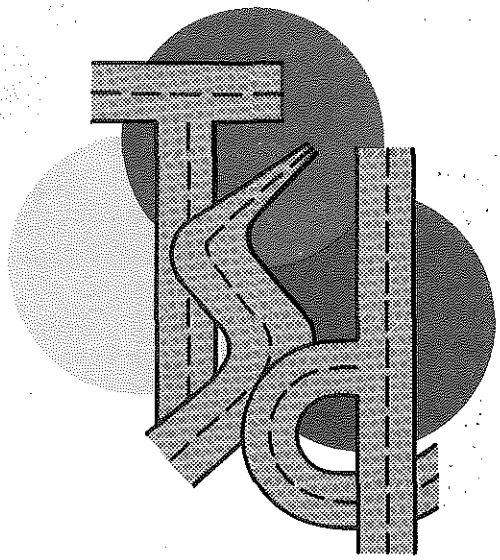
1973 ANALYSIS OF STATE HIGHWAY ACCIDENT FACTS

T.S.D. 250-74

By



TRAFFIC and SAFETY DIVISION

DEPARTMENT OF STATE HIGHWAYS
STATE OF MICHIGAN

MICHIGAN DEPARTMENT
OF
STATE HIGHWAYS AND TRANSPORTATION

1973 ANALYSIS OF STATE HIGHWAY ACCIDENT FACTS

T.S.D. 250-74

By

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Traffic and Safety Division
Michigan Department of State Highways and Transportation

in cooperation with

The U.S. Department of Transportation
Federal Highway Administration

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Tables and Figures

Michigan Accident History

Traffic accident experience on all of Michigan's streets and highways has grown at a rate of 8.2 percent per year over the 34 year period between 1939 and 1973 (See Fig. 1). The accident growth rate follows closely the growth rate of vehicle registrations and travel. Travel has increased from 14.1 billion vehicle miles in 1939 to 58.5 billion vehicle miles in 1973, for a growth rate of 9.30 percent per year. Traffic accidents, which are affected by many factors, are sensitive to economic conditions which prevail at any given time. This has especially been true of fatal accidents and their correlation with unemployment. During periods of peak employment, fatal accident experience has increased and in periods of great unemployment it has decreased. Typical periods of high unemployment were 1958 and 1961.

During this 34 year period, the accident rate for Michigan's roads has varied from a low of 565.4 to a high of 781.7 accidents per 100 million vehicle miles (Fig. 2). Accident rates also appear to be very sensitive to economic conditions. While little progress has been made in the reduction of the rate, considerable improvement has been made in the reduction of the death rate, principally by the construction of the freeway system with its limited access features.

The 1973 death rate on the freeway system is 1.93 per 100 million vehicle miles, compared with 4.35 per 100 million vehicle miles for free access arterial state highways. The average death rate for all roads has been reduced from 11.2 to 3.8 per 100 M.V.M. in the 34 year period.

Michigan Statewide Trend 1966-72

Total accidents, travel and motor vehicle registrations have increased annually 2.3, 4.7 and 4.5 percent a year respectively during this 7 year period on all public roads in Michigan.

Michigan's State Highway Accidents 1966-73

The state highway system within the city of Detroit has experienced a uniform number of accidents during this period, while the outstate accidents have increased 7.7 percent annually. The average annual growth in accidents is 6.3 percent for the 7 year period for the entire state system, including Detroit.

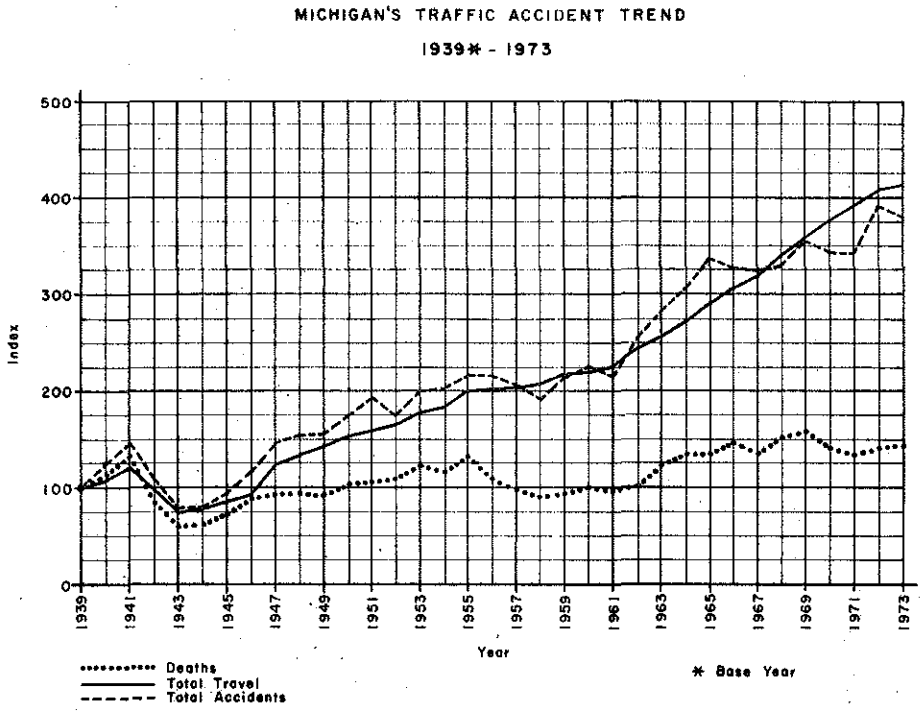
MICHIGAN'S TRAFFIC ACCIDENT TREND
1939* - 1973
Index
Year
Deaths
Total Travel
Total Accidents
* Base Year

Fig. 1

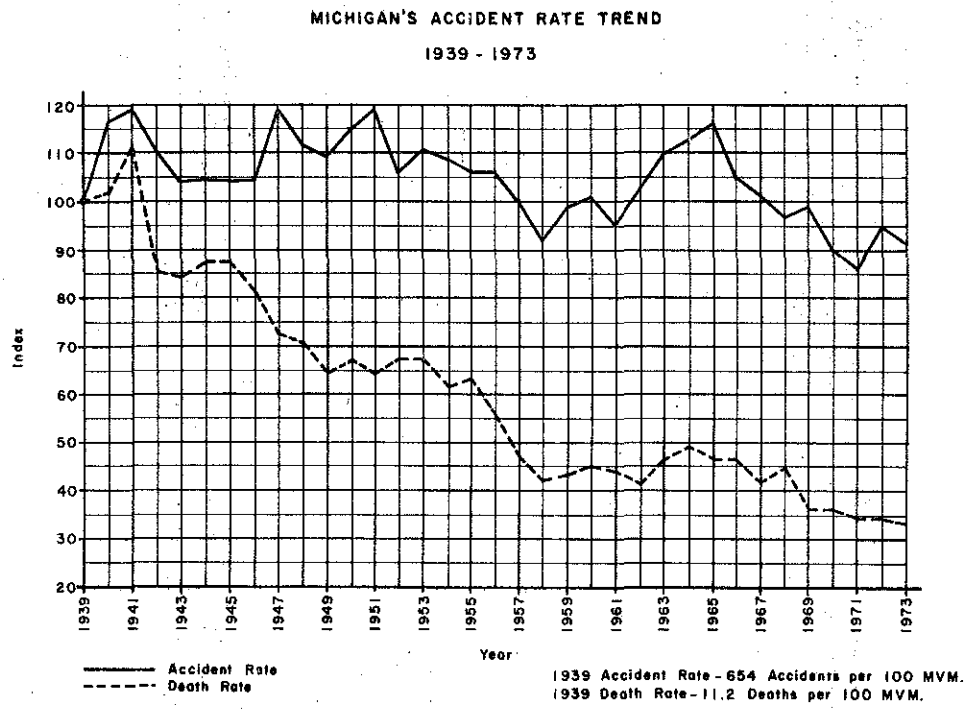
MICHIGAN'S ACCIDENT RATE TREND
1939 - 1973
Index
Year
Accident Rate
Death Rate
1939 Accident Rate - 654 Accidents per 100 MVM.
1939 Death Rate - 11.2 Deaths per 100 MVM.

Fig. 2

TABLE 1
Statewide Trends of Accidents, Vehicle Miles and Vehicle Registrations
1966-73

Year	All Accs.	Index	Annual Veh. Mi. (Millions)	Index	M.V. Registrations (Millions)*	Index
1966	302,880	Base	43,940	Base	4.13	Base
1967	299,004	98.7	45,054	102.5	4.16	100.7
1968	305,495	100.9	48,047	109.3	4.33	104.8
1969	331,223	109.4	50,905	115.9	4.56	110.4
1970	313,715	103.6	53,148	121.0	4.68	113.3
1971	314,015	103.7	55,557	126.4	4.84	117.2
1972	359,745	118.8	57,817	131.6	5.16	124.9
1973	350,864	115.8	58,478	133.1	5.44	131.7

*Excluding trailers and coaches.

TABLE 2
Michigna's State Highway Accident Trend
1966-73

Year	Detroit	Index	Outstate	Index	Total	Index
1966	15,463	Base	67,445	Base	82,908	Base
1967	15,486	100.1	69,796	103.5	85,292	102.9
1968	15,560	100.6	85,097	126.2	100,657	121.4
1969	16,004	103.5	92,182	136.7	108,186	130.5
1970	14,516	93.9	92,469	137.1	106,986	129.0
1971	14,080	91.1	96,114	142.5	110,194	132.9
1972	15,274	98.8	107,603	159.5	122,877	148.2
1973	15,320	99.1	103,934	154.1	119,254	143.8

State Highway Rates, 1972 and 1973

Roadway type accident rates have held relatively constant for urban and rural highway types during the past year as shown in table 3.

TABLE 3
Accident Rates* for Rural and Urban Roads

Roadway Type	Urban		Rural	
	1972	1973	1972	1973
a) Freeways				
4 lane	265.5	249.9	151.7	156.1
6 lane	284.0(1)	286.0(1)	163.8	162.2
b) Divided Free Access				
4 lane	723.4	807.7	386.9	328.6
6 lane	576.8	562.7	--	--
c) Undivided Free Access				
2 lane	876.5	890.7	364.5	377.7
4 lane	903.7	934.8	678.5	718.7

* Accidents per 100 million vehicle miles

(1) Department of Street's and Traffic, City of Detroit

State Highway Accidents by District

The distribution of accidents is due largely to the distribution of population, weather, travel patterns, and highway capacity. About 88 percent of the traffic accidents which occur on the trunkline system occur in Districts 5-Metro.

TABLE 4
State Highway Accidents by District*

DISTRICT	INJURY ACCIDENTS NUMBER	%	FATAL ACCIDENTS NUMBER	%	TOTAL ACCIDENTS NUMBER	%
1	898	2.4	35	3.8	3358	2.8
2	506	1.4	20	2.2	1887	1.6
3	1254	3.4	39	4.2	4674	3.9
4	957	2.6	39	4.2	3896	3.3
5	3553	9.5	99	10.7	13,155	11.0
6	4389	11.8	150	16.2	14,255	12.0
7	3319	8.9	93	10.0	12,906	10.0
8	5113	13.7	121	13.0	17,763	14.9
DIST. 1-8	19,989	53.6	596	64.3	71,894	60.3
(1)	11,160	30.0	261	28.2	32,040	26.9
DETROIT	6,190	16.4	70	7.5	15,320	12.8
METRO DIST.	17,269	46.4	331	35.7	47,360	39.7
TOTAL	37,258	100.0	927	100.0	119,254	100.0

* Trunkline System

(1) Metro District Excluding Detroit.

A good indicator of relative congestion is the percentage of rear-end collisions. This varies from 13-16 percent in Districts 1-4 (north of US-10 including the Upper Peninsula), 21-28 percent in Districts 5-8 (southern half of Lower Peninsula), and 35-37 percent in the urban counties* of the Metropolitan District. Table 4 shows the trunkline accident experience for the various districts and state.

*Wayne, Oakland, and Macomb

State Highway Accident Rates by Roadway Type and District(1)

Freeways (expressways) with their limited access features provide the safest travel of any roadway type. In order of safety, urban 4 lane roadway types may be ranked as follows: freeways, divided, non-divided, left turn (centerlane) and one way. Rural 4 lane roadway types are ranked for safety as follows: freeway, divided, left turn (centerlane) and non-divided. The 1973 accident rates for 4 lane roadway types are as follows:

TABLE 5

	Urban Rates*		Rural Rates*	
	Personal Injury	Total	Personal Injury	Total
Freeway	79.9	249.9	49.1	156.1
Divided	233.1	807.7	108.0	328.6
Centerlane	285.4	1084.8	188.9	642.2
Non-Divided	277.1	934.8	243.8	718.7
One Way	311.5	1324.1		

Rates for Detroit's System are as follows:

	Injury Accident Rate	Total Accident Rate
Freeways	125.0	286.0
Centerlane (2)	500.0	1317.0

* Accidents per 100 million vehicle miles

(1) Excluding Detroit's State Highways

(2) Grand River (B.S. - 96), Woodward (M-1), Gratiot (M-3), Michigan (US-12), W. Fort (US-25), and E. Jefferson

TABLE 6

1973 Urban Total Accident Rates for State Highways by Road Type and District

TOTAL RATE ROAD TYPE	LANES/DISTRICT	1	2	3	4	5	6	7	8	9	AVE
Non Divided (Free)	2	613.2	947.1	942.9	993.6	716.1	827.4	970.3	1058.7	1024.1	890.7
	3			1294.4	3219.6	1092.0		1534.5		1112.8	1282.3
	4	1081.4	1315.6	1434.7	1607.1	1016.8	836.7	1301.6	1350.6	682.2	934.8
	6						1959.7			221.0	240.9
Divided (Free)	4	716.0	475.4	1007.1	1179.1	947.7	763.8	956.3	858.8	757.9	807.7
	5								1004.4		689.2
	6					506.5	1113.2	1467.5	1797.7	478.2	562.7
	7									439.5	439.5
	8						638.3	1362.6		501.5	
Freeway (Limited)	4					287.4	201.6	249.0	255.5	228.3	249.9
	6					430.1				35.1	44.6
	8									44.0	44.0
Center Lane (Free)	4					1006.8	1187.1	988.1	1153.7	1196.4	1084.8
	6									745.4	745.4
One Way (Free)	4						3378.8	2203.0		1145.3	1324.1
	5						484.0		1493.5		680.2
	6						483.7	1125.4	1354.5		1029.6
	7								835.2		835.2

TABLE 7
1973 Rural Total Accident Rates for State Highways
by Road Type and District

ROAD TYPE	LANES/DISTRICT	1	2	3	4	5	6	7	8	9	AVE
Non Divided (Free)	2	369.0	286.0	366.7	406.0	350.0	344.8	381.7	431.0	454.5	377.7
	3					453.2	538.5				465.5
	4	363.0		858.6	936.1	511.0	596.7	906.3	981.9	708.6	718.7
	5						794.8		1259.7		884.8
	6					1572.4	1098.7			512.2	1004.7
Divided (Free)	4	488.5	298.6	192.9		318.4	174.3	376.6	422.4	559.2	328.6
	6									664.9	664.9
	7									664.8	664.8
	8								659.6	616.5	620.6
Freeway (Limited)	4		229.9		119.3	151.3	181.1	141.2	143.5	175.0	156.1
	6						117.0	145.0	217.2	167.3	162.2
Center Lane (Free)	4					473.3	574.9		1363.6		642.2

TABLE 8
1973 Urban Injury Accident Rates for State Highways
by Road Type and District

ROAD TYPE	LANES/DISTRICT	1	2	3	4	5	6	7	8	9	AVE
Non Divided (Free)	2	148.5	205.7	211.5	216.8	194.6	208.7	242.6	245.6	325.5	228.1
	3			444.9	536.6	244.5		460.4		392.7	336.0
	4	319.3	455.4	341.7	368.8	251.0	257.9	304.6	373.3	243.9	277.1
	6						447.3			80.2	83.3
Divided (Free)	4	189.5	139.3	170.9	386.9	238.9	248.4	197.1	240.4	244.5	233.1
	5									310.5	209.2
	6					164.6	316.3	289.6	369.3	172.0	185.4
	7									168.3	168.3
	8							258.4		168.2	168.5
Freeway (Limited)	4					84.6	62.9	58.2	84.7	88.8	79.9
	6					104.1		49.6		13.0	15.3
	8									16.9	16.9
Center Lane (Free)	4					261.0	339.2	203.0	324.4	247.4	285.4
	6								306.1		306.1
One Way (Free)	4						1006.4	228.6		324.8	311.5
	5						84.4		326.7		131.5
	6						149.4	120.6	276.1		222.0
	7							466.1	230.6		230.6

TABLE 9
1973 Rural Injury Accident
Rates for State Highway
by Road Type and District

ROAD TYPE	LANES/DISTRICT	1	2	3	4	5	6	7	8	9	AVE
Non Divided (Free)	2	98.0	77.1	104.9	98.7	95.1	108.1	113.9	130.1	163.5	111.1
	3					135.2	160.2				142.9
	4	148.8		276.7	212.7	150.5	200.0	238.9	332.7	274.7	243.8
	5						260.4		296.4		242.9
	6					463.4	341.4			180.2	314.1
Divided (Free)	4	160.6	108.6	55.0		95.9	59.7	115.2	138.4	194.8	108.0
	6									233.1	233.1
	7									194.0	194.0
	8								249.8	209.0	212.9
Freeway (Limited)	4		68.8		37.4	44.0	60.1	39.2	43.5	62.4	49.1
	6						49.5	39.6	54.3	60.6	53.4
Center Lane (Free)	4					128.4	175.7		378.2		188.9

Drinking and Drug Accidents

One of the problems facing the highway maintenance or construction worker is the hazard created by the drinking or drugged driver. Our studies indicate that this hazard may be minimized by a careful choice of working hours and days of the week. Drinking and drug related accidents are occurring for the most part during the night hours and on weekends. Of the 14,643 drinking and drug related accidents which occurred on the trunkline system during 1973, 2062 occurred during the daylight hours on weekdays (Monday through Friday). Table 10 gives a distribution of accidents by time and light condition.

TABLE 10

	Drinking and Drug Accidents	Percent of Total	Total Accidents
Weekdays:			
daylight	2062	5.0	40,990
night	6387	26.5	24,073
Total	8449	13.0	65,063
Weekend:			
daylight	1511	6.2	34,489
night	4683	32.6	14,383
Total	6194	15.9	38,872
Total	14,643	14.1	103,935

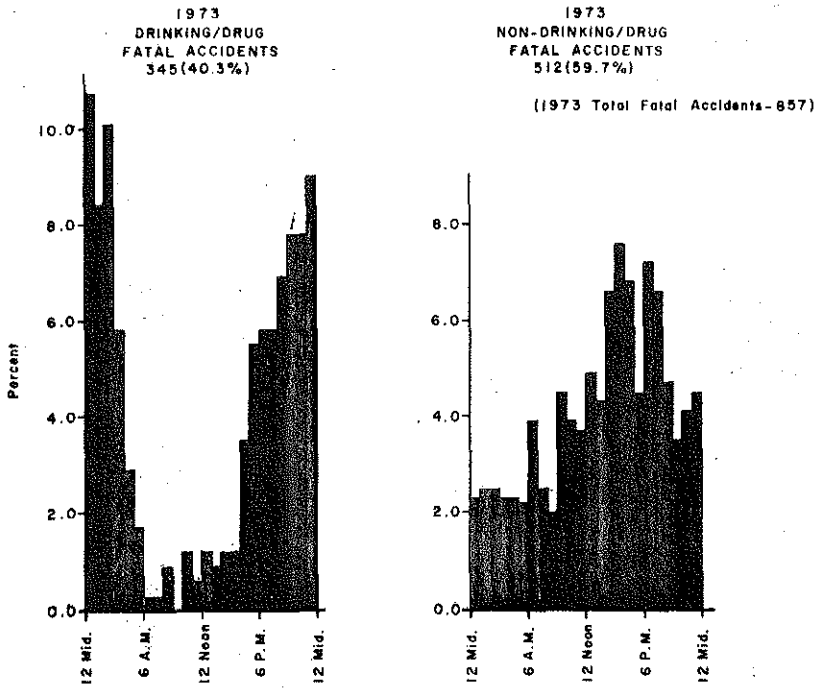
1973
DRINKING/DRUG
FATAL ACCIDENTS
345(40.3%)
1973
NON-DRINKING/DRUG
FATAL ACCIDENTS
512(59.7%)
(1973 Total Fatal Accidents-857)
Percent
10.0
8.0
6.0
4.0
2.0
0.0
12 Mid.
6 A.M.
12 Noon
6 P.M.
12 Mid.

Fig. 3

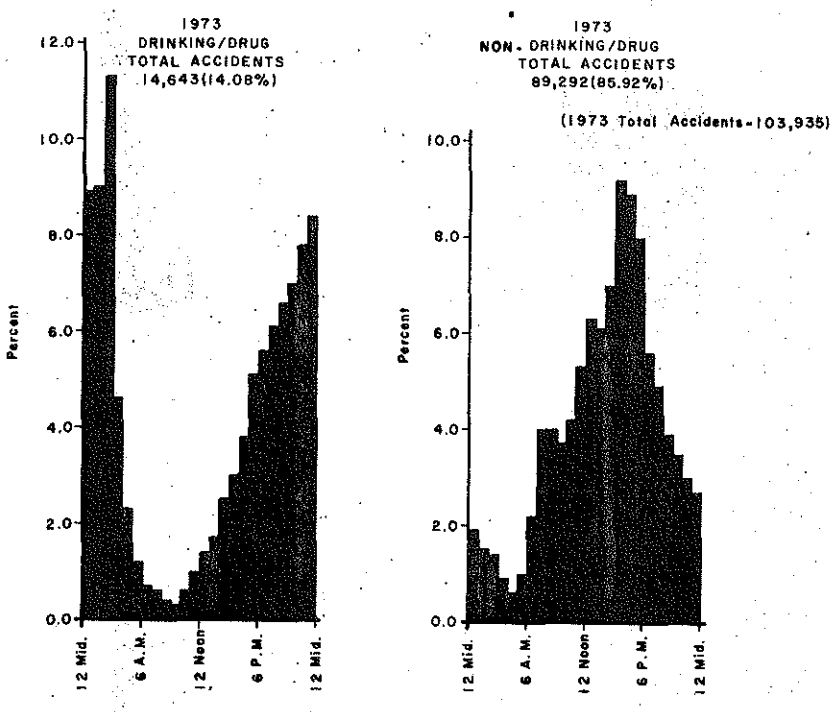
1973
DRINKING/DRUG
TOTAL ACCIDENTS
14,643(14.08%)
1973
NON-DRINKING/DRUG
TOTAL ACCIDENTS
89,292(85.92%)
(1973 Total Accidents-103,935)
Percent
12.0
10.0
8.0
6.0
4.0
2.0
0.0
12 Mid.
6 A.M.
12 Noon
6 P.M.
12 Mid.

Fig. 4

Precipitation and Accidents 1972 Versus 1973

Reduced precipitation in Michigan in 1973 decreased the number of reported wet surface and snow/ice type of accidents. Precipitation (both rain and snow) dropped from 34.3" in 1972 to 33.3" in 1973. Wet surface accidents were reduced from 27,180 in 1972, to 24,246 for a difference of 2,984 (10.8 percent). Snow/ice accidents were reduced from 17,285 in 1972 to 11,525 in 1973, a difference of 5,760 (33.3 percent). Snow/ice accidents were reduced from 17,285 in 1972 to 11,525 in 1973, a difference of 5,760 (33.3 percent). Insofar as district distribution is concerned, wet surface accidents showed an increase in Districts 1-4 and a decrease in Districts 5-Metro for a net decrease. Snow/ice accidents showed a substantial reduction in Districts 1-7 and a lesser reduction in Districts 8 and Metro. The reduction in wet surface and snow/ice accidents can also be attributed to the reduction in travel occurring in the fall season, 1973.

Interstate Accident Distribution
by Time and Vehicle Type in 1972 and 1973

Fig. 5a and 5b indicate the hourly accident distribution. In general there are two stages in the truck accident picture. During the daytime hours from 7:30 a.m. to 6:30 p.m., truck accidents fluctuated between 4% and 6% and then dropped to the vicinity of 3% the rest of the time with no evidence of morning and afternoon peak. Full-size and compact vehicle accidents followed the same trend. Starting at the lowest point with 1.2% at 4:30 a.m., and increased to 5% during the 7:30 a.m. peak, then dropped slightly to 4% until 4:30 p.m., again increased sharply to 8% by the 4:30 p.m. peak and dropped steadily to 1.2% by 4:30 a.m. It is evident that the high passenger vehicle accidents coincide with the high traffic volumes in the morning and afternoon peaks.

Fig. 5c and Fig. 5d show that full-size and compact vehicle accidents followed the same trend, with higher proportions of accidents from Friday to Sunday (in the range of 14% to 20% with the peak occurring on Friday).

Semi-truck accidents had their unique pattern in both years, which indicate that truck accidents took place during business days from Monday through Friday (range of 14% to 22%). They dropped substantially to about 8% on Saturday and less than 4% on Sunday.

In Fig. 5e, all three types of vehicles had similar monthly accident distributions in 1972. Accidents occurred relatively higher during the summer and winter seasons with an average of about 8.5% in August and 13% in December.

Fig. 5f indicates that full-size passenger vehicle accidents decreased rapidly in the last few months of 1973. In December alone, full-size passenger vehicle accidents dropped from 12.3% in 1972 to 8.9% in 1973 while compact vehicle accidents dropped from 13.8% to 10.9% and 14.2% to 13.7% for semi-truck accidents.

It is assumed that less non-commercial driving and a lower speed limit due to the nationwide fuel shortage have contributed to the changes.

HOURLY ACCIDENT DISTRIBUTIONS OF THE DAY

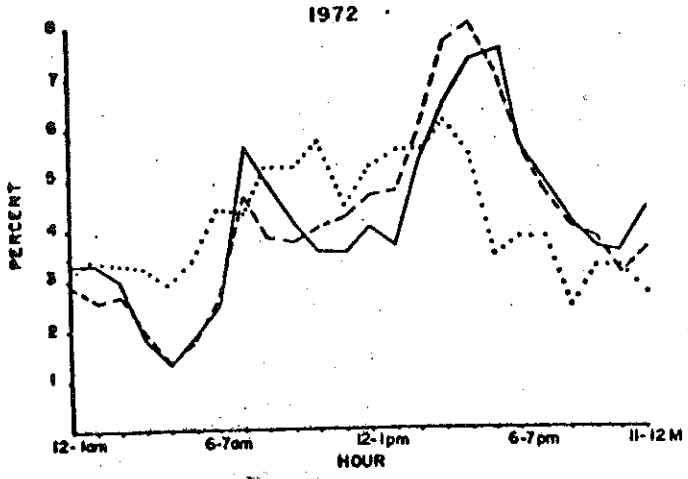

Fig. 5a

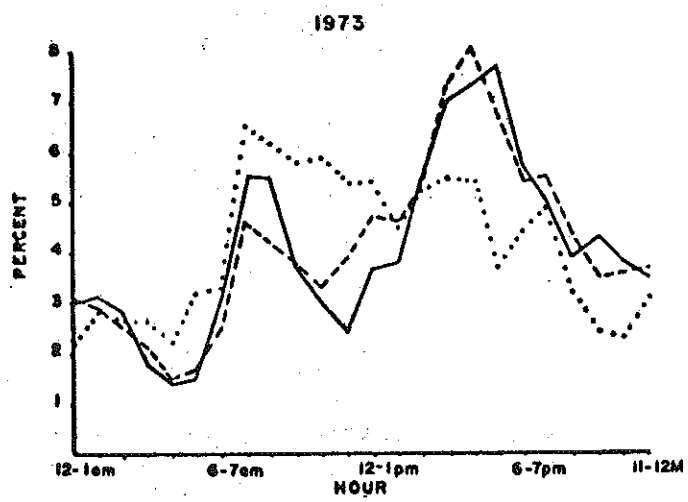

Fig. 5b

DAILY ACCIDENT DISTRIBUTIONS OF THE WEEK

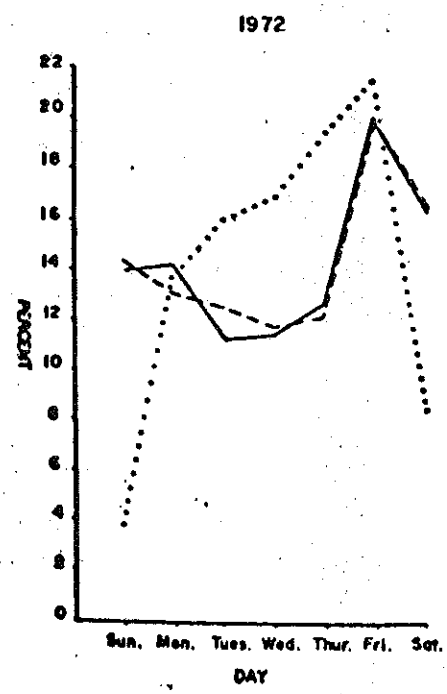

Fig. 5c

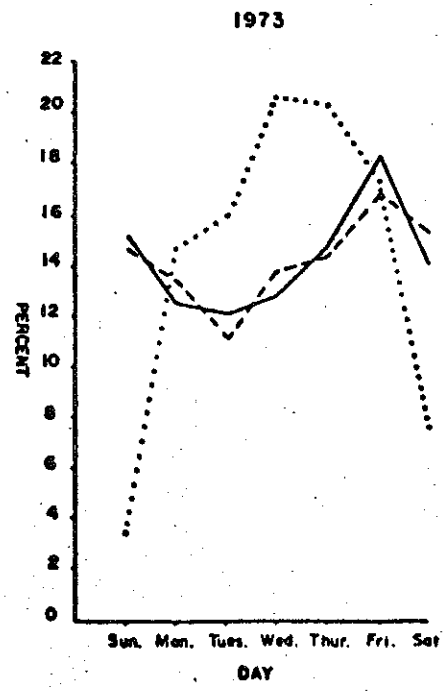

Fig. 5d

MONTHLY ACCIDENT DISTRIBUTIONS OF THE YEAR

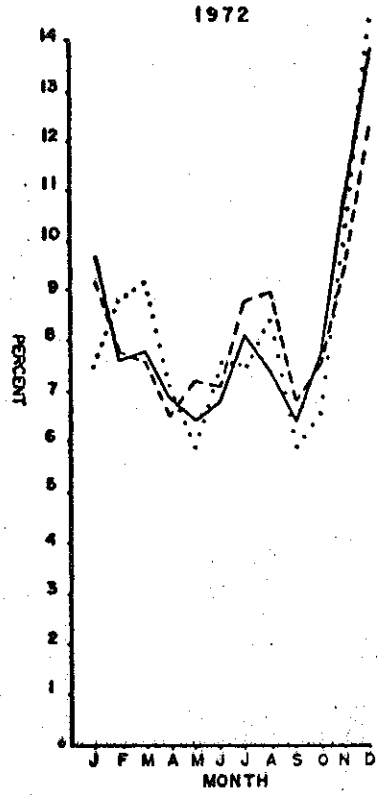

Fig. 5e

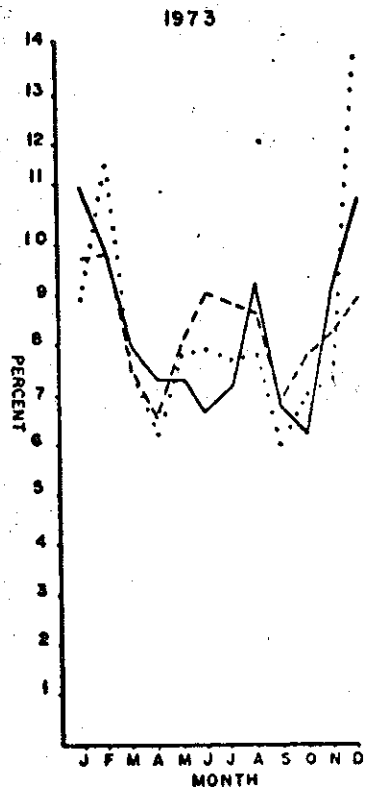

Fig. 5f

Computing Accident Costs

It is not recommended that fatal accident costs be used for computation of cost benefits for a period less than three years. A recent study of 225 fatal accidents which occurred at 210 traffic signals or flashing beacon sites on the state highway trunkline system over a three year period (1971-1973), indicates that there is little probability that a second fatal will occur at the same location within the same calendar year or following calendar years. Of the 225 fatal accidents, 15 occurred at previous fatal accident sites. Six of the 15 occurred during the same calendar year, 9 occurred during other calendar years. The computed probability of a second fatal accident occurring within the same calendar year is 6/210 or 2.9 percent. The probability of a second fatal occurring in some other calendar year of the three year period is 9/210 or 4.3 percent. For this reason, fatal accident cost benefits should be used for the justification of programs over a long term, rather than for the justification of individual intersection improvement projects (1 year before and after studies).

The National Safety Council's Traffic Safety memo No. 113 dated July 1973, gives the following costs of traffic accidents:

1)	Each death	$82,000
2)	Each nonfatal disabling injury	$ 3,400
3)	Each property damage accident (including minor injuries)	$ 480

Analysis of 1973 High Accident Locations

Using a criteria of 10 accidents for accidents for each .2 mile section of highway in Districts 1-4 and 30 accidents for each .2 mile in Districts 5-Metro, 930 high accident locations were selected for detailed analysis. An 11 percent random sampling of 930 locations included 23 locations in Districts 1-4 and 76 locations in Districts 5-Metro. They are listed on pages 20 through 27.

A comparison of weather and surface condititions at these 99 high accident locations reveals that snow and ice control is a problem in Districts 1-4. The relationship of weather and surface condition is shown in the following table.

	% Snowy Weather Accidents	% Snow/Ice Surface Condition Accidents
District 1-4	13.4	23.6
District 5-Metro	5.3	6.2

A further study of monthly accident experience at their locations indicates that the proportion January through March accidents in Districts 1-4 are greater than in Districts 5-Metro.

Rear-end, parking, left-turn accidents show deficient capacity which is much more evident in the southern part of the state. Angle accidents are evident on a statewide basis with a greater proportion occurring in Districts 5-Metro.

1973 High Accident Locations on the State Highway System*

DISTRICT 1

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-41BR Marquette	(Front St.) Washington to Baraga	0	4	41
US-41, M-28, M-35 Ishpeming	Teal Lake Ave. to Second	0	11	24
US-41, M-28, US-41BR Marquette	E. Jct.	0	4	21
M-28BR Ishpeming	Main to Second	0	3	13
US-2 Ironwood	Douglas Blvd.	0	6	12
US-41BR Marquette	Park to 7th	0	3	11

DISTRICT 2

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-2 @ M-94 Manistique	Schoolcraft Co.	0	1	13
US-2, US-41, M-35	Lincoln Street from S. of 11th Ave.	0	7	12
I-75BS, I-75 Interchange to Knox Rd. Sault Ste. Marie	27th Ave.	0	4	11

DISTRICT 3

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-27BR @ US-10 Clare	Fifth Street Clare County	0	7	28

*Excluding Detroit

1973 High Accident Locations
on the State Highway System*

DISTRICT 3 (CONT)

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-10, M-115 @ US-27BR Clare	Clare County	0	5	22
US-10	Pine Evart, Osceola County	0	4	17
M-72, M-37 Traverse City	Silver Lake Road	0	2	16
M-37 Baldwin	8th St., Lake County Lake St. to Ninth St.	0	0	13
US-10 @ US-31 Scottville	E. Jct. (State & Main St.) Mason County	0	4	12
US-10 @ US-131 Richmond	Osceola County	0	4	12
M-37 Pleasant Plains	Star Lake Rd., Lake County	0	0	10

DISTRICT 4

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-23 Alpena	Johnson-Long Rapids Rd.	0	10	26
US-23 Alpena	Ripley Blvd. Alpena County	0	1	20
US-23 @ M-32 Alpena	Chisholm St. Alpena County	0	2	20
US-23 Oscoda	Waterloo-Cedar Lake Rd. Iosco County	0	7	17
US-23 Alpena	4th to 5th St.	0	2	13
US-23 Cheboygan	Cheboygan River	0	2	12

*Excluding Detroit

1973 High Accident Locations
on the State Highway System* (CONT)

DISTRICT 5

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-31BR, BS-96 Muskegon	Sherman	0	15	46
M-37 Walker	3 Mile Rd.	0	9	41
M-11 Wyoming	Buchanan	0	9	39
M-21BR Wyoming	Godfrey-Freeman	0	11	38
M-11 @ I-196 Grandville	Ramps	0	10	38
US-131 Grand Rapids	Franklin	0	12	36
US-31BR Holland	10th St.	0	11	32
US-131 Grand Rapids	Burton St.	0	5	31
US-131 Grand Rapids	Pearl	0	7	30

DISTRICT 6

Route City/Twp.	Location	Accidents Fatal	Injury	Total
M-54 Grand Blanc	Hill	0	21	51
M-58 Saginaw	Hemmeter	0	8	40
M-46 Thomas	River, Village of Shields	1	10	37
M-58 Saginaw	(Davenport) @ Warwick	0	10	37

*Excluding Detroit

1973 High Accident Locations
on the State Highway System*

DISTRICT 6 (CONT)

Route City/Twp.	Location	Accidents Fatal	Injury	Total
M-46 Saginaw	(Remington) @ Sheridan	0	10	33
M-25, BL-75 Bay City	(7th) @ Saginaw	0	13	33
M-84 Saginaw	From Luther to Dale	0	4	32
M-54BR Flint	1st to Water	0	6	32
M-46 Saginaw	(Stephens) From Harrison to Hamilton	0	8	31

DISTRICT 7

Route City/Twp.	Location	Accidents Fatal	Injury	Total
M-139 Benton	Napier	0	18	71
M-43 Kalamazoo	Gull Rd.	0	21	67
M-43 Kalamazoo	(Mich.) @ Riverview	0	5	50
M-37 Battle Creek	@ Capitol	0	2	48
US-12, M-66 Sturgis	@ Monroe	0	10	34
US-12 Coldwater	@ Monroe	0	6	33
US-12, M-66 Sturgis	@ W. Jct.	0	7	32

*Excluding Detroit

1973 High Accident Locations on
the State Highway System* (CONT)

DISTRICT 8

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-12 Ypsilanti	@ Hamilton	0	12	52
BL-94 Jackson	(Washtenaw) From Blackstone to Jackson	1	13	52
BL-94 Jackson	(Washtenaw) @ Glick	0	3	46
M-43 Delta	(Saginaw) @ Elmwood	0	10	46
US-27, BL-96 Lansing	(Larch) @ Grand River	0	11	36
M-99 Lansing	(Logan) @ Mt. Hope	0	8	36
BL-94, BR-23 Ann Arbor	(Huron) @ (N. Main)	0	14	35
M-125 Monroe	From 3rd to 1st	0	12	35
M-125 Monroe	@ Dunbar	0	10	35
I-94 Blackman	@ Cooper	0	10	35
M-17 Ypsilanti	(Cross) @ Hamilton	0	10	34
BL-94 Jackson	(Mich.) From Gorham to Horton	0	8	34
US-27 Lansing	(Larch) From Thomas to Harris	0	7	33

*Excluding Detroit

1973 High Accident Locations on the State Highway System*

DISTRICT Metro

Route City/Twp.	Location	Accidents Fatal	Injury	Total
M-85 Cities of Southgate & Wyandotte	(Fort) from Orange to Catalpa	1	21	98
M-39 City of Lincoln Park	(Southfield) from Dix-Toledo-Riopelle	0	23	95
M-53 City of Centerline	From Edward to 10 Mile	0	30	76
M-59 Waterford Township	@ Cresent Lake Road	0	23	67
M-1 Cities of Berkley & Royal Oak	(Woodward) from 12 Mile to Beverly Boulevard	0	10	63
M-1 Cities of Huntington Woods & Royal Oak	(Woodward) from Princeton-Borgnan X-Over	0	20	62
US-25 City of Roseville	@ Frazho Road	0	29	61
I-96BL @ I-96 Farmington Township	Ramps	0	21	52
I-94 to M-39 City of Allen Park	From Klob Street to E. Bound Exit	0	18	51
M-1 City of Royal Oak	(Woodward) from Guilford to Woodslee	0	17	51
US-24 Redford Township	(Telegraph) from Davison to Schoolcraft	0	19	50
M-1 City of Birmingham	(Woodward) from 14 Mile to Buckingham	0	18	46
M-1 City of Royal Oak	(Woodward) from Millington-Wellsley	0	16	45

*Excluding Detroit

1973 High Accident Locations
on the State Highway System*

DISTRICT Metro (CONT)

Route City/Twp.	Location	Accidents Fatal	Injury	Total
M-102 City of Southfield	(8 Mile) @ John Lodge	0	21	45
M-53 From M-102 City of Warren	(8 Mile) to Rivard Street	0	15	44
I-75BL, US-10BR M-59 to (M-59 W.B) City of Pontiac	From Pike to University	0	9	44
M-59 Highland Township	From John St. C & O X-01	0	20	43
US-25 Clinton Township	From Schafer to Nunnely	0	14	41
I-75 City of Woodhaven	@ West Road	1	14	40
US-24 City of Southfield	(Telegraph) from Norcrest to 9 Mile	0	18	38
M-1 City of Birmingham	(Woodward) from Normandy & Hunt to Chester	0	17	36
BL-75, M-24 Oxford Township	@ Drahner Road	0	13	36
M-1 (US-10) City of Detroit & Highland Park	From McLean to Massachusetts Avenue	0	15	35
US-24 City of Southfield	(Telegraph) @ 10 Mile	0	7	35
M-1 City of Royal Oak	(Woodward) from Amherst & Elm to Fairwood	0	11	34
M-153 City of Dearborn	From Kinmore to Highview	0	10	33

*Excluding Detroit

1973 High Accident Locations
on the State Highway System*

DISTRICT Metro (CONT)

Route City/Twp.	Location	Accidents Fatal	Injury	Total
US-25 City of Mt. Clemens	From Cass-Market Street	0	7	33
US-12, I-96BS City of Dearborn	From Lois Street-Oakman Boulevard	0	13	32
US-25 Clinton Township	From Pitko to Quinn Road	0	12	33
M-49 City of Sterling Heights	@ Mound Road	1	13	32
I-75, US-25 @ M-39 City of Lincoln Park	Ramps	0	13	31
US-10 Waterford Township	From Ruth Street to X-Over	0	8	31
US-24 edford Township	(Telegraph) from Fullerton to Glendale	0	6	31
US-24 Redford Township	(Telegraph) from Wadsworth to Capitol Street	0	10	30
I-94 Van Buren Township	@ Middle Belt	0	8	30
M-53 City of Centerline	From Chapp Street to Superior	0	6	30
US-10 Waterford Township	From Gilcrest to Scott Lake Road	1	8	30
I-94, US-12 City of Dearborn	From C & O R.R. to Overpass	2	16	30

*Excluding Detroit

High Accident Intersections 1973

City of Detroit[1]

		Detroit Ranking	Accidents*
1.	Grand River (B.S. - 96) and Livernois	(#4)	38
2.	Van Dyke (M-53) and East Outer Drive	(#9)	29
3.	Van Dyke (M-53) and Harper	(#10)	29
4.	Davison (M-14) and Livernois	(#11)	28
5.	Davison (M-14) and Conant	(#12)	28
6.	Woodward (M-1) and Seven Mile	(#14)	26
7.	Van Dyke (M-53) and E. Seven Mile Rd.	(#16)	25
8.	Van Dyke (M-53) and E. McNichols	(#18)	24
9.	Davison (M-14) and Linwood	(#20)	23
10.	Woodward (M-1) and E. Jefferson	(#22)	23
11.	Woodward (M-1) and State Fair	(#26)	23
12.	Plymouth (M-14) and W. Outer Drive	(#27)	22
13.	Michigan (US-12) and Livernois	(#33)	20
14.	Michigan (US-12) and Lonyo	(#34)	20
15.	Woodward (M-1) and Larned	(#35)	20

*Accidents occurring within intersections defined by extension of right of way lines

(1) Department of Streets and Traffic

1973 High Accident State Highway Interchanges[2]

City of Detroit

		Accidents		
		Fatal	Personal Injury	Total
1.	I-94 (Ford) @ US-10 (Lodge	0	139	337
2.	I-94 (Ford) @ I-75 (Chrysler)	0	105	304
3.	I-94 (Ford) @ M-53 (Van Dyke)	1	92	205
4.	I-75 (Chrysler) @ M-102 (8 Mile)	0	69	141
5.	I-94 (Ford) @ M-3 (Gratiot)	1	32	90
6.	I-94 (Ford) @ Livernois)	0	30	86
7.	I-75 (Fisher) @ I-375 (Chrysler)	1	33	78
8.	US-24 (Telegraph) @ I-96BS (Grand River)	0	26	69

(2) Includes service road accidents where applicable

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