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16. Abstract  In this study, two types of accident rates were determined. First, accident rates were calculated based on 1983 data. Secondly, the 1983 data were combined with the 1980, 1981, and 1982 data to calculate long-term accident statistics to reflect a four-year average.  Comparison of 1983 to combined 1980 through 1982 rates show that the rates have remained remarkably stable. Several methods of classifying highways were used when determining average rates. Average and critical accident rates were calculated for use in the high-accident location identification program. Also, average and critical numbers of accidents were determined.			
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TRAFFIC ACCIDENT RATES IN KENTUCKY (1983)

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## INTRODUCTION

Kentucky has a systematic procedure to identify locations that have abnormal rates or numbers of accidents. However, before this procedure may be utilized, average accident rates and numbers must be known. Those average rates and numbers must be determined for appropriate highway categories and for rural and urban areas. The primary objective of this study was to determine average accident statistics in Kentucky for 1983. Those statistics were then used in the high-accident location identification program. Statewide accident statistics have previously been determined for 1978 (1), 1980 (2), 1981 (3), and 1982 (4). Calculating accident rates on an annual basis enables the most recently available data to be used in the program. Also, several years of data may be combined when a long-term rate is desired, and accident trends may be analyzed. In this study, two types of accident rates were determined. First, accident rates were calculated based on 1983 data. Secondly, the 1983 data were combined with the 1980, 1981, and 1982 data to calculate long-term accident statistics that reflect a four-year average.

Statewide rural and urban accident rates were calculated by highway classification, which was based primarily on number of lanes as used in the high-accident location program. Rates using other classification methods (functional classification, federal-aid system, and administrative system) also were determined.

The statistics presented apply only to streets and highways having route numbers, mileposts, and traffic volumes. Those requirements limited available data, particularly in cities. Rates for counties and cities used 1980 through 1983 data to increase the available data base.

The available information also was used to compute accident rates as a function of other variables such as access control. Accidents also were classified by the type of location.

## PROCEDURE

Two data bases were used to obtain statistics presented in this report. Those were the 1983 accident file and the 1983 statewide mileage file. The necessary accident information was obtained from the accident file; traffic volumes and roadway classifications were obtained from the statewide mileage file.

The same computer program used in previous analyses was used with minor modifications to allow some additional summaries. In this program, a record is first read from the statewide mileage file and checked to determine whether traffic volume, route, and milepost data are present. Where those are not all present, the record is omitted from the analysis since all information is necessary to locate accidents and determine rates. When all information is present, accident information for the roadway section is obtained from the accident file. The program is written so that each data base is read only once.

General accident statistics for 1983 were compared to those for 1980, 1981, and 1982. The rates presented, except for those for cities and counties, are for 1983 only as well as 1980 through 1983. The rates listed for cities and counties apply only to combined 1980 through 1983 statistics, thereby providing a larger data base.

In addition to average rates, critical rates and numbers of accidents are needed in the high-accident location program. Both types of rates are listed. The following formula is used to calculate critical accident rates:

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

in which  $Ac$  = critical accident rate,

$Aa$  = average accident rate,

$K$  = constant related to level of statistical significance selected (a  $P$  of 0.995 was used giving a  $K$  of 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:

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

in which  $Nc$  = critical number of accidents and

$Na$  = average number of accidents.

## RESULTS

The accident statistics apply either to 1983 only or for the combined years of 1980 through 1983. All statistics apply only for streets and highways having known traffic volumes, route numbers, and mileposts included on the statewide mileage file.

A comparison of 1980, 1981, 1982, and 1983 accident statistics is shown in Table 1. The various accident rates have remained remarkably constant over this four-year period. For example, the overall accident rate has ranged from a maximum of 318 accidents per 100 million vehicle-miles (ACC/100 MVM) in 1981 to 310 ACC/100 MVM in 1980. The overall rate of 315 ACC/100 MVM was identical to the 1980 through 1982 average. The largest change was a 7.8 percent decrease in the fatal accident rate in 1983 compared to the three-year (1980-1982) average.

The estimated total vehicle-miles travelled in Kentucky in 1983 were 26,719 million. There were 127,278 accidents reported on the state police accident file in 1983; this yields a statewide accident rate of 477 ACC/100 MVM. This compares to 487 ACC/100 MVM in 1982, 497 ACC/100 MVM in 1981 and 509 ACC/100 MVM in 1980. The rates show a slight but constant decline over the past several years. The rates are substantially higher than that computed when only routes with a known route number, mileposts, and traffic volume are considered.

## HIGHWAY TYPE

Accident rates needed 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, except that four-lane highways are separated into divided and undivided highways. Also, interstates and parkways are classified separately. Rates for rural highways for a one-year period (1983) are listed in Table 2, while 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 was determined. The number of accidents for each section was then located on 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, the small sample of three-lane highways had the highest rate, when either all accidents or injury accidents were considered (Table 2). One-lane highways also had high rates. Interstates had the lowest rates, followed closely by parkways. The advantage of providing a median is shown when comparing rates for four-lane divided (no access control) and four-lane undivided highways. The overall accident rate for the divided highway 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 closely by two-lane highways (Table 3). Those two highway types also had the highest injury and fatal accident rates. The lowest rates were on interstates and parkways. The rate on six-lane interstates (138 ACC/100 MVM) was slightly less than on four-lane interstates (143 ACC/100 MVM), although traffic volumes on six-lane sections were substantially greater. Volume, in terms of vehicles per lane, was similar for the four- and six-lane sections.

Tables 2 and 3 show that overall total accident rates on urban highways were over twice that on rural highways. Also, the injury rate on urban highways was about 50 percent greater than that for rural highways. However, the fatal accident rate on urban highways was only one-half that on rural highways.

Four-year period (1980-1983), rate data are presented in Tables 4 and 5. For any given highway type, the rates for 1983 are similar to those for the combined years of 1980 through 1983. Using 1980 through 1983 data provides a longer-term alternative than using 1983 data only.

The variation in accident rates by rural and urban highway-type classifications is given in Table 6. This table shows how stable the rates have been over the time period. The 1983 rates were more than 10 percent different from the 1980-1982 average rates in only two instances.

Average rates listed in Tables 2 and 3 (1983) or Tables 4 and 5 (1980-1983) 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 7 for 1983 and Table 8 for 1980 through 1983.

Kentucky's procedure for identifying high-accident locations first 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 9 for 1983 and Table 10 for 1980 through 1983. The critical numbers of accidents listed in Tables 9 and 10 are used to establish the "number of accidents" criteria for determining the initial list of locations. Critical numbers of accidents for various section lengths were determined for each highway type using Equation 2. Results are presented in tables in APPENDIX A (for one- and four-year periods). Section lengths up to 20 miles for rural roads and up to 10 miles for urban roads were included.

After the initial list of locations meeting the critical number criteria 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 B (for one- and four-year periods). 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 C (for one- and four-year periods). Those rates are presented in units of accidents per million vehicles and also were determined using Equation 1.

#### LOCATION ANALYSIS

Descriptions of locations of accidents are beneficial when analyzing potential high-accident sites. Directional analysis codes have been developed that allow an analysis by location. (5). A summary of 1980 through 1983 accident data by the major location categories is given in Table 11 for the various highway types. A detailed description of the accidents may be obtained by analysis of the detailed directional analysis codes.

Accidents are divided into intersection and "section or midblock" categories in Table 11. The percentages vary significantly by location and highway type. Almost one-half of the urban accidents occurred at an intersection compared to slightly less than 20 percent for rural accidents. The percentage of intersection accidents was highest for four-lane divided (no access control) and four-lane undivided highways and lowest for interstates and parkways.

#### HIGHWAY SYSTEM CLASSIFICATION

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. Data for 1980 through 1983 were used to establish long-term rates. Following is a summary of the findings.

Average statewide rates by functional classification are listed in Table 12. 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 rate was for urban minor arterials followed by urban principal arterials (non-interstate or freeway) and urban collectors. The lowest overall rates were for rural principal arterials (interstate) followed by urban principal arterials (interstate and other freeway). Injury accident rates for the various categories were ordered similar to overall accident rates. However, fatal accident rates were different. The highest fatal accident rates were for rural collectors and minor arterials. The lowest fatal accident rates were for urban and rural principal arterials (interstate).

Statewide accident rates by federal-aid system are shown in Table 13. The highest rate was on the federal-aid urban system and the lowest rate was on the interstate system. The federal-aid primary, federal-aid secondary, and non-federal-aid systems had similar rates.

Statewide accident rates by administrative classification are listed in Table 14. The rate for the primary system was lowest, and rates for the secondary, rural secondary, and unclassified systems were similar.

#### COUNTY AND CITY

Accident rates for counties and incorporated cities having populations over 1,000 are given in Tables 15 and 16, respectively. As noted before, those rates are for roads having known volumes, route numbers, and mileposts. Similar rates are used in the problem identification section of the Kentucky Highway Safety Plan (6). However, in that report, rates for cities were calculated using population rather than vehicle-miles as the exposure measure, and rates for counties were calculated using an estimate of the total miles driven in each county. Use of vehicle-miles travelled would be the optimum exposure measure, but there is only a limited mileage for which that information is available (especially for individual cities). For this reason, 1980 through 1983 data were combined in Tables 15 and 16 to provide a larger and more reliable data base.

Counties and cities were divided into categories based on population. Average rates for the various categories were calculated, and the counties and cities having the highest accident rates in their population category are listed (Tables 17 and 18).

Mason County had the highest county accident rate followed by Marion and Campbell Counties. Lyon County had the lowest accident rate followed by Wolfe County. Counties having the highest rate in their population category included Campbell, Jessamine, Mason, Lewis, and Spencer.

There are 162 cities included in Table 16. The list of incorporated cities having populations over 1,000 was obtained from a problem

identification report that included 186 cities (7). However, cities having less than one mile of highway with known volumes, route numbers, and mileposts were excluded from this analysis because of the limited data available. Those were basically the smaller cities. Cities having the highest accident rate in their population category included Lexington, Owensboro, Florence, Shelbyville, Grayson, and Falmouth.

The counties and cities identified as having the highest rates were very similar to those identified in the previous report (4). This illustrates the year-to-year consistency of accident data.

#### OTHER VARIABLES

Information available from the statewide mileage file allowed rates to be calculated as a function of numerous variables. A few of those variables were selected for analysis.

The benefits of providing a median and access control are shown in Tables 19 and 20, respectively. Increasing the median width to over 30 feet provides an additional accident-rate reduction as shown in Table 19.

An analysis of accident rates for rural highways by federal-aid system and terrain is presented in Table 21. 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 and the highest rate was for mountainous terrain.

Rates by rural-urban designation are shown in Table 22. 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 shows that US-signed routes have a slightly higher rate than state-marked routes, with interstates having a much lower rate (Table 23). 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 24. For interstates, which have high design criteria, the accident rate increased with volume. For federal-aid primary and non-federal aid highways, rates were highest for the lowest and highest volume ranges. For federal-aid urban and federal-aid secondary highways, rates decreased with volume. One reason for a high rate at low-volume locations is the fact that a few accidents may increase the rate substantially. A rate given in terms of accidents per mile increases dramatically with increasing traffic volume. Lower volume roads also are constructed to less stringent design standards, which could contribute to a higher rate.

Of 127,278 police-reported accidents in 1983, 70,413 (55 percent) could be related to a highway with a known traffic volume, route, and milepoint. Approximately 30 percent of the remaining accidents (about 14 percent of all accidents) occurred in parking lots. Others occurred on county and city streets off the state-maintained system. A comparison of total statewide mileage by federal-aid classification with the mileages included in this analysis for the various federal-aid classifications (Table 13) shows where the remainder of the missing accidents may be found. Except for the federal-aid urban category, the mileages listed in Table 13 agree closely with total statewide mileages. However, the miles of federal-aid urban highways listed in Table 13 are only slightly more than one-half of the statewide total. Information must have been missing from the remaining sections of federal-aid urban highways, which excluded them from the analysis.

### SUMMARY

Average accident rates, using 1983 accident data only as well as combined 1980 through 1983 data, were calculated for Kentucky highways. Comparison of 1983 to combined 1980 through 1982 rates show that the rates have remained remarkably stable. Several methods of classifying highways were used when determining average rates. Those average rates may be used in the high-accident location identification program. Average and critical numbers of accidents also were determined for use in the high-accident location program.

Tables that list critical numbers of accidents and critical rates for highway sections and spots as a function of highway type, traffic volume, and section length are presented in the appendices. Two sets of tables are included. They apply to either a one-year or four-year period. This allows use of both short- and long-term critical accident rates. Those tables provide a convenient method for determining whether specific locations have accident problems.

Rates were calculated as a function of several other variables, and a general description of the types of accidents occurring on specific types of highways was given using the locational analysis code. Rates, using combined 1980 through 1983 data, were calculated for individual counties and for incorporated cities having populations over 1,000. Counties and cities having the highest rates for their population category were identified.

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TABLE 1. COMPARISON OF 1980, 1981, and 1982 ACCIDENT STATISTICS\*

STATISTIC	1980	1981	1980-1982		1983	PERCENT CHANGE
			1982	AVERAGE		
Accidents	67,262	68,389	68,251	67,967	70,413	+3.6
Mileage	24,723	24,763	24,837	24,774	24,875	+0.4
Accidents per Mile	2.72	2.76	2.75	2.74	2.83	+3.3
Vehicle Miles (Billion)	21.683	21.476	21.607	21.589	21.376	+3.6
AADT	2,402	2,375	2,383	2,387	2,464	+3.2
Accident Rate**	310	318	316	315	315	+0.0
Fatal Accident Rate**	2.77	2.85	2.86	2.83	2.61	-7.8
Injury Accident Rate**	84	89	88	87	89	+2.3

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

\*\* Accident rates are given in terms of accidents per 100 million vehicle-miles (ACC/100 MVM).

TABLE 2. STATEWIDE RURAL ACCIDENT RATES BY HIGHWAY TYPE CLASSIFICATION (1983)

HIGHWAY TYPE	TOTAL MILEAGE	AADT	ACCIDENT RATES (ACCIDENTS PER 100 MVM)		
			ALL	INJURY	FATAL
One-Lane	335	190	616	134	0.0
Two-Lane	21,265	1,158	300	104	4.3
Three-Lane	14	2,222	675	158	17.5
Four-Lane Divided (No Access Control)	247	6,954	167	61	3.3
Four-Lane Undivided	65	8,016	411	122	4.7
Interstate	578	16,782	56	17	0.8
Parkway	585	3,850	73	22	1.0
All	23,089	1,711	220	75	3.2

TABLE 3. STATEWIDE URBAN ACCIDENT RATES BY HIGHWAY  
TYPE CLASSIFICATION (1983)

HIGHWAY TYPE	TOTAL MILEAGE	AADT	ACCIDENT RATES (ACCIDENTS PER 100 MVM)		
			ALL	INJURY	FATAL
Two-Lane	1,154	5,930	709	172	2.0
Four-Lane Divided (No Access Control)	239	18,130	503	122	1.5
Four-Lane Undivided	177	17,599	757	164	1.9
Interstate	138	44,121	75	34	1.1
Parkway	40	6,399	98	27	1.1
All	1,789	12,180	486	115	1.6

TABLE 4. STATEWIDE RURAL ACCIDENT RATES BY HIGHWAY  
TYPE CLASSIFICATION (1980-1983)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENT RATES (ACCIDENTS PER 100 MVM)		
			ALL	INJURY	FATAL
One-Lane	337	186	581	139	4.4
Two-Lane	21,372	1,149	310	106	4.6
Three-Lane	14	2,219	758	238	8.8
Four-Lane Divided (No Access Control)	211	7,676	169	60	2.6
Four-Lane Undivided	62	9,168	364	102	3.7
Interstate	590	16,799	52	16	0.7
Parkway	605	3,698	69	22	1.4
All	23,196	1,699	225	76	3.4

\*Average of the four years.

TABLE 5. STATEWIDE URBAN ACCIDENT RATES BY HIGHWAY  
TYPE CLASSIFICATION (1980-1983)

HIGHWAY TYPE	TOTAL MILEAGE*	AADT	ACCIDENT RATES (ACCIDENTS PER 100 MVM)		
			ALL	INJURY	FATAL
Two-Lane	1,018	6,368	678	160	2.2
Four-Lane Divided (No Access Control)	205	18,418	491	120	1.7
Four-Lane Undivided	179	17,964	737	152	2.0
Interstate	140	43,290	125	33	1.2
Parkway	34	5,624	97	27	1.9
All	1,605	12,645	490	111	1.7

\*Average of the four years.

TABLE 6. COMPARISON OF 1980, 1981, 1982, AND 1983 ACCIDENT RATES BY  
RURAL AND URBAN HIGHWAY TYPE CLASSIFICATION

LOCATION	HIGHWAY TYPE	ACCIDENT RATE (ACC/100 MVM)					PERCENT CHANGE
		1980	1981	1982	1980-1983 AVERAGE	1983	
Rural	One-Lane	574	544	578	565	616	+9
	Two-Lane	306	328	311	315	300	-5
	Three-Lane	775	799	809	794	675	-15
	Four-Lane Divided (No Access Control)	159	180	167	169	167	-1
	Four-Lane Undivided	367	380	309	352	411	+17
	Interstate	50	51	51	51	56	+9
	Parkway	66	68	72	69	73	+1
	All	225	230	225	227	220	-3
Urban	Two-Lane	723	711	668	701	709	+1
	Four-Lane Divided (No Access Control)	413	539	509	487	503	+3
	Four-Lane Undivided	692	760	740	731	757	+3
	Interstate	150	133	141	141	75	-5
	Parkway	95	102	92	96	98	+2
	All	483	499	491	491	486	-1

TABLE 7. STATEWIDE ACCIDENT RATES FOR "SPOTS" BY HIGHWAY  
TYPE CLASSIFICATION (1983)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER SPOT PER YEAR	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	143	1,117	0.069	1.86
	Two-Lane	26,997	70,883	0.423	0.90
	Three-Lane	77	47	0.811	2.02
	Four-Lane Divided (No Access Control)	1,047	822	2.538	0.50
	Four-Lane Undivided	783	217	2.93	1.23
	Interstate	2,101	1,910	6.13	0.18
	Parkway	601	1,950	1.41	0.22
	All Rural	31,749	76,963	0.625	0.66
Urban	Two-Lane	17,709	3,847	2.16	2.13
	Four-Lane Divided (No Access Control)	7,949	797	6.62	1.51
	Four-Lane Undivided	8,625	590	6.42	2.28
	Interstate	3,563	460	16.1	0.48
	Parkway	91	134	2.34	0.29
	All Urban	38,664	5,964	4.45	1.46

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

TABLE 8. STATEWIDE ACCIDENT RATES FOR "SPOTS" BY HIGHWAY  
TYPE CLASSIFICATION (1980-1983)

RURAL OR URBAN	HIGHWAY TYPE	NUMBER OF ACCIDENTS	NUMBER OF SPOTS*	MILLION VEHICLES PER SPOT	ACCIDENTS PER MILLION VEHICLES PER SPOT
Rural	One-Lane	532	1,125	0.272	1.74
	Two-Lane	111,626	71,243	1.678	0.93
	Three-Lane	344	48	3,240	2.22
	Four-Lane Divided (No Access Control)	3,961	704	11.207	0.50
	Four-Lane Undivided	3,022	206	13.385	1.10
	Interstate	7,620	1,967	24.527	0.15
	Parkway	2,274	2,018	5.399	0.21
	All Rural	129,413	77,320	2.481	0.67
Urban	Two-Lane	67,413	3,421	9.297	2.12
	Four-Lane Divided (No Access Control)	27,321	687	26.890	1.48
	Four-Lane Undivided	34,514	594	26.227	2.22
	Interstate	12,939	467	63.203	0.44
	Parkway	272	113	8.211	0.29
	All Urban	144,664	5,351	18.461	1.46

\* Average of four years.

TABLE 9. STATEWIDE AVERAGE AND CRITICAL NUMBERS OF ACCIDENTS FOR "SPOTS"  
AND ONE-MILE SECTIONS BY HIGHWAY TYPE CLASSIFICATION (1983)\*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE-MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	0.13	2	0.43	3
	Two-Lane	0.38	3	1.27	5
	Three-Lane	1.64	6	5.50	13
	Four-Lane Divided (No Access Control)	1.27	5	4.24	11
	Four-Lane Undivided	3.61	10	12.05	22
	Interstate	1.10	5	3.67	10
	Parkway	0.31	3	1.03	5
	All Rural	0.41	3	1.38	5
Urban	Two-Lane	4.60	11	15.35	26
	Four-Lane Divided (No Access Control)	9.97	19	33.26	49
	Four-Lane Undivided	14.62	25	48.73	68
	Interstate	7.75	16	25.82	40
	Parkway	0.68	4	2.28	7
	All Urban	6.48	14	21.61	35

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

TABLE 10. STATEWIDE AVERAGE AND CRITICAL NUMBERS OF ACCIDENTS  
FOR "SPOTS" AND ONE-MILE SECTIONS BY HIGHWAY TYPE  
CLASSIFICATION (1980-1983)\*

RURAL OR URBAN	HIGHWAY TYPE	ACCIDENTS PER SPOT		ACCIDENTS PER ONE-MILE SECTION	
		AVERAGE	CRITICAL NUMBER	AVERAGE	CRITICAL NUMBER
Rural	One-Lane	0.48	3	1.58	6
	Two-Lane	1.57	6	5.23	12
	Three-Lane	7.17	15	24.58	38
	Four-Lane Divided (No Access Control)	5.63	13	18.78	31
	Four-Lane Undivided	14.67	25	48.75	68
	Interstate	3.87	10	12.92	23
	Parkway	1.13	5	3.76	10
	All Rural	1.67	6	5.58	13
Urban	Two-Lane	19.71	32	66.23	88
	Four-Lane Divided (No Access Control)	39.79	57	133.27	164
	Four-Lane Undivided	58.11	79	192.82	230
	Interstate	27.71	42	92.43	118
	Parkway	2.41	7	8.00	16
	All Urban	27.04	41	90.14	116

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

TABLE 11. SUMMARY OF ACCIDENTS BY LOCATION FOR VARIOUS  
HIGHWAY TYPES (1980-1983 DATA)

LOCATION	HIGHWAY TYPE	PERCENT OF TOTAL BY LOCATION				
		INTERSECTION	SECTION OR MIDBLOCK	BRIDGE	INTERCHANGE RAMP	OTHER
Rural	One-Lane	6.2	92.1	1.3	0.0	0.5
	Two-Lane	18.4	80.4	0.7	0.2	0.4
	Three-Lane	19.3	80.3	0.0	0.0	0.4
	Four-Lane Divided (No Access Control)	32.0	65.8	0.8	1.1	0.4
	Four-Lane Undivided	36.1	62.5	0.7	0.4	0.3
	Interstate	1.6	94.3	1.6	2.4	0.1
	Parkway	3.0	92.8	1.9	1.2	1.8
	All Rural	18.1	80.5	0.8	0.4	0.3
Urban	Two-Lane	49.0	49.6	0.6	0.3	0.5
	Four-Lane Divided (No Access Control)	51.7	45.8	0.2	1.8	0.4
	Four-Lane Undivided	51.7	47.1	0.2	0.7	0.4
	Interstate	11.9	71.9	1.9	14.2	0.1
	Parkway	19.8	66.9	0.8	12.3	0.3
	All Urban	46.9	50.2	0.5	1.9	0.4



TABLE 12. STATEWIDE ACCIDENT RATES BY FUNCTIONAL CLASSIFICATION  
(1980-1983 DATA)

LOCATION	FUNCTIONAL CLASSIFICATION	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATES (ACC PER 100 MVM)		
				ALL	INJURY	FATAL
Rural	Principal Arterial, Interstate	591	17,041	52	16	0.8
	Principal Arterial, Other	1,489	4,936	157	53	2.5
	Minor Arterial	1,817	2,906	298	96	4.7
	Major Collector	7,257	1,464	342	115	5.0
	Minor Collector	9,219	483	359	127	4.9
	Local System	2,827	483	295	85	3.2
Urban	Principal Arterial, Interstate	144	43,473	141	32	0.9
	Principal Arterial, Other Freeway	72	13,369	113	29	0.8
	Principal Arterial, Other	341	14,670	666	151	2.0
	Minor Arterial	714	8,302	704	162	2.2
	Collector	201	3,013	655	166	2.7
	Local System	76	2,528	402	96	2.2

TABLE 13. STATEWIDE ACCIDENT RATES BY FEDERAL-AID SYSTEM  
(1980-1983 DATA)

FEDERAL-AID SYSTEM	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Interstate	20,596	739	22,464	85
Federal-Aid Primary (other than Interstate)	85,663	3,743	4,872	322
Federal-Aid Urban	84,704	1,081	7,549	711
Federal-Aid Secondary (Rural Only)	52,778	7,271	1,471	338
Non-Federal Aid	30,674	12,108	498	347

TABLE 14. STATEWIDE ACCIDENT RATES BY ADMINISTRATIVE CLASSIFICATION  
(1980-1983 DATA)

ADMINISTRATIVE CLASSIFICATION	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Primary	126,144	4,649	7,930	234
Secondary	99,696	7,659	1,974	452
Rural Secondary	38,520	9,816	621	433
Unclassified	9,955	2,684	595	427

TABLE 15. COMBINED 1980-1983 ACCIDENT RATES BY COUNTY

COUNTY	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Adair	976	253	900	294
Allen	969	178	1,070	350
Anderson	917	132	1,730	275
Ballard	681	149	1,240	253
Barren	2,705	310	2,380	251
Bath	465	145	1,300	169
Bell	2,429	213	2,360	330
Boone	5,780	222	6,030	296
Bourbon	1,724	151	1,980	395
Boyd	4,198	145	5,150	385
Boyle	1,826	137	2,610	350
Bracken	244	131	700	183
Breathitt	990	253	1,210	221
Breckinridge	1,064	312	780	299
Bullitt	2,613	167	5,110	207
Butler	685	226	960	216
Caldwell	1,038	221	1,470	219
Calloway	2,150	236	1,540	405
Campbell	6,491	161	5,610	492
Carlisle	300	138	870	171
Carroll	1,066	125	2,330	251
Carter	1,307	266	1,760	191
Casey	519	222	850	189
Christian	4,711	436	2,670	277
Clark	2,419	170	3,410	286
Clay	1,323	241	1,210	310
Clinton	496	146	890	261
Crittenden	631	169	1,290	198
Cumberland	252	153	800	142
Daviess	6,879	309	3,880	392
Edmonson	544	142	1,200	218
Elliott	292	141	490	289
Estill	821	139	1,100	368
Fayette	15,297	273	11,560	332
Fleming	879	224	730	369
Floyd	3,329	274	2,390	349
Franklin	3,535	181	3,790	353
Fulton	475	177	950	193
Gallatin	558	102	2,770	135
Garrard	800	127	1,330	325

TABLE 15. COMBINED 1980-1983 ACCIDENT RATES BY COUNTY (continued)

COUNTY	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Grant	1,224	173	3,780	128
Graves	2,594	432	1,280	321
Grayson	1,491	300	1,110	306
Green	659	171	890	297
Greenup	1,867	194	2,400	275
Hancock	394	121	940	237
Hardin	6,487	396	4,010	280
Harlan	3,015	290	2,010	355
Harrison	945	156	1,060	392
Hart	925	276	2,150	107
Henderson	2,918	279	3,130	308
Henry	949	207	1,590	198
Hickman	378	196	680	193
Hopkins	3,710	372	2,520	271
Jackson	457	167	750	251
Jefferson	56,432	429	19,400	440
Jessamine	1,922	107	2,850	432
Johnson	1,716	205	1,590	361
Kenton	12,280	201	9,180	456
Knott	956	198	1,170	284
Knox	1,593	207	1,970	269
Larue	886	162	1,620	232
Laurel	3,107	311	3,140	218
Lawrence	764	217	1,220	197
Lee	151	109	670	235
Leslie	722	166	1,150	259
Letcher	1,269	240	1,550	234
Lewis	800	193	710	400
Lincoln	1,006	217	1,500	211
Livingston	617	194	1,050	208
Logan	1,787	333	1,120	327
Lyon	354	133	2,140	85
McCracken	6,087	275	3,490	434
McCreary	684	187	960	262
McLean	577	197	770	261
Madison	4,518	262	4,690	252
Magoffin	838	189	850	358
Marion	1,445	1,020	1,020	529
Marshall	1,890	282	2,530	182
Martin	471	120	860	314

TABLE 15. COMBINED 1980-1983 ACCIDENT RATES BY COUNTY (continued)

COUNTY	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Mason	2,206	169	1,670	537
Meade	1,503	224	1,400	327
Menifee	257	104	590	289
Mercer	1,124	148	1,840	283
Metcalfe	381	175	730	207
Monroe	459	180	780	223
Montgomery	1,590	144	2,220	341
Morgan	596	223	630	291
Muhlenberg	2,532	281	1,900	325
Nelson	2,225	281	1,630	333
Nicholas	237	114	820	174
Ohio	1,440	311	1,390	228
Oldham	1,653	147	2,800	276
Owen	548	222	470	361
Owsley	221	103	490	299
Pendleton	614	154	760	359
Perry	2,691	222	2,240	371
Pike	5,914	410	2,380	415
Powell	546	148	1,500	169
Pulaski	3,288	370	2,050	296
Robertson	51	74	370	128
Rockcastle	991	207	3,160	104
Rowan	1,651	155	2,070	352
Russell	662	173	1,010	261
Scott	1,961	204	4,330	152
Shelby	2,066	245	2,580	224
Simpson	1,195	170	2,620	184
Spencer	431	117	620	407
Taylor	1,432	188	1,330	392
Todd	563	185	980	212
Trigg	748	212	1,260	192
Trimble	379	94	1,020	271
Union	1,243	264	1,050	308
Warren	7,423	340	4,440	337
Washington	734	192	950	276
Wayne	964	203	860	380
Webster	1,057	241	1,180	255
Whitley	2,131	255	4,760	120
Wolfe	421	158	1,970	93
Woodford	1,740	140	3,420	249

TABLE 16. COMBINED 1980-1983 ACCIDENT RATES FOR INCORPORATED  
CITIES HAVING POPULATIONS OVER 1,000\*

CITY	POPULATION	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC 100/MVM)
Adairville	1,105	14	2.1	1,440	317
Albany	2,083	168	4.7	3,680	665
Alexandria	4,735	150	2.3	6,280	711
Ashland	27,064	2,665	15.0	15,480	786
Auburn	1,467	82	3.7	2,170	700
Augusta	1,455	12	1.3	810	748
Barbourville	3,233	380	7.2	4,100	882
Bardstown	6,155	605	4.4	9,280	1,015
Beattyville	1,068	49	3.5	2,970	322
Beaver Dam	3,185	154	2.5	3,540	1,191
Benton	3,700	453	12.2	3,280	776
Berea	8,226	443	8.1	6,590	568
Bowling Green	40,450	2,867	21.0	10,460	893
Brandenburg	1,831	56	3.2	2,450	490
Burgin	1,008	18	2.7	2,310	198
Burkesville	2,051	57	3.7	3,620	291
Cadiz	1,661	177	2.9	6,010	696
Calhoun	1,080	36	1.5	1,210	1,353
Calvert City	2,388	44	4.9	2,830	217
Campbellsville	8,715	447	6.8	5,500	818
Carlisle	1,757	26	1.7	3,500	300
Carrollton	3,967	169	2.9	4,250	938
Catlettsburg	3,005	365	6.2	12,720	317
Cave City	2,098	57	2.8	5,370	260
Central City	5,214	443	6.9	5,230	841
Clay	1,356	53	2.7	2,380	564
Clay City	1,276	12	5.0	2,080	78
Clinton	1,720	70	4.8	2,170	460
Cloverport	1,585	63	2.7	2,430	659
Cold Springs	2,117	303	1.2	20,720	835
Columbia	3,710	291	6.5	2,970	1,031
Corbin	8,075	689	14.0	7,280	463
Covington	49,013	5,689	25.2	27,470	563
Cumberland	3,712	9	3.6	3,860	44
Cynthiana	5,881	249	4.4	4,130	939
Danville	12,942	702	7.4	8,870	733
Dawson Springs	3,275	161	6.4	3,250	530
Dry Ridge	1,250	115	2.0	5,040	781
Earlington	2,011	39	2.3	3,370	345
Eddyville	1,949	3	2.0	1,260	81

\* Cities with a total mileage less than one mile were not included.  
When mileages for the various years were different, the higher  
mileage is given.

TABLE 16. COMBINED 1980-1983 ACCIDENT RATES FOR INCORPORATED  
CITIES HAVING POPULATIONS OVER 1,000\* (continued)

CITY	POPULATION	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC 100/MVM)
Edmonton	1,401	65	2.5	4,130	431
Elizabethtown	15,380	1,844	27.7	7,920	576
Elkhorn City	1,416	38	2.5	3,430	304
Elkton	1,815	151	3.6	3,280	876
Eminence	2,260	71	2.2	4,290	515
Erlanger	14,433	1,224	4.1	17,940	1,140
Evarts	1,234	43	1.4	2,110	998
Falmouth	2,482	114	2.2	1,930	1,842
Fleming-Neon	1,195	14	1.5	3,270	195
Flemingsburg	2,835	220	5.7	3,840	689
Florence	15,586	1,640	6.4	9,350	1,878
Fort Thomas	16,012	197	6.6	7,270	281
Frankfort	25,973	1,801	24.5	9,510	529
Franklin	7,738	454	7.7	4,480	902
Fulton	3,137	139	5.4	8,170	216
Georgetown	10,972	556	4.9	8,246	943
Glasgow	12,958	966	18.1	7,110	514
Grayson	3,423	174	2.2	2,620	2,071
Greensburg	2,377	78	1.8	3,680	806
Greenville	4,631	251	4.1	7,120	589
Hardinsburg	2,211	88	2.6	3,710	625
Harlan	3,024	437	5.5	7,830	695
Harrodsburg	7,265	560	14.6	3,510	749
Hartford	2,512	12	2.3	5,170	69
Hawesville	1,036	39	2.6	1,190	862
Hazard	5,429	636	8.8	8,420	588
Henderson	24,834	930	6.2	13,240	776
Hickman	2,894	64	6.4	1,260	542
Highland Heights	4,435	585	3.2	14,840	844
Hodgenville	2,459	188	3.6	6,900	518
Hopkinsville	27,318	2,336	75.3	3,760	565
Horse Cave	2,045	18	3.9	3,460	91
Independence	7,998	56	1.1	3,010	1,157
Irvine	2,889	215	5.1	3,890	742
Irvington	1,409	29	1.0	1,630	1,218
Jackson	2,651	98	3.5	2,030	942
Jamestown	1,441	25	1.8	2,470	386
Jenkins	3,271	53	6.3	3,580	161
Junction City	2,045	34	1.7	2,860	478
LaCenter	1,044	43	1.3	2,140	1,059

\* Cities with a total mileage under one mile were not included.  
When mileages for the various years were different, the higher  
mileage is given.

TABLE 16. COMBINED 1980-1983 ACCIDENT RATES FOR INCORPORATED  
CITIES HAVING POPULATIONS OVER 1,000\* (continued)

CITY	POPULATION	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC 100/MVM)
LaGrange	2,971	109	2.2	4,150	817
Lakeside Park	3,026	273	1.4	13,070	1,022
Lancaster	3,365	196	3.0	4,110	1,088
Lawrenceburg	5,167	234	4.5	5,290	673
Lebanon	6,590	472	6.2	6,130	851
Lebanon Junction	1,581	8	1.9	2,720	106
Leitchfield	4,533	478	6.2	4,250	1,242
Lewisport	1,832	3	1.2	3,190	54
Lexington	204,165	8,163	36.1	21,990	704
Liberty	2,206	92	9.3	2,786	243
Livermore	1,672	33	1.6	3,260	434
London	4,002	576	6.4	6,940	888
Louisa	1,832	132	2.0	5,920	764
Louisville	298,161	28,861	151.4	30,020	435
Loyall	1,210	39	1.3	1,710	1,200
Madisonville	16,979	949	40.1	2,150	753
Manchester	1,838	183	3.7	2,920	1,160
Marion	3,392	217	3.8	6,220	629
Mayfield	10,705	866	7.2	7,560	1,089
Maysville	7,982	928	9.2	6,050	1,141
Middlesboro	12,251	820	21.7	4,740	546
Monticello	5,677	580	16.0	2,160	1,150
Morehead	7,789	421	2.4	11,820	1,016
Morganfield	3,781	258	3.9	4,470	1,014
Morgantown	2,000	93	3.1	2,300	895
Mortons Gap	1,201	16	2.2	3,820	130
Mount Sterling	5,820	429	4.8	7,190	851
Mount Vernon	2,334	108	4.4	3,740	450
Mount Washington	3,997	76	1.8	2,720	1,063
Muldraugh	1,752	19	1.0	2,250	578
Munfordville	1,783	97	2.9	2,711	845
Murray	14,248	1,053	9.8	8,560	860
Newport	21,587	3,454	19.7	13,230	908
Nicholasville	10,400	597	5.2	8,020	980
Nortonville	1,336	18	2.6	5,180	91
Olive Hill	2,539	69	3.7	3,040	420
Owensboro	54,450	2,957	15.5	9,230	1,343
Owenton	1,341	102	3.3	3,640	581
Owingsville	1,419	41	2.2	2,570	496
Paducah	29,758	2,732	47.2	5,820	681

\* Cities with a total mileage under one mile were not included.  
When mileages for the various years were different, the higher  
mileage is given.



TABLE 16. COMBINED 1980-1983 ACCIDENT RATES FOR INCORPORATED  
CITIES HAVING POPULATIONS OVER 1,000\* (continued)

CITY	POPULATION	NUMBER OF ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC 100/MVM)
Paintsville	3,815	339	4.4	6,010	877
Paris	7,935	614	11.3	5,420	687
Phelps	1,126	34	2.5	2,570	362
Pikeville	4,756	631	7.7	7,660	733
Pineville	2,559	349	3.8	6,340	992
Prestonsburg	4,011	441	4.1	9,060	813
Princeton	7,073	463	18.2	2,800	622
Providence	4,434	97	4.9	3,540	383
Radcliff	14,579	1,207	13.7	9,080	665
Richmond	21,705	1,009	5.5	13,330	943
Russell	3,824	25	1.8	3,780	252
Russell Springs	1,831	116	5.7	3,290	424
Russellville	7,520	652	46.2	1,870	517
St Matthews	13,356	360	2.7	9,980	915
Salyersville	1,352	126	2.9	3,700	803
Scottsville	4,278	253	5.6	3,680	842
Sebree	1,516	51	2.5	3,920	356
Shelbyville	5,308	667	2.3	7,260	2,737
Sheperdsville	4,454	264	3.0	4,900	1,231
Shively	16,819	1,030	4.8	19,263	763
Somerset	10,649	1,146	12.1	9,070	716
South Shore	1,525	716	19.5	8,930	282
Springfield	3,179	208	4.5	3,790	835
Stanford	2,764	213	7.4	3,990	494
Stanton	2,691	63	2.9	2,190	678
Sturgis	2,293	78	2.4	4,650	479
Tompkinsville	4,366	194	5.5	3,040	794
Uniontown	1,169	16	2.2	1,753	284
Vanceburg	1,939	110	3.6	2,548	822
Versailles	6,427	635	7.5	7,790	745
Vine Grove	3,583	184	8.0	2,280	690
Walton	1,651	109	2.0	4,616	808
Warsaw	1,328	53	2.5	1,780	817
West Liberty	1,381	89	2.3	3,282	808
West Point	1,339	9	1.0	3,260	189
Whitesburg	1,525	50	2.5	6,250	219
Wickliffe	1,044	127	2.2	7,020	563
Williamsburg	5,560	228	12.7	3,960	311
Williamstown	2,509	51	2.5	3,850	363
Wilmore	3,787	33	2.2	1,520	678
Winchester	15,216	917	8.8	10,160	703
Worthington	1,948	21	1.3	2,780	398

\* Cities with a total mileage under one mile were not included.  
When mileages for the various years were different, the higher  
mileage is given.

TABLE 17. COUNTIES HAVING HIGHEST ACCIDENT RATES (1980-1983 DATA)  
(BY POPULATION CATEGORY)

POPULATION CATEGORY	NUMBER OF COUNTIES	AVERAGE RATE (ACC/100 MVM)	COUNTY	NUMBER OF ACCIDENTS (1980-1983)	ACCIDENT RATE (ACC/100 MVM)
Over 50,000	12	397	Campbell	6,491	492
25,000-50,000	26	274	Jessamine	1,922	432
15,000-24,999	26	286	Mason Marion	2,206 1,445	537 529
10,000-14,999	30	227	Lewis	800	400
Under 10,000	26	199	Spencer Owen	431 548	407 361

TABLE 18. CITIES HAVING HIGHEST ACCIDENT RATES (1980-1983 DATA)  
(BY POPULATION CATEGORY)

POPULATION CATEGORY	NUMBER OF CITIES	AVERAGE RATE (ACC PER 100 MVM)	CITY	NUMBER OF ACCIDENTS (1980-1983)	AVERAGE RATE (ACC PER 100 MVM)
Over 200,000	2	475	Lexington	8,163	704
20,000-55,000	10	724	Owensboro	2,957	1,343
10,000-19,999	17	760	Florence	1,640	1,878
5,000-9,999	22	760	Shelbyville	667	2,739
2,500-4,999	44	755	Grayson	174	2,071
1,000-2,499	67	459	Falmouth	114	1,842

TABLE 19. STATEWIDE ACCIDENT RATES BY MEDIAN TYPE (RURAL ROADS WITH FOUR OR MORE LANES)(1980-1983 DATA)

MEDIAN TYPE	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Undivided, No Median	3,159	82	9,840	268
Divided, Median Less than 30, Feet, No Barrier	3,687	217	11,571	101
Divided, Median Greater than 30 Feet, No Barrier	9,365	1,068	10,444	58

TABLE 20. STATEWIDE ACCIDENT RATES BY ACCESS CONTROL (1980-1983 DATA)

ACCESS CONTROL	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Full Control	24,290	1,416	13,962	84
Partial Control	1,612	31	14,035	254
No Control	248,351	23,349	1,691	431

TABLE 21. ACCIDENT RATES FOR RURAL HIGHWAYS BY FEDERAL-AID SYSTEM AND TERRAIN (1980-1983 DATA)

FEDERAL-AID SYSTEM	ACCIDENT RATE (ACC/100 MVM) BY TERRAIN CLASSIFICATION		
	FLAT	ROLLING	MOUNTAINOUS
Interstate	47	60	47
Federal-Aid Primary	217	229	215
Federal-Aid Secondary	239	369	333
Non-Federal Aid	263	345	343
All	233	246	270

TABLE 22. STATEWIDE ACCIDENT RATES BY RURAL-URBAN DESIGNATION (1980-1983 DATA)

RURAL-URBAN DESIGNATION	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Rural	129,413	23,195	1,700	225
Small Urban Area	46,571	818	7,360	530
Urbanized Area	98,331	788	18,210	469

TABLE 23. STATEWIDE ACCIDENT RATES BY ROUTE SIGNING IDENTIFIER (1980-1983 DATA)

ROUTE SIGNING IDENTIFIER	ACCIDENTS	TOTAL MILEAGE	AVERAGE AADT	ACCIDENT RATE (ACC/100 MVM)
Interstate	20,527	736	22,219	86
US	116,839	3,513	5,362	425
State	136,934	20,547	1,191	383

TABLE 24. RELATIONSHIP BETWEEN ACCIDENT RATE AND TRAFFIC VOLUME (1983 DATA)

VOLUME RANGE (AADT)	ACCIDENT RATE (ACC/100 MVM)				
	INTERSTATE	FEDERAL-AID PRIMARY	FEDERAL-AID URBAN	FEDERAL-AID SECONDARY	NON-FEDERAL AID
0 - 1,000	*	572	1,308	386	373
1,000-2,499	*	270	770	330	357
2,500-4,999	*	209	742	319	277
5,000-9,999	55	251	760	272	193
10,000-19,999	64	453	713	184	353
20,000-29,999	52	521	654	*	*
30,000-39,999	91	509	700	*	*
40,000 or more	162	521	450	*	*

\* No data in this volume range.

APPENDIX A  
CRITICAL "NUMBERS OF ACCIDENTS" TABLES



TABLE A-1. CRITICAL NUMBERS OF ACCIDENTS ON RURAL HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (ONE-YEAR PERIOD) (1983)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)						
	0.4	1	2	5	10	15	20
One-Lane	2	3	4	7	10	14	17
Two-Lane	3	5	8	14	23	31	39
Three-Lane	7	13	21	42	75	107	138
Four-Lane Divided (No Access Control)	6	11	17	34	60	85	109
Four-Lane Undivided	11	22	38	81	150	216	282
Interstate	6	10	15	30	53	75	96
Parkway	3	5	7	12	20	27	33

TABLE A-2. CRITICAL NUMBERS OF ACCIDENTS ON URBAN HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (ONE-YEAR PERIOD) (1983)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)					
	0.4	1	2	5	8	10
Two-Lane	14	26	46	100	152	186
Four-Lane Divided (No Access Control)	24	49	89	201	309	381
Four-Lane Undivided	32	68	124	285	442	545
Interstate	20	40	71	159	245	301
Parkway	4	7	11	21	30	36

TABLE A-3. CRITICAL NUMBERS OF ACCIDENTS ON RURAL HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (FOUR-YEAR PERIOD) (1980 - 1983)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)						
	0.4	1	2	5	10	15	20
One-Lane	4	6	9	16	27	37	47
Two-Lane	7	12	20	40	72	102	132
Three-Lane	19	38	68	152	287	419	550
Four-Lane Divided (No Access Control)	13	25	44	96	179	259	337
Four-Lane Undivided	32	68	124	285	545	802	1,056
Interstate	12	23	40	86	159	231	301
Parkway	6	10	16	31	54	77	99

TABLE A-4. CRITICAL NUMBERS OF ACCIDENTS ON URBAN HIGHWAYS BY HIGHWAY TYPE AND SECTION LENGTH (FOUR-YEAR PERIOD) (1980 -1983)

HIGHWAY TYPE	CRITICAL NUMBER OF ACCIDENTS FOR THE GIVEN SECTION LENGTH (MILES)					
	0.4	1	2	5	8	10
Two-Lane	41	88	163	379	590	729
Four-Lane Divided (No Access Control)	73	164	310	734	1,151	1,428
Four-Lane Undivided	103	236	449	1,074	1,691	2,100
Interstate	54	118	221	518	810	1,004
Parkway	9	16	27	57	86	104



APPENDIX B  
CRITICAL ACCIDENT RATE TABLES  
FOR HIGHWAY SECTIONS



TABLE B-1. CRITICAL ACCIDENT RATES FOR RURAL ONE-LANE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
100	8,088	5,333	3,668	2,387	1,811
200	5,333	3,668	2,632	1,811	1,433
300	4,262	3,005	2,111	1,572	1,273
400	3,668	2,632	1,971	1,433	1,180
500	3,281	2,387	1,811	1,341	1,117
700	2,797	2,077	1,609	1,221	1,036
1,000	2,387	1,811	1,433	1,117	964
1,500	2,021	1,572	1,273	1,021	899
2,000	1,811	1,433	1,180	964	860
2,500	1,673	1,341	1,117	924	834
3,000	1,572	1,273	1,071	899	814

TABLE B-2. CRITICAL ACCIDENT RATES FOR RURAL TWO-LANE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
100	6,343	4,006	2,637	1,619	1,176	891
300	3,121	2,105	1,482	995	773	625
500	2,325	1,619	1,176	822	658	548
1,000	1,619	1,176	891	658	548	472
1,500	1,336	995	773	588	500	440
2,000	1,176	891	704	548	472	421
3,000	995	773	625	500	440	398
4,000	891	704	579	472	421	385
5,000	822	658	548	454	408	376
6,000	773	625	525	440	398	369
7,000	734	599	508	429	391	364
8,000	704	579	494	421	385	360
9,000	679	562	482	414	380	356
10,000	658	548	472	408	376	353

TABLE B-3. CRITICAL ACCIDENT RATES FOR RURAL THREE-LANE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACG/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	3	5
100	8,369	5,548	3,837	3,155	2,516
300	4,449	3,155	2,334	1,995	1,671
500	3,440	2,516	1,920	1,671	1,431
1,000	2,516	1,920	1,527	1,361	1,198
1,500	2,137	1,671	1,361	1,228	1,098
2,000	1,920	1,527	1,264	1,151	1,040
3,000	1,671	1,361	1,151	1,060	971
4,000	1,527	1,264	1,084	1,007	930
5,000	1,431	1,198	1,040	971	903
6,000	1,361	1,151	1,007	944	882
7,000	1,307	1,114	981	924	867
8,000	1,264	1,084	961	907	854
9,000	1,228	1,060	944	894	759
10,000	1,198	1,040	930	882	755

TABLE B-4. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE DIVIDED SECTIONS (NO ACCESS CONTROL) (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	1,817	1,221	855	571	441
1,000	1,221	855	626	441	355
2,500	770	571	441	334	283
5,000	571	441	355	283	248
7,500	489	387	319	261	233
10,000	441	355	298	249	224
15,000	387	319	273	233	213
20,000	355	298	258	223	207
30,000	319	273	241	213	200
40,000	298	258	231	207	195
50,000	283	249	224	203	192

TABLE B-5. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE UNDIVIDED SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	2,688	1,908	1,413	1,013	825
1,000	1,908	1,413	1,091	825	699
2,500	1,294	1,013	825	667	589
5,000	1,013	825	699	589	536
7,500	894	745	644	556	513
10,000	825	699	612	536	499
20,000	699	612	552	499	473
30,000	644	574	525	483	462
40,000	612	552	510	473	455
50,000	589	536	499	467	450

TABLE B-6. CRITICAL ACCIDENT RATES FOR RURAL INTERSTATE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
500	1,243	782	513	313	227	171
1,000	782	513	351	227	171	135
2,500	451	313	227	158	126	104
5,000	313	227	171	126	104	90
7,500	258	191	148	112	95	83
10,000	227	171	135	104	90	80
20,000	171	135	110	90	80	73
30,000	148	119	100	83	75	70
40,000	135	110	94	80	73	68
50,000	126	104	90	77	71	67

TABLE B-7. CRITICAL ACCIDENT RATES FOR RURAL PARKWAY SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
400	1,573	992	652	400	290	219
700	1,081	705	479	307	231	181
1,000	863	575	400	264	202	162
1,500	677	462	329	225	177	145
2,000	575	400	290	202	162	135
3,000	462	329	245	177	145	123
4,000	400	290	219	162	135	116
5,000	359	264	202	152	128	111
7,000	307	231	181	139	119	105
10,000	264	202	162	128	111	100
20,000	202	162	135	111	100	92
40,000	1.62	135	116	100	92	87

TABLE B-8. CRITICAL ACCIDENT RATES FOR URBAN TWO-LANE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	3,528	2,589	1,982	1,482	1,245
1,000	2,589	1,982	1,581	1,245	1,082
2,500	1,835	1,482	1,245	1,042	942
5,000	1,482	1,245	1,082	942	873
7,500	1,332	1,142	1,012	899	842
10,000	1,245	1,082	970	873	824
15,000	1,142	1,012	921	842	803
20,000	1,082	970	892	824	790
30,000	1,012	921	858	803	776
40,000	970	892	838	790	767
50,000	942	873	824	782	761

TABLE B-9. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE  
DIVIDED SECTIONS (NO ACCESS CONTROL)  
(ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	2,130	1,597	1,248	959	820
2,500	1,468	1,163	959	785	700
5,000	1,163	959	820	700	641
10,000	959	820	724	641	600
15,000	871	760	683	616	582
20,000	820	724	658	600	572
25,000	785	700	641	590	565
30,000	760	683	629	582	559
40,000	724	658	612	572	552
50,000	700	641	600	565	547
60,000	683	629	592	559	543

TABLE B-10. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE  
UNDIVIDED SECTIONS) (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	2,691	2,068	1,656	1,310	1,142
2,500	1,916	1,554	1,310	1,100	998
5,000	1,554	1,310	1,142	998	926
10,000	1,310	1,142	1,027	926	876
15,000	1,204	1,070	976	895	854
20,000	1,142	1,027	946	876	841
25,000	1,160	998	926	864	832
30,000	1,070	976	911	854	826
40,000	1,027	946	890	841	816
50,000	998	926	876	832	810
60,000	976	911	866	826	806

TABLE B-11. CRITICAL ACCIDENT RATES FOR URBAN INTERSTATE SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	872	582	405	268	206
5,000	364	268	206	155	130
10,000	268	206	165	130	114
20,000	206	165	137	114	102
30,000	180	147	125	107	97
40,000	165	137	118	102	94
50,000	155	130	114	99	92
60,000	147	125	110	97	91
70,000	142	122	108	96	90
80,000	137	118	106	94	89
90,000	134	116	104	93	88
100,000	130	114	102	92	87

TABLE B-12. CRITICAL ACCIDENT RATES FOR URBAN PARKWAY SECTIONS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	1,491	969	658	420	315
1,000	969	658	465	315	246
2,500	586	420	315	229	188
5,000	420	315	246	188	162
7,500	353	271	217	171	149
10,000	315	246	200	162	142
15,000	271	217	180	149	134
20,000	246	200	169	142	129
30,000	217	180	155	134	123
40,000	200	169	147	130	120
50,000	188	162	142	126	118



TABLE B-13. CRITICAL ACCIDENT RATES FOR RURAL ONE-LANE SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
100	3,565	2,549	1,902	1,377	1,130
200	2,549	1,902	1,480	1,130	962
300	2,137	1,634	1,302	1,024	890
400	1,902	1,480	1,199	962	847
500	1,746	1,377	1,130	920	818
700	1,548	1,245	1,040	866	781
1,000	1,378	1,130	962	818	747
1,500	1,221	1,024	890	774	716
2,000	1,130	962	847	747	698
2,500	1,069	920	818	730	686
3,000	1,024	890	797	716	676

TABLE B-14. CRITICAL ACCIDENT RATES FOR RURAL TWO-LANE SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
100	2,674	1,840	1,321	910	720	593
300	1,508	1,110	851	640	539	469
500	1,198	910	720	562	485	433
1,000	910	720	593	485	433	396
1,500	790	640	539	452	410	380
2,000	720	593	507	433	396	371
3,000	640	539	469	410	380	360
4,000	593	507	447	396	371	353
5,000	562	485	433	387	364	348
6,000	539	469	422	380	360	345
7,000	521	457	413	375	356	342
8,000	507	447	406	371	353	340
9,000	495	439	401	367	350	339
10,000	485	433	396	364	348	337

TABLE B-15. CRITICAL ACCIDENT RATES FOR RURAL THREE-LANE SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	3	5
100	4,068	2,957	2,242	1,944	1,657
300	2,502	1,944	1,573	1,415	1,261
500	2,069	1,657	1,380	1,261	1,143
1,000	1,657	1,380	1,191	1,109	1,028
1,500	1,482	1,261	1,109	1,043	977
2,000	1,380	1,191	1,061	1,004	948
3,000	1,261	1,109	1,004	958	912
4,000	1,191	1,061	970	931	891
5,000	1,143	1,028	948	912	877
6,000	1,109	1,004	931	899	867
7,000	1,082	985	918	888	859
8,000	1,061	970	907	880	852
9,000	1,043	958	899	873	847
10,000	1,028	948	891	867	842

TABLE B-16. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE DIVIDED SECTIONS (NO ACCESS CONTROL) (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	861	630	480	358	300
1,000	630	481	383	300	261
2,500	445	358	300	251	226
5,000	358	300	261	226	209
7,500	322	275	243	216	202
10,000	300	261	233	209	198
20,000	261	233	214	198	189
30,000	243	221	206	192	186
40,000	233	216	201	189	183
50,000	226	209	198	187	182

TABLE B-17. CRITICAL ACCIDENT RATES FOR RURAL FOUR-LANE  
UNDIVIDED SECTIONS (FOUR-YEAR PERIOD)  
(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	1,315	1,008	805	635	553
1,000	1,008	805	669	553	497
2,500	756	635	553	482	447
5,000	635	553	497	447	423
7,500	584	518	472	432	412
10,000	553	497	457	423	406
20,000	497	457	430	406	393
30,000	472	440	418	398	389
40,000	457	430	410	393	385
50,000	447	423	406	390	383

TABLE B-18. CRITICAL ACCIDENT RATES FOR RURAL INTERSTATE  
SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
500	497	338	240	163	128	105
1,000	338	240	178	128	105	89
2,500	217	163	128	99	85	75
5,000	163	128	105	85	75	68
7,500	141	113	94	79	71	65
10,000	128	105	89	75	68	64
20,000	105	89	78	68	64	60
30,000	94	82	73	65	61	59
40,000	89	78	70	64	60	58
50,000	85	75	68	62	59	57

TABLE B-19. CRITICAL ACCIDENT RATES FOR RURAL PARKWAY  
SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)						
AADT	0.5	1	2	5	10	20
400	637	435	310	212	167	136
700	467	330	244	174	141	119
1,000	388	281	212	156	129	111
1,500	320	237	183	139	118	103
2,000	281	212	167	129	111	98
3,000	237	183	148	118	103	93
4,000	212	167	136	111	98	90
5,000	195	156	129	106	95	88
7,000	174	141	119	100	91	85
10,000	156	129	111	95	88	82
20,000	129	111	98	88	82	78
40,000	111	98	90	82	78	76

TABLE B-20. CRITICAL ACCIDENT RATES FOR URBAN TWO-LANE  
SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	1,926	1,532	1,268	1,043	934
1,000	1,532	1,268	1,088	934	857
2,500	1,202	1,043	934	838	791
5,000	1,043	934	857	791	758
7,500	974	886	824	770	743
10,000	934	857	804	758	734
15,000	886	824	781	743	724
20,000	857	804	767	734	718
30,000	824	781	751	724	711
40,000	804	767	741	718	706
50,000	791	658	734	714	703

TABLE B-21. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE  
DIVIDED SECTIONS (NO ACCESS CONTROL)  
(FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	1,228	998	843	710	644
2,500	941	804	710	628	587
5,000	804	710	644	587	559
10,000	710	644	599	559	539
15,000	669	616	579	547	530
20,000	644	599	567	539	525
25,000	628	587	559	534	522
30,000	616	579	553	530	519
40,000	599	567	545	525	515
50,000	587	559	539	522	513
60,000	579	553	535	519	511

TABLE B-22. CRITICAL ACCIDENT RATES FOR URBAN FOUR-LANE  
(UNDIVIDED SECTIONS) (FOUR-YEAR PERIOD)  
(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	1,624	1,351	1,164	1,003	924
2,500	1,283	1,117	1,003	904	855
5,000	1,117	1,003	924	855	820
10,000	1,003	924	869	820	796
15,000	953	889	844	805	785
20,000	924	869	830	796	779
25,000	904	855	820	790	774
30,000	889	844	813	785	771
40,000	869	830	803	779	767
50,000	855	820	796	774	763
60,000	844	813	791	771	761

TABLE B-23. CRITICAL ACCIDENT RATES FOR URBAN INTERSTATE SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
1,000	531	398	311	239	204
5,000	290	239	204	175	160
10,000	239	204	181	160	150
20,000	204	181	164	150	143
30,000	189	170	157	145	139
40,000	181	164	153	143	138
50,000	175	160	150	141	136
60,000	170	157	148	139	135
70,000	167	154	146	138	135
80,000	164	153	145	138	134
90,000	162	151	143	137	133
100,000	160	150	143	136	133

TABLE B-24. CRITICAL ACCIDENT RATES FOR URBAN PARKWAY SECTIONS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/100 MVM) FOR THE GIVEN SECTION LENGTH (MILES)					
AADT	0.5	1	2	5	10
500	654	463	342	244	198
1,000	463	342	263	198	167
2,500	313	243	198	160	141
5,000	244	198	167	141	128
7,500	215	179	154	133	122
10,000	198	167	146	128	119
15,000	179	154	137	122	115
20,000	167	146	132	119	113
30,000	154	137	125	115	110
40,000	146	132	121	113	108
50,000	141	128	119	111	107

APPENDIX C  
CRITICAL ACCIDENT RATE TABLES FOR "SPOTS"





TABLE C-1. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL ONE-LANE, TWO-LANE, AND THREE-LANE HIGHWAYS (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	ONE-LANE	TWO-LANE	THREE-LANE
100	34.0	27.4	34.9
500	13.0	9.37	13.4
1,000	9.05	6.32	9.45
2,500	6.09	4.01	6.41
5,000	4.74	2.99	5.01
7,500	4.17	2.56	4.42
10,000	3.84	2.32	4.08
15,000	3.46	2.04	3.68
20,000	3.23	1.88	3.45

TABLE C-2. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL FOUR-LANE HIGHWAYS, INTERSTATES, AND PARKWAYS (ONE-YEAR PERIOD) (1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE				
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE DIVIDED (NO ACCESS CONTROL)	INTERSTATE	PARKWAY
500	10.7	7.51	5.48	5.79
1,000	7.33	4.89	3.36	3.59
2,500	4.77	2.96	1.88	2.04
5,000	3.62	2.13	1.27	1.39
10,000	2.87	1.60	0.89	0.99
15,000	2.54	1.37	0.74	0.83
20,000	2.36	1.25	0.66	0.74
30,000	2.14	1.10	0.56	0.64
40,000	2.02	1.02	0.51	0.58
50,000	1.93	0.96	0.47	0.54

TABLE C-3. CRITICAL ACCIDENT RATES FOR "SPOTS" ON  
URBAN TWO-LANE HIGHWAYS AND PARKWAYS  
(ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE		
AADT	TWO-LANE	PARKWAY
500	13.7	6.28
1,000	9.73	3.96
2,500	6.62	2.30
5,000	5.19	1.60
7,500	4.59	1.32
10,000	4.24	1.16
15,000	3.83	0.98
20,000	3.59	0.88
30,000	3.32	0.76
40,000	3.15	0.69

TABLE C-4. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN FOUR-LANE  
HIGHWAYS AND INTERSTATES (ONE-YEAR PERIOD)(1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE, DIVIDED (NO ACCESS CONTROL)	INTERSTATE
1,000	10.1	8.12	4.01
5,000	5.44	4.13	2.08
10,000	4.46	3.31	1.56
15,000	4.04	2.96	1.34
20,000	3.79	2.76	1.21
30,000	3.51	2.52	1.07
40,000	3.34	2.38	0.99
50,000	3.22	2.28	0.93
60,000	3.14	2.21	0.89
70,000	3.07	2.16	0.86
80,000	3.02	2.12	0.83
90,000	2.98	2.08	0.81
100,000	2.94	2.05	0.79

TABLE C-5. CRITICAL ACCIDENT RATES FOR "SPOTS" ON  
RURAL ONE-LANE, TWO-LANE, AND THREE-LANE  
HIGHWAYS (FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	ONE-LANE	TWO-LANE	THREE-LANE
100	14.1	10.9	15.7
500	6.41	4.53	7.40
1,000	4.90	3.33	5.74
2,500	3.66	2.37	4.37
5,000	3.07	1.92	3.71
7,500	2.82	1.73	3.43
10,000	2.67	1.62	3.26
15,000	2.49	1.49	3.07
20,000	2.39	1.41	2.95

TABLE C-6. CRITICAL ACCIDENT RATES FOR "SPOTS" ON RURAL FOUR-LANE  
HIGHWAYS, INTERSTATES, AND PARKWAYS (FOUR-YEAR PERIOD)  
(1980-1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE				
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE DIVIDED (NO ACCESS CONTROL)	INTERSTATE	PARKWAY
500	4.95	3.32	2.01	2.28
1,000	3.68	2.35	1.32	1.53
2,500	2.66	1.60	0.81	0.97
5,000	2.17	1.25	0.59	0.72
10,000	1.85	1.02	0.45	0.56
15,000	1.71	0.92	0.39	0.49
20,000	1.62	0.86	0.36	0.45
30,000	1.52	0.79	0.32	0.40
40,000	1.47	0.75	0.29	0.38
50,000	1.43	0.73	0.28	0.36

TABLE C-7. CRITICAL ACCIDENT RATES FOR "SPOTS" ON  
URBAN TWO-LANE HIGHWAYS AND PARKWAYS  
(FOUR-YEAR PERIOD)(1980-1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE		
AADT	TWO-LANE	PARKWAY
500	7.20	2.50
1,000	5.57	1.79
2,500	4.23	1.16
5,000	3.58	0.88
7,500	3.30	0.76
10,000	3.14	0.69
15,000	2.95	0.61
20,000	2.84	0.57
30,000	2.70	0.52
40,000	2.62	0.49

TABLE C-8. CRITICAL ACCIDENT RATES FOR "SPOTS" ON URBAN FOUR-LANE  
HIGHWAYS AND INTERSTATES (FOUR-YEAR PERIOD)  
(1980-1983)

CRITICAL ACCIDENT RATE (ACC/MV) BY HIGHWAY TYPE			
AADT	FOUR-LANE UNDIVIDED	FOUR-LANE, DIVIDED (NO ACCESS CONTROL)	INTERSTATE
1,000	5.74	4.42	2.20
5,000	3.71	2.71	1.15
10,000	3.26	2.34	0.93
15,000	3.07	2.18	0.83
20,000	2.95	2.08	0.78
30,000	2.82	1.97	0.71
40,000	2.74	1.90	0.68
50,000	2.68	1.86	0.65
60,000	2.64	1.83	0.63
70,000	2.61	1.80	0.62
80,000	2.58	1.78	0.61
90,000	2.56	1.76	0.60
100,000	2.55	1.75	0.59