

Stella Daniel



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH 27611

JAMES G. MARTIN
GOVERNOR

April 10, 1985

JAMES E. HARRINGTON
SECRETARY

DIVISION OF HIGHWAYS

MEMORANDUM

TO: Area Traffic Engineers and Unit Heads
FROM: S. K. Smith, Accident Studies Engineer *SK Smith*
THRU: J. M. Lynch, P.E., Manager of Traffic Engineering *JML*
SUBJECT: Traffic Accident Rates by Road Types and Systems - 1984

The attached tables list various traffic accident rates for rural and municipal (urban) route systems for 1984 traffic accidents. These tables are for your information and use in any accident studies.

If you have need for any other types of traffic accident data summaries on a yearly basis, then given us a description of the specific information that you require and we will incorporate it in future summaries.

SKS:lb

Att.

- cc: Mr. J. M. Lynch, P.E., Att.
- Mr. C. C. Sessoms, Jr., P.E., Att.
- Mr. W. A. Ward, P.E., Att.
- Traffic Engineers, Att.
- Division Traffic Engineers, Att.
- Accident Studies Staff, Att.
- Mr. Charles Adkins, P.E., Att (10)

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING BRANCH
1984 ACCIDENT RATES

ITEMS	RURAL STATE HIGHWAYS					TOTAL RURAL	
	INTER	US	NC	PRI	SR		
TOTAL ACCIDENTS	2113	14677	13467	30257	32919	63176	
FATAL ACCIDENTS	38	231	231	500	444	944	
NON-FATAL INJURY ACC	864	6464	6127	13455	14681	28136	
NIGHT ACCIDENTS	672	4156	4205	9033	12352	21385	
WET ACCIDENTS	342	2979	2556	5877	5786	11663	
% FATAL ACCIDENTS	1.8	1.6	1.7	1.7	1.3	1.5	
% NON-FATAL INJ ACC	40.9	44.0	45.5	44.5	44.6	44.5	
% NIGHT ACCIDENTS	31.8	28.3	31.2	29.9	37.5	33.8	
% WET ACCIDENTS	16.2	20.3	19.0	19.4	17.6	18.5	
MILES OF ROAD	673	4385	6963	12021	59611	71632	
ADT (1)	18788	5286	2334	4332	406	1065	
TRAVEL (100MVM)	46.17	84.6	59.32	190.09	88.25	278.34	
TOTAL ACC RATE (2)	45.8	173.5	227.0	159.2	373.0	227.0	
FATAL ACC RATE (2)	0.8	2.7	3.9	2.6	5.0	3.4	
NON-FAT INJ RATE (2)	18.7	76.4	103.3	70.8	166.3	101.1	
NIGHT ACC RATE (2)	14.6	49.1	70.9	47.5	140.0	76.8	
WET ACC RATE (2)	7.4	35.2	43.1	30.9	65.6	41.9	
SEVERITY INDEX (3)	15.2	14.8	15.17	14.99	14.63	14.80	
ITEMS	URBAN STATE HIGHWAYS					TOTAL URBAN	
	INT	US	NC	PRI	SR(4)	NON SYS	URBAN
TOTAL ACCIDENTS	2314	14464	6635	23413	12993	46858	83264
FATAL ACCIDENTS	16	44	34	94	59	139	292
NON-FATAL INJURY ACC	911	5585	2900	9396	5091	17463	31950
NIGHT ACCIDENTS	522	3121	1660	5303	2817	10991	19111
WET ACCIDENTS	533	2814	1417	4764	2452	8473	15689
% FATAL ACCIDENTS	0.7	0.3	0.5	0.4	0.5	0.3	0.4
% NON-FATAL INJ ACC	39.4	38.6	43.7	40.1	39.2	37.3	38.4
% NIGHT ACCIDENTS	22.6	21.6	25	22.6	21.7	23.5	23.0
% WET ACCIDENTS	23	19.5	21.4	20.3	18.9	18.1	18.8
MILES OF ROAD	113	1006	792	1911	1408	13110	16429
ADT (1)	35933	11424	6635	10888	5542	2960	4104
TRAVEL (100MVM) (1)	14.77	41.95	19.19	75.91	28.48	141.64	246.09
TOTAL ACC RATE (2)	156.7	344.8	378.6	308.4	456.3	330.8	338.3
FATAL ACC RATE (2)	1.1	1.0	1.8	1.2	1.4	1.0	1.2
NON-FAT INJ RATE (2)	61.7	133.1	151.1	123.8	178.8	123.3	129.8
NIGHT ACC RATE (2)	35.3	74.4	86.5	69.9	98.9	77.6	77.7
WET ACC RATE (2)	36.1	67.1	73.8	62.8	86.1	59.8	63.8
SEVERITY INDEX (3)	12.01	11.42	12.20	11.70	11.90	10.85	11.25

(1) ESTIMATED VALUE

(2) RATE IS FOR 100 MILLION VEHICLE MILES OF TRAVEL.

(3) SEVERITY INDEX = (64(F+A) + 19.1(B+C) + PDO) / TOTAL ACC.

(4) INCLUDES ONLY ROUTE SEGMENTS WITH COMPUTERIZED TRAFFIC VOLUME

F=FATAL ACC

A=A INJ ACC

B=B INJ ACC

C=C INJ ACC

PDO=PROPERTY

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 TRAFFIC ENGINEERING BRANCH
 ACCIDENT RATES
 1984
 BY ROAD TYPES & SYSTEMS

RURAL INTERSTATES ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	0	-	-	-	-	-
3 LANES UNDIVIDED	0	-	-	-	-	-
4+ UNDIVIDED NO	0	-	-	-	-	-
4+ DIVIDED NO	0	-	-	-	-	-
4+ DIVIDED PARTIAL	0	-	-	-	-	-
4+ DIVIDED FULL	673	<u>45.8</u>	0.8	18.7	14.6	7.4
TOTAL	673	<u>45.8</u>	0.8	18.7	14.6	7.4

URBAN INTERSTATE ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	0	-	-	-	-	-
3 LANES UNDIVIDED	0	-	-	-	-	-
4+ UNDIVIDED	0	-	-	-	-	-
4+ DIVIDED NO	0	-	-	-	-	-
4+ DIVIDED PARTIAL	0	-	-	-	-	-
4+ DIVIDED FULL	113	<u>156.7</u>	1.1	61.7	35.3	36.1
TOTAL	113	<u>156.7</u>	1.1	61.7	35.3	36.1

NOTE: Includes only route segments with computerized traffic volume

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 TRAFFIC ENGINEERING BRANCH
 ACCIDENT RATES
 1984
 BY ROAD TYPES & SYSTEMS

RURAL UNITED STATES ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	3283	<u>200.6</u>	3.7	89.1	57.8	42.3
3 LANES UNDIVIDED	44	<u>227.7</u>	0.9	92.6	61.4	43.5
4+ UNDIVIDED NO	138	<u>267.4</u>	2.5	106.8	67.7	54.5
4+ DIVIDED NO	493	<u>168.6</u>	2.1	74.8	46.1	31.3
4+ DIVIDED PARTIAL	153	<u>93.1</u>	1.2	45.7	26.5	16.5
4+ DIVIDED FULL	274	<u>50.2</u>	0.8	20.6	17.0	10.0
TOTAL	4385	173.5	2.7	76.4	49.1	35.2

URBAN UNITED STATES ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	521	<u>346.1</u>	1.0	133.0	68.0	58.2
3 LANES UNDIVIDED *	6	<u>163.5</u>	4.2	54.5	21.0	37.7
4+ UNDIVIDED	269	<u>441.8</u>	1.0	173.4	97.8	86.4
4+ DIVIDED NO	113	<u>394.6</u>	0.5	145.9	87.7	77.4
4+ DIVIDED PARTIAL	48	<u>195.9</u>	2.1	78.4	51.1	54.4
4+ DIVIDED FULL	47	<u>101.0</u>	1.1	40.9	21.3	27.5
TOTAL	1006	344.8	1.0	133.1	74.4	67.1

NOTE: Includes only route segments with computerized traffic volume
 * Rates are not significant.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 TRAFFIC ENGINEERING BRANCH
 ACCIDENT RATES
 1984
 BY ROAD TYPES & SYSTEMS

RURAL NORTH CAROLINA ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	6829	<u>226.6</u>	4.1	103.6	70.9	43.1
3 LANES UNDIVIDED *	12	<u>199.2</u>	0.0	89.3	41.2	68.7
4+ UNDIVIDED NO	41	<u>306.7</u>	1.6	120.6	67.2	51.0
4+ DIVIDED NO	63	<u>223.7</u>	1.7	97.6	81.2	43.2
4+ DIVIDED PARTIAL *	18	<u>77.5</u>	0.0	45.6	29.6	13.7
4+ DIVIDED FULL	0	-	-	-	-	-
TOTAL	6963	<u>227.0</u>	3.9	103.3	70.9	43.1

URBAN NORTH CAROLINA ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	629	<u>352.4</u>	1.9	136.4	77.2	66.2
3 LANES UNDIVIDED	0	-	-	-	-	-
4+ UNDIVIDED	120	<u>441.0</u>	1.9	180.2	102.2	92.2
4+ DIVIDED NO	33	<u>463.0</u>	1.5	196.2	122.0	85.7
4+ DIVIDED PARTIAL	0	-	-	-	-	-
4+ DIVIDED FULL *	8	<u>76.9</u>	0.0	30.8	13.8	20.0
TOTAL	792	<u>378.6</u>	1.8	151.1	86.5	73.8

NOTE: Includes only route segments with computerized traffic volume
 * Rates are not significant.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 TRAFFIC ENGINEERING BRANCH
 ACCIDENT RATES
 1984
 BY ROAD TYPES & SYSTEMS

RURAL TOTAL PRIMARY ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	10112	<u>214.9</u>	3.9	97.1	65.0	42.7
3 LANES UNDIVIDED	56	<u>224.3</u>	0.8	92.2	59.0	46.5
4+ UNDIVIDED NO	180	<u>274.8</u>	2.3	109.4	67.6	53.8
4+ DIVIDED NO	555	<u>175.3</u>	2.1	77.6	50.4	32.7
4+ DIVIDED PARTIAL	171	<u>92.2</u>	1.1	45.7	26.7	16.4
4+ DIVIDED FULL	947	<u>46.5</u>	0.8	19.0	14.9	7.8
TOTAL	12021	158.5	2.6	70.8	47.5	30.9

URBAN TOTAL PRIMARY ROUTES

Accident Rates (per 100MVM)

ROAD TYPES	SYSTEM MILES	TOTAL	FATAL	NON-FAT INJURY	NIGHT	WET
2 LANES UNDIVIDED	1150	<u>349.1</u>	1.4	134.6	72.4	62.1
3 LANES UNDIVIDED *	8	<u>189.5</u>	3.8	69.6	23.2	38.7
4+ UNDIVIDED	389	<u>441.4</u>	1.3	175.3	99.0	88.0
4+ DIVIDED NO	146	<u>409.1</u>	0.7	156.6	95.0	79.1
4+ DIVIDED PARTIAL	51	<u>196.2</u>	2.0	78.3	50.9	54.5
4+ DIVIDED FULL	168	<u>141.4</u>	1.1	55.9	31.5	33.6
TOTAL	1911	316.7	1.2	123.8	69.9	62.8

NOTE: Includes only route segments with computerized traffic volume
 * Rates are not significant.