BUSES INVOLVED IN FATAL ACCIDENTS FACTBOOK 2002



Center for National Truck and Bus Statistics

University of Michigan Transportation Research Institute 2901 Baxter Road • Ann Arbor, Michigan 48109-2150

BUSES INVOLVED IN FATAL ACCIDENTS FACTBOOK 2002

Michael Shrank

Anne Matteson

Daniel Hershberger

John Woodrooffe

December 2005

Center for National Truck and Bus Statistics

The University of Michigan Transportation Research Institute Ann Arbor, Michigan 48109-2150 The research reported herein was conducted under general research funds provided by the Federal Motor Carrier Safety Administration. The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the U.S. Department of Transportation or the Federal Motor Carrier Safety Administration.

1. Report No. UMTRI-2005-20	2. Government Ac	cession No.	3. Recipient's Catalog No).		
4. Title and Subtitle		- L 2002	5. Report Date	5. Report Date		
Buses Involved in Fatal Accidents Factbook 2002			December 200	05		
			6. Performing Organization	on Code		
7. Authors Michael Shrank, Anne Mattesc Woodrooffe	on, Daniel H	ershberger, John	8. Performing Organization			
9. Performing Organization Name and Address			10. Work Unit No.			
Transportation Research Instit 2901 Baxter Road	080638	080638				
University of Michigan			11. Contract or Grant No. DTMC75-02-R-00090			
Ann Arbor, Michigan 48109-2	150		DTMC75-02-F	-00090		
12. Sponsoring Agency Name and Address			13. Type of Report and F Special report 14. Sponsoring Agency C			
•	on DC 20590); and,	ation Truck and Bus Statis	stics		
16. Abstract						
This document presents aggrest statistics are derived from the University of Michigan Transport buses involved in a fatal accide recorded in the Fatality Analyst accident, and occupant recorder and operating authority of the Markov Structure and operating authority of the Markov Structure and St	Buses Involventation Response on the second	ved in Fatal Accie earch Institute. T hited States, and System (FARS) S with information BIFA survey.	dents (BIFA) file, cor he BIFA database is provides coverage c file. BIFA combines	npiled by the a census of all of buses vehicle,		
^{17. Key Words} Buses, accident statistics, fata	l accident	18. Distribution Statement Unlimited				
data	-					
19. Security Classification (of this report) Unclassified	20. Security Classif Unclassifie	ication (of this page) d	21. No. of Pages 70	22. Price		

Reproduction of completed page authorized

	SI* (MODERN METRIC) CONVERSION FACTORS									
	APPROXIMATE CONVERSIONS TO SI UNITS APPROXIMATE CONVERSIONS FROM SI UNITS									
Symbol When You Know Multiply By To Find Symbol					Symbol	ymbol When You Know Multiply By To Find				
LENGTH					LENGTH					
in	inches	25.4	millimeters	mm	mm	millimeters	0.039	inches	in	
ft	feet	0.305	meters	m	m	meters	3.28	feet	ft	
yd	yards	0.914	meters	m	m	meters	1.09	yards	yd	
mi	miles	1.61	kilometers	km	km	kilometers	0.621	miles	mi	
		AREA					AREA			
in ²	square inches	645.2	square millimeters	mm ²	mm ²	square millimeters	0.0016	square inches	in ²	
ft ²	square feet	0.093	square meters	m²	m ²	square meters	10.764	square feet	ft ²	
yd ²	square yards	0.836	square meters	m²	m²	square meters	1.195	square yards	yd ²	
ac	acres	0.405	hectares	ha	ha	hectares	2.47	acres	ac	
mi ²	square miles	2.59	square kilometers	km ²	km ²	square kilometers	0.386	square miles	mi ²	
		VOLUME					VOLUME			
fl oz	fluid ounces	29.57	milliliters	mL	rnL	milliliters	0.034	fluid ounces	fl oz	
gal	gallons	3.785	liters	L	L	liters	0.264	gallons	gal	
ft ³	cubic feet	0.028	cubic meters	m³	m ³	cubic meters	35.71	cubic feet	ft ³	
yd ³	cubic yards	0.765	cubic meters	m³	m³	cubic meters	1.307	cubic yards	yd ³	
NOTE: Vo	olumes greater than 1000	L shall be shown	in m ³ .							
		MASS					MASS			
oz	ounces	28.35	grams	g	g	grams	0.035	ounces	oz	
lb	pounds	0.454	kilograms	kg	kg	kilograms	2.202	pounds	lb	
Т	short tons (2001 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")	Mg (or "t")	megagrams (or "metric ton")	1.103	short tons (2001 lb)	Т	
	TEMF	PERATURE (exa	act)			TEMI	PERATURE (exa	ict)		
°F	Fahrenheit	5(F-32)/9	Celcius	°C	°C	Celcius	1.8C + 32	Fahrenheit	°F	
	temperature	or (F-32)/1.8	temperature			temperature		temperature		
	IL	LUMINATION				I	LLUMINATION			
fc	foot-candles	10.76	lux	lx	lx	lux	0.0929	foot-candles	fc	
fl	foot-Lamberts	3.426	candela/m ²	cd/m ²	cd/m ²	candela/m ²	0.2919	foot-lamberts	fl	
	FORCE and	PRESSURE or	STRESS			FORCE an	d PRESSURE o			
lbf	poundforce	4.45	newtons	Ν	Ν	newtons	0.225	poundforce	lbf	
lbf/in ²	poundforce per square inch	6.89	kilopascals	kpa	kPa	kilopascals	0.145	poundforce per square inch	lbf/in ²	

* SI is the symbol for the International System of Units. Appropriate rounding should be made to comply with Section 4 of ASTM E380.

(Revised September 1993)

Acknowledgments

The data documented in this report are the product of the dedicated efforts of many people. The project originated under the direction of Ken Campbell. Daniel Hershberger managed the survey and edited the cases. Laury Elwell, Stuart Snyder, and James Piazza served as interviewers. Their conscientious dedication to accuracy and completeness is greatly appreciated. In addition, the project would not have been possible without the willing cooperation of hundreds of bus owners, operators, and police officers across the country.

The BIFA survey is conducted by the Center for National Truck and Bus Statistics at the University of Michigan Transportation Research Institute. The preparation of the data file and codebook was supported by the Federal Motor Carrier Safety Administration.

Table of contents

Figuresix
Tablesxi
Introduction
Report overview1
Trends 1999-2002
Annual fatal involvements5
Annual fatalities
Accident conditions9
Geographic distributions11
Temporal distributions14
Environmental distributions16
Roadway distributions
Accident description21
Fatalities23
Vehicle
Driver
Glossary and abbreviations
Glossary51
Tables of abbreviations 54
Index

Figures

Figure 1-1 Fatal Bus Involvements by State, BIFA 2002	.11
Figure 1-2 Fatal Bus Involvements by State – School Buses Only, BIFA 2002	.11
Figure 1-3 Fatal Bus Involvements by State – Transit Buses Only, BIFA 2002	.12

Tables

Trends

Table 1-1 Fatal Bus Involvements by Year and Bus Type BIFA 1999-2002	5
Table 1-2 Fatal Bus Involvements by Year and Operator Type BIFA 1999-2002	5
Table 1-3 Fatal Bus Involvements by Year, Bus Type and Passenger Seating Capacity BIFA 1999-2002	6
Table 1-4: Fatal Bus Involvements by Year and State, BIFA 1999-2002	7
Table 1-5 Fatalities in Bus Involvements by Year and Person Type BIFA 1999-2002	8

Accident conditions

Table 2-1 Fatal Bus Involvements by State and Bus Type BIFA 2002	13
Table 2-2 Fatal Bus Involvements by Month and Bus Type BIFA 2002	14
Table 2-3 Fatal Bus Involvements by Day of Week and Bus Type BIFA 2002	14
Table 2-4 Fatal Bus Involvements by Day Type and Bus Type BIFA 2002	14
Table 2-5 Fatal Bus Involvements by Time of Accident and Bus Type BIFA 2002	15
Table 2-6 Fatal Bus Involvements by Time of Accident and Day Type BIFA 2002	16
Table 2-7 Fatal Bus Involvements by Land Use and Bus Type BIFA 2002	16
Table 2-8 Fatal Bus Involvements by Light Condition and Bus Type BIFA 2002	17
Table 2-9 Fatal Bus Involvements by Roadway Surface Condition and Bus Type BIFA 2002	17
Table 2-10 Fatal Bus Involvements by Weather Condition and Bus Type BIFA 2002	17
Table 2-11 Fatal Bus Involvements by Roadway Function Class and Bus Type BIFA 2002	18
Table 2-12 Fatal Bus Involvements by Route Signing and Bus Type BIFA 2002	18
Table 2-13 Fatal Bus Involvements by Relation to Junction and Bus Type BIFA 2002	19

Table 2-14 Fatal Bus Involvements by Number of Travel Lanes and Bus Type BIFA 2002	. 19
Table 2-15 Fatal Bus Involvements by Trafficway Flow and Bus Type BIFA 2002	. 20
Table 2-16 Fatal Bus Involvements by Speed Limit and Bus Type BIFA 2002	. 20
Table 2-17 Fatal Bus Involvements by Accident Type and Bus Type BIFA 2002	.21
Table 2-18 Fatal Bus Involvements by Number of Vehicles in Crash and Bus Type BIFA 2002	.21
Table 2-19 Fatal Bus Involvements by First Harmful Event and Bus Type BIFA 2002	.22
Table 2-20 Fatal Bus Involvements by Vehicle Role in Accident and Bus Type BIFA 2002	.22
Table 2-21 Fatal Bus Involvements by Manner of Collision and Bus Type BIFA 2002	.23
Table 2-22 Fatalities in Bus Involvements by Person Type and Bus Type BIFA 2002	.23
Table 2-23 Non-Motorist Fatality Involvements by Bus Type BIFA 2002	.23

Vehicle

Table 3-1 Fatal Bus Involvements by Operator Type and Bus Vehicle Description BIFA 2002 2	7
Table 3-2 Fatal Bus Involvements by Operator Type and Bus Operator Description BIFA 2002 2	8
Table 3-3 Fatal Bus Involvements by Bus Body Style and Bus Type BIFA 20022	9
Table 3-4 Fatal Bus Involvements by Bus Body Configuration and Bus Type BIFA 20022	9
Table 3-5 Fatal Bus Involvements by Front of Bus Style and Bus Type BIFA 20022	9
Table 3-6 Fatal Bus Involvements by Model Year and Front of Bus Style BIFA 2002	0
Table 3-7 Fatal Bus Involvements by Model Year and Bus Type BIFA 2002	1
Table 3-8 Fatal Bus Involvements by Bus Length and Bus Type BIFA 2002	2
Table 3-9 Fatal Bus Involvements by Bus Empty Weight and Bus Type BIFA 20023	2
Table 3-10 Fatal Bus Involvements by Gross Vehicle Weight Rating and Bus Type BIFA 2002	3
Table 3-11 Fatal Bus Involvements by Number of Axles and Bus Type BIFA 2002	3

Table 3-12 Fatal Bus Involvements by Passenger Seating Capacity (Excluding Driver) and Bus Type BIFA 2002	
Table 3-13 Fatal Bus Involvements by Number of Passengers and Bus Type BIFA 2002	34
Table 3-14 Fatal Bus Involvements by Type of Passenger Restraints Available (Excluding Driver) and Bus Type BIFA 2002	35
Table 3-15 Fatal Bus Involvements by Carrier Type and Bus Type BIFA 2002	35
Table 3-16 Fatal Bus Involvements by Trip Type and Bus Type BIFA 2002	35
Table 3-17 Fatal Bus Involvements by Most Harmful Event and Bus Type BIFA 2002	36
Table 3-18 Fatal Bus Involvements by Rollover Status and Bus Type BIFA 2002	36
Table 3-19 Fatal Bus Involvements by Number of Quarter Turns and Direction of Roll BIFA 2002	36
Table 3-20 Fatal Bus Involvements by Fire Occurrence and Bus Type BIFA 2002	37

Driver

Table 4-1 Fatal Bus Involvements by Driver Drinking Status and Bus Type BIFA 200241
Table 4-2 Fatal Bus Involvements by Driver Drug Use and Bus Type BIFA 200241
Table 4-3 Fatal Bus Involvements by Driver Age and Bus Type BIFA 200241
Table 4-4 Fatal Bus Involvements by Driver Sex and Bus Type BIFA 200242
Table 4-5 Fatal Bus Involvements by Driver Restraint Use and Bus Type BIFA 200242
Table 4-6 Fatal Bus Involvements by Driver Injury Severity and Bus Type BIFA 200242
Table 4-7 Fatal Bus Involvements by Driver Injury Severity and Rollover, Fire,Ejection Status BIFA 200243
Table 4-8 Fatal Bus Involvements by Bus Type and Driver Extrication BIFA 200243
Table 4-9 Fatal Bus Involvements by Driver Compensation BIFA 200243
Table 4-10 Fatal Bus Involvements by Driver Compensation and Bus Type BIFA 200244
Table 4-11 Fatal Bus Involvements by Reported Hours Driven and Bus Type BIFA 200245
Table 4-12 Fatal Bus Involvements by Driver Violations Charged and Bus Type BIFA 200245

Table 4-13 Fatal Bus Involvements by Number of Previous Accidents (fatal and nonfatal) and Bus Type BIFA 2002	.46
Table 4-14 Fatal Bus Involvements by Number of Previous Suspensions and Bus Type BIFA 2002	.46
Table 4-15 Fatal Bus Involvements by Number of Previous Speeding Convictions and Bus Type BIFA 2002	.46
Table 4-16 Fatal Bus Involvements by Previous Other Moving Convictions and Bus Type BIFA 2002	.47
Table 4-17 Fatal Bus Involvements by License Class Compliance and Bus Type BIFA 2002.	.47
Table 4-18 Fatal Bus Involvements by CDL License Status and Bus Type BIFA 2002	.47
Table 4-19 Fatal Bus Involvements by License Endorsements and Bus Type BIFA 2002	.48
Table 4-20 Fatal Bus Involvements by Driver-Related Factors and Bus Type BIFA 2002	.49

Introduction

This report, *Buses Involved in Fatal Accidents Factbook 2002*, provides descriptive statistics about buses involved in fatal accidents in the United States. The data come from the Buses Involved in Fatal Accidents (BIFA) survey program, initiated in 2000 by the Center for National Truck and Bus Statistics (CNTBS) at the University of Michigan Transportation Research Institute (UMTRI).

Modeled after UMTRI's Trucks Involved in Fatal Accidents (TIFA) program, the BIFA survey collects detailed information on all buses involved in all fatal traffic accidents. Buses are defined as motor vehicles with seating for nine or more, including the driver, that are not operated as personal transportation, and all motor vehicles with seating for 16 or more.

The BIFA file is produced annually, beginning with the 1999 data year, from a survey of bus records extracted from the Fatality Analysis Reporting System (FARS) file, compiled by the National Center for Statistics and Analysis at the National Highway Traffic Safety Administration. Accident, vehicle, and driver records that appear to involve a bus are selected from the FARS file. Police reports for each accident represented are requested from the appropriate states. The 2002 BIFA file is a census file, meaning there is one record for each of the 298 buses involved in a fatal accident that year.

Trained and experienced interviewers contact individuals knowledgeable about the bus, including drivers, safety officers, police officers, emergency personnel, and witnesses. The interviewers verify that the vehicle is a bus and then collect information about the bus, bus driver, and the motor carrier that operated the bus. The interview produces a detailed description of the physical configuration of the bus, the operating authority of the bus, and the trip the bus was on at the time of the accident. An editor reviews each case to ensure accuracy and consistency.

The BIFA file combines the detailed physical description of the vehicle from the BIFA survey with matching accident, driver, and vehicle data from the FARS file. Almost all variables in FARS describing the accident, vehicle, and driver are included in the BIFA file. No FARS data is altered or corrected. The BIFA variables supplement the FARS data with extensive detail on the bus, including the bus's seating capacity; its weight, length and width; the number of passengers at the time of the crash; operating authority; type of trip; hours driving; and the bus's role in the accident. The methodology, as well as a complete list of variables and data in the BIFA survey, is fully documented in *Buses Involved in Fatal Accidents Codebook 2002*.

Report overview

This report consists of four sections. The "Trends" section provides data on fatalities, and fatal accident involvements from 1999 through 2002. The "Accident conditions" section provides

information about the accidents the buses were involved in, including distributions of bus fatal involvements across states, and information about the weather, road type, and roadway condition at the time of the accident. The "Vehicle" section includes statistics about bus body style, seating capacity, and the weights, lengths, and axle counts of the buses. The "Driver" section includes information about bus driver injury, licensing, previous driving record, age, sex, and other driver characteristics.

Virtually all tables present counts of involvements; that is, the number of the buses involved in a fatal accident by various factors and conditions of interest.

Within this report buses are classified by how they are operated rather than by their physical configuration. The BIFA survey collects a detailed physical description of each vehicle. But the most meaningful and straightforward classification for this report is how the bus is used. Thus, if a bus is used to transport K-12 students for a school, it is classified as a school bus. Other buses that are of the type typically used as school buses, but which are used for a different purpose, are classified according to the operator type. "School buses" are sometimes converted to private use, and would be classified as "other bus type" here, a category used for the less common operator types. Likewise, a "school bus" used by a charter bus company would be categorized as "charter." However, in most cases the physical configuration of the bus corresponds to the expected type for each.

Bus Operator Types Used in this Factbook

School – any public or private school or district, or contracted carrier operating on behalf of the entity, providing transportation for pupils.

Transit – an entity providing passenger transportation over fixed, scheduled routes, within primarily urban geographical areas.

Intercity – a company providing for-hire, long-distance passenger transportation between cities over fixed routes with regular schedules.

Charter – companies that operate buses on a for-hire basis, usually providing round-trip service for a tour group or an outing, either on an ad hoc or scheduled basis.

Other – this category includes buses operated by private companies (primary business other than passenger transportation), non-governmental organizations (such as churches and non-profit organizations), non-educational units of government (such as departments of corrections or highway departments), and private individuals (entertainers, sports teams, etc.).

Unknown – in cases where sufficient information could not be obtained about the operator type, "unknown" was assigned.

Definitions of terms and a table of abbreviations may be found on page 51.

Trends 1999-2002

This section contains tables displaying trends in bus involvements in fatal traffic accidents and the number of persons killed in those accidents. The trends are presented by bus operator type, state, and person type.

- During the 4-year period 1999-2002, an average of 325 buses were involved in a fatal traffic accident each year. In 2002 there was a decrease of 14 bus involvements (298 total) from 312 involvements in 2001.
- Buses owned or operated for a school district were the most common operator type, accounting for 39.7% of all buses involved in fatal crashes during the 4-year period on average. Urban transit authority buses represent the second most frequent bus type for fatal involvements, averaging 33.1%.
- 2002 experienced a significant decline in school bus involvements (102 in 2002 compared to 131 in 2001), however, the unknown bus type category was significantly higher in 2002 than 2001 (35 compared to 10 respectively). It is suspected that some school buses could not be identified.
- California, New York, and Florida had the greatest number of bus involvements over the period 1999-2002.
- In 2002 there were 359 persons killed in crashes involving a bus; 11 of them were bus drivers, and 44 were passengers on the bus. Other vehicle drivers and passengers represented the largest source of fatalities with 207 (57.7%) and non-motorists represented 97 (27.0%) of the fatalities.
- Of the non-motorist fatalities, 83 pedestrians and 13 bicyclists were killed during 2002 in accidents involving buses. One non-motorist could not be categorized.

Annual fatal involvements

Accident	School	Transit	Intercity	Charter	Other	Unknown	Total
year	No.	No.	No.	No.	No.	No.	No.
1999	146	104	13	35	22	13	333
2000	138	133	15	31	36	5	358
2001	131	96	15	37	23	10	312
2002	102	98	10	29	24	35	298
Total	517	431	53	132	105	63	1301

Table 1-1Fatal Bus Involvements by Year and Bus TypeBIFA 1999-2002

Table 1-2Fatal Bus Involvements by Year and Operator TypeBIFA 1999-2002

	199	99	200	00	200)1	200)2	Tot	al
Bus Operator Type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
School district	146	43.8	138	38.5	131	42.0	102	34.2	517	39.7
Urban transit authority	104	31.2	133	37.2	96	30.8	98	32.9	431	33.1
Scheduled intercity	13	3.9	15	4.2	15	4.8	10	3.4	53	4.1
Charter bus	35	10.5	31	8.7	37	11.9	29	9.7	132	10.1
Private company	5	1.5	3	0.8	2	0.6	2	0.7	12	0.9
Non-government organization	7	2.1	12	3.4	9	2.9	10	3.4	38	2.9
Non-educational unit of government	2	0.6	6	1.7	1	0.3	4	1.3	13	1.0
Private, for personal transportation	1	0.3	0	0.0	1	0.3	1	0.3	3	0.2
Other	7	2.1	15	4.2	10	3.2	7	2.3	39	3.0
Unknown	13	3.9	5	1.4	10	3.2	35	11.7	63	4.8
Total	333	100.0	358	100.0	312	100.0	298	100.0	1301	100.0

Bus operator type	199	9	200	00	200)1	200)2	Tot	al
Bus seating capacity	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
School district										
8-14	4	1.2	3	0.8	3	1.0	3	1.0	13	1.0
15-50	27	8.1	27	7.5	18	5.8	23	7.7	95	7.3
51-99	92	27.6	100	27.9	107	34.3	74	24.8	373	28.7
Est. 15 or more	0	0.0	2	0.6	1	0.3	2	0.7	5	0.4
Unknown	23	6.9	6	1.7	2	0.6	0	0.0	31	2.4
Total school district	146	43.8	138	38.5	131	42.0	102	34.2	517	39.7
Transit bus authority										
8-14	0	0.0	4	1.1	1	0.3	2	0.7	7	0.5
15-50	76	22.8	115	32.1	81	26.0	89	29.9	361	27.7
51-99	8	2.4	10	2.8	13	4.2	5	1.7	36	2.8
Est. 15 or more	0	0.0	2	0.6	0	0.0	1	0.3	3	0.2
Unknown	20	6.0	2	0.6	1	0.3	1	0.3	24	1.8
Total transit bus	104	31.2	133	37.2	96	30.8	98	32.9	431	33.1
Intercity bus operator										
8-14	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
15-50	11	3.3	9	2.5	10	3.2	7	2.3	37	2.8
51-99	1	0.3	6	1.7	5	1.6	3	1.0	15	1.2
Unknown	1	0.3	0	0.0	0	0.0	0	0.0	1	0.1
Total intercity bus	13	3.9	15	4.2	15	4.8	10	3.4	53	4.1
Charter bus operator	_									
8-14	1	0.3	1	0.3	0	0.0	0	0.0	2	0.2
15-50	19	5.7	11	3.1	18	5.8	14	4.7	62	4.8
51-99	13	3.9	13	3.6	8	2.6	7	2.3	41	3.2
Est. 15 or more	0	0.0	4	1.1	9	2.9	8	2.7	21	1.6
Unknown	2	0.6	2	0.6	2	0.6	0	0.0	6	0.5
Total charter bus	35	10.5	31	8.7	37	11.9	29	9.7	132	10.1
Other operator										
8-14	1	0.3	11	3.1	3	1.0	6	2.0	21	1.6
15-50	7	2.1	21	5.9	14	4.5	12	4.0	54	4.2
51-99	8	2.4	2	0.6	4	1.3	3	1.0	17	1.3
Est. 15 or more	0	0.0	2	0.6	1	0.3	3	1.0	6	0.5
Unknown	6	1.8	0	0.0	1	0.3	0	0.0	7	0.5
Total other	22	6.6	36	10.1	23	7.4	24	8.1	105	8.1
Unknown operator type										
8-14	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
15-50	3	0.9	3	0.8	0	0.0	3	1.0	9	0.7
51-99	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Est. 15 or more	0	0.0	0	0.0	0	0.0	3	1.0	3	0.2
Unknown	10	3.0	1	0.3	10	3.2	29	9.7	50	3.8
Total unknown	13	3.9	5	1.4	10	3.2	35	11.7	63	4.8
Total	333	100.0	358	100.0	312	100.0	298	100.0	1301	100.0

 Table 1-3

 Fatal Bus Involvements by Year, Bus Type and Passenger Seating Capacity

 BIFA 1999-2002

New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island

South Carolina

South Dakota

Tennessee

Texas

Vermont

Washington

West Virginia

Wisconsin

Wyoming

Total

Virginia

Utah

1

6

0

2

18

3

0

7

10

2

4

0

333

0.3

1.8

0.0

0.6

5.4

0.9

0.0

2.1

3.0

0.6

1.2

0.0

100.0

2

2

0

7

28

4

0

4

4

0

7

3

358

0.6

0.6

0.0

2.0

7.8

1.1

0.0

1.1

1.1

0.0

2.0

0.8

100.0

1

7

0

6

16

2

1

5

10

2

8

0

312

0.3

2.2

0.0

1.9

5.1

0.6

0.3

1.6

3.2

0.6

2.6

0.0

100.0

2

5

0

3

24

2

1

6

3

3

5

0

298

0.7

1.7

0.0

1.0

8.1

0.7

0.3

2.0

1.0

1.0

1.7

0.0

100.0

6

20

0

18

86

11

2

22

27

7

24

3

1301

0.5

1.5

0.0

1.4

6.6

0.8

0.2

1.7

2.1

0.5

1.8

0.2

100.0

	199	99	200	00	200)1	200)2	Tot	al
State	No.	Pct.								
Alabama	2	0.6	3	0.8	4	1.3	1	0.3	10	0.0
Alaska	0	0.0	3	0.8	3	1.0	0	0.0	6	0.
Arizona	6	1.8	7	2.0	6	1.9	8	2.7	27	2.1
Arkansas	3	0.9	1	0.3	7	2.2	3	1.0	14	1.1
California	45	13.5	38	10.6	38	12.2	38	12.8	159	12.2
Colorado	5	1.5	8	2.2	6	1.9	6	2.0	25	1.9
Connecticut	4	1.2	2	0.6	0	0.0	3	1.0	9	0.
Delaware	3	0.9	1	0.3	0	0.0	1	0.3	5	0.4
Dist of Columbia	2	0.6	3	0.8	2	0.6	1	0.3	8	0.0
Florida	26	7.8	38	10.6	21	6.7	22	7.4	107	8.2
Georgia	8	2.4	12	3.4	9	2.9	8	2.7	37	2.8
Hawaii	1	0.3	4	1.1	5	1.6	5	1.7	15	1.2
Idaho	2	0.6	0	0.0	4	1.3	2	0.7	8	0.0
Illinois	12	3.6	13	3.6	13	4.2	7	2.3	45	3.
Indiana	6	1.8	4	1.1	4	1.3	1	0.3	15	1.2
Iowa	1	0.3	5	1.4	3	1.0	3	1.0	12	0.9
Kansas	4	1.2	4	1.1	2	0.6	3	1.0	13	1.(
Kentucky	1	0.3	4	1.1	2	0.6	5	1.7	12	0.9
Louisiana	4	1.2	2	0.6	8	2.6	3	1.0	17	1.
Maine	1	0.3	0	0.0	2	0.6	0	0.0	3	0.2
Maryland	8	2.4	4	1.1	5	1.6	5	1.7	22	1.
Massachusetts	2	0.6	3	0.8	3	1.0	6	2.0	14	1.1
Michigan	9	2.7	17	4.7	9	2.9	11	3.7	46	3.
Minnesota	5	1.5	10	2.8	5	1.6	4	1.3	24	1.8
Mississippi	2	0.6	3	0.8	2	0.6	1	0.3	8	0.0
Missouri	7	2.1	8	2.2	6	1.9	8	2.7	29	2.2
Montana	1	0.3	0	0.0	0	0.0	1	0.3	2	0.2
Nebraska	0	0.0	0	0.0	2	0.6	1	0.3	3	0.2
Nevada	4	1.2	6	1.7	5	1.6	6	2.0	21	1.0
New Hampshire	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
New Jersey	17	5.1	13	3.6	10	3.2	12	4.0	52	4.
New Mexico	5	1.5	5	1.4	3	1.0	5	1.7	18	1.4
New York	36	10.8	33	9.2	39	12.5	26	8.7	134	10.3
North Carolina	4	1.2	7	2.0	2	0.6	6	2.0	19	1.
North Dakota	0	0.0	1	0.3	0	0.0	1	0.3	2	0.3
Ohio	12	3.6	9	2.5	6	1.9	9	3.0	36	2.
Oklahoma	3	0.9	8	2.2	4	1.3	4	1.3	19	1.
Oregon	6	1.8	0	0.0	2	0.6	3	1.0	11	0.8
Pennsylvania	23	6.9	17	4.7	12	3.8	15	5.0	67	5.1

Table 1-4: Fatal Bus Involvements	s by Year and State, BIFA 1999-2002
	, .,

Annual fatalities

	19	99	20	00	20	01	200)2	Тс	otal
Vehicle/Person type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Bus										
Driver	18	4.5	15	3.8	12	3.4	11	3.1	56	3.7
Passenger	47	11.9	26	6.6	25	7.0	44	12.3	142	9.4
Bus total	65	16.4	41	10.4	37	10.4	55	15.3	198	13.1
Other vehicle										
Drivers	175	44.2	190	48.1	153	43.0	151	42.1	669	44.4
Passengers	63	15.9	61	15.4	60	16.9	56	15.6	240	15.9
Unknown occ. type	0	0.0	3	0.8	0	0.0	0	0.0	3	0.2
Other vehicle total	238	60.1	254	64.3	213	59.8	207	57.7	912	60.6
Non-motorists										
In parked vehicle	2	0.5	0	0.0	0	0.0	0	0.0	2	0.1
Pedestrian	82	20.7	91	23.0	92	25.8	83	23.1	348	23.1
Bicyclist	9	2.3	9	2.3	14	3.9	13	3.6	45	3.0
Unknown non-motorist	0	0.0	0	0.0	0	0.0	1	0.3	1	0.1
Non-motorist total	93	23.5	100	25.3	106	29.8	97	27.0	396	26.3
Total	396	100.0	395	100.0	356	100.0	359	100.0	1506	100.0

Table 1-5Fatalities in Bus Involvements by Year and Person TypeBIFA 1999-2002

Accident conditions

This section provides statistics that describe conditions at the scene of fatal traffic accidents involving buses. Tables present various accident characteristics, including temporal and environmental conditions, as well as distributions of collision type and the bus's role in the accident. Though the tables focus on accident-level characteristics, all tables show counts of buses involved in fatal accidents, rather than counts of accidents. Some fatal traffic accidents include more than one bus.

- About 53% of fatal bus involvements occurred from 6:00 to 8:59 a.m. or from 2:00 to 4:59 p.m., primarily due to school buses.
- Overall, 84.6% of fatal involvements of buses occurred during the work week, but this varies by bus type. Charter buses experienced 37.9% of their involvements on the weekend (Saturday and Sunday), compared with only 4.9% for school buses.
- The majority (82.6%) of fatal involvements occurred under "normal" weather conditions (i.e. no rain, snow, fog, or other adverse condition). Thirty-nine or 13.1% of fatal involvements occurred under rain conditions.
- Overall, 71.1% of the fatal bus involvements occurred in daylight and 23.5% of the involvements occurred under dark and dark but lighted conditions. Transit buses (the second most frequent bus type) had the highest incidence of fatal involvements occurring during dark and dark but lighted conditions, accounting for 31 or 35.7% of their 98 involvements.
- Local streets (township or municipality) accounted for 39.6% of fatal bus involvements, 23.8% of bus involvements were on state highways, and 13.1% were on county roads.
- Over sixty percent of the fatal involvements of buses occurred on undivided roads with twoway traffic.
- In 25.8% of fatal involvements, the bus hit an object in the road (often a pedestrian or other non-motorist); in 11.4% of involvements another vehicle crossed the center line of the road and struck the bus head on; and in 6.4% of involvements the bus struck the side of another vehicle. These proportions can differ dramatically by bus type.
- In 61.4% of fatal bus involvements the first harmful event was collision with a motor vehicle; 26.5% involved collision with a pedestrian. Transit and charter buses had the highest incidence of collisions involving pedestrians, with 40.8% and 31.0% respectively.

Geographic distributions

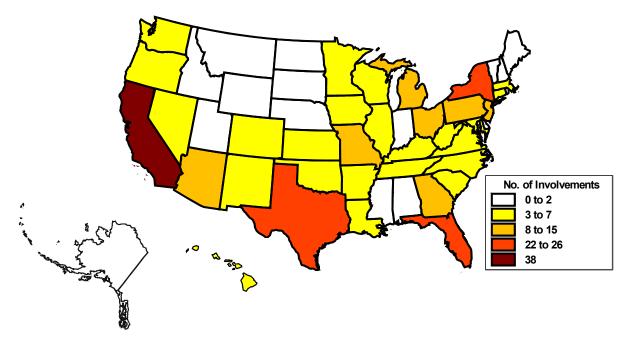


Figure 1-1: Fatal Bus Involvements by State, BIFA 2002

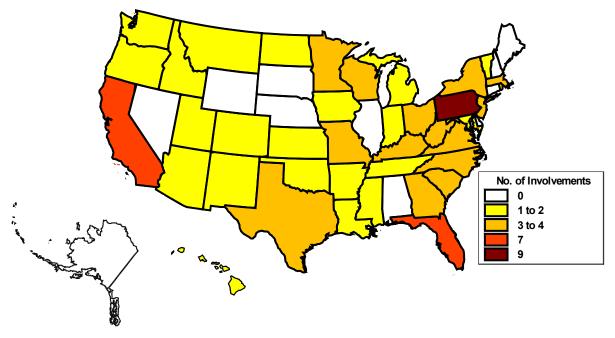


Figure 1-2: Fatal Bus Involvements by State – School Buses Only, BIFA 2002

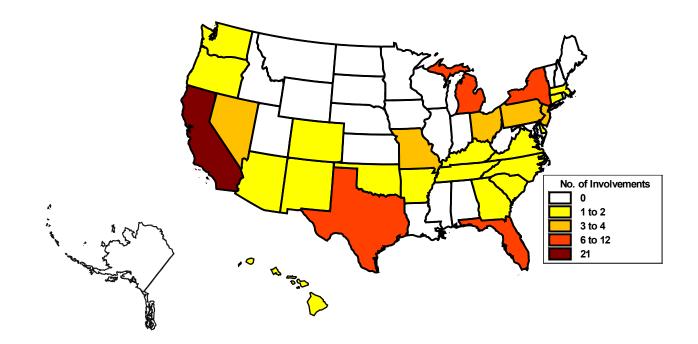


Figure 1-3: Fatal Bus Involvements by State – Transit Buses Only, BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unk	nown	Тс	otal
State	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Alabama	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Alaska	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Arizona	2	2.0	1	1.0	1	10.0	2	6.9	2	8.3	0	0.0	8	2.7
Arkansas	2	2.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
California	7	6.9	21	21.4	1	10.0	5	17.2	4	16.7	0	0.0	38	12.8
Colorado	2	2.0	2	2.0	2	20.0	0	0.0	0	0.0	0	0.0	6	2.0
Connecticut	0	0.0	1	1.0	0	0.0	1	3.4	1	4.2	0	0.0	3	1.0
Delaware	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Dist of Columbia	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Florida	7	6.9	6	6.1	0	0.0	1	3.4	7	29.2	1	2.9	22	7.4
Georgia	3	2.9	2	2.0	1	10.0	1	3.4	0	0.0	1	2.9	8	2.7
Hawaii	1	1.0	2	2.0	0	0.0	2	6.9	0	0.0	0	0.0	5	1.7
Idaho	1	1.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	2	0.7
Illinois	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	20.0	7	2.3
Indiana	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Iowa	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	2	5.7	3	1.0
Kansas	2	2.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	3	1.0
Kentucky	3	2.9	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	5	1.7
Louisiana	2	2.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	3	1.0
Maine	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Maryland	2	2.0	0	0.0	1	10.0	2	6.9	0	0.0	0	0.0	5	1.7
Massachusetts	4	3.9	1	1.0	0	0.0	0	0.0	0	0.0	1	2.9	6	2.0
Michigan	2	2.0	6	6.1	0	0.0	1	3.4	2	8.3	0	0.0	11	3.7
Minnesota	4	3.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.3
Mississippi	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Missouri	3	2.9	3	3.1	0	0.0	1	3.4	1	4.2	0	0.0	8	2.7
Montana	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Nebraska	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Nevada	0	0.0	4	4.1	0	0.0	1	3.4	0	0.0	1	2.9	6	2.0
New Hampshire	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
New Jersey	3	2.9	4	4.1	0	0.0	0	0.0	1	4.2	4	11.4	12	4.0
New Mexico	2	2.0	2	2.0	0	0.0	0	0.0	0	0.0	1	2.9	5	1.7
New York	4	3.9	12	12.2	1	10.0	2	6.9	0	0.0	7	20.0	26	8.7
North Carolina	3	2.9	1	1.0	1	10.0	0	0.0	1	4.2	0	0.0	6	2.0
North Dakota	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Ohio	3	2.9	4	4.1	0	0.0	0	0.0	0	0.0	2	5.7	9	3.0
Oklahoma	1	1.0	1	1.0	0	0.0	0	0.0	0	0.0	2	5.7	4	1.3
Oregon	1	1.0	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
Pennsylvania	9	8.8	4	4.1	0	0.0	1	3.4	1	4.2	0	0.0	15	5.0
Rhode Island	1	1.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	2	0.7
South Carolina	4	3.9	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	5	1.7
South Dakota	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tennessee	1	1.0	1	1.0	0	0.0	0	0.0	1	4.2	0	0.0	3	1.0
Texas	4	3.9	8	8.2	2	20.0	3	10.3	2	8.3	5	14.3	24	8.1
Utah	1	1.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	2	0.7
Vermont	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Virginia	4	3.9	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	6	2.0
Washington	1	1.0	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
West Virginia	3	2.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
Wisconsin	4	3.9	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	5	1.7
Wyoming	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0
									- ·		00			

Table 2-1 Fatal Bus Involvements by State and Bus Type BIFA 2002

Temporal distributions

Month of	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Otl	ner	Unkr	nown	То	tal
accident	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
January	6	5.9	15	15.3	2	20.0	4	13.8	5	20.8	4	11.4	36	12.1
February	12	11.8	8	8.2	1	10.0	1	3.4	0	0.0	4	11.4	26	8.7
March	10	9.8	9	9.2	0	0.0	3	10.3	0	0.0	1	2.9	23	7.7
April	6	5.9	4	4.1	1	10.0	2	6.9	3	12.5	3	8.6	19	6.4
May	11	10.8	6	6.1	0	0.0	2	6.9	3	12.5	4	11.4	26	8.7
June	4	3.9	9	9.2	1	10.0	6	20.7	2	8.3	3	8.6	25	8.4
July	1	1.0	9	9.2	0	0.0	3	10.3	2	8.3	0	0.0	15	5.0
August	3	2.9	9	9.2	0	0.0	0	0.0	0	0.0	1	2.9	13	4.4
September	17	16.7	8	8.2	2	20.0	1	3.4	3	12.5	4	11.4	35	11.7
October	8	7.8	7	7.1	3	30.0	4	13.8	4	16.7	4	11.4	30	10.1
November	15	14.7	10	10.2	0	0.0	1	3.4	2	8.3	5	14.3	33	11.1
December	9	8.8	4	4.1	0	0.0	2	6.9	0	0.0	2	5.7	17	5.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-2 Fatal Bus Involvements by Month and Bus Type BIFA 2002

Table 2-3
Fatal Bus Involvements by Day of Week and Bus Type
BIFA 2002

	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	otal
Day of week	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Sunday	1	1.0	6	6.1	1	10.0	5	17.2	1	4.2	3	8.6	17	5.7
Monday	18	17.6	13	13.3	0	0.0	4	13.8	7	29.2	8	22.9	50	16.8
Tuesday	13	12.7	23	23.5	2	20.0	0	0.0	3	12.5	4	11.4	45	15.1
Wednesday	24	23.5	15	15.3	2	20.0	4	13.8	1	4.2	6	17.1	52	17.4
Thursday	18	17.6	16	16.3	1	10.0	2	6.9	5	20.8	5	14.3	47	15.8
Friday	24	23.5	14	14.3	2	20.0	8	27.6	3	12.5	7	20.0	58	19.5
Saturday	4	3.9	11	11.2	2	20.0	6	20.7	4	16.7	2	5.7	29	9.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-4 Fatal Bus Involvements by Day Type and Bus Type BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkr	nown	То	otal
Day type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Work week	97	95.1	81	82.7	7	70.0	18	62.1	19	79.2	30	85.7	252	84.6
Weekend	5	4.9	17	17.3	3	30.0	11	37.9	5	20.8	5	14.3	46	15.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Note: Work week is defined as Monday through Friday, and weekend as Saturday and Sunday.

Time of	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Oth	ner	Unkr	nown	Tc	tal
accident	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Midnight	0	0.0	2	2.0	0	0.0	1	3.4	2	8.3	0	0.0	5	1.7
1:00 AM	0	0.0	2	2.0	0	0.0	0	0.0	0	0.0	2	5.7	4	1.3
2:00 AM	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	1	2.9	2	0.7
3:00 AM	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	1	2.9	2	0.7
4:00 AM	0	0.0	1	1.0	3	30.0	1	3.4	1	4.2	0	0.0	6	2.0
5:00 AM	1	1.0	3	3.1	2	20.0	0	0.0	3	12.5	0	0.0	9	3.0
6:00 AM	8	7.8	7	7.1	0	0.0	1	3.4	0	0.0	2	5.7	18	6.0
7:00 AM	22	21.6	7	7.1	0	0.0	2	6.9	1	4.2	2	5.7	34	11.4
8:00 AM	8	7.8	3	3.1	0	0.0	2	6.9	3	12.5	5	14.3	21	7.0
9:00 AM	1	1.0	4	4.1	0	0.0	4	13.8	1	4.2	0	0.0	10	3.4
10:00 AM	2	2.0	2	2.0	0	0.0	1	3.4	1	4.2	1	2.9	7	2.3
11:00 AM	1	1.0	3	3.1	0	0.0	3	10.3	0	0.0	1	2.9	8	2.7
Noon	7	6.9	4	4.1	0	0.0	2	6.9	0	0.0	0	0.0	13	4.4
1:00 PM	1	1.0	4	4.1	0	0.0	1	3.4	0	0.0	2	5.7	8	2.7
2:00 PM	10	9.8	4	4.1	0	0.0	2	6.9	2	8.3	3	8.6	21	7.0
3:00 PM	20	19.6	7	7.1	0	0.0	2	6.9	2	8.3	6	17.1	37	12.4
4:00 PM	15	14.7	6	6.1	0	0.0	2	6.9	0	0.0	4	11.4	27	9.1
5:00 PM	2	2.0	7	7.1	3	30.0	1	3.4	2	8.3	1	2.9	16	5.4
6:00 PM	2	2.0	10	10.2	1	10.0	2	6.9	2	8.3	2	5.7	19	6.4
7:00 PM	1	1.0	8	8.2	0	0.0	1	3.4	1	4.2	1	2.9	12	4.0
8:00 PM	0	0.0	6	6.1	0	0.0	0	0.0	1	4.2	0	0.0	7	2.3
9:00 PM	1	1.0	3	3.1	1	10.0	1	3.4	0	0.0	0	0.0	6	2.0
10:00 PM	0	0.0	3	3.1	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
11:00 PM	0	0.0	1	1.0	0	0.0	0	0.0	1	4.2	1	2.9	3	1.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-5Fatal Bus Involvements by Time of Accident and Bus TypeBIFA 2002

Note: 1:00 AM signifies 1:00 to 1:59 AM, etc.

Time of	Work	week	Wee	kend	Total	
accident	No.	Pct.	No.	Pct.	No.	Pct.
Midnight	4	1.6	1	2.2	5	1.7
1:00 AM	3	1.2	1	2.2	4	1.3
2:00 AM	0	0.0	2	4.3	2	0.7
3:00 AM	1	0.4	1	2.2	2	0.7
4:00 AM	6	2.4	0	0.0	6	2.0
5:00 AM	6	2.4	3	6.5	9	3.0
6:00 AM	16	6.3	2	4.3	18	6.0
7:00 AM	32	12.7	2	4.3	34	11.4
8:00 AM	17	6.7	4	8.7	21	7.0
9:00 AM	8	3.2	2	4.3	10	3.4
10:00 AM	7	2.8	0	0.0	7	2.3
11:00 AM	5	2.0	3	6.5	8	2.7
Noon	11	4.4	2	4.3	13	4.4
1:00 PM	8	3.2	0	0.0	8	2.7
2:00 PM	20	7.9	1	2.2	21	7.0
3:00 PM	32	12.7	5	10.9	37	12.4
4:00 PM	25	9.9	2	4.3	27	9.1
5:00 PM	13	5.2	3	6.5	16	5.4
6:00 PM	14	5.6	5	10.9	19	6.4
7:00 PM	11	4.4	1	2.2	12	4.0
8:00 PM	3	1.2	4	8.7	7	2.3
9:00 PM	5	2.0	1	2.2	6	2.0
10:00 PM	2	0.8	1	2.2	3	1.0
11:00 PM	3	1.2	0	0.0	3	1.0
Total	252	100.0	46	100.0	298	100.0

Table 2-6Fatal Bus Involvements by Time of Accident and Day TypeBIFA 2002

Note: Work week is defined as Monday through Friday, and weekend as Saturday and Sunday. 1:00 AM signifies 1:00 to 1:59 AM, etc.

Environmental distributions

Table 2-7 Fatal Bus Involvements by Land Use and Bus Type BIFA 2002

	Sch	School Transit		nsit	Intercity		Charter		Other		Unknown		Total	
Land use	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Urban	45	44.1	87	88.8	3	30.0	16	55.2	16	66.7	25	71.4	192	64.4
Rural	57	55.9	11	11.2	7	70.0	12	41.4	8	33.3	10	28.6	105	35.2
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	School		Transit		Intercity		Charter		Other		Unknown		Total	
Light condition	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Daylight	93	91.2	57	58.2	2	20.0	23	79.3	12	50.0	25	71.4	212	71.1
Dark	2	2.0	4	4.1	5	50.0	1	3.4	7	29.2	1	2.9	20	6.7
Dark but lighted	0	0.0	31	31.6	3	30.0	4	13.8	3	12.5	9	25.7	50	16.8
Dawn	6	5.9	2	2.0	0	0.0	1	3.4	2	8.3	0	0.0	11	3.7
Dusk	1	1.0	4	4.1	0	0.0	0	0.0	0	0.0	0	0.0	5	1.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-8 Fatal Bus Involvements by Light Condition and Bus Type BIFA 2002

Table 2-9
Fatal Bus Involvements by Roadway Surface Condition and Bus Type
BIFA 2002

Roadway sur-	School		Transit		Intercity		Charter		Other		Unknown		Total	
face condition	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Dry	76	74.5	79	80.6	6	60.0	21	72.4	22	91.7	30	85.7	234	78.5
Wet	21	20.6	19	19.4	4	40.0	6	20.7	1	4.2	3	8.6	54	18.1
Snow or slush	2	2.0	0	0.0	0	0.0	2	6.9	0	0.0	2	5.7	6	2.0
Ice	3	2.9	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-10
Fatal Bus Involvements by Weather Condition and Bus Type
BIFA 2002

Weather	Sch	lool	Tra	Transit		Intercity		Charter		Other		Unknown		otal
condition	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Normal	80	78.4	83	84.7	7	70.0	22	75.9	22	91.7	32	91.4	246	82.6
Rain	14	13.7	15	15.3	3	30.0	5	17.2	0	0.0	2	5.7	39	13.1
Sleet	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Snow	1	1.0	0	0.0	0	0.0	2	6.9	1	4.2	1	2.9	5	1.7
Fog	3	2.9	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	4	1.3
Rain and fog	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Other	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Unknown	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Roadway distributions

	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Ot	ner	Unkr	nown	Tc	otal
Road function class	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Urban														
Interstate	1	1.0	1	1.0	0	0.0	4	13.8	0	0.0	2	5.7	8	2.7
Freeway/expressway	1	1.0	2	2.0	1	10.0	1	3.4	1	4.2	0	0.0	6	2.0
Other principal artery	9	8.8	34	34.7	0	0.0	6	20.7	4	16.7	3	8.6	56	18.8
Minor artery	14	13.7	22	22.4	1	10.0	3	10.3	3	12.5	9	25.7	52	17.4
Collector	5	4.9	6	6.1	0	0.0	1	3.4	1	4.2	1	2.9	14	4.7
Local street	15	14.7	22	22.4	1	10.0	1	3.4	7	29.2	10	28.6	56	18.8
Total urban	45	44.1	87	88.8	3	30.0	16	55.2	16	66.7	25	71.4	192	64.4
Rural														
Interstate	2	2.0	0	0.0	5	50.0	5	17.2	0	0.0	2	5.7	14	4.7
Other principal artery	10	9.8	1	1.0	2	20.0	3	10.3	3	12.5	1	2.9	20	6.7
Minor artery	15	14.7	4	4.1	0	0.0	1	3.4	2	8.3	2	5.7	24	8.1
Major collector	15	14.7	2	2.0	0	0.0	2	6.9	0	0.0	3	8.6	22	7.4
Minor collector	5	4.9	1	1.0	0	0.0	1	3.4	2	8.3	2	5.7	11	3.7
Local road	10	9.8	2	2.0	0	0.0	0	0.0	1	4.2	0	0.0	13	4.4
Unknown rural	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Total rural	57	55.9	11	11.2	7	70.0	12	41.4	8	33.3	10	28.6	105	35.2
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Total urban and rural	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 2-11

 Fatal Bus Involvements by Roadway Function Class and Bus Type

 BIFA 2002

Table 2-12
Fatal Bus Involvements by Route Signing and Bus Type
BIFA 2002

	School		Transit		Intercity		Charter		Other		Unknown		To	tal
Route signing	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Interstate	3	2.9	1	1.0	5	50.0	9	31.0	0	0.0	3	8.6	21	7.0
US highway	13	12.7	6	6.1	2	20.0	3	10.3	3	12.5	4	11.4	31	10.4
State highway	32	31.4	19	19.4	1	10.0	8	27.6	7	29.2	4	11.4	71	23.8
County road	24	23.5	6	6.1	0	0.0	3	10.3	3	12.5	3	8.6	39	13.1
Township	8	7.8	6	6.1	0	0.0	0	0.0	1	4.2	2	5.7	17	5.7
Municipality	15	14.7	56	57.1	2	20.0	5	17.2	7	29.2	16	45.7	101	33.9
Frontage road	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	1	2.9	2	0.7
Other	6	5.9	2	2.0	0	0.0	0	0.0	1	4.2	2	5.7	11	3.7
Unknown	1	1.0	1	1.0	0	0.0	1	3.4	2	8.3	0	0.0	5	1.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
Relation to junction	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Noninterchange														
Nonjunction	54	52.9	38	38.8	7	70.0	15	51.7	12	50.0	13	37.1	139	46.6
Intersection	36	35.3	40	40.8	0	0.0	5	17.2	10	41.7	16	45.7	107	35.9
Intersection related	7	6.9	19	19.4	1	10.0	7	24.1	1	4.2	1	2.9	36	12.1
Driveway, alley, etc.	2	2.0	0	0.0	1	10.0	0	0.0	0	0.0	1	2.9	4	1.3
Entrance/exit ramp	0	0.0	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	1	0.3
Interchange area														
Intersection	1	1.0	1	1.0	0	0.0	0	0.0	0	0.0	1	2.9	3	1.0
Entrance/exit ramp	2	2.0	0	0.0	0	0.0	1	3.4	1	4.2	2	5.7	6	2.0
Other location	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	1	2.9	2	0.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-13 Fatal Bus Involvements by Relation to Junction and Bus Type BIFA 2002

Table 2-14
Fatal Bus Involvements by Number of Travel Lanes and Bus Type
BIFA 2002

No. of	Sch	lool	Tra	nsit Intercity		Charter		Other		Unknown		Total		
travel lanes	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
2	82	80.4	46	46.9	7	70.0	17	58.6	19	79.2	24	68.6	195	65.4
3	4	3.9	16	16.3	1	10.0	7	24.1	1	4.2	3	8.6	32	10.7
4	12	11.8	24	24.5	1	10.0	2	6.9	2	8.3	5	14.3	46	15.4
5	2	2.0	2	2.0	0	0.0	1	3.4	0	0.0	0	0.0	5	1.7
6	0	0.0	5	5.1	1	10.0	2	6.9	1	4.2	0	0.0	9	3.0
7	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
9	1	1.0	4	4.1	0	0.0	0	0.0	1	4.2	3	8.6	9	3.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	School		Transit		Intercity		Charter		Other		Unknown		Total	
Trafficway flow	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Not divided	82	80.4	57	58.2	1	10.0	14	48.3	13	54.2	19	54.3	186	62.4
Median – no barrier	16	15.7	24	24.5	6	60.0	7	24.1	5	20.8	10	28.6	68	22.8
Median w/barrier	1	1.0	10	10.2	2	20.0	7	24.1	4	16.7	3	8.6	27	9.1
One-way traffic	0	0.0	3	3.1	1	10.0	1	3.4	0	0.0	1	2.9	6	2.0
Two-way left turn lane	1	1.0	2	2.0	0	0.0	0	0.0	2	8.3	0	0.0	5	1.7
Unknown	2	2.0	2	2.0	0	0.0	0	0.0	0	0.0	2	5.7	6	2.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-15Fatal Bus Involvements by Trafficway Flow and Bus TypeBIFA 2002

Table 2-16
Fatal Bus Involvements by Speed Limit and Bus Type
BIFA 2002

	Sch	School Transit		nsit	Inte	rcity	Cha	arter	Ot	her	Unknown		Total	
Speed limit	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
25	12	11.8	14	14.3	1	10.0	3	10.3	5	20.8	2	5.7	37	12.4
30	9	8.8	18	18.4	0	0.0	2	6.9	2	8.3	5	14.3	36	12.1
35	12	11.8	27	27.6	1	10.0	7	24.1	1	4.2	5	14.3	53	17.8
40	2	2.0	8	8.2	0	0.0	0	0.0	3	12.5	5	14.3	18	6.0
45	20	19.6	9	9.2	0	0.0	1	3.4	2	8.3	3	8.6	35	11.7
50	5	4.9	2	2.0	0	0.0	3	10.3	0	0.0	0	0.0	10	3.4
55	32	31.4	2	2.0	1	10.0	2	6.9	7	29.2	4	11.4	48	16.1
60	2	2.0	1	1.0	0	0.0	0	0.0	2	8.3	0	0.0	5	1.7
65	2	2.0	2	2.0	5	50.0	6	20.7	0	0.0	3	8.6	18	6.0
70	1	1.0	0	0.0	1	10.0	3	10.3	1	4.2	0	0.0	6	2.0
75	2	2.0	0	0.0	1	10.0	0	0.0	0	0.0	2	5.7	5	1.7
Unknown	3	2.9	15	15.3	0	0.0	2	6.9	1	4.2	6	17.1	27	9.1
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Accident description

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unknown		Total	
Accident type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Single vehicle														
Ran off road	2	2.0	0	0.0	1	10.0	6	20.7	1	4.2	0	0.0	10	3.4
Hit object in road	19	18.6	42	42.9	2	20.0	8	27.6	6	25.0	0	0.0	77	25.8
Same direction, same trafficwa	ay													
Rearend, bus striking	3	2.9	3	3.1	4	40.0	2	6.9	1	4.2	0	0.0	13	4.4
Rearend, bus struck	9	8.8	5	5.1	3	30.0	1	3.4	1	4.2	1	2.9	20	6.7
Sideswipe, in bus's lane	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Opposite direction, same trafficway														
Head-on, in other's lane	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Head-on, in bus's lane	21	20.6	11	11.2	0	0.0	0	0.0	2	8.3	0	0.0	34	11.4
Sideswipe, in bus's lane	10	9.8	1	1.0	0	0.0	3	10.3	2	8.3	0	0.0	16	5.4
Change trafficway, one vehicle	e turnin	g												
Bus turn across path	6	5.9	7	7.1	0	0.0	1	3.4	1	4.2	0	0.0	15	5.0
Other turn across path	4	3.9	5	5.1	0	0.0	0	0.0	2	8.3	0	0.0	11	3.7
Intersecting paths, both going	straigh	t												
Bus into side of other	11	10.8	7	7.1	0	0.0	0	0.0	1	4.2	0	0.0	19	6.4
Other into side of bus	4	3.9	4	4.1	0	0.0	0	0.0	2	8.3	0	0.0	10	3.4
Other accident types														
Untripped rollover	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Other	10	9.8	6	6.1	0	0.0	2	6.9	4	16.7	0	0.0	22	7.4
Unknown	3	2.9	7	7.1	0	0.0	3	10.3	1	4.2	34	97.1	48	16.1
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-17 Fatal Bus Involvements by Accident Type and Bus Type BIFA 2002

Table 2-18
Fatal Bus Involvements by Number of Vehicles in Crash and Bus Type
BIFA 2002

Number of motor	School		Tra	nsit	Intercity		Charter		Other		Unknown		Total	
vehicles in crash	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1	20	19.6	44	44.9	3	30.0	14	48.3	8	33.3	10	28.6	99	33.2
2	68	66.7	43	43.9	6	60.0	10	34.5	13	54.2	17	48.6	157	52.7
3	10	9.8	9	9.2	1	10.0	2	6.9	3	12.5	7	20.0	32	10.7
4	2	2.0	1	1.0	0	0.0	3	10.3	0	0.0	1	2.9	7	2.3
5	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
7	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
12	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Sc	hool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	otal
First harmful event	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Noncollision event														
Overturn	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Fell from vehicle	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Other noncollision	1	1.0	0	0.0	0	0.0	1	3.4	1	4.2	0	0.0	3	1.0
Collision with nonfixed object														
Pedestrian	14	13.7	40	40.8	2	20.0	9	31.0	5	20.8	9	25.7	79	26.5
Pedalcycle	5	4.9	7	7.1	0	0.0	1	3.4	0	0.0	0	0.0	13	4.4
Motor vehicle in transport	77	75.5	50	51.0	7	70.0	10	34.5	15	62.5	24	68.6	183	61.4
Veh. in transport – other roadway	0	0.0	1	1.0	0	0.0	1	3.4	0	0.0	0	0.0	2	0.7
Other type nonmotorist	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Collision with fixed object														
Guardrail	1	1.0	0	0.0	0	0.0	3	10.3	0	0.0	1	2.9	5	1.7
Concrete traffic barrier	1	1.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	2	0.7
Luminaire/light supply	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Utility pole	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Culvert	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Curb	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Embankment - type unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Tree	1	1.0	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	2	0.7
Other fixed object	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 2-19

 Fatal Bus Involvements by First Harmful Event and Bus Type

 BIFA 2002

Table 2-20 Fatal Bus Involvements by Vehicle Role in Accident and Bus Type BIFA 2002

	Sch	lool	Tra	nsit	Intercity		Cha	arter	Ot	her	Unki	nown	То	otal
Vehicle role	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Non-collision	0	0.0	0	0.0	0	0.0	1	3.4	1	4.2	1	2.9	3	1.0
Striking	57	55.9	58	59.2	7	70.0	22	75.9	15	62.5	21	60.0	180	60.4
Struck	40	39.2	37	37.8	3	30.0	5	17.2	7	29.2	11	31.4	103	34.6
Both	5	4.9	3	3.1	0	0.0	1	3.4	1	4.2	2	5.7	12	4.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Sch	nool	Tra	Insit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
Manner of collision	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Not applicable	25	24.5	47	48.0	3	30.0	18	62.1	9	37.5	11	31.4	113	37.9
Rear-end	14	13.7	13	13.3	7	70.0	4	13.8	3	12.5	7	20.0	48	16.1
Head-on	19	18.6	9	9.2	0	0.0	1	3.4	1	4.2	2	5.7	32	10.7
Front-to-side: Same direction	2	2.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	3	1.0
Front-to-side: Opp. direction	13	12.7	2	2.0	0	0.0	1	3.4	3	12.5	2	5.7	21	7.0
Front-to-side: Right angle	26	25.5	23	23.5	0	0.0	4	13.8	5	20.8	12	34.3	70	23.5
Front-to-side: Other	1	1.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7
Sideswipe: Same direction	0	0.0	2	2.0	0	0.0	0	0.0	1	4.2	0	0.0	3	1.0
Sideswipe: Opp. direction	1	1.0	1	1.0	0	0.0	0	0.0	2	8.3	1	2.9	5	1.7
Other	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 2-21 Fatal Bus Involvements by Manner of Collision and Bus Type BIFA 2002

Fatalities

						A 2002		J P • •						
	Sch	ool	Trar	nsit	Inter	city	Cha	rter	Oth	ner	Unkr	iown	To	tal
Vehicle/Person type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Bus	-													
Driver	2	1.7	1	0.9	2	16.7	3	6.4	3	10.0	0	0.0	11	3.1
Passenger	5	4.1	1	0.9	3	25.0	17	36.2	9	30.0	9	20.9	44	12.3
Bus total	7	5.8	2	1.9	5	41.7	20	42.6	12	40.0	9	20.9	55	15.3
Other vehicle														
Drivers	72	59.5	44	41.5	2	16.7	10	21.3	9	30.0	14	32.6	151	42.1
Passengers	21	17.4	13	12.3	2	16.7	7	14.9	3	10.0	10	23.3	56	15.6
Other vehicle total	93	76.9	57	53.8	4	33.3	17	36.2	12	40.0	24	55.8	207	57.7
Non-motorists														
Pedestrian	16	13.2	40	37.7	3	25.0	9	19.1	6	20.0	10	23.3	84	23.4
Bicyclist	5	4.1	7	6.6	0	0.0	1	2.1	0	0.0	0	0.0	13	3.6
Non-motorist total	21	17.4	47	44.3	3	25.0	10	21.3	6	20.0	10	23.3	97	27.0
Total	121	100.0	106	100.0	12	100.0	47	100.0	30	100.0	43	100.0	359	100.0

Table 2-22Fatalities in Bus Involvements by Person Type and Bus TypeBIFA 2002

Table 2-23 Non-Motorist Fatality Involvements by Bus Type BIFA 2002

Relationship of	Sch	nool	Tra	insit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
Non-Motorist to Bus	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Discharged passenger	3	2.9	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.3
Intended passenger	3	2.9	4	4.1	0	0.0	0	0.0	0	0.0	0	0.0	7	2.3
Not related to bus	13	12.7	36	36.7	1	10.0	8	27.6	5	20.8	0	0.0	63	21.1
No non-motorist involvement	73	71.6	56	57.1	9	90.0	18	62.1	17	70.8	35	100.0	208	69.8
Unknown	10	9.8	1	1.0	0	0.0	3	10.3	2	8.3	0	0.0	16	5.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Vehicle

This section provides statistics that describe the physical configuration of buses involved in a fatal accident during 2002. The tables cover bus body style, model year, weight and length of the bus, seating capacity, number of passengers, and the type of carrier that operated the bus.

- Buses operated by school districts represented 34.2% of all buses involved in a fatal accident; transit buses accounted for 32.9% of the buses.
- Of the 102 school buses involved in fatal crashes, 63 were operated by public school districts and 35 were operated by a contracted carrier for the school district.
- The majority of the school buses (61 of the 102) were 35 to 40 feet in length. School buses were predominantly Type C school buses (61.8%), followed by Type D (25.5%), and Type A (11.8%). Transit buses were primarily heavy-duty buses. Charter buses were predominantly long-distance coaches. The other operator category was comprised of a wide variety of bus types, however, large passenger vans, small shuttle buses, and retired school buses comprised the majority of buses in this category.
- Over 88% of the buses involved in a fatal crash were less than fifteen years old, and 70.9% were less than ten years old.
- Overall, 61.4% of the buses were 31-40 feet in length, and almost 70% had a Gross Vehicle Weight Rating (GVWR) of Class 6 to Class 8.
- School buses had a higher average seating capacity than other bus types, with 65.7% having a seating capacity of 61 or more.
- Roughly one-fifth or 21.1% of buses involved in fatal accidents were not carrying any passengers at the time of the accident.
- Buses operated by interstate for-hire carriers accounted for 20.1% of the fatal involvements, interstate government carriers represented 15.4%, and 39.3% of the involvements were buses operated by intrastate government carriers (primarily transit buses and school buses).
- Almost 74% of the buses were on local trips (within 50 miles of base) when involved in the fatal accident.

 Table 3-1

 Fatal Bus Involvements by Operator Type and Bus Vehicle Description

 BIFA 2002

Operator type		
Bus vehicle description	No.	Pct.
School district		
Small (15-22 feet length)	10	3.4
Mid-size (27-34 feet length)	18	6.0
Full-size (35-40 feet length)	61	20.5
Special needs	12	4.0
Large passenger van	1	0.3
Total school bus	102	34.2
Transit bus authority		
Heavy-duty	67	22.5
Articulated heavy-duty	2	0.7
Long-distance coach	2	0.7
Full-size shuttle bus	1	0.3
Special needs	9	3.0
Shorter transit bus	10	3.4
Trolley bus	5	1.7
Unknown type	2	0.7
Total transit bus	98	32.9
Intercity bus operator		
Long-distance coach	10	3.4
Total intercity bus	10	3.4
Charter bus operator		
Long-distance coach	26	8.7
Medium-duty shuttle bus	1	0.3
Small limosine bus	1	0.3
Trolley replica bus	1	0.3
Total charter bus	29	9.7
Other operator		
Full-size conventional hood bus	1	0.3
Full-size shuttle bus	1	0.3
Full-size transit bus	1	0.3
Inmate security bus/coach	1	0.3
Large passenger van	5	1.7
Special needs	2	0.7
Long-distance coach	1	0.3
Mid-size conventional hood bud	2	0.7
Retired school bus	4	1.3
Retired transit bus	1	0.3
Small shuttle bus	5	1.7
Total other operator	24	8.1
Unknown operator type		0.1
Heavy-duty transit bus	1	0.3
Large passenger van	4	1.3
Long-distance coach	5	1.7
School bus	1	0.3
Transit bus	1	0.3
Unknown	23	7.7
Total unknown operator type	35	11.7
Total	298	100.0
	200	100.0

Note: Bus vehicle description records descriptions from respondents.

 Table 3-2

 Fatal Bus Involvements by Operator Type and Bus Operator Description

 BIFA 2002

Operator type	N	Det
Operating authority description	No.	Pct.
School district		
Contracted carrier for school district	35	11.7
Private school	1	0.3
Public school district	63	21.1
Public school state department of education	2	0.7
Special needs school state department of education	1	0.3
Total school bus	102	34.2
Transit bus authority		
Contracted carrier for transit authority	3	1.0
Municipal shuttle service	1	0.3
Scheduled route & paratransit regional urban area	1	0.3
Schedueld route & paratransit urban area	2	0.7
Scheduled route regional area	3	1.0
Scheduled route regional urban area	70	23.5
Scheduled route urban area	18	6.0
Total transit bus	98	32.9
Intercity bus operator		
Interstate passenger & express freight	6	2.0
Interstate passenger service	3	1.0
Regional intercity passenger service	1	0.3
Total intercity bus	10	3.4
Charter bus operator		
Charter & sightseeing tour service	1	0.3
Charter service	27	9.1
Sightseeing tour service	1	0.3
Total charter bus	29	9.7
Other operator		
Adult day care facility	1	0.3
Casino shuttle service	1	0.3
Church use	4	1.3
Community youth organization	1	0.3
Farmworker transportation by harvesting company	2	0.7
Farmworker transportation in privately-owned van	1	0.3
Hotel shuttle service	1	0.3
Municipal corrections department	1	0.3
National armed services support division	1	0.3
Non-profit community services organization	1	0.3
Non-profit organization for developmentally disabled	1	0.3
Non-profit program for mentally retarded adults	1	0.3
On-demand shuttle services agency	2	0.7
Private use by entertainers	1	0.3
Senior citizen community association	1	0.3
Senior citizen services agency	1	0.3
Ski lodge shuttle	1	0.3
State department of corrections	1	0.3
Township demand-response transportation system	1	0.3
Total other operator	24	8.1
Unknown operator type	35	11.7
Total	298	100.0

Note: The operator authority records descriptions from respondents.

	Sch	School		nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	tal
Bus body style	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Bus	101	99.0	94	95.9	10	100.0	28	96.6	17	70.8	27	77.1	277	93.0
Large van	1	1.0	0	0.0	0	0.0	0	0.0	7	29.2	4	11.4	12	4.0
Other	0	0.0	4	4.1	0	0.0	1	3.4	0	0.0	0	0.0	5	1.7
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	11.4	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-3 Fatal Bus Involvements by Bus Body Style and Bus Type BIFA 2002

Table 3-4 Fatal Bus Involvements by Bus Body Configuration and Bus Type BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unki	nown	То	otal
Bus body configuration	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Type A school bus	12	11.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12	4.0
Type C school bus	63	61.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	63	21.1
Type D school bus	26	25.5	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	27	9.1
Flat front	0	0.0	86	87.8	0	0.0	0	0.0	4	16.7	3	8.6	93	31.2
Big cowl and chassis	0	0.0	0	0.0	0	0.0	1	3.4	7	29.2	0	0.0	8	2.7
High platform	0	0.0	4	4.1	10	100.0	26	89.7	1	4.2	5	14.3	46	15.4
Small cowl and chassis	0	0.0	4	4.1	0	0.0	1	3.4	5	20.8	1	2.9	11	3.7
Other	1	1.0	4	4.1	0	0.0	1	3.4	7	29.2	4	11.4	17	5.7
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	21	60.0	21	7.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-5Fatal Bus Involvements by Front of Bus Style and Bus TypeBIFA 2002

	Sch	School		insit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	Tc	otal
Front of bus	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Conventional hood	76	74.5	4	4.1	0	0.0	2	6.9	19	79.2	17	48.6	118	39.6
Flat front	26	25.5	94	95.9	10	100.0	27	93.1	5	20.8	15	42.9	177	59.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	8.6	3	1.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Conve	ntional	Flat	front	Unkr	nown	То	otal
Model year	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1976	1	0.8	1	0.6	0	0.0	2	0.7
1980	0	0.0	3	1.7	0	0.0	3	1.0
1981	2	1.7	2	1.1	0	0.0	4	1.3
1982	0	0.0	4	2.3	0	0.0	4	1.3
1983	0	0.0	1	0.6	0	0.0	1	0.3
1984	2	1.7	0	0.0	0	0.0	2	0.7
1985	4	3.4	3	1.7	0	0.0	7	2.3
1986	6	5.1	1	0.6	0	0.0	7	2.3
1987	4	3.4	1	0.6	0	0.0	5	1.7
1988	3	2.5	1	0.6	0	0.0	4	1.3
1989	3	2.5	8	4.5	0	0.0	11	3.7
1990	3	2.5	7	4.0	1	33.3	11	3.7
1991	5	4.2	4	2.3	0	0.0	9	3.0
1992	4	3.4	5	2.8	0	0.0	9	3.0
1993	4	3.4	7	4.0	0	0.0	11	3.7
1994	3	2.5	9	5.1	0	0.0	12	4.0
1995	11	9.3	8	4.5	0	0.0	19	6.4
1996	12	10.2	13	7.3	0	0.0	25	8.4
1997	9	7.6	15	8.5	0	0.0	24	8.1
1998	9	7.6	14	7.9	0	0.0	23	7.7
1999	11	9.3	25	14.1	0	0.0	36	12.1
2000	8	6.8	22	12.4	0	0.0	30	10.1
2001	9	7.6	18	10.2	0	0.0	27	9.1
2002	5	4.2	5	2.8	0	0.0	10	3.4
Unknown	0	0.0	0	0.0	2	66.7	2	0.7
Total	118	100.0	177	100.0	3	100.0	298	100.0

 Table 3-6

 Fatal Bus Involvements by Model Year and Front of Bus Style

 BIFA 2002

	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	otal
Model year	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1976	0	0.0	0	0.0	0	0.0	0	0.0	2	8.3	0	0.0	2	0.7
1980	0	0.0	0	0.0	1	10.0	1	3.4	1	4.2	0	0.0	3	1.0
1981	1	1.0	0	0.0	0	0.0	1	3.4	1	4.2	1	2.9	4	1.3
1982	0	0.0	2	2.0	0	0.0	2	6.9	0	0.0	0	0.0	4	1.3
1983	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
1984	0	0.0	0	0.0	0	0.0	0	0.0	2	8.3	0	0.0	2	0.7
1985	3	2.9	0	0.0	0	0.0	1	3.4	2	8.3	1	2.9	7	2.3
1986	5	4.9	0	0.0	0	0.0	1	3.4	0	0.0	1	2.9	7	2.3
1987	3	2.9	0	0.0	1	10.0	0	0.0	0	0.0	1	2.9	5	1.7
1988	3	2.9	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	4	1.3
1989	5	4.9	2	2.0	1	10.0	1	3.4	1	4.2	1	2.9	11	3.7
1990	2	2.0	5	5.1	0	0.0	0	0.0	1	4.2	3	8.6	11	3.7
1991	3	2.9	3	3.1	0	0.0	0	0.0	0	0.0	3	8.6	9	3.0
1992	6	5.9	3	3.1	0	0.0	0	0.0	0	0.0	0	0.0	9	3.0
1993	4	3.9	3	3.1	3	30.0	0	0.0	1	4.2	0	0.0	11	3.7
1994	2	2.0	5	5.1	1	10.0	2	6.9	0	0.0	2	5.7	12	4.0
1995	9	8.8	2	2.0	0	0.0	4	13.8	3	12.5	1	2.9	19	6.4
1996	9	8.8	9	9.2	0	0.0	3	10.3	1	4.2	3	8.6	25	8.4
1997	10	9.8	7	7.1	0	0.0	3	10.3	2	8.3	2	5.7	24	8.1
1998	7	6.9	5	5.1	2	20.0	4	13.8	2	8.3	3	8.6	23	7.7
1999	9	8.8	20	20.4	1	10.0	0	0.0	3	12.5	3	8.6	36	12.1
2000	8	7.8	15	15.3	0	0.0	4	13.8	2	8.3	1	2.9	30	10.1
2001	8	7.8	14	14.3	0	0.0	1	3.4	0	0.0	4	11.4	27	9.1
2002	5	4.9	3	3.1	0	0.0	0	0.0	0	0.0	2	5.7	10	3.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	5.7	2	0.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-7Fatal Bus Involvements by Model Year and Bus TypeBIFA 2002

Bus	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unki	nown	То	tal
length (feet)	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
16-20	10	9.8	2	2.0	0	0.0	0	0.0	8	33.3	4	11.4	24	8.1
21-25	3	2.9	3	3.1	0	0.0	1	3.4	5	20.8	1	2.9	13	4.4
26-30	11	10.8	8	8.2	0	0.0	1	3.4	2	8.3	0	0.0	22	7.4
31-35	26	25.5	5	5.1	0	0.0	0	0.0	3	12.5	0	0.0	34	11.4
36-40	47	46.1	72	73.5	7	70.0	14	48.3	5	20.8	4	11.4	149	50.0
41-45	3	2.9	5	5.1	3	30.0	13	44.8	1	4.2	1	2.9	26	8.7
56-60	0	0.0	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7
Est. <= 35	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	2	0.7
Unknown	1	1.0	1	1.0	0	0.0	0	0.0	0	0.0	24	68.6	26	8.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-8 Fatal Bus Involvements by Bus Length and Bus Type BIFA 2002

Table 3-9Fatal Bus Involvements by Bus Empty Weight and Bus TypeBIFA 2002

	Sch			Inte	Intercity		arter	Other		Unknown		Total		
Empty wt (lbs)	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
4,000-6,000	1	1.0	0	0.0	0	0.0	0	0.0	6	25.0	1	2.9	8	2.7
6,001-10,000	12	11.8	3	3.1	0	0.0	0	0.0	6	25.0	3	8.6	24	8.1
10,001-15,000	5	4.9	1	1.0	0	0.0	1	3.4	1	4.2	1	2.9	9	3.0
15,001-20,000	78	76.5	4	4.1	0	0.0	2	6.9	9	37.5	0	0.0	93	31.2
20,001-25,000	6	5.9	4	4.1	0	0.0	0	0.0	0	0.0	0	0.0	10	3.4
25,001-30,000	0	0.0	65	66.3	7	70.0	10	34.5	2	8.3	4	11.4	88	29.5
30,001-35,000	0	0.0	19	19.4	0	0.0	14	48.3	0	0.0	2	5.7	35	11.7
35,001-40,000	0	0.0	1	1.0	3	30.0	2	6.9	0	0.0	0	0.0	6	2.0
40,001-46,000	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	24	68.6	24	8.1
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Gross vehicle weight	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unk	nown	To	otal
rating	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Class 2: 6,001-10,000	9	8.8	0	0.0	0	0.0	0	0.0	7	29.2	4	11.4	20	6.7
Class 3: 10,001-14,000	4	3.9	0	0.0	0	0.0	0	0.0	5	20.8	0	0.0	9	3.0
Class 4: 14,001-16,000	0	0.0	4	4.1	0	0.0	1	3.4	0	0.0	3	8.6	8	2.7
Class 6: 19,501-26,000	15	14.7	0	0.0	0	0.0	1	3.4	4	16.7	0	0.0	20	6.7
Class 7: 26,001-33,000	50	49.0	3	3.1	0	0.0	0	0.0	3	12.5	8	22.9	64	21.5
Class 8: 33,001 or more	1	1.0	79	80.6	10	100.0	26	89.7	2	8.3	6	17.1	124	41.6
Unknown	23	22.5	12	12.2	0	0.0	1	3.4	3	12.5	14	40.0	53	17.8
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 3-10

 Fatal Bus Involvements by Gross Vehicle Weight Rating and Bus Type

 BIFA 2002

Table 3-11 Fatal Bus Involvements by Number of Axles and Bus Type BIFA 2002

	Sch	nool	Tra	Transit		Intercity		arter	Other		Unknown		To	tal
Axles	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
2 axles	102	100.0	92	93.9	0	0.0	3	10.3	23	95.8	22	62.9	242	81.2
3 axles	0	0.0	6	6.1	10	100.0	26	89.7	1	4.2	5	14.3	48	16.1
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	22.9	8	2.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Passenger	Sch	lool	Transit		Inte	rcity	Charter		Other		Unknown		Total	
seating capacity	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
8-14	3	2.9	2	2.0	0	0.0	0	0.0	6	25.0	3	8.6	14	4.7
15-20	8	7.8	3	3.1	0	0.0	1	3.4	2	8.3	0	0.0	14	4.7
21-25	2	2.0	1	1.0	0	0.0	0	0.0	2	8.3	0	0.0	5	1.7
26-30	4	3.9	7	7.1	0	0.0	1	3.4	1	4.2	0	0.0	13	4.4
31-35	0	0.0	3	3.1	0	0.0	0	0.0	1	4.2	0	0.0	4	1.3
36-40	1	1.0	38	38.8	0	0.0	0	0.0	5	20.8	0	0.0	44	14.8
41-45	3	2.9	30	30.6	0	0.0	0	0.0	1	4.2	0	0.0	34	11.4
46-50	5	4.9	7	7.1	7	70.0	12	41.4	0	0.0	0	0.0	31	10.4
51-55	3	2.9	1	1.0	3	30.0	3	10.3	0	0.0	0	0.0	10	3.4
56-60	4	3.9	2	2.0	0	0.0	4	13.8	0	0.0	0	0.0	10	3.4
61-65	21	20.6	2	2.0	0	0.0	0	0.0	1	4.2	0	0.0	24	8.1
66-70	5	4.9	0	0.0	0	0.0	0	0.0	2	8.3	0	0.0	7	2.3
71-75	24	23.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	24	8.1
76-80	10	9.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	10	3.4
81+	7	6.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	2.3
Est. 15 or more	2	2.0	1	1.0	0	0.0	8	27.6	3	12.5	3	8.6	17	5.7
Unknown	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	29	82.9	30	10.1
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 3-12

 Fatal Bus Involvements by Passenger Seating Capacity (Excluding Driver) and Bus Type BIFA 2002

Table 3-13
Fatal Bus Involvements by Number of Passengers and Bus Type
BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	Тс	tal
No. of passengers	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
None	27	26.5	18	18.4	1	10.0	10	34.5	6	25.0	1	2.9	63	21.1
1-3	11	10.8	10	10.2	0	0.0	0	0.0	3	12.5	0	0.0	24	8.1
4-6	7	6.9	11	11.2	0	0.0	1	3.4	1	4.2	0	0.0	20	6.7
7-10	8	7.8	9	9.2	0	0.0	0	0.0	1	4.2	0	0.0	18	6.0
11-15	4	3.9	5	5.1	2	20.0	0	0.0	2	8.3	0	0.0	13	4.4
16-20	9	8.8	4	4.1	2	20.0	2	6.9	3	12.5	0	0.0	20	6.7
21-25	7	6.9	3	3.1	0	0.0	1	3.4	2	8.3	0	0.0	13	4.4
26-30	7	6.9	3	3.1	0	0.0	1	3.4	1	4.2	1	2.9	13	4.4
31-35	3	2.9	1	1.0	1	10.0	2	6.9	1	4.2	0	0.0	8	2.7
36-40	4	3.9	0	0.0	1	10.0	2	6.9	0	0.0	0	0.0	7	2.3
41-45	1	1.0	1	1.0	2	20.0	1	3.4	1	4.2	0	0.0	6	2.0
46-50	3	2.9	0	0.0	1	10.0	2	6.9	1	4.2	0	0.0	7	2.3
51+	3	2.9	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	4	1.3
Est. 15 or more	0	0.0	1	1.0	0	0.0	0	0.0	1	4.2	0	0.0	2	0.7
Unknown	8	7.8	32	32.7	0	0.0	6	20.7	1	4.2	33	94.3	80	26.8
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Fatal Bus Invol	vements by Ty	/pe of Passen	Table 3-14 ger Restraints BIFA 2002	s Available (Ex	cluding Drive	er) and Bus Ty	/pe
e of passenger	School	Transit	Intercity	Charter	Other	Unknown	Total

Type of passenger	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	otal
restraint	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
None	82	80.4	92	93.9	10	100.0	22	75.9	9	37.5	0	0.0	215	72.1
Lap belts	17	16.7	4	4.1	0	0.0	0	0.0	9	37.5	0	0.0	30	10.1
Lap and shoulder belts	2	2.0	0	0.0	0	0.0	0	0.0	4	16.7	0	0.0	6	2.0
Lap belts, front only	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Other	1	1.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	2	0.7
Unknown	0	0.0	2	2.0	0	0.0	5	17.2	2	8.3	35	100.0	44	14.8
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-15
Fatal Bus Involvements by Carrier Type and Bus Type
BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
Carrier type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Interstate														
Private	0	0.0	0	0.0	0	0.0	0	0.0	4	16.7	0	0.0	4	1.3
For-hire	23	22.5	1	1.0	10	100.0	25	86.2	1	4.2	0	0.0	60	20.1
Government owned	30	29.4	15	15.3	0	0.0	0	0.0	1	4.2	0	0.0	46	15.4
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Intrastate														
Private	1	1.0	0	0.0	0	0.0	0	0.0	13	54.2	0	0.0	14	4.7
For-hire	10	9.8	2	2.0	0	0.0	3	10.3	1	4.2	1	2.9	17	5.7
Government owned	35	34.3	79	80.6	0	0.0	0	0.0	3	12.5	0	0.0	117	39.3
Unknown	3	2.9	1	1.0	0	0.0	1	3.4	1	4.2	33	94.3	39	13.1
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-16
Fatal Bus Involvements by Trip Type and Bus Type
BIFA 2002

	Sch	School		insit	Inte	rcity	Cha	arter	Other		Unknown		Total	
Trip type	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Local	96	94.1	93	94.9	0	0.0	9	31.0	21	87.5	0	0.0	219	73.5
51-100 miles	2	2.0	0	0.0	0	0.0	2	6.9	1	4.2	0	0.0	5	1.7
101-200	2	2.0	0	0.0	2	20.0	4	13.8	1	4.2	0	0.0	9	3.0
201-500	0	0.0	0	0.0	7	70.0	6	20.7	0	0.0	0	0.0	13	4.4
Over 500	0	0.0	0	0.0	0	0.0	2	6.9	0	0.0	0	0.0	2	0.7
Unk. over-the-road distance	0	0.0	0	0.0	1	10.0	0	0.0	0	0.0	0	0.0	1	0.3
Unknown	2	2.0	5	5.1	0	0.0	6	20.7	1	4.2	35	100.0	49	16.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Sch	lool	Tra	nsit	Inte	rcity	Cha	arter	Other		Unknown		Total	
Most harmful event	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Noncollision event														
Overturn	1	1.0	1	1.0	0	0.0	3	10.3	1	4.2	2	5.7	8	2.7
Fire/explosion	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Fell from vehicle	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Other noncollision	1	1.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	2	0.7
Collision with nonfixed object														
Pedestrian	14	13.7	40	40.8	3	30.0	8	27.6	5	20.8	8	22.9	78	26.2
Pedalcycle	5	4.9	7	7.1	0	0.0	1	3.4	0	0.0	0	0.0	13	4.4
Vehicle in transport	80	78.4	49	50.0	6	60.0	13	44.8	15	62.5	24	68.6	187	62.8
Parked motor vehicle	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Other type nonmotorist	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Collision with fixed object														
Bridge pier/abutment	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Guardrail	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Tree	1	1.0	0	0.0	1	10.0	1	3.4	1	4.2	0	0.0	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-17 Fatal Bus Involvements by Most Harmful Event and Bus Type BIFA 2002

Table 3-18
Fatal Bus Involvements by Rollover Status and Bus Type
BIFA 2002

Bus rollover	Sch	School		nsit	Inte	rcity	Cha	arter	Ot	her	Unknown		Total	
status	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No rollover	100	98.0	96	98.0	10	100.0	26	89.7	21	87.5	31	88.6	284	95.3
First event	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Subsequent event	2	2.0	2	2.0	0	0.0	2	6.9	3	12.5	4	11.4	13	4.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-19
Fatal Bus Involvements by Number of Quarter Turns and Direction of Roll
BIFA 2002

Number of	Rol	l left	Roll	right	No ro	llover	Total		
quarter turns	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	
1	4	66.7	6	85.7	0	0.0	10	3.4	
2	1	16.7	0	0.0	0	0.0	1	0.3	
8	1	16.7	0	0.0	0	0.0	1	0.3	
Unknown	0	0.0	1	14.3	0	0.0	1	0.3	
NA	0	0.0	0	0.0	285	100.0	285	95.6	
Total	6	100.0	7	100.0	285	100.0	298	100.0	

Note: The BIFA survey found one fewer rollover than FARS reported.

Bus fire	Sch	nool	Transit		Intercity		Cha	arter	Other		Unknown		Total	
occurrence	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No fire	100	98.0	98	100.0	9	90.0	28	96.6	24	100.0	35	100.0	294	98.7
Fire in vehicle	2	2.0	0	0.0	1	10.0	1	3.4	0	0.0	0	0.0	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 3-20Fatal Bus Involvements by Fire Occurrence and Bus TypeBIFA 2002

Driver

This section provides statistics on the drivers of buses involved in fatal traffic accidents. Tables cover driver age, sex, alcohol or drug use, safety belt use, driver injury, licensing, previous driving record, compensation, and other driver factors related to the accident.

- Only 1.0% of bus drivers involved in a fatal traffic accident had been using drugs; drinking was also reported for only 1.0% of the drivers.
- Nearly one-third (32.2%) of bus drivers involved in a fatal crash were female. Over 47% of school bus drivers were female.
- Eleven (3.7%) bus drivers were fatally injured in a traffic accident.
- Over one half (54.5%) of involvements in which the bus driver suffered a fatal injury did not involve bus rollover or fire, or driver ejection.
- Nearly three-quarters (72.5%) of school bus drivers were paid by the hour, as were 90.8% of transit drivers and 50.0% of intercity drivers.
- Overall, 9.1% of bus drivers involved in a fatal crash had a previous speeding conviction. Transit bus drivers had the highest percentage of previous speeding convictions. Transit bus drivers also had the highest incidence of previous accidents (fatal and nonfatal).
- The vast majority (93.0%) of all bus drivers had a valid CDL license.
- Failure to yield was the most common driver factor (12.1%), followed by inattentive (6.7%), and driving too fast (5.0%). An additional 1.3% of drivers were coded as drowsy or asleep.
- Nearly two-thirds (64.4%) of bus drivers had no driver factors recorded.

Bus driver	School		Transit		Intercity		Charter		Other		Unknown		То	tal
drinking	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No drinking	101	99.0	98	100.0	10	100.0	28	96.6	23	95.8	35	100.0	295	99.0
Drinking	1	1.0	0	0.0	0	0.0	1	3.4	1	4.2	0	0.0	3	1.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-1Fatal Bus Involvements by Driver Drinking Status and Bus TypeBIFA 2002

Table 4-2
Fatal Bus Involvements by Driver Drug Use and Bus Type
BIFA 2002

Bus driver	School		Transit		Intercity		Charter		Other		Unknown		Total	
drug use	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No drugs	40	39.2	37	37.8	3	30.0	11	37.9	10	41.7	11	31.4	112	37.6
Drugs involved	0	0.0	0	0.0	0	0.0	1	3.4	2	8.3	0	0.0	3	1.0
Not reported	57	55.9	56	57.1	6	60.0	14	48.3	11	45.8	23	65.7	167	56.0
Reported unk.	5	4.9	5	5.1	1	10.0	3	10.3	1	4.2	1	2.9	16	5.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-3
Fatal Bus Involvements by Driver Age and Bus Type
BIFA 2002

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkr	nown	To	otal
Age (years)	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
22-25	3	2.9	1	1.0	0	0.0	1	3.4	0	0.0	1	2.9	6	2.0
26-30	4	3.9	7	7.1	1	10.0	0	0.0	2	8.3	2	5.7	16	5.4
31-35	8	7.8	10	10.2	0	0.0	3	10.3	2	8.3	7	20.0	30	10.1
36-40	11	10.8	18	18.4	3	30.0	1	3.4	4	16.7	5	14.3	42	14.1
41-45	19	18.6	16	16.3	0	0.0	4	13.8	4	16.7	3	8.6	46	15.4
46-50	15	14.7	13	13.3	0	0.0	4	13.8	5	20.8	7	20.0	44	14.8
51-55	14	13.7	14	14.3	3	30.0	5	17.2	1	4.2	4	11.4	41	13.8
56-60	9	8.8	11	11.2	2	20.0	5	17.2	4	16.7	3	8.6	34	11.4
61-65	6	5.9	6	6.1	0	0.0	3	10.3	1	4.2	1	2.9	17	5.7
66-70	7	6.9	2	2.0	1	10.0	1	3.4	1	4.2	1	2.9	13	4.4
71-75	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7
over 75	4	3.9	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	5	1.7
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	1	2.9	2	0.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Sch	lool	Transit		Intercity		Charter		Other		Unknown		Total	
Driver sex	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Male	54	52.9	74	75.5	10	100.0	26	89.7	17	70.8	19	54.3	200	67.1
Female	48	47.1	24	24.5	0	0.0	2	6.9	7	29.2	15	42.9	96	32.2
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	1	2.9	2	0.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-4Fatal Bus Involvements by Driver Sex and Bus TypeBIFA 2002

 Table 4-5

 Fatal Bus Involvements by Driver Restraint Use and Bus Type

 BIFA 2002

	Sch	nool	Tra	nsit	Inte	Intercity		arter	Ot	her	Unkı	nown	To	otal
Driver restraint use	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
None used or N/A	5	4.9	16	16.3	0	0.0	4	13.8	2	8.3	4	11.4	31	10.4
Shoulder belt	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	2	0.7
Lap belt	24	23.5	23	23.5	3	30.0	5	17.2	6	25.0	3	8.6	64	21.5
Lap and shoulder	61	59.8	39	39.8	7	70.0	14	48.3	13	54.2	15	42.9	149	50.0
Used, type unk	1	1.0	7	7.1	0	0.0	0	0.0	0	0.0	6	17.1	14	4.7
Belt use improper	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Unknown	9	8.8	13	13.3	0	0.0	6	20.7	3	12.5	6	17.1	37	12.4
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-6
Fatal Bus Involvements by Driver Injury Severity and Bus Type
BIFA 2002

Driver injury	School		Transit		Inte	rcity	Cha	arter	Ot	her	Unki	nown	Total	
severity	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Fatal injury (K)	2	2.0	1	1.0	2	20.0	3	10.3	3	12.5	0	0.0	11	3.7
Incapacitating (A)	4	3.9	2	2.0	1	10.0	2	6.9	1	4.2	4	11.4	14	4.7
Non-incapacitating (B)	13	12.7	6	6.1	0	0.0	3	10.3	1	4.2	4	11.4	27	9.1
Complaint of pain (C)	20	19.6	14	14.3	0	0.0	2	6.9	2	8.3	3	8.6	41	13.8
No injury (O)	63	61.8	75	76.5	7	70.0	18	62.1	17	70.8	22	62.9	202	67.8
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	2	5.7	3	1.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

	Fa	Fatal		Incapaci-		Non-incapa-		olaint	Ν	lo				
Rollover, fire	injury (K)		tating (A)		citating (B)		of pain (C)		injury (O)		Unknown		Total	
ejection	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Rollover only	0	0.0	4	28.6	3	11.1	2	4.9	3	1.5	0	0.0	12	4.0
Fire only	2	18.2	0	0.0	1	3.7	0	0.0	1	0.5	0	0.0	4	1.3
Ejection only	2	18.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7
Rollover and ejection	1	9.1	0	0.0	1	3.7	0	0.0	0	0.0	0	0.0	2	0.7
None	6	54.5	10	71.4	22	81.5	39	95.1	197	97.5	1	33.3	275	92.3
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	2	66.7	3	1.0
Total	11	100.0	14	100.0	27	100.0	41	100.0	202	100.0	3	100.0	298	100.0

Table 4-8 Fatal Bus Involvements by Bus Type and Driver Extrication BIFA 2002

	School Transit		Inte	Intercity Charter			Ot	her	Unkı	nown	Total			
Driver extrication	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Not extricated	100	98.0	98	100.0	9	90.0	28	96.6	23	95.8	32	91.4	290	97.3
Extricated	2	2.0	0	0.0	1	10.0	0	0.0	1	4.2	0	0.0	4	1.3
Unknown	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	3	8.6	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-9Fatal Bus Involvements by Driver CompensationBIFA 2002

Compensation	No.	Pct.
Hourly only	181	60.7
Mileage only	3	1.0
Salary only	15	5.0
Percentage of revenue only	2	0.7
Driver owned only	5	1.7
Hourly and mileage	2	0.7
Hourly and tips	1	0.3
Driver has other primary employment	9	3.0
Driver is volunteer	3	1.0
Other		
Paid by trip/route	8	2.7
Paid by day	8	2.7
Driver not compensated - bus loaned	1	0.3
Miscellaneous	2	0.7
Unknown	58	19.5
Total	298	100.0

 Table 4-10

 Fatal Bus Involvements by Driver Compensation and Bus Type

 BIFA 2002

Operator type		
Compensation	No.	Pct.
School district		
Hourly only	74	72.5
Salary only	12	11.8
Mileage and other	1	1.0
Driver owned	2	2.0
Volunteer	1	1.0
Driver has other primary employment	2	2.0
Other		
Paid by day	4	3.9
Paid by trip/route	2	2.0
Unknown	4	3.9
Total school bus	102	100.0
Transit bus authority		
Hourly only	89	90.8
Salary only	2	2.0
Other		
Paid by day	1	1.0
Paid by trip/route	3	3.1
Unknown	3	3.1
Total transit bus	98	100.0
Intercity bus operator		
Hourly only	5	50.0
Hourly and mileage	2	20.0
Mileage only	2	20.0
Unknown	1	10.0
Total intercity bus	10	100.0
Charter bus operator		
Hourly only	6	20.7
Mileage only	1	3.4
Tips only	1	3.4
Hourly and tips	1	3.4
Driver owned	2	6.9
Other		
Paid by trip	2	6.9
Paid by day	3	10.3
Unknown	13	44.8
Total charter bus	29	100.0
Other operator		
Hourly only	7	29.2
Percent of revenue	2	8.3
Salary only	1	4.2
Driver owned	3	12.5
Driver is volunteer	2	8.3
Driver has other primary employment	6	25.0
Miscellaneous/unknown	3	12.5
Total other operator	24	100.0
Unknown operator type	35	100.0
Total	298	100.0

	School T		Tra	nsit	Inte	ercity	Cha	arter	Other		Unknown		Tc	otal
Hours driven	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1 hr	29	28.4	5	5.1	1	10.0	7	24.1	9	37.5	0	0.0	51	17.1
2 hrs	28	27.5	9	9.2	1	10.0	3	10.3	2	8.3	0	0.0	43	14.4
3 hrs	19	18.6	2	2.0	2	20.0	2	6.9	3	12.5	0	0.0	28	9.4
4-5 hrs	14	13.7	15	15.3	0	0.0	2	6.9	3	12.5	0	0.0	34	11.4
6-7 hrs	6	5.9	10	10.2	1	10.0	3	10.3	1	4.2	0	0.0	21	7.0
8-10 hrs	1	1.0	8	8.2	2	20.0	1	3.4	0	0.0	0	0.0	12	4.0
11 or more	0	0.0	1	1.0	1	10.0	0	0.0	0	0.0	0	0.0	2	0.7
Unknown, legal	0	0.0	3	3.1	0	0.0	1	3.4	0	0.0	0	0.0	4	1.3
Unknown/NA	5	4.9	45	45.9	2	20.0	10	34.5	6	25.0	35	100.0	103	34.6
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 4-11

 Fatal Bus Involvements by Reported Hours Driven and Bus Type

 BIFA 2002

Note: Reflects actual driving time since driver's last 8 hour rest period.

Table 4-12
Fatal Bus Involvements by Driver Violations Charged and Bus Type
BIFA 2002

	Sch	nool	Tra	Insit	Inte	rcity	Cha	arter	Ot	her	Unki	nown	Тс	otal
Driver violations charged	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
None	93	91.2	93	94.9	9	90.0	22	75.9	19	79.2	28	80.0	264	88.6
Manslaughter/homicide	1	1.0	0	0.0	0	0.0	2	6.9	0	0.0	1	2.9	4	1.3
Willfull reckless driving	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Inattentive	1	1.0	1	1.0	1	10.0	0	0.0	1	4.2	1	2.9	5	1.7
Speeding	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	1	2.9	2	0.7
Unreasonable speed	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Failure to obey traffic device	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.9	1	0.3
Failure to yield	3	2.9	2	2.0	0	0.0	0	0.0	0	0.0	1	2.9	6	2.0
Entering intersection	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Any lane violations	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Other license violation	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	1	2.9	2	0.7
Unknown violation	2	2.0	3	3.1	0	0.0	5	17.2	1	4.2	3	8.6	14	4.7
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Note: Since "driver violations charged" is a multiple-response variable, more than one driver violation can be coded per driver. Percentages are calculated based on total drivers, not total violations.

No. of previous	Sch	nool	Tra	Transit		Intercity		Charter		Other		Unknown		tal
accidents*	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
0	82	80.4	63	64.3	8	80.0	22	75.9	20	83.3	27	77.1	222	74.5
1	10	9.8	20	20.4	1	10.0	2	6.9	2	8.3	4	11.4	39	13.1
2	4	3.9	8	8.2	0	0.0	2	6.9	1	4.2	1	2.9	16	5.4
3	2	2.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
Not reported	4	3.9	6	6.1	0	0.0	2	6.9	1	4.2	1	2.9	14	4.7
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 4-13

 Fatal Bus Involvements by Number of Previous Accidents (fatal and nonfatal) and Bus Type

 BIFA 2002

Table 4-14
Fatal Bus Involvements by Number of Previous Suspensions and Bus Type
BIFA 2002

No. of previous	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	То	tal
suspensions*	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
0	102	100.0	95	96.9	9	90.0	27	93.1	23	95.8	30	85.7	286	96.0
1	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	3	8.6	4	1.3
2	0	0.0	1	1.0	0	0.0	1	3.4	0	0.0	0	0.0	2	0.7
3	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
4	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 4-15

 Fatal Bus Involvements by Number of Previous Speeding Convictions and Bus Type

 BIFA 2002

No. of previous	Sch	nool	Tra	Transit		Intercity		Charter		Other		Unknown		tal
speeding convs.*	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
0	97	95.1	87	88.8	9	90.0	25	86.2	20	83.3	29	82.9	267	89.6
1	5	4.9	11	11.2	0	0.0	1	3.4	2	8.3	3	8.6	22	7.4
2	0	0.0	0	0.0	0	0.0	0	0.0	2	8.3	1	2.9	3	1.0
3	0	0.0	0	0.0	0	0.0	2	6.9	0	0.0	0	0.0	2	0.7
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

* Reflects events occurring within three years of the current accident.

No. prev. other	Sch	nool	Tra	Transit		Intercity		Charter		Other		Unknown		tal
moving convs.*	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
0	97	95.1	83	84.7	8	80.0	17	58.6	20	83.3	27	77.1	252	84.6
1	5	4.9	12	12.2	1	10.0	7	24.1	4	16.7	5	14.3	34	11.4
2	0	0.0	1	1.0	0	0.0	2	6.9	0	0.0	1	2.9	4	1.3
3	0	0.0	2	2.0	0	0.0	2	6.9	0	0.0	0	0.0	4	1.3
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 4-16

 Fatal Bus Involvements by Previous Other Moving Convictions and Bus Type

 BIFA 2002

* Reflects moving convictions occurring within three years of the current accident.

Table 4-17
Fatal Bus Involvements by License Class Compliance and Bus Type
BIFA 2002

License class	Sch	nool	Tra	Transit		Intercity		Charter		Other		Unknown		otal
compliance	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Not valid	0	0.0	2	2.0	0	0.0	1	3.4	3	12.5	1	2.9	7	2.3
Valid	102	100.0	95	96.9	9	90.0	27	93.1	21	87.5	30	85.7	284	95.3
Unknown if CDL	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	2	5.7	3	1.0
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

Table 4-18
Fatal Bus Involvements by CDL License Status and Bus Type
BIFA 2002

CDL license	Scl	nool	Tra	Insit	Inte	rcity	Cha	arter	Ot	her	Unki	nown	То	otal
status	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No CDL	0	0.0	1	1.0	0	0.0	0	0.0	9	37.5	3	8.6	13	4.4
Suspended	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Valid	102	100.0	94	95.9	9	90.0	27	93.1	15	62.5	30	85.7	277	93.0
Other-not valid	0	0.0	2	2.0	0	0.0	1	3.4	0	0.0	0	0.0	3	1.0
Unknown	0	0.0	0	0.0	1	10.0	1	3.4	0	0.0	2	5.7	4	1.3
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

License	Scl	nool	Tra	insit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
endorsements	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
No endorsements	13	12.7	22	22.4	2	20.0	3	10.3	13	54.2	8	22.9	61	20.5
Complied	70	68.6	64	65.3	6	60.0	21	72.4	8	33.3	22	62.9	191	64.1
Not complied	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Compliance unk	16	15.7	10	10.2	1	10.0	4	13.8	2	8.3	3	8.6	36	12.1
Unknown	3	2.9	2	2.0	1	10.0	1	3.4	0	0.0	2	5.7	9	3.0
Total	102	100.0	98	100.0	10	100.0	29	100.0	24	100.0	35	100.0	298	100.0

 Table 4-19

 Fatal Bus Involvements by License Endorsements and Bus Type

 BIFA 2002

Total

	Sch	nool	Tra	nsit	Inte	rcity	Cha	arter	Ot	her	Unkı	nown	To	otal
Driver-related factors	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
None	74	72.5	67	68.4	5	50.0	11	37.9	11	45.8	24	68.6	192	64.4
Physical/mental condition														
Drowsy, asleep	0	0.0	0	0.0	0	0.0	3	10.3	0	0.0	1	2.9	4	1.3
III, blackout	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Inattentive	3	2.9	7	7.1	1	10.0	4	13.8	4	16.7	1	2.9	20	6.7
Miscellaneous causes														
Ran off road/lane	2	2.0	1	1.0	1	10.0	4	13.8	2	8.3	1	2.9	11	3.7
W/O required equipment	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Improper tailing	0	0.0	1	1.0	1	10.0	0	0.0	1	4.2	0	0.0	3	1.0
Improper lane change	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Not in lane	1	1.0	2	2.0	0	0.0	1	3.4	0	0.0	2	5.7	6	2.0
Improper start/back	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Erratic/reckless	1	1.0	0	0.0	0	0.0	2	6.9	2	8.3	1	2.9	6	2.0
Failure to yield	13	12.7	15	15.3	0	0.0	1	3.4	4	16.7	3	8.6	36	12.1
Failure to obey signs	5	4.9	0	0.0	0	0.0	2	6.9	0	0.0	2	5.7	9	3.0
Driving too fast	2	2.0	2	2.0	2	20.0	3	10.3	3	12.5	3	8.6	15	5.0
Other improper turn	1	1.0	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
Stopping in road	0	0.0	1	1.0	0	0.0	1	3.4	1	4.2	2	5.7	5	1.7
Locked wheel	0	0.0	0	0.0	0	0.0	1	3.4	1	4.2	0	0.0	2	0.7
Vision obscured by														
Glare	1	1.0	2	2.0	0	0.0	0	0.0	0	0.0	0	0.0	3	1.0
Curve, hill, etc	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Building/billboard	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Moving vehicle	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Parked vehicle	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Obstructing angles on vehicle	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Rear mirrors	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Avoiding, swerving due to														
Flat tire	0	0.0	0	0.0	0	0.0	0	0.0	1	4.2	0	0.0	1	0.3
Vehicle in road	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Phantom vehicle	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Pedestrian	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Other misc. factors														
Hit and run driver	0	0.0	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Homicide	1	1.0	0	0.0	0	0.0	1	3.4	0	0.0	1	2.9	3	1.0
Other nonmoving violation	0	0.0	1	1.0	0	0.0	0	0.0	1	4.2	2	5.7	4	1.3
Possible distractions														
Cellphone	2	2.0	3	3.1	0	0.0	2	6.9	0	0.0	0	0.0	7	2.3
Head-up display	0	0.0	0	0.0	0	0.0	1	3.4	0	0.0	0	0.0	1	0.3
Unknown	1	1.0	1	1.0	0	0.0	1	3.4	0	0.0	0	0.0	3	1.0

 Table 4-20

 Fatal Bus Involvements by Driver-Related Factors and Bus Type

 BIFA 2002

Note: Since "driver-related factors" is a multiple-response variable, more than one driver factor can be coded per driver. Percentages are calculated based on total drivers, not total factors.

10 100.0

29 100.0

24 100.0

35 100.0 298 100.0

98 100.0

102 100.0

Glossary and abbreviations

Glossary

Bus Operator Types

School

Any public or private school or district, or contracted carrier operating on behalf of the entity, providing transportation for pupils.

Transit

An entity providing passenger transportation over fixed, scheduled routes, primarily within urban geographical areas.

Intercity

A company providing for-hire, long-distance passenger transportation between cities over fixed routes with regular schedules.

Charter

Companies that operate buses on a for-hire basis, usually providing round-trip service for a tour group or an outing, either on an ad hoc or scheduled basis.

Other operator type

This category includes buses operated by private companies (primary business other than passenger transportation), non-governmental organizations (such as churches and non-profit organizations), non-educational units of government (such as departments of corrections or highway departments), and private individuals (entertainers, sports teams, etc.).

Unknown operator type

In cases where sufficient information could not be obtained about the operator type, "unknown" was assigned.

Bus Definitions

Big cowl and chassis

A truck-based bus, where a coach has been fitted onto a large, front-engine chassis, with a conventional hood/cowl in front of the windshield.

Bus

Motor vehicles with seating for nine or more, including the driver, that are not operated as personal transportation, and all motor vehicles with seating for 16 or more.

Heavy-duty bus

A heavy-duty vehicle such as a transit bus, manufactured to withstand the demands of severe duty cycles; typically 40 feet in length, but shorter lengths of 35 or 30 may be found. Articulated models are typically 60 feet in length, with the two vehicle sections connected by a joint mechanism which allows the bus to negotiate sharp turns and still have a continuous interior compartment.

Heavy-duty with lift

A heavy-duty bus with a wheelchair lift.

High platform

Typically intercity or touring coaches, often with cargo holds below the seating deck as well as a lavatory. These buses are designed for long distance travel.

Jitney

A small bus operated on a fixed route as demand warrants without fixed schedules or fixed stops.

Large passenger van

A full-size vehicle manufactured as a complete unit (unlike a cutaway cab fitted with a coach), seating up to 15 people.

Long-distance coach

Refers to the typical cross-country, heavy duty bus.

Low platform

Flat front transit buses with no cargo storage capacity below the passenger compartment. Flat front transit-style school buses have also been included in this category.

Mini van

A smaller vehicle manufactured as a complete unit, seating 7 – 10 people.

Passengers

Individuals being transported, excluding the driver.

Shuttle bus

A smaller bus intended for short, local trips.

Small cowl and chassis

A van-based bus, where a coach has been fitted onto a smaller front-engine chassis, usually below Class 5 GVWR. Shuttle buses and some school buses fall into this category.

Special needs bus

A bus containing a wheelchair lift and tie downs (locks to immobilize the wheelchair, and/or a belt for the occupant and chair).

Transit-style bus

A school bus or other bus with a flat front similar to a transit bus.

Type A school bus

A van conversion or bus constructed utilizing a small cowl and chassis, van-based cutaway. Has a nose and grille like a typical van, a regular driver's door (on the left side of vehicle), and the passenger entrance door curbside, behind the front wheel. Front engine location.

Type B school bus

A school bus constructed on a stripped van or truck chassis, perhaps resembling a stepvan type of front. Full coach body, with only one door, curbside, behind the front wheels. Front engine location.

Type C school bus

Conventional school bus consisting of a coach body mounted on a truck-based, flat back cowl (big cowl and chassis – hood and fender assembly). Varying lengths and some have wheelchair lifts. One entrance door located behind the front wheels. Front engine location.

Type D school bus

Transit-style school bus. Flat front, full coach body mounted on stripped bus chassis. Can be either front (forward control, FE) or rear engine (RE). Varying lengths, can have wheelchair lift and small storage compartments under passenger floor (accessed through small hatch doors on side of bus).

Tables of abbreviations

Abbreviation	Definition
CDL	Commercial driver's license
Convs	Convictions
Misc	Miscellaneous
Орр	Opposite
Prev	Previous
Stat	Statutory
Unk	Unknown
Veh	Vehicle
WO	Without

Injuries are classified according to severity under the following levels:

K Fatal injury

A Incapacitating injury

B Evident but not incapacitating

C Complaint of pain

O No injury

Index

Α

abbreviations, definition	54
accident description	21
accident type	21
age	41
all buses	11
annual fatal involvements	5, 6, 7
annual fatalities	8
axles	33

В

big cowl and chassis, definition	51
body style	29
bus body configuration	29
bus body style	29
bus descriptions	2
bus length	32
bus operator description	28
bus operator types	51
bus seating capacity	6
bus vehicle description	27
bus, definition	1, 52

С

carrier type	35
CDL license status	47
Center for National Truck and Bus Statistics	1
charter bus, definition	2, 51
classification of buses	2, 51
CNTBS	1
compensation	44

D

day of week	14
day type	14, 16
direction of roll	36
drinking status	41
driver	39
driver age	41

driver compensation	43
driver factors	49
driver injury severity	42, 43
driver sex	42
driver violations charged	45
driver-related factors	49
drug use	41

Е

ejection	43
empty weight	32
environmental distributions	16
extrication	43

F

FARS	1
fatalities	8, 23
fire	43
fire occurrence	37
first harmful event	22
front of bus style	29, 30

G

gross vehicle	weight	rating	33
---------------	--------	--------	----

Η

heavy duty with lift, definition	52
heavy-duty bus, definition	52
high platform, definition	52
hours driven	45

I

injury severity	42, 43
intercity bus, definition	2, 51
involvements, definition	2

J

jitney, definition	.52
junction, relation to	.19

L

land use	16
large passenger van, definition	52
length	32
license class compliance	47
license endorsements	48
license status	47
light condition	17
long distance coach, definition	52
low platform, definition	52

Μ

manner of collision	23
maps	11, 12
mini van, definition	52
model year	30, 31
month	14
most harmful event	36
moving convictions	47

Ν

non-motorist involvements2	23
number of passengers	34
number of vehicles in crash2	21

0

operator type	5
other bus, definition	2
other operator type, definition	51

Ρ

passenger restraints	35
passengers, definition	52
person type	8, 23
previous accidents	46
previous moving convictions	47
previous other moving convictions	47
previous speeding convictions	46
previous suspensions	46

Q

quarter turns3	6

R

relation to junction	19
reported hours driven	45
restraint use	42
road function class	18
roadway distributions	18
roadway surface condition	17
rollover	43
rollover status	36
route signing	18

S

school bus, definition	2 51
school buses	11
seating capacity	6, 34
sex	42
shuttle bus, definition	52
small cowl and chassis, definition	52
special needs bus, definition	53
speed limit	20
state	7, 11, 13
survey methodology	1
suspensions	46

Т

temporal distributions	14
TIFA	1
time of accident	15, 16
trafficway flow	20
transit bus, definition	2, 51
transit buses	12
transit-style bus, definition	53
travel lanes	19
trends	3
trip type	35
Trucks Involved in Fatal Accidents	1
Type A school bus, definition	53
Type B school bus, definition	53
Type C school bus, definition	53
Type D school bus, definition	53

U

UMTRI	1

University of Michigan Transportation Research	
Institute1	
unknown bus, definition2	
V	

vehicle role in accident	22
violations charged	45

W

weather condition	17
weekend	14, 16
weight	32
work week	14, 16

Υ

year5, 6,	7	. 8	3
-----------	---	-----	---