	2	0.07	0.03	57
	Incapacitating	387	63	1.85	1.05	43**
	Non-Incapacitating	889	139	4.25	2.31	46**
	Possible	664	130	3.18	2.16	32**
Non-Intersection Fixed Object	Fatal	600	42	1.50	0.26	83**
	Incapacitating	4,922	855	12.31	5.22	58**
	Non-Incapacitating	7,321	1,907	18.30	11.64	36**
	Possible	5,120	1,878	12.80	11.47	10**
Non-Intersection Run Off Road	Fatal	302	21	1.38	0.25	82**
	Incapacitating	2,749	532	12.60	6.34	50**
	Non-Incapacitating	4,599	1,143	21.08	13.62	35**
	Possible	3,461	1,234	15.87	14.70	7
Non-Intersection Overturned In Road	Fatal	66	2	2.11	0.14	93**
	Incapacitating	477	105	15.24	7.24	52**
	Non-Incapacitating	718	288	22.94	19.86	13
	Possible	559	247	17.86	17.03	5
Non-Intersection Parking Lot	Fatal	2	0	0.00	0.00	DNA
	Incapacitating	182	40	0.21	0.14	33**
	Non-Incapacitating	444	119	0.52	0.42	19**
	Possible	808	292	0.95	1.03	-8**

* A negative sign means the percentage sustaining a given injury while wearing safety belt was higher than that when not wearing a safety belt.

** Statistically significant change (probability of 0.99).

TABLE F-2. ACCIDENT SEVERITY VERSUS SAFETY BELT USAGE BY SPEED LIMIT (DRIVERS OF PASSENGER CARS)*

SPEED LIMIT (MPH)	TYPE OF INJURY	PERCENTAGE SUSTAINING A GIVEN INJURY: NOT WEARING SAFETY BELT	PERCENTAGE SUSTAINING A GIVEN INJURY: WEARING SAFETY BELT	PERCENT REDUCTION**
25	FATAL	0.03	0.01	67
	INCAPACITATING	0.83	0.75	10
	NON-INCAPACITATING	2.95	1.97	33
	POSSIBLE	3.97	3.26	18
35	FATAL	0.08	0.01	88
	INCAPACITATING	2.31	1.23	47
	NON-INCAPACITATING	4.88	3.14	36
	POSSIBLE	5.62	4.74	16
45	FATAL	0.17	0.03	82
	INCAPACITATING	3.22	1.41	56
	NON-INCAPACITATING	6.13	3.84	37
	POSSIBLE	7.64	6.85	10
55	FATAL	0.90	0.21	77
	INCAPACITATING	7.13	3.62	49
	NON-INCAPACITATING	10.41	7.16	31
	POSSIBLE	9.08	8.55	6

* Based on 1985-1989 accident data.

** A negative sign means the percentage sustaining a given injury while wearing a safety belt was higher than that when not wearing a safety belt.

TABLE F-3. SEVERITY OF INJURY VERSUS EJECTION (DRIVERS OF PASSENGER CARS)*

TYPE OF INJURY	PERCENT WITH GIVEN INJURY: EJECTED	PERCENT WITH GIVEN INJURY: NOT EJECTED	PERCENT EJECTED/ PERCENT NOT EJECTED
FATAL	9.74	0.15	67
INCAPACITATING	26.59	2.55	10
NON-INCAPACITATING	13.68	4.91	3
POSSIBLE	9.94	5.82	2

* Based on 1986-1990 accident data.

TABLE F-4. SAFETY BELT USAGE BY AGE AND SEX (DRIVERS OF PASSENGER CARS)*

VARIABLE	CATEGORY	PERCENT USAGE: 1986-1990	PERCENT USAGE: 1990
AGE	16-19	21.8	30.6
	20-24	29.9	42.7
	25-34	35.1	46.3
	35-44	37.5	49.6
	45-54	35.7	47.9
	55-64	34.1	46.5
	65 OR OLDER	30.0	41.2
SEX	MALE	30.2	41.3
	FEMALE	36.5	49.2

* Based on 1986-1990 accident data.