Research Report 546

ANALYSIS OF WEEKDAY, WEEKEND, AND HOLIDAY ACCIDENT FREQUENCIES

by

1

· •

ĩ

Jerry G. Pigman Research Engineer Chief

Rolands L. Rizenbergs Assistant Director

and

Donald R. Herd Formerly Research Engineer

Division of Research Bureau of Highways DEPARTMENT OF TRANSPORTATION Commonwealth of Kentucky

offered for publication to the Traffic Quarterly

March 1980

ANALYSIS OF WEEKDAY, WEEKEND, AND HOLIDAY ACCIDENT FREQUENCIES

by

J. G. Pigman, R. L. Rizenbergs, and D. R. Herd

ABSTRACT

Trends in recent years have indicated that a significant percentage of weekend traffic is recreational and that the proportion of weekend trips is increasing. The "energy crisis" in late 1973, and the associated reduction in speed limit on March 1, 1974, affected weekend travel. A previous study by the Division of Research revealed that significant reductions in the number and rates of highway accidents, fatalities, and injuries coincided with the period of time generally referred to as the "energy crisis". Lower speeds were considered to be a primary factor in the reduction of accidents. An alteration in weekend and holiday trips was suspected of contributing to the reduction of accident rates; however, information was lacking from which to make this determination. A comparison of accidents during weekday, weekend, and holiday periods was made; most of the data were for rural sections of two-lane roads, four-lane roads, interstate routes, and toll roads.

On rural roads, the largest number of accidents have occurred on Saturdays, Fridays, and Sundays. Tuesdays generally had the lowest number of accidents. Fatal accidents on two-lane roads occurred in similar random patterns of distribution during the week. The highest rates for two-lane roads were on Sundays and Saturdays, and the rates for expressways (interstates and toll roads) were the highest on Sundays. Fatality rates were distributed similarly to the rates of all accidents.

The percentage of accidents on weekends decreased steadily from 35 in 1973 to 32 in 1976. Likewise, the percentage of fatalities on weekends showed gradual decreases. Accident rates on weekends were substantially higher than on weekdays. Rates of fatal and all accidents were lower during holiday periods than during weekends not involving holidays. Holiday periods had fewer accidents per day than weekends but had more accidents per day than weekdays. Traffic volumes, however, were significantly greater during holidays than on either weekends or weekdays.

INTRODUCTION

Much of weekend traffic is non-business and recreational, and trends indicated that the number of these trips are increasing. The "energy crisis" in late 1973, and the reduction in speed limit on March 1, 1974, however, affected weekend travel. Significant reductions in the number and rates of highway accidents, fatalities, and injuries coincided with the period of time that is generally referred to as the "energy crisis" (1). Slower speeds were considered to be a primary factor in the reduction of accidents. A significant change in weekend and holiday trips was suspected as contributing to the reduction of accident rates; however, information was lacking from which to make this determination. The purpose of this study was to analyze and summarize accident statistics for weekday, weekend, and holiday periods.

PROCEDURE

Accidents on weekdays, weekends, and holidays were analyzed by summarizing number of accidents, number of fatalities, accident rates, and fatal accident rates. Rates were expressed as accidents per 100 million vehicle-miles (MVM)(160 million vehicle-kilometers) of travel. The analysis focused primarily on data for 1973, 1974, and 1975, but 1976 data were also used. It was necessary to compute accident rates for the rural highway system and its three major components:

- 1. two-lane (including three-lane) roads,
- 2. four-lane roads, and
- 3. expressways (interstates and parkways (toll roads)).

Accident rates were computed for day of the week and month.

A separate file was available for each of the years of study. Since implementation of uniform accident reporting in July 1975 in Kentucky, the number of accidents reported has increased from approximately 30,000 to 140,000 per year. The data base, of course, is different. The increased portion of accidents reported since July 1975 come from local jurisdictions. The largest number of accidents come from the five urban counties in the state. To insure that only rural accidents were included, those occurring in the mostly urban counties were omitted. Accidents investigated by Kentucky State Police were the primary data base for the analysis; however, all accidents reported in 1976 were presented, in some cases, for comparison. Accidents were summarized by severity (fatal, injury, and property damage only) for each day of week, month, year, and type of road.

Computation of vehicle-miles (vehicle-kilometers) of travel on each type of road by

day of week and month presented problems because data were not available in the desired form. However, in a previous study (2), monthly volumes of travel for a three-year period (1973-1975) had been determined. Adjustment factors were calculated and applied to convert monthly volumes to daily volumes. Traffic count summaries from 44 automatic traffic recorder stations (28 on two-lane roads, 5 on four-lane roads, and 11 on expressways) were analyzed. The month-to-day factors were computed as follows:

- 1. All data from automatic counters, located on each type of road, were grouped together.
- The data from each group (type of road) were summed by day of week for each month and week. Weekly totals were combined to obtain the monthly totals.
- The sum for each day of week was divided by the monthly total to yield day-of-week factors.
- 4. The day-of-week factor multiplied by the monthly volume of travel for the particular year yielded a daily volume of travel.

Total accident and fatality rates were computed for each day of week, month, year, and for each type of road. Saturday and Sunday values were combined to calculate weekend accident rates, and Monday through Friday values were combined to calculate weekday rates.

A separate analysis was made for holidays during the study periods. Holidays were New Year's Day, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The number of days included in each holiday period were those observed by state government in Kentucky. The entire 24-hour period was included for every day of the holiday period.

A factor was developed to represent the percentage of the montly volume in each holiday. This factor was multiplied by vehicle-miles (vehicle-kilometers) of travel during the month of the holiday to obtain travel during the holiday. Accident rates were calculated from vehicle-miles (vehicle-kilometers) of travel and number of accidents for respective holidays.

It was also necessary to separate accidents and travel during holidays from the weekday and weekend accidents and travel. This was done to insure that only applicable data were used to calculate accident rates for weekdays, weekends, and holidays. Again, adjustment factors were developed for holiday periods by using volumes from automatic traffic recorder sites for 1973 through 1975.

RESULTS

Number of Accidents

Number of accidents by day of the week, year, and highway system are plotted in Figures 1 through 4. Number and percentage of accidents for each day of the week are shown in Table 1. The largest number of accidents occurred on Saturdays, Fridays, and Sundays, respectively. Tuesdays generally had the lowest number of accidents. The "energy crisis", and the associated reduction in speed limit on March 1, 1974, substantially reduced the number of accidents as compared to 1973. Accidents increased in 1975 to the 1973 levels. Accidents during 1976 were even higher for each day of the week (Figure 4).

A summary of 1976 statewide accidents (Table 1) showed a weekly distribution considerably different from that of accidents reported by State Police in rural areas. On a statewide basis, Fridays had the highest percentage of weekly accidents; this was followed by Saturdays and Mondays. The emergence on Fridays and Mondays as days having high percentages of accidents may be explained by the fact that 55 percent of accidents reported in 1976 were in urban areas. The higher volumes associated with urban traffic during weekdays and Saturdays and the accompanying congestion could contribute to a larger percentage of accidents on weekdays and Saturdays and a smaller percentage on Sundays, when traffic is light. Saturdays in urban areas are unique because of high traffic volumes related to shopping.

The distribution of accidents by weekday and weekend periods for 1973 through 1976 is presented in Table 2. Percentages of accidents occurring on weekends have steadily decreased from 34.6 percent in 1973 to 31.8 percent in 1976. A trend in decreasing percentage of accidents during the weekends may be taking place on rural roads, except expressways. Accidents experienced on expressways decreased between 1973 and 1974 but increased between 1974 and 1975. Also, a larger percentage of accidents were occurring on expressways compared to other roads during the weekends in 1973 and 1975.

3

Number of Fatal Accidents

A summary of fatal accidents by weekday and weekend periods is presented in Table 3. A plot of number of fatal accidents by day of week for two-lane roads is presented in Figure 5. The distributions of accidents were generally the same for fatal accidents as for all accidents (Figure 1). However, on four-lane roads and expressways, there were no patterns. Variation in the data may be attributed to a limited data base. The general trend in percentage of fatal accidents on weekends also shows a gradual decrease in the period from 1973 to 1975. This decrease coincided with the large decrease in total number of accidents during the same period.

Accident Rates

Accident rates, rather than numbers of accidents, have been accepted as the primary means of comparing and viewing accident levels. Accident rates by day of week for each type of road are presented in Figures 6 through 9. Saturdays and Sundays were days with the highest accident rates for two-lane roads. For four-lane roads, no particular trends were discerned. Accident rates for expressways indicated reduced levels during the middle of the week if 1974 "energy crisis" data were ignored. Distributions of weekday and weekend accident rates for various roads are summarized in Table 4. Weekend accident rates decreased between 1973 and 1974 and then increased in 1975 to near the 1973 levels. This again represents the effects of the "energy crisis" and the associated reduction in speed limit. Each year the weekend accident rates were higher than weekday rates for all roads except four-lane roads. Apparently weekend rates were not affected to any greater extent than weekday rates by the "energy crisis".

A summary of weekday and weekend travel is presented in Table 5. Even though total travel on weekends was approximately the same in 1973 and 1974, and then increased in 1975, the ratio of weekday to weekend travel was generally the same for those periods.

Seasonal variations in accident rates are presented in Figure 10. The seasons were designated as follows:

Spring - March, April, May

Summer - June, July, August

Fall - September, October, November

Winter - December, January, February

Significant differences in accident rates were found among seasons of the year. Seasons

4

with highest accident rates were fall and winter, followed by spring and summer. Days of the week with the highest accident rates in each season were Saturdays and Sundays, followed by Fridays. Sundays exhibited especially large differences in accident rates throughout the seasons.

Fatal Accident Rates

Fatality rates by day of week for rural roads are presented in Figure 11. The trends are similar to rates of all accidents. Saturdays and Sundays again had the highest rates, followed by Friday. This pattern was generally the same each year, but the magnitudes of the rates were considerably different. In 1973, rates were higher every day of the week than they were in 1974 or 1975. The distributions of fatality rates by weekdays and weekends are summarized in Table 6. The data show that rates for each type of road were highest in 1973 and generally the same in 1974 and 1975. The large reduction in 1974 and since must be attributed primarily to the lower speed limit in effect since March I, 1974.

Holiday Accident Rates

Safety officials have placed a great deal of emphasis on the dangers associated with driving on holidays. Accident rates for the years 1973 through 1975 were calculated for several holidays; and the results are presented in Tables 7, 8, and 9. From these tables, it was noted that Christmas and Memorial Day had the highest accident rates in 1973 and 1975, but New Year's and Thanksgiving had the highest rates in 1974. In an attempt to determine if accident rates were related to volume of travel, average daily vehicle-miles (vehicle-kilometers) of travel were determined for each holiday during a three-year period. No relationship was found between accident rates on holidays and daily vehicle-miles (vehicle-kilometers) of travel.

The most significant results from the study are presented in Table 10. A comparison of accident rates for weekday, weekend, and holiday periods revealed that rates for weekdays were substantially lower than for weekends and that holiday rates were lower than weekend rates. Also shown in Table 10 is a comparison of fatal accident rates for a three-year period. Fatal accident rates were also lowest on weekdays, and holiday rates were lower than weekend rates. There was an exception in 1975 when holiday rates of fatal accidents were higher than weekend rates. Again, travel for the various time periods was determined and the results are presented in Table 11. Daily vehicle-miles (vehicle-kilometers) of travel were highest on holidays every year. Travel on holidays was about 17-percent higher than on weekends not involving holidays; yet, accident rates were lower (4 to 12 percent) during holidays.

Occurrences of numbers of accidents per days for the various periods are cited in Table 12. Here too, the lowest number of accidents are shown to occur during weekdays and the highest during weekends. Accidents on holidays were more numerous than on weekdays, but the differences were not large.

SUMMARY AND CONCLUSIONS

Most accidents in Kentucky occurred on Saturdays, Fridays, and Sundays. Tuesdays generally had the least accidents. Distribution patterns of fatal accidents on two-lane roads were similar to those for all accidents. The highest rates for two-lane roads were on Sundays and Saturdays; the highest rates for expressways were on Sundays. No particular pattern in accident rates could be discerned for four-lane roads. Otherwise, the distribution of fatal accident rates was similar to that of accidents.

The percentage of accidents occurring on weekends compared to weekdays has steadily decreased from 34.6 percent in 1973 to 31.8 percent in 1976. A trend in decreasing percentage of accidents during the weekends may be taking place on all rural roads, except on the expressways. Likewise, the percentage of fatal accidents on weekends also showed gradual decreases from 1973 to 1975. Each year, accident rates on weekends were substantially higher than on weekdays for two-lane roads and expressways. The number of accidents per day during weekends was substantially higher than during weekdays. Emphasis on enforcement of traffic laws during weekends, therefore, may be justifiable since both the number and rate of accidents are the highest then.

Rates of fatal and all accidents were found to be lower during holiday periods than during weekends not involving holidays, but higher than during weekdays. Holiday periods had substantially fewer numbers of accidents per day than weekends and somewhat larger numbers of accidents per day than weekdays. Daily volumes of traffic on holidays, however, was significantly greater than on either weekends or weekdays. Apparently, attempts to warn the driving public of hazards associated with highway travel during holiday periods, and increased efforts by the police to patrol highways, have had some impact in reducing accidents.

6

Significant differences in accident rates on rural roads occurred between seasons of the year. The highest rates were in fall and winter, and the lowest were in spring and summer. Sundays had the highest rates every season of the year.

The first year of reporting statewide accidents in Kentucky was 1976. On a statewide basis, Fridays emerged as the day on which the highest percentage of weekday accidents occurred, followed by Sundays and then Mondays. About 55-percent of the accidents in 1976 were in urban areas. Higher volumes of urban traffic during weekdays and Saturdays would contribute to higher percentages of accidents.

Both the number of accidents and accident rates decreased in 1974 from the 1973 levels. This decrease was associated with the "energy crisis" and the accompanying reduction in speed limit in March 1974. The number of accidents increased in 1975 to about the 1973 levels, but accident rates remained somewhat lower. Fatality rates in 1975 remained at much lower rates than in 1973.

REFERENCES

- Agent, K. R.; Herd, D. R.; and Rizenbergs, R. L.; *First Year Effects of the Energy Crisis on Rural Highways in Kentucky*, Record 567, Transportation Research Board, 1976.
- 2. Agent, K. R.; and Deen, R. C.; *Relationships between Roadway Geometrics and Accidents*, Record 541, Transportation Research Board, 1975.

TABLE 1.NUMBER AND PERCENT OF ACCIDENTS BY DAY OFWEEK (STATE-POLICE REPORTED ACCIDENTS IN
RURAL AREAS)

| DAY | 1973 | | 1974 | | 1975 | | 1976 | | 1976* | |
|------------|--------|---------|-----------|---------|--------|---------|--------|---------|---------|---------|
| OF WEEK | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT | NUMBER | PERCENT |
| SUNDAY | 4.327 | 15.4 | 3.397 | 14.1 | 4,232 | 15.0 | 4,458 | 14.1 | 15,407 | 11.1 |
| MONDAY | 3.578 | 12.7 | 3.052 | 12.6 | 3,608 | 12.8 | 4,138 | 13.1 | 19,529 | 14.1 |
| TUESDAY | 3.375 | 12.0 | 3.040 | 12.6 | 3,368 | 11.9 | 3,881 | 12.3 | 17,894 | 12.9 |
| WEDNESDAY | 3,432 | 12.2 | 3.093 | 12.8 | 3.637 | 12.9 | 4,083 | 12.9 | 18,841 | 13.6 |
| THURSDAY | 3,570 | 12.7 | 2 959 | 12.3 | 3,802 | 13.4 | 4,048 | 12.8 | 18,820 | 13.6 |
| FRIDAY | 4.452 | 15-8 | 4.023 | 16.7 | 4.623 | 16.3 | 5,424 | 17.1 | 25,390 | 18.3 |
| SATURDAY | 5,401 | 19.2 | 4 - 5 7 3 | 18.9 | 5,022 | 17.7 | 5,584 | 17.7 | 22,830 | 16.4 |
| TOTAL | 28,135 | 100.0 | 24,145 | 100.0 | 28,292 | 100.0 | 31,612 | 100.0 | 138,711 | 100.0 |

#INCLUDES ALL ACCIDENTS REPURTED IN 1976

TABLE 2.DISTRIBUTION OF WEEKDAY AND WEEKEND ACCI-
DENTS BY TYPE OF ROAD

| | | WEE | KDAY | WEEKEND | | |
|---------------------------------------|------------|---------|---------|---------|---------|--|
| YEAR | ROAD | NUMBER | PERCENT | NUMBER | PERCENT | |
| turzennegytőszerynyennetőségyiketésze | TWO-LANE | 15,875 | 65.4 | 8,380 | 34.6 | |
| 1973 | FOUR-LANE | 854 | 69.1 | 381 | 30.9 | |
| | EXPRESSWAY | 1,678 | 63.4 | 967 | 36.6 | |
| | ALL | 18,407 | 65.4 | 9,728 | 34.6 | |
| | TWO-LANE | 14.258 | 66.6 | 7,155 | 33.4 | |
| 1974 | FOUR-LANE | 688 | 74-1 | 240 | 25.9 | |
| ~ / () | EXPRESSWAY | 1,229 | 68.1 | 575 | 31.9 | |
| | ALL | 16,175 | 67.0 | 7,970 | 33.0 | |
| | TWO-LANE | 17,175 | 67.4 | 8,325 | 32.6 | |
| 1975 | FOUR-LANE | 677 | 75.0 | 226 | 25.0 | |
| 3. 7 T - 7 | EXPRESSWAY | 1,136 | 62.8 | 703 | 37.2 | |
| | ALL | 19,038 | 67.3 | 9,254 | 32.7 | |
| 1976 | ALL | 21,570 | 68.2 | 10,042 | 31.8 | |
| 1976* | ALL | 100,474 | 72.5 | 38,237 | 27.5 | |

\$INCLUDES ALL ACCIDENTS REPORTED IN 1976

| | | WEE | KDAY | WEEKEND | | |
|---|------------|-----|---------|---------|---------|--|
| YEAR | ROAD | | PERCENT | NUMBER | PERCENT | |
| Lange Constant Industry and Annual Constant | TWO-LANE | 401 | 61 e 1 | 255 | 38.9 | |
| 1973 | FOUR-LANE | 22 | 61.1 | 14 | 38.9 | |
| 2.1.0 | EXPRESSWAY | 46 | 63.0 | 27 | 37.0 | |
| | ALL | 469 | 61.3 | 296 | 38.7 | |
| | TWO-LANE | 321 | 64.7 | 175 | 35.3 | |
| 1974 | FOUR-LANE | 14 | 60.9 | 9 | 39.1 | |
| | EXPRESSWAY | 26 | 63.4 | 15 | 36.6 | |
| | ALL | 361 | 64.5 | 199 | 35.5 | |
| | TWO-LANE | 352 | 65.8 | 183 | 34.2 | |
| 1975 | FOUR-LANE | 17 | 89.5 | 2 | 10.5 | |
| | EXPRESSWAY | 25 | 52.1 | 23 | 47.9 | |
| | ALL | 394 | 65.4 | 208 | 3406 | |

TABLE 3.DISTRIBUTION OF WEEKDAY AND WEEKEND FATALACCIDENTS BY TYPE OF ROAD

TABLE 4.DISTRIBUTION OF WEEKDAY AND WEEKEND ACCI-
DENT RATES BY TYPE OF ROAD

| | | ACCIDENTS/100 MVM | | | |
|---|------------|-------------------|---------|--|--|
| YEAR | ROAD | WEEKDAY | WEEKEND | | |
| C. B. C. S. | TWO-LANE | 252 | 311 | | |
| 1973 | FOUR-LANE | 154 | 179 | | |
| | EXPRESSWAY | 88 | 98 | | |
| | ALL | 211 | 253 | | |
| | TWO-LANE | 224 | 274 | | |
| 1974 | FOUR-LANE | 125 | 117 | | |
| | EXPRESSWAY | 61 | 78 | | |
| | ALL | 184 | 216 | | |
| | TWO-LANE | 251 | 304 | | |
| 1975 | FOUR-LANE | 119 | 106 | | |
| | EXPRESSWAY | 60 | 74 | | |
| | ALL | 203 | 238 | | |

| | | WEEKI | DAY | WEE | TOTAL | |
|---|------------|--------|---------|---------|---------|--------|
| YEAR | ROAD | TRAVEL | PERCENT | TRAVEL | PERCENT | TRAVEL |
| <u>a densis kangar</u> iki da Kataranan | TWO-LANE | 6,292* | 70.0 | 2,695 | 30.0 | 8,987 |
| 1973 | FOUR-LANE | 555 | 72.3 | 212 | 2707 | 767 |
| | EXPRESSWAY | 1,906 | 67.1 | 934 | 32.9 | 2,840 |
| | ALL | 8,744 | 69.5 | 3,841 | 30.5 | 12,585 |
| | TWO-LANE | 6,373 | 71.0 | 2,608 | 29.0 | 8,981 |
| 1974 | FOUR-LANE | 552 | 73.0 | 204 | 27.0 | 756 |
| | EXPRESSWAY | 1,848 | °68 ∝ 0 | 871 | 32.0 | 2,719 |
| | ALL | 8,773 | 70.4 | 3,683 | 29.6 | 12,456 |
| | TWO-LANE | 6,823 | 71.4 | 2,731 | 28.6 | 9,554 |
| 1975 | FOUR-LANE | 569 | 72 . 8 | 213 | 2702 | 782 |
| | EXPRESSWAY | 1,967 | 67.4 | 953 | 32.6 | 2,920 |
| | ALL | 9.358 | 70.0 | 3 • 898 | 29.4 | 13,256 |

TABLE 5. WEEKDAY AND WEEKEND DISTRIBUTION OF

TRAVEL

*MILLION VEHICLE-MILES (1.6 MILLION VEHICLE-KILOMETERS)

TABLE 6.DISTRIBUTION OF WEEKDAY AND WEEKEND FATALACCIDENT RATES BY TYPE OF ROAD

| | | FATAL ACCIDENTS/100MVM | | | | |
|------|------------|------------------------|---------|--|--|--|
| YEAR | ROAD | WEEKDAY | WEEKEND | | | |
| 1973 | TWO-LANE | 6 o 4 | 9 • 5 | | | |
| | FOUR-LANE | 3.9 | 6.6 | | | |
| | EXPRESSWAY | 2.4 | 2.6 | | | |
| | ALL | 503 | 7.7 | | | |
| 1974 | TWO-LANE | 5.0 | 6.0 | | | |
| | FOUR-LANE | 3.0 | 4.0 | | | |
| | EXPRESSWAY | 1 = 4 | 1.07 | | | |
| | ALL | 401 | 5.4 | | | |
| 1975 | TWO-LANE | 5.3 | 6.7 | | | |
| | FOUR-LANE | 2.9 | 0.9 | | | |
| | EXPRESSWAY | 1.3 | 2.4 | | | |
| | ALL | 4 . 2 | 5.3 | | | |

TABLE 7.HOLIDAY ACCIDENT RATES - 1973

1

| | ACCIDENTS /100 MVM | | | | | | | |
|-----------------------|--------------------|----------|--------------|-------|--------------|---------------------|-------|----------|
| | TWO-LANE | | FOUR-LANE | | EXPRESSWAYS | | ALL | |
| | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL |
| NEW YEAR'S | <u></u> | | 207712002200 | | | | | |
| (DECEMBER 30-31, 1972 | | | | | | | | . |
| JANUARY 1, 1973) | 296 | 4.9 | 455 | 0 | 67.2 | 0 | 242 | 5.4 |
| EASTER | | | | _ | (a b | ~ | 20.2 | 2 (|
| (APRIL 21-22) | 258 | 5.0 | 274 | 0 | 40.2 | 0 | 203 | 3.4 |
| MEMORIAL DAY | | | | ~ | 0E 7 | ٥ | 280 | 9.0 |
| (MAY 26-28) | 343 | 12.7 | 300 | 0 | 95.7 | U | 200 | 760 |
| INDEPENDENCE DAY | | <u> </u> | | | (2)(| 7.1 | 218 | 8.1 |
| (JULY 3-5) | 268 | 8.1 | 220 | 12.9 | 63°6 | { ⊕ L | 210 | Oct |
| LABOR DAY | 2// | 7 - 5 | 158 | n | 89-0 | 0 | 222 | 5.5 |
| (SEPTEMBER 1-3) | 266 | 607 | 100 | U. | 0700 | U | 66 | 262 |
| THANKSGIVING | 299 | 12.1 | 238 | 0 | 55.6 | 0 | 236 | 8.4 |
| (NOVEMBER 22-25) | 644 | I Z e I | 200 | 0 | 7760 | v | 200 | 061 |
| CHRISTMAS | 346 | 6.2 | 336 | n | 68.0 | 3.8 | 281 | 5.3 |
| (DECEMBER 22-25) | 240 | Uaz | 220 | U | | 200 | | |
| TOTAL (22 DAYS) | 298 | 8.8 | 274 | 2.3 | 69.5 | 1.5 | 242 | 6.7 |

TABLE 8. HOLIDAY ACCIDENT RATES - 1974

.

| | ACCIDENTS/100 MVM | | | | | | | |
|-----------------------|-------------------------|--|------------|-------|------------------------------------|-------|-------|-------|
| | TWO-LANE | | FOUR -LANE | | EXPRESSWAYS | | ALL | |
| | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL |
| NEW YEAR'S | - 70 (1997) - 10 (1997) | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | Anno gal go den solo de la desente | | | |
| (DECEMBER 29-31, 1973 | | | | | | | | |
| JANUARY 1, 1974) | 313 | 9.2 | 422 | 0 | 162 | 4.04 | 244 | 8.5 |
| EAŜTER | • | | | | | | | |
| (APRIL 13-14) | 188 | 4.3 | 141 | 0 | 37 | 0 | 152 | 3.1 |
| MEMORIAL DAY | | | | | | | | |
| (MAY 25-27) | 245 | 3.1 | 88 | 0 | 40 | 0 | 185 | 2.2 |
| INDEPENDENCE DAY | | | | | | | | |
| (JULY 3-5) | 209 | 4.8 | 185 | 0 | 46 | 0 | 173 | 3.5 |
| LABOR DAY | | | | | | | | |
| (AUGUST 31 | | | | | | | | |
| SEPTEMBER 1-2) | 211 | 3.9 | 221 | 0 | 56 | 0 | 177 | 2.8 |
| THANKSG IV I NG | | | | | | | | |
| (NOVEMBER 28-30 | | | | | | | | |
| DECEMBER 1) | 301 | 6.0 | 137 | 0 | 79 | 0 | 232 | 4.0 |
| CHRISTMAS | | | | | | _ | | |
| (DECEMBER 24-26) | 2 38 | 9.8 | 264 | 0 | 36 | 0 | 190 | 6.9 |
| TOTAL | | | | | | | | |
| (22 DAYS) | 256 | 5.9 | 211 | 0 | 67 | 0.5 | 20 B | 404 |

| | ACCIDENTS/100 MVM | | | | | | | | |
|--|---|-------|-------------------------------|-----------|-------|-----------------------------------|---|----------------------------|--|
| | TWO-LANE | | FOUR | FOUR-LANE | | EXPRESSWAYS | | ALL | |
| | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL | TOTAL | FATAL | |
| NEW YEAR'S | almenter of the second second second second | | anna y dan supakusi kukousuka | | | Qerred Control Constanting of the | and the second secon | 12/10-2474/1-1444-1444-144 | |
| (DECEMBER 31, 1974 JANUARY 1, 1975) | -232 | 11.6 | 144 | 0 | 41 | 0 | 187 | 8.5 | |
| EASTER | | | | | | | | | |
| (MARCH 29-30) | 263 | 5.7 | 178 | 0 | 63 | 4.9 | 206 | 5.2 | |
| MEMORIAL DAY | | | | | | | | | |
| (MAY 24-26) | 296 | 8.4 | 122 | 0 | 55 | 0 | 237 | 6.2 | |
| INDEPENDENCE DAY | | | | | | | | | |
| (JULY 4-6) | 241 | 91 | 47 | 15.6 | 86 | 7.8 | 191 | 9•0 | |
| LABOR DAY | | | | | | | | | |
| (AUGUST 30-31, | 220 | | 200 | 0 | | 0 | 1.00 | | |
| SEPTEMBER 1) THANKSGIVING | 239 | 2 • 2 | 203 | 0 | 43 | U | 189 | 1.5 | |
| (NOVEMBER 27-30) | 289 | 6.6 | 93 | 0 | 76 | 5.2 | 225 | 5.9 | |
| CHRISTMAS | 207 | UeU | | U | 10 | 20L | 223 | J @ / | |
| (DECEMBER 24-28) | 322 | 9.8 | 127 | 0 | 81 | 0 | 241 | 5.8 | |
| | ~~~ | , | | ÷ | | - | - • + | | |
| TOTAL | | | | | | | | | |
| (22 DAYS) | 275 | 7.5 | 126 | 2.3 | 68 | 2 • 7 | 215 | 5.9 | |

TABLE 9. HOLIDAY ACCIDENT RATES - 1975

.

TABLE 10. A COMPARISON OF WEEKDAY, WEEKEND, AND HOLI-

DAY ACCIDENT RATES

| BBC/rsis/eBecB26000000000000000000000000000000000000 | zmű-nen felenek költők költ | ACCIDENTS/100 | MVM | | |
|--|---|-------------------------------|-------------------------------|--|--|
| | 1973 | 1974 | 1975 | | |
| | TOTAL FATAL | TOTAL FATAL | TOTAL FATAL | | |
| WEEKDAYS WEEKENDS HOLIDAYS | 210 5.3 252 7.8 242 6.7 | 184 4.1 218 5.7 193 4.2 | 203 4•1 241 5•4 215 5•9 | | |

 $\mathbf{12}$

| TABLE 11. | COMPARISON | OF | WEEKDAY, | WEEKEND, | AND | HOLI- |
|-----------|------------|----|----------|----------|-----|-------|
| | DAY TRAVEL | | | | | |

| | | MVM/DAY | |
|----------|---------|---------|---------|
| | 1973 | 1974 | 1975 |
| WEEKDAYS | 32•13 | 31.89 | 34 • 44 |
| WEEKENDS | 32 • 49 | 31.39 | 32.59 |
| HOLIDAYS | 37.27 | 39.32 | 39.97 |

TABLE 12.COMPARISONOFACCIDENTSPERDAYONWEEKDAYS, WEEKENDS, AND HOLIDAYS

| | ACCIDENTS/DAY | | |
|-----------|---------------|------|------|
| | 1973 | 1974 | 1975 |
| WEEKDAYS | 70 | 62 | 73 |
| WEEKENDS* | 94 | 77 | 89 |
| HOLIDAYS | 78 | 67 | 76 |

*INCLUDES HOLIDAY WEEKENDS

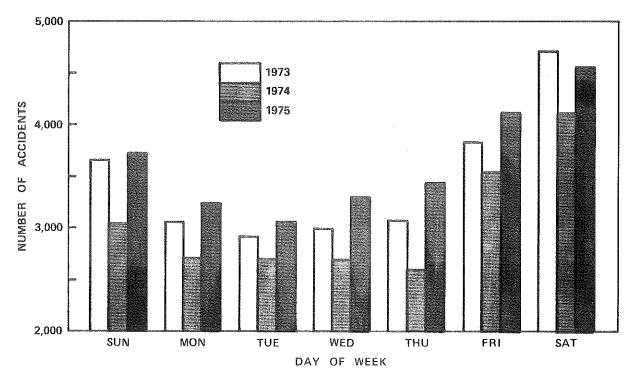
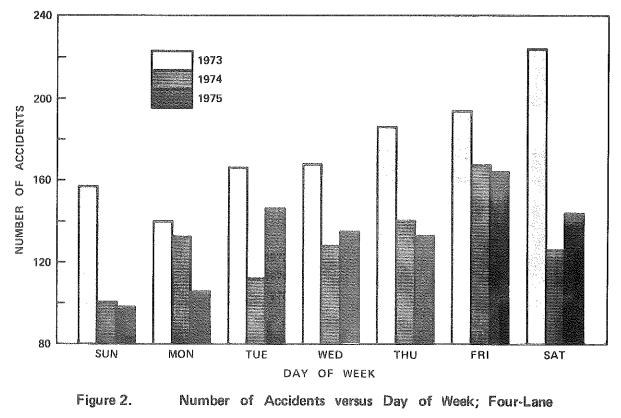


Figure 1. Number of Accidents versus Day of Week; Two-Lane Roads.



Roads.

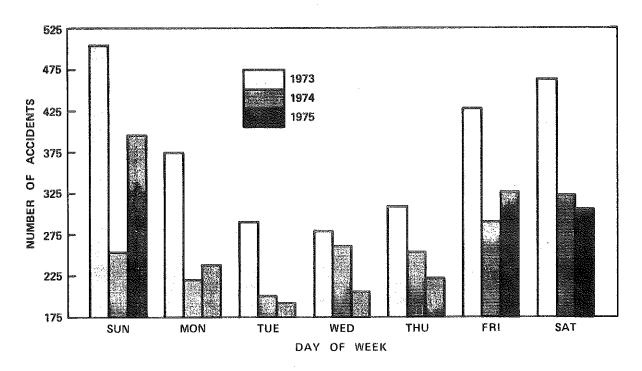


Figure 3. Number of Accidents versus Day of Week; Expressways.

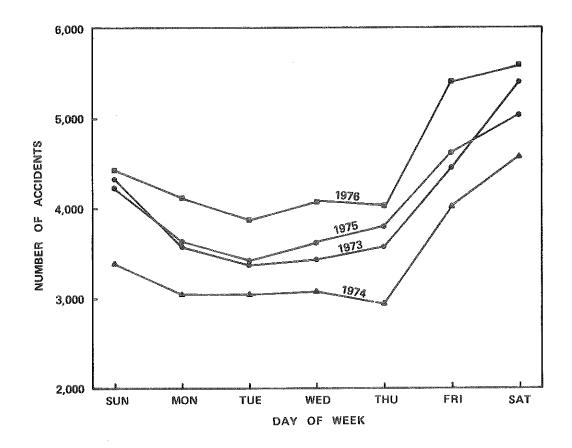


Figure 4. Number of Accidents versus Day of Week; Two-Lane and Four-Lane Roads and Expressways.

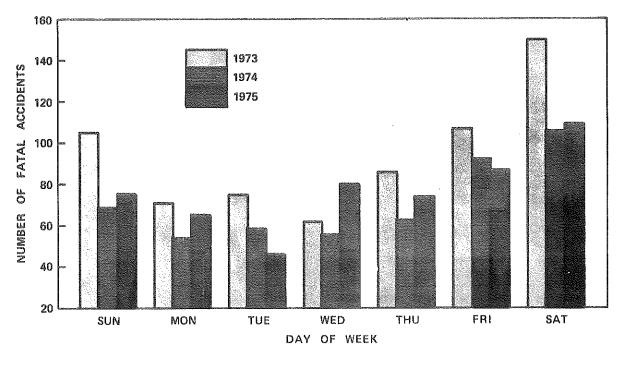


Figure 5.

Number of Fatal Accidents versus Day of Week; Two-Lane Roads.

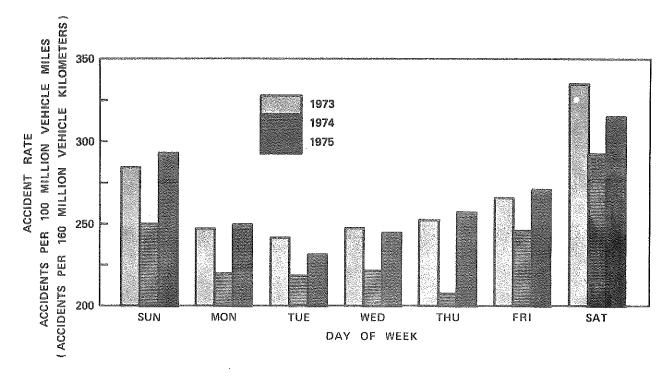


Figure 6.

Accident Rate versus Day of Week; Two-Lane Roads.

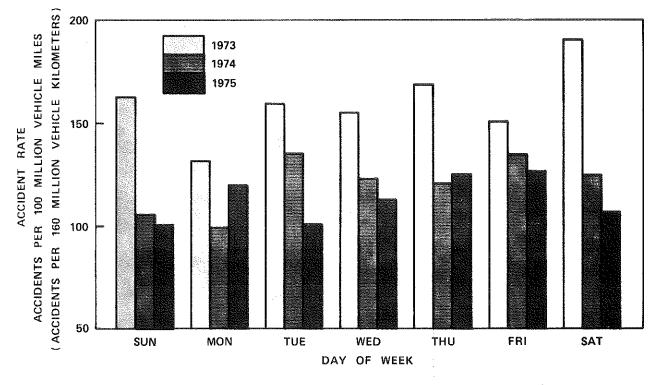


Figure 7.

Accident Rate versus Day of Week; Four-Lane Roads.

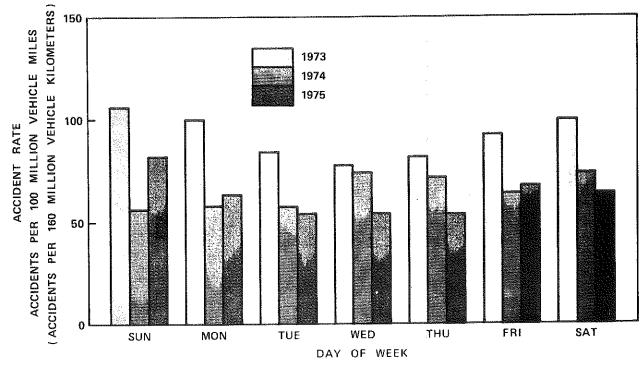


Figure 8. Accident Rate versus Day of Week; Expressways.

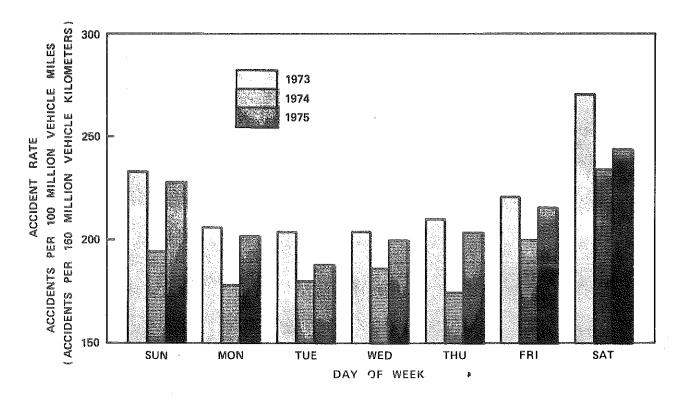


Figure 9. Accident Rate versus Day of Week; Two-Lane and Four-Lane Roads and Expressways.

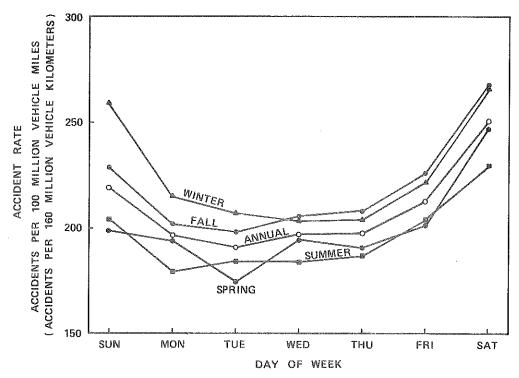


Figure 10. Accident Rate versus Day of Week by Seasons of the Year (1973-1975); Two-Lane and Four-Lane Roads and Expressways.

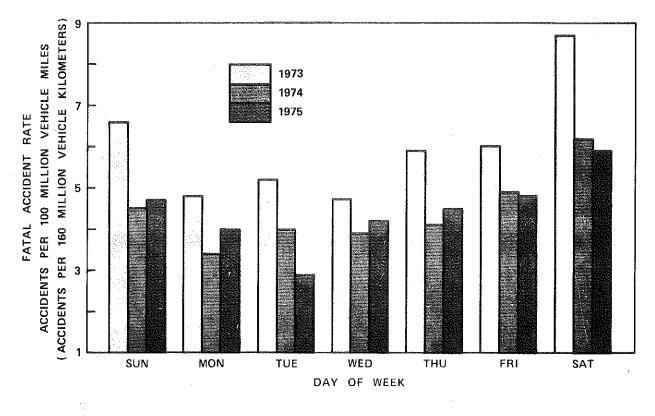


Figure 11. Fatal Accident Rate versus Day of Week; Two-Lane and Four-Lane Roads and Expressways.