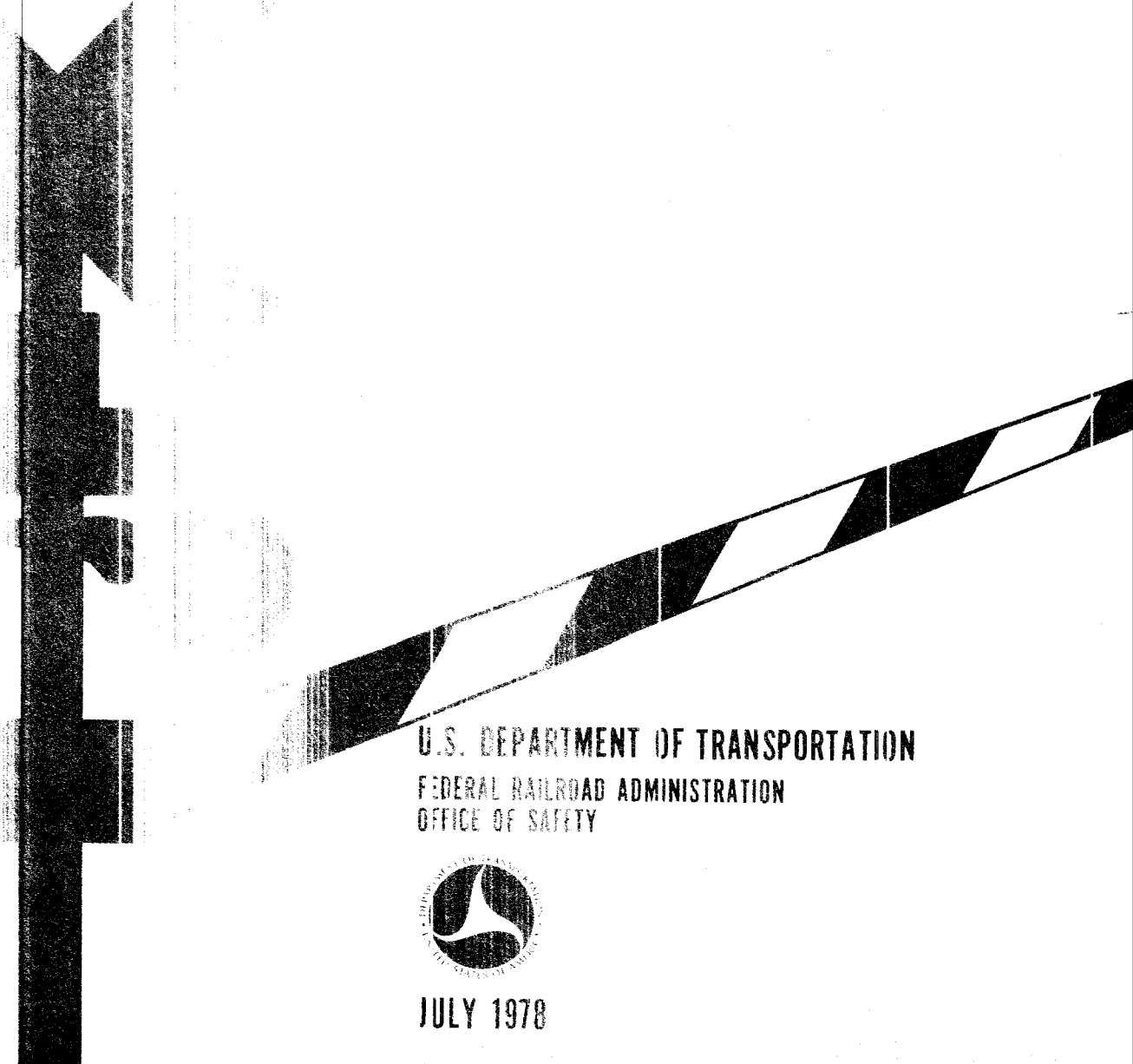


RAIL-HIGHWAY GRADE-CROSSING ACCIDENT/INCIDENT BULLETIN

No. 43

Calendar Year 1977



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
OFFICE OF SAFETY



JULY 1978

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INTRODUCTION

In accordance with 49 CFR 225, all railroads are required to file monthly accident/incident reports with Office of Safety, Federal Railroad Administration (FRA). For the purposes of these requirements a "railroad" is any system of surface transportation of persons and property over rails. It includes line-haul freight and passenger railroads, switching and terminal railroads, and passenger-carrying railroads including, but not limited to, rapid transit, commuter, scenic, street, subway, elevated, cable and cog railways.

The purpose of reporting to the FRA the occupational illnesses of employees, damage to railroad equipment and structures, and injury to persons arising from the operation of a railroad, is to carry out the intent of Congress as expressed in the Federal Railroad Safety Act of 1970 (PL-91-458) and the Accident Reports Act, as amended (45 USC-38-43), namely the disclosure of hazards arising in the provision of carrier transportation by rail.

This is the forty-third annual statistical report on rail-highway grade crossing accidents/incidents based upon reports of Class I and II carriers filed with the FRA. The purpose of this report is to direct attention to the hazards inherent to public grade crossings, and to provide basic statistical information in support of the overall Department of Transportation program to promote the safety of both rail and highway traffic at crossings. Data in this report will not identify all factors leading to rail-highway grade crossing accidents; however, the tabular information provides valuable material for use in identifying specific conditions surrounding crossing accidents.

Due to major revisions in reporting requirements effective January 1, 1975, a direct comparison of 1975 and later years with previous data is not feasible. These major changes are in the following categories: Rail Equipment Accidents/Incidents, Rail-Highway Grade Crossing Accidents/Incidents, Fatalities, Occupational Illness, and Occupational Injuries (refer to Appendix A for definitions). These changes have resulted in a substantial increase in the number of rail-highway grade crossing accidents/incidents reported, and to a lesser degree, the number of casualties resulting from these accidents.

In reference to the tables shown in this report, it should be noted that Tables A, B, 1, 20A, and 21 pertain to rail-highway grade crossing accidents/incidents of all kinds, and the other tables pertain only to accidents/incidents covering those situations where motor vehicles were involved. Also, due to duplication of casualty reporting for 1976, a revised table "Rail-Highway Accidents/Incidents Involving Motor Vehicles by State 1976" has been included in this report (see Appendix B). The source of data used in Tables 23 through 27 is the National Rail-Highway Crossing Inventory as of June 1978.

More detailed information on the National Inventory is available in the DOT publication "Summary Statistics of the National Railroad - Highway Crossing Inventory for Public At-Grade Crossings," from the National Technical Information Services, Springfield, Virginia 22161, Accession Number PB 271334/AS. The publication is being updated and will be reissued in the fall of 1978.

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ACCIDENT/INCIDENT AND GRADE CROSSING INVENTORY TABLES

TABLE A SUMMARY OF ALL RAIL-HIGHWAY CROSSING
ACCIDENTS FOR 11-YEAR PERIOD 1967 THRU 1977

Year	Number of Accidents	.....Total..... Killed	Injured	Casualties	Casualties per Accident
1967	3,932	1,632	3,812	5,444	1.38
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 ¹	11,354	978	4,168	5,146	0.45
1976 ²	12,114	1,114	4,831	5,945	0.49
1977	12,299	944	4,649	5,593	0.45

TABLE B NUMBER OF RAIL-HIGHWAY ACCIDENTS INVOLVING MOTOR
VEHICLES FOR 11-YEAR PERIOD 1967 THRU 1977

Year	Accidents	Motor Vehicles Registered (000)3	Accidents per Million Vehicles
1967	3,733	82,411	45.30
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 ¹	10,925	137,918	79.21
1976	11,700	143,538	81.51
1977	11,849	147,718	80.21

- (1) Data collected after 1974, are not directly comparable to that of prior years. (see Introduction)
- (2) Due to duplicate reporting, casualty figures for 1976 have been revised. (see Introduction)
- (3) Estimated figures supplied by Federal Highway Administration.

TABLE 1 RAIL-HIGHWAY ACCIDENTS/INCIDENTS
OF ALL KINDS AND CASUALTIES 1977

Trains striking or being struck by:	Total Accidents		Total Killed		Total Injured	
	#	Pct.	#	Pct.	#	Pct.
Pedestrians	114	0.9	70	7.4	44	0.9
Automobiles	8,535	69.3	577	61.1	3,265	70.2
Buses	32	0.2	6	0.6	56	1.2
Trucks	3,189	25.9	239	25.3	1,096	23.5
Motorcycles	93	0.7	24	2.5	38	0.8
Miscellaneous	336	2.7	28	2.9	150	3.2
Unknown	0	0.0	0	0.0	0	0.0
Total.....	12,299	100.0	944	100.0	4,649	100.0

TABLE 2-A NATURE OF ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS
INVOLVING MOTOR VEHICLES, SHOWING NUMBER OF ACCIDENTS, 1977

	Accidents		Killed		Injured	
	#	Pct.	#	Pct.	#	Pct.
Motor vehicle struck by train	8,528	71.9	674	79.6	3,057	68.6
Motor vehicle ran into train	3,321	28.0	172	20.3	1,398	31.3
Total.....	11,849	100.0	846	100.0	4,455	100.0

TABLE 2-B NATURE OF ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS,
WHERE MOTOR VEHICLE WAS STRUCK BY TRAIN, 1977

Type of Vehicle	.....Daylight.....			.....Dark.....		
	Accidents	Killed	Injured	Accidents	Killed	Injured
Passenger automobiles	3,617	316	1,407	2,485	161	827
Motor buses	23	1	38	8	5	18
Motor trucks	1,797	148	612	574	37	154
Motorcycles	19	5	1	5	1	0
Total.....	5,456	470	2,058	3,072	204	999

TABLE 2-C NATURE OF ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS
WHERE TRAIN WAS RUN INTO BY MOTOR VEHICLE, 1977

Type of Vehicle	.....Daylight.....			.....Dark.....		
	Accidents	Killed	Injured	Accidents	Killed	Injured
Passenger automobiles	1,031	37	372	1,402	63	659
Motor buses	1	0	0	0	0	0
Motor trucks	491	34	220	327	20	110
Motorcycles	43	12	22	26	6	15
Total.....	1,566	83	614	1,755	89	784

TABLE 3 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
THAT RAN INTO TRAINS, 1977

....Circumstance....	.....Part of train struck.....									
	Consist struck hwy user	Consist struck by hwy user	Loco(s)	First quarter	Second quarter	Third quarter	Fourth quarter	Unknown	Daylight	Dark
Train(units pulling)	7,069	2,349	1,721	186	147	88	121	86	5,819	3,599
Train (units pushing)	544	256	107	20	26	16	84	3	405	395
Train (standing)	0	240	60	50	49	21	47	13	30	210
Cars(moving)	82	106	22	24	7	7	41	5	90	98
Cars (standing)	0	27	9	1	6	3	7	1	9	18
Light Locos(moving)	703	238	233	0	1	0	3	1	490	451
Light Locos(standing)	0	34	34	0	0	0	0	0	9	25
Other	130	71	28	2	3	0	26	12	170	31
Total.....	8,528	3,321	2,214	283	239	135	329	121	7,022	4,827

TABLE 4 NATURE OF ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS
INVOLVING MOTOR VEHICLES AND PART OF 24-HOUR PERIOD, 1977

	Accidents		Struck by train		Ran into train	
	#	Pct.	Killed	Injured	Killed	Injured
Dawn	319	2.6	17	72	4	27
Day	6,703	56.5	453	1,986	79	587
Dusk	434	3.6	26	126	---	42
Dark	4,393	37.0	178	873	89	742
Total.....	11,849	100.0	674	3,057	172	1,398

TABLE 5 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
 ACCORDING TO HOUR, 1977

Hour	Total Accidents	Struck by Train	Ran into Train
Midnight to 12:59 AM	391	226	165
1 to 1:59 AM	413	235	178
2 to 2:59 AM	332	167	165
3 to 3:59 AM	210	112	98
4 to 4:59 AM	160	94	66
5 to 5:59 AM	187	121	66
6 to 6:59 AM	347	244	103
7 to 7:59 AM	467	360	107
8 to 8:59 AM	491	383	108
9 to 9:59 AM	520	411	109
10 to 10:59 AM	550	417	133
11 to 11:59 AM	641	500	141
Noon to 12:59 PM	629	473	156
1 to 1:59 PM	611	486	125
2 to 2:59 PM	648	505	143
3 to 3:59 PM	745	595	150
4 to 4:59 PM	692	529	163
5 to 5:59 PM	674	512	162
6 to 6:59 PM	588	433	155
7 to 7:59 PM	592	414	178
8 to 8:59 PM	476	320	156
9 to 9:59 PM	508	345	163
10 to 10:59 PM	504	353	151
11 to 11:59 PM	462	283	179
Unknown	11	10	1
Total.....	11,849	8,528	3,321

TABLE 6 RAIL-HIGHWAY ACCIDENTS/INCIDENTS
INVOLVING MOTOR VEHICLES BY DAY OF WEEK, 1977

	Total Accidents	Struck by Train	Ran into Train
SUNDAY	986	715	271
MONDAY	1,653	1,230	423
TUESDAY	1,832	1,345	487
WEDNESDAY	1,905	1,362	543
THURSDAY	1,934	1,387	547
FRIDAY	2,048	1,449	599
SATURDAY	1,491	1,040	451
Total.....	11,849	8,528	3,321

TABLE 7 RAIL-HIGHWAY ACCIDENTS/INCIDENTS
INVOLVING MOTOR VEHICLES BY MONTH, 1977

Month	Total Accidents	Struck by Train	Ran into Train
January	1,373	931	442
February	1,036	750	286
March	896	650	246
April	802	565	237
May	743	567	176
June	826	628	198
July	800	608	192
August	890	635	255
September	872	632	240
October	1,096	799	297
November	1,153	803	350
December	1,362	960	402
Unknown	---	---	---
Total.....	11,849	8,528	3,321

TABLE 8 TYPES OF MOTOR VEHICLES INVOLVED IN ACCIDENTS/INCIDENTS
AT RAIL-HIGHWAY CROSSINGS, 1977

Type of Vehicle	Number of Accidents	Vehicles Registered (000)*	Accidents per million Vehicles	Number occurring in	
				Daylight	Dark
Passenger automobiles	8,535	112,770	75.6	4,648	3,887
Motor buses	32	477	67.0	24	8
Motor trucks	3,189	29,524	108.0	2,288	901
Motorcycles	93	4,947	18.7	62	31
TOTAL	11,849	147,718	80.2	7,022	4,827

*NOTE: Estimated figures supplied by Federal Highway Administration

TABLE 9-A RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY HIGHEST CROSSING PROTECTION AND MOTORIST ACTION, 1977

Highest Protection Level	.....Motorist Action.....					Total
	Drove Around or Thru Gate	Stopped and Then Proceeded	Did Not Stop	Other	Unknown	
Gates	492	45	127	280	69	1,013
Cantilever Flashing Light	---	31	322	105	33	491
Standard Flashing Light	---	263	2,289	808	121	3,481
Wig Wags	---	13	159	39	24	235
Hwy. Traffic Signals	---	23	121	44	42	230
Audible	---	5	61	18	11	95
Crossbucks	---	368	3,763	1,250	399	5,780
Stop Signs	---	14	89	38	27	168
Watchman	---	2	3	1	---	6
Flagged by crew	---	16	49	12	3	80
Other	---	3	48	19	---	70
None	---	14	99	59	28	200
Unknown	---	---	---	---	---	---
TOTALS...	492	797	7,130	2,673	757	11,849

TABLE 9-B RAIL-HIGHWAY CASUALTIES INVOLVING MOTOR VEHICLES
BY HIGHEST CROSSING PROTECTION AND MOTORIST ACTION, 1977

Highest Protection Level	.....Motorist Action.....									
	Drove Around or Thru Gate		Stopped and Then Proceeded		Did Not Stop		Other		Total	
	kld	inj	kld	inj	kld	inj	kld	inj	kld	inj
Gates	37	177	---	28	4	57	7	49	48	311
Cantilever Flashing Light	---	---	2	7	26	198	6	46	34	251
Standard Flashing Light	---	---	15	65	212	998	22	213	249	1,276
Wis Wags	---	---	---	---	18	66	1	8	19	74
Hwy. Traffic Signals	---	---	---	2	9	39	2	23	11	64
Audible	---	---	---	2	8	26	2	6	10	34
Crossbucks	---	---	29	101	367	1,758	62	452	458	2,311
Stop Signs	---	---	---	5	5	47	2	9	7	61
Watchman	---	---	---	---	---	3	---	---	---	3
Flashed by crew	---	---	---	---	---	17	---	2	---	19
Other	---	---	---	1	5	15	---	4	5	20
None	---	---	---	3	4	18	1	10	5	31
Unknown	---	---	---	---	---	---	---	---	---	---
TOTAL...	37	177	46	214	658	3,242	105	822	846	4,455

TABLE 10 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY TYPE OF CROSSING PROTECTION, 1977

Crossing Protection	Killed	Injured	Accidents	Number Of Crossings	Devices Operating		not reported	Struck ....by train....		Ran ....into train..	
					Yes	No		Daylight	Dark	Daylight	Dark
Gates	48	311	1,013	12,932	967	32	14	406	398	76	133
Flashing lights	283	1,527	3,972	34,277	3,849	71	52	1,788	1,020	576	588
Hwy Sgnl WW Bells	40	172	560	3,310	464	4	92	247	156	84	73
Crossbucks	458	2,311	5,780	140,446	---	---	5,780	2,764	1,337	788	891
Stop signs	7	61	168	3,550	---	---	168	86	42	18	22
Other passive	5	42	156	8,642	---	---	156	66	45	13	32
None	5	31	200	15,197	---	---	200	99	74	11	16
Total	846	4,455	11,849	218,354	5,280	107	6,462	5,456	3,072	1,566	1,755

Note: Hwy sgnl - Highway Traffic Signals
WW - Wiswags

TABLE 11 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
ACCORDING TO LOCATION OF CROSSING PROTECTION, 1977

Crossing protection	Number of Accidents	Occurring		Struck.....by train.....		Ran....into train....	
		Daylight	Dark	Daylight	Dark	Daylight	Dark
Automatic, both sides	5,247	3,010	2,237	2,316	1,491	694	746
Automatic, side of approach	227	125	102	93	64	32	38
Automatic, opposite side	48	28	20	21	13	7	7
Automatic, side not reported	23	14	9	11	6	3	3
Manual, both sides	22	11	11	10	8	1	3
Manual, side of approach	35	14	21	12	11	2	10
Manual, opposite side	3	2	1	2	---	---	1
Manual, side not reported	26	13	13	12	7	1	6
Other, both sides	4,990	3,064	1,926	2,365	1,153	699	773
Other, side of approach	731	442	289	357	173	85	116
Other, opposite side	253	163	90	141	54	22	36
Other, side not reported	44	26	18	17	18	9	---
None	200	110	90	99	74	11	16
Not reported	---	---	---	---	---	---	---
Total	11,849	7,022	4,827	5,456	3,072	1,566	1,755

TABLE 12 CROSSING ACCIDENTS/INCIDENTS DURING DUSK AND DARK HOURS
ACCORDING TO ILLUMINATION OF CROSSING, 1977

Crossing Illumination	Number of Accidents	Struck by Train	Ran into Train	....Persons....	
				Killed	Injured
Lighted	1,800	1,123	677	97	629
Not-lighted	1,949	1,257	692	141	771
Not reported	1,078	692	386	55	383
Total	4,827	3,072	1,755	293	1,783

TABLE 13 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
ACCORDING TO SPEED AND TYPE OF TRAIN INVOLVED, 1977

Train Speed (MPH)	Total	Struck By Train		Ran Into Train		Freight		Passenger		Yard(Switching) And Other	
		Daylight	Dark	Daylight	Dark	#	Pct.	#	Pct.	#	Pct.
Unknown	133	14	15	25	79	89	1.0	2	0.4	42	1.3
Standing	245	---	---	40	205	152	1.8	1	0.2	92	2.9
1-9	3,678	1,468	1,032	462	716	1,558	18.7	29	6.3	2,091	67.9
10-19	2,339	1,079	601	314	345	1,724	20.7	55	12.1	560	18.1
20-29	2,152	1,105	567	291	189	1,912	22.9	75	16.5	165	5.3
30-39	1,600	838	413	213	136	1,451	17.4	67	14.7	82	2.6
40-49	1,086	593	286	151	56	996	11.9	55	12.1	35	1.1
50-59	419	250	104	44	21	358	4.3	51	11.2	10	0.3
60-69	119	69	31	14	5	67	0.8	51	11.2	1	0.0
70-79	68	37	18	10	3	9	0.1	59	12.9	---	0.0
80-89	8	3	4	1	---	---	0.0	8	1.7	---	0.0
90 and over	2	---	1	1	---	1	0.0	1	0.2	---	0.0
TOTAL	11,849	5,456	3,072	1,566	1,755	8,317	100.0	454	100.0	3,078	100.0

TABLE 14 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
ACCORDING TO WEATHER CONDITIONS, 1977

Weather	Total Accidents		Struck By Train		Ran into Train	
	#	Pct.	Daylight	Dark	Daylight	Dark
Clear	7,699	64.9	3,771	1,828	1,037	1,063
Cloudy	2,521	21.2	1,110	727	284	400
Rain	965	8.1	343	335	139	148
Fog	192	1.6	58	44	28	62
Sleet	18	0.1	6	6	2	4
Snow	436	3.6	160	126	75	75
Not Reported	18	0.1	8	6	1	3
Total	11,849	100.0	5,456	3,072	1,566	1,755

TABLE 15 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
ACCORDING TO NUMBER OF CARS IN TRAIN AND KIND OF TRAIN, 1977

Number of cars in train	Freight		Passenger		Yard (Switching) and others		Total		Number ...occurring in....	
	#	PCT.	#	PCT.	#	PCT.	#	PCT.	Daylight	Dark
Not reported/all locos	46	0.5	---	0.0	174	5.6	220	1.8	122	98
None	162	1.9	36	7.9	879	28.5	1,077	9.0	613	464
1-9	1,688	20.2	282	62.1	1,229	39.9	3,199	26.9	2,140	1,059
10-19	923	11.0	111	24.4	422	13.7	1,456	12.2	878	578
20-29	688	8.2	3	0.6	165	5.3	856	7.2	502	354
30-39	515	6.1	8	1.7	84	2.7	607	5.1	339	268
40-49	523	6.2	8	1.7	45	1.4	576	4.8	332	244
50-59	521	6.2	1	0.2	28	0.9	550	4.6	300	250
60-69	543	6.5	1	0.2	12	0.3	556	4.6	318	238
70-79	573	6.8	2	0.4	11	0.3	586	4.9	337	249
80-89	489	5.8	2	0.4	6	0.1	497	4.1	267	230
90-99	492	5.9	---	0.0	6	0.1	498	4.2	264	234
100-109	448	5.3	---	0.0	5	0.1	453	3.8	242	211
110-119	237	2.8	---	0.0	2	0.0	239	2.0	133	106
120-129	187	2.2	---	0.0	3	0.0	190	1.6	95	95
130-139	113	1.3	---	0.0	3	0.0	116	0.9	63	53
140-149	76	0.9	---	0.0	2	0.0	78	0.6	36	42
150 and over	93	1.1	---	0.0	2	0.0	95	0.8	41	54
Total....	8,317	100.0	454	100.0	3,078	100.0	11,849	100.0	7,022	4,827

TABLE 16 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
ACCORDING TO SPEED OF MOTOR VEHICLE, 1977

Speed of Vehicle	Struck by Train												Ran into Train					
Total Accidents.....			Daylight.....			Dark.....			Daylight.....		Dark.....		
	#	Pct.	Kld.	Inj.	#	Kld.	Inj.	#	Kld.	Inj.	#	Kld.	Inj.	#	Kld.	Inj.		
Unknown	2,449	20.7	174	850	1,036	87	363	695	44	169	295	19	133	423	24	185		
Standing	2,096	17.7	63	418	1,327	45	308	769	18	110	---	---	---	---	---	---		
1 - 9	2,100	17.7	107	633	1,070	75	389	480	31	163	277	1	34	273	---	47		
10 - 19	2,108	17.8	142	822	961	103	423	502	27	198	330	4	87	315	8	114		
20 - 29	1,413	11.9	102	706	568	62	289	343	30	194	224	8	103	278	2	120		
30 - 23	939	7.8	99	518	290	44	167	183	32	103	208	9	104	242	14	144		
40 - 49	324	3.6	74	257	128	33	75	62	13	37	122	12	68	120	16	77		
50 - 59	256	2.2	55	199	64	15	38	32	8	23	86	22	68	74	10	70		
60 And over	72	0.6	30	52	12	6	6	6	1	2	24	8	17	30	15	27		
Total	11,849	100.0	846	4,455	5,456	470	2,058	3,072	204	999	1,566	83	614	1,755	89	784		

TABLE 17-A RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING
MOTOR VEHICLES BY STATE, 1977

State	Accidents		Killed		Injured	
	#	Pct.	#	Pct.	#	Pct.
Alabama	364	3.0	24	2.8	120	2.6
Alaska	19	0.1	1	0.1	5	0.1
Arizona	52	0.4	1	0.1	17	0.3
Arkansas	242	2.0	15	1.7	130	2.9
California	578	4.8	37	4.3	186	4.1
Colorado	142	1.1	12	1.4	43	0.9
Connecticut	20	0.1	2	0.2	7	0.1
Delaware	13	0.1	1	0.1	8	0.1
District of Columbia	1	0.0	---	0.0	---	0.0
Florida	374	3.1	48	5.6	174	3.9
Georgia	390	3.2	24	2.8	136	3.0
Hawaii	---	0.0	---	0.0	---	0.0
Idaho	77	0.6	8	0.9	39	0.8
Illinois	838	7.0	65	7.6	339	7.6
Indiana	807	6.8	72	8.5	282	6.3
Iowa	285	2.4	16	1.8	97	2.1
Kansas	245	2.0	22	2.6	119	2.6
Kentucky	266	2.2	14	1.6	63	1.4
Louisiana	409	3.4	23	2.7	175	3.9
Maine	64	0.5	1	0.1	15	0.3
Maryland	68	0.5	8	0.9	26	0.5
Massachusetts	51	0.4	---	0.0	12	0.2
Michigan	559	4.7	35	4.1	230	5.1
Minnesota	286	2.4	24	2.8	85	1.9
Mississippi	241	2.0	8	0.9	118	2.6
Missouri	265	2.2	21	2.4	101	2.2
Montana	58	0.4	3	0.3	17	0.3
Nebraska	163	1.3	13	1.5	62	1.3
Nevada	11	0.0	1	0.1	3	0.0
New Hampshire	19	0.1	1	0.1	5	0.1
New Jersey	89	0.7	7	0.8	49	1.0
New Mexico	21	0.1	3	0.3	11	0.2
New York	146	1.2	13	1.5	47	1.0
North Carolina	347	2.9	30	3.5	138	3.0
North Dakota	83	0.7	11	1.3	10	0.2
Ohio	847	7.1	51	6.0	319	7.1
Oklahoma	234	1.9	26	3.0	95	2.1
Oregon	146	1.2	9	1.0	36	0.8
Pennsylvania	264	2.2	22	2.6	54	1.2
Rhode Island	1	0.0	---	0.0	---	0.0
South Carolina	252	2.1	27	3.1	123	2.7
South Dakota	51	0.4	1	0.1	12	0.2
Tennessee	270	2.2	15	1.7	81	1.8
Texas	1,165	9.8	63	7.4	511	11.4
Utah	71	0.5	4	0.4	34	0.7
Vermont	19	0.1	---	0.0	10	0.2
Virginia	131	1.1	6	0.7	54	1.2
Washington	216	1.8	23	2.7	69	1.5
West Virginia	124	1.0	6	0.7	42	0.9
Wisconsin	435	3.6	28	3.3	138	3.0
Wyoming	28	0.2	1	0.1	8	0.1
Unknown	2	0.0	---	0.0	---	0.0
Total.....	11,849	100.0	846	100.0	4,455	100.0

TABLE 17-B NATURE OF ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE, 1977

State	.....Daylight.....			.....Dark.....		
	Accidents	Killed	Injured	Accidents	Killed	Injured
Alabama	237	20	80	127	4	40
Alaska	10	1	1	9	---	4
Arizona	33	1	8	19	---	9
Arkansas	154	12	78	88	3	52
California	318	16	103	260	21	83
Colorado	81	7	25	61	5	18
Connecticut	10	1	4	10	1	3
Delaware	5	---	3	8	1	5
District of Columbia	1	---	---	---	---	---
Florida	250	26	118	124	22	56
Georgia	246	19	98	144	5	38
Hawaii	---	---	---	---	---	---
Idaho	51	7	23	26	1	16
Illinois	445	39	186	393	26	153
Indiana	462	48	168	345	24	114
Iowa	159	8	59	126	8	38
Kansas	140	17	67	105	5	52
Kentucky	176	11	37	90	3	26
Louisiana	268	15	105	141	8	70
Maine	53	1	11	11	---	4
Maryland	37	4	15	31	4	11
Massachusetts	29	---	6	22	---	6
Michigan	344	19	158	215	16	72
Minnesota	158	16	35	128	8	50
Mississippi	149	6	69	92	2	49
Missouri	167	17	62	98	4	39
Montana	31	2	10	27	1	7
Nebraska	99	10	31	64	3	31
Nevada	6	1	2	5	---	1
New Hampshire	13	---	3	6	1	2
New Jersey	48	5	28	41	2	21
New Mexico	12	3	9	9	---	2
New York	72	8	26	74	5	21
North Carolina	231	19	99	116	11	39
North Dakota	49	8	8	34	3	2
Ohio	441	37	179	406	14	140
Oklahoma	128	20	46	106	6	49
Oregon	84	8	21	62	1	15
Pennsylvania	139	15	29	125	7	25
Rhode Island	---	---	---	1	---	---
South Carolina	171	16	92	81	11	31
South Dakota	31	1	9	20	---	3
Tennessee	174	11	60	96	4	21
Texas	708	35	298	457	28	213
Utah	48	3	25	23	1	9
Vermont	15	---	7	4	---	3
Virginia	71	2	31	60	4	23
Washington	129	15	40	87	8	29
West Virginia	61	4	16	63	2	26
Wisconsin	258	18	78	177	10	60
Wyoming	19	1	6	9	---	2
Unknown	1	---	---	1	---	---
Total.....	7,022	553	2,672	4,827	293	1,783

TABLE 18 RAIL-HIGHWAY ACCIDENTS/INCIDENTS BY STATE AND TYPE OF MOTOR VEHICLE INVOLVED, 1977

State	.....Total.....			....Automobiles....			.....Buses.....			....Motortrucks....			....Motorcycles....		
	#	kld	inj	#	kld	inj	#	kld	inj	#	kld	inj	#	kld	inj
Alabama	364	24	120	271	14	96	---	---	---	90	8	24	3	2	---
Alaska	19	1	5	16	---	5	---	---	---	2	---	---	1	1	---
Arizona	52	1	17	34	---	13	---	---	---	16	1	4	2	---	---
Arkansas	242	15	130	156	11	89	2	---	4	84	4	37	---	---	---
California	578	37	186	406	26	139	2	---	3	167	10	44	3	1	---
Colorado	142	12	43	88	8	32	---	---	---	53	4	11	1	---	---
Connecticut	20	2	7	18	2	6	---	---	---	2	---	1	---	---	---
Delaware	13	1	6	10	---	8	---	---	---	2	---	---	1	1	---
District of Columbia	1	---	---	1	---	---	---	---	---	---	---	---	---	---	---
Florida	374	48	174	268	29	124	2	---	2	97	18	40	7	1	8
Georgia	390	24	136	256	14	101	1	---	---	131	9	35	2	1	---
Hawaii	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Idaho	77	8	39	51	4	24	---	---	---	26	4	15	---	---	---
Illinois	838	65	339	644	55	271	6	1	18	184	9	49	4	---	1
Indiana	807	72	282	621	58	221	2	---	1	178	11	57	6	3	3
Iowa	285	16	97	201	8	62	---	---	---	81	7	34	3	1	1
Kansas	245	22	119	154	11	85	1	---	---	89	11	34	1	---	---
Kentucky	266	14	63	203	12	45	---	---	---	62	2	18	1	---	---
Louisiana	409	23	175	296	13	122	1	---	3	110	9	49	2	1	1
Maine	64	1	15	47	1	12	---	---	---	17	---	3	---	---	---
Maryland	68	8	26	40	7	14	---	---	---	28	1	12	---	---	---
Massachusetts	51	---	12	44	---	11	---	---	---	6	---	1	1	---	---
Michigan	559	35	230	440	23	157	2	4	8	110	7	59	7	1	6
Minnesota	286	24	85	204	20	60	---	---	---	78	3	22	4	1	3
Mississippi	241	8	118	179	3	89	1	---	7	60	4	22	1	1	---
Missouri	265	21	101	190	16	77	---	---	---	73	3	24	2	2	---
Montana	58	3	17	29	2	7	---	---	---	27	1	8	2	---	2
Nebraska	163	13	62	110	7	43	---	---	---	52	5	19	1	1	---
Nevada	11	1	3	5	---	1	---	---	---	6	1	2	---	---	---
New Hampshire	19	1	5	14	---	3	---	---	---	4	1	1	1	---	1
New Jersey	89	7	49	66	6	29	---	---	---	22	1	20	1	---	---
New Mexico	21	3	11	15	---	8	---	---	---	6	3	3	---	---	---
New York	146	13	47	118	12	42	---	---	---	26	1	5	2	---	---
North Carolina	347	30	138	241	22	106	1	---	---	99	8	31	6	---	1
North Dakota	83	11	10	46	4	4	---	---	---	37	7	6	---	---	---
Ohio	847	51	319	632	38	239	---	---	---	213	12	79	2	1	1
Oklahoma	234	26	95	148	13	64	---	---	---	80	10	28	6	3	3
Oregon	146	9	36	92	4	20	---	---	---	54	5	16	---	---	---
Pennsylvania	264	22	54	198	13	44	1	---	---	64	9	10	1	---	---
Rhode Island	1	---	---	1	---	---	---	---	---	---	---	---	---	---	---
South Carolina	252	27	123	201	18	94	---	---	---	51	9	29	---	---	---
South Dakota	51	1	12	36	1	11	1	---	---	14	---	1	---	---	---
Tennessee	270	15	81	204	11	61	---	---	---	64	4	18	2	---	2
Texas	1,165	63	511	831	40	380	5	1	8	319	20	122	10	2	1
Utah	71	4	34	32	3	17	---	---	---	38	1	17	1	---	---
Vermont	19	---	10	13	---	6	1	---	1	5	---	3	---	---	---
Virginia	131	6	54	99	4	45	1	---	---	31	2	9	---	---	---
Washington	216	23	69	136	18	34	---	---	---	77	5	33	3	---	2
West Virginia	124	6	42	81	6	32	---	---	---	43	---	10	---	---	---
Wisconsin	435	28	138	335	20	108	2	---	1	95	8	27	3	---	2
Wyoming	28	1	8	12	---	4	---	---	---	16	1	4	---	---	---
Unknown	2	---	---	2	---	---	---	---	---	---	---	---	---	---	---
Total.....	11,849	846	4,455	8,535	577	3,265	32	6	56	3,189	239	1,096	93	24	38

TABLE 19 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY STATE AND MONTH, 1977

State	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Alabama	42	38	23	21	26	25	22	30	27	32	35	43	364
Alaska	4	---	1	1	---	3	2	3	---	1	3	1	19
Arizona	6	6	5	1	2	5	4	5	---	4	8	6	52
Arkansas	22	17	26	21	22	14	23	13	16	26	16	26	242
California	46	42	51	41	40	47	49	57	48	56	44	57	578
Colorado	6	20	13	11	8	13	8	10	11	17	11	14	142
Connecticut	1	3	2	2	1	---	1	---	1	1	3	5	20
Delaware	1	1	2	---	1	2	1	---	1	2	---	2	13
District of Columbia	---	---	---	---	---	---	---	1	---	---	---	---	1
Florida	27	44	35	34	28	20	29	38	26	32	28	33	374
Georgia	44	25	34	33	27	29	28	22	30	37	31	50	390
Hawaii	---	---	---	---	---	---	---	---	---	---	---	---	---
Idaho	11	12	6	6	4	3	7	4	3	11	5	5	77
Illinois	117	88	61	54	54	63	49	48	58	67	84	95	838
Indiana	99	63	52	49	43	59	49	49	63	85	86	110	807
Iowa	40	17	22	10	9	18	21	19	30	28	27	44	285
Kansas	34	17	8	16	16	19	15	17	17	25	28	33	245
Kentucky	37	20	24	15	17	26	27	14	22	19	27	18	266
Louisiana	38	35	28	27	32	29	31	45	26	31	43	44	409
Maine	14	7	5	7	2	4	3	2	3	8	1	8	64
Maryland	8	4	5	1	7	6	6	4	3	10	7	7	68
Massachusetts	3	8	3	---	3	4	5	2	5	4	4	10	51
Michigan	80	57	47	43	33	41	32	30	44	46	49	57	559
Minnesota	38	27	12	17	18	16	18	26	25	15	36	38	286
Mississippi	25	16	16	24	15	16	25	19	10	17	30	28	241
Missouri	35	16	19	9	19	17	12	22	22	35	25	34	265
Montana	9	2	6	3	4	2	2	4	5	5	6	10	58
Nebraska	21	15	17	7	12	11	9	12	8	22	14	15	163
Nevada	2	1	---	---	1	2	2	2	---	1	---	---	11
New Hampshire	3	1	---	---	1	1	1	2	3	2	1	4	19
New Jersey	15	3	2	8	4	8	6	8	9	7	8	11	89
New Mexico	3	3	1	1	2	2	1	5	1	---	---	2	21
New York	20	18	12	6	9	11	4	7	9	19	15	16	146
North Carolina	56	35	34	22	14	26	17	27	30	27	31	28	347
North Dakota	13	5	2	3	3	6	3	9	4	11	12	12	83
Ohio	106	72	67	54	50	39	56	58	64	86	95	100	847
Oklahoma	17	19	15	24	12	14	20	8	16	31	28	30	234
Oregon	10	16	14	12	11	9	5	14	12	17	13	13	146
Pennsylvania	35	25	21	20	18	26	16	14	18	21	21	29	264
Rhode Island	---	---	---	---	---	---	---	---	---	---	1	---	1
South Carolina	24	25	13	13	19	16	23	24	17	18	30	30	252
South Dakota	3	5	9	1	3	6	4	1	3	1	8	7	51
Tennessee	32	31	12	13	16	22	19	20	22	22	29	32	270
Texas	115	91	86	106	76	82	83	116	83	92	103	132	1165
Utah	6	6	11	3	3	6	2	7	8	5	6	8	71
Vermont	4	2	---	---	2	1	---	1	---	1	2	6	19
Virginia	14	8	10	5	12	4	11	10	10	15	16	16	131
Washington	15	11	22	24	14	15	16	21	17	19	19	23	216
West Virginia	10	11	9	4	9	12	8	5	8	17	18	13	124
Wisconsin	60	46	29	28	20	23	23	30	32	47	42	55	435
Wyoming	1	2	4	1	1	3	2	5	2	1	4	2	28
Unknown	1	---	---	1	---	---	---	---	---	---	---	---	2
Total.....	1373	1036	896	802	743	826	800	890	872	1096	1153	1362	11849

TABLE 20-A CASUALTIES IN ALL TYPES OF RAIL-HIGHWAY
ACCIDENTS/INCIDENTS BY STATE, 1977

State	Accidents	Killed		Injured		Total Casualties	
		#	Pct.	#	Pct.	#	Pct.
Alabama	369	25	2.6	124	2.6	149	2.6
Alaska	23	1	0.1	7	0.1	8	0.1
Arizona	58	5	0.5	20	0.4	25	0.4
Arkansas	247	15	1.5	137	2.9	152	2.7
California	617	45	4.7	210	4.5	255	4.5
Colorado	146	12	1.2	44	0.9	56	1.0
Connecticut	21	3	0.3	7	0.1	10	0.1
Delaware	13	1	0.1	8	0.1	9	0.1
District of Columbia	1	---	0.0	---	0.0	---	0.0
Florida	388	53	5.6	184	3.9	237	4.2
Georgia	402	31	3.2	141	3.0	172	3.0
Hawaii	---	---	0.0	---	0.0	---	0.0
Idaho	82	9	0.9	40	0.8	49	0.8
Illinois	900	81	8.5	359	7.7	440	7.8
Indiana	831	79	8.3	289	6.2	368	6.5
Iowa	302	18	1.9	99	2.1	117	2.0
Kansas	256	24	2.5	124	2.6	148	2.6
Kentucky	271	15	1.5	63	1.3	78	1.3
Louisiana	418	23	2.4	179	3.8	202	3.6
Maine	65	2	0.2	15	0.3	17	0.3
Maryland	68	8	0.8	26	0.5	34	0.6
Massachusetts	53	---	0.0	13	0.2	13	0.2
Michigan	588	36	3.8	248	5.3	284	5.0
Minnesota	298	25	2.6	93	2.0	118	2.1
Mississippi	250	9	0.9	127	2.7	136	2.4
Missouri	274	23	2.4	102	2.1	125	2.2
Montana	60	3	0.3	17	0.3	20	0.3
Nebraska	166	14	1.4	63	1.3	77	1.3
Nevada	15	4	0.4	4	0.0	8	0.1
New Hampshire	19	1	0.1	5	0.1	6	0.1
New Jersey	90	8	0.8	49	1.0	57	1.0
New Mexico	25	4	0.4	14	0.3	18	0.3
New York	152	16	1.6	49	1.0	65	1.1
North Carolina	357	33	3.4	147	3.1	180	3.2
North Dakota	87	12	1.2	11	0.2	23	0.4
Ohio	865	56	5.9	328	7.0	384	6.8
Oklahoma	244	27	2.8	100	2.1	127	2.2
Oregon	157	10	1.0	37	0.7	47	0.8
Pennsylvania	268	24	2.5	54	1.1	78	1.3
Rhode Island	1	---	0.0	---	0.0	---	0.0
South Carolina	261	27	2.8	127	2.7	154	2.7
South Dakota	54	1	0.1	12	0.2	13	0.2
Tennessee	277	18	1.9	82	1.7	100	1.7
Texas	1,193	69	7.3	517	11.1	586	10.4
Utah	74	4	0.4	37	0.7	41	0.7
Vermont	19	---	0.0	10	0.2	10	0.1
Virginia	133	7	0.7	55	1.1	62	1.1
Washington	225	24	2.5	74	1.5	98	1.7
West Virginia	127	7	0.7	42	0.9	49	0.8
Wisconsin	458	31	3.2	148	3.1	179	3.2
Wyoming	29	1	0.1	8	0.1	9	0.1
Unknown	2	---	0.0	---	0.0	---	0.0
Total.....	12,299	944	100.0	4,649	100.0	5,593	100.0

TABLE 20-B CASUALTIES IN RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY STATE AND NUMBER OF AUTOMOBILES REGISTERED, 1977

State	Total Accidents	Killed		Injured		Total		Vehicles Registered (000)*	Casualties per 10,000 Registrations		
		#	Pct.	#	Pct.	#	Pct.		Killed	Injured	Total
Alabama	364	24	2.8	120	2.6	144	2.7	2,723	0.08	0.44	0.52
Alaska	19	1	0.1	5	0.1	6	0.1	270	0.03	0.18	0.22
Arizona	52	1	0.1	17	0.3	18	0.3	1,618	0.00	0.10	0.11
Arkansas	242	15	1.7	130	2.9	145	2.7	1,452	0.10	0.89	1.00
California	578	37	4.3	186	4.1	223	4.2	15,622	0.02	0.11	0.14
Colorado	142	12	1.4	43	0.9	55	1.0	2,200	0.05	0.19	0.25
Connecticut	20	2	0.2	7	0.1	9	0.1	2,152	0.00	0.03	0.04
Delaware	13	1	0.1	8	0.1	9	0.1	381	0.02	0.21	0.23
District of Columbia	1	---	0.0	---	0.0	---	0.0	262	0.00	0.00	0.00
Florida	374	48	5.6	174	3.9	222	4.1	6,258	0.07	0.27	0.35
Georgia	390	24	2.8	136	3.0	160	3.0	3,591	0.06	0.37	0.44
Hawaii	---	---	0.0	---	0.0	---	0.0	525	0.00	0.00	0.00
Idaho	77	8	0.9	39	0.8	47	0.8	762	0.10	0.51	0.61
Illinois	838	65	7.6	339	7.6	404	7.6	7,145	0.09	0.47	0.56
Indiana	807	72	8.5	282	6.3	354	6.6	3,731	0.19	0.75	0.94
Iowa	285	16	1.8	97	2.1	113	2.1	2,380	0.06	0.40	0.47
Kansas	245	22	2.6	119	2.6	141	2.6	2,007	0.11	0.59	0.70
Kentucky	266	14	1.6	63	1.4	77	1.4	2,489	0.05	0.25	0.31
Louisiana	409	23	2.7	175	3.9	198	3.7	2,476	0.09	0.70	0.80
Maine	64	1	0.1	15	0.3	16	0.3	750	0.01	0.20	0.21
Maryland	68	8	0.9	26	0.5	34	0.6	2,649	0.03	0.09	0.12
Massachusetts	51	---	0.0	12	0.2	12	0.2	3,363	0.00	0.03	0.03
Michigan	559	35	4.1	230	5.1	265	4.9	6,241	0.05	0.36	0.42
Minnesota	286	24	2.8	85	1.9	109	2.0	2,956	0.08	0.28	0.36
Mississippi	241	8	0.9	118	2.6	126	2.3	1,524	0.05	0.77	0.82
Missouri	265	21	2.4	101	2.2	122	2.3	3,144	0.06	0.32	0.38
Montana	58	3	0.3	17	0.3	20	0.3	706	0.04	0.24	0.28
Nebraska	163	13	1.5	62	1.3	75	1.4	1,257	0.10	0.49	0.60
Nevada	11	1	0.1	3	0.0	4	0.0	546	0.01	0.05	0.07
New Hampshire	19	1	0.1	5	0.1	6	0.1	626	0.01	0.08	0.09
New Jersey	89	7	0.8	49	1.0	56	1.0	4,489	0.01	0.10	0.12
New Mexico	21	3	0.3	11	0.2	14	0.2	943	0.03	0.11	0.14
New York	146	13	1.5	47	1.0	60	1.1	7,845	0.01	0.05	0.07
North Carolina	347	30	3.5	138	3.0	168	3.1	4,175	0.07	0.33	0.40
North Dakota	83	11	1.3	10	0.2	21	0.3	606	0.18	0.16	0.35
Ohio	847	51	6.0	319	7.1	370	6.9	7,749	0.06	0.41	0.47
Oklahoma	234	26	3.0	95	2.1	121	2.2	2,405	0.10	0.39	0.50
Oregon	146	9	1.0	36	0.8	45	0.8	1,948	0.04	0.18	0.23
Pennsylvania	264	22	2.6	54	1.2	76	1.4	8,312	0.02	0.06	0.09
Rhode Island	1	---	0.0	---	0.0	---	0.0	624	0.00	0.00	0.00
South Carolina	252	27	3.1	123	2.7	150	2.8	1,896	0.14	0.65	0.79
South Dakota	51	1	0.1	12	0.2	13	0.2	587	0.01	0.20	0.22
Tennessee	270	15	1.7	81	1.8	96	1.8	2,680	0.05	0.30	0.35
Texas	1,165	63	7.4	511	11.4	574	10.8	9,759	0.06	0.52	0.58
Utah	71	4	0.4	34	0.7	38	0.7	961	0.04	0.35	0.39
Vermont	19	---	0.0	10	0.2	10	0.1	337	0.00	0.30	0.30
Virginia	131	6	0.7	54	1.2	60	1.1	3,330	0.01	0.16	0.18
Washington	216	23	2.7	69	1.5	92	1.7	3,007	0.07	0.23	0.30
West Virginia	124	6	0.7	42	0.9	48	0.9	1,074	0.05	0.39	0.44
Wisconsin	435	28	3.3	138	3.0	166	3.1	2,794	0.10	0.49	0.59
Wyoming	28	1	0.1	8	0.1	9	0.1	391	0.02	0.20	0.23
Unknown	2	---	0.0	---	0.0	---	0.0	---	0.00	0.00	0.00
Total.....	11,849	846	100.0	4,455	100.0	5,301	100.0	147,718	0.01	0.36	0.36

*NOTE: Estimated figures supplied by Federal Highway Administration

TABLE 21 CASUALTIES IN ALL TYPES OF RAIL-HIGHWAY ACCIDENTS/INCIDENTS
BY CIRCUMSTANCE, TYPE OF HIGHWAY USER AND TYPE PERSON INVOLVED, 1977

	---EOD---		---ENOD---		---PSGR---		---NONT---		---TRES---		---CONT---		---TOTAL---		Total Acci- dents
	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	
S T R U C K B Y T R A I N															
Automobile	1	37	---	1	---	3	450	2,106	26	87	---	---	477	2,234	6,102
Truck	1	30	---	1	---	---	143	495	2	17	---	---	146	543	1,645
Truck-Trailer	7	69	---	---	---	4	31	146	1	4	---	---	39	223	726
Bus	---	1	---	---	---	---	6	27	---	16	---	---	6	44	23
School Bus	---	1	---	---	---	---	---	11	---	---	---	---	---	12	8
Motorcycle	---	---	---	---	---	---	6	1	---	---	---	---	6	1	24
Pedestrian	---	1	---	---	---	---	46	26	22	13	---	---	68	40	107
Other	1	12	---	---	---	---	16	87	2	8	---	---	19	107	259
Total...	10	151	---	2	---	7	698	2,899	53	145	---	---	761	3,204	8,894
R A N I N T O T R A I N															
Automobile	---	15	---	---	---	---	97	964	3	52	---	---	100	1,031	2,433
Truck	---	18	---	---	---	4	39	234	---	7	---	---	39	263	685
Truck-Trailer	---	8	---	---	---	13	15	46	---	---	---	---	15	67	133
Bus	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
School Bus	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Motorcycle	---	---	---	---	---	---	18	33	---	4	---	---	18	37	69
Pedestrian	---	---	---	---	---	---	1	2	1	2	---	---	2	4	7
Other	1	1	---	---	---	---	6	39	2	3	---	---	9	43	77
Total...	1	42	---	---	---	17	176	1,318	6	68	---	---	183	1,445	3,405
G R A N D T O T A L															
Automobile	1	52	---	1	---	3	547	3,070	29	139	---	---	577	3,265	8,535
Truck	1	48	---	1	---	4	182	729	2	24	---	---	185	806	2,330
Truck-Trailer	7	77	---	---	---	17	46	192	1	4	---	---	54	290	859
Bus	---	1	---	---	---	---	6	27	---	16	---	---	6	44	24
School Bus	---	1	---	---	---	---	---	11	---	---	---	---	---	12	8
Motorcycle	---	---	---	---	---	---	24	34	---	4	---	---	24	38	93
Pedestrian	---	1	---	---	---	---	47	28	23	15	---	---	70	44	114
Other	2	13	---	---	---	---	22	126	4	11	---	---	28	150	336
Total...	11	193	---	2	---	24	874	4,217	59	213	---	---	944	4,649	12,299

Casualties are arrived at by matching Grade Crossing Reports
with corresponding Casualty Report(s) By report number

EOD = Employee on duty
ENOD = Employee not on duty
PSGR = Passengers on train
NONT = Nontraspasgers
TRES = Trespassers
CONT = Contractor employees

TABLE 22 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY KIND OF CROSSING PROTECTION IN 1977

Railroad	Gates	Flashings Lights	Hwy Signals Wigwags Bells	Cross- bucks	Stop Signs	Other Passive	None	Total
CLASS I RAILROADS (LINE-HAUL)								
EASTERN DISTRICT								
Amtrak	41	78	11	113	2	---	2	247
Amtrak (Northeast Corridor)	2	2	---	2	---	---	1	7
Baltimore and Ohio Railroad Company	15	132	16	211	---	5	2	381
Benson and Aroostook Railroad Company	---	7	---	4	1	---	---	12
Bessemer and Lake Erie Railroad Company	---	---	---	5	---	---	---	5
Boston and Maine Corporation	4	32	1	11	---	3	4	55
Canadian Pacific Lines in Maine	---	2	---	---	---	---	---	2
Central Vermont Railroad Incorporated	---	4	---	4	---	---	---	8
Chesapeake and Ohio Railway Company	23	132	2	181	2	5	5	350
Chicago and Illinois Midland	---	3	---	2	---	---	---	5
Consolidated Rail Corporation	175	592	38	535	16	34	19	1,409
Delaware and Hudson Railway Company	1	2	---	2	---	---	---	5
Detroit Toledo Shore Line Railroad Company	2	2	---	2	---	---	---	6
Detroit, Toledo and Ironton Railroad Company	5	9	1	19	---	1	3	38
Elsin, Joliet and Eastern Railway Company	6	7	---	10	---	---	---	23
Grand Trunk Western Railroad Company	32	43	---	41	---	---	3	119
Illinois Terminal Railroad Company	1	16	---	9	---	---	---	26
Long Island Railroad Company	12	1	---	1	---	1	---	15
Maine Central Railroad Company	2	24	1	16	---	---	---	43
Missouri-Illinois Railroad Company	---	---	---	3	---	---	---	3
Norfolk and Western Railway Company	55	220	27	242	---	2	3	549
Pittsburgh and Lake Erie Railroad Company	---	---	---	7	---	---	---	7
Richmond Fredericksburg and Potomac Railroad	1	---	---	1	---	---	---	2
Western Maryland Railway Company	---	8	---	12	1	---	---	21
SUBTOTAL, EASTERN DISTRICT	377	1,316	97	1,433	22	51	42	3,338
SOUTHERN DISTRICT								
Alabama Great Southern Railroad Company	4	18	10	26	---	---	1	59
Auto-train Corporation	2	8	---	11	---	---	---	21
Central of Georgia Railway Company	1	14	9	47	---	2	3	76
Cincinnati, New Orleans & Texas Pac. Rwy	---	9	2	12	---	---	1	24
Clinchfield Railroad Company	1	3	1	5	---	---	2	12
Florida East Coast Railway Company	31	17	---	14	1	---	---	64
Georgia Railroad Lessee Organization	1	7	1	24	---	---	1	34
Georgia Southern and Florida Railway Co	2	4	4	18	---	---	1	29
Illinois Central Gulf Railroad Company	35	148	13	263	47	5	10	521
Louisville and Nashville Railroad Company	34	190	44	278	14	15	21	596
Norfolk Southern Railway Company	1	4	---	27	---	2	1	35
Seaboard Coast Line Railroad Company	31	197	5	580	1	---	4	818
Southern Railway Company	24	174	37	280	---	5	15	535
SUBTOTAL, SOUTHERN DISTRICT	167	793	126	1,585	63	30	60	2,824
WESTERN DISTRICT								
Atchison Topeka and Santa Fe Railway Co	87	207	31	260	3	---	3	591
Burlington Northern Inc	42	172	27	425	18	6	16	706
Chicago and North Western, Transportati	61	132	39	194	---	3	13	442
Chicago, Milw. St. Paul and Pacific R.R	32	126	18	181	5	8	7	377
Chicago, Rock Island and Pacific Railroad	24	60	7	126	3	2	2	224
Colorado and Southern Railway Company	---	7	3	24	1	---	---	35
Denver and Rio Grande Western Railroad	3	13	2	23	2	1	---	44
Duluth Missabe and Iron Range Railway Co.	---	2	---	2	---	---	---	4
Duluth, Winnipeg and Pacific Railway Co	---	---	---	5	---	---	---	5
Fort Worth and Denver Railway Company	2	27	2	28	---	---	1	60
Kansas City Southern Railway Company	---	28	---	33	---	2	5	68
Missouri-Kansas-Texas Railroad Company	3	85	4	74	3	2	---	171
Missouri Pacific Railroad Company	43	280	3	374	3	12	6	721
Northwestern Pacific Railroad Company	1	1	---	5	2	---	---	9
St. Louis-San Francisco Railway Company	13	93	2	159	6	8	3	284
St. Louis Southwestern Railway Company	8	46	16	50	2	1	2	125
Soo Line Railroad Company	3	93	4	91	1	4	3	199
Southern Pacific Transportation Company	107	170	129	284	22	1	14	727
Texas Mexican Railway Company	---	3	1	5	---	---	---	9
Toledo, Peoria and Western Railroad Company	---	8	2	10	---	---	1	21
Union Pacific Railroad Company	28	107	9	206	2	4	5	361
Western Pacific Railroad Company	8	26	11	36	---	1	1	83
SUBTOTAL, WESTERN DISTRICT	465	1,666	310	2,595	73	55	82	5,266

(Continued)

(Continuation)

TABLE 22 RAIL-HIGHWAY ACCIDENTS/INCIDENTS INVOLVING MOTOR VEHICLES
BY KIND OF CROSSING PROTECTION IN 1977

Railroad	Gates	Flashings Lights	Hwy Signals Widwags Bells	Cross- bucks	Stop Signs	Other Passive	None	Total
CLASS I RAILROADS (SWITCHING AND TERMINAL)								
EASTERN DISTRICT								
Alton and Southern Railway Company	1	1	---	---	---	---	---	2
Baltimore and Ohio Terminal Railroad	7	8	---	1	---	---	---	16
Belt Railway Company of Chicago	---	2	---	---	---	---	---	2
Cuyahoga Valley Railway Company	---	---	2	2	---	---	---	4
Indiana Harbor Belt Railroad Company	20	16	---	---	---	1	1	38
Lake Terminal Railroad	---	---	---	1	---	---	---	1
Pataasco and Back Rivers Railroad Company	---	---	---	3	---	---	---	3
SUBTOTAL, EASTERN DISTRICT	28	27	2	7	---	1	1	66
SOUTHERN DISTRICT								
Birmingham Southern Railroad	---	2	---	2	---	---	---	4
Kentucky and Indiana Terminal Railroad	---	7	---	1	---	---	---	8
SUBTOTAL, SOUTHERN DISTRICT	---	9	---	3	---	---	---	12
WESTERN DISTRICT								
Houston Belt Terminal Railway Company	---	29	1	12	---	---	---	42
Kansas City Terminal Railway Company	---	---	1	---	---	---	---	1
Terminal Railroad Association of St. Louis	5	3	---	5	---	---	1	14
Texas Pacific - Missouri Pacific RR	---	---	---	2	---	---	---	2
SUBTOTAL, WESTERN DISTRICT	5	32	2	19	---	---	1	59
CLASS II RAILROADS								
SUBTOTAL,	14	195	34	262	12	19	16	552
RECAPITULATION								
ALL DISTRICTS								
CLASS I RAILROADS (LINE-HAUL)	966	3,709	522	5,489	156	136	182	11,160
CLASS I RAILROADS (SWITCHING AND TERMINAL)	33	68	4	29	---	1	2	137
CLASS II RAILROADS	14	195	34	262	12	19	16	552
TOTAL...	1,013	3,972	560	5,780	168	156	200	11,849

NOTE: 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.

TABLE 23 CROSSINGS BY STATE AND TYPE

State	Public	Public Grade		Private	Pedestrian	Total
	At Grade	RR Under	RR Over			
Alabama	4,789	497	193	2,591	31	8,101
Alaska	224	9	1	74	---	308
Arizona	1,066	68	68	747	6	1,955
Arkansas	4,081	175	134	1,983	16	6,389
California	9,389	892	554	5,760	240	16,035
Colorado	2,363	191	100	1,514	10	4,178
Connecticut	545	335	265	501	56	1,702
Delaware	263	42	53	170	6	534
District of Columbia	70	30	38	16	13	167
Florida	5,837	239	55	2,423	80	8,634
Georgia	6,938	575	253	3,120	41	10,927
Hawaii	6	---	---	---	---	6
Idaho	2,207	97	71	1,886	8	4,269
Illinois	13,859	1,017	2,034	8,079	432	25,421
Indiana	10,138	551	656	4,200	135	15,680
Iowa	8,967	627	475	6,331	62	16,462
Kansas	9,690	355	230	4,932	33	15,240
Kentucky	3,647	466	480	3,773	105	8,471
Louisiana	4,913	211	129	4,184	45	9,482
Maine	1,114	124	81	1,067	13	2,399
Maryland	1,125	315	217	895	27	2,579
Massachusetts	1,230	805	449	602	99	3,185
Michigan	8,366	342	428	3,781	104	13,021
Minnesota	7,942	547	454	5,312	85	14,340
Mississippi	3,600	233	115	2,768	21	6,737
Missouri	6,614	731	472	5,007	104	12,928
Montana	2,292	158	114	3,374	23	5,961
Nebraska	5,563	243	170	4,050	24	10,050
Nevada	361	46	38	318	2	765
New Hampshire	719	172	75	566	19	1,551
New Jersey	2,215	554	741	780	128	4,418
New Mexico	845	64	80	612	4	1,605
New York	4,452	1,452	1,182	4,051	302	11,439
North Carolina	5,489	515	298	4,436	77	10,815
North Dakota	5,777	82	91	2,800	34	8,784
Ohio	9,966	1,258	1,234	6,028	113	18,599
Oklahoma	5,784	261	222	2,475	19	8,761
Oregon	2,932	288	177	3,378	93	6,868
Pennsylvania	6,739	1,700	2,024	4,240	339	15,042
Rhode Island	138	99	41	82	4	364
South Carolina	4,443	406	129	1,880	19	6,877
South Dakota	3,305	106	66	2,136	7	5,620
Tennessee	4,167	505	502	2,453	34	7,661
Texas	14,631	779	783	7,589	47	23,829
Utah	1,373	119	53	907	6	2,458
Vermont	595	76	86	799	51	1,607
Virginia	2,856	644	483	3,940	68	7,991
Washington	4,290	412	395	4,423	116	9,636
West Virginia	2,466	287	376	2,934	110	6,173
Wisconsin	7,293	478	397	4,751	182	13,101
Wyoming	625	82	47	974	8	1,736
Puerto Rico	55	---	---	2	---	57
Total.....	218,354	20,260	17,809	141,694	3,601	401,718

TABLE 24

CROSSINGS BY RAILROAD AND TYPE

Railroad	Public	Public Grade		Private	Pedestrian	Total
	At Grade	RR Under	RR Over			
LINE HAUL - EASTERN DISTRICT						
Amtrak	54	1	1	8	---	64
Baltimore and Ohio Railroad	5,506	821	704	3,768	134	10,933
Bangor and Aroostook Railroad	206	10	22	491	3	732
Bessemer and Lake Erie Railroad	166	35	51	105	2	359
Boston and Maine Corporation	1,254	519	247	713	62	2,795
Canadian Pacific Railway Company	108	9	18	164	41	340
Central Vermont	224	58	50	280	10	622
Chesapeake and Ohio Railway	4,570	378	469	4,180	141	9,738
Chicago and Illinois Midland Railway	114	4	4	73	---	195
Consolidated Rail Corporation	16,355	96	65	8,398	164	25,078
The Estates *	9,030	4,918	4,984	5,049	584	24,565
Delaware and Hudson Railroad	545	98	107	691	28	1,469
Detroit and Toledo Shore Line	75	8	4	17	---	104
Detroit, Toledo and Ironton	530	23	43	477	6	1,079
Elsin, Joliet and Eastern	250	32	28	102	---	412
Grand Trunk Western	1,324	87	148	656	17	2,232
Illinois Terminal Railroad	197	19	29	109	1	355
Long Island Railroad	313	294	94	82	85	868
Maine Central Railroad	664	73	40	468	8	1,253
Missouri-Illinois Railroad	166	13	7	180	1	367
Norfolk and Western Railway	7,793	749	1,007	6,025	115	15,689
Pittsburg and Lake Erie Railroad	112	46	27	104	18	307
Richmond Fredericksburg Potomac	113	42	26	58	20	259
Western Maryland Railway	500	76	66	509	10	1,161
SUBTOTAL, EASTERN	50,169	8,409	8,241	32,707	1,450	100,976
LINE HAUL - SOUTHERN DISTRICT						
Alabama Great Southern Railroad	---	---	---	---	---	---
Autotrain Corporation	---	---	---	---	---	---
Central of Georgia Railroad	---	---	---	---	---	---
Cinn., N.O. & Texas Pacific	---	---	---	---	---	---
Clinchfield Railroad	144	49	66	232	4	495
Florida East Coast Railway	820	37	2	116	13	988
Georgia Railroad	407	34	30	126	4	601
Georgia Southern & Florida	---	---	---	---	---	---
Illinois Central Gulf Railroad	10,085	832	764	6,834	204	18,719
Louisville and Nashville	7,957	770	579	4,964	213	14,483
Norfolk Southern Railway	---	---	---	---	---	---
Seaboard Coast Line Railroad	11,923	849	289	5,693	132	18,886
Southern Railway	13,077	1,350	765	8,095	73	23,360
SUBTOTAL, SOUTHERN	44,413	3,921	2,495	26,060	643	77,532

(Continued)

(Continuation)

TABLE 24

CROSSINGS BY RAILROAD AND TYPE

Railroad	Public	Public Grade		Private	Pedestrian	Total
	At Grade	RR Under	RR Over			
LINE HAUL - WESTERN DISTRICT						
Atchison, Topeka and Santa Fe	11,927	641	638	7,180	90	20,476
Burlington Northern	20,672	1,208	1,066	16,151	294	39,391
Chicasso and Northwestern	10,904	672	852	7,155	213	19,796
Chi., Milw., St. Paul & Pacific	9,251	642	592	6,865	135	17,485
Chicasso, Rock Island & Pacific	6,963	492	446	4,055	28	11,984
Colorado and Southern Railway	420	39	21	317	3	800
Denver and Rio Grande Western	1,115	128	62	529	4	1,838
Duluth, Missabe and Iron Range	227	27	34	171	8	467
Duluth, Winnipeg and Pacific	95	13	14	30	---	152
Fort Worth and Denver Railway	938	38	16	458	---	1,450
Kansas City Southern Railway	1,013	85	76	470	3	1,647
Missouri-Kansas-Texas Railroad	2,200	152	133	1,214	7	3,706
Missouri Pacific Railroad	12,367	656	502	7,828	112	21,465
Northwestern Pacific Railroad	181	30	6	303	5	525
St. Louis-San Francisco Railway	5,507	287	228	2,876	42	8,940
St. Louis Southwestern Railway	1,424	61	40	509	---	2,034
Soo Line	4,372	144	163	2,772	45	7,496
Southern Pacific Trans. Company	11,804	953	649	8,012	234	21,652
Texas Mexican Railway Company	217	7	2	206	---	432
Toledo, Peoria and Western	369	10	3	227	6	615
Union Pacific Railroad	7,821	577	276	6,335	54	15,063
Western Pacific	631	77	56	370	10	1,144
SUBTOTAL, WESTERN	110,418	6,939	5,875	74,033	1,293	198,558
SWITCHING - EASTERN DISTRICT						
Aliquippa and Southern Railroad	---	2	1	---	---	3
Alton and Southern Railroad	26	4	1	27	---	58
Balt. and Ohio Chicasso	150	30	84	38	7	309
Belt Railway Company of Chicasso	38	8	62	79	1	188
Chicasso, Union Station	1	13	---	---	---	14
Conemaugh and Black Lick	6	4	---	7	---	17
Cuyahoga Valley Railway Company	---	---	---	---	---	---
Indiana Harbor Belt Railroad	112	29	45	50	6	242
Lakefront Dock and Railroad	---	---	---	---	---	---
Lake Terminal Railroad Company	2	---	---	6	1	9
Monongahela Connecting Railroad	---	1	1	---	1	3
Patascos and Back Rivers	5	5	---	58	---	68
Phila., Bethlehem and New Eng.	---	6	2	16	---	24
South Buffalo Railway	2	3	3	37	---	45
Union Railroad "Penna."	17	21	33	67	16	154
SUBTOTAL, EASTERN	359	126	232	385	32	1,134

(Continued)

(Continuation)

TABLE 24

CROSSING BY RAILROAD AND TYPE

Railroad	Public At Grade	Public Grade Separation RR Under	RR Over	Private	Pedestrian	Total
SWITCHING - SOUTHERN DISTRICT						
Birmingham Southern Railroad	41	12	2	10	---	65
Kentucky and Indiana Terminal	75	3	16	13	---	107
SUBTOTAL, SOUTHERN	116	15	18	23	---	172
SWITCHING - WESTERN DISTRICT						
Houston Belt and Terminal Railway	272	15	14	54	5	360
Kansas City Terminal Railway	46	48	21	23	4	142
Port Terminal RR Assoc.	58	1	9	85	1	154
Terminal Railroad Association	171	50	34	15	1	271
Texas Pacific-Missouri Pacific	---	---	---	---	---	---
SUBTOTAL, WESTERN	547	114	78	177	11	927
RECAPITULATION						
LINE HAUL - EASTERN DISTRICT	50,169	8,409	8,241	32,707	1,450	100,976
LINE HAUL - SOUTHERN DISTRICT	44,413	3,921	2,495	26,060	643	77,532
LINE HAUL - WESTERN DISTRICT	110,418	6,939	5,875	74,033	1,293	198,558
SWITCHING - EASTERN DISTRICT	359	126	232	385	32	1,134
SWITCHING - SOUTHERN DISTRICT	116	15	18	23	---	172
SWITCHING - WESTERN DISTRICT	547	114	78	177	11	927
TOTAL CLASS I - LINE HAUL	205,000	19,269	16,611	132,800	3,386	377,066
TOTAL CLASS I - SWITCHING	1,022	255	328	585	43	2,233
CLASS II RAILROADS	12,307	732	806	8,309	171	22,325
TOTAL:	218,354	20,260	17,809	141,694	3,601	401,718
FOOTNOTE:						
* The Estates - Crossings on lines not merged into Consolidated Rail Corporation or not yet identified as belonging to Consolidated Rail Corporation						

TABLE 25-A PUBLIC AT GRADE CROSSINGS BY
TYPICAL DAILY TRAIN MOVEMENTS AND AVERAGE DAILY TRAFFIC
CROSSINGS WITH TRAIN ACTIVATED WARNING DEVICES

TRAFFIC	TRAIN MOVEMENTS						TOTAL
	0 TO 2	3 TO 5	6 TO 10	11 TO 20	21 TO 40	>40	
0 TO 250	1,515	1,068	1,833	1,763	1,248	349	7,776
251 TO 500	1,031	768	1,257	1,080	797	268	5,201
501 TO 1,000	1,616	1,081	1,608	1,571	1,077	322	7,275
1001 TO 5,000	4,933	2,854	3,743	3,682	2,530	872	18,614
5001 TO 10,000	1,852	987	1,355	1,359	867	370	6,790
MORE THAN 10,000	1,411	766	922	957	521	286	4,863
TOTAL:	12,358	7,524	10,718	10,412	7,040	2,467	50,519

TABLE 25-B PUBLIC AT GRADE CROSSINGS BY
TYPICAL DAILY TRAIN MOVEMENTS AND AVERAGE DAILY TRAFFIC
CROSSINGS WITHOUT TRAIN ACTIVATED WARNING DEVICES

TRAFFIC	TRAIN MOVEMENTS						TOTAL
	0 TO 2	3 TO 5	6 TO 10	11 TO 20	21 TO 40	>40	
0 TO 250	55,640	17,317	17,958	10,378	5,154	695	107,142
251 TO 500	10,294	3,081	2,967	1,616	726	110	18,794
501 TO 1,000	8,539	2,448	2,029	1,224	509	102	14,851
1001 TO 5,000	12,691	3,153	2,455	1,492	530	108	20,429
5001 TO 10,000	3,101	626	405	199	64	37	4,432
MORE THAN 10,000	1,595	291	191	73	28	9	2,187
TOTAL:	91,860	26,916	26,005	14,982	7,011	1,061	167,835

TABLE 26 PUBLIC AT GRADE CROSSINGS BY STATE
AND HIGHEST PROTECTION LEVEL

State	Crossings Meeting Minimum Standards		Highest Protection Level									Total
	On FA System	Off FA System	Gates	Flashings Lights	Sig. WW Bells	Special Prot	Cross-bucks	Stop Signs	Other Signs	None		
Alabama	323	203	89	590	24	56	3,491	75	10	454	4,789	
Alaska	39	5	1	44	---	18	145	2	1	13	224	
Arizona	167	114	145	121	16	95	603	8	---	78	1,066	
Arkansas	268	127	115	427	30	96	2,918	21	1	473	4,081	
California	2,124	2,980	2,263	1,457	592	215	4,325	96	21	420	9,389	
Colorado	149	171	75	366	44	69	1,653	22	2	132	2,363	
Connecticut	78	132	47	174	8	94	85	10	3	124	545	
Delaware	91	14	30	85	---	48	81	2	---	17	263	
District of Columbia	2	---	---	3	---	12	25	6	---	24	70	
Florida	815	1,122	769	1,006	9	178	3,347	44	107	377	5,837	
Georgia	472	227	203	638	24	166	5,376	18	11	502	6,938	
Hawaii	---	1	---	---	---	---	6	---	---	---	6	
Idaho	135	70	38	207	14	21	1,824	7	2	94	2,207	
Illinois	1,367	2,104	1,556	2,895	235	347	8,197	12	2	615	13,859	
Indiana	1,223	1,303	625	2,352	177	283	5,874	96	15	716	10,138	
Iowa	931	401	299	1,097	166	83	6,991	6	1	324	8,967	
Kansas	622	246	241	813	114	270	7,950	2	1	299	9,690	
Kentucky	395	315	193	656	38	137	2,028	8	1	586	3,647	
Louisiana	316	309	125	696	19	75	2,839	317	29	813	4,913	
Maine	137	203	58	332	35	172	497	---	4	16	1,114	
Maryland	117	115	69	195	36	89	488	15	42	191	1,125	
Massachusetts	287	301	164	442	43	247	283	2	2	47	1,230	
Michigan	1,306	784	550	1,884	82	267	5,287	20	43	233	8,366	
Minnesota	634	359	174	939	20	45	6,466	21	2	275	7,942	
Mississippi	170	63	24	355	19	59	395	2,373	25	350	3,600	
Missouri	661	385	196	1,042	158	159	4,557	8	3	491	6,614	
Montana	129	83	62	206	10	21	1,765	4	1	223	2,292	
Nebraska	509	167	199	528	66	16	4,459	4	23	268	5,563	
Nevada	46	22	31	63	3	6	215	---	7	36	361	
New Hampshire	100	71	25	154	16	180	305	9	4	26	719	
New Jersey	296	596	358	637	32	415	644	6	3	120	2,215	
New Mexico	92	76	74	117	11	12	605	---	6	20	845	
New York	667	1,098	692	1,284	104	519	1,560	3	56	234	4,452	
North Carolina	785	746	212	829	30	257	3,599	18	24	520	5,489	
North Dakota	283	33	74	240	2	---	5,060	2	---	399	5,777	
Ohio	1,357	1,729	682	2,306	97	115	6,235	15	17	499	9,966	
Oklahoma	331	235	96	712	59	170	4,535	4	11	197	5,784	
Oregon	367	373	261	184	79	114	1,824	100	12	358	2,932	
Pennsylvania	671	859	503	1,381	110	798	2,816	78	442	611	6,739	
Rhode Island	15	14	7	24	19	33	28	5	2	20	138	
South Carolina	647	130	119	325	5	382	3,313	1	18	280	4,443	
South Dakota	139	29	1	192	5	---	2,993	---	1	113	3,305	
Tennessee	141	257	104	487	18	305	2,423	36	2	792	4,167	
Texas	1,255	1,653	634	2,755	150	100	9,813	35	17	1,127	14,631	
Utah	99	115	46	222	14	123	815	5	50	98	1,373	
Vermont	66	59	12	146	7	57	344	1	7	21	595	
Virginia	418	334	271	464	45	243	1,469	2	14	348	2,856	
Washington	408	392	94	547	60	63	2,975	21	12	518	4,290	
West Virginia	184	116	53	300	20	52	1,684	8	6	343	2,466	
Wisconsin	829	517	251	1,245	435	243	4,816	1	3	299	7,293	
Wyoming	61	43	18	112	8	1	420	1	2	63	625	
Puerto Rico	13	3	4	1	2	48	---	---	---	---	55	
Total.....	22,737	21,804	12,932	34,277	3,310	7,574	140,446	3,550	1,068	15,197	218,354	

FOOTNOTE: FA - Federal Aid Sig - Highway Traffic Signals WW - Wiswags
Special Prot - Special warning device not train activated, e.s., crossings flagged by train crew

TABLE 27 PUBLIC AT GRADE CROSSINGS BY RAILROAD AND HIGHEST PROTECTION LEVEL

Railroad	Crossings Meeting Minimum Standards		Gates	Flashing Lights	Sig. WW Bells	Highest Protection Level					None	Total
	On FA System	Off FA System				Special Prot.	Cross-bucks	Stop Signs	Other Signs			
LINE HAUL - EASTERN DISTRICT												
Amtrak	16	26	42	11	---	---	1	---	---	---	---	54
Baltimore and Ohio Railroad	537	613	202	1,175	45	115	3,637	18	7	307	5,506	
Bansor and Aroostook Railroad	39	44	6	80	7	12	97	---	---	4	206	
Bessemer and Lake Erie Railroad	20	20	13	34	---	6	110	---	---	3	166	
Boston and Maine Corporation	237	208	176	288	33	254	445	4	4	50	1,254	
Canadian Pacific Railway Company	19	11	3	35	3	12	49	---	---	6	108	
Central Vermont	23	49	9	79	1	2	121	2	2	8	224	
Chesapeake and Ohio Railway	599	347	240	898	16	83	3,015	5	2	311	4,570	
Chicago and Illinois Midland Railway	16	14	7	39	1	3	64	---	---	---	114	
Consolidated Rail Corporation	2,295	2,657	1,665	4,473	296	1,053	7,395	87	335	1,051	16,355	
The Estates *	991	1,024	363	1,808	129	850	4,636	81	186	977	9,030	
Delaware and Hudson Railroad	93	195	145	167	8	20	161	2	21	21	545	
Detroit and Toledo Shore Line	18	28	24	14	---	1	36	---	---	---	75	
Detroit, Toledo and Ironton	75	98	16	109	---	9	381	1	---	14	530	
Elgin, Joliet and Eastern	47	76	66	77	1	13	92	---	---	1	250	
Grand Trunk Western	257	220	248	342	11	102	612	2	---	18	1,324	
Illinois Terminal Railroad	32	19	5	52	---	---	120	2	---	---	197	
Lons Island Railroad	47	254	273	29	---	---	10	---	---	1	313	
Maine Central Railroad	81	121	29	215	28	57	317	---	2	6	664	
Missouri-Illinois Railroad	13	5	1	23	---	---	140	---	---	2	166	
Norfolk and Western Railway	944	990	521	1,672	147	195	4,867	18	10	363	7,793	
Pittsburg and Lake Erie Railroad	4	20	18	10	2	3	64	---	---	15	112	
Richmond Fredericksburg Potomac	28	22	27	6	3	61	13	---	---	3	113	
Western Maryland Railway	54	60	22	135	12	28	258	2	17	26	500	
SUBTOTAL, EASTERN	6,485	7,121	4,121	11,771	743	2,889	26,641	224	586	3,194	50,169	
LINE HAUL - SOUTHERN DISTRICT												
Alabama Great Southern Railroad	---	---	---	---	---	---	---	---	---	---	---	---
Autotrain Corporation	---	---	---	---	---	---	---	---	---	---	---	---
Central of Georgia Railroad	---	---	---	---	---	---	---	---	---	---	---	---
Cinn., N.O. & Texas Pacific	---	---	---	---	---	---	---	---	---	---	---	---
Clinchfield Railroad	14	11	6	21	3	10	95	---	---	9	144	
Florida East Coast Railway	112	406	363	164	---	4	276	---	1	12	820	
Georgia Railroad	21	23	10	57	5	61	263	2	---	9	407	
Georgia Southern & Florida	---	---	---	---	---	---	---	---	---	---	---	---
Illinois Central Gulf Railroad	781	695	406	1,347	193	180	4,994	2,231	17	717	10,085	
Louisville and Nashville	692	922	293	1,404	55	218	4,871	77	11	1,028	7,957	
Norfolk Southern Railway	---	---	---	---	---	---	---	---	---	---	---	---
Seaboard Coast Line Railroad	1,743	1,253	714	1,561	25	540	8,437	37	11	598	11,923	
Southern Railway	1,035	794	355	1,511	37	634	8,678	35	37	1,790	13,077	
SUBTOTAL, SOUTHERN	4,398	4,104	2,147	6,065	318	1,647	27,614	2,382	77	4,163	44,413	

(Continued)

TABLE 27 PUBLIC AT GRADE CROSSINGS BY RAILROAD AND HIGHEST PROTECTION LEVEL

Railroad	Crossings Meeting Minimum Standards		Gates	Flashing Lights	Sig. WW Bells	Highest Protection Level				None	Total
	On FA System	Off FA System				Special Prot	Cross-bucks	Stop Signs	Other Signs		
LINE HAUL - WESTERN DISTRICT											
Atchison, Topeka and Santa Fe	1,296	1,400	1,061	1,655	328	623	8,016	8	14	222	11,927
Burlington Northern	1,566	930	694	1,981	191	101	16,078	120	28	1,479	20,672
Chicago and Northwestern	1,089	802	416	1,486	489	128	7,933	4	6	442	10,904
Chi., Milw., St. Paul & Pacific	819	536	237	1,225	159	246	6,851	5	8	520	9,251
Chicago, Rock Island & Pacific	646	481	413	828	53	12	5,300	8	2	347	6,963
Colorado and Southern Railway	23	32	4	73	9	2	293	3	---	36	420
Denver and Rio Grande Western	73	110	34	214	2	6	769	4	2	84	1,115
Duluth, Missabe and Iron Range	27	17	5	43	---	4	173	1	1	---	227
Duluth, Winnepes and Pacific	10	3	1	16	---	4	74	---	---	---	95
Fort Worth and Denver Railway	80	25	11	105	---	3	701	---	2	116	938
Kansas City Southern Railway	64	62	12	162	10	---	704	2	---	123	1,013
Missouri-Kansas-Texas Railroad	159	175	48	350	59	2	1,545	1	1	194	2,200
Missouri Pacific Railroad	993	791	359	1,951	60	130	8,717	24	6	1,120	12,367
Northwestern Pacific Railroad	32	67	35	39	16	---	88	---	1	2	181
St. Louis-San Francisco Railway	390	256	105	773	52	219	3,964	107	3	284	5,507
St. Louis Southwestern Railway	127	82	58	238	---	2	1,059	9	---	58	1,424
Soo Line	342	164	64	563	27	1	3,603	1	1	112	4,372
Southern Pacific Trans. Company	1,970	2,570	2,070	1,614	520	31	6,529	89	24	927	11,804
Texas Mexican Railway Company	14	12	---	44	---	4	158	2	---	9	217
Toledo, Peoria and Western	29	19	---	102	2	2	256	---	---	7	369
Union Pacific Railroad	656	438	328	853	92	174	5,789	20	56	509	7,821
Western Pacific	121	153	155	102	18	---	297	10	1	48	631
SUBTOTAL, WESTERN	10,546	9,145	6,110	14,417	2,087	1,694	78,897	418	156	6,639	110,418
SWITCHING - EASTERN DISTRICT											
Alaquippa and Southern Railroad	---	---	---	---	---	---	---	---	---	---	---
Alton and Southern Railroad	7	1	3	9	---	---	12	---	---	2	26
Belt, and Ohio Chicago	12	60	43	50	2	24	22	1	---	8	150
Belt Railway Company of Chicago	3	8	6	10	---	1	20	---	---	1	38
Chicago, Union Station	---	1	1	---	---	---	---	---	---	---	1
Coneaugh and Black Lick	2	---	1	2	---	---	3	---	---	---	6
Cusawosa Valley Railway Company	---	---	---	---	---	---	---	---	---	---	---
Indiana Harbor Belt Railroad	12	35	32	30	---	37	10	---	---	3	112
Lakefront Dock and Railroad	---	---	---	---	---	---	---	---	---	---	---
Lake Terminal Railroad Company	---	---	---	---	---	1	1	---	---	---	2
Mononahela Connecting Railroad	---	---	---	---	---	---	---	---	---	---	---
Pataasco and Back Rivers	2	1	---	---	1	4	---	---	---	---	5
Phila., Bethlehem and New Eng.	---	---	---	---	---	---	---	---	---	---	---
South Buffalo Railway	---	---	---	---	---	2	---	---	---	---	2
Union Railroad 'Penna.'	1	4	3	14	---	---	---	---	---	---	17
SUBTOTAL, EASTERN	39	110	89	115	3	69	68	1	---	14	359
SWITCHING - SOUTHERN DISTRICT											
Birmingham Southern Railroad	14	5	---	20	---	---	21	---	---	---	41
Kentucky and Indiana Terminal	4	8	1	37	---	1	29	---	---	7	75
SUBTOTAL, SOUTHERN	18	13	1	57	---	1	50	---	---	7	116
SWITCHING - WESTERN DISTRICT											
Houston Belt and Terminal Railway	8	50	13	90	2	---	136	---	---	31	272
Kansas City Terminal Railway	---	1	---	8	---	---	12	---	1	25	46
Port Terminal RR Assoc.	1	15	---	23	---	---	26	---	---	9	58
Terminal Railroad Association	14	40	42	16	3	73	34	---	---	3	171
Texas Pacific-Missouri Pacific	---	---	---	---	---	---	---	---	---	---	---
SUBTOTAL, WESTERN	23	106	55	137	5	73	208	---	1	68	547
RECAPITULATION											
LINE HAUL - EASTERN	6,485	7,121	4,121	11,771	743	2,889	26,641	224	586	3,194	50,169
LINE HAUL - SOUTHERN	4,398	4,104	2,147	6,065	318	1,647	27,614	2,382	77	4,163	44,413
LINE HAUL - WESTERN	10,546	9,145	6,110	14,417	2,087	1,694	78,897	418	156	6,639	110,418
SWITCHING - EASTERN	39	110	89	115	3	69	68	1	---	14	359
SWITCHING - SOUTHERN	18	13	1	57	---	1	50	---	---	7	116
SWITCHING - WESTERN	23	106	55	137	5	73	208	---	1	68	547
CLASS II	1,227	1,181	384	1,715	154	1,201	6,968	525	248	1,112	12,307
TOTAL:	22,736	21,780	12,907	34,277	3,310	7,574	140,446	3,550	1,068	15,197	218,329

FOOTNOTE:

FA - Federal Aid

Sig - Highway Traffic Signals

WW - Wiswess

Special Prot - Special warning device not train activated, e.g., crossing flashed by train crew

* The Estates - Crossings on lines not merged into Consolidated Rail Corporation or not yet identified as belonging to Consolidated Rail Corporation

Appendix A - Definitions and Forms

REPORTABILITY REQUIREMENTS

The rules governing monthly reporting of railroad accidents/incidents which were in effect at the end of 1977 define a reportable accident/incident as an event arising from the operation of a railroad that results, with minor exceptions, in one or more of the following circumstances:

(a) Any impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian at a rail-highway grade crossing;

(b) Any collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment (standing or moving) which results in more than \$2300 in damages to railroad on-track equipment, signals, track, 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, that requires medical treatment;
- (iii) injury to one or more employees that requires medical treatment or results 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 or
- (iv) any occupational illness of a railroad employee, as diagnosed by a physician.

CLASSIFICATION OF ACCIDENTS/INCIDENTS

Accidents/incidents are divided into the following groups:

Train accidents are events, with or without casualties, arising in connection with the operation of railroad on-track equipment which satisfy the conditions specified in (b) above.

From 1957 through 1974, the damage threshold for reporting train accidents remained at \$750. In 1975, the threshold was increased to \$1,750, and in 1977 it was increased to \$2300. The reporting threshold is reviewed periodically and adjusted every two years as necessary.

Train Incidents are events arising in connection with the movement of railroad on-track equipment which result in a reportable death, injury or illness, but do not result in damage to railroad equipment, track or roadbed of more than \$2,300.

Non-Train Incidents are events which result in a reportable death, injury or illness arising from the operation of a railroad, but not from the movement of railroad on-track equipment.

CLASSIFICATION OF CASUALTIES

Fatalities. Prior to 1975, a death which resulted from railroad operations, but which occurred more than 24 hours after the injury, was reported as an injury and a subsequent fatality. Such fatal injuries are now classified as fatalities. In addition, fatalities resulting from occupational illnesses, if they occur within 365 days of the initial diagnosis of the illness, are now reportable. These were not reportable prior to 1975.

Occupational Illness. This is a new category with no counterpart in casualty statistics prior to 1975. In this publication, nonfatal illnesses are included in the injury data.

Occupational Injuries. Major changes were made in the definition of a reportable injury in 1975. This was done to allow comparability of railroad industry statistics with those published by the Occupational Safety and Health Administration (OSHA) for other industries. Previous regulations required the reporting of any employee injury which prevented the employee from performing normally assigned duties for more than 24 hours in the aggregate during 10 days immediately following the injury. This resulted in the reporting of only those injuries causing at least 2 days of lost or restricted time. The revised regulation requires the reporting of any employee injury which results in one or more lost or restricted workdays, the administration of medical treatment beyond first aid, transfer to another job, termination of employment, or loss of consciousness. In addition, the case remains active for 365 days rather than the 10-day period previously specified. An injury to a person other than an employee-on-duty was formerly reportable if it prevented the customary vocation or mode of life of the injured person for more than 24 hours during the 10 days immediately following the injury. Such an injury is presently reportable if the injured person requires medical treatment beyond first aid.

CLASSIFICATION OF PERSONS

Employees "on duty" are those persons who are engaged in the operation of a railroad. Ordinarily the fact that the employee is or is not under pay will determine this. However:

- a) Employees on railroad property, while on rest or meal periods, "trading time," or doing work which they are expected to do but actually perform before pay starts or after pay stops, are considered to be employees "on duty."
- b) Employees "not on duty" are those employees who are on railroad property for purposes connected with their employment or with other railroad permission, but who are not "on duty" as defined above.
- c) Employees who are injured while trespassing are categorized as "trespassers."

Passengers are persons on boarding, or alighting from railroad cars for the purpose of travel.

Nontrespassers are persons who are lawfully on that part of railroad property which is used in railroad operation (other than those herein defined as employees, passengers, or trespassers), and persons adjacent to railroad premises when injured as the result of the operation of a railroad.

Trespassers are persons who are on that part of railroad property used in railroad operation, and whose presence is prohibited, forbidden, or unlawful.

Contractor employees are persons who are employed by a contractor engaged by a railroad to perform normal maintenance work to railroad rolling stock, track structure, bridges, buildings, etc.

NOTE: A person on a rail-highway grade crossing is classified as a trespasser if the crossing is protected by gates or other barriers which are closed when the person enters the crossing. He is also a trespasser if he attempts to pass over or under trains or cars at the crossing.

CLASSIFICATION OF ON-TRACK EQUIPMENT

Train - A train is a locomotive unit or units coupled, with or without cars and with or without markers displayed. Included in this definition are those trains consisting entirely of self-propelled units designed to carry passengers and/or freight traffic.

Locomotive - A locomotive is a self-propelled unit of equipment designed for moving other equipment. It includes a self-propelled unit designed to carry freight and/or passenger traffic.

Car - A car is any unit of equipment designed to be hauled by locomotives, or any unit of on-track work equipment such as a track motorcar, highway-rail car, on-track crane, on-track ballast tamping machine, etc.

Equipment Consist - An equipment consist is a train, locomotive(s), cut of cars, or any single car not coupled to another car or locomotive.

Highest Protection Level - At those crossings where more than one form of crossing protection is in use, "Highest Protection Level" is determined by the following ranking:

- | | | |
|---------|-----|----------------------------------|
| Highest | 1) | Gates |
| | 2) | Cantilever Flashing Light Signal |
| | 3) | Standard Flashing Light Signal |
| | 4) | Wig Wags |
| | 5) | Highway Traffic Signals |
| | 6) | Audible Signal |
| | 7) | Crossbucks |
| | 8) | Stop Signs |
| | 9) | Watchman |
| | 10) | Flagged by Crew |
| | 11) | Other |
| Lowest | 12) | None |

Daylight/Dark - Unless specifically listed, those accidents reported as occurring during dawn have been included in the daylight category. Likewise, those reported as occurring during dusk have been included in the dark category.

Minimum Standards for Crossing. The Second Annual Report on Highway Safety Improvement Programs from the Secretary of Transportation to Congress stated that a program to sign and mark all crossings is a high priority under the Highway Safety Act of 1973. Further, the report stated that the National Rail-Highway Crossing Inventory "...will allow the states to identify those crossings which are not signed and marked in accordance with the Manual on Uniform Traffic Control Devices (MUTCD)." The Federal Highway Administration has specified the following minimum standards for signing and marking to be in accordance with the MUTCD: An automatic warning device or two reflectorized crossbuck signs, advance warning signs, and pavement markings if the highway approach is paved. In this publication, crossings having automatic warning devices are counted as meeting minimum standards except that multiple track crossings having automatic warning devices other than gates do not meet minimum standards.

Class I Railroads are those railroads having annual operating revenue in excess of \$10,000,000, including switching and terminal companies.

Class II Railroads are those having annual operating revenue of \$10,000,000 or less.

FORMS

Up to three separate forms may be required to properly report a Rail-Highway Grade Crossing Accident/Incident. These forms are:

- 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 grade crossing accidents/incidents, Form FRA F 6180-57 must be submitted by the carrier having on-track equipment involved. If reportable casualties resulted, these casualties must be reported individually on Form FRA F 6180-55. Finally, if the accident also resulted in more than \$2300 in damages to railroad on-track equipment, signals, track, track structures and roadbed, a Form FRA 6180-54 must be submitted.

The data contained in Tables A through 22 are based on information submitted on these three forms.

The data contained in tables 23 through 27 are based on information submitted on the U. S. DOT - AAR Crossing Inventory Form.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL-HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT REPORT

FORM APPROVED
OMB NO. 04R4033

1. NAME OF REPORTING RAILROAD		Amtrak Autotrain	1a. Alphabetic Code	1b. Railroad Acc./Incident No.
2. NAME OF OTHER RAILROAD INVOLVED IN TRAIN ACCIDENT/INCIDENT			2a. Alphabetic Code	2b. Railroad Acc./Incident No.
3. NAME OF RAILROAD RESPONSIBLE FOR TRACK MAINTENANCE (single entry)			3a. Alphabetic Code	3b. Railroad Acc./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"/>

LOCATION

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)		

ACCIDENT/INCIDENT SITUATION

HIGHWAY USER INVOLVED				RAILROAD EQUIPMENT INVOLVED			
12. TYPE	3. Truck-Trailer	6. Motorcycle	CODE	16. EQUIPMENT	3. Train (standing)	6. Light loco(s) (moving)	CODE
1. Auto	4. Bus	7. Pedestrian		1. Train (units pulling)	4. Car(s) (moving)	7. Light loco(s) (standing)	
2. Truck	5. School Bus	8. Other (specify)		2. Train (units pushing)	5. Car(s) (standing)	8. Other (specify)	
13. SPEED (estimated mph at impact)	14. DIRECTION (geographical)	CODE		17. POSITION OF CAR/UNIT IN TRAIN			
	1. North 3. East			CODE			
	2. South 4. West						
15. POSITION	18. CIRCUMSTANCE	CODE		CODE			
1. Stalled on crossing	1. Train struck highway user			2. Train struck by highway user			
2. Stopped on crossing							
3. Moving over crossing							
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		

ENVIRONMENT

20. TEMPERATURE (specify, if minus)	21. VISIBILITY (single entry)	CODE	22. WEATHER (single entry)	CODE
' F	1. Dawn 3. Dusk		1. Clear 3. Rain 5. Sleet	
	2. Day 4. Dark		2. Cloudy 4. Fog 6. Snow	

TRAIN AND TRACK

23. TYPE OF TRAIN	CODE	24. TRACK TYPE USED BY TRAIN INVOLVED	CODE
1. Freight		1. Main	
2. Passenger		2. Yard	
3. Mixed		3. Siding	
4. Work		4. Industry	
5. Yard/Switching			
6. Light Locomotive(s)			
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)	30. TIME TABLE DIRECTION	
	MPH Est Recorded	1. North 3. East	
		2. South 4. West	

CROSSING WARNING

31. TYPE	32. SIGNALLED CROSSING WARNING	CODE
(place X in appropriate box(es))	Was the signaled crossing warning identified in item 31 operating?	
1. <input type="checkbox"/> Gates	1. Yes	
2. <input type="checkbox"/> Cantilever FLS	2. No	
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		
33. LOCATION OF WARNING	34. CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS	35. CROSSING ILLUMINATED BY STREET LIGHTS OR SPECIAL LIGHTS
1. Both sides	1. Yes 2. No 3. Unknown	1. Yes 2. No 3. Unknown
2. Side of vehicle approach		
3. Opposite side of vehicle approach		

MOTORIST ACTION

36. MOTORIST PASSED STANDING HIGHWAY VEHICLE	CODE	37. MOTORIST DROVE BEHIND OR IN FRONT OF TRAIN AND STRUCK OR WAS STRUCK BY SECOND TRAIN	CODE
1. Yes 2. No 3. Unknown		1. Yes 2. No 3. Unknown	
38. MOTORIST	CODE		
1. Drove around or thru the gate	2. Stopped and then proceeded	3. Did not stop	4. Other (specify)
			5. Unknown
39. VIEW OF TRACK OBSCURED BY (primary obstruction)	CODE		
1. Permanent structure	2. Standing railroad equipment	3. Passing train	4. Topography
		5. Vegetation	6. Highway vehicles
		7. Other (specify)	8. Not obstructed

HIGHWAY VEHICLE PROPERTY DAMAGE/CASUALTIES

40. HIGHWAY VEHICLE PROPERTY DAMAGE (est. dollar damage)	41. DRIVER WAS	CODE	42. WAS DRIVER IN THE VEHICLE?	CODE
	1. Killed 2. Injured 3. Uninjured		1. Yes 2. No	
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			

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

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

FORM APPROVED
OMB NO. 04R4008

1. NAME OF REPORTING RAILROAD		Amtrak <input type="checkbox"/>	1a. Alphabetic Code	1b. Railroad Accident/Incident No.
		Autotrain <input type="checkbox"/>		
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		6. TIME OF ACCIDENT/INCIDENT
		month | day | year		am <input type="checkbox"/> pm <input type="checkbox"/>
7. TYPE OF ACCIDENT/INCIDENT (enter number in code box, single entry)				CODE
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-Defonation				

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) CODE

ENVIRONMENTAL CONDITIONS			
16. TEMPERATURE (specify if minus) °F	17. VISIBILITY (single entry) CODE	18. WEATHER (single entry) CODE	
	1. Dawn 3. Dusk 2. Day 4. Dark	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
20. SPEED (recorded speed, if available) Est. MPH Recorded		21. TRAIN NUMBER	22. TIME TABLE DIRECTION CODE
			1. North 2. South 3. East 4. West

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

31. LOCOMOTIVE UNITS (no. of)		a. Head End		Mid Train		Rear End		32. CARS (no. of)		Loaded		Empty		e. Caboose	
		b. Manual		c. Remote		d. Manual				a. Freight		b. Pass.		c. Freight	
						e. Remote									
(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 CODE	36. CONTRIBUTING CAUSE CODE	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	46. CONDUCTOR		
				Hrs:	Mins:	Hrs:	Mins:

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

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

TABLE 17-A RAIL-HIGHWAY ACCIDENTS, INCIDENTS INVOLVING
MOTOR VEHICLES BY STATE, 1976 (** REVISÉD **)

State	Accidents		Killed		Injured	
	#	Pct.	#	Pct.	#	Pct.
Alabama	365	3.1	36	3.6	125	2.8
Alaska	8	0.0	---	0.0	---	0.0
Arizona	57	0.4	3	0.3	18	0.4
Arkansas	223	1.9	28	2.8	111	2.5
California	596	5.0	53	5.4	169	3.8
Colorado	148	1.2	17	1.7	37	0.8
Connecticut	19	0.1	---	0.0	2	0.0
Delaware	5	0.0	2	0.2	2	0.0
District of Columbia	1	0.0	---	0.0	3	0.0
Florida	349	2.9	57	5.8	152	3.4
Georgia	373	3.1	23	2.3	140	3.2
Hawaii	---	0.0	---	0.0	---	0.0
Idaho	101	0.8	8	0.8	32	0.7
Illinois	867	7.4	84	8.5	344	7.9
Indiana	671	5.7	73	7.4	269	6.1
Iowa	341	2.9	27	2.7	124	2.8
Kansas	218	1.8	37	3.7	110	2.5
Kentucky	279	2.3	22	2.2	90	2.0
Louisiana	387	3.3	22	2.2	147	3.3
Maine	33	0.2	---	0.0	3	0.0
Maryland	47	0.4	3	0.3	15	0.3
Massachusetts	39	0.3	1	0.1	18	0.4
Michigan	583	4.9	29	2.9	190	4.3
Minnesota	281	2.4	15	1.5	106	2.4
Mississippi	274	2.3	25	2.5	106	2.4
Missouri	277	2.3	38	3.8	114	2.6
Montana	45	0.3	5	0.5	13	0.2
Nebraska	164	1.4	36	3.6	58	1.3
Nevada	14	0.1	---	0.0	7	0.1
New Hampshire	8	0.0	---	0.0	4	0.0
New Jersey	67	0.5	1	0.1	24	0.5
New Mexico	34	0.2	8	0.8	15	0.3
New York	135	1.1	8	0.8	56	1.2
North Carolina	334	2.8	22	2.2	103	2.3
North Dakota	84	0.7	11	1.1	23	0.5
Ohio	792	6.7	64	6.5	302	6.9
Oklahoma	245	2.0	27	2.7	101	2.3
Oregon	185	1.5	16	1.6	88	2.0
Pennsylvania	296	2.5	22	2.2	94	2.1
Rhode Island	2	0.0	---	0.0	---	0.0
South Carolina	226	1.9	13	1.3	100	2.3
South Dakota	55	0.4	---	0.0	9	0.2
Tennessee	258	2.2	21	2.1	76	1.7
Texas	1,126	9.6	60	6.1	457	10.5
Utah	83	0.7	8	0.8	33	0.7
Vermont	11	0.0	---	0.0	---	0.0
Virginia	154	1.3	13	1.3	63	1.9
Washington	246	2.1	9	0.9	74	1.7
West Virginia	150	1.2	10	1.0	55	1.2
Wisconsin	413	3.5	18	1.8	131	3.0
Wyoming	31	0.2	3	0.3	10	0.2
Unknwn	---	0.0	---	0.0	---	0.0
Total.....	11,700	100.0	978	100.0	4,343	100.0