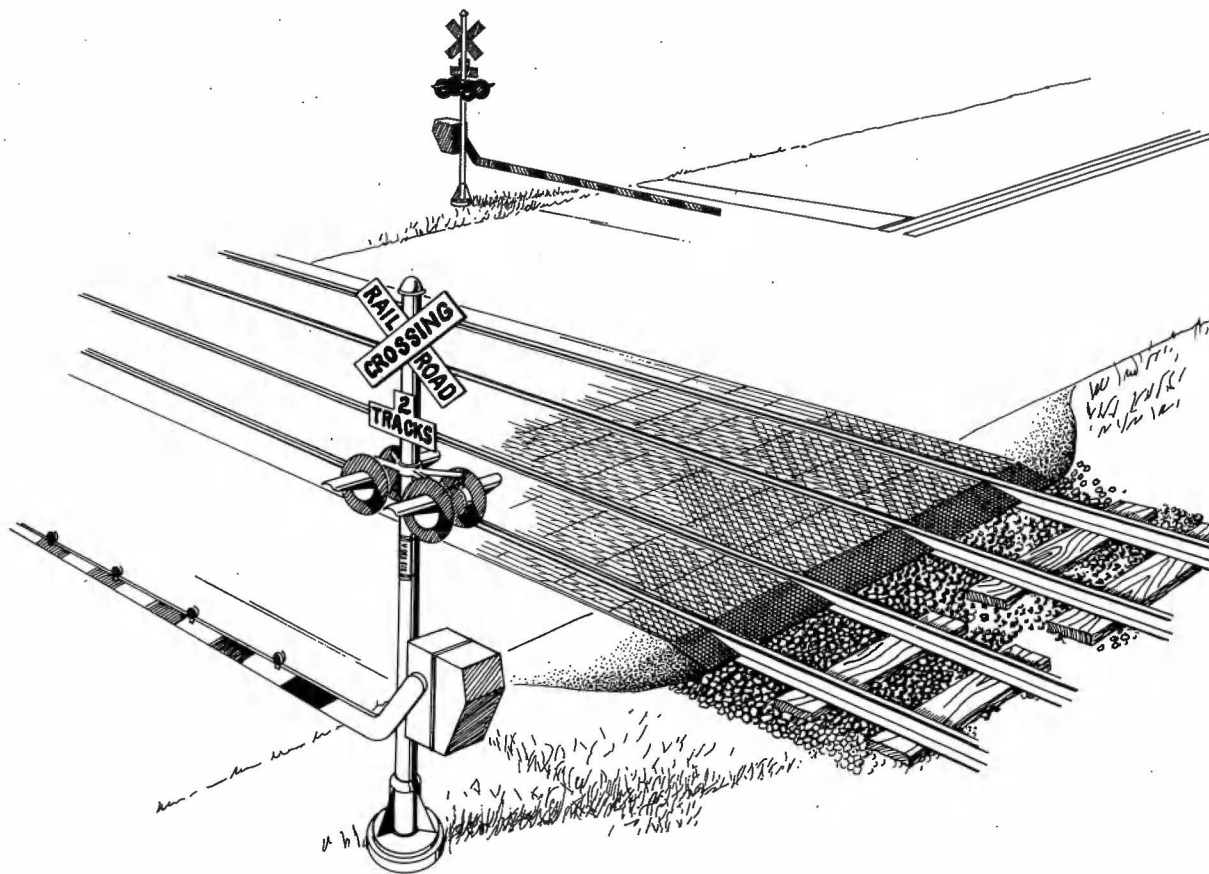


# RAIL-HIGHWAY CROSSING ACCIDENT/INCIDENT AND INVENTORY BULLETIN

No. 3 Calender Year 1980



U.S. DEPARTMENT OF TRANSPORTATION  
Federal Railroad Administration  
Office of Safety



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## LIST OF ABBREVIATIONS

ACC/INC - accident/incident  
CAS - casualty  
CONT - contractor employee  
ENOD - employee not on duty  
EOD - employee on duty  
FA - Federal aid  
HWY - highway  
K - thousands  
KLD - killed  
LOCO(S) - locomotive  
NONT - non-trespasser  
PSGR - passenger  
SIG - signal  
TRES - trespasser  
VEH REG - vehicles registered



## INTRODUCTION

This is the third annual report issued by the Federal Railroad Administration's (FRA) Office of Safety which combines rail-highway crossing accident/incident statistics with the National Rail-Highway Crossing Inventory. Accident/incident data has been obtained from the FRA's Railroad Accident/Incident Reporting System (RAIRS). The RAIRS contains accident/incident reports filed by all railroads with the Office of Safety in accordance with 49 CFR 225. The National Rail-Highway Crossing Inventory contains information on the characteristics of all rail-highway crossings in the United States.

Railroads file accident/incident reports with the FRA in accordance with the Federal Railroad Safety Act of 1970 (P.L. 91-458) and the Accident Reports Act (45 U.S.C. 38-43). The reports allow the FRA to carry out the congressional mandate by maintaining a record of accidents and casualties resulting from the movement of freight and passengers by rail. The National Rail-Highway Crossing Inventory was developed in response to the Federal Railroad Safety Act of 1970 and the Federal Highway Safety Acts of 1970 and 1973. These Acts require the Secretary of Transportation to take action in improving rail-highway crossing safety.

Because of major revisions in reporting requirements which became effective on January 1, 1975, it is not possible to make direct comparisons of data collected after that date with information from prior years. The effect of these changes substantially increased the number of reported rail-highway accidents/incidents. Casualty reporting has been increased to a lesser extent by the changes. Appendix A explains the current reporting requirements.

Complete statistics on all railroad related accidents/incidents are available in the Accident/Incident Bulletin published annually by the FRA's Office of Safety.

Section 1 presents historical data on rail-highway crossing accidents/incidents for 1968 through 1980.

Section 2 of this bulletin contains accident/incident statistics for 1980. The data was obtained from the rail-highway crossing accident/incident file and the railroad casualty file.

Section 3 combines information from the rail-highway crossing accident/incident file with data in the National Rail-Highway Crossing Inventory to develop relationships between certain crossing characteristics and accident frequencies.

INTRODUCTION (continued)

Section 4 presents physical and operational statistics for all public at grade rail-highway crossings in the United States as described by the National Inventory of April 1981. More detailed information is available in the DOT publication "Summary Statistics of the National Railroad-Highway Crossing Inventory for Public at Grade Crossings" (Accession Number PB 293070/AS, September 1978). This document may be obtained from the National Technical Information Service, Springfield, Virginia 22161.

The tables and figures in Sections 1, 2, 3, and 4 and Appendix C of this bulletin present data for public rail-highway crossings only. Tables 1, 3, 9, 13 and D-3 and Figures 1 and 3 pertain to public crossing accidents/incidents involving all highway users. All other tables show only those accidents/incidents in which motor vehicles were involved. Summary data for all accidents and incidents at all public and private crossings are shown in the following table:

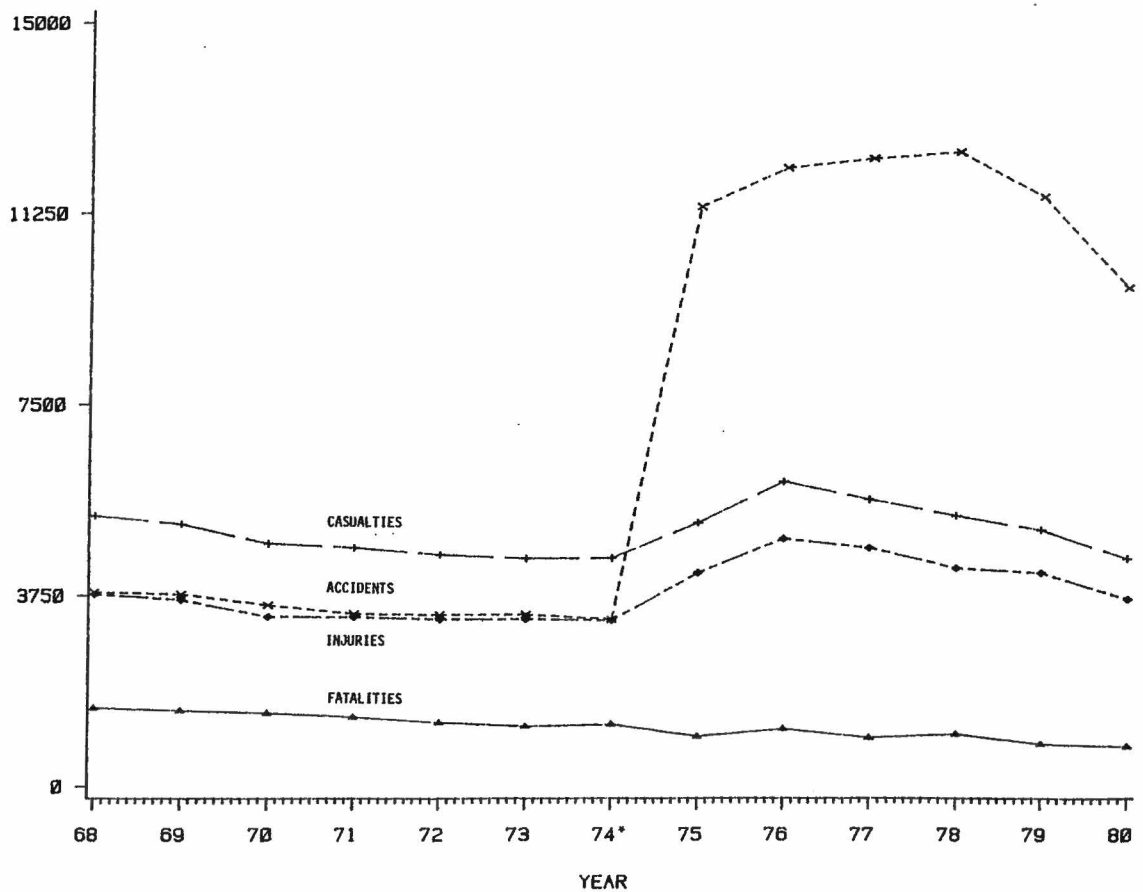
SUMMARY OF ALL RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS (1980)

Type of Crossing	Total			Motor Vehicles			Non-Motor Vehicles		
	Accidents	Killed	Injured	Accidents	Killed	Injured	Accidents	Killed	Injured
Public	9,763	788	3,662	9,422	708	3,534	341	80	128
Private	848	45	228	792	40	205	56	5	23
Total	10,611	833	3,890	10,214	748	3,739	397	85	151

1. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS: HISTORICAL DATA 1968-1980

TABLE 1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1968-1980

YEAR	NUMBER OF ACCIDENTS	TOTAL			CASUALTIES PER ACCIDENT
		KILLED	INJURED	CASUALTIES	
1968	3,816	1,546	3,774	5,320	1.39
1969	3,774	1,490	3,669	5,159	1.37
1970	3,559	1,440	3,336	4,776	1.34
1971	3,392	1,356	3,332	4,688	1.38
1972	3,379	1,260	3,285	4,545	1.35
1973	3,379	1,185	3,283	4,468	1.32
1974	3,268	1,220	3,249	4,469	1.37
1975*	11,354	978	4,168	5,146	0.45
1976	12,114	1,114	4,831	5,945	0.49
1977	12,299	944	4,649	5,593	0.45
1978	12,435	1,021	4,256	5,277	0.42
1979	11,552	834	4,172	5,006	0.43
1980	9,763	788	3,662	4,450	0.46



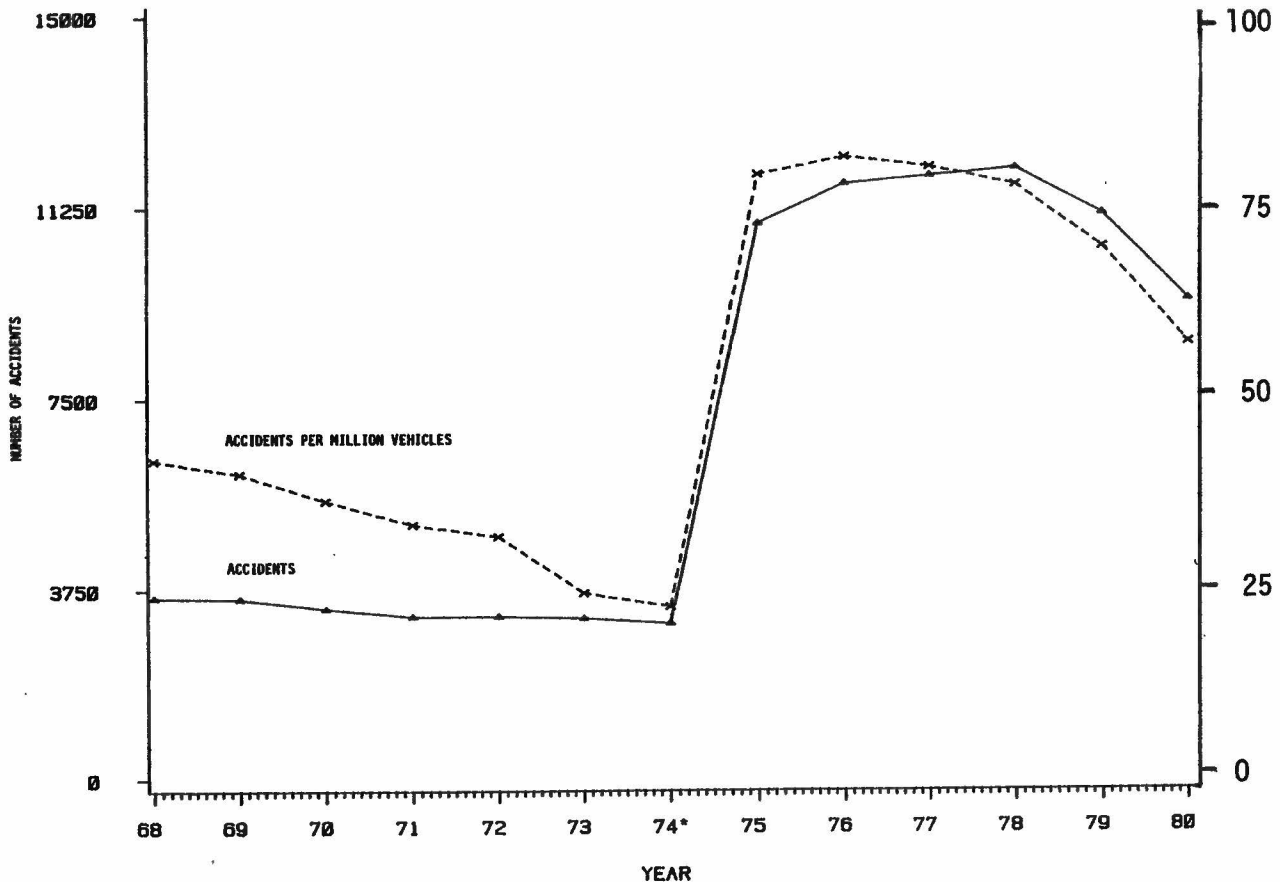
\* DATA AFTER 1974 IS NOT COMPARABLE WITH PREVIOUS DATA BECAUSE OF CHANGES IN REPORTING REQUIREMENTS

FIGURE 1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1968-1980

**TABLE 2 SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1968-1980**

YEAR	ACCIDENTS	MOTOR VEHICLES REGISTERED (000) <sup>1</sup>	ACCIDENTS PER MILLION VEHICLES
1968	3,603	85,799	41.99
1969	3,572	88,815	40.22
1970	3,377	92,124	36.66
1971	3,224	96,097	33.55
1972	3,222	100,595	32.03
1973	3,174	129,511	24.51
1974	3,079	135,720	22.69
1975*	10,925	137,918	79.21
1976	11,700	143,538	81.51
1977	11,849	147,718	80.12
1978	11,999	153,636	78.12
1979	11,108	159,620	69.59
1980	9,422	164,728	57.20

<sup>1</sup> Figures for 1968-1979 supplied by the Federal Highway Administration. The 1980 figure is an estimate, and is not used in other tables.



\* DATA AFTER 1974 IS NOT COMPARABLE WITH PRIOR YEARS BECAUSE OF CHANGES IN REPORTING REQUIREMENTS

**FIGURE 2 SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1968-1980**



## 2. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS 1980

**TABLE 3 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY STATE**

STATE	TOTAL ACC/INC		TOTAL KILLED		TOTAL INJURED		TOTAL CASUALTIES	
	NO.	%	NO.	%	NO.	%	NO.	%
ALABAMA	281		15	1.90	125	3.41	140	3.15
ALASKA	23		1	0.13	8	0.22	9	0.20
ARIZONA	31		2	0.25	14	0.38	16	0.36
ARKANSAS	209		16	2.03	97	2.65	113	2.54
CALIFORNIA	430		29	3.68	134	3.66	163	3.66
COLORADO	121		11	1.40	40	1.09	51	1.15
CONNECTICUT	23		2	0.25	6	0.16	8	0.18
DELAWARE	18		2	0.25	1	0.03	3	0.07
DIST. COLUMBIA	2		0	—	0	—	0	—
FLORIDA	333		27	3.43	99	2.70	126	2.83
GEORGIA	300		16	2.03	123	3.36	139	3.12
HAWAII	0		0	—	0	—	0	—
IDAHO	67		2	0.25	24	0.66	26	0.58
ILLINOIS	654		71	9.01	251	6.85	322	7.24
INDIANA	553		59	7.49	192	5.24	251	5.64
IOWA	251		23	2.92	78	2.13	101	2.27
KANSAS	202		12	1.52	103	2.81	115	2.58
KENTUCKY	157		12	1.52	39	1.06	51	1.15
LOUISIANA	408		21	2.66	256	6.99	277	6.22
MAINE	17		3	0.38	4	0.11	7	0.16
MARYLAND	57		2	0.25	20	0.55	22	0.49
MASSACHUSETTS	34		2	0.25	6	0.16	8	0.18
MICHIGAN	373		27	3.43	137	3.74	164	3.69
MINNESOTA	283		14	1.78	89	2.43	103	2.31
MISSISSIPPI	238		19	2.41	157	4.29	176	3.96
MISSOURI	236		24	3.05	106	2.89	130	2.92
MONTANA	49		10	1.27	12	0.33	22	0.49
NEBRASKA	182		23	2.92	55	1.50	78	1.75
NEVADA	22		1	0.13	12	0.33	13	0.29
NEW HAMPSHIRE	15		2	0.25	2	0.05	4	0.09
NEW JERSEY	74		6	0.76	28	0.76	34	0.76
NEW MEXICO	23		3	0.38	13	0.35	16	0.36
NEW YORK	129		20	2.54	22	0.60	42	0.94
NORTH CAROLINA	268		30	3.81	97	2.65	127	2.85
NORTH DAKOTA	42		6	0.76	6	0.16	12	0.27
OHIO	649		63	7.99	256	6.99	319	7.17
OKLAHOMA	242		21	2.66	101	2.76	122	2.74
OREGON	93		7	0.89	38	1.04	45	1.01
PENNSYLVANIA	226		9	1.14	55	1.50	64	1.44
RHODE ISLAND	3		0	—	1	0.03	1	0.02
SOUTH CAROLINA	186		20	2.54	50	1.37	70	1.57
SOUTH DAKOTA	27		1	0.13	6	0.16	7	0.16
TENNESSEE	215		11	1.40	74	2.02	85	1.91
TEXAS	1196		94	11.93	478	13.05	572	12.85
UTAH	59		6	0.76	24	0.66	30	0.67
VERMONT	13		1	0.13	3	0.08	4	0.09
VIRGINIA	119		6	0.76	38	1.04	44	0.99
WASHINGTON	183		12	1.52	29	0.79	41	0.92
WEST VIRGINIA	110		6	0.76	41	1.12	47	1.06
WISCONSIN	314		17	2.16	104	2.84	121	2.72
WYOMING	23		1	0.13	8	0.22	9	0.20
TOTAL	9763		788	100.00	3662	100.00	4450	100.00

**TABLE 4 ACCIDENTS/INCIDENTS AND CASUALTY RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE**

STATE	TOTAL ACC/INC	TOTAL KILLED	TOTAL INJURED	TOTAL CASUALTIES	VEHICLES REGISTERED (000) <sup>1</sup>	ACC/CAS PER 10,000 REGISTRATION		
						ACC	KILLED	INJURED
ALABAMA	272	13	122	135	2915	0.93	0.04	0.42
ALASKA	21	1	8	9	258	0.81	0.04	0.31
ARIZONA	29	1	14	15	1845	0.16	0.01	0.08
ARKANSAS	199	14	93	107	1544	1.29	0.09	0.60
CALIFORNIA	411	26	125	151	16990	0.24	0.02	0.07
COLORADO	118	11	39	50	2472	0.48	0.04	0.16
CONNECTICUT	23	2	6	8	2280	0.10	0.01	0.03
DELAWARE	18	2	1	3	404	0.44	0.05	0.02
DIST. COLUMBIA	2	0	0	0	253	0.08	-	-
FLORIDA	324	27	96	123	7519	0.43	0.04	0.13
GEORGIA	284	15	114	129	3846	0.74	0.04	0.30
HAWAII	0	0	0	0	566	-	-	-
IDAHO	65	2	23	25	833	0.78	0.02	0.28
ILLINOIS	619	55	240	295	9028	0.69	0.06	0.27
INDIANA	542	55	188	243	3955	1.37	0.14	0.48
IOWA	233	22	72	94	2519	0.92	0.09	0.29
KANSAS	196	11	101	112	2312	0.85	0.05	0.44
KENTUCKY	153	11	39	50	2667	0.57	0.04	0.15
LOUISIANA	396	19	247	266	2754	1.44	0.07	0.90
MAINE	17	3	4	7	756	0.22	0.04	0.05
MARYLAND	56	1	20	21	2844	0.20	-	0.07
MASSACHUSETTS	34	2	6	8	3822	0.09	0.01	0.02
MICHIGAN	366	27	134	161	6592	0.56	0.04	0.20
MINNESOTA	276	13	89	102	3576	0.77	0.04	0.25
MISSISSIPPI	232	19	154	173	1509	1.54	0.13	1.02
MISSOURI	227	23	104	127	3343	0.68	0.07	0.31
MONTANA	48	10	11	21	963	.50	.10	.11
NEBRASKA	170	21	50	71	1284	1.32	0.16	0.39
NEVADA	20	0	12	12	586	0.34	-	0.20
NEW HAMPSHIRE	15	2	2	4	668	0.22	0.03	0.03
NEW JERSEY	73	6	28	34	4816	0.15	0.01	0.06
NEW MEXICO	21	3	13	16	1077	0.19	0.03	0.12
NEW YORK	125	18	20	38	8183	0.15	0.02	0.02
NORTH CAROLINA	260	26	95	121	4549	0.57	0.06	0.21
NORTH DAKOTA	39	6	6	12	644	0.60	0.09	0.09
OHIO	635	59	252	311	7691	.83	.08	1.33
OKLAHOMA	226	17	89	106	2717	0.83	0.06	0.33
OREGON	88	6	36	42	2089	0.42	0.03	0.17
PENNSYLVANIA	217	6	52	58	6974	0.31	0.01	0.07
RHODE ISLAND	3	0	1	1	608	0.05	0.0	0.02
SOUTH CAROLINA	184	18	50	68	2011	0.91	0.09	0.25
SOUTH DAKOTA	24	0	5	5	629	0.38	-	0.08
TENNESSEE	205	9	71	80	3080	0.67	0.03	0.23
TEXAS	1159	84	461	545	10292	1.13	0.08	0.45
UTAH	58	5	24	29	1045	0.55	0.05	0.23
VERMONT	13	1	3	4	351	0.37	0.03	0.09
VIRGINIA	114	5	37	42	3589	0.32	0.01	0.10
WASHINGTON	176	11	26	37	3258	0.54	0.03	0.08
WEST VIRGINIA	106	4	40	44	1301	0.81	0.03	0.31
WISCONSIN	307	15	103	118	3313	0.93	0.05	0.31
WYOMING	23	1	8	9	477	0.48	0.02	0.17
<b>TOTAL</b>	<b>9422</b>	<b>708</b>	<b>3534</b>	<b>4242</b>	<b>159620</b>	<b>0.59</b>	<b>0.04</b>	<b>0.22</b>

<sup>1</sup>(1979) FIGURES SUPPLIED BY FEDERAL HIGHWAY ADMINISTRATION.

**TABLE 5 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF MOTOR VEHICLE**

STATE	TYPE OF MOTOR VEHICLE																	
	***AUTOMOBILE***			*****TRUCK*****			TRUCK TRAILER*****			*****BUS*****			SCHOOL *****BUS*****			***MOTORCYCLE***		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
ALABAMA	205	10	91	45	3	18	20	0	11	0	0	0	0	0	0	2	0	2
ALASKA	9	1	2	11	0	5	1	0	1	0	0	0	0	0	0	0	0	0
ARIZONA	21	1	5	5	0	6	1	0	2	0	0	0	1	0	0	1	0	1
ARKANSAS	127	9	67	53	5	20	18	0	6	1	0	0	0	0	0	0	0	0
CALIFORNIA	305	17	94	77	8	22	24	0	6	1	0	0	0	0	0	4	1	3
COLORADO	79	7	27	30	4	10	8	0	2	0	0	0	0	0	0	1	0	0
CONNECTICUT	17	2	6	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0
DELAWARE	12	1	1	3	1	0	3	0	0	0	0	0	0	0	0	0	0	0
DIST. COLUMBIA	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	219	17	62	62	5	25	35	2	8	1	0	0	0	0	0	7	3	1
GEORGIA	194	5	85	59	9	19	30	1	8	0	0	0	1	0	2	0	0	0
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	38	1	20	22	1	2	5	0	1	0	0	0	0	0	0	0	0	0
ILLINOIS	482	44	181	100	5	39	29	4	15	0	0	0	1	0	0	7	2	5
INDIANA	400	40	125	115	14	43	18	0	6	3	0	11	0	0	0	6	1	3
IOWA	155	18	56	52	1	9	17	0	2	2	0	1	0	0	0	7	3	4
KANSAS	123	8	70	56	1	26	16	2	4	0	0	0	0	0	0	1	0	1
KENTUCKY	104	7	28	40	2	10	7	0	0	0	0	0	0	0	0	2	2	1
LOUISIANA	260	10	147	97	2	45	34	7	14	4	0	41	0	0	0	1	0	0
MAINE	10	3	3	6	0	1	1	0	0	0	0	0	0	0	0	0	0	0
MARYLAND	34	0	9	15	1	9	7	0	2	0	0	0	0	0	0	0	0	0
MASSACHUSETTS	31	2	6	3	0	0	0	0	0	0	0	0	0	0	0	3	2	3
MICHIGAN	263	17	94	84	8	28	15	0	9	1	0	0	0	0	0	0	0	0
MINNESOTA	192	8	66	63	4	14	17	1	4	0	0	0	1	0	3	3	0	2
MISSISSIPPI	162	16	111	56	1	37	13	1	6	0	0	0	0	0	0	1	1	0
MISSOURI	151	15	63	65	8	29	10	0	12	0	0	0	0	0	0	1	0	0
MONTANA	29	7	7	14	3	0	4	0	0	0	0	0	1	0	4	0	0	0
NEBRASKA	101	10	31	46	10	14	23	1	5	0	0	0	0	0	0	0	0	0
NEVADA	12	0	10	6	0	2	2	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	10	2	1	4	0	0	0	0	0	0	0	0	0	0	0	1	0	1
NEW JERSEY	56	4	17	11	2	4	4	0	6	0	0	0	0	0	0	0	0	0
NEW MEXICO	11	2	8	6	0	4	4	1	1	0	0	0	1	0	0	2	3	0
NEW YORK	102	14	17	14	1	2	5	0	1	1	0	0	0	0	0	0	0	0
NORTH CAROLINA	181	22	67	51	4	19	28	0	9	0	0	0	0	0	0	0	0	0
NORTH DAKOTA	23	1	4	13	5	2	3	0	0	0	0	0	0	0	0	0	0	0
OHIO	473	53	192	116	3	50	41	2	6	0	0	0	0	0	0	5	1	4
OKLAHOMA	166	11	66	48	6	17	7	0	3	0	0	0	1	0	0	4	0	3
OREGON	60	5	26	23	1	8	3	0	0	0	0	0	0	0	0	2	0	2
PENNSYLVANIA	160	1	39	48	4	12	8	0	0	0	0	0	0	0	0	1	1	1
RHODE ISLAND	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH CAROLINA	128	13	35	39	4	10	16	1	3	0	0	0	0	0	0	1	0	2
SOUTH DAKOTA	16	0	4	6	0	1	1	0	0	0	0	0	0	0	0	1	0	0
TENNESSEE	144	6	42	42	2	20	14	0	6	1	0	0	0	0	0	3	1	2
TEXAS	714	55	295	316	19	126	120	8	34	4	0	5	0	0	0	5	2	1
UTAH	34	3	19	18	2	4	6	0	1	0	0	0	0	0	0	0	0	0
VERMONT	7	0	1	6	1	2	0	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	89	4	24	17	1	10	6	0	2	1	0	0	0	0	0	1	0	1
WASHINGTON	113	3	13	55	8	9	7	0	3	1	0	1	0	0	0	0	0	0
WEST VIRGINIA	67	1	27	36	3	13	3	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	220	8	73	69	4	22	9	0	4	0	0	0	1	0	0	8	3	4
WYOMING	12	1	6	6	0	0	5	0	2	0	0	0	0	0	0	0	0	0
TOTAL	6524	485	2444	2135	166	768	650	31	205	21	0	60	9	0	9	83	26	48

**TABLE 6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN**

STATE	TYPE OF TRAIN											
	****FREIGHT****			****PASSENGER****			YARD/ ****SWITCHING****			1 ****OTHER****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
ALABAMA	206	9	100	5	0	1	29	0	11	32	4	10
ALASKA	3	0	0	2	0	1	10	1	3	6	0	4
ARIZONA	20	0	12	1	1	0	8	0	2	0	0	0
ARKANSAS	154	13	74	1	0	0	17	0	5	27	1	14
CALIFORNIA	266	21	96	20	0	4	70	2	14	55	3	11
COLORADO	77	11	23	2	0	0	24	0	10	15	0	6
CONNECTICUT	11	2	2	8	0	2	0	0	0	4	0	2
DELAWARE	11	1	1	0	0	0	5	1	0	2	0	0
DIST. COLUMBIA	0	0	0	0	0	0	1	0	0	1	0	0
FLORIDA	231	17	70	26	6	13	32	0	3	35	4	10
GEORGIA	190	11	93	2	0	4	49	0	6	43	4	11
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	46	1	12	0	0	0	7	1	2	12	0	9
ILLINOIS	393	31	173	63	21	28	84	2	15	79	1	24
INDIANA	427	48	155	20	0	12	47	2	7	48	5	14
IOWA	151	13	53	0	0	0	43	8	12	39	1	7
KANSAS	142	10	79	1	0	0	24	0	4	29	1	10
KENTUCKY	107	7	34	1	0	0	22	0	1	23	4	4
LOUISIANA	269	16	166	6	1	7	69	0	52	52	2	22
MAINE	13	3	3	0	0	0	1	0	0	3	0	1
MARYLAND	31	1	13	4	0	0	11	0	4	10	0	3
MASSACHUSETTS	17	2	2	10	0	1	2	0	3	5	0	0
MICHIGAN	270	23	103	10	1	6	48	1	9	38	2	16
MINNESOTA	199	13	74	0	0	0	43	0	11	34	0	4
MISSISSIPPI	163	19	111	4	0	2	38	0	25	27	0	16
MISSOURI	168	21	71	4	0	11	27	1	8	28	1	14
MONTANA	32	9	5	1	0	0	9	0	5	6	1	1
NEBRASKA	128	20	41	4	0	0	17	0	3	21	1	6
NEVADA	13	0	8	0	0	0	5	0	3	2	0	1
NEW HAMPSHIRE	10	0	1	1	2	1	3	0	0	1	0	0
NEW JERSEY	36	0	4	25	6	24	6	0	0	6	0	0
NEW MEXICO	18	3	7	0	0	0	0	0	0	3	0	6
NEW YORK	74	10	8	28	7	7	8	0	2	15	1	3
NORTH CAROLINA	204	21	83	5	3	1	20	0	3	31	2	8
NORTH DAKOTA	27	6	4	0	0	0	6	0	1	6	0	1
OHIO	501	49	208	10	6	3	62	0	20	62	4	21
OKLAHOMA	164	17	68	0	0	0	38	0	16	24	0	5
OREGON	50	4	21	5	1	3	20	0	1	13	1	11
PENNSYLVANIA	151	5	45	32	1	3	12	0	3	22	0	1
RHODE ISLAND	3	0	1	0	0	0	0	0	0	0	0	0
SOUTH CAROLINA	141	8	41	8	3	0	14	0	2	21	7	7
SOUTH DAKOTA	15	0	2	0	0	0	4	0	1	5	0	2
TENNESSEE	143	9	56	0	0	0	38	0	13	24	0	2
TEXAS	758	71	320	18	0	11	206	7	73	177	6	57
UTAH	40	4	16	2	0	0	6	0	0	10	1	8
VERMONT	10	1	2	1	0	0	0	0	0	2	0	1
VIRGINIA	75	4	27	5	0	3	22	1	4	12	0	3
WASHINGTON	107	10	17	1	0	0	44	0	7	24	1	2
WEST VIRGINIA	78	3	30	0	0	0	8	0	1	20	1	9
WISCONSIN	198	14	79	3	0	2	68	1	9	38	0	13
WYOMING	15	1	6	0	0	0	5	0	1	3	0	1
TOTAL	6556	562	2620	339	59	150	1332	28	375	1195	59	389

<sup>1</sup> INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

**TABLE 7 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY**

CLASS I RAILROAD	WARNING DEVICE CATEGORY									TOTAL
	GATES	CANTI-LEVERED FLASHING LIGHTS	STANDARD FLASHING LIGHTS	HWY. SIG. WIGWAGS BELLS	SPECIAL <sup>1</sup>	CROSS-BUCKS	STOP SIGNS	OTHER SIGNS	NO SIGNS OR SIGNALS	
ALABAMA GREAT SOUTHERN RAILROAD	1	3	8	4	1	17	0	0	4	38
AMTRAK <sup>2</sup>	37	16	44	7	0	51	3	0	0	158
ATCHISON, TOPEKA & SANTA FE	90	57	120	17	3	187	0	1	2	477
BALTIMORE & OHIO RAILWAY	16	30	77	4	10	132	8	0	7	284
BESSEMER & LAKE ERIE RAILROAD	0	0	2	0	0	5	0	0	0	7
BOSTON & MAINE CORPORATION	6	1	17	0	4	7	0	0	1	36
BURLINGTON NORTHERN	54	24	107	35	5	330	6	0	9	570
CENTRAL OF GEORGIA RAILROAD	4	1	12	5	9	36	0	0	1	68
CHESAPEAKE & OHIO RAILWAY	13	20	69	3	1	86	13	0	6	211
CHICAGO & NORTH WESTERN	59	17	120	50	10	166	2	0	13	437
CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC	26	3	69	20	5	107	2	0	1	233
CHICAGO, ROCK ISLAND & PACIFIC	8	0	6	5	2	19	0	0	1	41
CINN., NEW ORLEANS & TEXAS PACIFIC	2	0	3	2	0	3	0	0	0	10
CLINCHFIELD RAILROAD	0	1	1	0	0	4	0	0	0	6
COLORADO & SOUTHERN RAILWAY	3	0	4	3	0	10	1	0	0	21
CONSOLIDATED RAIL CORPORATION	184	42	347	14	34	366	25	7	10	1029
DELAWARE & HUDSON RAILWAY	5	0	6	0	0	3	0	0	0	14
DENVER & RIO GRANDE WESTERN	6	3	14	0	2	19	0	0	0	44
DETROIT, TOLEDO & Ironton	3	0	3	0	0	18	0	0	0	24
DULUTH, MISSABE & IRON RANGE	0	0	2	0	0	2	0	0	0	4
ELGIN, JOLIET & EASTERN	4	0	5	0	1	7	0	0	0	17
FLORIDA EAST COAST RAILWAY	44	0	9	0	1	7	0	1	0	62
FORT WORTH & DENVER RAILWAY	0	6	15	6	0	23	0	0	1	51
GRAND TRUNK WESTERN	28	7	24	0	1	24	0	0	0	84
ILLINOIS CENTRAL GULF RAILROAD	28	49	104	13	14	215	2	4	7	436
KANSAS CITY SOUTHERN RAILWAY	2	7	35	11	3	41	3	0	2	104
LONG ISLAND RAIL ROAD	22	0	0	0	0	0	0	0	0	22
LOUISIANA & ARKANSAS RAILWAY COMPANY	2	17	20	3	0	23	0	0	0	65
LOUISVILLE & NASHVILLE	32	17	137	26	11	148	5	1	10	387
MISSOURI-KANSAS-TEXAS RAILROAD	8	22	47	3	4	72	1	1	0	158
MISSOURI PACIFIC RAILROAD	39	40	245	3	16	324	2	2	18	689
NORFOLK & WESTERN RAILWAY	39	34	152	13	3	197	0	2	4	444
PITTSBURGH & LAKE ERIE RAILROAD	1	0	0	0	0	2	0	0	1	4
ST. LOUIS-SAN FRANCISCO RAILWAY	13	26	77	5	8	152	0	2	1	284
ST. LOUIS SOUTHWESTERN RAILWAY	16	3	33	4	4	68	4	0	2	134
SEABOARD COAST LINE RAILROAD	49	38	124	14	32	382	0	0	3	642
SOO LINE	6	6	56	3	2	65	0	1	0	139
SOUTHERN PACIFIC TRANSPORTATION COMPANY	135	34	127	80	24	198	13	1	11	623
SOUTHERN RAILWAY	21	19	96	25	28	239	0	1	24	453
UNION PACIFIC RAILROAD	32	16	77	17	5	147	4	0	4	302
WESTERN MARYLAND RAILWAY	1	2	9	0	0	8	0	0	2	22
WESTERN PACIFIC	10	1	17	8	1	23	0	0	1	61
TOTAL CLASS I RAILROADS	1014	547	2397	396	244	3882	91	24	146	8741
TOTAL CLASS II & III RAILROADS	79	44	194	37	34	265	13	0	15	681
GRAND TOTAL	1093	591	2591	433	278	4147	104	24	161	9422

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

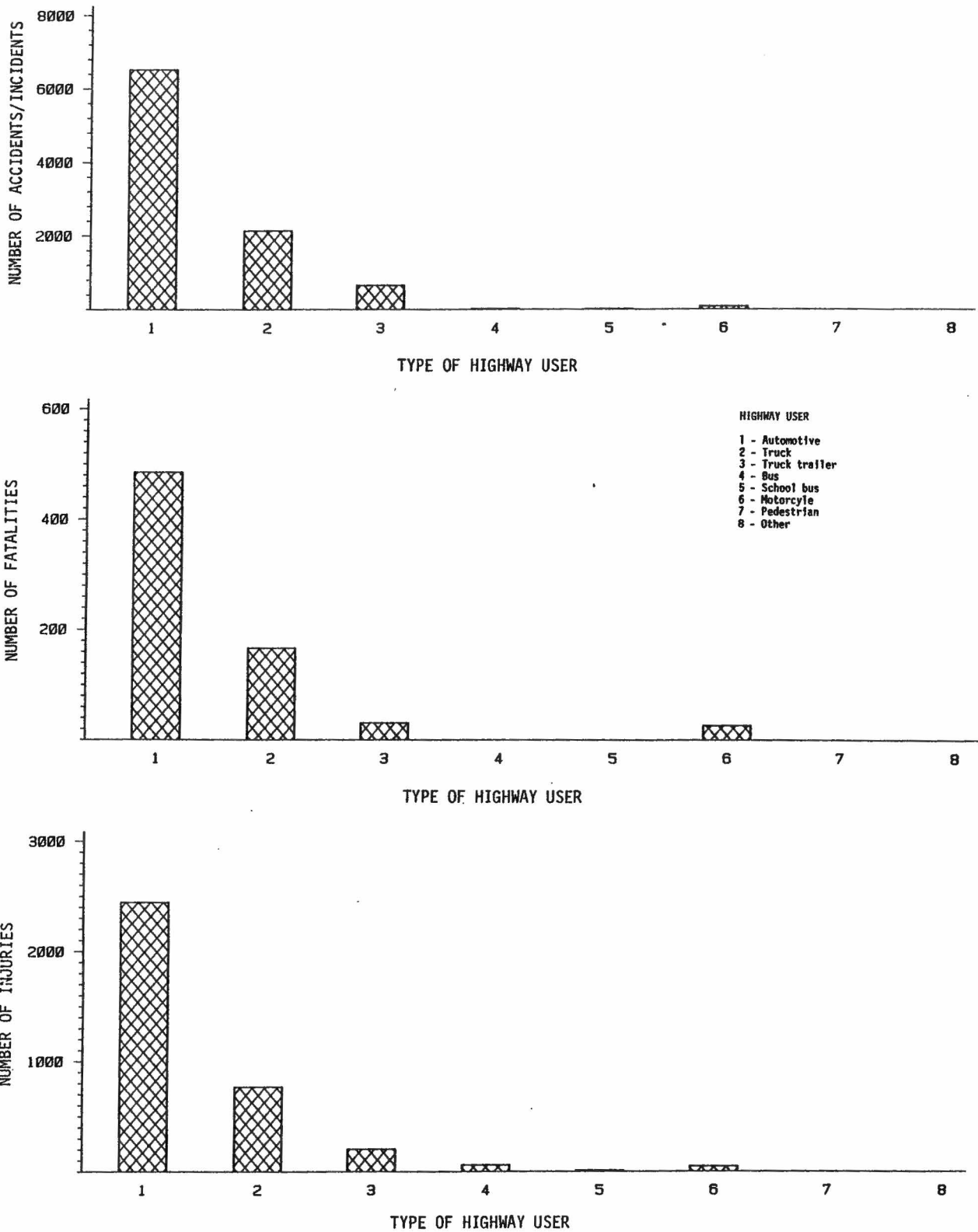
<sup>2</sup> AMTRAK AND AUTOTRAIN ACCIDENTS HAVE BEEN EXCLUDED IN ALL OTHER TABLES. THESE ACCIDENTS ARE REPORTED BY AMTRAK AND AUTOTRAIN AND BY THE OPERATING CARRIER. IN THIS TABLE THEY ARE INCLUDED IN THE DETAIL LINES BUT EXCLUDED IN THE TOTAL.

**TABLE 8 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY**

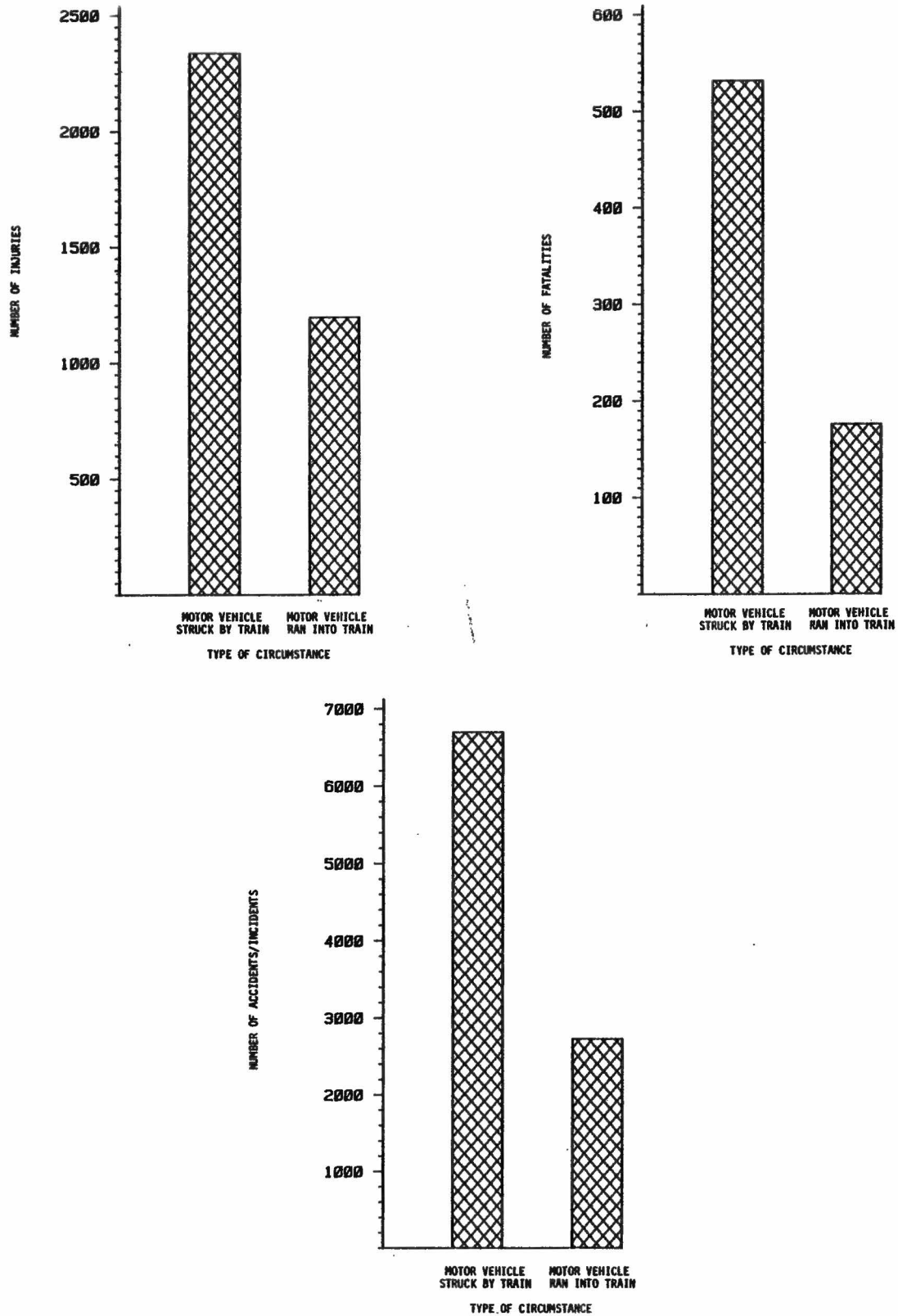
STATE	WARNING DEVICE CATEGORY								TOTAL
	GATES	FLASHING LIGHTS	HWY SIGS. WIGWAGS BELLS	SPECIAL	CROSS-BUCKS	STOP SIGNS	OTHER SIGNS	NO SIGNS OR SIGNALS	
ALABAMA	5	71	24	14	148	3	1	6	272
ALASKA	0	4	4	1	11	0	0	1	21
ARIZONA	6	14	3	0	5	0	1	0	29
ARKANSAS	12	49	7	5	118	3	0	5	199
CALIFORNIA	148	87	55	12	100	5	0	4	411
COLORADO	13	47	4	2	50	1	0	1	118
CONNECTICUT	1	14	0	1	6	1	0	0	23
DELAWARE	2	7	0	0	8	0	1	0	18
DIST. COLUMBIA	0	0	0	2	0	0	0	0	2
FLORIDA	71	111	5	9	124	0	1	3	324
GEORGIA	28	63	14	23	151	0	0	5	284
HAWAII	0	0	0	0	0	0	0	0	0
IDAHO	1	17	1	1	42	2	0	1	65
ILLINOIS	176	243	10	5	170	4	1	10	619
INDIANA	107	202	10	6	208	6	0	3	542
IOWA	16	63	25	3	118	3	0	5	233
KANSAS	21	31	6	6	129	0	1	2	196
KENTUCKY	12	78	8	1	49	0	0	5	153
LOUISIANA	20	150	16	11	179	3	2	15	396
MAINE	0	9	0	0	8	0	0	0	17
MARYLAND	9	19	3	7	18	0	0	0	56
MASSACHUSETTS	6	21	1	3	2	0	0	1	34
MICHIGAN	51	162	6	6	123	15	1	2	366
MINNESOTA	9	83	15	8	156	4	1	0	276
MISSISSIPPI	3	56	13	18	122	9	2	9	232
MISSOURI	15	85	11	3	109	0	1	3	227
MONTANA	5	15	1	0	27	0	0	0	48
NEBRASKA	13	61	2	3	91	0	0	0	170
NEVADA	5	9	3	0	1	1	0	1	20
NEW HAMPSHIRE	0	6	0	2	6	0	0	1	15
NEW JERSEY	13	31	2	10	16	1	0	0	73
NEW MEXICO	3	6	0	0	11	1	0	0	21
NEW YORK	46	34	6	5	27	3	0	4	125
NORTH CAROLINA	14	53	0	11	176	0	1	5	260
NORTH DAKOTA	0	7	4	0	27	0	0	1	39
OHIO	55	238	6	4	315	12	2	3	635
OKLAHOMA	13	86	5	6	115	0	0	1	226
OREGON	8	13	13	1	48	4	0	1	88
PENNSYLVANIA	23	79	5	11	84	4	5	6	217
RHODE ISLAND	0	1	1	0	1	0	0	0	3
SOUTH CAROLINA	4	30	1	19	127	0	0	3	184
SOUTH DAKOTA	0	6	6	0	12	0	0	0	24
TENNESSEE	14	55	17	10	94	2	0	13	205
TEXAS	91	519	48	32	439	11	3	16	1159
UTAH	4	16	1	0	35	1	0	1	58
VERMONT	0	7	0	0	6	0	0	0	13
VIRGINIA	20	30	6	5	51	0	0	2	114
WASHINGTON	11	32	19	5	103	0	0	6	176
WEST VIRGINIA	1	43	5	1	41	4	0	11	106
WISCONSIN	16	109	39	6	132	1	0	4	307
WYOMING	2	10	2	0	8	0	0	1	23
TOTAL	1093	3182	433	278	4147	104	24	161	9422

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

**HIGHWAY USER AND VEHICLE DATA (1980)**



**FIGURE 3 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER**



**FIGURE 4 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE**



**TABLE 9 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER**

TRAINS STRIKING OR BEING STRUCK BY:	**ACC/INC**		***KILLED***		**INJURED**		INJURY ACC	FATAL ACC	INJ-IN-FATAL ACCIDENTS
	NO.	%	NO.	%	NO.	%			
AUTOMOBILE	6524	66.82	485	61.55	2444	66.74	1718	377	165
TRUCK	2135	21.87	166	21.07	768	20.97	554	147	56
TRUCK TRAILER	650	6.66	31	3.93	205	5.60	147	25	4
BUS	21	0.22	0	—	60	1.64	8	0	0
SCHOOL BUS	9	0.09	0	—	9	0.25	3	0	0
MOTORCYCLE	83	0.85	26	3.30	48	1.31	37	23	4
PEDESTRIAN	86	0.88	54	6.85	31	0.85	28	54	3
OTHER	255	2.61	26	3.30	97	2.65	67	24	12
TOTAL	9763	100.00	788	100.00	3662	100.00	2562	650	244

**TABLE 10 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE**

CIRCUMSTANCE	**ACC/INC**		***KILLED***		**INJURED**		INJURY ACC	FATAL ACC	INJ-IN-FATAL ACCIDENTS
	NO.	%	NO.	%	NO.	%			
MOTOR VEHICLE STRUCK BY TRAIN	6695	71.06	532	75.14	2338	66.16	1597	428	174
MOTOR VEHICLE RAN INTO TRAIN	2727	28.94	176	24.86	1196	33.84	870	144	55
TOTAL	9422	100.00	708	100.00	3534	100.00	2467	572	229

**TABLE 11 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, NUMBER OF OCCUPANTS, CASUALTY RATES, DAMAGE RATES, AND ACCIDENT RATES**

TYPE OF VEHICLE	NUMBER OF ACC/INC	AVERAGE OCCUPANTS PER ACC/INC	VEHICLE OCCUPANTS KILLED PER ACC/INC	AVERAGE HIGHWAY OCCUPANTS INJURED PER ACC/INC	PROPERTY DAMAGE PER ACC/INC(\$)	VEHICLES <sup>1</sup> REG (000)	ACCIDENTS PER MILLION VEHICLES
AUTOMOBILE	6524	1.45	0.08	0.42	1489.21	120248	54.26
MOTOR TRUCKS	2785	1.26	0.08	0.38	4490.11	33350	83.51
MOTOR BUSES	30	10.48	-	2.38	3004.50	520	57.65
MOTORCYCLE	83	1.17	0.35	0.64	949.66	5502	15.08
<b>TOTAL</b>	<b>9422</b>	<b>1.42</b>	<b>0.08</b>	<b>0.42</b>	<b>2388.20</b>	<b>159620</b>	<b>59.03</b>

<sup>1</sup>(1979) FIGURES SUPPLIED BY FEDERAL HIGHWAY ADMINISTRATION.

**TABLE 12 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY**

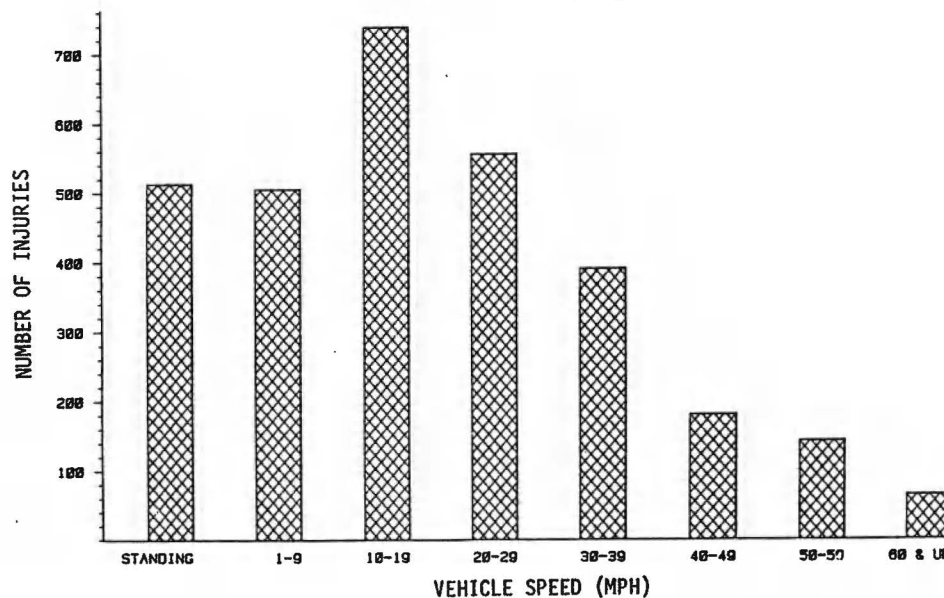
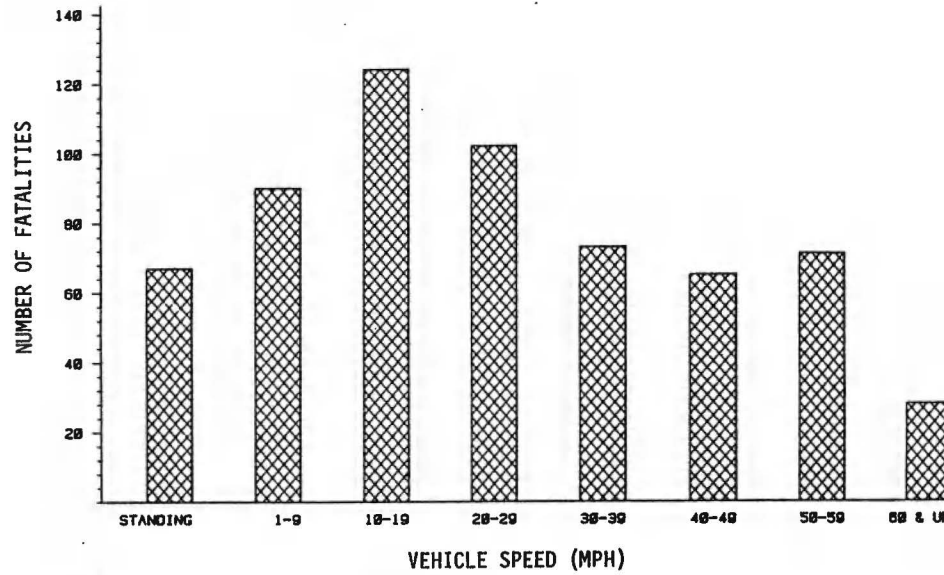
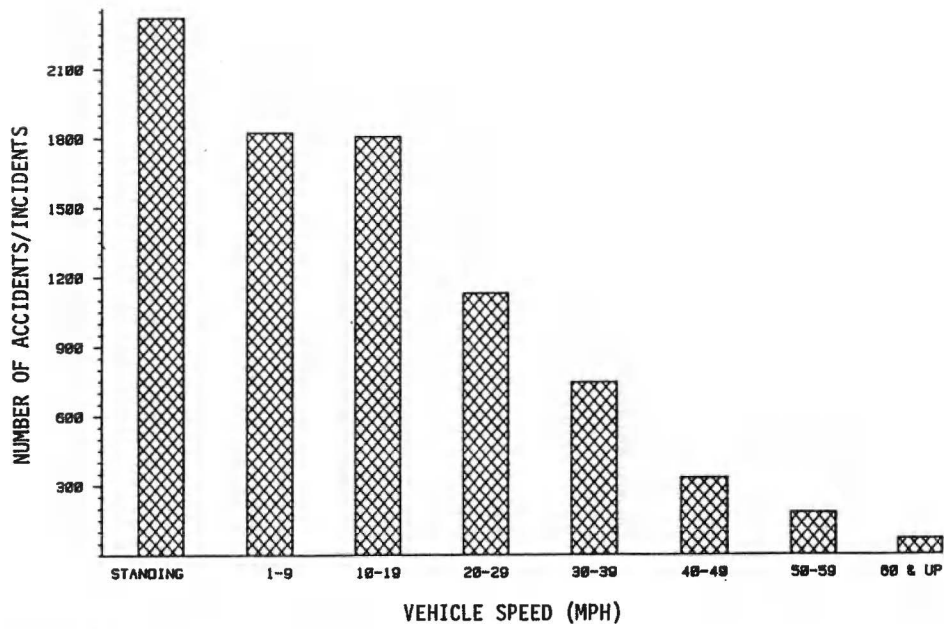
TYPE OF VEHICLE	VISIBILITY											
	*****DAWN*****			*****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>S T R U C K   B Y   T R A I N</b>												
AUTOMOBILE	91	7	23	2468	211	888	186	17	56	1886	151	636
TRUCK	42	4	11	973	88	344	38	1	11	424	25	131
TRUCK TRAILER	12	1	2	437	10	138	13	2	5	75	9	20
BUS	2	0	0	12	0	26	0	0	0	3	0	32
SCHOOL BUS	0	0	0	6	0	6	1	0	0	1	0	3
MOTORCYCLE	0	0	0	12	5	4	1	1	0	12	0	2
TOTAL	147	12	36	3908	314	1406	239	21	72	2401	185	824
<b>R A N   I N T O   T R A I N</b>												
AUTOMOBILE	37	0	15	665	25	249	58	3	29	1133	71	548
TRUCK	10	1	4	334	25	129	18	0	4	296	22	134
TRUCK TRAILER	0	0	0	82	6	29	4	0	1	27	3	10
BUS	0	0	0	4	0	2	0	0	0	0	0	0
SCHOOL BUS	0	0	0	1	0	0	0	0	0	0	0	0
MOTORCYCLE	0	0	0	31	10	20	0	0	0	27	10	22
TOTAL	47	1	19	1117	66	429	80	3	34	1483	106	714
<b>G R A N D   T O T A L</b>												
AUTOMOBILE	128	7	38	3133	236	1137	244	20	85	3019	222	1184
TRUCK	52	5	15	1307	113	473	56	1	15	720	47	265
TRUCK TRAILER	12	1	2	519	16	167	17	2	6	102	12	30
BUS	2	0	0	16	0	28	0	0	0	3	0	32
SCHOOL BUS	0	0	0	7	0	6	1	0	0	1	0	3
MOTORCYCLE	0	0	0	43	15	24	1	1	0	39	10	24
TOTAL	194	13	55	5025	380	1835	319	24	106	3884	291	1338

**TABLE 13 CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF PERSON INVOLVED, TYPE OF HIGHWAY USER, AND CIRCUMSTANCE**

TYPE OF HIGHWAY USER	TYPE OF PERSON														TOTAL ACCI- DENTS
	***EOD***		**ENOD**		***PSGR***		***NONT***		***TRES***		***CONT***		**TOTAL**		
	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	
<b>S T R U C K B Y T R A I N</b>															
AUTOMOBILE	0	25	1	0	0	3	322	1450	63	125	0	0	386	1603	4631
TRUCK	0	37	0	0	0	6	112	434	6	20	0	0	118	497	1477
TRUCK TRAILER	0	38	0	0	0	15	21	110	1	2	0	0	22	165	537
BUS	0	0	0	0	0	0	0	58	0	0	0	0	0	58	17
SCHOOL BUS	0	0	0	0	0	0	0	9	0	0	0	0	0	9	8
MOTORCYCLE	0	0	0	0	0	0	4	6	2	0	0	0	6	6	25
PEDESTRIAN	0	0	0	0	0	0	32	13	20	14	0	0	52	27	80
OTHER	0	0	0	0	0	0	20	63	4	8	0	0	24	71	196
TOTAL	0	100	1	0	0	24	511	2143	96	169	0	0	608	2436	6971
<b>R A N I N T O T R A I N</b>															
AUTOMOBILE	0	9	0	0	0	0	91	771	8	61	0	0	99	841	1893
TRUCK	0	7	0	0	0	0	48	253	0	11	0	0	48	271	658
TRUCK TRAILER	0	6	0	0	0	0	9	31	0	3	0	0	9	40	113
BUS	0	0	0	0	0	0	0	2	0	0	0	0	0	2	4
SCHOOL BUS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MOTORCYCLE	0	0	0	0	0	0	19	40	1	2	0	0	20	42	58
PEDESTRIAN	0	0	0	0	0	0	1	0	1	4	0	0	2	4	6
OTHER	0	0	0	0	0	0	1	26	1	0	0	0	2	26	59
TOTAL	0	22	0	0	0	0	169	1123	11	81	0	0	180	1226	2792
<b>T O T A L</b>															
AUTOMOBILE	0	34	1	0	0	3	413	2221	71	186	0	0	485	2444	6524
TRUCK	0	44	0	0	0	6	160	687	6	31	0	0	166	768	2135
TRUCK TRAILER	0	44	0	0	0	15	30	141	1	5	0	0	31	205	650
BUS	0	0	0	0	0	0	0	60	0	0	0	0	0	60	21
SCHOOL BUS	0	0	0	0	0	0	0	9	0	0	0	0	0	9	9
MOTORCYCLE	0	0	0	0	0	0	23	46	3	2	0	0	26	48	83
PEDESTRIAN	0	0	0	0	0	0	33	13	21	18	0	0	54	31	86
OTHER	0	0	0	0	0	0	21	89	5	8	0	0	26	97	255
TOTAL	0	122	1	0	0	24	680	3266	107	250	0	0	788	3662	9763

**TABLE 14 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY**

CIRCUMSTANCE AND VEHICLE SPEED (MPH)	*****TOTAL*****			*****DAWN*****			*****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>STRUCK BY TRAIN</b>															
STANDING	2320	67	513	48	0	6	1327	49	387	78	0	12	867	18	108
1-9	1287	82	417	29	2	12	823	54	250	38	10	16	397	16	139
10-19	1225	110	521	26	3	8	716	65	304	49	3	16	434	39	193
20-29	710	91	356	15	3	4	398	48	182	32	2	12	265	38	158
30-39	375	56	191	13	1	2	201	31	90	13	3	4	148	21	95
40-49	133	31	56	1	0	1	87	25	40	6	2	2	39	4	13
50-59	62	29	47	2	0	1	36	10	33	3	1	0	21	18	13
60 AND OVER	24	4	16	0	0	0	15	2	9	1	0	1	8	2	6
UNKNOWN	559	62	221	13	3	2	305	30	111	19	0	9	222	29	99
TOTAL	6695	532	2338	147	12	36	3908	314	1406	239	21	72	2401	185	824
<b>RAN INTO TRAIN</b>															
STANDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-9	536	8	88	8	0	0	283	5	50	15	0	1	230	3	37
10-19	580	14	217	7	0	2	226	7	72	23	0	8	324	7	135
20-29	417	11	199	10	0	5	165	5	63	9	0	5	233	6	126
30-39	367	17	199	11	1	6	143	7	83	10	0	9	203	9	101
40-49	199	34	124	3	0	2	88	17	48	5	0	1	103	17	73
50-59	120	42	95	1	0	0	44	13	31	5	2	4	70	27	60
60 AND OVER	45	24	48	1	0	1	15	6	19	2	1	4	27	17	24
UNKNOWN	463	26	226	6	0	3	153	6	63	11	0	2	293	20	158
TOTAL	2727	176	1196	47	1	19	1117	66	429	80	3	34	1483	106	714
<b>GRAND TOTAL</b>															
STANDING	2320	67	513	48	0	6	1327	49	387	78	0	12	867	18	108
1-9	1823	90	505	37	2	12	1106	59	300	53	10	17	627	19	176
10-19	1805	124	738	33	3	10	942	72	376	72	3	24	758	46	328
20-29	1127	102	555	25	3	9	563	53	245	41	2	17	498	44	284
30-39	742	73	390	24	2	8	344	38	173	23	3	13	351	30	196
40-49	332	65	180	4	0	3	175	42	88	11	2	3	142	21	86
50-59	182	71	142	3	0	1	80	23	64	8	3	4	91	45	73
60 AND OVER	69	28	64	1	0	1	30	8	28	3	1	5	35	19	30
UNKNOWN	1022	88	447	19	3	5	458	36	174	30	0	11	515	49	257
TOTAL	9422	708	3534	194	13	55	5025	380	1835	319	24	106	3884	291	1538



**FIGURE 5 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY VEHICLE SPEED**

**TABLE 15 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY POSITION AND TYPE OF VEHICLE**

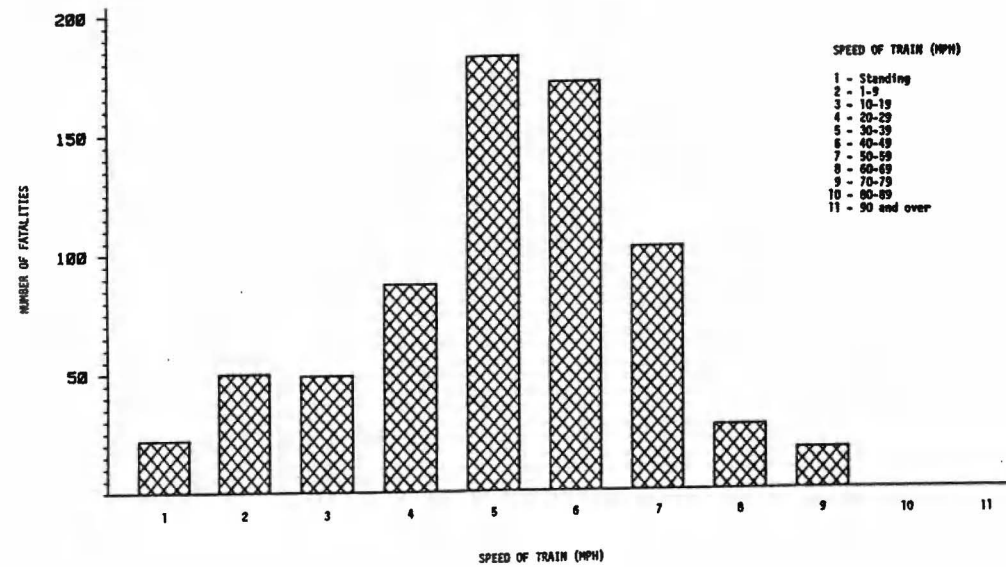
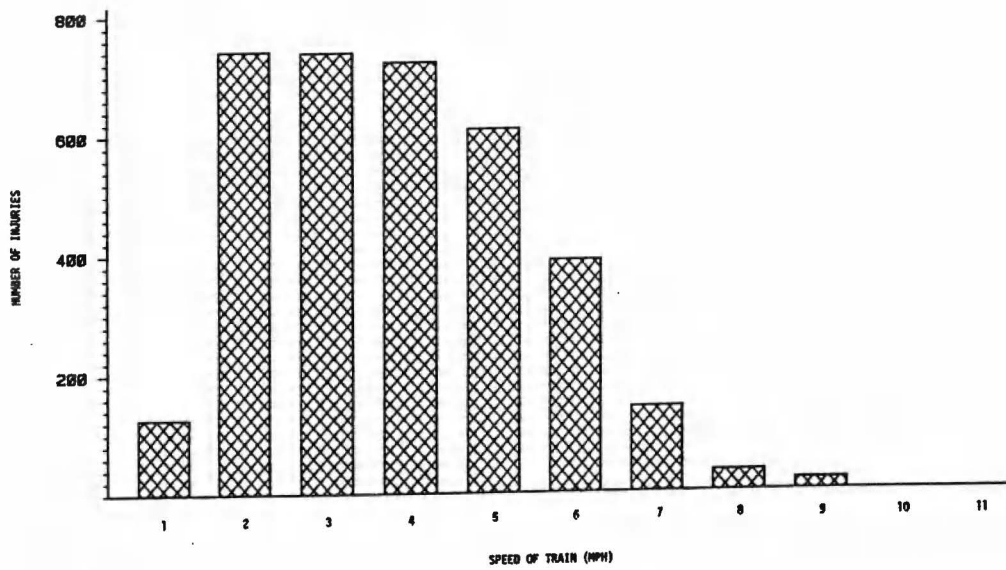
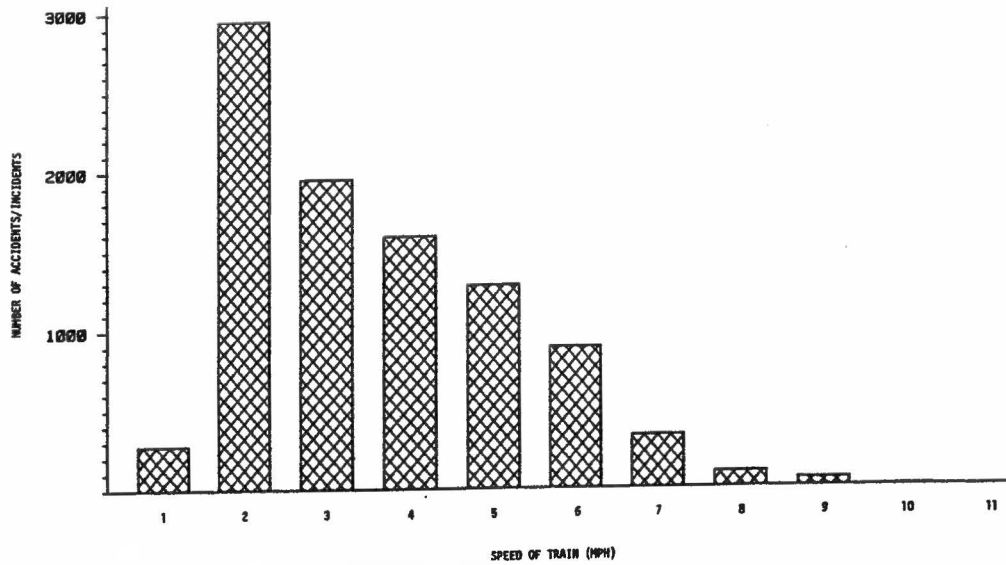
TYPE OF VEHICLE	POSITION OF HIGHWAY VEHICLE								
	STALLED ON ****CROSSING****			STOPPED ON ****CROSSING****			MOVING OVER ****CROSSING****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
AUTOMOBILE	813	12	134	944	29	255	4767	444	2055
TRUCK	185	7	34	257	12	54	1693	147	680
TRUCK TRAILER	39	1	7	68	5	7	543	25	191
BUS	1	0	0	3	0	20	17	0	40
SCHOOL BUS	0	0	0	3	0	2	6	0	7
MOTORCYCLE	5	1	0	2	0	0	76	25	48
TOTAL	1043	21	175	1277	46	338	7102	641	3021

**TRAIN AND TRACK DATA (1980)**

**TABLE 16 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY**

CIRCUMSTANCE AND TRAIN SPEED (MPH)	*****TOTAL*****			*****DAWN*****			VISIBILITY *****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>STRUCK BY TRAIN</b>															
STANDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-9	1925	12	379	34	0	5	1058	2	147	69	0	10	764	10	217
10-19	1399	25	502	33	1	6	834	5	284	62	1	20	470	18	192
20-29	1205	67	524	28	2	6	733	34	337	36	2	16	408	29	165
30-39	1023	153	471	28	3	14	625	94	319	31	5	11	339	51	127
40-49	733	151	302	16	5	4	428	99	209	27	4	12	262	43	77
50-59	272	86	120	5	1	0	157	60	82	8	3	1	102	22	37
60-69	83	23	26	2	0	1	38	11	20	6	6	2	37	6	3
70-79	42	15	11	0	0	0	25	9	5	0	0	0	17	6	6
80-89	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	12	0	3	1	0	0	10	0	3	0	0	0	1	0	0
TOTAL	6695	532	2338	147	12	36	3908	314	1406	239	21	72	2401	185	824
<b>RAN INTO TRAIN</b>															
STANDING	277	22	126	3	0	0	27	0	3	5	0	1	242	22	122
1-9	1022	38	362	15	0	7	373	7	89	29	1	15	605	30	251
10-19	951	24	237	8	0	3	218	12	79	20	0	3	305	12	152
20-29	382	20	199	12	0	4	196	7	102	18	2	11	156	11	82
30-39	254	29	139	3	1	2	146	14	76	4	0	1	101	14	60
40-49	154	20	88	2	0	1	103	13	59	3	0	2	46	7	26
50-59	58	16	23	2	0	0	39	9	13	0	0	0	17	7	10
60-69	13	4	8	1	0	1	7	2	3	1	0	1	4	2	3
70-79	7	2	8	0	0	0	6	2	4	0	0	0	1	0	4
80-89	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	8	1	6	1	0	1	1	0	1	0	0	0	6	1	4
TOTAL	2727	176	1196	47	1	19	1117	66	429	80	3	34	1483	106	714
<b>GRAND TOTAL</b>															
STANDING	277	22	126	3	0	0	27	0	3	5	0	1	242	22	122
1-9	2947	50	741	49	0	12	1431	9	236	98	1	25	1369	40	468
10-19	1950	49	739	41	1	9	1052	17	363	82	1	23	775	30	344
20-29	1587	87	723	40	2	10	929	41	439	54	4	27	564	40	247
30-39	1277	182	610	31	4	16	771	108	395	35	5	12	440	65	187
40-49	887	171	390	18	5	5	531	112	268	30	4	14	308	50	103
50-59	330	102	143	7	1	0	196	69	95	8	3	1	119	29	47
60-69	96	27	34	3	0	2	45	13	23	7	6	3	41	8	6
70-79	49	17	19	0	0	0	31	11	9	0	0	0	18	6	10
80-89	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	20	1	9	2	0	1	11	0	4	0	0	0	7	1	4
TOTAL	9422	708	3534	194	13	55	5025	380	1835	319	24	106	3884	291	1538





**FIGURE 6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN**

**TABLE 17 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD EQUIPMENT INVOLVED, PART OF TRAIN STRUCK, CIRCUMSTANCE, AND VISIBILITY**

RAILROAD EQUIPMENT INVOLVED	***CIRCUMSTANCE**		*****VISIBILITY*****										
	CONSIST STRUCK VEHICLE ACC/INC	VEHICLE STRUCK CONSIST ACC/INC	*****PART OF TRAIN STRUCK*****						DAWN	DAY	DUSK	DARK	
			LOCO(S)	----QUARTER----				UNKNOWN					
			1	2	3	4							
TRAIN (UNITS PULLING)	5437	1966	1300	166	149	105	172	74	162	4065	254	2922	
TRAIN (UNITS PUSHING)	496	221	42	96	40	12	27	4	13	338	18	348	
TRAIN (STANDING)	0	246	53	48	50	28	53	14	3	17	5	221	
CARS (MOVING)	138	48	0	0	4	0	40	4	1	170	3	12	
CARS (STANDING)	0	13	0	1	3	0	9	0	0	7	0	6	
LIGHT LOCOS (MOVING)	623	215	211	0	0	0	0	4	15	424	39	360	
LIGHT LOCOS (STANDING)	0	18	18	0	0	0	0	0	0	3	0	15	
OTHER	1	0	0	0	0	0	0	0	0	1	0	0	
<b>TOTAL</b>	<b>6695</b>	<b>2727</b>	<b>1624</b>	<b>311</b>	<b>246</b>	<b>145</b>	<b>301</b>	<b>100</b>	<b>194</b>	<b>5025</b>	<b>319</b>	<b>3884</b>	

**TABLE 18 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRAIN SPEED AND TYPE OF TRAIN**

TRAIN SPEED (MPH)	*****TOTAL*****			*****FREIGHT*****			*****PASSENGER*****			YARD/ ****SWITCHING****			*****OTHER***** <sup>1</sup>		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
STANDING	277	22	126	184	9	93	1	0	0	63	13	25	29	0	8
1-9	2947	50	741	1282	29	332	29	0	2	982	10	250	654	11	157
10-19	1950	49	739	1394	37	542	38	0	8	232	4	75	286	8	114
20-29	1587	87	723	1404	80	634	48	2	20	42	1	21	93	4	48
30-39	1277	182	610	1140	161	544	60	7	29	7	0	3	70	14	34
40-49	887	171	390	804	146	354	42	11	18	2	0	0	39	14	18
50-59	330	102	143	279	82	102	41	15	37	3	0	1	7	5	3
60-69	96	27	34	52	16	13	38	9	17	0	0	0	6	2	4
70-79	49	17	19	6	1	0	40	15	19	0	0	0	3	1	0
80-89	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	20	1	9	11	1	6	0	0	0	1	0	0	8	0	3
<b>* TOTAL</b>	<b>9422</b>	<b>708</b>	<b>3534</b>	<b>6556</b>	<b>562</b>	<b>2620</b>	<b>339</b>	<b>59</b>	<b>150</b>	<b>1332</b>	<b>28</b>	<b>375</b>	<b>1195</b>	<b>59</b>	<b>389</b>

<sup>1</sup> INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

**TABLE 19 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY NUMBER OF CARS IN TRAIN AND TYPE OF TRAIN**

NUMBER OF CARS IN TRAIN	*****TOTAL*****			*****FREIGHT*****			*****PASSENGER*****			YARD/ *****SWITCHING*****			1 *****OTHER*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
LOCOMOTIVES ONLY	967	51	302	27	5	5	75	8	31	17	1	4	848	37	262
1-9	2391	140	809	1163	79	434	184	32	85	774	19	201	270	10	89
10-19	1132	68	403	707	40	246	71	19	31	316	4	111	38	5	15
20-29	583	40	203	483	40	170	0	0	0	87	0	22	13	0	11
30-39	525	44	238	462	43	214	2	0	0	56	1	20	5	0	4
40-49	454	39	161	411	36	149	4	0	2	31	0	9	8	3	1
50-59	450	38	152	430	36	148	1	0	0	15	0	1	4	2	3
60-69	467	57	224	457	57	223	0	0	0	10	0	1	0	0	0
70-79	483	39	173	472	38	170	2	0	1	7	1	1	2	0	1
80-89	466	41	212	459	39	210	0	0	0	7	2	2	0	0	0
90-99	426	41	188	422	41	187	0	0	0	4	0	1	0	0	0
100-109	411	44	166	407	44	165	0	0	0	3	0	1	1	0	0
110-119	288	30	128	281	28	125	0	0	0	3	0	0	4	2	3
120-129	158	27	77	155	27	77	0	0	0	1	0	0	2	0	0
130-139	82	2	36	81	2	35	0	0	0	1	0	1	0	0	0
140-149	64	5	42	64	5	42	0	0	0	0	0	0	0	0	0
150 AND OVER	75	2	20	75	2	20	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>9422</b>	<b>708</b>	<b>3534</b>	<b>6556</b>	<b>562</b>	<b>2620</b>	<b>339</b>	<b>59</b>	<b>150</b>	<b>1332</b>	<b>28</b>	<b>375</b>	<b>1195</b>	<b>59</b>	<b>389</b>

<sup>1</sup> INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

**TABLE 20 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY NUMBER OF CARS IN TRAIN, CIRCUMSTANCE, AND VISIBILITY**

NUMBER OF CARS IN TRAIN	*****TOTAL*****			*****DAWN*****			VISIBILITY *****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>STRUCK BY TRAIN</b>															
LOCOMOTIVES ONLY	709	42	229	17	1	7	380	23	105	28	4	7	284	14	110
1-9	1670	99	528	26	2	2	1130	63	353	50	2	9	464	32	162
10-19	791	50	251	12	0	2	490	29	138	38	3	13	251	18	98
20-29	421	24	150	12	2	2	253	14	96	16	0	4	140	8	48
30-39	359	26	147	7	0	2	204	18	85	17	2	6	131	6	54
40-49	329	31	101	6	0	0	188	19	66	12	1	4	123	11	31
50-59	324	30	98	7	2	1	167	11	69	14	2	1	136	15	27
60-69	347	45	148	8	0	3	191	25	101	15	3	8	133	17	36
70-79	330	30	110	13	1	5	171	21	55	13	1	0	133	7	50
80-89	326	26	152	9	0	4	159	17	92	10	0	6	148	9	50
90-99	302	33	115	5	0	1	160	15	67	5	2	6	132	16	41
100-109	303	39	110	10	3	2	152	24	68	4	1	1	137	11	39
110-119	204	25	78	9	1	4	121	15	41	2	0	1	72	9	32
120-129	113	24	52	1	0	0	59	13	34	7	0	4	46	11	14
130-139	57	2	21	2	0	1	23	2	9	5	0	2	27	0	9
140-149	51	4	37	1	0	0	30	3	16	2	0	0	18	1	21
150 AND OVER	59	2	11	2	0	0	30	2	9	1	0	0	26	0	2
TOTAL	6695	532	2338	147	12	36	3908	314	1406	239	21	72	2401	185	824
<b>RAN INTO TRAIN</b>															
LOCOMOTIVES ONLY	258	9	73	4	0	1	107	4	22	13	1	8	134	4	42
1-9	721	41	281	10	0	3	367	17	130	21	0	9	323	24	139
10-19	341	18	152	8	0	5	155	6	49	14	0	2	164	12	96
20-29	162	16	53	3	0	1	66	5	25	5	1	2	88	10	25
30-39	166	18	91	1	0	1	59	6	28	6	0	3	100	12	59
40-49	125	8	60	1	0	0	50	5	26	6	0	2	68	3	32
50-59	126	8	54	2	0	1	59	3	27	1	1	3	64	4	23
60-69	120	12	76	3	0	1	43	6	26	3	0	1	71	6	48
70-79	153	9	63	2	0	0	53	5	22	0	0	0	98	4	41
80-89	140	15	60	0	0	0	45	3	17	2	0	2	93	12	41
90-99	124	8	73	4	0	2	29	2	16	0	0	0	91	6	55
100-109	108	5	56	4	1	0	31	3	18	4	0	2	69	1	36
110-119	84	5	50	2	0	2	25	1	12	2	0	0	55	4	36
120-129	45	3	25	2	0	1	14	0	5	3	0	0	26	3	19
130-139	25	0	15	1	0	1	7	0	3	0	0	0	17	0	11
140-149	13	1	5	0	0	0	3	0	0	0	0	0	10	1	5
150 AND OVER	16	0	9	0	0	0	4	0	3	0	0	0	12	0	6
TOTAL	2727	176	1196	47	1	19	1117	66	429	80	3	34	1483	106	714
<b>GRAND TOTAL</b>															
LOCOMOTIVES ONLY	967	51	302	21	1	8	487	27	127	41	5	15	418	18	152
1-9	2391	140	809	36	2	5	1497	80	485	71	2	18	787	56	301
10-19	1132	68	403	20	0	7	645	35	187	52	3	15	415	30	194
20-29	583	40	203	15	2	3	319	19	121	21	1	6	228	18	73
30-39	525	44	238	8	0	3	263	24	113	23	2	9	231	18	113
40-49	454	39	161	7	0	0	238	24	92	18	1	6	191	14	63
50-59	450	38	152	9	2	2	226	14	96	15	3	4	200	19	50
60-69	467	57	224	11	0	4	234	31	127	18	3	9	204	23	84
70-79	483	39	173	15	1	5	224	26	77	13	1	0	231	11	91
80-89	466	41	212	9	0	4	204	20	109	12	0	8	241	21	91
90-99	426	41	188	9	0	3	189	17	83	5	2	6	223	22	96
100-109	411	44	166	14	4	2	183	27	86	8	1	3	206	12	75
110-119	288	30	128	11	1	6	146	16	53	4	0	1	127	13	68
120-129	158	27	77	3	0	1	73	13	39	10	0	4	72	14	33
130-139	82	2	36	3	0	2	30	2	12	5	0	2	44	0	20
140-149	64	5	42	1	0	0	33	3	16	2	0	0	28	2	26
150 AND OVER	75	2	20	2	0	0	34	2	12	1	0	0	38	0	8
TOTAL	9422	708	3534	194	13	55	5025	380	1835	319	24	106	3884	291	1538

**TABLE 21 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRACK TYPE AND TRACK CLASS**

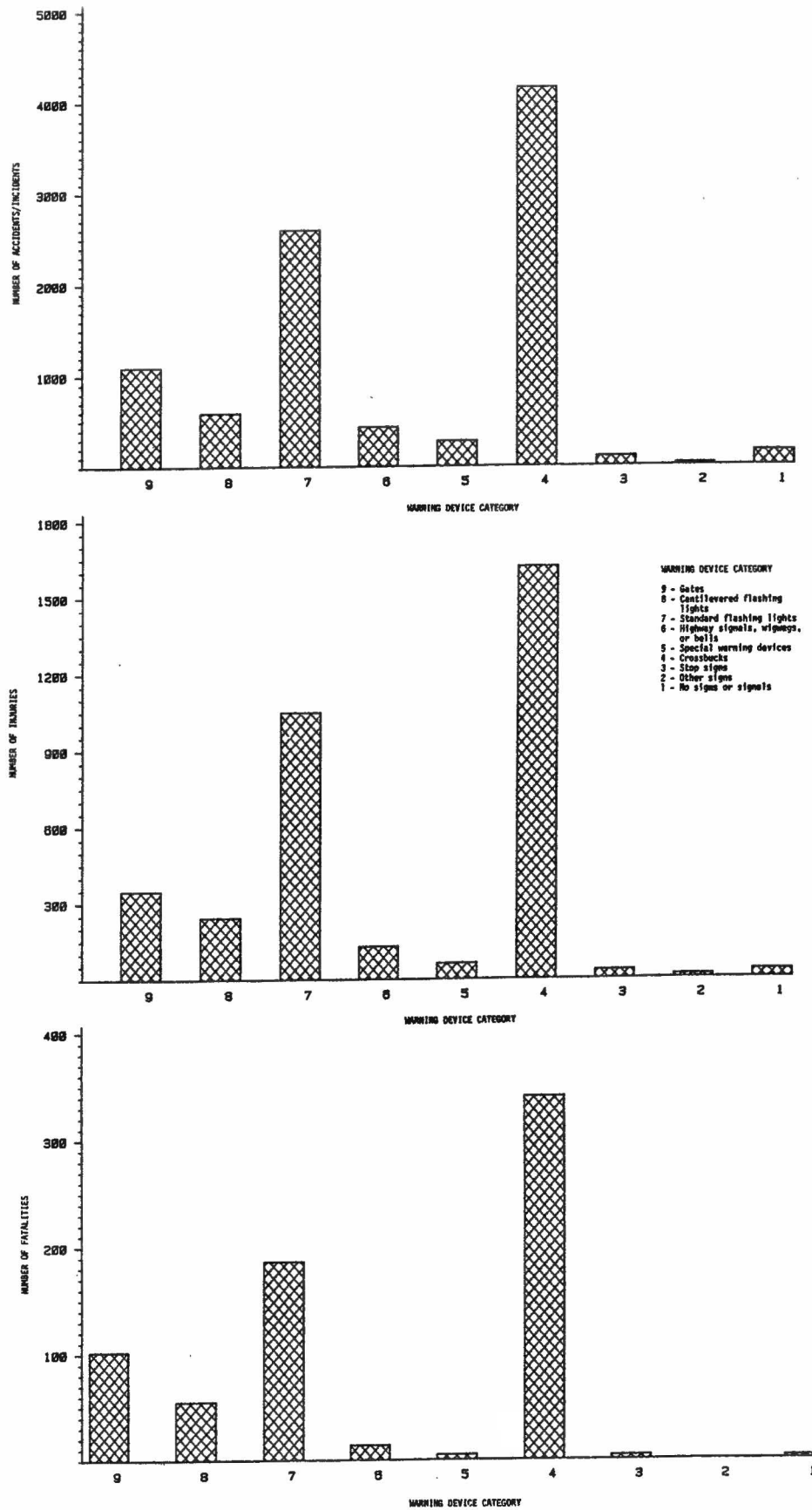
TRACK CLASS	TRACK TYPE															*****TOTAL*****		
	*****MAIN*****			*****YARD*****			*****SIDING*****			*****INDUSTRY*****			*****UNKNOWN*****			ACC/INC	KLD	INJ
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
1	1152	31	329	575	7	167	123	3	23	298	9	72	2	0	2	2150	50	593
2	1978	76	738	126	1	38	30	1	4	65	0	15	1	0	0	2200	78	795
3	2462	203	1048	19	0	4	18	2	7	12	2	0	2	0	0	2513	207	1059
4	2207	338	957	17	0	10	9	1	1	16	1	2	1	0	1	2250	340	971
5	161	29	74	0	0	0	1	0	1	1	0	1	0	0	0	163	29	76
6	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2
UNKNOWN	67	4	22	46	0	9	9	0	1	16	0	4	3	0	2	141	4	38
TOTAL	8032	681	3170	783	8	228	190	7	37	408	12	94	9	0	5	9422	708	3534

**WARNING DEVICE DATA (1980)**

**TABLE 22 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION**

WARNING DEVICE CATEGORY	****TOTAL****			DROVE AROUND OR **THRU GATE**			STOPPED AND THEN **PROCEEDED**			DID NOT ****STOP****			****OTHER****			***UNKNOWN***		
	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ
GATES	1093	102	348	507	82	202	32	4	5	168	6	89	367	10	50	19	0	2
CANTILEVERED FLASHING LIGHTS	591	55	244	0	0	0	36	2	8	412	48	191	130	4	38	13	1	7
STANDARD FLASHING LIGHTS	2591	186	1049	0	0	0	192	13	62	1759	150	815	600	18	151	40	5	21
HIGHWAY SIGNALS WIGWAGS OR BELLS	433	14	130	0	0	0	24	2	1	283	11	107	108	0	17	18	1	5
SPECIAL WARNING DEVICES	278	5	63	0	0	0	29	0	0	199	5	56	39	0	4	11	0	3
CROSSBUCKS	4147	339	1623	0	0	0	210	17	66	2643	269	1200	1115	38	276	179	15	81
STOP SIGNS	104	4	32	0	0	0	10	0	2	60	2	24	29	2	6	5	0	0
OTHER SIGNS	24	0	13	0	0	0	0	0	0	16	0	8	7	0	5	1	0	0
NO SIGNS OR SIGNALS	161	3	32	0	0	0	15	0	2	82	3	20	58	0	8	6	0	2
<b>TOTAL</b>	<b>9422</b>	<b>708</b>	<b>3534</b>	<b>507</b>	<b>82</b>	<b>202</b>	<b>548</b>	<b>38</b>	<b>146</b>	<b>5622</b>	<b>494</b>	<b>2510</b>	<b>2453</b>	<b>72</b>	<b>555</b>	<b>292</b>	<b>22</b>	<b>121</b>

A/I = ACCIDENTS/INCIDENTS



**FIGURE 7 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY**

**TABLE 23 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE AND OPERATIONAL STATUS OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY**

WARNING DEVICE CATEGORY	*DEVICE(S) OPERATING*			*****CIRCUMSTANCE*****							
	YES	NO	NOT REPORTED	----STRUCK BY TRAIN----				----RAN INTO TRAIN----			
				DAWN	DAY	DUSK	DARK	DAWN	DAY	DUSK	DARK
GATES	1044	32	17	20	352	31	469	8	56	6	151
FLASHING LIGHTS	3096	44	42	41	1279	79	748	16	453	26	540
HIGHWAY SIGNALS WIGWAGS OR BELLS	359	4	70	2	177	10	110	2	51	7	74
SPECIAL WARNING DEVICES	0	0	278	6	75	6	80	0	26	2	83
CROSSBUCKS	0	0	4147	74	1885	106	923	19	501	36	603
STOP SIGNS	0	0	104	2	45	4	30	0	14	2	7
OTHER SIGNS	0	0	24	0	8	1	5	1	4	1	4
NO SIGNS OR SIGNALS	0	0	161	2	87	2	36	1	12	0	21
<b>TOTAL</b>	<b>4499</b>	<b>80</b>	<b>4843</b>	<b>147</b>	<b>3908</b>	<b>239</b>	<b>2401</b>	<b>47</b>	<b>1117</b>	<b>80</b>	<b>1483</b>

**TABLE 24 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES DURING DUSK AND DARK HOURS BY ILLUMINATION OF CROSSING AND CIRCUMSTANCE**

CROSSING ILLUMINATION	*****TOTAL*****			CIRCUMSTANCE					
	ACC/INC	KLD	INJ	**STRUCK BY TRAIN**			***RAN INTO TRAIN**		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
LIGHTED	1511	106	574	958	81	325	553	25	249
NOT LIGHTED	1710	139	707	1063	79	363	647	60	344
NOT REPORTED	982	70	363	619	46	208	363	24	155
<b>TOTAL</b>	<b>4203</b>	<b>315</b>	<b>1644</b>	<b>2640</b>	<b>206</b>	<b>896</b>	<b>1563</b>	<b>109</b>	<b>748</b>



**TABLE 25 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY LOCATION AND TYPE OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY**

LOCATION AND TYPE OF WARNING DEVICE AND CIRCUMSTANCE	*****TOTAL*****			*****DAWN*****			*****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>S T R U C K B Y T R A I N</b>															
AUTOMATIC, BOTH SIDES <sup>1</sup>	3172	252	1105	61	4	14	1721	132	600	116	13	25	1274	103	466
AUTOMATIC, SIDE OF APPROACH	127	7	35	2	0	0	73	4	21	4	0	1	48	3	13
AUTOMATIC, OPPOSITE SIDE	15	0	4	0	0	0	12	0	1	0	0	0	3	0	3
AUTOMATIC, SIDE NOT REPORTED	4	0	2	0	0	0	2	0	0	0	0	0	2	0	2
MANUAL, BOTH SIDES <sup>2</sup>	118	0	20	6	0	1	46	0	7	4	0	1	62	0	11
MANUAL, SIDE OF APPROACH	29	0	3	0	0	0	16	0	1	2	0	1	11	0	1
MANUAL, OPPOSITE SIDE	4	0	0	0	0	0	2	0	0	0	0	0	2	0	0
MANUAL, SIDE NOT REPORTED	16	0	4	0	0	0	11	0	3	0	0	0	5	0	1
OTHER, BOTH SIDES <sup>3</sup>	2733	242	990	66	7	18	1699	158	645	100	8	32	868	69	295
OTHER, SIDE OF APPROACH	236	24	89	8	1	3	156	16	66	6	0	4	66	7	16
OTHER, OPPOSITE SIDE	98	4	56	2	0	0	75	2	39	2	0	7	19	2	10
OTHER, SIDE NOT REPORTED	16	0	7	0	0	0	8	0	3	3	0	1	5	0	3
NO SIGNS OR SIGNALS	127	3	23	2	0	0	87	2	20	2	0	0	36	1	3
<b>SUBTOTAL</b>	<b>6695</b>	<b>532</b>	<b>2338</b>	<b>147</b>	<b>12</b>	<b>36</b>	<b>3908</b>	<b>314</b>	<b>1406</b>	<b>239</b>	<b>21</b>	<b>72</b>	<b>2401</b>	<b>185</b>	<b>824</b>
<b>R A N I N T O T R A I N</b>															
AUTOMATIC, BOTH SIDES	1331	94	600	26	1	12	542	39	217	35	2	18	728	52	353
AUTOMATIC, SIDE OF APPROACH	50	4	22	0	0	0	15	1	1	4	0	1	31	3	20
AUTOMATIC, OPPOSITE SIDE	7	0	1	0	0	0	2	0	1	0	0	0	5	0	0
AUTOMATIC, SIDE NOT REPORTED	2	0	2	0	0	0	1	0	2	0	0	0	1	0	0
MANUAL, BOTH SIDES	85	4	32	0	0	0	17	0	3	1	1	1	67	3	28
MANUAL, SIDE OF APPROACH	16	0	3	0	0	0	7	0	0	1	0	0	8	0	3
MANUAL, OPPOSITE SIDE	6	1	1	0	0	0	1	0	0	0	0	0	5	1	1
MANUAL, SIDE NOT REPORTED	4	0	0	0	0	0	1	0	0	0	0	0	3	0	0
OTHER, BOTH SIDES	1078	68	483	18	0	5	475	24	188	34	0	13	551	44	277
OTHER, SIDE OF APPROACH	81	2	31	2	0	2	33	0	10	3	0	1	43	2	18
OTHER, OPPOSITE SIDE	28	3	10	0	0	0	8	2	2	2	0	0	18	1	8
OTHER, SIDE NOT REPORTED	5	0	2	0	0	0	3	0	2	0	0	0	2	0	0
NO SIGNS OR SIGNALS	34	0	9	1	0	0	12	0	3	0	0	0	21	0	6
<b>SUBTOTAL</b>	<b>2727</b>	<b>176</b>	<b>1196</b>	<b>47</b>	<b>1</b>	<b>19</b>	<b>1117</b>	<b>66</b>	<b>429</b>	<b>80</b>	<b>3</b>	<b>34</b>	<b>1483</b>	<b>106</b>	<b>714</b>
<b>TOTAL</b>															
AUTOMATIC, BOTH SIDES	4503	346	1705	87	5	26	2263	171	817	151	15	43	2002	155	819
AUTOMATIC, SIDE OF APPROACH	177	11	57	2	0	0	88	5	22	8	0	2	79	6	33
AUTOMATIC, OPPOSITE SIDE	22	0	5	0	0	0	14	0	2	0	0	0	8	0	3
AUTOMATIC, SIDE NOT REPORTED	6	0	4	0	0	0	3	0	2	0	0	0	3	0	2
MANUAL, BOTH SIDES	203	4	52	6	0	1	63	0	10	5	1	2	129	3	39
MANUAL, SIDE OF APPROACH	45	0	6	0	0	0	23	0	1	3	0	1	19	0	4
MANUAL, OPPOSITE SIDE	10	1	1	0	0	0	3	0	0	0	0	0	7	1	1
MANUAL, SIDE NOT REPORTED	20	0	4	0	0	0	12	0	3	0	0	0	8	0	1
OTHER, BOTH SIDES	3811	310	1473	84	7	23	2174	182	833	134	8	45	1419	113	572
OTHER, SIDE OF APPROACH	317	26	120	10	1	5	189	16	76	9	0	5	109	9	34
OTHER, OPPOSITE SIDE	126	7	66	2	0	0	83	4	41	4	0	7	37	3	18
OTHER, SIDE NOT REPORTED	21	0	9	0	0	0	11	0	5	3	0	1	7	0	3
NO SIGNS OR SIGNALS	161	3	32	3	0	0	99	2	23	2	0	0	57	1	9
<b>G R A N D T O T A L</b>	<b>9422</b>	<b>708</b>	<b>3534</b>	<b>194</b>	<b>13</b>	<b>55</b>	<b>5025</b>	<b>380</b>	<b>1835</b>	<b>319</b>	<b>24</b>	<b>106</b>	<b>3884</b>	<b>291</b>	<b>1538</b>

<sup>1</sup> AUTOMATIC DEVICES INCLUDE GATES, FLASHING LIGHTS, HIGHWAY SIGNALS, WIGWAGS, AND BELLS WHICH ARE TRAIN ACTIVATED.  
<sup>2</sup> MANUAL DEVICES INCLUDE "WATCHMAN" AND "FLAGGED BY CREW."  
<sup>3</sup> OTHER DEVICES INCLUDE CROSSBUCKS, STOP SIGNS, ETC.

**TIME, DAY, AND WEATHER DATA (1980)**

**TABLE 26 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY VISIBILITY AND CIRCUMSTANCE**

VISIBILITY	*****TOTAL*****			**STRUCK BY TRAIN**			***RAN INTO TRAIN**		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
DAWN	194	13	55	147	12	36	47	1	19
DAY	5025	380	1835	3908	314	1406	1117	66	429
DUSK	319	24	106	239	21	72	80	3	34
DARK	3884	291	1538	2401	185	824	1483	106	714
TOTAL	9422	708	3534	6695	532	2338	2727	176	1196

**TABLE 27 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TEMPERATURE, CIRCUMSTANCE, AND VISIBILITY**

TEMPERATURE DEGREES F	TOTAL ACC/INC	***STRUCK BY TRAIN***				****RAN INTO TRAIN****			
		DAWN	DAY	DUSK	DARK	DAWN	DAY	DUSK	DARK
OVER 100	58	0	44	0	0	0	14	0	0
80 TO 100	1604	4	1011	47	161	2	262	9	108
60 TO 79	2650	42	1202	71	603	6	343	22	361
40 TO 59	2534	50	857	68	805	19	211	25	499
20 TO 39	2009	41	631	45	657	16	222	21	376
0 TO 19	521	10	149	8	162	4	61	3	124
-20 TO -1	43	0	13	0	11	0	4	0	15
UNDER -20	3	0	1	0	2	0	0	0	0
TOTAL	9422	147	3908	239	2401	47	1117	80	1483

**TABLE 28 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TIME OF DAY AND CIRCUMSTANCE**

HOUR	*****TOTAL*****			CIRCUMSTANCE			**STRUCK BY TRAIN**			***RAN INTO TRAIN**		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
MIDNIGHT TO 12:59 AM	377	39	159	220	26	79	157	13	80			
1 TO 1:59 AM	367	29	166	201	13	59	166	16	107			
2 TO 2:59 AM	306	27	120	163	15	51	143	12	69			
3 TO 3:59 AM	191	11	84	101	4	23	90	7	61			
4 TO 4:59 AM	165	9	44	94	5	17	71	4	27			
5 TO 5:59 AM	163	14	65	98	9	41	65	5	24			
6 TO 6:59 AM	289	23	75	199	19	44	90	4	31			
7 TO 7:59 AM	333	29	133	246	27	104	87	2	29			
8 TO 8:59 AM	391	33	141	321	29	104	70	4	37			
9 TO 9:59 AM	412	25	124	323	21	95	89	4	29			
10 TO 10:59 AM	439	35	161	352	28	132	87	7	29			
11 TO 11:59 AM	488	27	178	373	23	134	115	4	44			
NOON TO 12:59 PM	443	33	174	348	27	136	95	6	38			
1 TO 1:59 PM	455	29	149	358	20	118	97	9	31			
2 TO 2:59 PM	463	42	166	367	37	130	96	5	36			
3 TO 3:59 PM	534	38	210	412	32	152	122	6	58			
4 TO 4:59 PM	522	48	184	395	42	143	127	6	41			
5 TO 5:59 PM	472	26	164	358	23	132	114	3	32			
6 TO 6:59 PM	489	41	208	355	25	158	134	16	50			
7 TO 7:59 PM	467	40	197	331	36	124	136	4	73			
8 TO 8:59 PM	410	32	150	275	23	76	135	9	74			
9 TO 9:59 PM	401	23	162	256	17	88	145	6	74			
10 TO 10:59 PM	429	32	154	291	16	99	138	16	55			
11 TO 11:59 PM	416	23	166	258	15	99	158	8	67			
TOTAL	9422	708	3534	6695	532	2338	2727	176	1196			

**TABLE 29 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY DAY OF WEEK AND CIRCUMSTANCE**

DAY	*****TOTAL*****			CIRCUMSTANCE			**STRUCK BY TRAIN**			***RAN INTO TRAIN**		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
SUNDAY	832	83	360	566	60	228	266	23	132			
MONDAY	1321	95	440	947	75	301	374	20	139			
TUESDAY	1435	90	534	1081	76	381	354	14	153			
WEDNESDAY	1450	91	504	1034	68	332	416	23	172			
THURSDAY	1436	83	504	1023	57	347	413	26	157			
FRIDAY	1649	119	606	1158	86	393	491	33	213			
SATURDAY	1299	147	586	886	110	356	413	37	230			
TOTAL	9422	708	3534	6695	532	2338	2727	176	1196			

**TABLE 30 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MONTH AND CIRCUMSTANCE**

MONTH	*****TOTAL*****			CIRCUMSTANCE			**STRUCK BY TRAIN**			***RAN INTO TRAIN**		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
JANUARY	1034	73	366	732	61	232	302	12	134			
FEBRUARY	1010	84	403	693	66	282	317	18	121			
MARCH	875	74	313	621	55	204	254	19	109			
APRIL	645	29	248	446	22	158	199	7	90			
MAY	603	45	212	441	31	133	162	14	79			
JUNE	608	61	216	450	48	135	158	13	81			
JULY	634	48	262	448	37	172	186	11	90			
AUGUST	666	47	251	477	30	167	189	17	84			
SEPTEMBER	701	59	275	515	38	191	186	21	84			
OCTOBER	856	56	314	597	39	211	259	17	103			
NOVEMBER	828	61	329	609	47	222	219	14	107			
DECEMBER	962	71	345	666	58	231	296	13	114			
TOTAL	9422	708	3534	6695	532	2338	2727	176	1196			

**TABLE 31 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WEATHER CONDITIONS, CIRCUMSTANCE, AND VISIBILITY**

WEATHER	TOTAL ACC/INC	CIRCUMSTANCE							
		***STRUCK BY TRAIN***				****RAN INTO TRAIN****			
		DAWN	DAY	DUSK	DARK	DAWN	DAY	DUSK	DARK
CLEAR	6161	84	2738	161	1463	30	745	43	897
CLOUDY	1979	35	779	49	568	9	207	20	312
RAIN	736	11	239	17	227	2	93	12	135
FOG	194	11	41	3	54	3	20	1	61
SLEET	22	1	9	0	5	1	2	0	4
SNOW	327	5	101	9	82	2	50	4	74
NOT REPORTED	3	0	1	0	2	0	0	0	0
<b>TOTAL</b>	<b>9422</b>	<b>147</b>	<b>3908</b>	<b>239</b>	<b>2401</b>	<b>47</b>	<b>1117</b>	<b>80</b>	<b>1483</b>

**MOTORIST ACTION DATA (1980)**

**TABLE 32 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY OBSTRUCTION OF MOTORISTS' VIEW, CIRCUMSTANCE, AND VISIBILITY**

OBSTRUCTION OF MOTORISTS' VIEW	CIRCUMSTANCE											
	*****TOTAL*****				***STRUCK BY TRAIN***				****RAN INTO TRAIN****			
	DAWN	DAY	DUSK	DARK	DAWN	DAY	DUSK	DARK	DAWN	DAY	DUSK	DARK
PERMANENT STRUCTURE	7	209	13	93	4	161	7	73	3	48	6	20
STANDING RR EQUIPMENT	1	60	2	16	1	52	1	10	0	8	1	6
PASSING TRAIN	0	13	3	15	0	8	3	12	0	5	0	3
TOPOGRAPHY	3	52	5	26	1	35	4	18	2	17	1	8
VEGETATION	1	172	8	31	1	125	6	21	0	47	2	10
HIGHWAY VEHICLE	1	25	2	12	1	21	1	7	0	4	1	5
OTHER	4	48	3	32	3	38	2	15	1	10	1	17
NOT OBSTRUCTED	177	4445	283	3658	136	3467	215	2244	41	978	68	1414
UNKNOWN	0	1	0	1	0	1	0	1	0	0	0	0
<b>TOTAL</b>	<b>194</b>	<b>5025</b>	<b>319</b>	<b>3884</b>	<b>147</b>	<b>3908</b>	<b>239</b>	<b>2401</b>	<b>47</b>	<b>1117</b>	<b>80</b>	<b>1483</b>

**TABLE 33 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MOTORIST ACTION AND TYPE OF VEHICLE**

TYPE OF VEHICLE	*****MOTORIST ACTION*****					
	STRUCK BY SECOND TRAIN			PASSED STANDING VEHICLE		
	YES	NO	UNKNOWN	YES	NO	UNKNOWN
AUTOMOBILE	125	6264	135	211	5657	656
TRUCK	48	2048	39	56	1902	177
TRUCK TRAILER	12	631	7	24	571	55
BUS	0	21	0	0	19	2
SCHOOL BUS	0	9	0	0	9	0
MOTORCYCLE	1	80	2	7	67	9
<b>TOTAL</b>	<b>186</b>	<b>9053</b>	<b>183</b>	<b>298</b>	<b>8225</b>	<b>899</b>

### 3. RAIL-HIGHWAY CROSSING ACCIDENT RATES (1980)

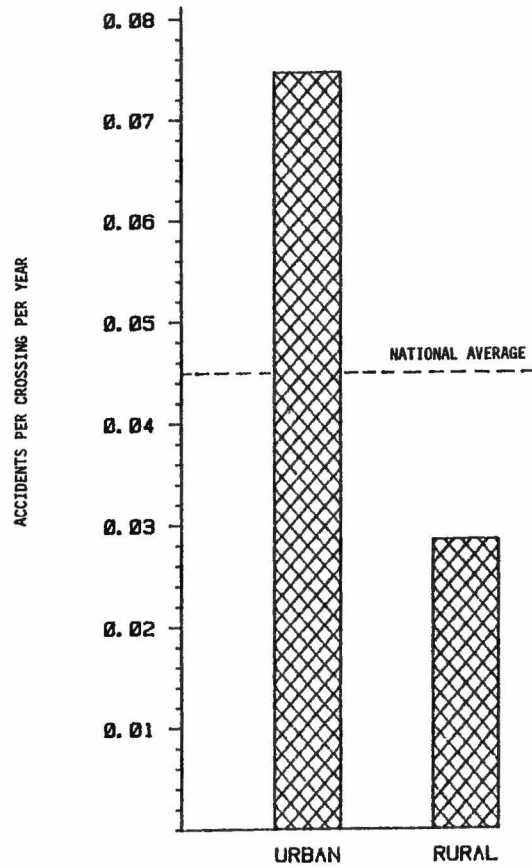


FIGURE 8 CROSSING ACCIDENT RATE BY LOCATION: URBAN OR RURAL

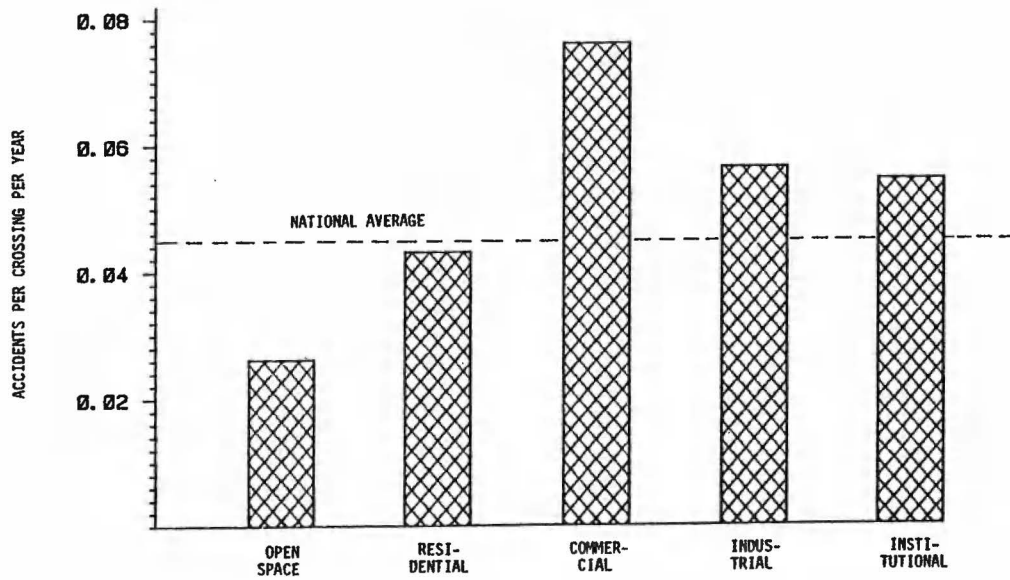
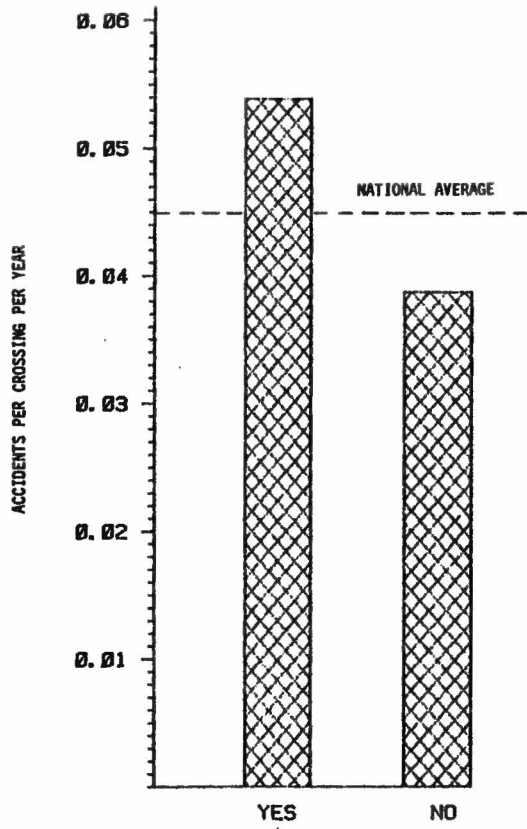
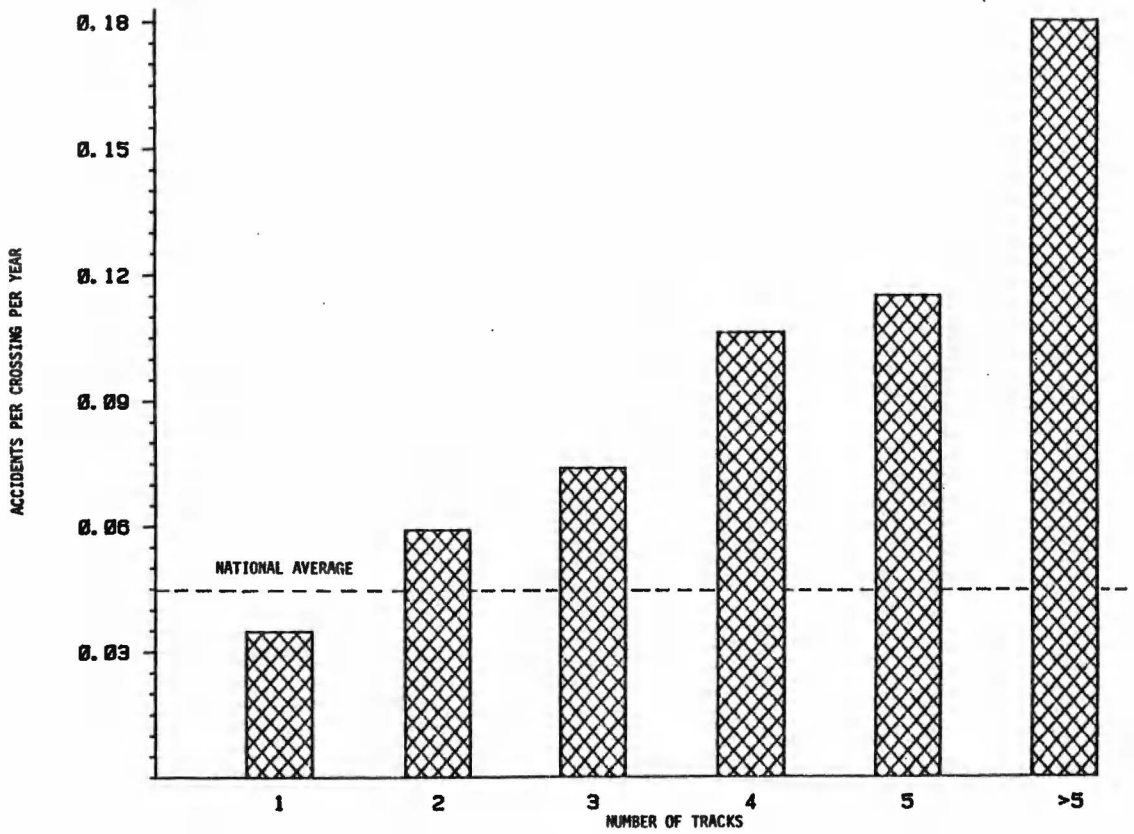


FIGURE 9 CROSSING ACCIDENT RATE BY TYPE OF DEVELOPMENT

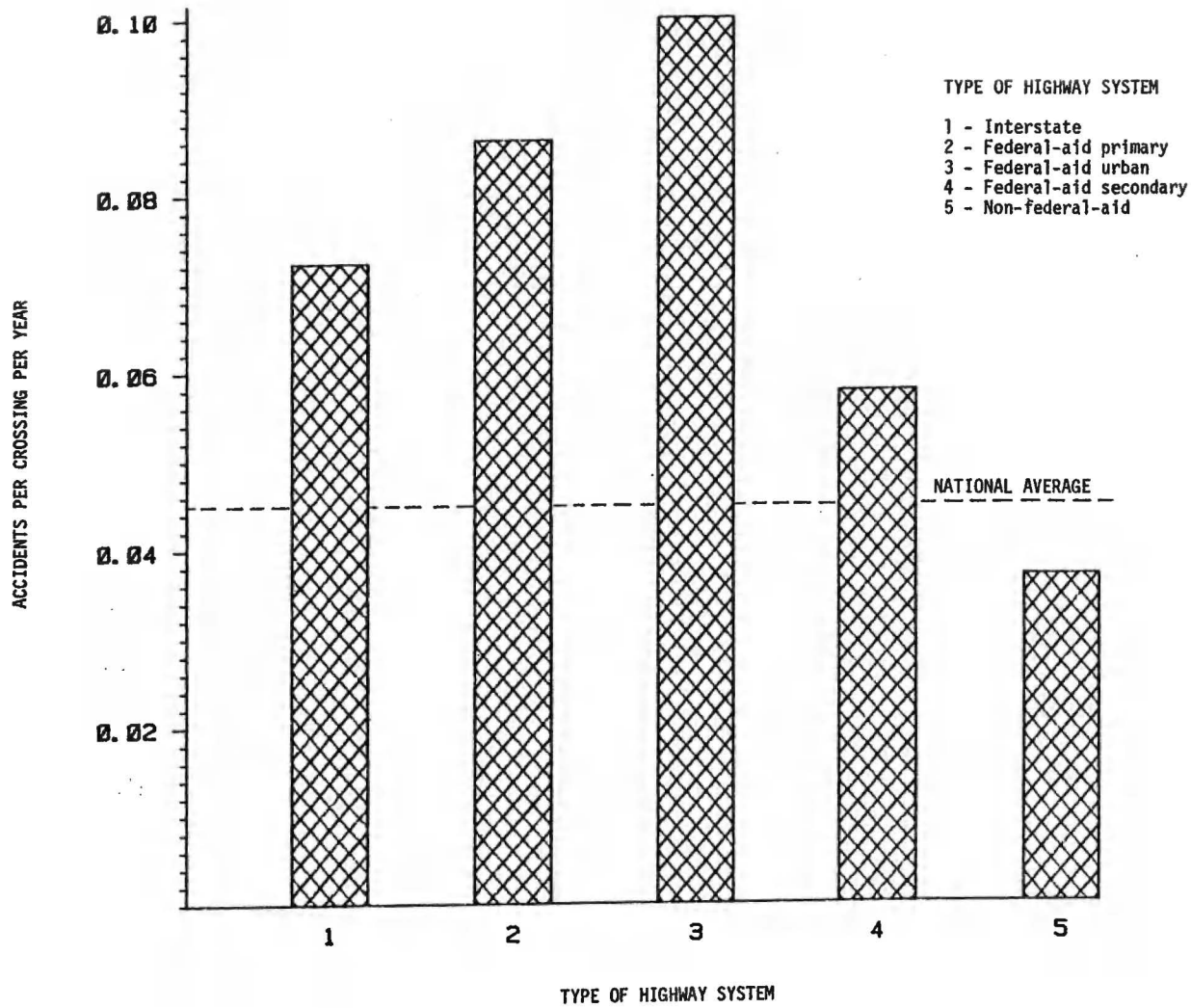


**FIGURE 10. CROSSING ACCIDENT RATE BY ADVANCE WARNING SIGNS**

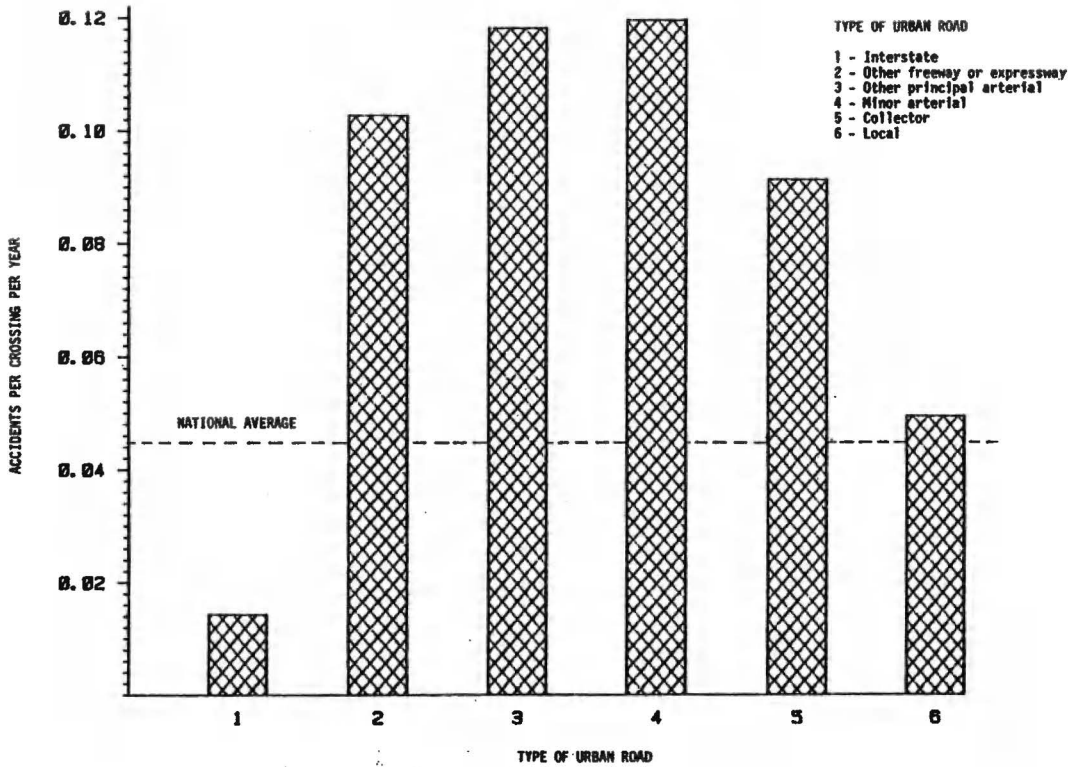


**FIGURE 11 CROSSING ACCIDENT RATE BY NUMBER OF TRACKS**

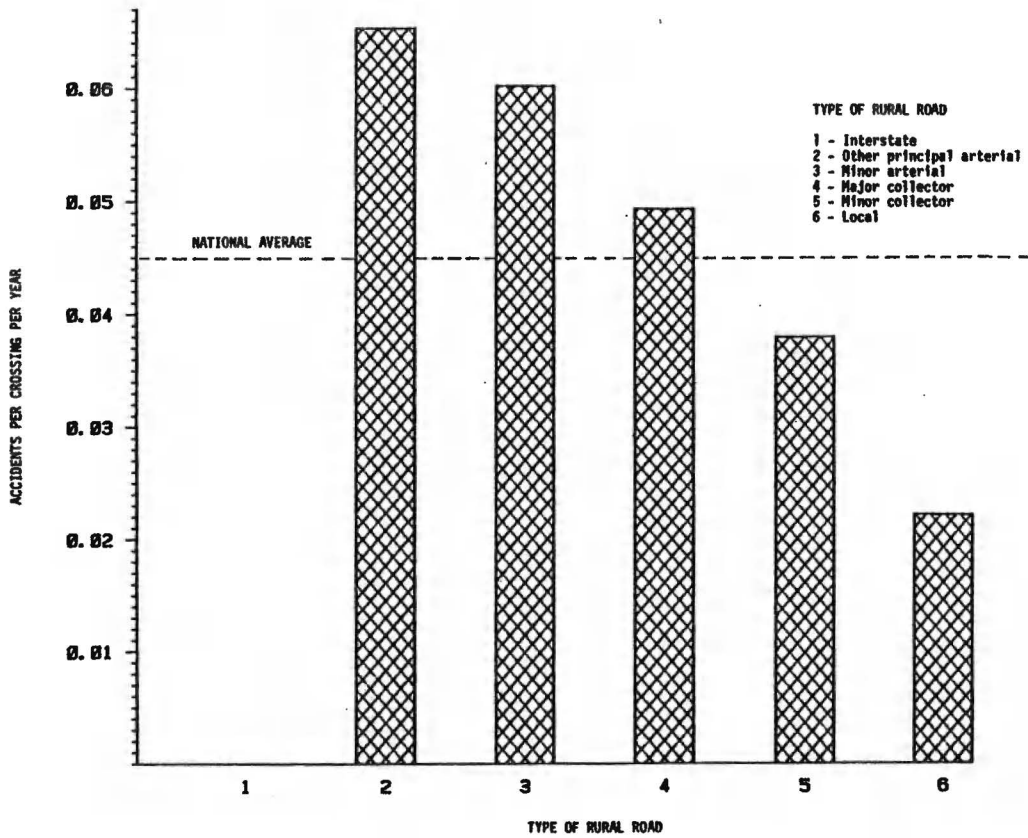




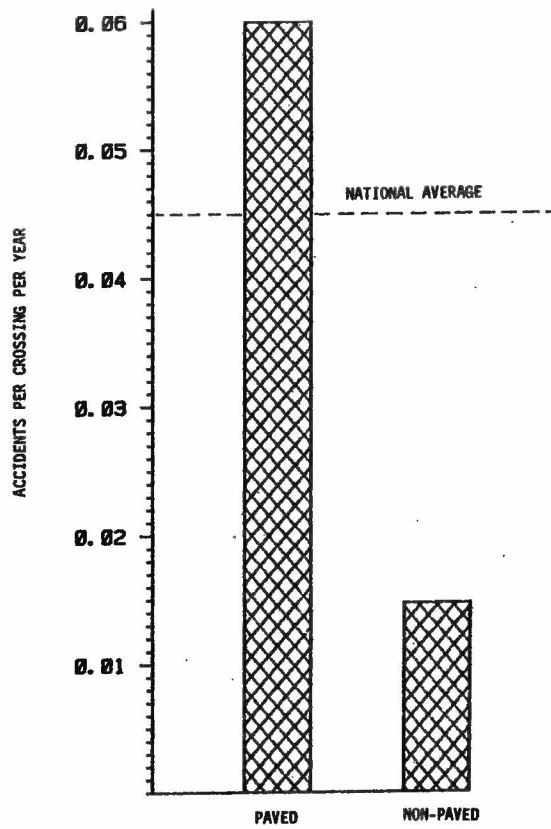
**FIGURE 12. CROSSING ACCIDENT RATE BY HIGHWAY SYSTEM**



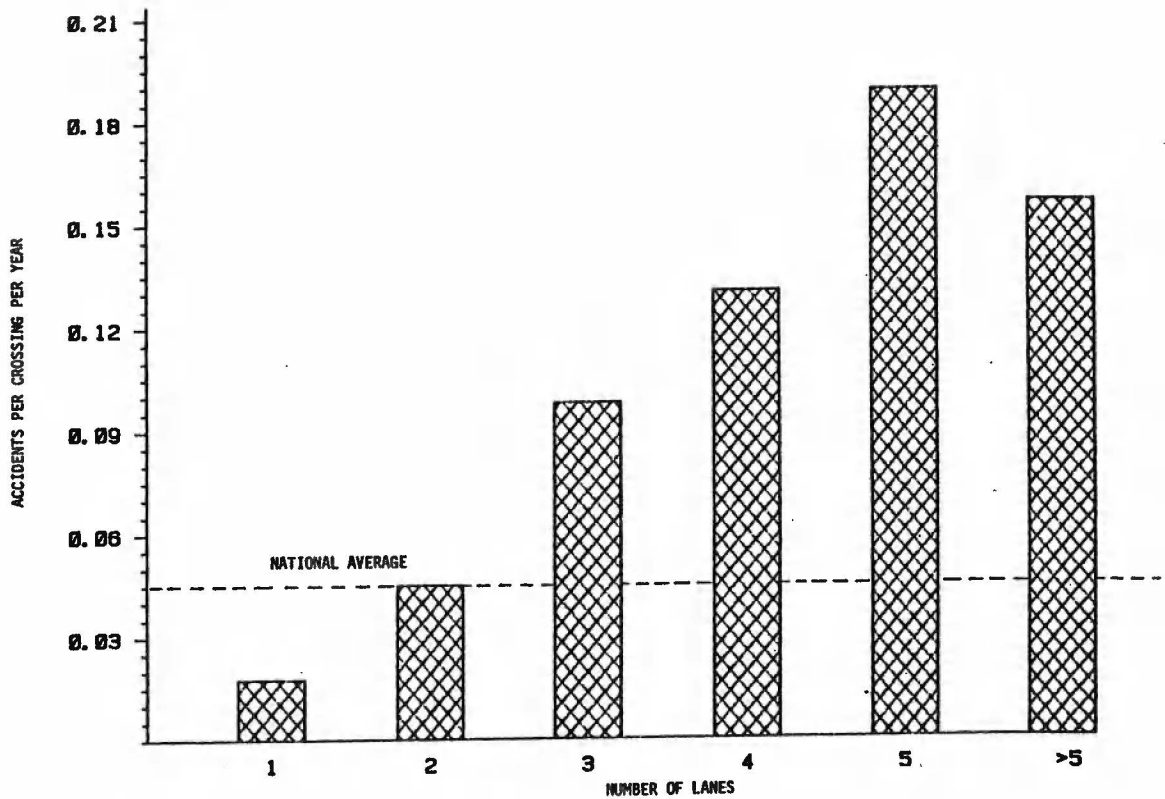
**FIGURE 13 CROSSING ACCIDENT RATE BY TYPE OF URBAN ROAD**



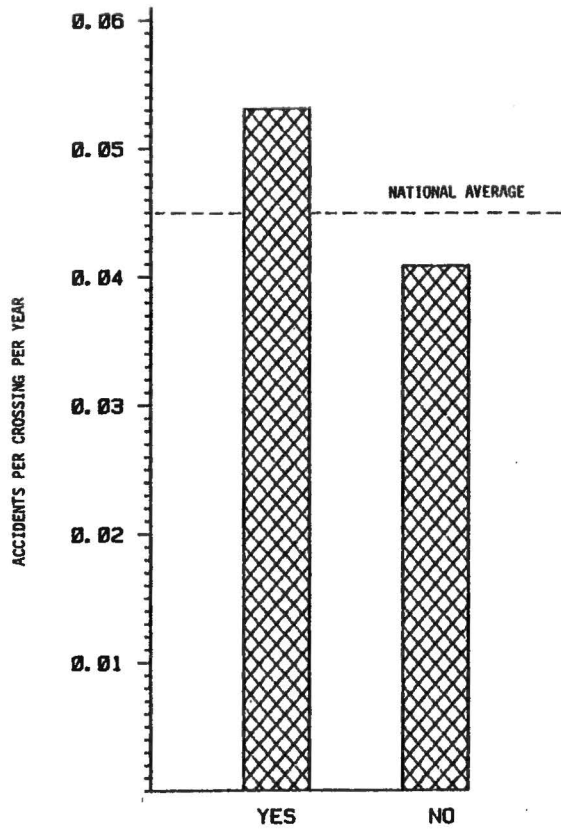
**FIGURE 14 CROSSING ACCIDENT RATE BY TYPE OF RURAL ROAD**



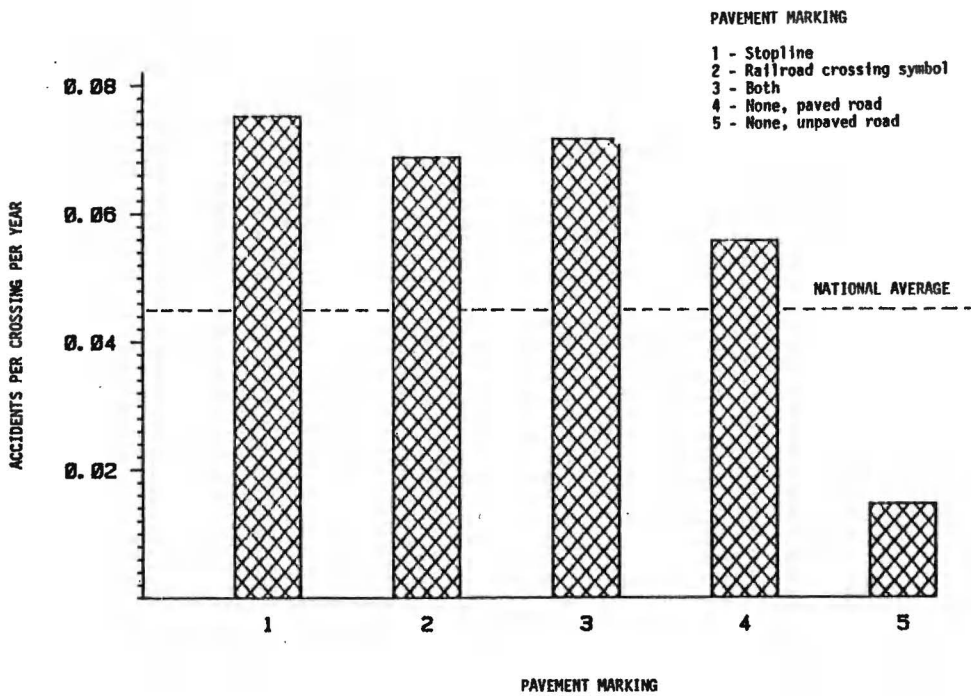
**FIGURE 15 CROSSING ACCIDENT RATE BY PAVED OR NON-PAVED ROAD SURFACE**



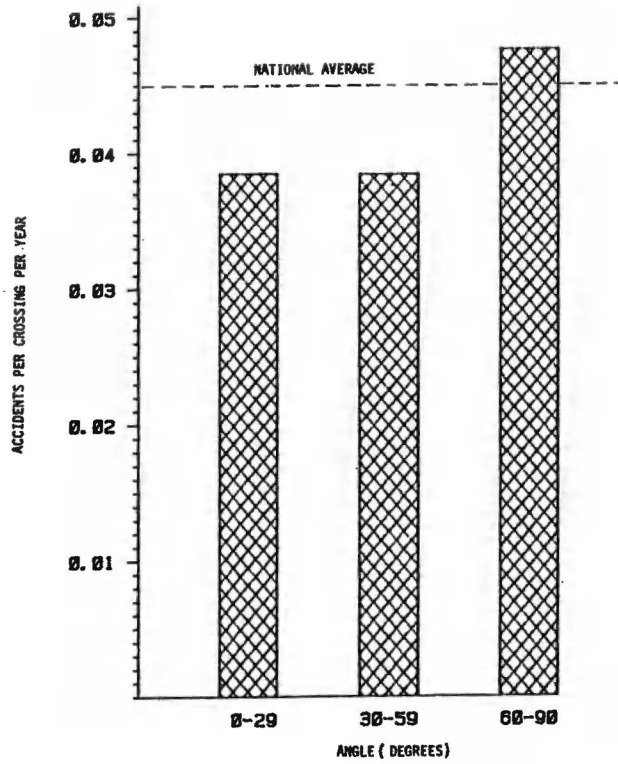
**FIGURE 16 CROSSING ACCIDENT RATE BY NUMBER OF TRAFFIC LANES**



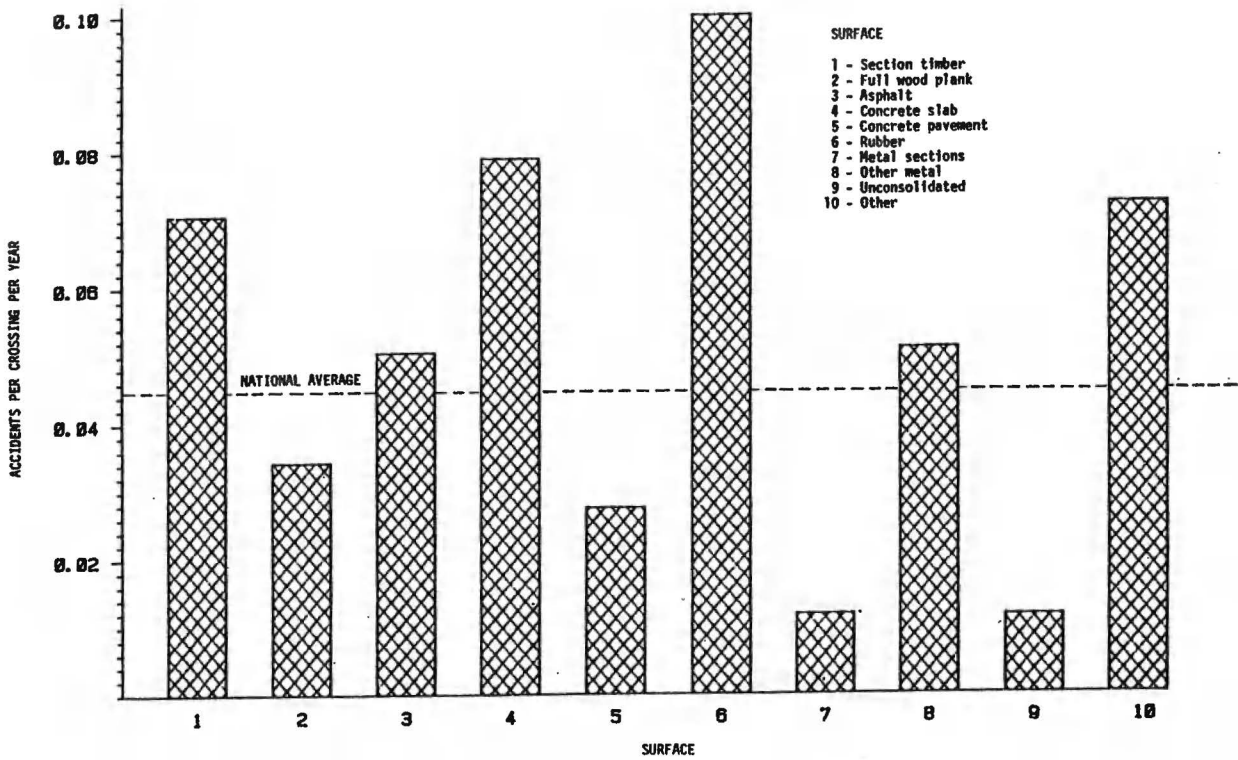
**FIGURE 17 CROSSING ACCIDENT RATE BY NEARBY INTERSECTING HIGHWAY**



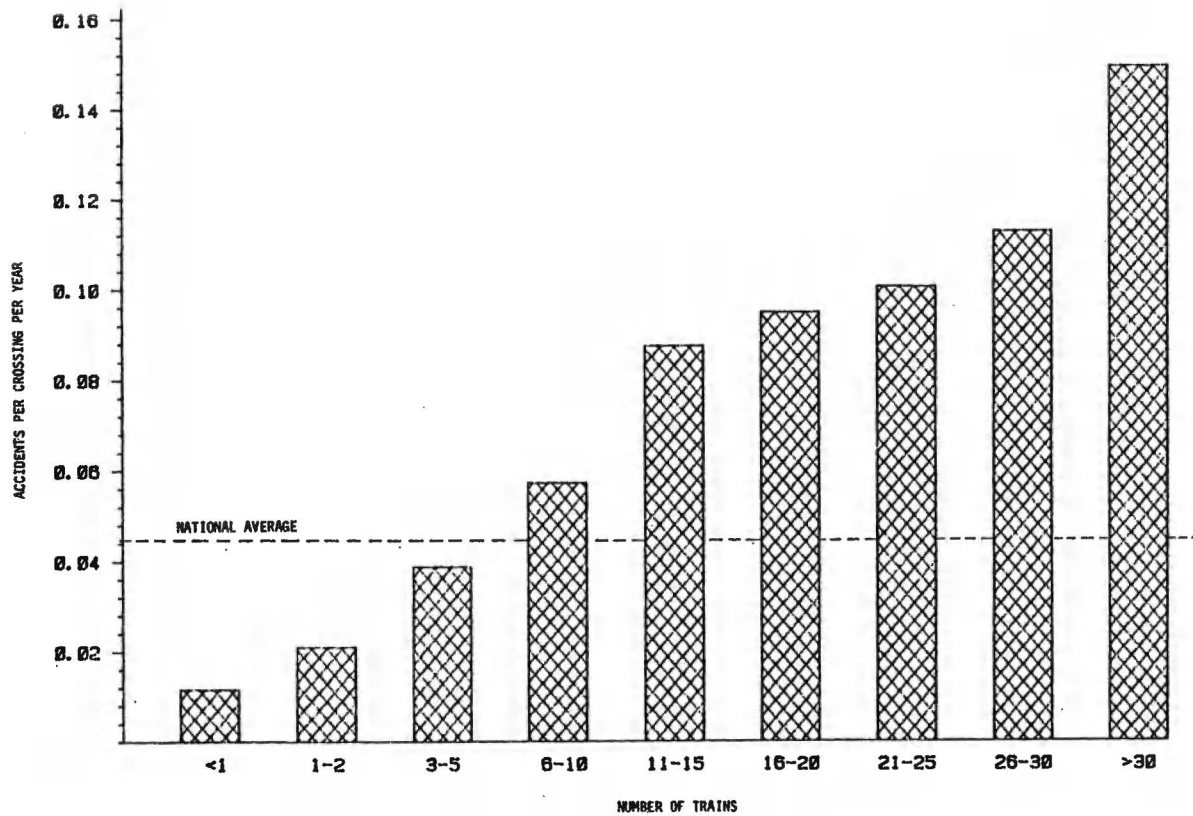
**FIGURE 18 CROSSING ACCIDENT RATE BY PAVEMENT MARKINGS**



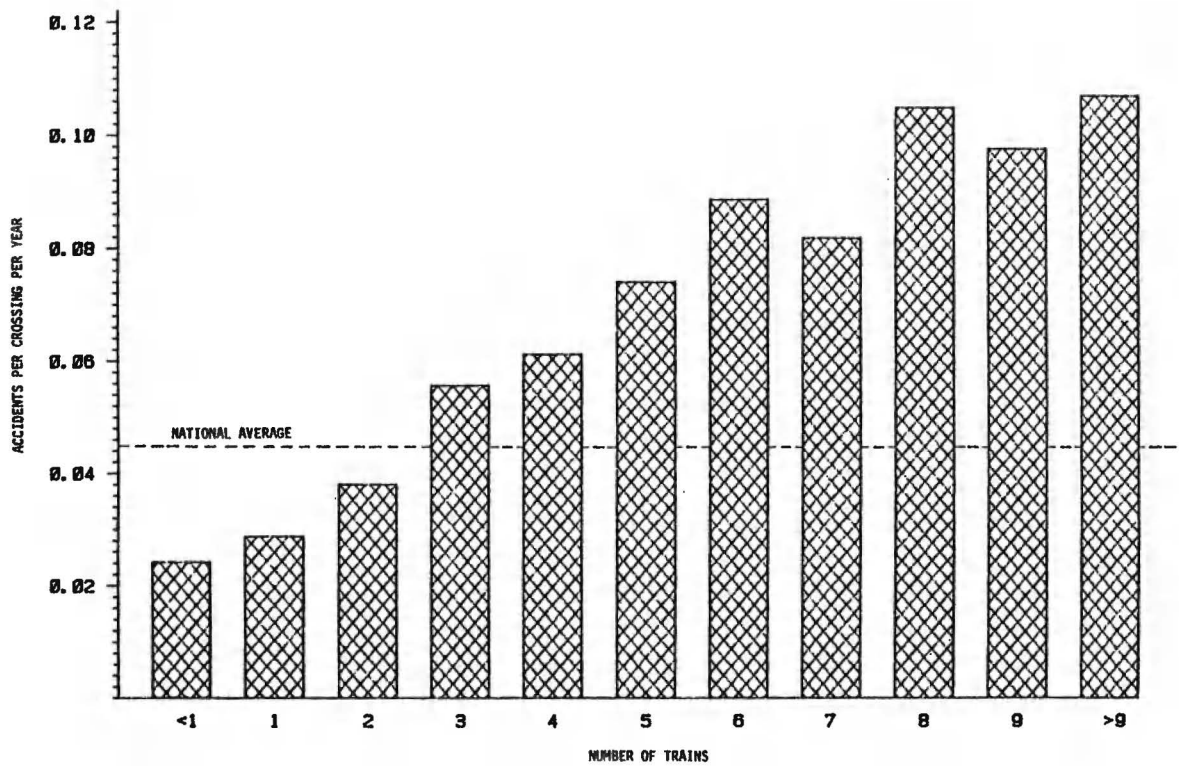
**FIGURE 19 CROSSING ACCIDENT RATE BY SMALLEST CROSSING ANGLE**



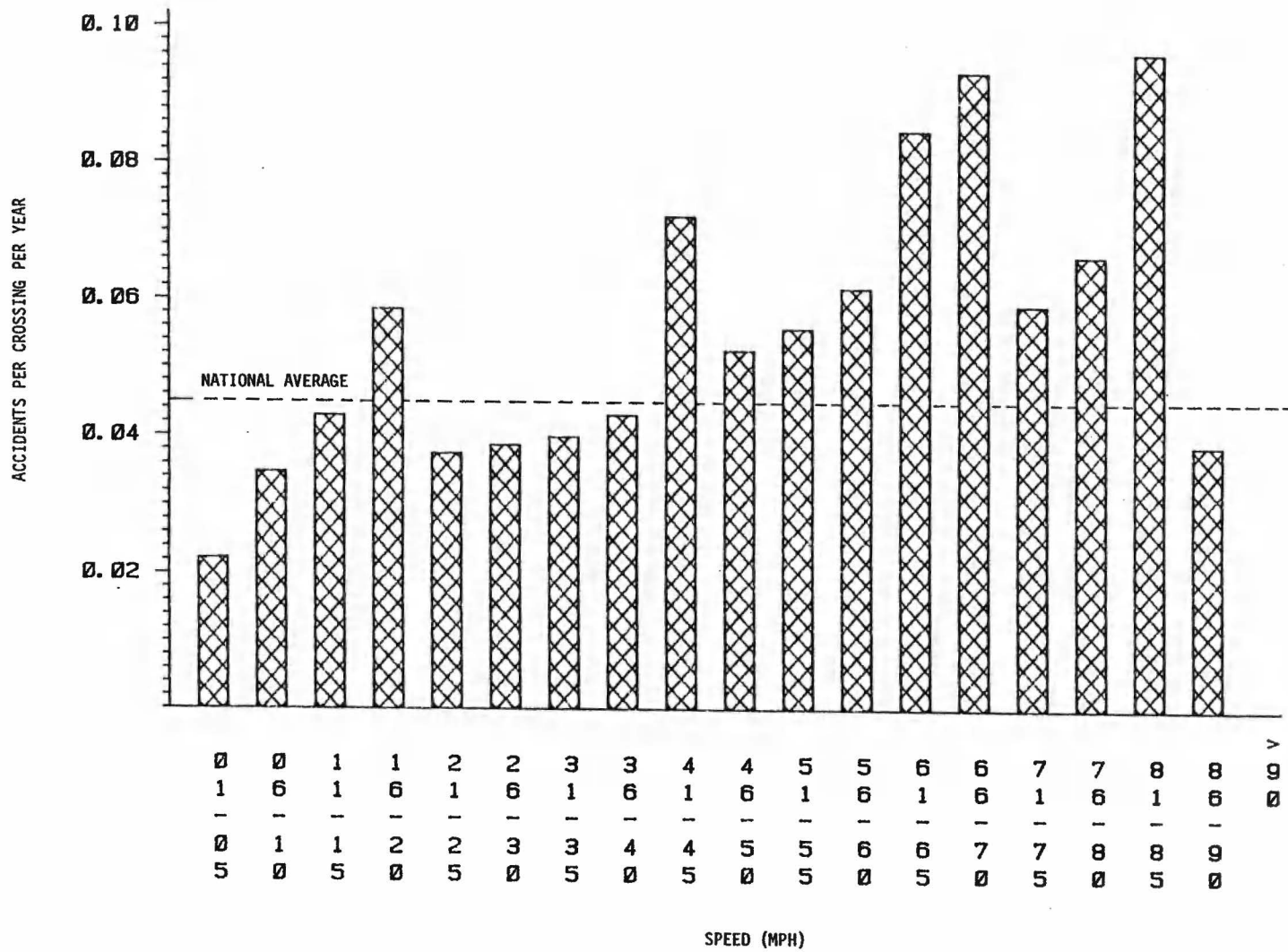
**FIGURE 20 CROSSING ACCIDENT RATE BY CROSSING SURFACE**



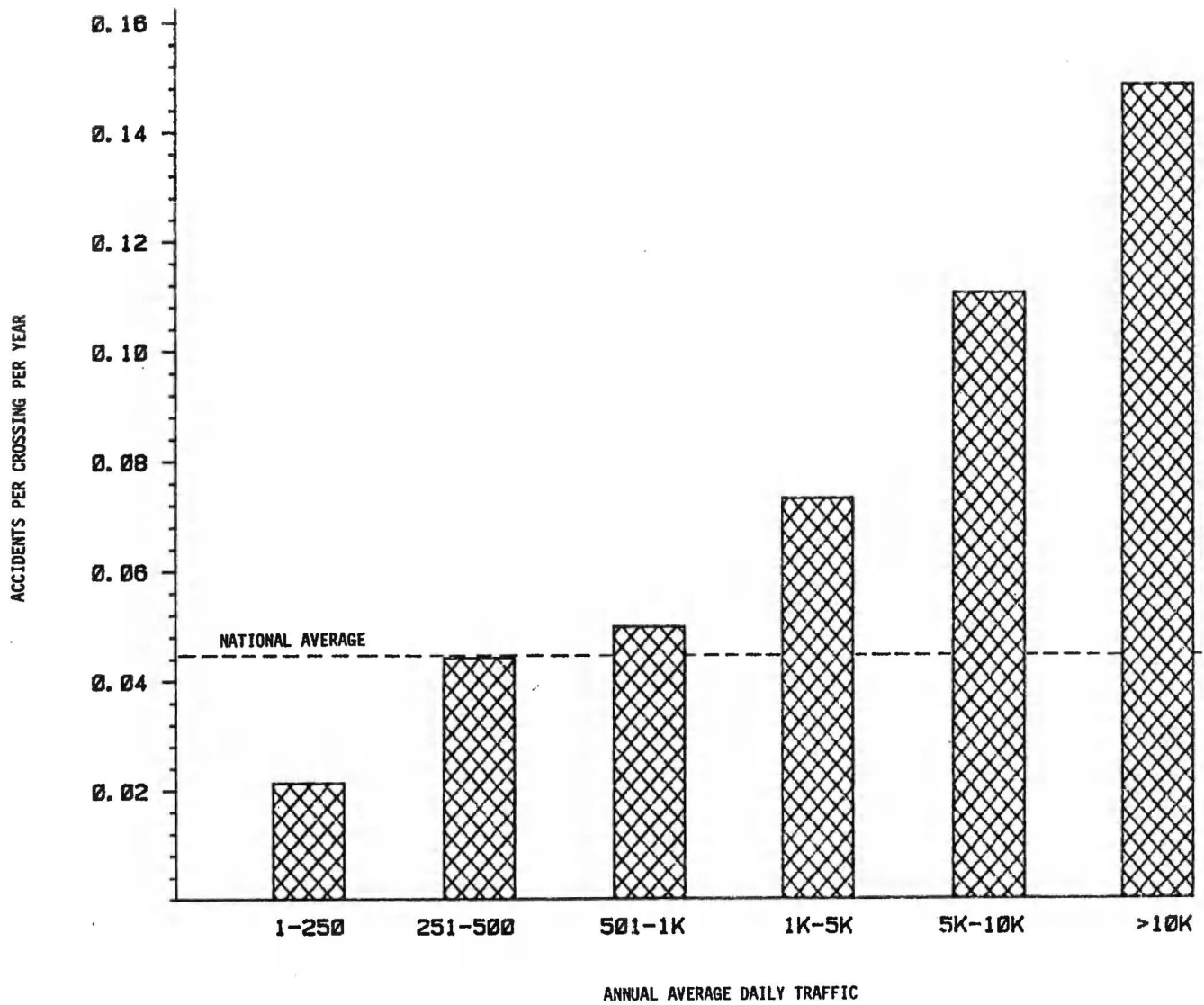
**FIGURE 21 CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY**



**FIGURE 22 CROSSING ACCIDENT RATE BY NUMBER OF THRU-TRAINS DURING DAYLIGHT HOURS (6AM TO 6PM)**

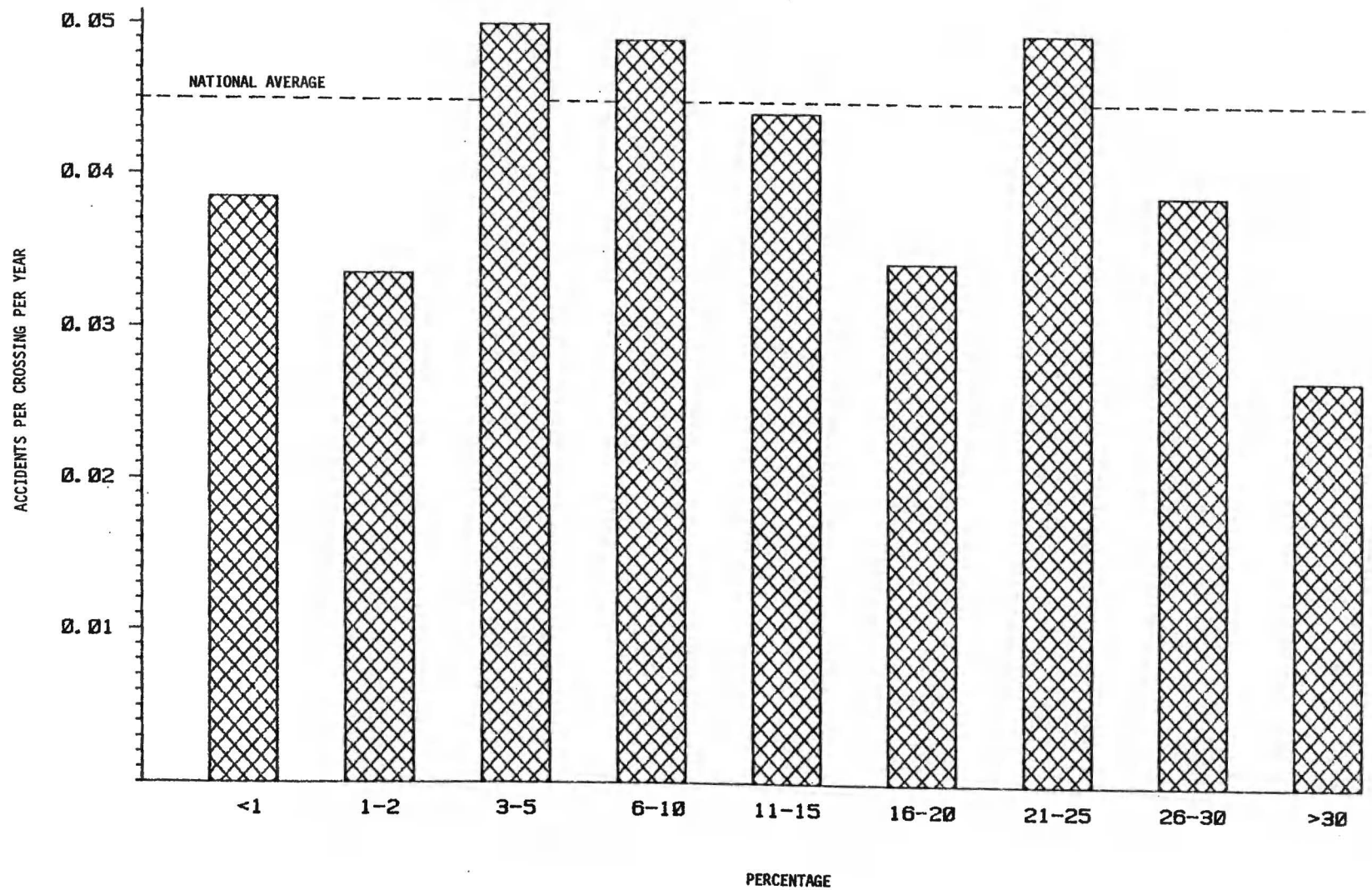


**FIGURE 23 CROSSING ACCIDENT RATE BY MAXIMUM TIMETABLE SPEED**

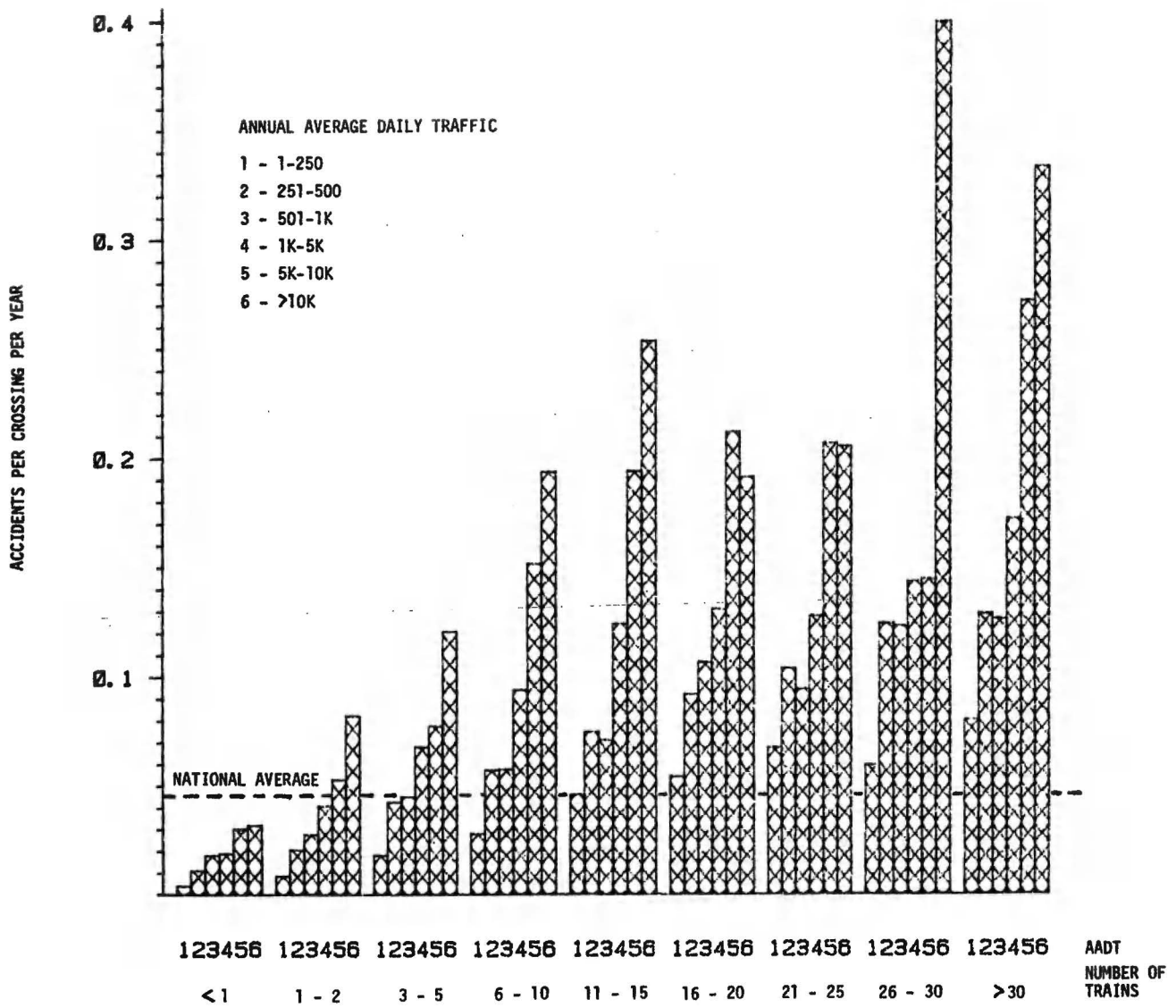


**FIGURE 24 CROSSING ACCIDENT RATE BY ANNUAL AVERAGE DAILY TRAFFIC**





**FIGURE 25 CROSSING ACCIDENT RATE BY TRUCKS AS PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC**



**FIGURE 26 CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC**

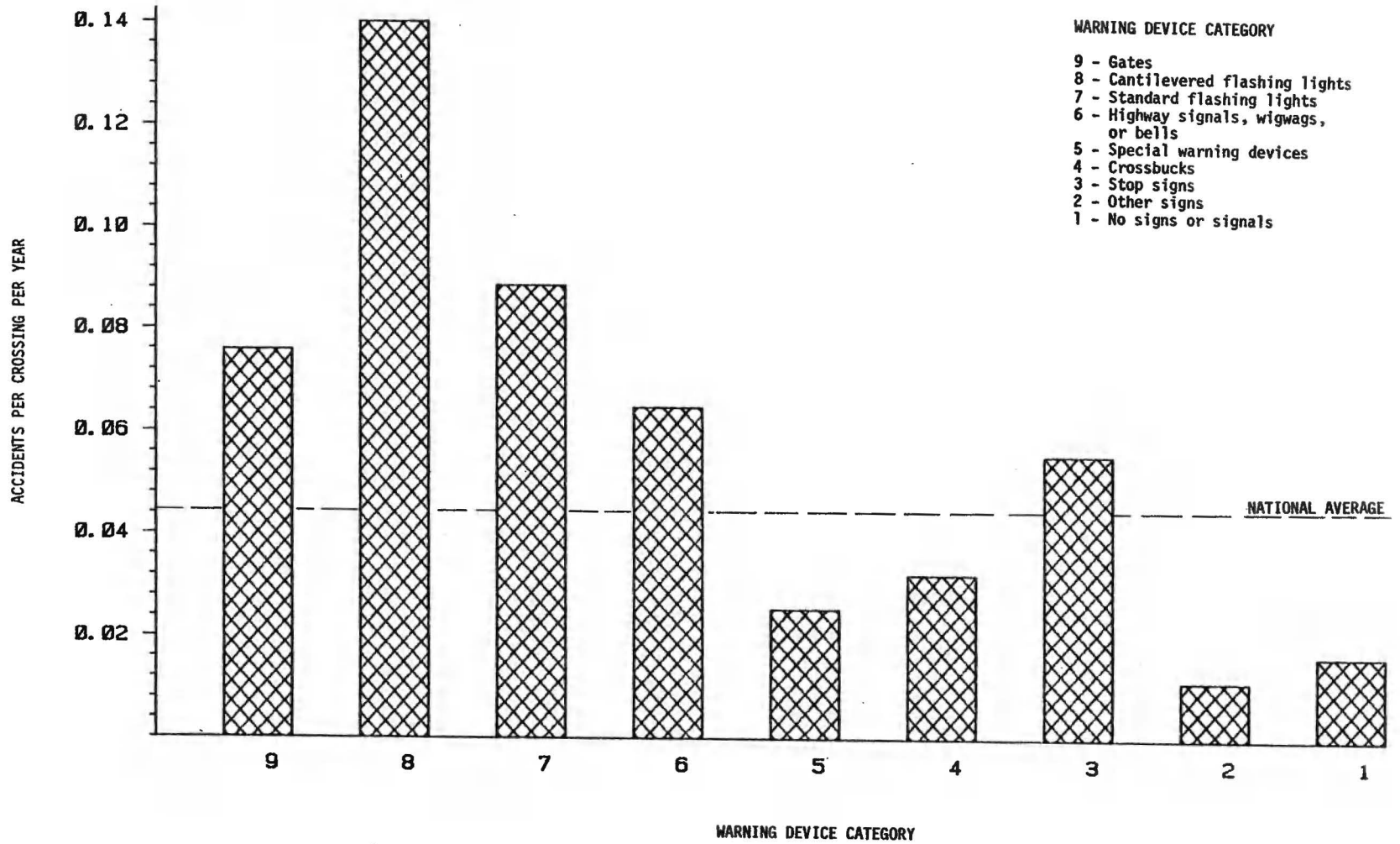


FIGURE 27 CROSSING ACCIDENT RATE BY WARNING DEVICE CATEGORY



#### 4. RAIL-HIGHWAY CROSSING INVENTORY (1980)

##### PHYSICAL CHARACTERISTICS

TABLE 34 TOTAL PUBLIC AND PRIVATE CROSSINGS BY STATE AND TYPE

STATE	PUBLIC AT GRADE	PUBLIC GRADE SEPARATION		PRIVATE	PEDESTRIAN	TOTAL
		RR UNDER	RR OVER			
ALABAMA	4,752	501	191	2,537	33	8,014
ALASKA	225	9	1	74	0	309
ARIZONA	1,036	79	77	833	7	2,032
ARKANSAS	4,011	179	139	1,921	16	6,266
CALIFORNIA	8,996	922	557	5,642	246	16,363
COLORADO	2,416	191	107	1,603	12	4,329
CONNECTICUT	528	335	261	484	55	1,663
DELAWARE	263	42	53	170	6	534
DISTRICT OF COLUMBIA	49	30	38	15	13	145
FLORIDA	5,742	236	55	2,374	77	8,484
GEORGIA	6,923	578	256	3,123	42	10,922
HAWAII	6	0	0	0	0	6
IDAHO	2,182	97	67	1,860	8	4,214
ILLINOIS	13,563	1,014	2,016	7,947	425	24,965
INDIANA	10,078	555	654	4,178	121	15,586
IOWA	8,881	625	469	6,082	64	16,121
KANSAS	9,550	353	233	4,875	34	15,045
KENTUCKY	3,653	465	483	3,792	114	8,507
LOUISIANA	4,836	217	129	4,127	46	9,355
MAINE	1,113	124	81	1,093	15	2,426
MARYLAND	1,045	322	219	899	27	2,512
MASSACHUSETTS	1,222	814	448	601	104	3,189
MICHIGAN	8,277	356	429	3,713	108	12,883
MINNESOTA	7,726	543	452	5,114	85	13,920
MISSISSIPPI	3,589	236	116	2,770	21	6,732
MISSOURI	6,533	737	470	4,939	105	12,784
MONTANA	2,168	154	108	3,297	24	5,751
NEBRASKA	5,474	242	170	4,020	25	9,931
NEVADA	358	48	37	301	2	746
NEW HAMPSHIRE	659	159	66	522	23	1,429
NEW JERSEY	2,218	554	747	780	130	4,429
NEW MEXICO	846	67	80	617	4	1,614
NEW YORK	4,435	1,451	1,203	4,041	305	11,435
NORTH CAROLINA	5,501	523	301	4,345	76	10,746
NORTH DAKOTA	5,728	82	92	2,785	37	8,724
OHIO	9,943	1,260	1,233	6,016	113	18,565
OKLAHOMA	5,728	264	225	2,438	20	8,675
OREGON	2,898	288	177	3,360	103	6,826
PENNSYLVANIA	6,689	1,696	2,027	4,237	344	14,993
RHODE ISLAND	141	101	43	81	4	370
SOUTH CAROLINA	4,402	406	131	1,842	19	6,800
SOUTH DAKOTA	3,173	106	64	1,974	8	5,325
TENNESSEE	4,161	514	503	2,415	37	7,630
TEXAS	14,588	786	797	7,552	51	23,774
UTAH	1,371	121	54	906	6	2,458
VERMONT	595	76	86	795	51	1,603
VIRGINIA	2,835	648	478	3,852	68	7,881
WASHINGTON	4,314	416	392	4,473	117	9,712
WEST VIRGINIA	2,418	292	375	2,926	110	6,121
WISCONSIN	6,911	465	384	4,363	177	12,300
WYOMING	624	89	52	1,011	8	1,784
PUERTO RICO	55	0	0	2	0	57
TOTAL	215,428	20,368	17,826	139,717	3,646	396,985

**TABLE 35 TOTAL PUBLIC AND PRIVATE CROSSINGS BY CLASS I RAILROAD AND TYPE**

RAILROAD	PUBLIC GRADE SEPARATION		PRIVATE	PEDESTRIAN	TOTAL
	PUBLIC AT GRADE	RR UNDER			
<b>CLASS I RAILROAD</b>					
ALABAMA GREAT SOUTHERN RAILROAD <sup>1</sup>	0	0	0	0	0
AMTRAK	138	351	347	90	977
ATCHISON, TOPEKA AND SANTA FE	11,714	658	646	7,183	20,287
BALTIMORE AND OHIO RAILROAD	5,306	827	704	3,661	10,631
BESSEMER AND LAKE ERIE RAILROAD	147	33	49	95	326
BOSTON AND MAINE CORPORATION	1,146	487	237	591	2,518
BURLINGTON NORTHERN	25,714	1,514	1,303	18,802	47,671
CENTRAL OF GEORGIA RAILROAD <sup>1</sup>	0	0	0	0	0
CHESAPEAKE AND OHIO RAILWAY	4,559	385	473	4,196	9,760
CHICAGO AND NORTHWESTERN	10,723	656	834	6,832	19,254
CHI., MILW., ST. PAUL & PACIFIC	8,247	613	573	5,875	15,429
CHICAGO, ROCK ISLAND & PACIFIC	5,921	435	400	3,463	10,245
CINN., N.O. & TEXAS PACIFIC <sup>1</sup>	0	0	0	0	0
CLINCHFIELD RAILROAD	145	53	66	232	500
COLORADO AND SOUTHERN RAILWAY	469	40	21	316	849
CONSOLIDATED RAIL CORPORATION	18,965	3,376	3,494	9,633	35,919
THE ESTATES <sup>2</sup>	5,526	1,284	1,235	3,319	11,621
DELAWARE AND HUDSON RAILROAD	526	99	107	680	1,440
DENVER AND RIO GRANDE WESTERN	1,137	128	68	629	1,966
DETROIT, TOLEDO AND IRONTON	529	23	43	478	1,079
DULUTH, MISSABE AND IRON RANGE	224	27	34	167	460
ELGIN, JOLIET AND EASTERN	249	32	28	102	411
FLORIDA EAST COAST RAILWAY	793	33	2	114	952
FORT WORTH AND DENVER RAILWAY	907	38	17	429	1,391
GRAND TRUNK WESTERN	1,570	100	150	704	2,548
ILLINOIS CENTRAL GULF RAILROAD	9,931	824	759	6,745	18,456
KANSAS CITY SOUTHERN RAILWAY	1,015	89	75	469	1,653
LONG ISLAND RAILROAD	310	294	105	82	879
LOUISIANA & ARKANSAS RAILWAY	721	60	33	561	1,380
LOUISVILLE AND NASHVILLE	7,887	772	575	4,903	14,335
MISSOURI-KANSAS-TEXAS RAILROAD	2,112	148	134	1,156	3,557
MISSOURI PACIFIC RAILROAD	12,579	676	512	8,014	21,894
NORFOLK AND WESTERN RAILWAY	7,809	761	1,014	6,000	15,698
PITTSBURG AND LAKE ERIE RAILROAD	112	46	27	105	308
ST. LOUIS-SAN FRANCISCO RAILWAY <sup>3</sup>	0	0	0	0	0
ST. LOUIS SOUTHWESTERN RAILWAY	2,204	114	88	947	3,355
SEABOARD COAST LINE RAILROAD	11,761	860	289	5,539	18,580
SOO LINE	4,374	145	163	2,759	7,487
SOUTHERN PACIFIC TRANS. COMPANY	11,504	983	651	7,950	21,342
SOUTHERN RAILWAY	13,081	1,345	768	8,056	23,324
UNION PACIFIC RAILROAD	7,761	578	272	6,191	14,861
WESTERN MARYLAND RAILWAY	492	76	66	498	1,142
WESTERN PACIFIC	625	78	57	371	1,141
TOTAL CLASS I	198,933	19,041	16,419	127,937	365,626
TOTAL CLASS II & III	16,495	1,327	1,407	11,780	31,359
TOTAL	215,428	20,368	17,826	139,717	396,985

<sup>1</sup> CROSSINGS ARE INCLUDED UNDER SOUTHERN RAILWAY

<sup>2</sup> CROSSINGS ON PREDECESSOR LINES NOT MERGED IN CONRAIL

<sup>3</sup> MERGED WITH BURLINGTON NORTHERN

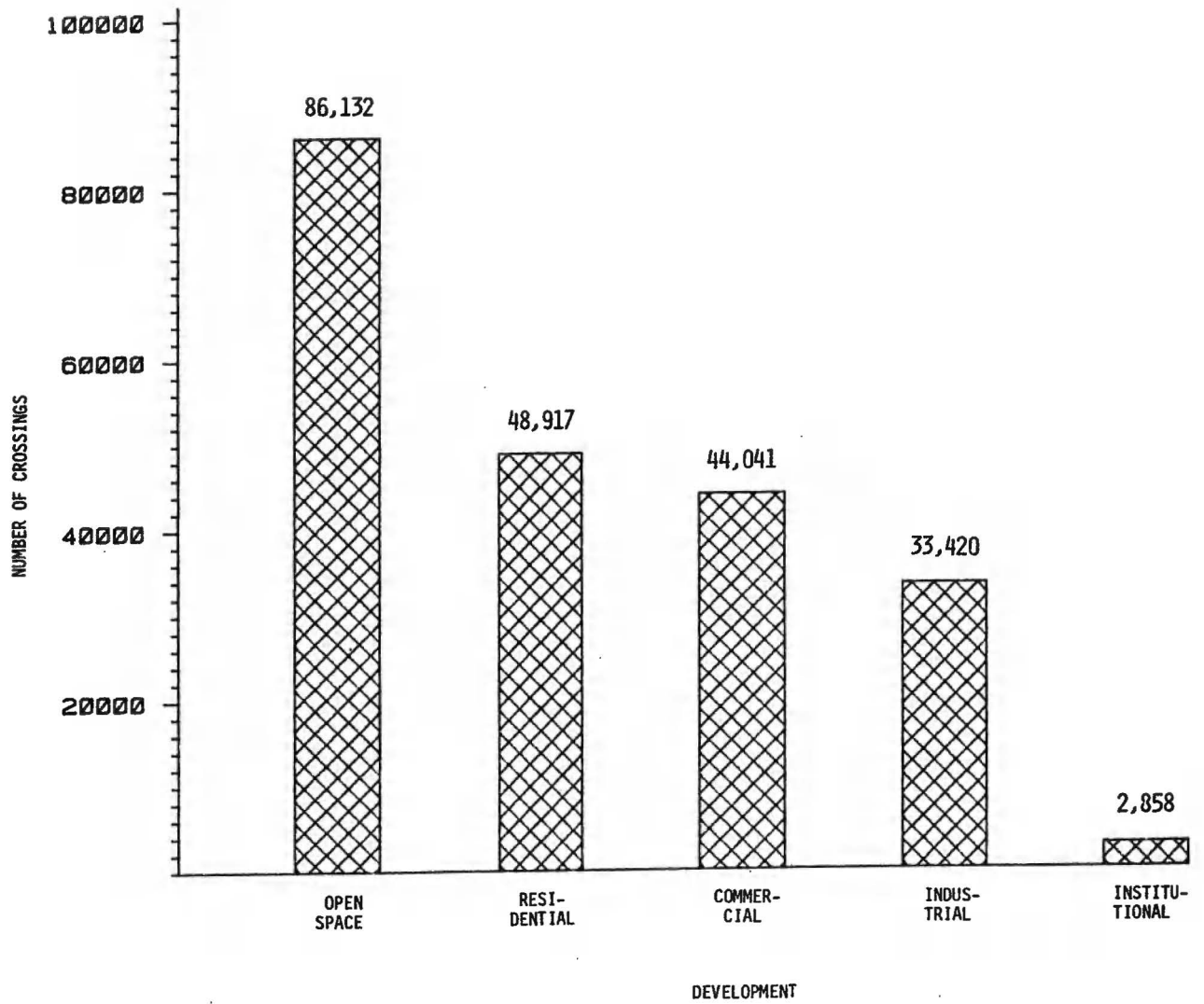
**TABLE 36 TOTAL CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL**

STATE	LOCATION		TOTAL
	URBAN	RURAL	
ALABAMA	2057	2695	4752
ALASKA	40	185	225
ARIZONA	524	512	1036
ARKANSAS	1726	2285	4011
CALIFORNIA	6522	2474	8996
COLORADO	873	1543	2416
CONNECTICUT	417	111	528
DELAWARE	89	174	263
DIST. COLUMBIA	49	0	49
FLORIDA	2598	3144	5742
GEORGIA	2505	4418	6923
HAWAII	0	6	6
IDAHO	369	1813	2182
ILLINOIS	4405	9158	13563
INDIANA	4109	5969	10078
IOWA	2174	6707	8881
KANSAS	1720	7830	9550
KENTUCKY	1033	2620	3653
LOUISIANA	2093	2743	4836
MAINE	286	827	1113
MARYLAND	475	570	1045
MASSACHUSETTS	862	360	1222
MICHIGAN	3214	5063	8277
MINNESOTA	1916	5810	7726
MISSISSIPPI	1144	2445	3589
MISSOURI	1945	4588	6533
MONTANA	381	1787	2168
NEBRASKA	841	4633	5474
NEVADA	89	269	358
NEW HAMPSHIRE	288	371	659
NEW JERSEY	1529	689	2218
NEW MEXICO	259	587	846
NEW YORK	1959	2476	4435
NORTH CAROLINA	2127	3374	5501
NORTH DAKOTA	362	5366	5728
OHIO	3780	6163	9943
OKLAHOMA	234	5494	5728
OREGON	1287	1611	2898
PENNSYLVANIA	3337	3352	6689
RHODE ISLAND	131	10	141
SOUTH CAROLINA	1721	2681	4402
SOUTH DAKOTA	362	2811	3173
TENNESSEE	1708	2453	4161
TEXAS	7692	6896	14588
UTAH	703	668	1371
VERMONT	207	388	595
VIRGINIA	1358	1477	2835
WASHINGTON	1991	2323	4314
WEST VIRGINIA	509	1909	2418
WISCONSIN	2612	4299	6911
WYOMING	57	567	624
PUERTO RICO	8	47	55
TOTAL	78677	136751	215428

THE CLASSIFICATION OF A CROSSING AS URBAN OR RURAL IS NOW BASED ON THE FUNCTIONAL CLASSIFICATION CODE. IN PREVIOUS PUBLICATIONS IT WAS BASED ON THE HIGHWAY SYSTEM CODE.







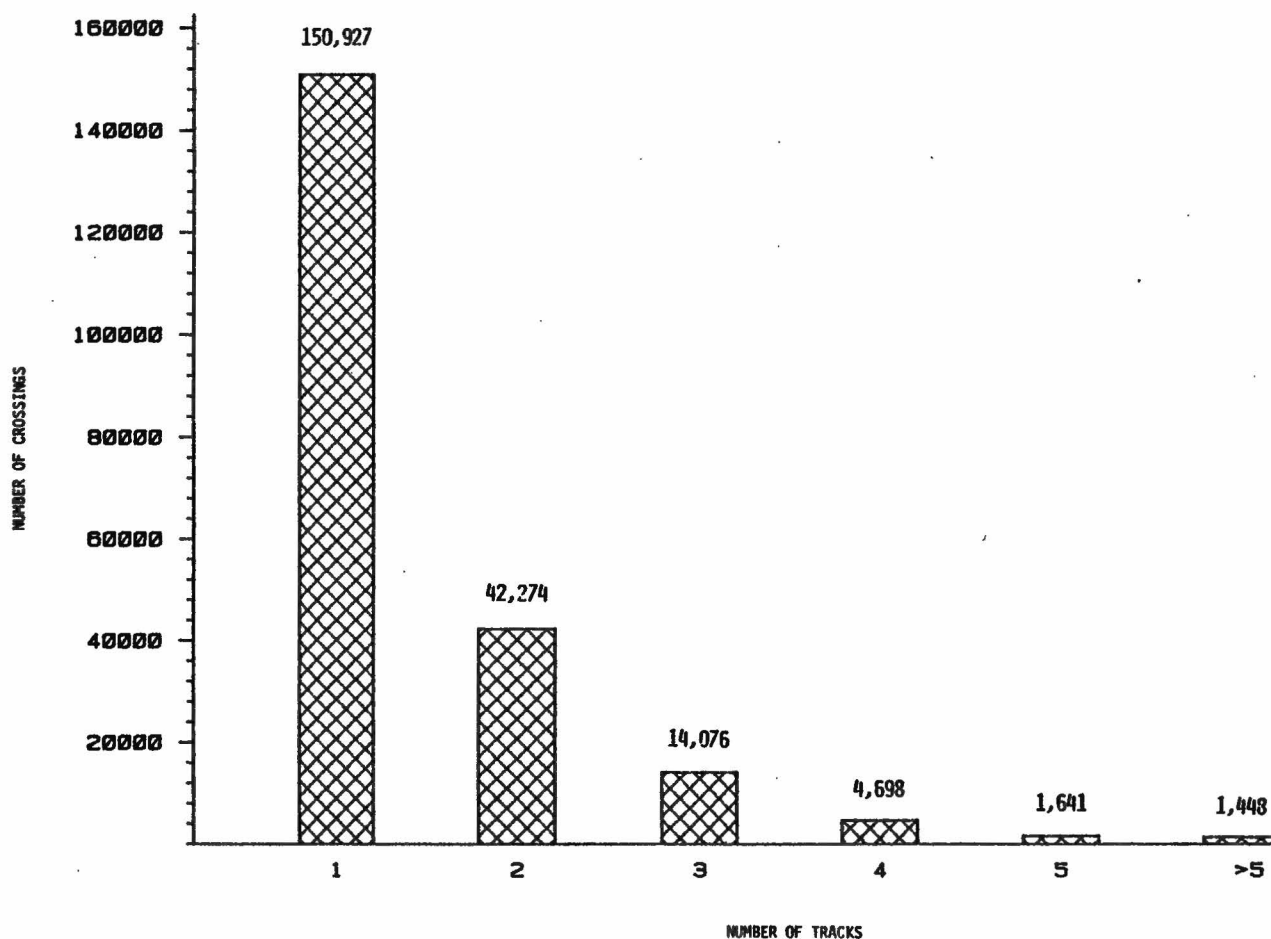
**FIGURE 29 CROSSINGS BY TYPE OF DEVELOPMENT**

**TRACK DATA (1980)**

**TABLE 37 TOTAL CROSSINGS BY NUMBER OF MAIN AND OTHER TRACKS**

NUMBER OF OTHER TRACKS	NUMBER OF MAIN TRACKS							TOTAL
	0	1	2	3	4	5	OVER 5	
0	364*	127030	10270	324	87	11	3	138089
1	23897	26502	2920	98	23	2	1	53443
2	5502	9163	1298	43	12	2	1	16021
3	1669	2742	449	23	7	0	0	4890
4	473	943	211	14	9	0	0	1650
5	172	368	109	7	2	0	0	658
OVER 5	189	366	108	2	8	4	0	677
<b>TOTAL</b>	<b>32266</b>	<b>167114</b>	<b>15365</b>	<b>511</b>	<b>148</b>	<b>19</b>	<b>5</b>	<b>215428</b>

\*CROSSINGS FOR WHICH DATA WAS NOT REPORTED IN INVENTORY.



**FIGURE 30 CROSSINGS BY NUMBER OF TRACKS**

**TABLE 38 TOTAL CROSSINGS BY NUMBER OF TRACKS AND WARNING DEVICE CATEGORY**

WARNING DEVICE CATEGORY	NUMBER OF TRACKS						TOTAL
	1	2	3	4	5	OVER 5	
GATES	5589	6217	2652	1050	378	384	16270
FLASHING LIGHTS	21940	7662	3052	1102	419	345	34520
HWY. SIGNALS, WIGWAGS, BELLS	1769	730	305	115	52	24	2995
SPECIAL WARNING DEVICES	5241	1326	477	183	67	79	7373
CROSSBUCKS	104111	23632	6824	2006	644	517	137734
STOP SIGNS	1031	250	82	27	9	11	1410
OTHER SIGNS	745	174	41	18	11	7	996
NO SIGNS OR SIGNALS	10501	2283	643	197	61	81	13766
<b>TOTAL</b>	<b>150927</b>	<b>42274</b>	<b>14076</b>	<b>4698</b>	<b>1641</b>	<b>1448</b>	<b>215064</b>

**TABLE 39 TOTAL CROSSINGS BY NUMBER OF TRACKS AND TRAFFIC LANES**

NUMBER OF TRAFFIC LANES	NUMBER OF TRACKS						TOTAL
	1	2	3	4	5	OVER 5	
1	29574	5812	1177	310	89	88	37050
2	113367	33619	11776	3951	1394	1212	165319
3	743	296	115	42	12	14	1222
4	6384	2315	926	363	138	127	10253
5	311	88	30	17	4	1	451
OVER 5	495	126	44	13	4	6	688
<b>TOTAL</b>	<b>150874</b>	<b>42256</b>	<b>14068</b>	<b>4696</b>	<b>1641</b>	<b>1448</b>	<b>214983</b>

**TABLE 40 TOTAL CROSSINGS BY NUMBER OF TRACKS AND STATE**

STATE	NUMBER OF TRACKS						TOTAL
	1	2	3	4	5	OVER 5	
ALABAMA	3463	820	311	86	36	35	4751
ALASKA	182	34	6	1	1	1	225
ARIZONA	744	186	70	22	6	6	1034
ARKANSAS	2806	815	258	75	32	20	4006
CALIFORNIA	6236	1705	627	213	108	97	8986
COLORADO	1658	473	160	49	31	33	2404
CONNECTICUT	399	93	24	8	4	0	528
DELAWARE	213	32	10	4	4	0	263
DIST. COLUMBIA	33	13	3	0	0	0	49
FLORIDA	3872	1241	393	120	45	31	5702
GEORGIA	5100	1212	369	143	39	41	6904
HAWAII	6	0	0	0	0	0	6
IDAHO	1533	378	145	61	22	21	2160
ILLINOIS	8311	3534	1112	369	123	98	13547
INDIANA	6665	2411	626	235	82	50	10069
IOWA	6199	1617	657	227	82	78	8860
KANSAS	6975	1545	656	232	76	65	9549
KENTUCKY	2457	855	227	73	16	22	3650
LOUISIANA	3478	892	280	93	32	36	4811
MAINE	858	187	48	15	3	1	1112
MARYLAND	739	205	67	20	4	8	1043
MASSACHUSETTS	949	205	41	16	6	4	1221
MICHIGAN	5893	1618	472	170	61	58	8272
MINNESOTA	5526	1421	509	154	48	61	7719
MISSISSIPPI	2418	756	248	103	33	30	3588
MISSOURI	4411	1288	554	166	54	56	6529
MONTANA	1563	383	154	33	14	19	2166
NEBRASKA	3892	1002	377	105	44	48	5468
NEVADA	233	85	23	6	3	4	354
NEW HAMPSHIRE	558	84	11	3	2	0	658
NEW JERSEY	1580	464	129	22	12	9	2216
NEW MEXICO	596	166	54	20	3	7	846
NEW YORK	3200	902	227	69	17	19	4434
NORTH CAROLINA	4002	994	315	117	35	31	5494
NORTH DAKOTA	4617	729	251	51	19	4	5671
OHIO	5809	2752	860	339	112	64	9936
OKLAHOMA	4308	804	380	135	45	51	5723
OREGON	2117	500	200	54	13	11	2895
PENNSYLVANIA	4456	1534	427	160	45	45	6667
RHODE ISLAND	88	43	8	2	0	0	141
SOUTH CAROLINA	3322	758	224	52	26	15	4397
SOUTH DAKOTA	2575	383	140	44	18	11	3171
TENNESSEE	2848	888	273	86	30	35	4160
TEXAS	10430	2664	924	333	116	115	14582
UTAH	967	261	83	22	20	10	1363
VERMONT	478	81	26	4	1	5	595
VIRGINIA	1883	637	199	73	22	13	2827
WASHINGTON	3038	787	307	118	31	30	4311
WEST VIRGINIA	1719	496	157	29	6	10	2417
WISCONSIN	5041	1227	405	144	51	37	6905
WYOMING	430	112	49	22	8	3	624
PUERTO RICO	53	2	0	0	0	0	55
TOTAL	150927	42274	14076	4698	1641	1448	215064

**HIGHWAY SYSTEM DATA (1980)**

**TABLE 41 TOTAL CROSSINGS BY TYPE OF HIGHWAY SYSTEM AND STATE**

STATE	TYPE OF HIGHWAY SYSTEM					TOTAL
	01	02	03	04	08	
ALABAMA	4	452	18	437	3841	4752
ALASKA	0	25	7	45	148	225
ARIZONA	10	43	113	99	769	1034
ARKANSAS	3	156	168	479	3205	4011
CALIFORNIA	7	1144	822	727	6296	8996
COLORADO	11	103	204	123	1951	2392
CONNECTICUT	0	27	64	38	396	525
DELAWARE	0	38	11	123	91	263
DIST. COLUMBIA	0	5	0	3	41	49
FLORIDA	3	169	77	818	4636	5703
GEORGIA	3	401	84	862	5573	6923
HAWAII	0	0	0	0	6	6
IDAHO	1	67	64	163	1887	2182
ILLINOIS	5	805	1432	1066	10255	13563
INDIANA	2	403	414	1903	7356	10078
IOWA	9	488	810	918	6654	8879
KANSAS	0	394	482	1258	7415	9549
KENTUCKY	0	133	257	368	2895	3653
LOUISIANA	2	177	33	480	4144	4836
MAINE	1	108	23	106	875	1113
MARYLAND	0	63	237	93	652	1045
MASSACHUSETTS	2	121	310	124	665	1222
MICHIGAN	10	380	880	1294	5712	8276
MINNESOTA	1	304	86	1286	6049	7726
MISSISSIPPI	1	167	208	565	2648	3589
MISSOURI	1	147	309	797	5279	6533
MONTANA	5	96	64	183	1820	2168
NEBRASKA	1	281	312	602	4278	5474
NEVADA	1	21	10	30	295	357
NEW HAMPSHIRE	1	74	124	38	420	657
NEW JERSEY	0	70	214	198	1735	2217
NEW MEXICO	0	32	46	80	688	846
NEW YORK	0	277	1	811	3346	4435
NORTH CAROLINA	0	126	215	424	4735	5500
NORTH DAKOTA	0	206	105	717	4700	5728
OHIO	16	427	112	2003	7382	9940
OKLAHOMA	0	196	302	487	4743	5728
OREGON	0	167	323	296	2112	2898
PENNSYLVANIA	6	457	443	575	5208	6689
RHODE ISLAND	0	7	29	24	81	141
SOUTH CAROLINA	1	277	96	1526	2502	4402
SOUTH DAKOTA	0	146	120	377	2529	3172
TENNESSEE	0	180	3	381	3597	4161
TEXAS	91	451	11	1367	12667	14587
UTAH	1	26	1	164	1179	1371
VERMONT	0	62	3	71	459	595
VIRGINIA	0	112	368	455	1898	2833
WASHINGTON	2	94	234	645	3339	4314
WEST VIRGINIA	0	152	7	605	1654	2418
WISCONSIN	1	447	937	527	4999	6911
WYOMING	3	32	17	60	512	624
PUERTO RICO	0	14	0	3	38	55
TOTAL	205	10750	11210	26824	166355	215344

**HIGHWAY SYSTEM CODES**

CODE	SYSTEM	CODE	SYSTEM
01	INTERSTATE	02	FEDERAL-AID PRIMARY
03	FEDERAL-AID URBAN	04	FEDERAL-AID SECONDARY
08	NON-FEDERAL-AID		

SEE APPENDIX A FOR EXPLANATION OF REVISION IN CODES.

**TABLE 42 TOTAL CROSSINGS BY HIGHWAY SYSTEM GROUP AND STATE**

STATE	HIGHWAY SYSTEM GROUP		TOTAL
	ON-STATE	OFF-STATE	
ALABAMA	324	4428	4752
ALASKA	100	125	225
ARIZONA	71	965	1036
ARKANSAS	627	3384	4011
CALIFORNIA	391	8605	8996
COLORADO	279	2110	2389
CONNECTICUT	95	432	527
DELAWARE	257	6	263
DIST. COLUMBIA	47	2	49
FLORIDA	1088	4608	5696
GEORGIA	801	6122	6923
HAWAII	0	6	6
IDAHO	153	2029	2182
ILLINOIS	1634	11929	13563
INDIANA	969	9109	10078
IOWA	564	8317	8881
KANSAS	532	9018	9550
KENTUCKY	1028	2625	3653
LOUISIANA	1034	3802	4836
MAINE	226	887	1113
MARYLAND	168	877	1045
MASSACHUSETTS	45	1177	1222
MICHIGAN	501	7776	8277
MINNESOTA	448	7278	7726
MISSISSIPPI	343	3246	3589
MISSOURI	945	5588	6533
MONTANA	339	1829	2168
NEBRASKA	426	5048	5474
NEVADA	66	292	358
NEW HAMPSHIRE	193	466	659
NEW JERSEY	207	2011	2218
NEW MEXICO	183	663	846
NEW YORK	466	3969	4435
NORTH CAROLINA	3567	1934	5501
NORTH DAKOTA	286	5442	5728
OHIO	1332	8611	9943
OKLAHOMA	437	5291	5728
OREGON	188	2710	2898
PENNSYLVANIA	2331	4358	6689
RHODE ISLAND	31	110	141
SOUTH CAROLINA	2926	1476	4402
SOUTH DAKOTA	222	2951	3173
TENNESSEE	274	3887	4161
TEXAS	2361	12227	14588
UTAH	146	1225	1371
VERMONT	147	448	595
VIRGINIA	1729	1104	2833
WASHINGTON	256	4058	4314
WEST VIRGINIA	1465	953	2418
WISCONSIN	601	6310	6911
WYOMING	100	524	624
PUERTO RICO	38	17	55
TOTAL	32987	182365	215352

**TABLE 43 TOTAL CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD AT RAIL-HIGHWAY CROSSING**

CODE	NUMBER OF CROSSINGS	CODE	NUMBER OF CROSSINGS
01	27	11	74
02	1606	12	567
06	5123	14	7863
07	13926	16	13345
08	14472	17	11461
09	101487	19	45367

SEE APPENDIX A FOR EXPLANATION OF REVISION IN CODES.

RURAL CODES		URBAN CODES	
INTERSTATE	01	INTERSTATE	11
OTHER PRINCIPAL ARTERIAL	02	OTHER FREEWAY AND EXPRESSWAY	12
MINOR ARTERIAL	06	OTHER PRINCIPAL ARTERIAL	14
MAJOR COLLECTOR	07	MINOR ARTERIAL	16
MINOR COLLECTOR	08	COLLECTOR	17
LOCAL	09	LOCAL	19

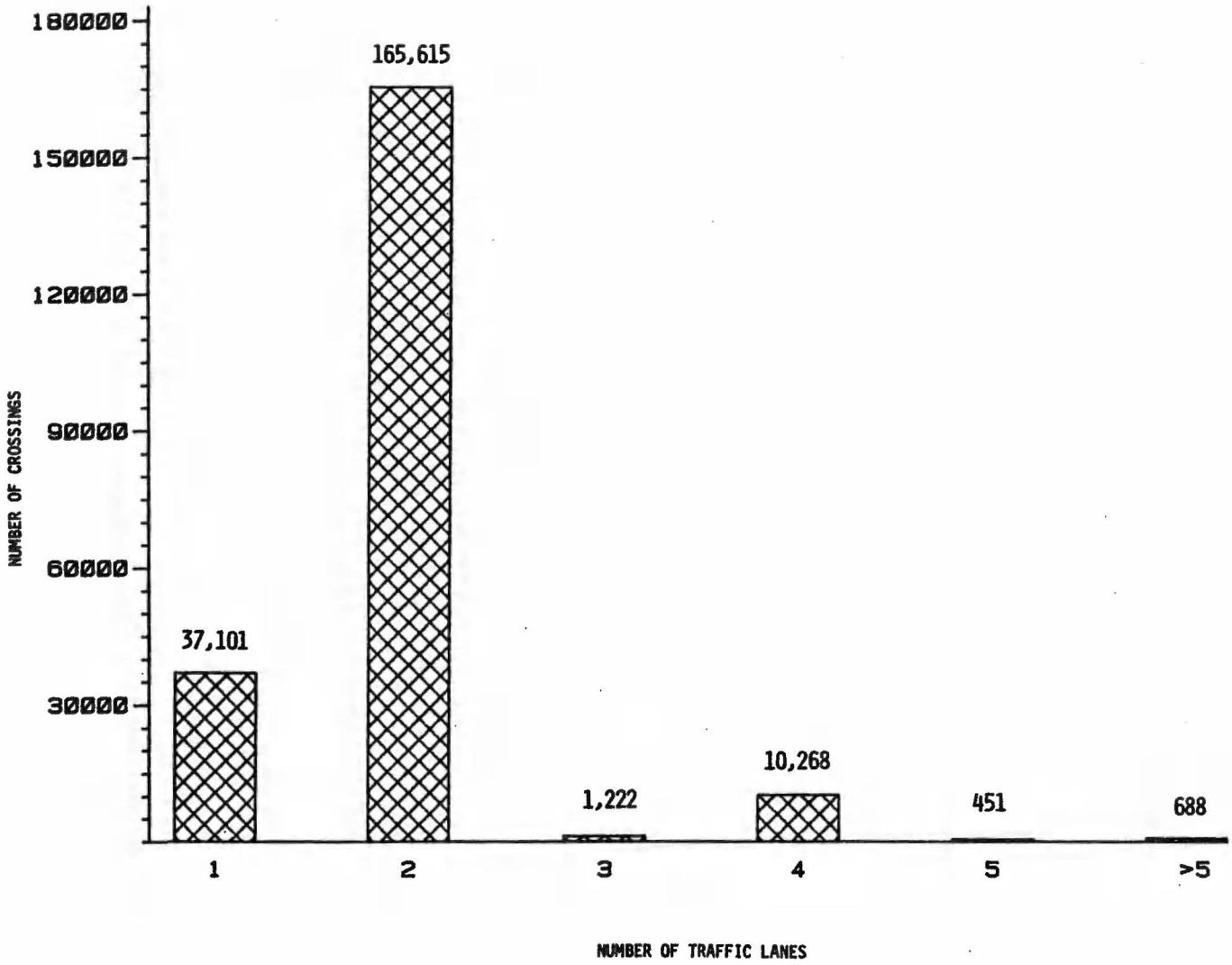
**TABLE 44 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND STATE**

STATE	NUMBER OF LANES (BOTH DIRECTIONS)						TOTAL
	1	2	3	4	5	OVER 5	
ALABAMA	975	3514	25	219	8	11	4752
ALASKA	29	187	1	7	1	0	225
ARIZONA	152	751	5	100	10	18	1036
ARKANSAS	1067	2873	13	57	0	1	4011
CALIFORNIA	493	6327	183	1603	166	224	8996
COLORADO	176	2056	22	143	5	5	2407
CONNECTICUT	34	464	5	24	0	0	527
DELAWARE	4	237	3	18	0	1	263
DIST. COLUMBIA	2	41	0	3	0	3	49
FLORIDA	329	4723	70	461	39	54	5676
GEORGIA	1405	5268	28	214	1	7	6923
HAWAII	0	6	0	0	0	0	6
IDAHO	621	1470	10	76	2	3	2182
ILLINOIS	2914	9855	52	711	11	20	13563
INDIANA	2052	7541	49	418	6	12	10078
IOWA	2210	6425	24	213	3	6	8881
KANSAS	2364	6876	8	299	0	3	9550
KENTUCKY	1143	2437	7	65	1	0	3653
LOUISIANA	683	3905	14	209	8	17	4836
MAINE	69	1026	4	14	0	0	1113
MARYLAND	160	805	10	65	1	4	1045
MASSACHUSETTS	45	1108	7	61	1	0	1222
MICHIGAN	651	6866	60	624	30	46	8277
MINNESOTA	1305	6117	16	286	2	0	7726
MISSISSIPPI	489	2977	8	108	2	5	3589
MISSOURI	1803	4574	8	141	2	5	6533
MONTANA	300	1835	4	28	1	0	2168
NEBRASKA	1345	4020	5	99	2	3	5474
NEVADA	134	192	1	25	0	1	353
NEW HAMPSHIRE	40	588	4	24	2	1	659
NEW JERSEY	135	1918	11	147	2	5	2218
NEW MEXICO	282	523	2	33	3	3	846
NEW YORK	431	3834	24	136	4	6	4435
NORTH CAROLINA	347	4895	37	201	11	10	5501
NORTH DAKOTA	1299	4391	1	36	0	0	5727
OHIO	1463	8053	72	329	14	12	9943
OKLAHOMA	1007	4427	7	279	6	2	5728
OREGON	346	2399	47	100	3	3	2898
PENNSYLVANIA	1041	5294	124	200	2	28	6689
RHODE ISLAND	6	114	0	21	0	0	141
SOUTH CAROLINA	740	3443	15	185	7	12	4402
SOUTH DAKOTA	900	2202	5	62	1	3	3173
TENNESSEE	770	3148	22	201	14	6	4161
TEXAS	2617	10595	72	1171	39	93	14587
UTAH	259	1016	0	85	1	10	1371
VERMONT	136	447	4	8	0	0	595
VIRGINIA	45	2636	25	111	8	10	2835
WASHINGTON	440	3406	75	351	28	14	4314
WEST VIRGINIA	1230	1167	9	11	0	1	2418
WISCONSIN	461	6146	22	260	2	20	6911
WYOMING	150	444	2	26	2	0	624
PUERTO RICO	2	53	0	0	0	0	55
TOTAL	37101	165615	1222	10268	451	688	215345



**TABLE 45 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND WARNING DEVICE CATEGORY**

WARNING DEVICE CATEGORY	NUMBER OF LANES (BOTH DIRECTIONS)						TOTAL
	1	2	3	4	5	OVER 5	
GATES	275	12854	255	2477	172	242	16275
FLASHING LIGHTS	821	28966	380	3950	174	246	34537
HWY. SIGNALS, WIGWAGS, BELLS	308	2338	35	243	27	46	2997
SPECIAL WARNING DEVICES	492	6016	127	681	17	35	7368
CROSSBUCKS	31230	103994	314	2282	47	92	137959
STOP SIGNS	241	1113	9	47	0	2	1412
OTHER SIGNS	231	751	5	19	0	2	1008
NO SIGNS OR SIGNALS	3503	9583	97	569	14	23	13789
TOTAL	37101	165615	1222	10268	451	688	215345



**FIGURE 31 CROSSINGS BY NUMBER OF TRAFFIC LANES**

**TABLE 46 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND STATE**

WARNING DEVICE DATA

STATE	WARNING DEVICE CATEGORY									TOTAL
	GATES	CANTI- LEVERED FLASHING LIGHTS	STANDARD FLASHING LIGHTS	HWY. SIG. WIGWAGS BELLS	SPECIAL <sup>1</sup>	CROSS- BUCKS	STOP SIGNS	OTHER SIGNS	NO SIGNS OR SIGNALS	
ALABAMA	135	63	538	20	56	3412	73	10	445	4752
ALASKA	1	3	41	0	18	146	2	1	13	225
ARIZONA	215	20	82	14	91	557	8	0	49	1036
ARKANSAS	166	56	383	30	112	2798	21	1	444	4011
CALIFORNIA	2759	268	949	448	211	4042	88	20	211	8996
COLORADO	119	51	318	44	78	1625	26	2	153	2416
CONNECTICUT	48	8	162	8	94	75	10	2	121	528
DELAWARE	30	8	77	0	48	81	2	0	17	263
DIST. COLUMBIA	0	1	2	0	7	13	6	0	20	49
FLORIDA	1193	334	657	11	155	2964	36	97	295	5742
GEORGIA	447	71	527	24	162	5205	12	11	464	6923
HAWAII	0	0	0	0	0	6	0	0	0	6
IDAHO	52	77	139	15	21	1541	87	10	240	2182
ILLINOIS	1720	317	2619	214	304	7799	8	3	579	13563
INDIANA	710	289	2076	168	280	5779	89	14	673	10078
IOWA	362	157	979	175	84	6806	6	2	310	8881
KANSAS	309	157	646	103	259	7826	2	2	246	9550
KENTUCKY	216	60	636	39	123	2141	5	0	433	3653
LOUISIANA	179	200	541	18	75	3334	33	22	434	4836
MAINE	64	15	347	15	163	489	0	4	16	1113
MARYLAND	68	18	168	36	72	457	13	37	176	1045
MASSACHUSETTS	167	21	421	41	248	275	2	2	45	1222
MICHIGAN	592	408	1484	77	256	5179	19	40	222	8277
MINNESOTA	248	97	829	21	45	6173	48	2	263	7726
MISSISSIPPI	31	62	297	19	60	2240	448	11	421	3589
MISSOURI	235	173	939	146	147	4436	11	4	442	6533
MONTANA	95	30	186	11	23	1613	3	4	203	2168
NEBRASKA	277	72	463	61	25	4335	9	16	216	5474
NEVADA	64	9	41	2	5	196	0	7	34	358
NEW HAMPSHIRE	26	14	140	16	165	260	9	4	25	659
NEW JERSEY	371	31	648	30	413	597	6	3	119	2218
NEW MEXICO	131	22	91	8	11	560	0	5	18	846
NEW YORK	701	56	1213	106	518	1553	1	56	232	4436
NORTH CAROLINA	415	247	560	41	246	3459	19	21	492	5500
NORTH DAKOTA	161	31	198	0	2	4944	2	0	390	5728
OHIO	724	325	1966	97	109	6244	14	16	448	9943
OKLAHOMA	153	165	572	57	166	4422	4	9	180	5728
OREGON	313	27	141	75	115	1761	100	11	355	2898
PENNSYLVANIA	569	169	1186	108	786	2750	76	436	609	6689
RHODE ISLAND	9	0	25	19	33	28	5	3	19	141
SOUTH CAROLINA	147	102	273	5	371	3211	1	17	275	4402
SOUTH DAKOTA	1	46	151	5	0	2863	0	1	106	3173
TENNESSEE	144	96	495	19	294	2289	35	2	787	4161
TEXAS	854	1083	1647	131	117	9680	34	17	1025	14588
UTAH	50	51	170	13	122	812	5	50	98	1371
VERMONT	16	28	153	5	56	315	1	6	15	595
VIRGINIA	444	52	440	31	250	1375	1	7	235	2835
WASHINGTON	116	229	338	57	63	2956	20	10	525	4314
WEST VIRGINIA	88	76	272	20	49	1566	8	6	333	2418
WISCONSIN	320	200	1112	387	223	4393	2	4	270	6911
WYOMING	32	16	113	5	2	396	2	2	56	624
PUERTO RICO	4	0	1	2	48	0	0	0	0	55
<b>TOTAL</b>	<b>16291</b>	<b>6111</b>	<b>28452</b>	<b>2997</b>	<b>7381</b>	<b>137977</b>	<b>1412</b>	<b>1010</b>	<b>13797</b>	<b>215428</b>

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, SUCH AS CROSSING FLAGGED BY CREW

TABLE 47 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND RAILROAD

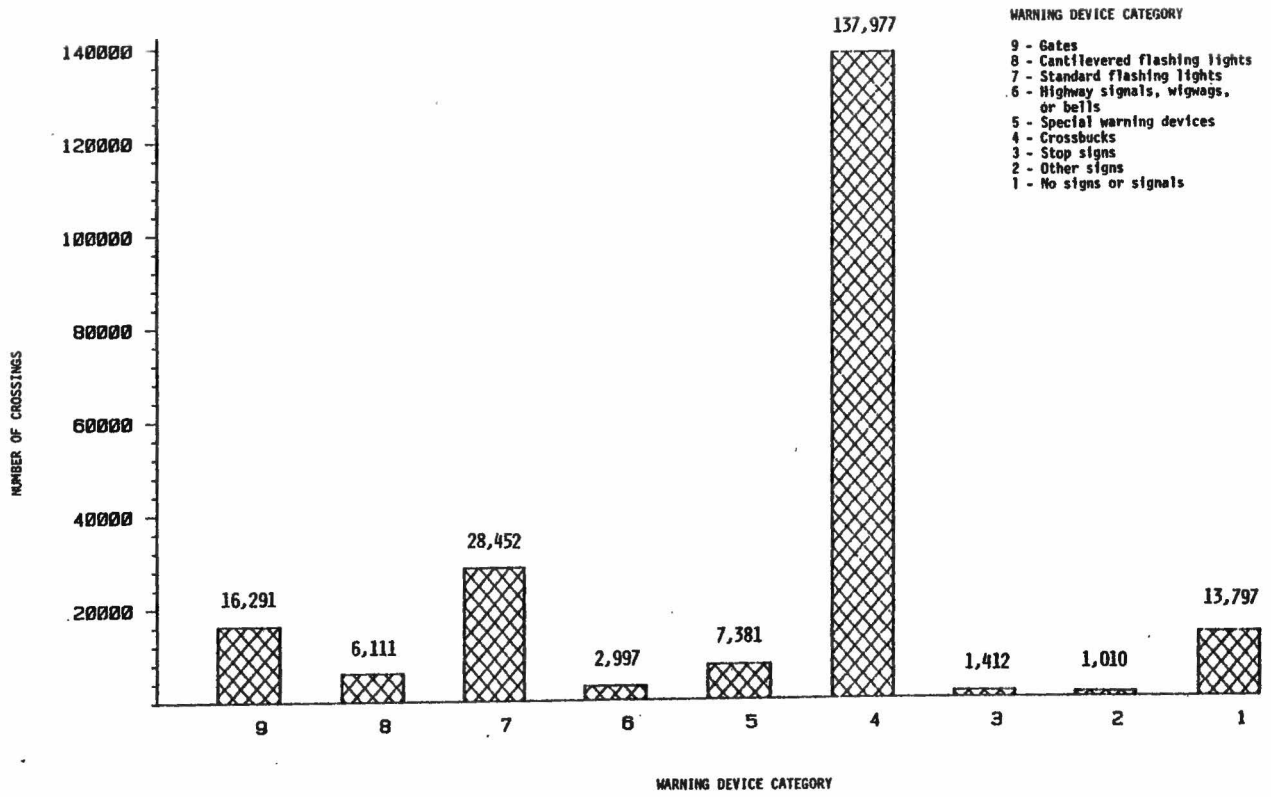
	GATES	CANTI- LEVERED FLASHING LIGHTS	STANDARD FLASHING LIGHTS	HWY. SIG. WIGWAGS BELLS	WARNING DEVICE CATEGORY				NO SIGNS OR SIGNALS	TOTAL
					SPECIAL <sup>1</sup>	CROSS- BUCKS	STOP SIGNS	OTHER SIGNS		
CLASS I RAILROAD										
ALABAMA GREAT SOUTHERN RAILROAD <sup>2</sup>	0	0	0	0	0	0	0	0	0	0
AMTRAK	67	2	27	0	2	33	1	1	5	138
ATCHISON, TOPEKA & SANTA FE	1369	455	1098	252	603	7864	8	11	54	11714
BALTIMORE & OHIO RAILWAY	282	231	939	43	115	3407	13	7	269	5306
BESSEMER & LAKE ERIE RAILROAD	27	1	22	0	4	89	0	0	4	147
BOSTON & MAINE CORPORATION	175	12	254	29	245	377	4	3	47	1146
BURLINGTON NORTHERN	1144	557	2257	207	320	19428	153	23	1625	25714
CENTRAL OF GEORGIA RAILROAD <sup>2</sup>	0	0	0	0	0	0	0	0	0	0
CHESAPEAKE & OHIO RAILWAY	335	160	743	14	76	2961	6	2	262	4559
CHICAGO & NORTH WESTERN	482	221	1320	465	123	7662	7	8	436	10724
CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC	271	203	938	115	216	6005	10	11	478	8247
CHICAGO, ROCK ISLAND & PACIFIC	395	133	637	52	11	4417	9	1	266	5921
CINN., NEW ORLEANS & TEXAS PACIFIC <sup>2</sup>	0	0	0	0	0	0	0	0	0	0
CLINCHFIELD RAILROAD	7	1	19	3	10	95	0	0	9	144
COLORADO & SOUTHERN RAILWAY	15	21	63	9	1	306	4	1	49	469
CONSOLIDATED RAIL CORPORATION	1899	478	4515	339	1553	8169	113	360	1539	18965
THE ESTATES <sup>3</sup>	170	98	1027	79	323	3159	50	148	472	5526
DELAWARE & HUDSON RAILWAY	156	5	144	8	21	151	0	21	20	526
DENVER & RIO GRANDE WESTERN	46	23	190	3	13	757	4	3	98	1137
DETROIT, TOLEDO & Ironton	29	16	91	0	6	372	1	0	14	529
DULUTH, MISSABE & IRON RANGE	6	0	42	0	4	170	1	1	0	224
ELGIN, JOLIET & EASTERN	76	6	67	2	12	85	0	0	1	249
FLORIDA EAST COAST RAILWAY	445	22	101	0	5	210	0	0	10	793
FORT WORTH & DENVER RAILWAY	16	55	51	0	2	676	0	2	105	907
GRAND TRUNK WESTERN	272	89	328	15	98	754	2	0	12	1570
ILLINOIS CENTRAL GULF RAILROAD	422	195	1222	183	173	6751	316	10	659	9931
KANSAS CITY SOUTHERN RAILWAY	20	43	122	11	0	710	0	2	107	1015
LONG ISLAND RAIL ROAD	269	0	29	0	0	11	0	0	1	310
LOUISIANA & ARKANSAS RAILWAY COMPANY	14	59	102	0	0	522	0	0	24	721
LOUISVILLE & NASHVILLE	397	157	1362	50	196	4756	61	10	898	7887
MISSOURI-KANSAS-TEXAS RAILROAD	66	120	259	47	2	1437	2	1	178	2112
MISSOURI PACIFIC RAILROAD	504	477	1525	61	130	8950	20	2	910	12579
NORFOLK & WESTERN RAILWAY	640	215	1533	138	193	4836	18	6	230	7809
PITTSBURGH & LAKE ERIE RAILROAD	18	0	10	2	3	64	0	0	15	112
ST. LOUIS-SAN FRANCISCO RAILWAY <sup>4</sup>	0	0	0	0	0	0	0	0	0	0
ST. LOUIS SOUTHWESTERN RAILWAY	132	68	241	3	14	1621	11	0	114	2204
SEABOARD COAST LINE RAILROAD	1208	479	1054	23	508	7917	34	9	529	11761
SOO LINE	124	68	503	27	3	3537	2	1	109	4374
SOUTHERN PACIFIC TRANSPORTATION COMPANY	2561	372	1037	425	50	6279	78	22	700	11504
SOUTHERN RAILWAY	749	311	1289	31	592	8358	31	33	1687	13081
UNION PACIFIC RAILROAD	421	227	640	88	174	5441	83	59	628	7761
WESTERN MARYLAND RAILWAY	26	13	121	12	28	248	1	17	26	492
WESTERN PACIFIC	191	22	61	15	0	299	10	1	26	625
TOTAL CLASS I RAILROADS	15446	5615	25983	2751	5809	128884	1053	776	12616	198933
TOTAL CLASS II & III RAILROADS	845	496	2469	246	1572	9093	359	234	1181	16495
TOTAL	16291	6111	28452	2997	7381	137977	1412	1010	13797	215428

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, SUCH AS CROSSING FLAGGED BY CREW

<sup>2</sup> CROSSINGS INCLUDED UNDER SOUTHERN RAILWAY COMPANY

<sup>3</sup> CROSSING ON PREDECESSOR LINES NOT MERGED INTO CONRAIL

<sup>4</sup> MERGED WITH BURLINGTON NORTHERN



**FIGURE 32 CROSSINGS BY WARNING DEVICE CATEGORY**

**TABLE 48 TOTAL CROSSINGS BY PAVEMENT MARKINGS AND STATE**

STATE	STOP LINES	RAILROAD CROSSING SYMBOL	PAVEMENT MARKING <sup>1</sup>		NONE UNPAVED	TOTAL
			BOTH	NONE PAVED		
ALABAMA	42	105	130	3320	1155	4752
ALASKA	3	1	13	94	114	225
ARIZONA	52	15	190	467	312	1036
ARKANSAS	53	92	113	2059	1694	4011
CALIFORNIA	1092	228	5111	2200	365	8996
COLORADO	16	21	95	1319	964	2415
CONNECTICUT	14	3	91	414	6	528
DELAWARE	2	17	15	221	8	263
DIST. COLUMBIA	0	0	20	29	0	49
FLORIDA	323	120	1433	2747	1105	5728
GEORGIA	80	156	371	4134	2182	6923
HAWAII	2	0	0	4	0	6
IDAHO	1	1	334	923	923	2182
ILLINOIS	59	157	1291	5926	6130	13563
INDIANA	95	267	2059	5727	1930	10078
IOWA	80	113	604	3182	4902	8881
KANSAS	31	84	255	3066	6114	9550
KENTUCKY	64	402	549	1691	947	3653
LOUISIANA	22	535	251	2837	1191	4836
MAINE	9	15	95	834	160	1113
MARYLAND	42	22	89	817	75	1045
MASSACHUSETTS	50	22	57	1055	38	1222
MICHIGAN	84	148	655	4962	2428	8277
MINNESOTA	127	193	478	2961	3967	7726
MISSISSIPPI	12	8	424	1983	1162	3589
MISSOURI	89	167	580	2684	3013	6533
MONTANA	3	18	230	450	1467	2168
NEBRASKA	46	128	262	1445	3593	5474
NEVADA	8	1	66	130	153	358
NEW HAMPSHIRE	19	11	36	525	68	659
NEW JERSEY	50	86	87	1860	135	2218
NEW MEXICO	4	17	41	360	424	846
NEW YORK	132	250	295	3356	402	4435
NORTH CAROLINA	384	172	1055	3010	880	5501
NORTH DAKOTA	14	14	180	767	4753	5728
OHIO	738	804	4747	2779	875	9943
OKLAHOMA	20	21	47	2920	2720	5728
OREGON	153	321	464	1332	628	2898
PENNSYLVANIA	66	357	164	5323	779	6689
RHODE ISLAND	13	0	14	114	0	141
SOUTH CAROLINA	96	100	1194	2204	808	4402
SOUTH DAKOTA	19	3	95	862	2194	3173
TENNESSEE	15	26	124	3025	971	4161
TEXAS	219	523	1343	7958	4545	14588
UTAH	13	16	105	868	369	1371
VERMONT	23	15	45	324	188	595
VIRGINIA	121	91	1203	1113	306	2834
WASHINGTON	164	34	591	2550	975	4314
WEST VIRGINIA	25	14	106	1465	808	2418
WISCONSIN	91	26	292	5406	1096	6911
WYOMING	8	8	83	133	392	624
PUERTO RICO	0	14	0	36	5	55
TOTAL	4888	5962	28172	105971	70419	215412

<sup>1</sup> THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DOES NOT REQUIRE PAVEMENT MARKINGS AT ALL CROSSINGS.

**TABLE 49 TOTAL CROSSINGS BY RAILROAD ADVANCE WARNING AND STATE**

STATE	RAILROAD ADVANCE WARNING <sup>1</sup>		TOTAL
	YES	NO	
ALABAMA	889	3863	4752
ALASKA	68	157	225
ARIZONA	475	561	1036
ARKANSAS	584	3427	4011
CALIFORNIA	7074	1922	8996
COLORADO	840	1563	2403
CONNECTICUT	233	294	527
DELAWARE	223	40	263
DIST. COLUMBIA	22	27	49
FLORIDA	2396	3319	5715
GEORGIA	1163	5760	6923
HAWAII	1	5	6
IDAHO	1715	467	2182
ILLINOIS	5918	7645	13563
INDIANA	6359	3719	10078
IOWA	4639	4242	8881
KANSAS	3488	6062	9550
KENTUCKY	762	2891	3653
LOUISIANA	2424	2412	4836
MAINE	887	226	1113
MARYLAND	398	647	1045
MASSACHUSETTS	882	340	1222
MICHIGAN	5422	2855	8277
MINNESOTA	3601	4125	7726
MISSISSIPPI	662	2927	3589
MISSOURI	1236	5297	6533
MONTANA	617	1551	2168
NEBRASKA	2202	3272	5474
NEVADA	116	242	358
NEW HAMPSHIRE	464	195	659
NEW JERSEY	783	1435	2218
NEW MEXICO	170	676	846
NEW YORK	3268	1167	4435
NORTH CAROLINA	4283	1218	5501
NORTH DAKOTA	937	4791	5728
OHIO	6205	3738	9943
OKLAHOMA	1016	4712	5728
OREGON	1800	1098	2898
PENNSYLVANIA	2437	4252	6689
RHODE ISLAND	28	113	141
SOUTH CAROLINA	2462	1940	4402
SOUTH DAKOTA	864	2309	3173
TENNESSEE	601	3560	4161
TEXAS	3453	11135	14588
UTAH	402	969	1371
VERMONT	336	259	595
VIRGINIA	1936	898	2834
WASHINGTON	2869	1445	4314
WEST VIRGINIA	504	1914	2418
WISCONSIN	3611	3300	6911
WYOMING	129	495	624
PUERTO RICO	32	23	55
TOTAL	93886	121500	215386

<sup>1</sup> THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DOES NOT REQUIRE RAILROAD ADVANCE WARNING AT ALL CROSSINGS.

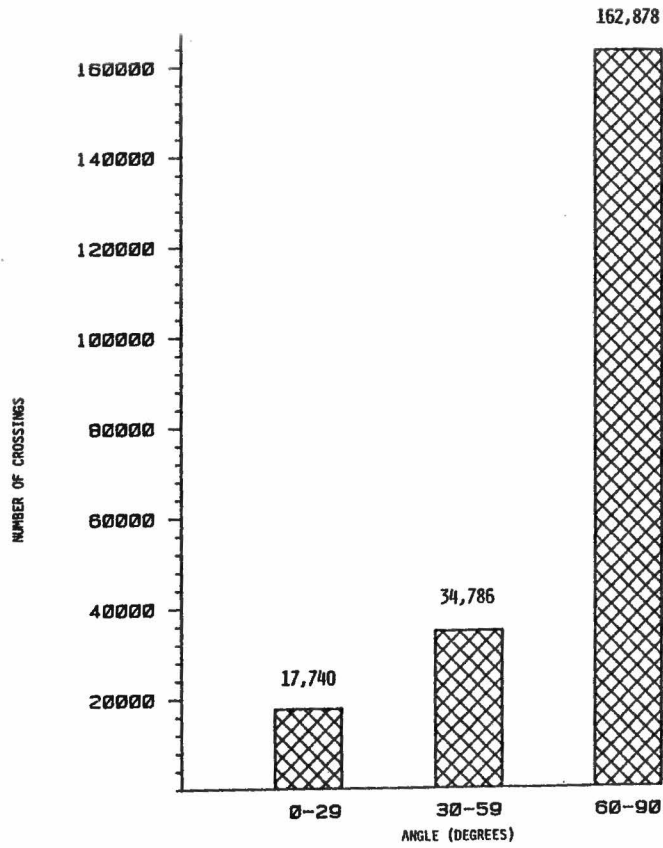
**TABLE 50 TOTAL CROSSINGS MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' STANDARD FOR CROSSBUCKS BY STATE**

	ACTIVE WARNING DEVICE*	MEETS STANDARD <sup>1</sup>		TOTAL
		YES	NO	
ALABAMA	756	3018	978	4752
ALASKA	45	145	35	225
ARIZONA	331	485	220	1036
ARKANSAS	635	1610	1766	4011
CALIFORNIA	4424	2912	1660	8996
COLORADO	532	1376	508	2416
CONNECTICUT	226	137	165	528
DELAWARE	115	29	119	263
DIST. COLUMBIA	3	14	32	49
FLORIDA	2195	2671	876	5742
GEORGIA	1069	4986	868	6923
HAWAII	0	5	1	6
IDAHO	283	1517	382	2182
ILLINOIS	4870	6925	1768	13563
INDIANA	3243	4144	2691	10078
IOWA	1673	6499	709	8881
KANSAS	1215	5576	2759	9550
KENTUCKY	951	1995	707	3653
LOUISIANA	938	3256	642	4836
MAINE	441	369	303	1113
MARYLAND	290	229	526	1045
MASSACHUSETTS	650	367	205	1222
MICHIGAN	2561	4230	1486	8277
MINNESOTA	1195	6088	443	7726
MISSISSIPPI	409	1787	1393	3589
MISSOURI	1493	3182	1858	6533
MONTANA	322	1344	502	2168
NEBRASKA	873	4032	569	5474
NEVADA	116	125	117	358
NEW HAMPSHIRE	196	310	153	659
NEW JERSEY	1080	521	617	2218
NEW MEXICO	252	541	53	846
NEW YORK	2075	1209	1151	4435
NORTH CAROLINA	1263	3217	1021	5501
NORTH DAKOTA	390	3407	1931	5728
OHIO	3112	4876	1955	9943
OKLAHOMA	947	2495	2286	5728
OREGON	556	1270	1072	2898
PENNSYLVANIA	2032	1958	2699	6689
RHODE ISLAND	53	8	80	141
SOUTH CAROLINA	527	3290	585	4402
SOUTH DAKOTA	203	2681	289	3173
TENNESSEE	754	2215	1192	4161
TEXAS	3715	6441	4432	14588
UTAH	284	782	305	1371
VERMONT	202	260	133	595
VIRGINIA	967	1376	492	2835
WASHINGTON	740	2388	1186	4314
WEST VIRGINIA	456	1139	823	2418
WISCONSIN	2019	3907	985	6911
WYOMING	166	326	132	624
PUERTO RICO	7	18	30	55
TOTAL	53850	113688	47890	215428

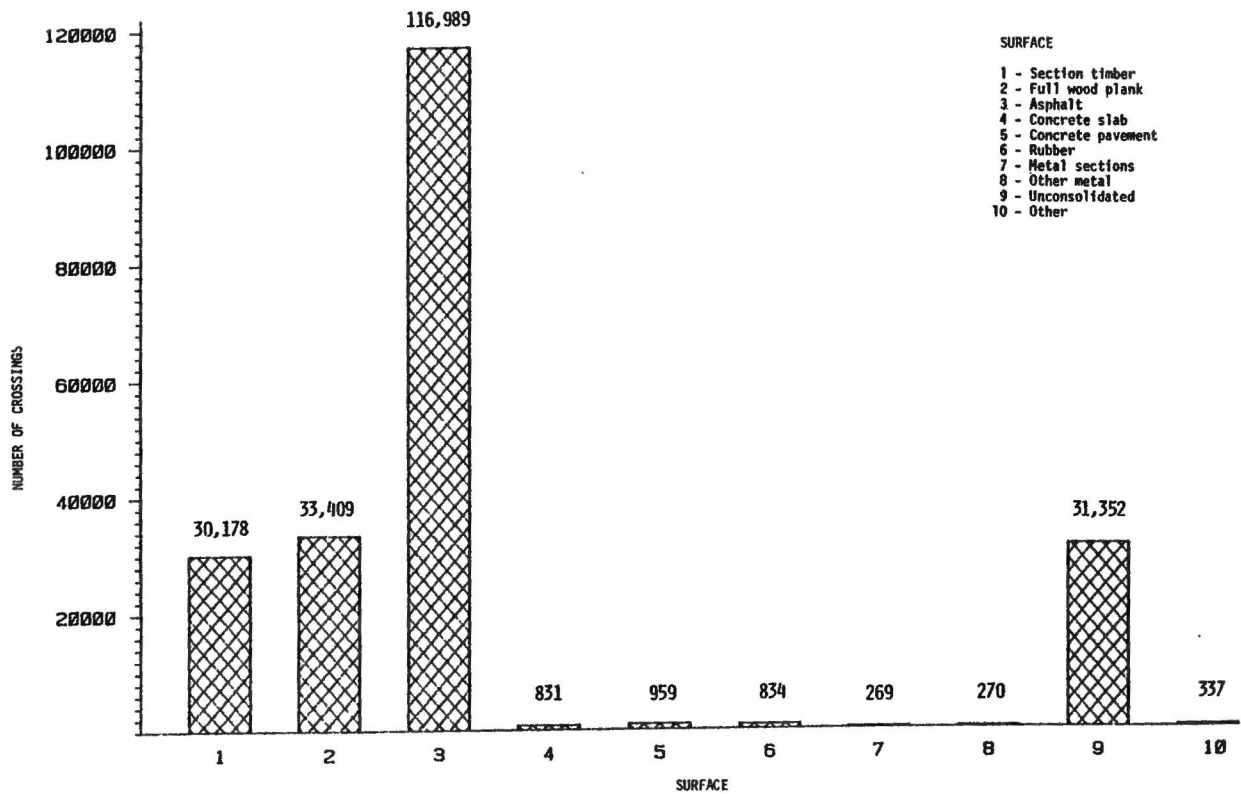
<sup>1</sup> THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES REQUIRES TWO REFLECTORIZED CROSSBUCKS TO BE PLACED AT ALL CROSSINGS.

\* FOR CROSSINGS WITH ACTIVE WARNING DEVICES, A DETERMINATION HAS NOT BEEN MADE AS TO WHETHER CROSSBUCKS WHICH ARE PART OF THE DEVICE MEET THE MUTCD STANDARD.





**FIGURE 33 CROSSINGS BY SMALLEST CROSSING ANGLE**

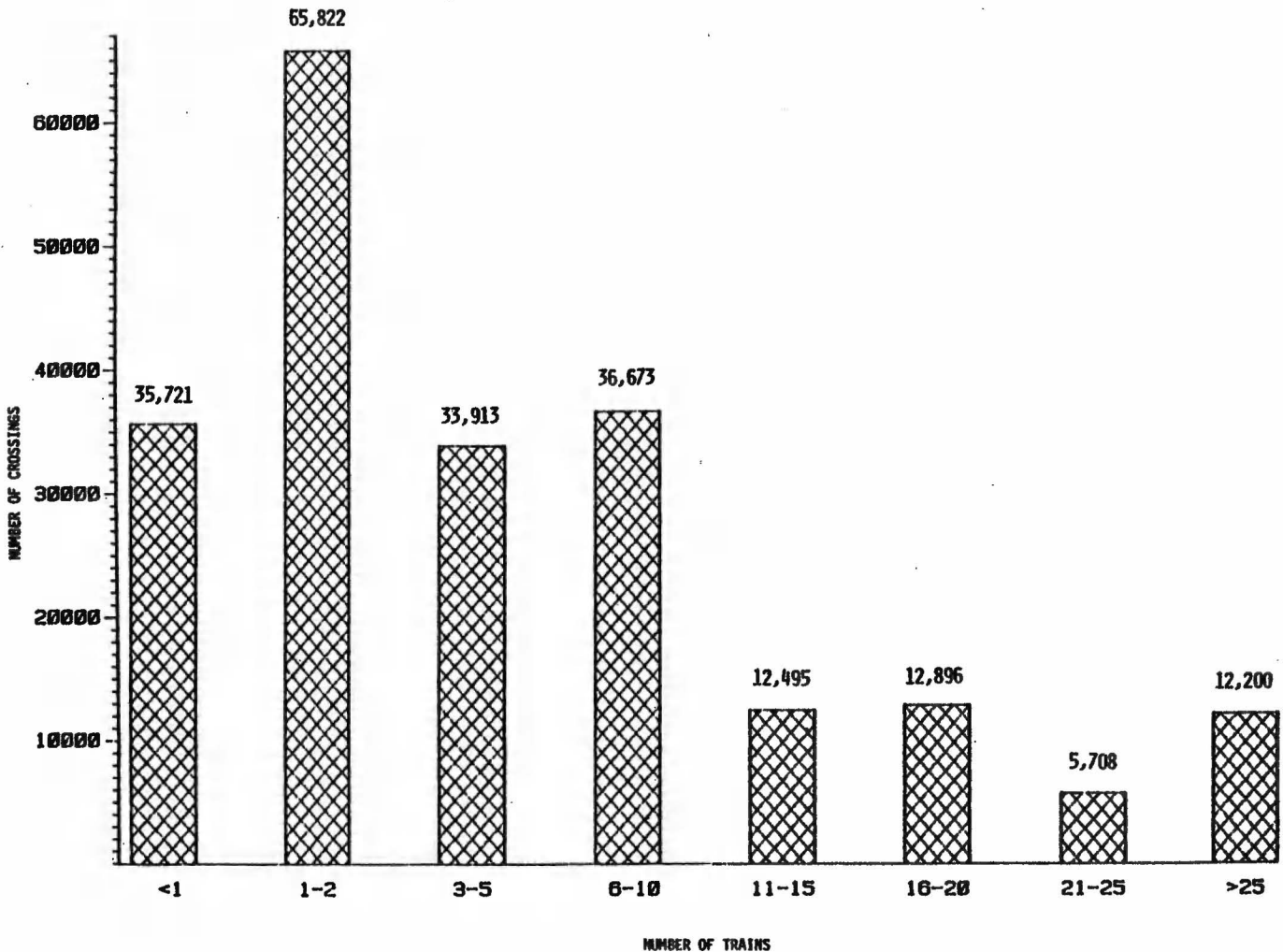


**FIGURE 34 CROSSINGS BY CROSSING SURFACE**

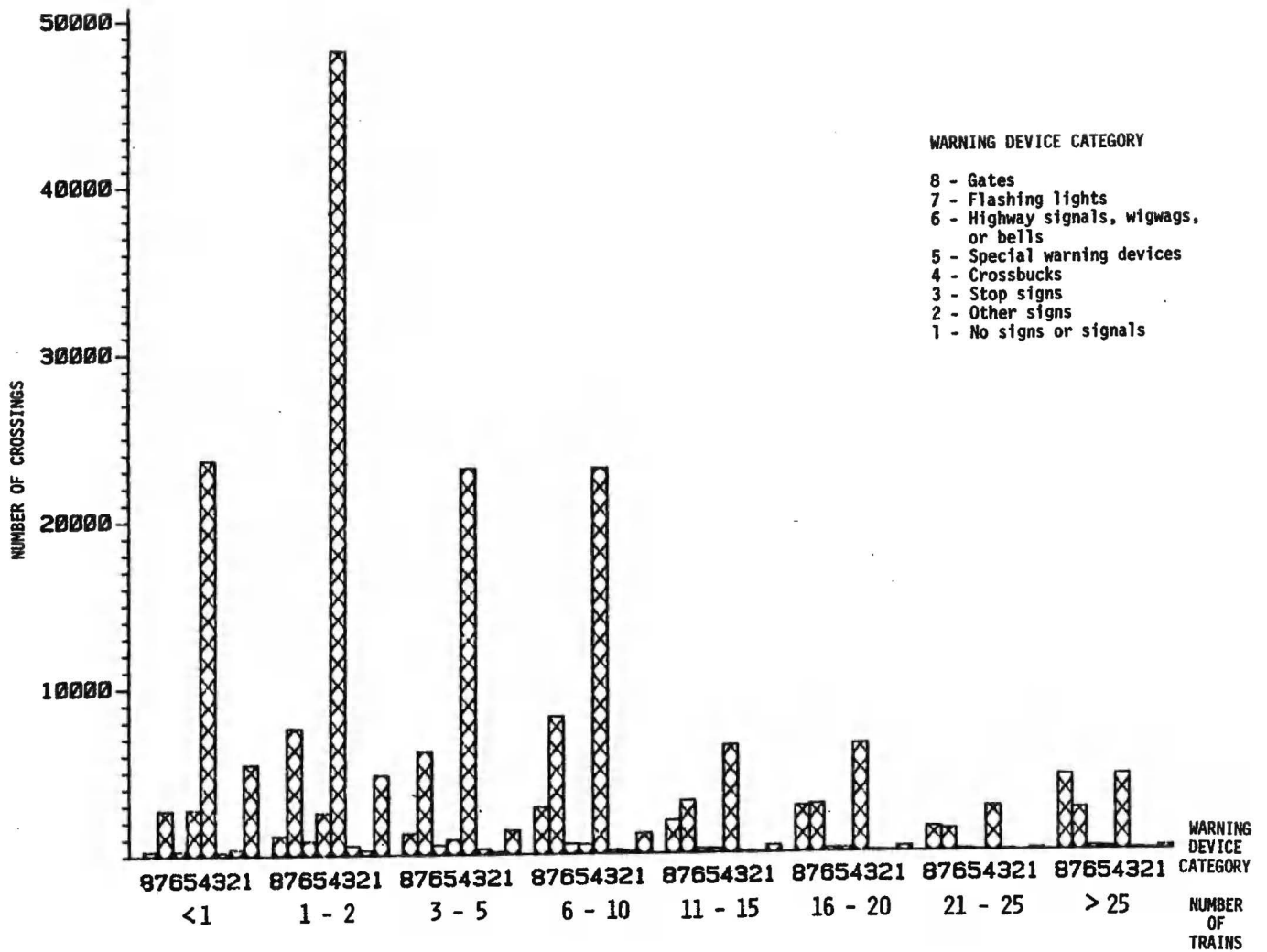
**OPERATIONAL CHARACTERISTICS  
TRAIN TRAFFIC DATA (1980)**

**TABLE 51 TOTAL CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY**

TRAINS PER DAY	CROSSINGS	TRAINS PER DAY	CROSSINGS
01-05	99735	101-105	26
06-10	36673	106-110	58
11-15	12495	111-115	4
16-20	12896	116-120	10
21-25	5708	121-125	8
26-30	4667	126-130	3
31-35	2321	131-135	6
36-40	1727	136-140	13
41-45	537	141-145	7
46-50	1033	146-150	2
51-55	263	151-155	2
56-60	517	156-160	3
61-65	266	161-165	2
66-70	145	166-170	5
71-75	117	171-175	0
76-80	182	176-180	1
81-85	41	181-185	0
86-90	42	186-190	2
91-95	73	191-195	2
96-100	82	196-200	23
UNDER 1	35721	OVER 200	10



**FIGURE 35 CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY**



**FIGURE 36 CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY**

**TABLE 52 TOTAL CROSSINGS BY NUMBER OF THRU TRAINS AND SWITCHING TRAINS PER DAY**

NUMBER OF SWITCHING TRAINS	NUMBER OF THRU TRAINS								TOTAL
	UNDER 1	1-2	3-5	6-10	11-15	16-20	21-25	OVER 25	
UNDER 1	35721	36705	15942	16623	4447	6117	2394	4469	122418
1-2	27864	9932	7206	7459	2933	2708	1174	1952	61228
3-5	6561	1922	1936	2675	1145	817	519	1060	16635
6-10	3679	985	1138	1705	666	882	365	575	9995
11-15	766	136	189	315	120	129	81	158	1894
16-20	673	141	127	250	82	95	127	141	1636
21-25	164	32	19	113	16	15	38	52	449
OVER 25	407	94	77	173	109	127	31	155	1173
TOTAL	75835	49947	26634	29313	9518	10890	4729	8562	215428

**TABLE 53 TOTAL CROSSINGS BY NUMBER OF DAY AND NIGHT TRAINS PER DAY**

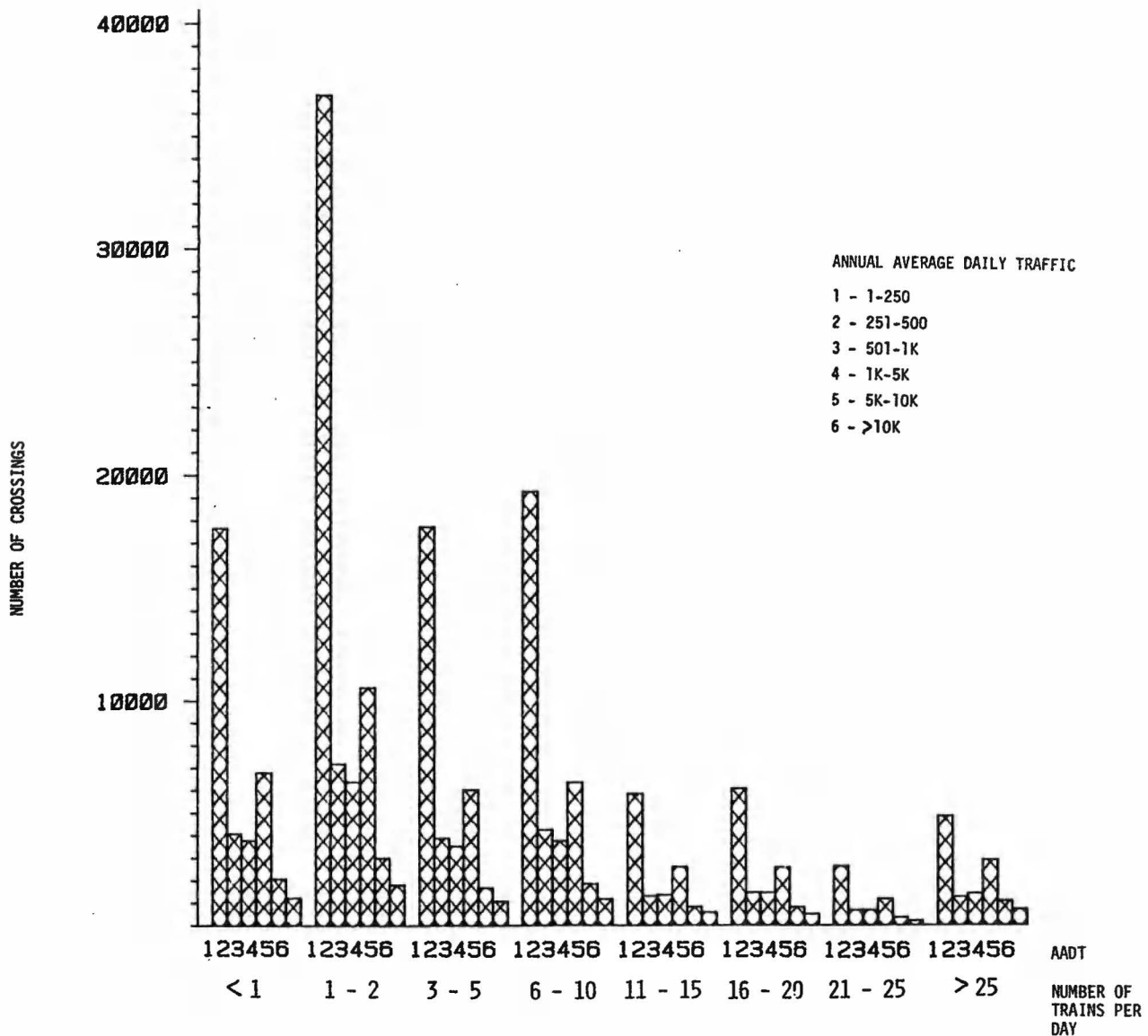
NUMBER OF DAY TRAINS (6 a.m. to 6 p.m.)	NUMBER OF NIGHT TRAINS (6 p.m. to 6 a.m.)								TOTAL
	UNDER 1	1-2	3-5	6-10	11-15	16-20	21-25	OVER 25	
UNDER 1	35721	9561	1085	251	16	4	2	1	46641
1-2	39339	34469	3602	515	25	43	0	0	77993
3-5	6454	13439	18671	1958	255	175	4	3	40959
6-10	2296	2771	7767	15193	1733	187	10	16	29973
11-15	206	280	647	3500	5560	716	57	27	10993
16-20	97	38	76	789	1330	2176	175	190	4871
21-25	17	12	10	105	345	264	578	127	1458
OVER 25	51	14	10	104	244	421	440	1256	2540
TOTAL	84181	60584	31868	22415	9508	3986	1266	1620	215428

**TABLE 54 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY**

WARNING DEVICE CATEGORY	NUMBER OF TRAINS								TOTAL
	UNDER 1	1-2	3-5	6-10	11-15	16-20	21-25	OVER 25	
GATES	311	1166	1280	2794	1963	2780	1472	4524	16290
FLASHING LIGHTS	2736	7607	6174	8187	3148	2871	1317	2523	34563
HWY. SIGNALS, WIGWAGS, BELLS	293	842	564	594	237	194	84	189	2997
SPECIAL WARNING DEVICES	2756	2530	915	555	243	194	37	151	7381
CROSSBUCKS	23647	48125	23091	23026	6421	6464	2676	4527	137977
STOP SIGNS	190	521	299	197	65	56	26	58	1412
OTHER SIGNS	368	279	146	129	28	34	4	22	1010
NO SIGNS OR SIGNALS	5420	4752	1444	1191	390	303	92	206	13798
TOTAL	35721	65822	33913	36673	12495	12896	5708	12200	215428

**TABLE 55 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC**

NUMBER OF TRAINS	ANNUAL AVERAGE DAILY TRAFFIC						TOTAL
	1-250	251-500	501-1K	1K-5K	5K-10K	OVER 10K	
UNDER 1	17685	4069	3787	6809	2073	1224	35647
1-2	36831	7175	6364	10564	2989	1812	65735
3-5	17720	3864	3526	6023	1665	1078	33876
6-10	19283	4243	3738	6348	1841	1164	36617
11-15	5848	1288	1340	2601	829	584	12490
16-20	6079	1448	1457	2584	789	504	12861
21-25	2633	683	673	1166	338	206	5699
OVER 25	4861	1256	1394	2894	1077	701	12183
<b>TOTAL</b>	<b>110940</b>	<b>24026</b>	<b>22279</b>	<b>38989</b>	<b>11601</b>	<b>7273</b>	<b>215108</b>



**FIGURE 37 CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC**

**TRAIN SPEED DATA (1980)**

**TABLE 56 TOTAL CROSSINGS BY MAXIMUM TIMETABLE SPEED**

MAXIMUM SPEED (MPH)	CROSSINGS	MAXIMUM SPEED (MPH)	CROSSINGS	MAXIMUM SPEED (MPH)	CROSSINGS
01-05	9849	36-40	20443	71-75	858
06-10	30596	41-45	5589	76-80	5174
11-15	16916	46-50	18339	81-85	11
16-20	17168	51-55	2699	86-90	850
21-25	24730	56-60	11859	91-95	0
26-30	27912	61-65	1199	96-100	4
31-35	16151	66-70	4599	OVER 100	6

**TABLE 57 TOTAL CROSSINGS BY TYPICAL TRAIN SPEED VARIATION**

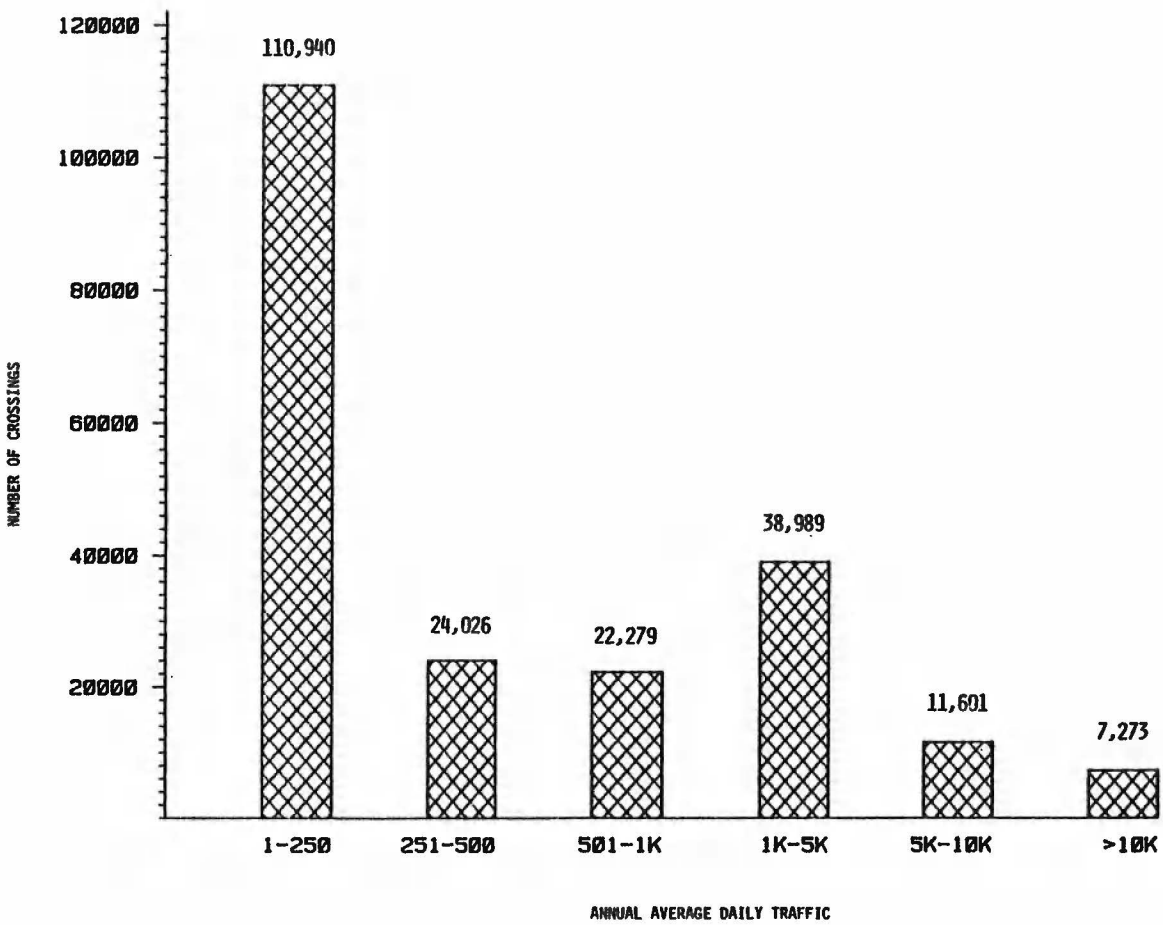
TYPICAL SPEED VARIATION <sup>1</sup> (MPH)	CROSSINGS	TYPICAL SPEED VARIATION (MPH)	CROSSINGS	TYPICAL SPEED VARIATION (MPH)	CROSSINGS
01-05	59118	36-40	6676	71-75	671
06-10	54010	41-45	3300	76-80	484
11-15	24428	46-50	5087	81-85	58
16-20	21072	51-55	1065	86-90	61
21-25	13131	56-60	2649	91-95	0
26-30	12331	61-65	810	96-100	1
31-35	6192	66-70	748	OVER 100	2
UNDER 1	3534				

<sup>1</sup> TYPICAL SPEED VARIATION IS THE DIFFERENCE BETWEEN NORMAL MAXIMUM SPEED AND NORMAL MINIMUM SPEED.

**HIGHWAY TRAFFIC DATA (1980)**

**TABLE 58 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC**

AADT	CROSSINGS	AADT	CROSSINGS	AADT	CROSSINGS
1-100	77923	1-1K	157245	1-10K	207835
101-200	20022	1K-2K	17490	10K-20K	5866
201-300	19507	2K-3K	10332	20K-30K	1133
301-400	8384	3K-4K	5905	30K-40K	209
401-500	9130	4K-5K	5262	40K-50K	38
501-600	5175	5K-6K	3185	50K-60K	7
601-700	3718	6K-7K	2336	60K-70K	4
701-800	5777	7K-8K	2544	70K-80K	4
801-900	3033	8K-9K	1616	80K-90K	3
901-1K	4576	9K-10K	1920	90K-100K	1
				OVER 100K	8

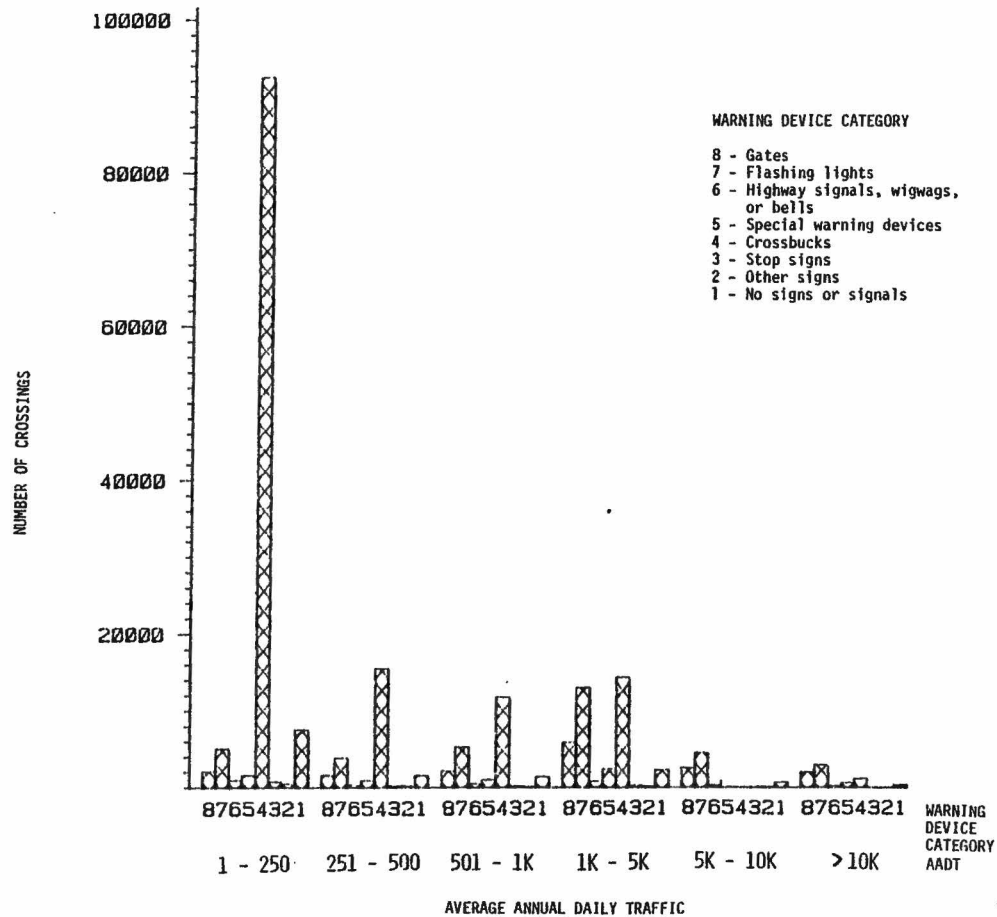


**FIGURE 38. CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC**



**TABLE 59 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY**

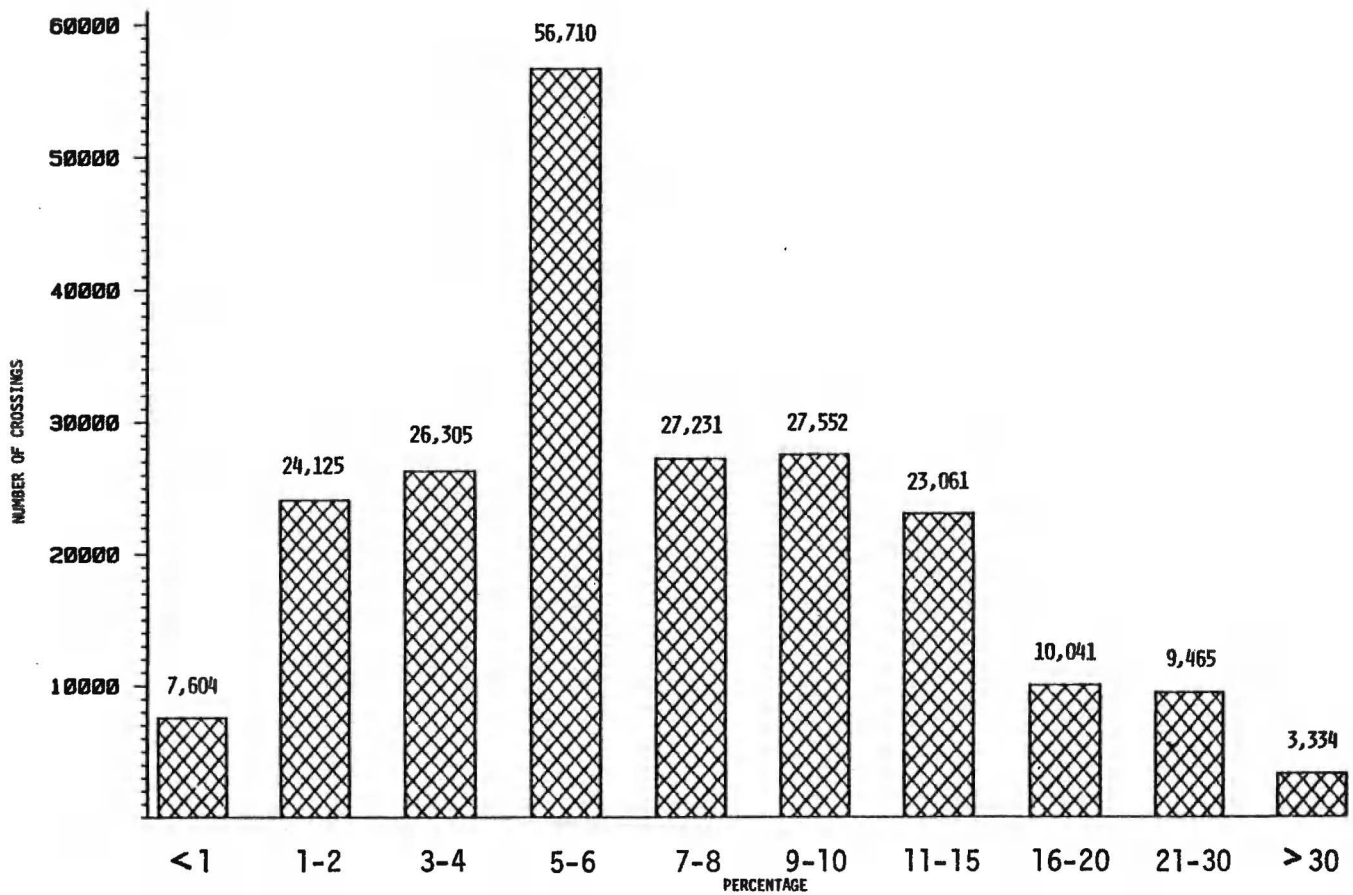
WARNING DEVICE CATEGORY	ANNUAL AVERAGE DAILY TRAFFIC						TOTAL
	1-250	251-500	501-1K	1K-5K	5K-10K	OVER 10K	
GATES	2101	1565	2161	5870	2548	2016	16261
FLASHING LIGHTS	5062	3814	5264	12979	4494	2920	34533
HWY. SIGNALS, WIGWAGS, BELLS	945	360	435	784	260	212	2996
SPECIAL WARNING DEVICES	1578	893	990	2416	863	629	7369
CROSSBUCKS	92481	15483	11706	14340	2675	1125	137810
STOP SIGNS	737	188	183	237	46	19	1410
OTHER SIGNS	500	197	137	120	43	9	1006
NO SIGNS OR SIGNALS	7536	1526	1403	2243	672	343	13723
TOTAL	110940	24026	22279	38989	11601	7273	215108



**FIGURE 39 CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY**

**TABLE 60 TOTAL CROSSINGS BY TRUCK TRAFFIC AS A PERCENT OF ANNUAL AVERAGE DAILY TRAFFIC**

%	CROSSINGS	%	CROSSINGS
UNDER 1	7604	51-55	21
01-05	85344	56-60	164
06-10	76579	61-65	5
11-15	23061	66-70	59
16-20	10041	71-75	119
21-25	2380	76-80	66
26-30	7085	81-85	6
31-35	413	86-90	57
36-40	1150	91-95	2
41-45	155	96-99	6
46-50	1111		



**FIGURE 40 CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC**

## APPENDIX A: REPORTING REQUIREMENTS AND DEFINITIONS

### ACCIDENT/INCIDENT REPORTABILITY REQUIREMENTS

The rules governing monthly reporting of railroad accidents/incidents, which were in effect at the end of 1979 define a reportable accident/incident as an event arising from the operation of a railroad that results in one or more stated circumstances.

- (a) An impact occurs between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, pedestrian or other highway user at a rail-highway grade crossing.
- (b) Any collision, derailment, fire, explosion, act of God or other event involving the operation of railroad on-track equipment (standing or moving) which results in more than \$2,900 in damages to railroad on-track equipment, signals, track and/or track structures, and roadbed.
- (c) Any event arising from the operation of a railroad which results in:
  - (i) death of one or more persons;
  - (ii) injury to one or more persons, other than railroad employees, requiring medical treatment;
  - (iii) injury to one or more employees requiring medical treatment or resulting in restriction of work or motion for one or more days, one or more lost workdays, transfer to another job, termination of employment or loss of consciousness;
  - (iv) any occupational illness of railroad employee diagnosed by a physician.

### DEFINITIONS

Annual Average Daily Traffic: Estimate of the annual average daily highway traffic in both traffic directions.

Active Warning Devices: Warning systems activated by an approaching train: gates, flashing lights, highway signals, wigwags, or bells.

Car - a railway car designed to carry freight, railroad personnel, or passengers. This includes boxcars, covered hopper cars, flatcars, refrigerator cars, gondola cars, hopper cars, tank cars, cabooses, stock cars, ventilation cars, and special cars. Also includes on-track maintenance equipment.

Class I railroad - a railroad with an annual gross operating revenue in excess of \$50 million.

Class II railroad - a railroad with an annual gross operating revenue of between \$10 and \$50 million.

Class III railroads - all switching and terminal companies, and all railroads with annual operating revenues of less than \$10 million.

Commercial Power: A source of commercial power within 500 feet of a crossing.

Consist - on-track railroad equipment such as a train, locomotive, group of rail cars, or a single rail car not coupled to another car or locomotive.

Contractor employee - person employed by a contractor engaged by a railroad to perform normal maintenance work to railroad rolling stock, track structure, bridges, buildings, etc.

Crossing Surfaces:

1. Sectional treated timber - prefabricated units approximately eight feet long, made of treated timber, individually installed, and removable for maintenance and replacement purposes.

2. Full wood plank - wood surface, other than sectional treated timber, covering the entire crossing area above crossties.

3. Asphalt - surface over the entire crossing area or the area between planks or other material which forms flangeway openings with or without single planks on the outside of running rails.

4. Concrete slab - precast concrete slabs which are installed and individually removable for maintenance and replacement.

5. Concrete pavement - continuous concrete surface over the track area which cannot be removed except by destruction of the surface.

6. Rubber slabs - preformed rubber sections which can be installed and removed individually for maintenance and replacement.

7. Metal sections - preformed sections of steel or other metal which can be individually installed and removed for maintenance and replacement.

8. Other metal - crossing area completed with covered rails or other permanent metal materials in limited sectional units.

9. Unconsolidated - ballast or other unconsolidated material placed above the tops of crossties with or without planks on one or both sides of running rail.

Daylight Train Movements: Train movements between 6 am and 6 pm.

Employee - a person engaged in railroad operations who works for a railroad company in return for financial or other compensation.

Employee not on duty - a railroad employee who is on railroad property for a purpose connected with his employment or with other railroad permission, but who is not engaged in rail operations for financial or other compensation.

Fatality - the death of a person resulting from an injury incurred during railroad operations or resulting from an occupational illness if death occurs within 365 days of initial diagnosis.

Flashing Lights: Cantilevered flashing lights, mast mounted flashing lights, and other flashing lights not conforming with the latest "Manual on Uniform Traffic Control Devices" (MUTCD).

Highway Signals: Train-activated highway lights (red-amber-green) that control highway traffic over the crossing.

Locomotive - a self-propelled unit of on-track equipment designed for moving other rail freight and passenger equipment on railroad tracks, and includes self-propelled units.

Main track - any track, other than auxiliary track, which extends through railroad yards or between stations and over which trains operate by time-table and/or train orders or the use of the track is governed by a signal system.

Maximum Timetable Speed: Maximum train speed permitted over a crossing.

Nearby Intersecting Highway: A highway intersection within 75 feet of the crossing.

Night Train Movements: Train movements between 6 pm and 6 am.

Non-tresspasser - person who is lawfully on any part of railroad property which is used in railroad operations or a person who is adjacent to railroad premises when injured as the result of railroad operations.

Number of Crossbucks: Masts with crossbucks; a mast with two or more crossbucks is counted as one. A crossbuck on an active device is not counted.

On-track equipment - railroad rolling stock used to transport freight or passengers and includes locomotives, railroad cars, maintenance equipment, and one or more locomotives coupled to one or more cars.

Other Signs: Signs other than crossbucks or stop signs.

Other Stop Signs: Stop signs other than standard highway stop signs.

Passenger - a person who is on, boarding, or alighting from a railroad car for the purpose of travel without participating in its operation.

Passive Warning Device: Warning systems not automatically activated by an approaching train: signs (crossbucks or standard highway signs) or special warning devices (manually operated gates, flood lights, etc.).

Pavement Markings: Markings prescribed or generally similar to those in highway traffic manuals, in particular, stoplines and railroad crossing symbols.

Percentage Trucks: The percentage of total daily highway traffic represented by trucks.

Public Crossing: A location open to public travel where railroad tracks cross a road that is under the jurisdiction and maintenance of a public authority.

Rail-highway crossing - the location where one or more railroad tracks intersect a public or private thoroughfare, a side walk, or a pathway.

Railroad - any surface transportation system which carries passengers, goods, materials, or property over rails.

Railroad Advance Warning: Advance warning signs on any highway approach.

Rural Crossing: A crossing classification derived from the Functional Classification Code.

Signals For Train Operation: Automatic signals or interlocks which control train operations in the vicinity of a crossing.

Smallest Crossing Angle: The smallest angle between the highway and the track.

Special Warning Devices: Non-train-activated devices other than signs including manually operated gates, train crews flagging a crossing, watchmen, and flood lights.

Speed Selection For Trains: A uniform warning time for the speed range of trains normally encountered at the crossing.

Standard Highway Stop Sign: Octagonal red sign with white lettering STOP.

Stop Signs: The standard highway stop sign or other stop signs.

Switch Trains: All trains other than thru trains, including locals, industrial runs, and switch engines.

Thru Trains: Trains whose primary responsibility is to move cars over the road; they may have a limited number of pickups and setouts along the route.

Total Train Movements: Includes all train movements for the reporting company and all other railroads operating over the crossing.

Traffic Lanes: Number of highway traffic lanes not including shoulders or parking lanes.

Trespasser - any person whose presence on railroad property, used in railroad operations, is prohibited or unlawful.

Truck Pullout Lane: A special lane designed to accommodate vehicles which are required to stop at a crossing.

Type of Development:

1. Open space - undeveloped, sparsely developed, very lightly populated, or agricultural area.
2. Residential - area comprised of private residences.
3. Commercial - area with retail stores, businesses, offices, and personal service offices.
4. Industrial - manufacturing, construction, heavy products, factories, and warehouse areas.
5. Institutional - schools, churches, hospitals, parks, and other community facilities.

Urban Crossing: A crossing classification derived from the Functional Classification Code.

Warning Device Category: At crossings which have more than one warning device, the warning category is determined by the following method:

- |         |                                      |
|---------|--------------------------------------|
| Highest | 8) Gates <sup>1</sup>                |
|         | 7) Flashing lights <sup>1</sup>      |
|         | 6) Highway signals, wigwags or bells |
|         | 5) Special warning devices           |
|         | 4) Crossbucks                        |
|         | 3) Stop signs                        |
|         | 2) Other signs                       |
| Lowest  | 1) No signs or signals               |

<sup>1</sup>When cantilevered flashing lights are categorized separately, they are ranked eighth and gates are ranked ninth.

REVISION IN HIGHWAY SYSTEM AND FUNCTIONAL CLASSIFICATION CODES:

The Highway System and Functional Classification Codes in the Inventory have been revised from those used in the original inventory to those currently in use by the Federal Highway Administration. The revisions are as follows:

FUNCTIONAL CLASSIFICATION CODES

<u>RURAL</u>	<u>PREVIOUS</u>	<u>PRESENT</u>
Interstate	01	01
Other principal arterial	02	02
Minor arterial	03	06
Major collector	04	07
Minor collector	05	08
Local	06	09

<u>URBAN</u>	<u>PREVIOUS</u> Population (Thousands)				<u>PRESENT*</u>
	<u>5-10</u>	<u>10-25</u>	<u>25-50</u>	<u>Over 50</u>	
Interstate	11	21	31	41	11
Other freeway and expressway	12	22	32	42	12
Other principal arterial	13	23	33	43	14
Minor arterial	14	24	34	44	16
Collector	15	25	35	45	17
Local	16	26	36	46	19

\*NOTE: The present Functional Classification Codes will not contain a population code. The tens digit for the urban codes must be "1".



HIGHWAY SYSTEM CODES

PRESENT

PREVIOUS

1	Interstate	01 Interstate, rural, open to traffic 02 Interstate, urban, open to traffic
2	Federal-aid primary	03 Other FA primary, rural 04 Other FA primary, urban
3	Federal-aid urban	14 Federal-aid urban
4	Federal-aid secondary	05 FA secondary rural, State jurisdiction 06 FA secondary urban, State jurisdiction 07 FA secondary rural, local jurisdiction 08 FA secondary urban, local jurisdiction
8	Non-Federal-aid	09 Other State highways, rural (non - FA) 10 Other State highways, urban (non - FA) 11 Local rural roads 12 Local city streets



## **APPENDIX B: REPORTING FORMS**

### **FORMS**

Three separate forms may be required to properly report a rail-highway crossing accident/incident:

- FRA F 6180-57 Grade Crossing Accident/Incident Report
- FRA F 6180-55 Railroad Injury and Illness Summary
- FRA F 6180-54 Rail Equipment Accident/Incident Report

For all reportable rail-highway crossing accidents/incidents, form FRA F 6180-57 must be submitted by the carrier which has on-track equipment involved. If reportable casualties result, they must be individually reported on Form F 6180-55. If the accident resulted in more than \$2,900 in damages to railroad on-track equipment, signals, track, track structures, or roadbed, Form FRA 6180-54 must also be submitted.

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION  
**RAILROAD INJURY AND ILLNESS SUMMARY**

*Form Approved  
OMB No. 04-R4009*

1. NAME OF REPORTING RAILROAD	2. ALPHABETIC CODE	3. REPORT MONTH & YEAR	4. STATE ALPHABETIC CODE	5. COUNTY
NAME OF REPORTING OFFICER			OFFICIAL TITLE	
ADDRESS			TELEPHONE (Area Code) (Number)	

6. I, \_\_\_\_\_, being first duly sworn, do say upon my oath that I am \_\_\_\_\_, of the railroad aforesaid and as such officer of the said railroad it is my duty to have supervision over the record of reportable incidents arising from the operation of the said railroad, and that I have caused to be compiled from the said record and to be carefully examined the annexed report of such incidents occurring during the month named at the head of this sheet; and that the said report is true and complete to the best of my knowledge and belief.

Subscribed and sworn to before me, a notary public in and for the State and County aforesaid, this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

(Use an impression seal) \_\_\_\_\_  
[L.S] \_\_\_\_\_  
(Notary Public) \_\_\_\_\_ (Signature of affiant)

7. MILES RUN DURING MONTH

A. LOCOMOTIVE TRAIN MILES	B. MOTOR TRAIN MILES	C. YARD SWITCHING MILES	D. TOTAL
---------------------------	----------------------	-------------------------	----------

8.

A. EMPLOYEE MANHOURS WORKED	B. PASSENGER MILES OPERATED	C. NUMBER OF PASSENGERS TRANSPORTED
-----------------------------	-----------------------------	-------------------------------------

TOTAL TRAIN ACCIDENTS	TOTAL FRA FORMS 6180-85A	TOTAL FRA FORMS 6180-84	TOTAL FRA FORMS 6180-87
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SECTION A—RECAPITULATION OF ALL CASUALTIES INCLUDING HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT CASUALTIES								CLASS OF PERSON FOR SECTIONS A AND B	SECTION B—RECAPITULATION OF ALL HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT CASUALTIES							
TRAIN ACCIDENTS		TRAIN INCIDENTS		NONTRAIN INCIDENTS		TOTAL			TRAIN ACCIDENTS		TRAIN INCIDENTS		NONTRAIN INCIDENTS		TOTAL	
Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj		Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj
								1. Employees on duty								
								2. Employees not on duty								
								3. Passengers on trains								
								4. Other nontrespassers								
								5. Trespassers (all classes)								
								6. Contractor Employees								
								7. GRAND TOTAL								

**SECTION C—MEMORANDUM—SUBSEQUENT FATALITIES DEVELOPED FROM REPORTED CASUALTIES**

LINE NO.	ACCIDENT/INCIDENT NUMBER	TYPE PERSON OR JOB CODE	DATE OF INJURY	DATE OF DEATH	STATE
1.					
2.					
3.					
4.					

FORM FRA F 6180-55 (8-76) REPLACES FORM FRA F 6180-55 (12-74) WHICH IS OBSOLETE.

*This report is required by law (45 USC 40). Failure to report can result in the imposition of civil penalties.*



# RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

1. NAME OF REPORTING RAILROAD <div style="text-align: right;">Amtrak Autotrain</div>		1a. Alphabetic Code	1b. Railroad Accident/Incident No.
2. NAME OF OTHER RAILROAD INVOLVED IN TRAIN ACCIDENT/INCIDENT		2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. NAME OF RAILROAD RESPONSIBLE FOR TRACK MAINTENANCE (single entry)		3a. Alphabetic Code	3b. Railroad Accident/Incident No.
4. U. S. DOT-AAR GRADE CROSSING IDENTIFICATION NUMBER	5. DATE OF ACCIDENT/INCIDENT month   day   year		6. TIME OF ACCIDENT/INCIDENT am <input type="checkbox"/> pm <input type="checkbox"/>
7. TYPE OF ACCIDENT/INCIDENT (enter number in code box, single entry) <span style="float: right;">CODE</span>			
1. Derailment      3. Rear end collision      5. Raking collision      7. Rail-Hwy crossing      9. Obstruction      11. Fire or violent rupture      12. Other (specify) 2. Head on collision      4. Side collision      6. Broken train collision      8. RR grade crossing      10. Explosion-Detonation			

HAZARDOUS MATERIALS (number of)			
8. CARS CARRYING	9. CARS DAMAGED OR DERAILED	10. CARS WHICH RELEASED HAZ. MAT.	11. PEOPLE EVACUATED (est.)

LOCATION			
12. DIVISION	13. NEAREST STATION	14. MILEPOST (to nearest tenth)	15. STATE (two letter code) <span style="float: right;">CODE</span>

ENVIRONMENTAL CONDITIONS			
16. TEMPERATURE (specify if minus) °F	17. VISIBILITY (single entry) <span style="float: right;">CODE</span> 1. Dawn      3. Dusk 2. Day      4. Dark	18. WEATHER (single entry) <span style="float: right;">CODE</span> 1. Clear      2. Cloudy      3. Rain      4. Fog      5. Sleet      6. Snow	

OPERATIONAL DATA			
19. METHOD (place X in appropriate box(es))			
1 <input type="checkbox"/> Manual block	4 <input type="checkbox"/> Automatic block	7 <input type="checkbox"/> Yard rules	10 <input type="checkbox"/> Auto. train control
2 <input type="checkbox"/> Interlocking	5 <input type="checkbox"/> Traffic control	8 <input type="checkbox"/> Time table	11 <input type="checkbox"/> Verbal permission
3 <input type="checkbox"/> Cab signal	6 <input type="checkbox"/> Auto. train stop	9 <input type="checkbox"/> Radio	12 <input type="checkbox"/> Train orders
13 <input type="checkbox"/> Other (specify)			
20. SPEED (recorded speed, if available) Est. MPH   Recorded MPH	21. TRAIN NUMBER	22. TIME TABLE DIRECTION <span style="float: right;">CODE</span> 1. North      2. South      3. East      4. West	

EQUIPMENT			
23. TRAILING TONS (gross tonnage, excluding power units)	24. TYPE OF EQUIPMENT CONSIST (single entry) <span style="float: right;">CODE</span> 1. Freight train      3. Mixed train      5. Single car      7. Yard/switching 2. Passenger train      4. Work train      6. Cut of cars      8. Light loco(s)	25. WAS THE EQUIPMENT IDENTIFIED IN ITEM 24 UNATTENDED? <span style="float: right;">CODE</span> 1. Yes      2. No	
26. TRACK NUMBER OR NAME	27. FRA TRACK CLASSIFICATION	28. ANNUAL TRACK DENSITY (gross tons in millions)	29. TYPE OF TRACK <span style="float: right;">CODE</span> 1. Main      3. Siding 2. Yard      4. Industry
30. PRINCIPLE CAR/UNIT  (1) First involved (derailed, struck, striking, etc.)  (2) Causing (mechanical failures)	30a. Initial and Number	30b. Position in Train	30c. Loaded (yes or no)

31. LOCOMOTIVE UNITS (no. of)	a. Head End	b. Manual	c. Remote	d. Manual	e. Remote	32. CARS (no. of)	a. Freight	b. Pass.	c. Freight	d. Pass.	e. Caboose
	(1) Total in Train						(1) Total in Equipment Consist				
	(2) Total Derailed						(2) Total Derailed				

PROPERTY DAMAGE (estimated cost, including labor, to repair or replace)	
33. EQUIPMENT DAMAGE (to be reported for this equipment consist only) \$	34. TRACK, SIGNAL, WAY AND STRUCTURES DAMAGE (to be reported by railroad in item 3 only) \$

ACCIDENT/INCIDENT CAUSE CODE		
35. PRIMARY CAUSE <span style="float: right;">CODE</span>	36. CONTRIBUTING CAUSE <span style="float: right;">CODE</span>	37. If no code available, explain cause.

CASUALTIES		
38. NUMBER OF PERSONS INJURED	39. ESTIMATED TOTAL DAYS DISABILITY	40. NUMBER OF FATALITIES

CREW (no. of)				HOURS ON DUTY			
41. ENGINEERS	42. FIREMEN	43. CONDUCTORS	44. BRAKEMEN	45. ENGINEER Hrs:      Mins:		46. CONDUCTOR Hrs:      Mins:	

47. TYPED NAME AND TITLE	48. SIGNATURE	49. DATE
--------------------------	---------------	----------

50. NARRATIVE DESCRIPTION - Describe the cause, nature and circumstances of accident/incident

# RAIL-HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT REPORT

1. NAME OF REPORTING RAILROAD		Amtrak Autotrain	1a. Alphabetic Code	1b. Railroad Accident/Incident No.
2. NAME OF OTHER RAILROAD INVOLVED IN TRAIN ACCIDENT/INCIDENT			2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. NAME OF RAILROAD RESPONSIBLE FOR TRACK MAINTENANCE (single entry)			3a. Alphabetic Code	3b. Railroad Accident/Incident No.
4. U. S. DOT-AAR GRADE CROSSING IDENTIFICATION NUMBER			5. DATE OF ACCIDENT/INCIDENT month      day      year	6. TIME OF ACCIDENT/INCIDENT am <input type="checkbox"/> pm <input type="checkbox"/>
<b>LOCATION</b>				
7. NEAREST RAILROAD STATION		8. COUNTY		9. STATE (two letter code)      CODE
10. CITY (if in a city)		11. HIGHWAY NAME OR NUMBER (if private crossing, so state)		
<b>ACCIDENT/INCIDENT SITUATION</b>				
HIGHWAY USER INVOLVED			RAILROAD EQUIPMENT INVOLVED	
12. TYPE 1. Auto 2. Truck 3. Truck-Trailer 4. Bus 5. School Bus 6. Motorcycle 7. Pedestrian 8. Other (specify)	CODE	16. EQUIPMENT 1. Train (units pulling) 2. Train (units pushing)	3. Train (standing) 4. Car(s) (moving) 5. Car(s) (standing)	6. Light loco(s) (moving) 7. Light loco(s) (standing) 8. Other (specify) CODE
13. SPEED (estimated mph at impact)	14. DIRECTION (geographical) 1. North 2. South 3. East 4. West	CODE	17. POSITION OF CAR/UNIT IN TRAIN CODE	
15. POSITION 1. Stalled on crossing 2. Stopped on crossing 3. Moving over crossing		CODE	18. CIRCUMSTANCE 1. Train struck highway user 2. Train struck by highway user CODE	
19. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials? 1. Highway user      2. Rail equipment      3. Both      4. Neither      CODE				
<b>ENVIRONMENT</b>				
20. TEMPERATURE (specify, if minus) °F		21. VISIBILITY (single entry) 1. Dawn 2. Day 3. Dusk 4. Dark		CODE
				22. WEATHER (single entry) 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow CODE
<b>TRAIN AND TRACK</b>				
23. TYPE OF TRAIN 1. Freight 2. Passenger 3. Mixed 4. Work 5. Yard/Switching 6. Light Locomotive(s)			CODE	24. TRACK TYPE USED BY TRAIN INVOLVED 1. Main 2. Yard 3. Siding 4. Industry CODE
25. TRACK NUMBER OR NAME		26. FRA TRACK CLASSIFICATION		27. NUMBER OF LOCOMOTIVE UNITS
28. NUMBER OF CARS		29. TRAIN SPEED (recorded speed, if available) MPH      Recorded      Est		30. TIME TABLE DIRECTION 1. North 2. South 3. East 4. West CODE
<b>CROSSING WARNING</b>				
31. TYPE (place X in appropriate box(es)) 1. <input type="checkbox"/> Gates 2. <input type="checkbox"/> Cantilever FLS 3. <input type="checkbox"/> Standard FLS 4. <input type="checkbox"/> Wig Wags 5. <input type="checkbox"/> Hwy. Traffic Signals 6. <input type="checkbox"/> Audible 7. <input type="checkbox"/> Crossbucks 8. <input type="checkbox"/> Stop Signs 9. <input type="checkbox"/> Watchman 10. <input type="checkbox"/> Flagged by crew 11. <input type="checkbox"/> Other (specify) 12. <input type="checkbox"/> None			32. SIGNALLED CROSSING WARNING Was the signaled crossing warning identified in item 31 operating? 1. Yes      2. No CODE	
33. LOCATION OF WARNING 1. Both sides 2. Side of vehicle approach 3. Opposite side of vehicle approach		CODE	34. CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS 1. Yes      2. No      3. Unknown CODE	
35. CROSSING ILLUMINATED BY STREET LIGHTS OR SPECIAL LIGHTS 1. Yes      2. No      3. Unknown		CODE		
<b>MOTORIST ACTION</b>				
36. MOTORIST PASSED STANDING HIGHWAY VEHICLE 1. Yes      2. No      3. Unknown			CODE	37. MOTORIST DROVE BEHIND OR IN FRONT OF TRAIN AND STRUCK OR WAS STRUCK BY SECOND TRAIN 1. Yes      2. No      3. Unknown CODE
38. MOTORIST 1. Drove around or thru the gate 2. Stopped and then proceeded 3. Did not stop 4. Other (specify) 5. Unknown			CODE	
39. VIEW OF TRACK OBSCURED BY (primary obstruction) 1. Permanent structure      2. Standing railroad equipment 3. Passing train      4. Topography 5. Vegetation      6. Highway vehicles 7. Other (specify) 8. Not obstructed CODE				
<b>HIGHWAY VEHICLE PROPERTY DAMAGE/CASUALTIES</b>				
40. HIGHWAY VEHICLE PROPERTY DAMAGE (est. dollar damage)		41. DRIVER WAS 1. Killed      2. Injured      3. Uninjured		42. WAS DRIVER IN THE VEHICLE? 1. Yes      2. No CODE
43. TOTAL NUMBER OF OCCUPANTS KILLED		44. TOTAL NUMBER OF OCCUPANTS INJURED		45. TOTAL NUMBER OF OCCUPANTS (include driver)
46. IS A RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT BEING FILED? 1. Yes      2. No      CODE				
47. TYPED NAME AND TITLE		48. SIGNATURE		49. DATE

# U.S. DOT - AAR CROSSING INVENTORY FORM

A. INITIATING AGENCY  
 RAILROAD  STATE

C. REASON FOR UPDATE:  
 CHANGES IN EXISTING CROSSING DATA  
 NEW CROSSING  
 CLOSED CROSSING

D. EFFECTIVE DATE  
M D Y

B. CROSSING NUMBER

### Part I Location and Classification of All Crossings (Must Be Completed)

1. Railroad Operating Company \_\_\_\_\_  
 2. Railroad Division or Region \_\_\_\_\_  
 3. Railroad Subdivision or District \_\_\_\_\_  
 4. State \_\_\_\_\_  
 5. County \_\_\_\_\_  
 6. County Map. Ref. No. \_\_\_\_\_  
 7. City \_\_\_\_\_  
 8. Nearest City \_\_\_\_\_  
 9. Highway Type and No. \_\_\_\_\_  
 10. Street or Road Name \_\_\_\_\_  
 11. RR I. D. No. \_\_\_\_\_  
 12. Nearest RR Timetable Station \_\_\_\_\_  
 13. Branch or Line Name \_\_\_\_\_  
 14. Railroad Mile Post \_\_\_\_\_

DO NOT WRITE IN THIS SPAC  
 State \_\_\_\_\_ County \_\_\_\_\_  
 City \_\_\_\_\_ Nearest City \_\_\_\_\_  
 RR Code \_\_\_\_\_ Timetable Station \_\_\_\_\_

15. Pedestrian Crossing  
 1. at grade  
 2. RR under  
 3. RR over  
 16. Private Vehicle Crossing  
 A.  1. Farm  2. Residential  3. Recreational  4. Industrial  
 B.  5. at grade C.  8. signs-specify \_\_\_\_\_  
 6. RR under  9. signals-specify \_\_\_\_\_  
 7. RR over  0. none

17. Public Vehicle Crossing  
 1. at grade  
 2. RR under  
 3. RR over

### COMPLETE REMAINDER OF FORM ONLY FOR PUBLIC VEHICLE CROSSINGS AT GRADE

### Part II Detailed Information for Public Vehicular at Grade Crossing

1A. Typical Number of Daily Train Movements

Daylight (6 AM to 6 PM)		Night (6 PM to 6 AM)	
thru trains	switching	thru trains	switching
____ 1	____ 2	____ 3	____ 4

1B. Check if Less Than One Movement Per Day  5

2. Speed of Train at Crossing

A. Maximum timetable speed \_\_\_\_\_ 1

B. Typical Speed Range Over Crossing from \_\_\_\_\_ 2 to \_\_\_\_\_ 3 mph

3. Type and Number of Tracks

main \_\_\_\_\_ 1 other \_\_\_\_\_ 2 If other specify \_\_\_\_\_ 3

4. Does Another RR Operate a Separate Track at Crossing?

Yes  No Specify: RR \_\_\_\_\_ 2

5. Does Another RR Operate Over Your Track at Crossing?

Yes  No Specify: RR \_\_\_\_\_ 2

6. Type of Warning Device at Crossing

A. Signs

Crossbucks		Standard Highway Stop Sign	Other Stop Signs	Other Signs: Specify	
reflectORIZED	non-reflectORIZED			Number	Number
____ 01	____ 02	____ 03	____ 04	____ 05	____ 06
Number	Number	Number	Number	Number	Number

B. Train Activated Devices

Gates		Cantilevered Flashing Lights		Mast Mounted Flashing Lights	Other Flashing Lights	Highway Traffic Signals	Wigwags	Bells
red & white reflectORIZED	other colored	over traffic lane	not over traffic lane					
____ 09	____ 10	____ 11	____ 12	____ 13	____ 14	____ 15	____ 16	____ 17
Number	Number	Number	Number	Number	Number	Number	Number	Number

C. Specify Special Warning Device not Train Activated \_\_\_\_\_ 19

D. No Signs or Signals  20

7. Is Commercial Power Available?  Yes  No

8. Does Crossing Signal Provide Speed Selection for Trains?  Yes  No  N/A

9. Method of Signalling for Train Operation: Is Track Equipped with Signals?  Yes  No

### Part III Physical Data

1. Type of Development  1. Open Sp.  2. Res  3. Comm.  4. Ind.  5. Inst.

2. Smallest Crossing Angle

0°-29°  30°-59°  60°-90°

3. Number of Traffic Lanes Crossing Railroad \_\_\_\_\_ Number

4. Are Truck Pullout Lanes Present?  Yes  No

5. Is Highway Paved  Yes  No

6. Pavement Markings  Stoplines  RR Xing Sym.  None

7. Are RR Advance Warning Signs Present?  Yes  No

8. Crossing Surface  1. Sec. Timber  2. Full Wd. Plank  3. Asphalt  4. Concrete Slab  
 5. Concrete Pave.  6. Rubber  7. Metal Sections  8. Other Meta  
 9. Unconsolidated  0. Other Specify

9. Does Track Run Down A Street?  Yes  No

10. Nearby Intersecting Highway?  Yes  No

### Part IV Highway Department Information

1. Highway System \_\_\_\_\_

2. Is Crossing on State Highway System?  Yes  No

4. Estimate AADT \_\_\_\_\_

3. Functional Classification of Road over Crossing \_\_\_\_\_

5. Estimate Percent Trucks \_\_\_\_\_

I. D. Number



**APPENDIX C: MISCELLANEOUS DATA**

**TABLE C-1 MISCELLANEOUS DATA RECEIVED FROM THE RAIL-HIGHWAY  
CROSSING ACCIDENT/INCIDENT REPORTS**

1.	IS RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT BEING FILED?									
	YES	236	NO	9527	NOT REPORTED				0	
2.	WAS DRIVER IN VEHICLE?									
	YES	8496	NO	1177	NOT REPORTED				90	
3.	DRIVER WAS:									
	KILLED	519	INJURED	2384	UNINJURED	6770	NOT REPORTED		90	
4.	IS CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS?									
	YES	514	NO	7108	NOT REPORTED				2141	
5.	DIRECTION (GEOGRAPHICAL) OF HIGHWAY USER INVOLVED:									
	NORTH	2534	SOUTH	2457	EAST	2381	WEST	2338	NOT REPORTED	53
6.	TRAIN TIMETABLE DIRECTION:									
	NORTH	2009	SOUTH	1922	EAST	2856	WEST	2924	NOT REPORTED	52

**TABLE C-2 MISCELLANEOUS DATA RECEIVED FROM DOT-AAR INVENTORY FORMS**

LESS THAN ONE TRAIN PER DAY?				
YES	36440	NO	178986	N/R 2
DOES ANOTHER RAILROAD OPERATE A SEPARATE TRACK AT CROSSING?				
YES	5375	NO	209951	N/R 102
DOES ANOTHER RAILROAD OPERATE OVER YOUR TRACK AT CROSSING?				
YES	28104	NO	187192	N/R 132
IS TRACK EQUIPPED WITH ANY SIGNS OR SIGNALS?				
YES	200380	NO	15042	N/R 6
IS TRACK EQUIPPED WITH SIGNALS FOR TRAIN OPERATION?				
YES	59939	NO	155095	N/R 394
IS HIGHWAY PAVED?				
YES	144993	NO	70419	N/R 16
IS COMMERCIAL POWER AVAILABLE?				
YES	194030	NO	21281	N/R 117
DOES TRACK RUN DOWN A STREET? <sup>1</sup>				
YES	6648	NO	200184	N/R 8596
NEARBY INTERSECTING HIGHWAY? <sup>1</sup>				
YES	75819	NO	130922	N/R 8687
RR ADVANCE WARNING SIGNS PRESENT?				
YES	93886	NO	121500	N/R 42
ARE TRUCK PULL-OUT LANES PRESENT?				
YES	2689	NO	212666	N/R 73
IS CROSSING ON STATE HIGHWAY SYSTEM?				
YES	32987	NO	182365	N/R 76
DOES CROSSING PROVIDE SPEED SELECTION?				
YES	6239	NO	74193	N/A 134996

<sup>1</sup> NOT ON ORIGINAL INVENTORY FORM USED IN THE FIVE PILOT STATES.

N/R: NOT RECORDED  
N/A: NOT APPLICABLE



**APPENDIX D: ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS**

**TABLE D-1 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN**

STATE	TYPE OF TRAIN											
	*****FREIGHT*****			****PASSENGER****			YARD/ ****SWITCHING****			1 *****OTHER*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
ALABAMA	9	2	4	0	0	0	2	0	0	3	0	1
ALASKA	0	0	0	0	0	0	0	0	0	0	0	0
ARIZONA	1	0	1	0	0	0	0	0	0	0	0	0
ARKANSAS	13	0	7	0	0	0	0	0	0	0	0	0
CALIFORNIA	21	3	8	4	2	0	14	0	1	3	0	1
COLORADO	11	0	3	0	0	0	2	0	0	1	0	0
CONNECTICUT	3	0	0	2	0	1	1	0	0	0	0	0
DELAWARE	0	0	0	0	0	0	3	0	0	0	0	0
DIST. COLUMBIA	0	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	8	0	3	1	0	0	7	0	0	0	0	0
GEORGIA	9	1	6	0	0	0	4	0	0	2	0	1
HAWAII	0	0	0	0	0	0	0	0	0	0	0	0
IDAHO	3	0	2	1	0	0	0	0	0	2	0	1
ILLINOIS	16	0	1	1	0	0	6	0	3	7	0	1
INDIANA	16	1	11	1	0	0	4	0	2	4	0	0
IOWA	5	1	1	0	0	0	5	0	0	1	0	0
KANSAS	7	1	0	0	0	0	2	0	0	3	0	0
KENTUCKY	33	4	14	1	0	0	3	0	0	3	0	1
LOUISIANA	26	1	15	1	0	0	10	0	2	5	1	0
MAINE	5	0	0	0	0	0	2	0	0	0	0	0
MARYLAND	5	0	1	0	0	0	2	0	0	1	0	0
MASSACHUSETTS	7	0	0	1	0	0	1	0	0	0	0	0
MICHIGAN	6	0	2	2	0	1	15	0	1	8	0	2
MINNESOTA	6	0	4	0	0	0	4	0	0	4	0	0
MISSISSIPPI	11	0	4	0	0	0	7	0	1	2	0	4
MISSOURI	13	3	8	1	0	1	1	0	1	4	0	1
MONTANA	12	2	0	0	0	0	1	0	0	5	0	0
NEBRASKA	11	0	1	0	0	0	3	0	1	3	0	1
NEVADA	1	0	0	0	0	0	0	0	0	0	0	0
NEW HAMPSHIRE	3	0	0	0	0	0	0	0	0	0	0	0
NEW JERSEY	1	0	0	0	0	0	6	0	2	0	0	0
NEW MEXICO	5	0	1	0	0	0	0	0	0	0	0	0
NEW YORK	11	2	2	4	0	0	4	0	1	2	0	0
NORTH CAROLINA	16	0	2	0	0	0	4	0	1	3	0	0
NORTH DAKOTA	2	0	0	0	0	0	0	0	0	0	0	0
OHIO	30	1	5	0	0	0	8	0	0	8	0	0
OKLAHOMA	10	0	1	0	0	0	0	0	0	1	0	0
OREGON	11	2	4	2	0	3	5	0	2	2	0	0
PENNSYLVANIA	20	1	2	1	0	0	5	0	0	4	0	0
RHODE ISLAND	1	0	0	0	0	0	1	0	0	0	0	0
SOUTH CAROLINA	5	0	1	1	0	0	1	0	0	1	0	0
SOUTH DAKOTA	1	0	2	0	0	0	0	0	0	1	0	0
TENNESSEE	14	1	6	0	0	0	0	0	0	0	0	0
TEXAS	34	3	10	0	0	0	18	0	0	4	0	2
UTAH	2	0	0	0	0	0	1	0	0	0	0	0
VERMONT	1	0	0	0	0	0	0	0	0	0	0	0
VIRGINIA	31	3	10	1	0	0	3	0	0	5	0	2
WASHINGTON	12	1	1	2	0	2	1	0	0	7	0	1
WEST VIRGINIA	22	3	11	1	0	0	0	0	0	3	0	3
WISCONSIN	6	1	2	0	0	0	0	0	0	0	0	0
WYOMING	8	0	1	0	0	0	2	0	0	0	0	0
TOTAL	504	37	157	28	2	8	158	0	18	102	1	22

<sup>1</sup> INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

**TABLE D-2 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY**

STATE	WARNING DEVICE CATEGORY								TOTAL
	GATES	FLASHING LIGHTS	HWY SIGS. WIGWAGS BELLS	SPECIAL <sup>1</sup>	CROSS-BUCKS	STOP SIGNS	OTHER SIGNS	NO SIGNS OR SIGNALS	
ALABAMA	0	0	0	0	8	1	0	5	14
ALASKA	0	0	0	0	0	0	0	0	0
ARIZONA	0	0	0	0	1	0	0	0	1
ARKANSAS	0	0	0	0	5	0	0	8	13
CALIFORNIA	0	0	1	6	9	17	1	8	42
COLORADO	0	0	2	0	4	1	3	4	14
CONNECTICUT	0	2	0	0	0	1	0	3	6
DELAWARE	0	0	0	3	0	0	0	0	3
DIST. COLUMBIA	0	0	0	0	0	0	0	0	0
FLORIDA	1	0	0	2	11	0	1	1	16
GEORGIA	0	0	0	3	8	0	0	4	15
HAWAII	0	0	0	0	0	0	0	0	0
IDAHO	0	1	1	0	1	1	1	1	6
ILLINOIS	1	0	0	1	10	3	1	14	30
INDIANA	1	3	0	2	4	1	1	13	25
IOWA	0	0	0	1	5	1	1	3	11
KANSAS	0	1	0	0	1	0	0	10	12
KENTUCKY	0	0	0	0	6	3	1	30	40
LOUISIANA	0	0	0	1	13	3	2	23	42
MAINE	0	0	0	0	0	0	2	5	7
MARYLAND	0	0	0	4	1	1	0	2	8
MASSACHUSETTS	0	0	0	2	4	0	0	3	9
MICHIGAN	0	16	2	0	2	1	0	10	31
MINNESOTA	0	0	1	2	6	0	0	5	14
MISSISSIPPI	0	0	0	1	9	0	0	10	20
MISSOURI	0	1	0	0	6	1	1	10	19
MONTANA	0	0	1	1	4	0	0	12	18
NEBRASKA	0	0	0	1	2	0	0	14	17
NEVADA	0	0	0	0	0	1	0	0	1
NEW HAMPSHIRE	0	0	0	0	1	1	0	1	3
NEW JERSEY	0	0	0	2	1	0	1	3	7
NEW MEXICO	0	0	1	0	3	0	0	1	5
NEW YORK	0	1	1	0	3	5	3	8	21
NORTH CAROLINA	0	3	0	3	7	0	0	10	23
NORTH DAKOTA	0	0	0	0	0	0	0	2	2
OHIO	0	1	2	0	5	7	2	29	46
OKLAHOMA	0	0	0	0	4	0	0	7	11
OREGON	0	0	5	0	5	2	0	8	20
PENNSYLVANIA	0	4	0	4	4	1	2	15	30
RHODE ISLAND	0	0	0	0	0	1	0	1	2
SOUTH CAROLINA	0	0	0	0	5	0	0	3	8
SOUTH DAKOTA	0	0	0	0	1	0	0	1	2
TENNESSEE	0	1	0	0	5	0	1	7	14
TEXAS	1	2	1	7	21	0	4	20	56
UTAH	0	0	0	0	1	1	0	1	3
VERMONT	0	0	0	0	0	0	0	1	1
VIRGINIA	0	1	0	0	9	3	1	26	40
WASHINGTON	0	0	4	1	8	1	0	8	22
WEST VIRGINIA	0	0	0	0	3	2	0	21	26
WISCONSIN	0	0	0	0	3	0	2	1	6
WYOMING	0	0	1	0	2	2	0	5	10
TOTAL	4	37	23	47	211	62	31	377	792

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

**TABLE D-3 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS  
BY TYPE OF ROADWAY USER**

TRAINS STRIKING OR BEING STRUCK BY:	**ACC/INC**		***KILLED***		**INJURED**	
	NO.	%	NO.	%	NO.	%
AUTOMOBILE	399	47.05	25	55.56	119	52.19
TRUCK	241	28.42	13	28.89	60	26.32
TRUCK TRAILER	145	17.10	1	2.22	24	10.53
BUS	1	0.12	0	0.0	0	0.0
SCHOOL BUS	1	0.12	0	0.0	0	0.0
MOTORCYCLE	5	0.59	1	2.22	2	0.88
PEDESTRIAN	5	0.59	3	6.67	1	0.44
OTHER	51	6.01	2	4.44	22	9.65
TOTAL	848	100.00	45	100.00	228	100.00

**TABLE D-4 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS  
INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY  
AND MOTORIST ACTION**

WARNING DEVICE CATEGORY	****TOTAL****			DROVE AROUND OR **THRU GATE**			STOPPED AND THEN **PROCEEDED**			DID NOT ****STOP*****			****OTHER****			***UNKNOWN***		
	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ	A/I	KLD	INJ
GATES	4	0	1	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0
CANTILEVERED FLASHING LIGHTS	5	0	0	0	0	0	1	0	0	3	0	0	1	0	0	0	0	0
STANDARD FLASHING LIGHTS	32	2	13	0	0	0	1	0	1	24	2	11	7	0	1	0	0	0
HIGHWAY SIGNALS WIGWAGS OR BELLS	23	2	8	0	0	0	3	0	0	11	2	7	6	0	0	3	0	1
SPECIAL WARNING DEVICES	47	0	2	0	0	0	7	0	0	27	0	2	12	0	0	1	0	0
CROSSBUCKS	211	11	70	0	0	0	14	1	6	106	8	42	80	2	14	11	0	8
STOP SIGNS	62	4	21	0	0	0	3	0	2	30	2	15	24	2	4	5	0	0
OTHER SIGNS	31	3	8	0	0	0	3	0	1	22	2	6	5	1	1	1	0	0
NO SIGNS OR SIGNALS	377	18	82	0	0	0	22	0	7	163	13	57	175	2	14	17	3	4
TOTAL	792	40	205	4	0	1	54	1	17	386	29	140	310	7	34	38	3	13

A/I = ACCIDENTS/INCIDENTS



**TABLE D-5 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY**

CIRCUMSTANCE AND TRAIN SPEED (MPH)	*****TOTAL*****			*****DAWN*****			VISIBILITY *****DAY*****			*****DUSK*****			*****DARK*****		
	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ	ACC/INC	KLD	INJ
<b>S T R U C K B Y T R A I N</b>															
STANDING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1-9	258	2	36	4	0	1	185	0	30	6	0	1	63	2	4
10-19	81	3	20	3	0	1	51	1	14	4	1	0	23	1	5
20-29	106	5	41	4	0	3	68	5	28	5	0	3	29	0	7
30-39	105	7	48	5	0	3	66	5	35	2	0	1	32	2	9
40-49	106	12	34	4	0	1	61	9	26	4	0	0	37	3	7
50-59	47	10	9	1	0	1	18	6	6	2	0	1	26	4	1
60-69	7	1	3	0	0	0	4	1	2	0	0	0	3	0	1
70-79	4	0	2	0	0	0	3	0	2	0	0	0	1	0	0
80-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL	715	40	193	21	0	10	457	27	143	23	1	6	214	12	34
<b>R A N I N T O T R A I N</b>															
STANDING	10	0	1	0	0	0	3	0	0	0	0	0	7	0	1
1-9	49	0	6	0	0	0	27	0	3	1	0	0	21	0	2
10-19	9	0	2	0	0	0	8	0	0	0	0	0	1	0	2
20-29	3	0	1	0	0	0	3	0	1	0	0	0	0	0	0
30-39	3	0	1	0	0	0	3	0	1	0	0	0	0	0	0
40-49	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1
50-59	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0
60-69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70-79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	77	0	12	0	0	0	46	0	5	1	0	1	30	0	6
<b>G R A N D T O T A L</b>															
STANDING	10	0	1	0	0	0	3	0	0	0	0	0	7	0	1
1-9	307	2	42	4	0	1	213	0	33	7	0	2	84	2	6
10-19	90	3	22	3	0	1	59	1	14	4	1	0	24	1	7
20-29	109	5	42	4	0	3	71	5	29	5	0	3	29	0	7
30-39	108	7	49	5	0	3	69	5	36	2	0	1	32	2	9
40-49	108	12	34	4	0	1	63	9	26	4	0	0	37	3	7
50-59	48	10	10	1	0	1	18	6	6	2	0	1	27	4	2
60-69	7	1	3	0	0	0	4	1	2	0	0	0	3	0	1
70-79	4	0	2	0	0	0	3	0	2	0	0	0	1	0	0
80-89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90 AND OVER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UNKNOWN	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
TOTAL	792	40	205	21	0	10	503	27	148	24	1	7	244	12	40

**TABLE D-6 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING  
MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY**

	GATES	CANTI- LEVERED FLASHING LIGHTS	STANDARD FLASHING LIGHTS	HWY. SIG. WIGWAGS BELLS	WARNING DEVICE CATEGORY				NO SIGNS OR SIGNALS	TOTAL
					SPECIAL <sup>1</sup>	CROSS- BUCKS	STOP SIGNS	OTHER SIGNS		
<b>CLASS I RAILROAD</b>										
ALABAMA GREAT SOUTHERN RAILROAD	0	0	0	0	0	1	0	0	0	1
AMTRAK <sup>2</sup>	0	2	2	0	0	7	6	0	4	21
ATCHISON, TOPEKA & SANTA FE	1	0	1	0	0	14	5	3	9	33
BALTIMORE & OHIO RAILWAY	0	0	0	0	3	3	9	1	14	30
BESSEMER & LAKE ERIE RAILROAD	0	0	0	0	0	0	0	0	3	3
BOSTON & MAINE CORPORATION	0	0	0	0	0	2	0	0	3	5
BURLINGTON NORTHERN	0	0	0	15	3	27	1	0	44	90
CENTRAL OF GEORGIA RAILROAD	0	0	0	0	1	1	0	0	0	2
CHESAPEAKE & OHIO RAILWAY	0	0	1	0	0	0	7	0	39	47
CHICAGO & NORTH WESTERN	0	0	0	0	0	2	1	0	1	4
CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC	0	0	0	0	1	4	0	0	4	9
CHICAGO, ROCK ISLAND & PACIFIC	0	0	0	0	0	0	0	0	0	0
CINN., NEW ORLEANS & TEXAS PACIFIC	0	0	0	0	0	1	0	0	1	2
CLINCHFIELD RAILROAD	0	0	0	0	0	0	0	0	1	1
COLORADO & SOUTHERN RAILWAY	0	0	0	0	0	1	0	0	1	2
CONSOLIDATED RAIL CORPORATION	0	3	14	1	13	14	6	5	48	104
DELAWARE & HUDSON RAILWAY	0	0	0	0	0	2	0	0	0	2
DENVER & RIO GRANDE WESTERN	0	0	0	0	0	2	1	3	0	6
DETROIT, TOLEDO & IRONTON	0	0	0	0	0	0	0	0	0	0
DULUTH, MISSABE & IRON RANGE	0	0	0	0	0	0	0	0	0	0
ELGIN, JULIET & EASTERN	0	0	0	0	0	0	0	0	0	0
FLORIDA EAST COAST RAILWAY	1	0	0	0	1	2	0	0	0	4
FORT WORTH & DENVER RAILWAY	0	0	0	0	0	1	0	0	0	1
GRAND TRUNK WESTERN	0	0	9	2	0	0	0	0	2	13
ILLINOIS CENTRAL GULF RAILROAD	0	0	0	0	1	12	1	3	15	32
KANSAS CITY SOUTHERN RAILWAY	0	0	0	0	0	1	1	0	6	8
LONG ISLAND RAIL ROAD	0	0	0	0	0	0	0	0	1	1
LOUISIANA & ARKANSAS RAILWAY COMPANY	0	0	0	0	0	3	0	0	2	5
LOUISVILLE & NASHVILLE	0	0	1	0	0	7	0	1	20	29
MISSOURI-KANSAS-TEXAS RAILROAD	0	0	0	0	0	3	0	0	3	6
MISSOURI PACIFIC RAILROAD	0	0	1	0	1	16	1	0	30	49
NORFOLK & WESTERN RAILWAY	0	0	1	0	0	9	3	2	41	56
PITTSBURGH & LAKE ERIE RAILROAD	0	0	0	0	0	0	0	0	1	1
ST. LOUIS-SAN FRANCISCO RAILWAY	0	0	0	0	0	4	1	0	13	18
ST. LOUIS SOUTHWESTERN RAILWAY	0	0	0	0	0	1	0	0	2	3
SEABOARD COAST LINE RAILROAD	0	1	1	0	2	22	0	1	9	36
SOO LINE	0	0	0	0	0	1	0	2	2	5
SOUTHERN PACIFIC TRANSPORTATION COMPANY	1	0	1	2	7	14	11	0	16	52
SOUTHERN RAILWAY	0	0	1	0	3	16	0	0	14	34
UNION PACIFIC RAILROAD	0	0	1	0	1	7	4	1	18	32
WESTERN MARYLAND RAILWAY	0	0	0	0	0	1	0	0	0	1
WESTERN PACIFIC	0	0	0	0	0	0	3	0	0	3
<b>TOTAL CLASS I RAILROADS</b>	<b>3</b>	<b>4</b>	<b>32</b>	<b>20</b>	<b>37</b>	<b>194</b>	<b>55</b>	<b>22</b>	<b>363</b>	<b>730</b>
<b>CLASS II &amp; III RAILROADS</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>17</b>	<b>7</b>	<b>9</b>	<b>14</b>	<b>62</b>
<b>TOTAL</b>	<b>4</b>	<b>5</b>	<b>32</b>	<b>23</b>	<b>47</b>	<b>211</b>	<b>62</b>	<b>31</b>	<b>377</b>	<b>792</b>

<sup>1</sup> SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

<sup>2</sup> AMTRAK AND AUTOTRAIN ACCIDENTS HAVE BEEN EXCLUDED IN ALL OTHER TABLES. THESE ACCIDENTS ARE REPORTED BY AMTRAK AND AUTOTRAIN AND BY THE OPERATING CARRIER. IN THIS TABLE THEY ARE INCLUDED IN THE DETAIL LINES BUT EXCLUDED IN THE RECAPITULATION.

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