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Safety Information Reporting and Analysis System (SIRAS)



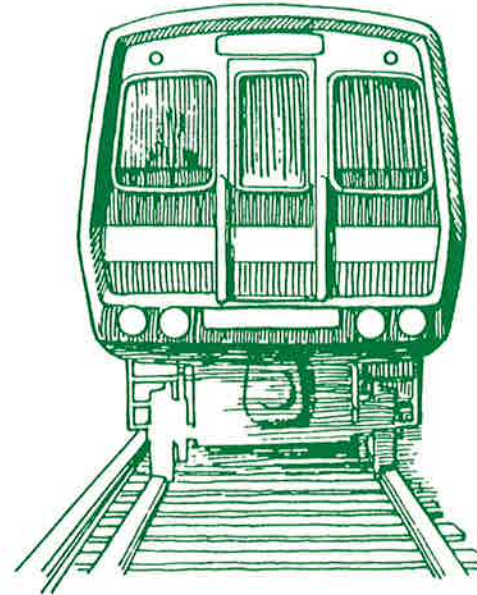
U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

HEAVY RAIL TRANSIT SAFETY 1987 Annual Report

Research and Special Programs
Administration
Transportation Systems Center
Cambridge, MA 02142

Urban Mass Transportation
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Office of Technical Assistance
Washington, DC 20590



UMTA Technical Assistance Program

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16. Abstract <p>The <u>Heavy Rail Transit Safety 1987 Annual Report</u> is a compendium and analysis of heavy rail transit accident and casualty statistics reported by the thirteen heavy rail transit systems in the United States during 1987, under UMTA's Safety Information Reporting and Analysis System (SIRAS).</p>			
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INTRODUCTION

The Safety Information Reporting and Analysis System (SIRAS) is a voluntary safety reporting system, developed by the Urban Mass Transportation Administration (UMTA) in cooperation with the American Public Transit Association (APTA) and the heavy rail transit (RRT) systems operating in the United States. Since its implementation on January 1, 1983, the operating RRT systems have been reporting transit safety data to UMTA on a monthly basis. New reporting thresholds were established and implemented on January 1, 1986. Up to four transit data reports are submitted: a Statistical Data Report, a Train Accident Report, a Casualty Report and a Fire Report. All transit systems submit a monthly Statistical Data Report containing the total number of car miles and number of passengers in the reporting month. The Train Accident Report, the Casualty Report and a Fire Report are submitted only during those months when reportable (according to specific SIRAS thresholds contained in Appendix A-1) train accidents, fires, or casualties occur.

To assist in understanding the terms used in this report, a glossary has been provided in Section 1.

Note: All data contained herein is preliminary, unverified data and must be regarded as such. Column and row entries may not sum to the total shown due to rounding.

I. GLOSSARY

The following definitions are to be used as a reference in understanding the terms in this report.

AUTHORIZED PERSON IN STATION OR OTHER AUTHORIZED LOCATION - A person legally on a transit system's property in a location deemed licit.

CAR MILES - Distances traveled by each rail transit car of a transit system in both revenue and non-revenue service during a reporting period.

CASUALTY - A fatality or injury in accordance with SIRAS thresholds.*

CASUALTY REPORT - A SIRAS report containing specific information on individual casualties (fatalities or injuries) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

COLLISION WITH OBSTACLE - A SIRAS train accident type involving the collision of a rail transit revenue train with obstacles (e.g., shopping carts, foreign objects, etc.) other than trains and persons.*

COLLISION WITH PERSON - A SIRAS train accident type involving the collision of a rail transit revenue train with a person on a track or platform.*

COLLISION WITH OTHER TRAIN - A SIRAS train accident type involving the collision of a rail transit revenue train with another rail transit train (e.g., revenue or non-revenue train, work train, etc.).*

DERAILMENT - A SIRAS train accident type involving a rail transit revenue train's leaving the rails.*

FATALITY - A death confirmed within 30 days after an incident which occurs under the train accident, fire and casualty thresholds.*

FIRE - A fire incident involving the phenomenon of combustion manifested in light, flame and heat.*

FIRE REPORT - A SIRAS report containing specific information on individual fires (station fires, train in revenue service fires, and right-of-way fires) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

NON-AUTHORIZED PERSON IN NON-AUTHORIZED LOCATION - A person illegally on a transit system's property in a location deemed illicit.

PASSENGER IN UNAUTHORIZED AREA - A person on, boarding or alighting from a rail transit revenue train in a location deemed illicit.

PASSENGER IN VEHICLE, BOARDING OR ALIGHTING - A person on, boarding or alighting from a rail transit revenue train in a location deemed licit.

RAIL-HIGHWAY CROSSING - A SIRAS train accident type involving the intersection of an otherwise exclusive (rail transit) right-of-way and a highway where motor vehicle and pedestrian traffic safety is enhanced by one or more crossing warning mechanisms.*

TRAIN ACCIDENT - An event involving one or more revenue trains resulting in any casualty or property damage in accordance with SIRAS thresholds.*

TRAIN ACCIDENT REPORT - A SIRAS report containing specific information on individual train accidents (collisions with trains, collisions with obstacles, collisions with persons, derailments, or rail-highway crossings) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

STATISTICAL DATA REPORT - A SIRAS report containing total car miles and total passengers submitted to UMTA by rail transit systems on a monthly basis.

* For additional information, please see Appendix A. RRT Thresholds

II. STATISTICAL DATA

(A) PASSENGERS

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 PERCENT OF TOTAL	1986 TOTAL
BART	13,650,998	14,324,096	14,311,403	14,268,234	56,554,731	3.2	56,347,986
CTA	36,088,388	34,977,336	36,274,844	36,354,582	143,695,150	8.2	149,606,716
GCRTA	1,396,695	1,426,667	1,411,082	1,502,968	5,737,412	0.3	5,655,658
MARTA	15,633,000	16,780,000	16,557,000	16,464,000	65,434,000	3.7	65,179,000
MBTA	27,736,500	31,206,000	31,889,000	30,514,000	121,345,500	6.9	113,164,425
MDTA	2,487,473	2,796,077	2,713,283	2,506,960	10,503,793	0.6	8,428,192
MTAMD	2,903,479	3,014,597	*3,157,855	3,325,630	12,401,561	0.7	11,441,119
NYCTA	258,483,604	269,516,660	254,701,556	274,379,995	1,057,081,815	60.4	1,024,266,052
PATCO	2,592,086	2,698,354	2,750,138	2,812,713	10,853,291	0.6	10,401,482
PATH	14,282,111	14,800,848	14,558,311	14,549,184	58,190,454	3.3	57,787,117
SEPTA	17,907,064	18,534,662	15,008,885	18,233,263	69,683,874	4.0	68,451,010
SIRTOA	1,650,073	1,638,094	1,523,201	1,630,753	6,442,121	0.4	6,395,603
WMATA	29,815,447	34,606,618	34,615,366	32,946,524	131,983,955	7.5	121,179,163
TOTAL	424,626,918	446,320,009	429,471,924	449,488,806	1,749,907,657	100.0	1,698,303,523

* MTAMD Effective July 20, 1987 an additional eight (8) miles of Rail System was opened.

II. STATISTICAL DATA

(B) CAR MILES

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 PERCENT OF TOTAL	1986 TOTAL
BART	7,304,921	7,772,155	7,928,270	7,821,135	30,826,481	6.3	30,137,667
CTA	13,132,429	13,164,762	13,368,880	13,184,743	52,850,814	10.7	52,615,619
GCRTA	532,933	547,165	560,591	557,201	2,197,890	0.4	2,196,228
MARTA	3,059,000	3,122,000	3,160,000	3,197,000	12,538,000	2.5	12,361,000
MBTA	3,522,862	3,597,236	3,648,869	4,365,685	15,134,652	3.1	13,966,844
MDTA	638,400	683,300	682,500	741,100	2,745,300	0.6	2,366,553
MTAMD	532,200	599,400	*1,078,200	1,066,200	3,276,000	0.7	2,178,520
NYCTA	75,211,673	75,913,596	76,120,774	78,571,894	305,817,937	62.0	301,311,700
PATCO	1,011,672	974,005	983,394	1,007,849	3,976,920	0.8	3,924,451
PATH	2,728,925	2,895,217	2,990,433	2,974,595	11,589,170	2.4	11,407,414
SEPTA	4,159,126	4,187,019	3,892,632	4,057,822	16,296,599	3.3	16,166,929
SIRTOA	543,223	549,040	557,890	557,687	2,207,840	0.4	2,425,500
WMATA	7,759,188	8,636,794	8,766,068	8,360,281	33,522,331	6.8	30,279,788
TOTAL	120,136,552	122,641,689	123,738,501	126,463,192	492,979,934	100.0	481,338,213

*MTAMD Effective July 20, 1987 an additional eight (8) miles of Rail System was opened.

III. TRAIN ACCIDENTS

(A) BY TYPE ACCIDENT

	NUMBER	Collision with other train		Collision with Obstacle		Collision with Person		Derailment		Rail-Highway Crossing		TOTAL	
		1987 TOTAL	1986 TOTAL	1987 TOTAL	1986 TOTAL	1987 TOTAL	1986 TOTAL	1987 TOTAL	1986 TOTAL	1987 TOTAL	1986 TOTAL	1987 TOTAL	1986 TOTAL
BART	Per 1,000,000 Car Miles	0	0	0	0	0	0	1	0	N/A	N/A	1	0
CTA	NUMBER	1	0	3	2	5	2	0	0	6	4	15	8
GCRTA	Per 1,000,000 Car Miles	.02	0	.06	.04	.09	.04	0	0	.11	.07	.28	.15
MARTA	NUMBER	1	0	1	0	2	1	0	0	N/A	N/A	4	1
MARTA	Per 1,000,000 Car Miles	.05	0	.05	0	.09	.05	0	0	N/A	N/A	1.9	.05
MBTA	NUMBER	0	0	0	0	0	0	0	0	0	0	0	0
MBTA	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	0	0	0	0
MDTA	NUMBER	1	0	0	0	0	0	0	0	N/A	N/A	1	0
MDTA	Per 1,000,000 Car Miles	.06	0	0	0	0	0	0	0	N/A	N/A	.06	0
MTAMD	NUMBER	0	0	0	0	0	1	0	0	N/A	N/A	0	1
MTAMD	Per 1,000,000 Car Miles	0	0	0	0	0	.05	0	0	N/A	N/A	0	.05
NYCTA	NUMBER	0	0	0	0	60	41	2	2	N/A	N/A	63	44
NYCTA	Per 1,000,000 Car Miles	0	0	.003	.003	.20	.14	.01	.01	N/A	N/A	.21	.15
PATCO	NUMBER	0	0	0	0	0	0	0	0	N/A	N/A	0	0
PATCO	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	N/A	N/A	0	0
PATH	NUMBER	2	1	1	0	0	0	1	1	0	1	4	3
PATH	Per 1,000,000 Car Miles	.02	.09	.03	0	0	0	.03	.09	0	.09	.03	.27
SEPTA	NUMBER	1	0	0	1	0	0	0	0	N/A	N/A	1	1
SEPTA	Per 1,000,000 Car Miles	.06	0	0	.06	0	0	0	0	N/A	N/A	.06	.06
SIRTOA	NUMBER	0	0	1	0	0	0	1	0	N/A	N/A	2	0
SIRTOA	Per 1,000,000 Car Miles	0	0	.045	0	0	0	.045	0	N/A	N/A	.09	0
WMATA	NUMBER	0	0	0	1	0	1	0	0	N/A	N/A	0	2
WMATA	Per 1,000,000 Car Miles	0	0	0	.03	0	.03	0	0	N/A	N/A	0	.06
TOTAL	NUMBER	6	1	7	5	67	46	5	3	6	5	91	60
TOTAL	Per 1,000,000 Car Miles	.01	.002	.01	.01	.13	.09	.01	.01	.01	.01	.18	.12

N/A Not applicable - RRT system does not have rail-highway crossings.
 * Less than .001

III. TRAIN ACCIDENTS

(B) BY CASUALTIES AND DAMAGE ESTIMATES

	1987 INJURIES	1987 FATALITIES	1987 TRAIN DAMAGE ESTIMATE (\$)	1987 OTHER TRANSIT DAMAGE ESTIMATE (\$)	1987 NON- TRANSIT DAMAGE ESTIMATE (\$)	1987 TOTAL DAMAGE ESTIMATE (\$)	1986 TOTAL DAMAGE ESTIMATE (\$)
COLLISION WITH OTHER TRAIN	105	0	218,483	11,000	0	229,483	41,570
COLLISION WITH OBSTACLE	3	0	119,402	4,800	0	124,202	280,442
COLLISION WITH PERSON	38	28	*15,000	*2,000	*12,000	*29,000	4,177
DERAILMENT	1	0	63,587	84,650	0	148,237	87,700
RAIL-HIGHWAY CROSSING	2	0	205	0	500	705	28,038
TOTAL	149	28	416,677	102,450	12,500	531,627	441,927

* Automobile crashed thru guard rail and fence,
Not a rail-highway crossing accident, as transit
system involved does not have rail-highway crossings.

IV. CASUALTIES

(A) NON-FATALITIES BY LOCATION

LOCATION	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 per 1,000,000 PASSENGERS	1987 PERCENT OF TOTAL	1986 TOTAL	FOUR QUARTER MOVING AVERAGE
ON PLATFORM	299	266	268	278	1,111	0.63	35.6	1,233	277.75
ON TRACKWAY	61	49	63	60	233	0.13	7.5	393	58.25
ON-BOARD TRAIN	208	294	238	208	948	0.54	30.4	999	236.50
ALIGHTING FROM TRAIN	84	84	85	66	319	0.18	10.2	393	79.75
BOARDING TRAIN	78	92	86	87	343	0.20	11.0	487	85.75
IN TRAIN ACCIDENT	59	17	9	65	150	0.09	4.8	97	38.00
STATION FIRES	1	0	2	0	3	0.00	0.1	4	0.75
RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0.0	17	0.00
TRAIN FIRES (IN REVENUE SERVICE)	6	3	6	0	15	0.01	0.5	45	0.00
TOTAL	796	805	757	764	3,122	1.78	100.0	3,668	776.75

IV. CASUALTIES

(B) FATALITIES BY LOCATION

<u>LOCATION</u>	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 per 1,000,000 PASSENGERS	1987 PERCENT OF TOTAL	1986 TOTAL	FOUR QUARTER MOVING AVERAGE
ON PLATFORM	0	1	0	0	1	0.00	2.9	7	0.25
ON TRACKWAY	0	1	3	0	4	0.00	11.8	15	1.00
ON-BOARD TRAIN	0	1	0	0	1	0.00	2.9	12	0.25
ALIGHTING FROM TRAIN	0	0	0	0	0	0.00	0.0	0	0.00
BOARDING TRAIN	0	0	0	0	0	0.00	0.0	1	0.00
IN TRAIN ACCIDENT	6	6	8	8	28	0.02	82.4	5	7.00
STATION FIRES	0	0	0	0	0	0.00	0.0	0	0.00
RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0.0	0	0.00
TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0.0	0	0.00
TOTAL	6	9	11	8	34	0.02	100.0	40	8.50

(A) TOTAL OF ALL RRT SYSTEMS

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 PERCENT OF TOTAL	1986 TOTAL
STATION FIRES							
Non-Public Areas	9	11	6	4	30	0.66	52
Public Areas							
Trash Receptacles	131	101	74	121	427	9.44	354
Concession	0	1	0	0	1	0.02	5
Other	48	42	35	50	175	3.87	132
TRAIN FIRES (in revenue service)							
Underfloor	110	94	97	111	412	9.11	617
Roof	0	0	0	1	1	0.02	0
Passenger Compartment	64	38	31	37	170	3.76	212
Operator Compartment	0	1	0	0	1	0.02	9
Other	351	299	314	307	1,271	28.09	1,963
RIGHT-OF-WAY FIRES							
Ties, protection board walkways (wooden elements)	20	86	104	52	262	5.79	369
Traction power distribution	13	15	14	13	55	1.22	39
Substation	3	0	0	0	3	0.07	2
Signal System	6	4	3	10	23	0.51	24
Grass, trash, debris	239	262	245	192	938	20.73	1,248
Flammable intrusion	0	0	0	0	0	0.00	0
Stored materials	0	0	1	0	1	0.02	0
Track greasers	1	1	0	2	4	0.09	3
Other	134	253	219	144	750	16.58	1,111
TOTALS	1,129	1,208	1,143	1,044	4,524	100.00	6,140

VI. SYSTEM SPECIFIC OVERVIEW

(A) TOTAL OF ALL RRT SYSTEMS

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 per 1,000,000 CAR MILES	1986 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	2	2	0	2	6	0.12	1
● COLLISION WITH OBSTACLE	2	1	0	3	6	0.12	5
● COLLISION WITH PERSON	21	16	17	13	67	1.36	46
● DERAILMENT	2	2	1	1	6	0.12	3
● RAIL HIGHWAY CROSSING	0	1	2	3	6	0.12	5
TOTAL TRAIN ACCIDENTS	27	22	20	22	91	1.85	60
<u>CASUALTIES</u>							
● ON-PLATFORM	299	267	268	278	1,112	0.64	1,240
● ON-TRACKWAY	61	50	66	60	237	0.14	408
● ON-BOARD TRAIN	208	295	238	208	949	0.54	1,011
● ALIGHTING FROM TRAIN	84	84	85	66	319	0.18	393
● BOARDING TRAIN	78	92	86	87	343	0.20	488
● IN TRAIN ACCIDENT	65	23	17	73	178	0.10	102
● STATION FIRES	1	0	2	0	3	0.00	4
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	17
● TRAIN FIRES (IN REVENUE SERVICE)	6	3	6	0	15	0.01	45
TOTAL CASUALTIES	802	814	768	772	3,156	1.80	3,708
INJURIES	796	805	757	764	3,122	1.78	3,668
FATALITIES	6	9	11	8	34	0.02	40

VI. SYSTEM SPECIFIC OVERVIEW

(B) BAY AREA RAPID TRANSIT DISTRICT (BART)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	PER 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	1	1	0.03	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	1	1	0.03	0
CASUALTIES							
● ON-PLATFORM	4	2	2	5	13	0.23	21
● ON-TRACKWAY	2	0	1	1	4	0.07	13
● ON-BOARD TRAIN	5	8	3	7	23	0.41	33
● ALIGHTING FROM TRAIN	10	4	5	4	23	0.41	61
● BOARDING TRAIN	6	8	3	6	23	0.41	44
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	27	22	14	23	86	1.52	172
INJURIES	27	22	14	23	86	1.52	172
FATALITIES	0	0	0	0	0	0.00	0

NA Not applicable - BART does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(C) CHICAGO TRANSIT AUTHORITY (CTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 PER 1,000,000 CAR MILES	1986 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	1	1	0.02	0
● COLLISION WITH OBSTACLE	1	1	0	1	3	0.06	2
● COLLISION WITH PERSON	2	0	2	1	5	0.09	2
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	0	1	2	3	6	0.11	4
TOTAL TRAIN ACCIDENTS	3	2	4	6	15	0.28	8
<u>CASUALTIES</u>							
● ON-PLATFORM	2	1	6	6	15	0.10	7
● ON-TRACKWAY	0	0	2	0	2	0.01	5
● ON-BOARD TRAIN	13	8	4	4	29	0.20	17
● ALIGHTING FROM TRAIN	10	4	5	3	22	0.15	15
● BOARDING TRAIN	1	1	3	0	5	0.03	6
● IN TRAIN ACCIDENT	10	2	4	35	51	0.36	4
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	4	0	4	0	8	0.06	0
TOTAL CASUALTIES	40	16	28	48	132	0.92	54
INJURIES	38	16	24	47	125	0.87	49
FATALITIES	2	0	4	1	7	0.05	5

VI. SYSTEM SPECIFIC OVERVIEW

(D) GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCRTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	1	0	0	0	1	0.48	0
● COLLISION WITH OBSTACLE	0	0	0	1	1	0.48	0
● COLLISION WITH PERSON	1	0	1	0	2	0.95	1
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	2	0	1	1	4	1.90	1
CASUALTIES							
● ON-PLATFORM	4	1	2	0	7	1.23	8
● ON-TRACKWAY	0	0	0	0	0	0.00	1
● ON-BOARD TRAIN	1	2	1	1	5	0.88	4
● ALIGHTING FROM TRAIN	2	1	2	0	5	0.88	8
● BOARDING TRAIN	0	0	0	0	0	0.00	2
● IN TRAIN ACCIDENT	19	0	0	0	19	3.33	1
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	26	4	5	1	36	6.32	24
INJURIES	26	4	5	1	36	6.32	24
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - GCRTA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(E) METROPOLITAN ATLANTA REGIONAL TRANSIT AUTHORITY (MARTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	0	0	0	0	0	0.00	0
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	0
CASUALTIES							
● ON-PLATFORM	3	2	2	2	9	0.14	10
● ON-TRACKWAY	4	1	1	1	7	0.11	11
● ON-BOARD TRAIN	1	3	0	0	4	0.06	10
● ALIGHTING FROM TRAIN	3	1	5	2	11	0.17	10
● BOARDING TRAIN	5	2	0	1	8	0.12	10
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	1
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	16	9	8	6	39	0.60	52
INJURIES	16	9	7	6	38	0.58	52
FATALITIES	0	0	1	0	1	0.02	0

VI. SYSTEM SPECIFIC OVERVIEW

(F) MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	1	1	0.07	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	1	1	0.07	0
CASUALTIES							
● ON-PLATFORM	31	12	14	17	74	0.61	48
● ON-TRACKWAY	1	3	4	2	10	0.08	15
● ON-BOARD TRAIN	3	8	14	6	31	0.26	34
● ALIGHTING FROM TRAIN	7	11	20	11	49	0.40	47
● BOARDING TRAIN	2	8	12	11	33	0.27	60
● IN TRAIN ACCIDENT	0	0	0	22	22	0.18	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	44	42	64	69	219	1.81	204
INJURIES	44	42	64	69	219	1.81	204
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - MBTA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(G) METRO DADE COUNTY TRANSIT AGENCY (MDTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	1
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	1
<u>CASUALTIES</u>							
● ON-PLATFORM	2	2	1	1	6	0.57	4
● ON-TRACKWAY	0	0	0	0	0	0.00	0
● ON-BOARD TRAIN	2	1	1	0	4	0.38	10
● ALIGHTING FROM TRAIN	1	0	0	0	1	0.10	2
● BOARDING TRAIN	0	1	0	0	1	0.10	3
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	5	4	2	1	12	1.14	19
INJURIES	5	4	2	1	12	1.14	19
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - MDTA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(H) MASS TRANSIT ADMINISTRATION OF MARYLAND (MTAMD)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	0
CASUALTIES							
● ON-PLATFORM	0	1	2	0	3	0.24	2
● ON-TRACKWAY	1	0	1	0	2	0.16	1
● ON-BOARD TRAIN	0	0	2	1	3	0.24	6
● ALIGHTING FROM TRAIN	1	1	1	0	3	0.24	1
● BOARDING TRAIN	1	0	1	0	2	0.16	6
● IN TRAIN ACCIDENT		0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	3	2	7	1	13	1.05	16
INJURIES	3	2	7	1	13	1.05	16
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - MTAMD does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(I) NEW YORK CITY TRANSIT AUTHORITY (NYCTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	1	1	0.00	1
● COLLISION WITH PERSON	18	16	14	12	60	0.20	41
● DERAILMENT	1	0	1	0	2	0.01	2
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	19	16	15	13	63	0.21	44
CASUALTIES							
● ON-PLATFORM	235	223	221	229	908	0.86	1,010
● ON-TRACKWAY	48	42	51	54	195	0.18	323
● ON-BOARD TRAIN	166	243	200	178	787	0.74	834
● ALIGHTING FROM TRAIN	34	45	28	35	142	0.13	174
● BOARDING TRAIN	39	46	47	57	189	0.18	251
● IN TRAIN ACCIDENT	18	15	13	16	62	0.06	44
● STATION FIRES	0	0	0	0	0	0.00	2
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	2
● TRAIN FIRES (IN REVENUE SERVICE)	2	3	1	0	6	0.01	44
TOTAL CASUALTIES	542	617	561	569	2,289	2.17	2,684
INJURIES	538	608	555	562	2,263	2.15	2,650
FATALITIES	4	9	6	7	26	0.02	34

N/A Not applicable - NYCTA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(J) PORT AUTHORITY TRANSIT CORPORATION (PATCO)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	0
CASUALTIES							
● ON-PLATFORM	2	0	0	1	3	0.28	4
● ON-TRACKWAY	0	0	0	0	0	0.00	1
● ON-BOARD TRAIN	1	2	0	4	7	0.65	3
● ALIGHTING FROM TRAIN	2	1	4	1	8	0.74	3
● BOARDING TRAIN	1	0	0	0	1	0.09	5
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	6	3	4	6	19	1.75	16
INJURIES	6	3	4	6	19	1.75	16
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - PATCO does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(K) PORT AUTHORITY TRANS-HUDSON CORPORATION (PATH)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	2	0	0	2	0.17	1
● COLLISION WITH OBSTACLE	0	1	0	0	1	0.09	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	1	0	0	1	0.09	1
● RAIL HIGHWAY CROSSING	0	0	0	0	0	0.00	1
TOTAL TRAIN ACCIDENTS	0	4	0	0	4	0.35	3
<u>CASUALTIES</u>							
● ON-PLATFORM	7	4	4	4	19	0.33	40
● ON-TRACKWAY	1	0	0	0	1	0.02	1
● ON-BOARD TRAIN	3	2	1	3	9	0.15	7
● ALIGHTING FROM TRAIN	0	1	1	1	3	0.05	0
● BOARDING TRAIN	0	0	0	0	0	0.00	0
● IN TRAIN ACCIDENT	0	6	0	0	6	0.10	3
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	10
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	1
TOTAL CASUALTIES	11	13	6	8	38	0.65	62
INJURIES	11	13	6	8	38	0.65	62
FATALITIES	0	0	0	0	0	0.00	0

VI. SYSTEM SPECIFIC OVERVIEW

(1) SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY (SEPTA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	1	0	0	0	1	0.06	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	1
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	1	0	0	0	1	0.06	1
CASUALTIES							
● ON-PLATFORM	3	9	9	7	28	0.40	51
● ON-TRACKWAY	4	4	6	0	14	0.20	10
● ON-BOARD TRAIN	10	11	4	0	25	0.36	48
● ALIGHTING FROM TRAIN	10	11	6	4	31	0.45	63
● BOARDING TRAIN	11	14	12	2	39	0.56	81
● IN TRAIN ACCIDENT	18	0	0	0	18	0.26	50
● STATION FIRES	0	0	1	0	1	0.01	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	56	49	38	13	156	2.24	303
INJURIES	56	49	38	13	156	2.24	302
FATALITIES	0	0	0	0	0	0.00	1

N/A Not applicable - SEPTA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(M) STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY (SIRTOA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 Per 1,000,000 CAR MILES	1986 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	1	0	0	0	1	0.45	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	1	0	0	0	1	0.45	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	2	0	0	0	2	0.90	0
<u>CASUALTIES</u>							
● ON-PLATFORM	0	1	1	5	7	1.09	0
● ON-TRACKWAY	0	0	0	2	2	0.31	0
● ON-BOARD TRAIN	3	7	5	2	17	2.66	0
● ALIGHTING FROM TRAIN	4	3	6	3	16	2.50	0
● BOARDING TRAIN	4	5	1	4	14	2.19	0
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	11	16	13	16	56	8.75	0
INJURIES	11	16	13	16	56	8.75	0
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - SIRTOA does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(N) WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

	1987 FIRST QUARTER	1987 SECOND QUARTER	1987 THIRD QUARTER	1987 FOURTH QUARTER	1987 TOTAL	1987 PER 1,000,000 CAR MILES	1986 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	1
● COLLISION WITH PERSON	0	0	0	0	0	0.00	1
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	2
CASUALTIES							
● ON-PLATFORM	6	9	4	1	20	0.15	35
● ON-TRACKWAY	0	0	0	0	0	0.00	1
● ON-BOARD TRAIN	0	0	3	2	5	0.04	5
● ALIGHTING FROM TRAIN	0	1	2	2	5	0.04	9
● BOARDING TRAIN	8	7	7	6	28	0.21	20
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	1	0	1	0	2	0.02	2
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	4
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	15	17	17	11	60	0.45	76
INJURIES	15	17	17	11	60	0.45	76
FATALITIES	0	0	0	0	0	0.00	0

N/A Not applicable - WMATA does not have rail-highway crossings

RRT THRESHOLDS

TRAIN ACCIDENT REPORTING THRESHOLDS

A "reportable train accident" is any accident which satisfies the following threshold levels:

A. TRAIN COLLISIONS

1. All collisions of trains in revenue service involving other rail transit equipment (such as revenue or non-revenue trains, work trains or work equipment), persons and/or rail highway crossings are to be reported.
2. Collisions between trains in revenue service and other obstacles (end of track barriers, shopping carts, foreign objects, etc.) which result in \$5,000 or greater property damage or casualties are to be reported.
"Property Damage" refers to the estimated cost to repair or replace damaged property (vehicles, equipment, right-of-way, etc.) to a state equivalent to that which existed prior to the accident. Property damage does not include the cost of clearing wreckage.

B. TRAIN DERAILMENTS

1. All derailments of trains in revenue service regardless of severity.

C. EXCLUSIONS

1. Accidents (collisions or derailments) occurring in yards and non-revenue service areas which do not involve trains in revenue service are excluded.
2. Accidents (collisions or derailments) which involve only work trains and servicing equipment are excluded.
3. Collisions between train cars resulting from coupling operations which do not involve passenger casualties are excluded.

CASUALTY REPORTING THRESHOLDS

A "reportable casualty" is any casualty which satisfies one or more of the following threshold levels:

A. PASSENGER AND OTHER CASUALTIES

Reportable casualties are casualties involving passengers or other personnel (contractors, etc.) which occur on station platforms, on trackways, boarding and/or on-board trains which result in fatalities or personnel injuries, regardless of severity.

B. EXCLUSIONS

1. Assaults
2. Attempted suicides
3. Suicides and injury resulting from illness
4. Trespassers

FIRE REPORTING THRESHOLDS

Reportable fires are all fires in stations, on trains in revenue service or on the right-of-way when the fire requires extinguishment by fire suppression system or person.

Each fire is reported regardless of damage.

