

PERIODIC PHYSICAL RE-EXAMINATION
OF MOTOR VEHICLE OPERATORS

An Evaluation of the Pennsylvania Experience



General Assembly of the Commonwealth of Pennsylvania

JOINT STATE GOVERNMENT COMMISSION

Harrisburg, Pennsylvania

1963

The Joint State Government Commission was created by Act of 1937, July 1, P. L. 2460, as last amended 1959, December 8, P. L. 1740, as a continuing agency for the development of facts and recommendations on all phases of government for the use of the General Assembly.

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1961-1963

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LETTER OF TRANSMITTAL

To the Members of the General Assembly of the
Commonwealth of Pennsylvania:

House Resolution No. 99, Session of 1961, directs “. . . the Joint State Government Commission to evaluate the effectiveness of the rules, regulations and administrative practices of the Pennsylvania Bureau of Highway Safety upon the frequency and severity of traffic accidents and the costs which the rules and regulations impose upon the taxpayer and the motoring public . . .”

In accordance with House Resolution No. 99, Session of 1961, there is submitted herewith a report which evaluates cost and effects of the periodic physical re-examination of Pennsylvania drivers selected at random. Pennsylvania is the only state in the Union which subjects drivers, randomly selected, to periodic physical examinations.

HARRIS G. BRETH, *Chairman*

*Joint State Government Commission
Capitol Building
Harrisburg, Pennsylvania
January, 1963*

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DRIVER LICENSING: ENFORCEMENT AND PROCEDURES

Generally speaking, the Bureau of Traffic Safety uses procedures and methods recommended by the National Safety Council and employed by most of the states whose traffic problems are comparable to those of Pennsylvania. However, the record discloses that some of these measures are applied in Pennsylvania with extreme severity. For instance, as regards suspension of driving privileges under discretionary actions, the criterion by which the National Safety Council evaluates the performance of the states calls for 50 suspensions per 10,000 drivers; during 1961, the Pennsylvania Bureau of Traffic Safety suspended 224 per 10,000 drivers, or four times the number of suspensions specified by the National Safety Council. Again, the criterion of the National Safety Council is 30 review-special examinations per 10,000 drivers; Pennsylvania, in 1961, gave special examinations to 457 per 10,000 drivers, or 15 times the number specified by the National Safety Council.¹

PHYSICAL RE-EXAMINATION PROGRAM

Unlike all other state traffic safety agencies, the Pennsylvania Bureau of Traffic Safety has instituted periodic physical re-examinations of Pennsylvania drivers selected at random.² This practice is not recommended by either the National Safety Council or by the American Association of Motor Vehicle Administrators. Though periodic physical re-examinations of all drivers, regardless of accident experience, have been suggested from time to time, the suggestions have been rejected by both governmental

¹ For details see Appendix, Table A.

² House Bills 219 and 1191 and Senate Bill 1091 (Session of 1959) would have provided explicit authority for periodic physical re-examination of Pennsylvania drivers as a condition for acquiring or retaining their driving privileges. House Bill 1191 was recommitted after passage on third reading. The others were never reported from committee.

agencies and specialists in traffic safety. For example, Glenn V. Carmichael, in a paper presented to the Conference of State Legislators on Street and Highway Traffic Safety in Boston, November 9-12, 1958, observed:

“Physical examinations, conducted by licensed physicians, have been proposed as a requirement for licensing. . . . While it is true that isolated cases of heart failure or loss of consciousness as a cause of an accident make the headlines, not enough valid data are available upon which to base conclusions as to the part diseases, bodily ailments, or physical condition play in accidents, . . .”³

Again, under date of February 27, Lewis L. Strauss, United States Secretary of Commerce, reported to the Congress of the United States in 1959:

“Over the past 20 years there has been an increasing effort to utilize driver licensing as a method of controlling the quality of drivers . . . Most of these measures have shown little relation to highway safety. Consequently, many suggestions have been made to use more intensive screening devices and regular retesting of license holders.

“. . . such tests usually have had such low validity that in order to eliminate even a small proportion of accident-likely drivers a large number of safe drivers would also have to be rejected. . . .”⁴

The Joint State Government Commission has made a study of the first 196,000 Pennsylvania drivers required to take a medical examination as a condition of retaining their driving privileges. Inasmuch as the 196,000 drivers

³ Glenn V. Carmichael, “Objectives in Driver License Administration,” Legislative Conference on Street and Highway Traffic Safety, sponsored by The President’s Committee for Traffic Safety and The Council of State Governments, Boston, Massachusetts, November 9-12, 1958.

⁴ U. S. Congress, House, *The Federal Role in Highway Safety*, 86th Cong., 1st Sess., 1959, Document No. 93, p. 34.

were selected in a systematic random manner, the Commission's findings apply to all drivers selected in the same manner for re-examination since the inception of the program. The Commission also has interviewed several thousand Pennsylvania drivers concerning the physical re-examination.

Briefly, the findings of the Commission are as follows:

1. Pennsylvania drivers have grossly erroneous notions as regards the number of motor vehicle operators who are physically or mentally unable to competently handle a motor vehicle. For instance, out of 297,618 drivers involved in Pennsylvania traffic accidents in 1961, 1,826 had apparent physical or mental defects—6 in a 1,000, while approximately two-thirds of the drivers surveyed estimated that more than 25 in a 1,000 were physically or mentally incompetent to operate motor vehicles.⁵

2. Of the 196,000 drivers requested to take a medical examination, 169,000 actually responded to the request. Of the 27,000 drivers called but not responding during the specified period of 90 days, some had been institutionalized, some had died, and some had moved out of the Commonwealth.

3. Of the 169,000 drivers actually responding, 369 were "rejected" as per reports of the Bureau of Traffic Safety.

4. Of the 369 drivers "rejected" 148 "voluntarily withdrew," that is to say, on receipt of the notice to take a medical examination, they surrendered their operators' cards. Of the 148 drivers who "voluntarily withdrew," 10 percent had moved out of the state, 14 percent had died, and 44 percent had not been driving for an average of six years.

⁵ For further accident details, see Appendix, Table B.

5. Of the remaining 221 "rejected" drivers, 58, or 26 percent, had their driving privileges subsequently restored.

DISTRIBUTION OF DRIVERS WHOSE
PRIVILEGES WERE RESTORED
BY REASONS FOR INITIAL REJECTION

<i>Reasons for Initial Rejection</i>	<i>Number of Drivers</i>
Cardiac	21
Alcoholism	9
Diabetic and Epileptic	7
Black Out	7
Neurosis and Psychosis	6
Vision	5
"Unfit"	3
Total	<u>58</u>

6. The reasons for the rejection of the remaining 163 drivers are shown below.

DISTRIBUTION OF DRIVERS
BY REASONS FOR REJECTION

<i>Reasons for Rejection</i>	<i>Number of Drivers</i>
Cardiac	40
Alcoholism	10
Diabetic and Epileptic	4
Black Out	25
Neurosis and Psychosis	21
Vision	41
"Unfit"	15
Other	7
Total	<u>163</u>

7. Of the 369 drivers "rejected," three percent were involved in accidents in 1960. The comparable percentage for all Pennsylvania drivers is six; of Pennsylvania drivers aged 16-20, 16 percent were involved in accidents. In other words, the accident record of all Pennsylvania drivers is double that of those rejected, and the accident record of drivers aged 16-20 is more than five times that of those rejected.⁶ Moreover, none of the "rejected" drivers were involved in fatal accidents in the last decade.

8. The Joint State Government Commission survey in 1962 of drivers reporting to substations for re-examination indicated that the average per person cost of compliance with the re-examination requirement in terms of wages lost, transportation expenses, and doctors' fees was \$8.50.⁷ Hence, the total compliance cost of the 169,000 drivers re-examined between November 14, 1960, and January 6, 1961, was \$1.4 million.

9. It is estimated that if the 311 drivers (those rejected and not subsequently restored), had retained their driving privileges for the rest of their lives (an average of 12 years), they could have been expected to be involved in property and personal injury accidents generating, during the remainder of their lives, a total cost of approximately \$198,000.

10. Medical examination of all of Pennsylvania's drivers, if examined at approximately the present rate, would take about 8 years and would generate a total compliance cost of \$40 million. On the basis of past experience, the

⁶ As a guide to administrative action in the area of driver improvement and driver licensing, the American Association of Motor Vehicle Administrators recommends: "The key to discretionary action is an estimate of the chance of future accidents. If this chance is great, vigorous action is warranted. If the chance is remote, no action at all is required." *Driver Improvement Through Licensing Procedures*, (1956) page 21.

⁷ For percentage distribution of compliance cost, see Appendix, Table C.

compliance cost of \$40 million could be expected to reduce the total cost of property and personal injury accidents over a 20-year period by approximately \$5 million. The compliance cost of \$40 million does not include the cost of enforcement and administration.

11. It is unrealistic to assume that the costly program of periodic re-examination of all drivers at time periods of 8 years can be expected to substantially reduce accidents attributable to physical defects. For instance, as regards heart disease—the most important single reason, exclusive of vision, for rejection—medical research studies show that of a group of drivers (65% males, 35% females), who at a given time, say today, are without identifiable symptoms of heart disease, approximately 1.8 percent will have developed a heart ailment within 30 months, and 21 percent (more than 1 out of every 5) of those developing a heart disease will have died of heart disease.⁸ In other words, of the 169,000 drivers who had passed the medical examination between November 14, 1960, and January 6, 1961, 3,000 will have developed diseases of the heart by July 1963 and over 600 of the 3,000 will have died of heart ailments by the end of July 1963, while under the physical re-examination program only 40 were rejected because of heart conditions.

FATAL ACCIDENTS

In conclusion, the introduction of periodic physical re-examination of drivers taken in conjunction with a drastic suspension policy, the introduction of radar, and the legalization of chemical tests have not changed the trend of fatal and personal injury accident rates.

Chart I shows for the United States and Pennsylvania, the number of traffic deaths per year per 100 million motor vehicle miles for the period 1950 to 1961. Examination of the chart shows:

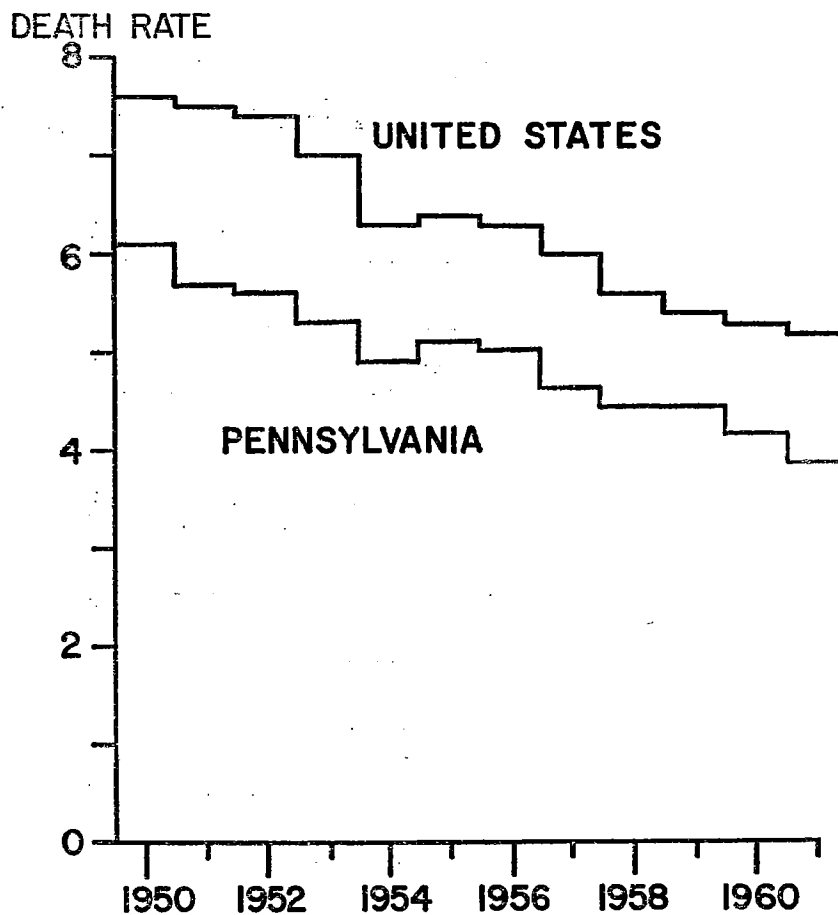
⁸ See, e.g., *American Journal of Public Health*, VOL. 47, (Supplement, 1957).

1. Throughout the period 1950-1961, Pennsylvania death rates have been lower than United States death rates.

2. The pattern of Pennsylvania death rates has been similar to the pattern of United States death rates.

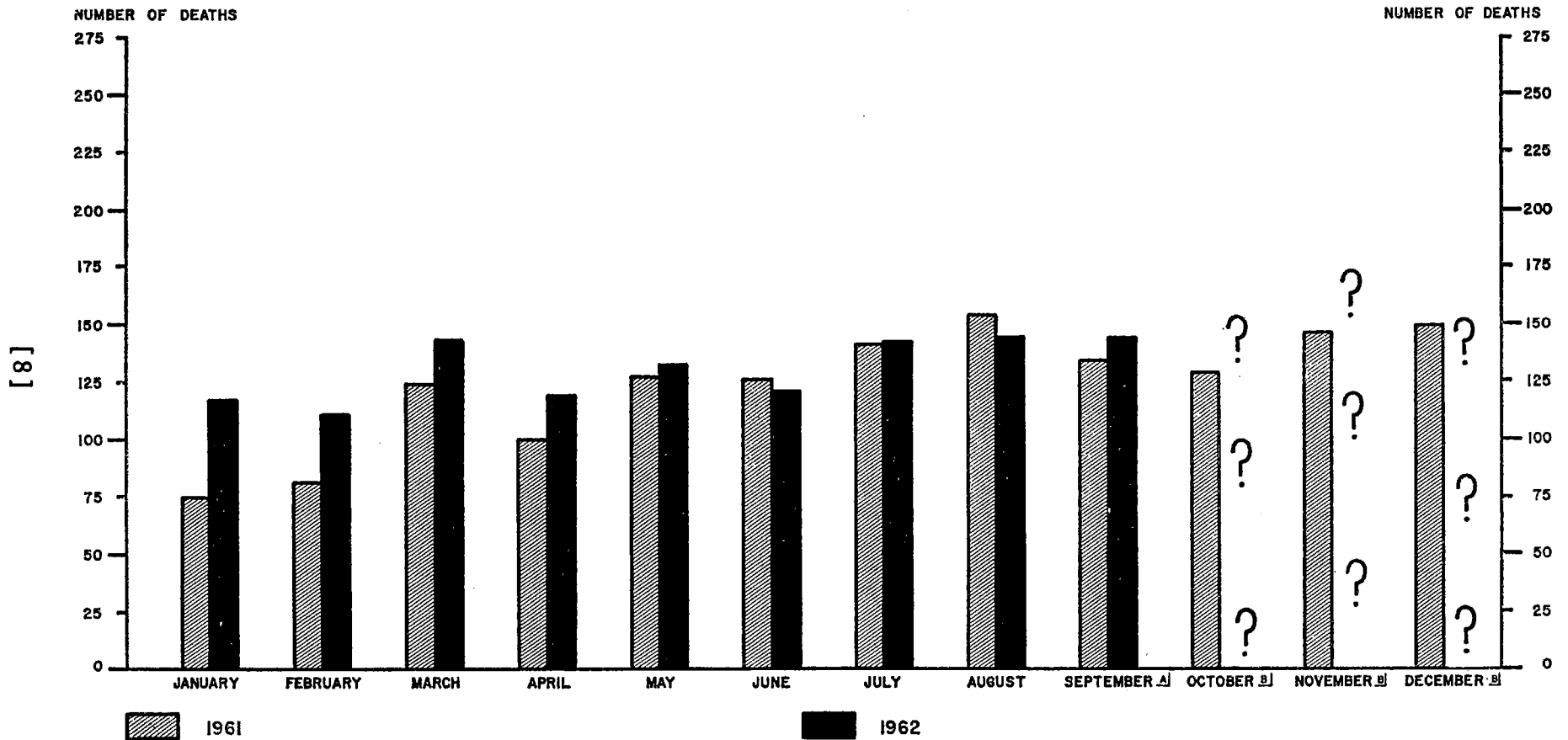
Chart I

NUMBER OF TRAFFIC DEATHS PER YEAR
PER 100 MILLION MOTOR VEHICLE MILES
PENNSYLVANIA AND UNITED STATES
1950-1961



SOURCE: National Safety Council, *Accident Facts*, 1952-1962 editions, (Chicago, Illinois).

Chart II
 NUMBER OF PENNSYLVANIA TRAFFIC DEATHS BY MONTH
 1961 AND 1962



▲ Preliminary figures submitted to National Safety Council.

■ No information submitted to National Safety Council.

SOURCE: National Safety Council, *Traffic Safety*, May-December, 1962 (Chicago, Illinois).

Chart II shows on a monthly basis, to the extent that data are available, the number of Pennsylvania traffic deaths for 1961 and 1962. Examination of the chart shows that the monthly death toll was greater in 1962 than 1961 except for the months of June and August.

As of October 1, 1961, the total number of traffic deaths on Pennsylvania highways was 1,062. The comparable figure for 1962 was 1,173. The death toll for the remainder of 1962 is conjectural.

For 1961, the last year for which complete figures are available, the total number of accidental deaths was 4,662. Of this total 1,486 (32 percent) were due to motor vehicle traffic accidents, 1,464 (31 percent) occurred in the home, and 345 (7 percent) occurred at work.

APPENDIX

TABLE A
 NATIONAL SAFETY COUNCIL ANNUAL TRAFFIC INVENTORY ANALYSIS FOR PENNSYLVANIA,
 DRIVER LICENSING IMPROVEMENT AND CONTROL

ITEM NO.	SUBJECT	EVALUATION CRITERIA	Performance	
			1960	1961
1.	DRIVER EXAMINING PERSONNEL AND TRAINING (a)			
	a. Examining personnel	State employed	150	150
	b. Recruiting procedures	Age-Educ-Phys-Methods	A-E-P-M	A-E-P-M
	c. New examiner training	12 days-specialized	14	9
	d. In-service examiner training	3 days or equivalent	4	4
	e. Field supervision	1 supvr. per 10 examiners	1-3	1-3
	f. Supervisory training (AAMVA approved)	Attended courses	Yes-1960	Previous
2.	EXAMINING STANDARDS AND PROCEDURES (a)			
	a. New applicants (1) A-C-D-P (b)	A-C-D-P	A-C-D-P	A-C-D-P
	(2) Rules of the road	Yes	Yes	Yes
	(3) Sign and signal test	Yes	Yes	Yes
	(4) Driving test	Yes	Yes	Yes
	b. Renewals (1) V-R-S-DR (b)	V-R-S-DR	V-R-S-DR	V-R-S-DR
3.	EXAMINATION RESULTS (a)			
	a. Examiner workload	Under 4000 per examiner	4380	3533
	b. Per cent failures	15% or higher	50%	33%
4.	CENTRAL DRIVER RECORD FILE (Used for Driver Improvement and Control) (a)			
	a. Conviction records	Yes	Yes	Yes
	b. Accident records	Yes	Yes	Yes
	c. Warning records	Yes	Yes	Yes
	d. Restriction records	Yes	Yes	Yes
	e. Suspension and revocation records	Yes	Yes	Yes
	f. Interview and hearing records	Yes	Yes	Yes
5.	DRIVER IMPROVEMENT PERSONNEL & TRAINING (a)			
	a. Improvement personnel assigned	1 per 100M drivers	6	6
	b. Recruitment procedures	Age-Educ-Phys-Methods	A-E-P-M	A-E-P-M
	c. New personnel training	12 days-specialized	3	4-6 weeks
	d. In-service personnel training	3 days or equivalent	4	7
	e. Supervisory training (AAMVA approved)	Attended courses	Yes-1960	Previous
6.	DRIVER IMPROVEMENT AND CONTROL (a)			
	a. Law or authority:			
	(1) For MANDATORY withdrawal	Yes	Yes	Yes
	(2) For DISCRETIONARY withdrawal	Yes	Yes	Yes
	(3) For withdrawal without interview	Yes	Yes	Yes
	(4) To re-examine as needed	Yes	Yes	Yes
	b. Driver improvement actions:			
	(1) Advisory or warning letters	160 per 10M drivers	613	407
	(2) Review-special examinations	30 per 10M drivers	236	457
	(3) Personal interviews	40 per 10M drivers	107	121
	(4) Hearings	15 or less per 10M drivers	118	119
	(5) Drivers placed under restriction	10 per 10M drivers	17	14
	(6) Drivers placed under probation	30 per 10M drivers	None	None
	(7) Total drivers losing driving privilege under discretionary actions	50 per 10M drivers	203	224
	(8) Enforcement agencies notified of driver improvement actions	Yes	Yes	Yes
7.	EXHIBITS (as required)	10 items	8	10
	SUPPLEMENTAL QUESTIONS (as required)	Yes	Yes	Yes
PERFORMANCE (In percentage)			89	89

(NR) - Information not reported.

(a) - AAMVA Standards or Procedures.

(b) - A-Acuity; C-Color; D-Depth; P-Peripheral; V-Vision; R-Road Rules; S-Signs and Signals; DR-Driving Test.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF REVENUE
BUREAU OF TRAFFIC SAFETY

TABLE B
STATISTICAL SUMMARY OF MOTOR VEHICLE
TRAFFIC ACCIDENTS

PERIOD 12 MONTHS - 1961 -
STATE TOTALS

FORM RTR-926 COLLISION OF MOTOR VEHICLE WITH	TYPE OF ACCIDENT				PERSONS KILLED																		PERSONS INJURED																		COMPARATIVE TOTALS							
	NUMBER OF ACCIDENTS				TOTAL KILLED	AGE																		TOTAL INJURED	AGE																		.. THIS YEAR TO DATE			SAME PERIOD LAST YEAR		
	TOTAL ACCIDENTS	FATAL	NON FATAL	PROPERTY DAMAGE		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50 & OVER	NOT STYD.	0-4	5-9	10-14	15-19	20-24	25-29		30-34	35-39	40-44	45-49	50 & OVER	NOT STYD.	TOTAL ACCIDENTS	PERSONS KILLED	PERSONS INJURED	TOTAL ACCIDENTS	PERSONS KILLED	PERSONS INJURED												
0. OTHER MOTOR VEHICLE	124680	414	32278	91988	520	17	7	8	58	61	88	62	138	69	12	51652	1536	1551	1475	5974	5769	8930	8725	11320	2502	3806	19084	75	6066	12085	131	6497																
1. PEDESTRIAN	7888	375	7507		378	38	65	16	10	9	15	22	72	128	3	7741	1150	8389	781	330	162	248	329	772	511	1084	14765	29	4705	14085	112	6975																
2. FIXED OBJECT	11288	263	4294	6786	292	1		5	47	49	57	40	41	25	7	6253	94	97	220	1676	1201	1032	894	831	156	202	10949	124	5187	15673	82	6852																
3. RAILROAD TRAIN	210	12	75	123	17	1			3	1	1	1	1	1	1	113	5	3	5	13	14	19	16	28	4	5	11317	102	5742	10887	124	6699																
4. STREET CAR	426	2	122	302	3											185	7	5	1	18	17	29	24	56	9	19	11500	129	6092	12949	168	7874																
5. BICYCLE	1396	23	1270	3	23	2	6	13	1	1	1	1	1	1	1	1433	18	511	634	112	5	6	4	6	2	135	12400	121	6602	11954	130	7425																
6. MOTORCYCLE	458	23	331	105	24				7	3	9	2	3	3		425	4		9	139	122	86	28	21	2	20	11052	144	6121	11710	148	7368																
7. ANIMAL	659		68	590												85	3	3	8	4	14	18	13	1	3	11619	155	6659	11485	149	6714																	
8. NON-COLLISION	1859	3	847	1009	3											1284	29	28	51	318	193	199	199	125	25	49	10880	130	5786	11993	143	6184																
9. HORSE-DRAWN VEHICLE	58	2	28	28	2											41	2	3	2	6	3	7	6	4	5	13288	136	6980	12225	147	6843																	
10. FALLING FROM VEHICLE	192	17	172	3	17	1	1	1	5	9	1	2	3	1	1	198	22	12	14	39	20	16	20	28	10	17	12825	140	6850	12753	152	6137																
11. COLLISION WITH GUARD RAIL	2952	45	857	2050	52	1			8	6	13	6	8	7	3	1299	28	19	41	323	231	261	177	180	37	22	17935	147	7813	32258	103	7224																
12. SLEDDER	170	9	160	1	9	1	3	5								186	5	85	53	17	4	7	9		12	156559	1386	73997	159051	1609	82792																	
13. OVERTURNED ON ROADWAY	1621	69	780	778	69	2	2	1	14	9	17	10	12	2		1476	19	24	43	350	256	203	159	140	32	50																						
14. RAN OFF ROADWAY	2248	57	994	1197	66	2			2	10	12	15	8	10	7	1546	23	22	63	438	327	252	176	175	39	31																						
15. FARM EQUIPMENT	145	7	55	83	7				2	2	1					80		1	3	6	14	9	23	12	8	4																						
16. OTHER	315	3	85	227	4				1							96	2	3	7	5	8	18	14	19	6	14																						
17. GO-KARTS	5			1												4																																
18.																																																
19.																																																
TOTALS	156559	1318	49967	105274	1486	65	84	54	186	156	218	155	301	241	26	73997	2947	4753	3412	9762	8920	1936	1820	3797	2351	5489																						

HOUR OF OCCURRENCE	TOTAL				DAY OF OCCURRENCE	TOTAL				WEATHER	TOTAL				AGE OF OPERATOR	TOTAL			
	TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE		TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE		TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE		TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE
12 - 1 A.M.	4016	72	1290	2654	1. SUNDAY	21688	210	7191	14287	0. CLEAR	98887	900	32988	64999	0. 16 YEARS OF AGE	7502	111	1727	5664
1 - 2 A.M.	3930	62	1254	2614	2. MONDAY	20208	135	6345	13928	1. CLOUDY	19990	165	4325	9440	1. 17 YEARS OF AGE	8285	45	2514	5726
2 - 3 A.M.	3180	63	1031	2086	3. TUESDAY	19236	150	6127	12939	2. FOGGY	2234	33	1028	1893	2. 18 & 19	18279	134	5814	12331
3 - 4 A.M.	2347	37	746	1564	4. WEDNESDAY	19381	159	6153	13069	3. RAINY	24363	171	7954	16238	3. 20 TO 24	34723	290	1195	23238
4 - 5 A.M.	1525	32	489	984	5. THURSDAY	21551	187	6779	14585	4. SNOW	16445	49	3692	14704	4. 25 TO 34	59000	408	19062	39530
5 - 6 A.M.	1238	26	387	825	6. FRIDAY	25393	201	8150	17042	TOTAL ACCIDENTS	156559	1318	49967	105274	5. 35 TO 44	57646	337	18510	38799
6 - 7 A.M.	2638	30	800	1808	7. SATURDAY	29102	276	9202	19624	ROADWAY					6. 45 TO 59	56912	326	17849	38137
7 - 8 A.M.	6427	37	1662	4708	TOTAL ACCIDENTS	156559	1318	49967	105274	1. WET	31567	245	10371	20951	7. 60 TO 74	19411	131	6885	13195
8 - 9 A.M.	7535	33	2097	5405	ROAD LOCATION					2. MUDDY	310	2	88	220	8. 75 & OVER	1940	30	623	1287
9 - 10 A.M.	5443	24	1468	3951	0. STREET INTERSECTION	58893	247	18938	39708	3. SNOWY	8654	36	1968	6650	9. NOT STATED	34520	85	4998	28437
10 - 11 A.M.	6225	29	1740	4436	1. BETWEEN INTERSECTION	54078	327	15569	38182	4. ICY	24988	60	5203	19625	TOTAL OPERATORS	397618	1897	89377	206344
11 - 12 P.M.	7300	42	2155	5103	2. RURAL ROAD	33372	661	12102	20609	TOTAL ACCIDENTS	156559	1318	49967	105274	SFX OF OPERATOR				
1 - 2 P.M.	7336	49	2556	5231	3. AURAL INTERSECTION	8460	70	2771	5209	0. MALE	24769	1698	72821	174118	1. FEMALE	48968	199	16555	32214
2 - 3 P.M.	9120	55	2890	6175	4. RAILROAD CROSSING	401	13	139	249	2. NOT STATED	13		1	12	2. NOT STATED	13		1	12
3 - 4 P.M.	11740	65	3935	7740	5. SHOPPING CENTER	1842		14	87	TOTAL OPERATORS	297618	1897	89377	206344	TOTAL OPERATORS	297618	1897	89377	206344
4 - 5 P.M.	14210	88	4761	9361	6. PARKING LOT	1842		14	87	EXPERIENCE OF OPERATOR					0. LESS THAN THREE MONTHS	1546	5	519	1022
5 - 6 P.M.	12734	92	4242	8400	TOTAL ACCIDENTS	156559	1318	49967	105274	1. TAXI	1989	1	600	788	1. 3 TO 5 MONTHS	1884	11	461	912
6 - 7 P.M.	8340	82	2908	5350	WIDTH OF HIGHWAY					3. OMNIBUS	2113	15	830	1268	2. 6 TO 12 MONTHS	3179	29	997	2153
7 - 8 P.M.	8279	69	3001	5203	1. ONE WAY STREET	6735	24	2394	4317	4. SCHOOL BUS	474		118	356	3. 1 YEAR OR MORE	236672	1455	74272	160945
8 - 9 P.M.	7020	69	2439	4512	2. TWO LANE	103732	989	31580	71163	5. MOTORCYCLE	634	33	477	124	4. UNLICENSED	1008	32	394	582
9 - 10 P.M.	6440	60	2042	4338	3. THREE LANE	17980	88	6111	11781	6. MOTORBIKE	110	6	91	13	5. OUT OF STATE	15821	188	5397	10236
10 - 11 P.M.	5991	70	1901	4020	4. FOUR LANE	19843	72	7039	12932	7. FOREIGN CAR	8175	49	2881	5245	6. LEARNER'S PERMIT	970	10	303	657
11 - 12 P.M.	6028	79	1841	4188	5. DIVIDED	7559	142	2550	4867	8. TRAILER TRUCKS	5389	147	1567	3675	7. NOT STATED	37038	167	7204	27837
					6. OTHER	681	3	287	389	9. OTHER (FARM TRACTOR, ETC., ROAD ROLLERS)	352	12	104	236	TOTAL OPERATORS	297618	1897	89377	206344
					7. NOT STATED	29		4	25	TOTAL VEHICLES	297618	1897	89377	206344					
TOTALS	156559	1318	49967	105274	TOTAL ACCIDENTS	156559	1318	49967	105274										

[14]

DRIVER VIOLATIONS				DRIVERS TRAINING COURSE				ROAD CHARACTER										
TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE	TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE	TOTAL	FATAL	NON FATAL	PROPERTY DAMAGE							
00. DROVE THROUGH SAFETY ZONE	231	1	26	194	0. YES	40848	169	13219	27516	0. STRAIGHT ROAD	28230	781	31877	65622				
01. EXCEEDED LAWFUL SPEED	5523	245	2343	2935	1. NO	151751	709	48521	102521	1. SHARP CURVE OR TURN	11277	184	3541	7602				
02. DISREGARDED POLICE OFFICER	165		30	135	2. NOT STATED	104919	1025	22637	76307	3. OTHER CURVES	7268	149	2408	4711				
03. DID NOT GRANT RIGHT-OF-WAY	32386	100	2152	24134	TOTAL DRIVERS	297618	1897	89377	206344	3. LEVEL ROAD	13503	65	4222	9206				
04. DISREGARDED STOP-OR LIGHT	5228	17	1967	3243	VEHICLE CONDITION				4. UP-GRADE	7828	80	2377	5360					
05. FOLLOWED TOO CLOSELY	25492	19	7950	17123					0. DEFECTIVE BRAKES	4212	25	1450	2737	5. HILL CREST	2521	33	799	1289
06. IMPROPER PASSING	5324	17	908	4439					1. IMPROPER LIGHTS	797	12	257	518	6. DOWN-GRADE	11796	81	3522	8153
07. CUTTING IN	2376	4	336	2036					2. DEFECTIVE STEERING	747	4	295	448	7. UNDER CONST. OR REPAIR	812	7	265	540
08. FORCED OFF ROADWAY	3846	11	818	3017					3. DEFECTIVE TIRES	924	28	313	583	8. BRIDGE	1952	23	421	1298
09. ON WRONG SIDE OF ROAD	12662	199	3407	9056					4. OTHER DEFECTS	1456	21	454	981	9. DRIVE-WAY	1372	5	274	1093
10. IMPROPER SIGNAL	1456	3	419	1034					5. NO DEFECTS	29442	1877	8668	201077	TOTAL ACCIDENTS	156559	1318	49927	105274
11. DISREGARDED STOP SIGN	8353	36	2812	5511					TOTAL VEHICLES	297618	1897	89377	206344	ROAD SURFACE				
12. IMPROPER TURN	6427	11	1311	5165					LIGHT CONDITIONS				0. CONCRETE	43370	332	14422	28616	
13. IMPROPERLY PARKED	1587	7	356	1224									0. DAVLIGHT	96452	581	30779	65098	1. BLACKTOP
14. HIT AND RUN	2059	34	204	2701	1. DUSK	8320	56	2724					5520	2. BRICK	4709	16	1264	3229
15. DISREGARDED WARNING SIGN	798	10	265	523	2. DAWN	2205	21	608					1576	3. GRAVEL	945	4	297	644
16. IMPROPER START FROM PARKED POSITION	4116	2	524	3590	3. DARKNESS (STREET LIGHTED)	29826	223	8688					20875	4. DIRT OR SAND	1120	7	322	783
17. NO IMPROPER DRIVING	143261	826	4977	97458	4. DARKNESS (NO STREET LIGHT)	19774	397	7172					12205	5. OTHER	1331	2	448	881
18. PASSING ON HILL	94	7	21	66	5. NOT STATED	2		2						6. NOT STATED	2		2	
19. PASSING ON CURVE	72	5	12	55	TOTAL ACCIDENTS	156559	1318	49927					105274	TRAFFIC CONTROL				
20. RUNAWAY VEHICLE	1235	31	186	1018	0. OFFICER	1019	4	397					678	1. STOP-OR LIGHT	24192	81	826	15225
21. TOO FAST FOR CONDITIONS	23454	297	1158	21399	1. STOP SIGN OR SIGNAL	18369	82	5659					12628	2. WARNING SIGN OR SIGNAL	2597	64	951	1582
22. DOOR OPENED INTO TRAFFIC	393	20	65	308	4. R. R. CROSSING SIGNAL	239	8	84	147	5. R. R. AUTOMATIC SIGNAL	172	2	63	107				
TOTAL DRIVERS	297618	1897	89377	206344	6. NO CONTROL	109971	1077	34387	74507	TOTAL ACCIDENTS	156559	1318	49927	105274				
CONDITION OF DRIVERS				ACTION OF PEDESTRIAN				MANNER COLLISION										
0. INATTENTIVE	125557	774	35617	89126	00. CROSSING AT INTERSECTION WITH SIGNAL	480	22	458	0. HEAD ON	14410	175	6055	8180					
1. APPARENTLY ASLEEP	2298	27	933	1298	01. CROSSING AT INTERSECTION AGAINST SIGNAL	474	21	453	1. REAR END	41323	62	13674	27567					
2. SICK	219	8	73	139	02. CROSSING AT INTERSECTION - NO SIGNAL	530	26	504	2. ANGLE	55713	524	15020	40159					
3. BLACKED OUT	571	11	261	299	03. CROSSING AT INTERSECTION DIAGONALLY	82	15	67	3. SIDESWIPED	22287	82	3778	18427					
4. HAD BEEN DRINKING	6110	203	2610	3296	04. CROSSING NOT AT INTERSECTION	1996	112	1874	4. BACKED INTO	4658	3	565	4090					
5. BODY DEFECTS	1036	61	483	492	05. COMING FROM BEHIND CAR	2734	76	2658	5. OTHER	18188	472	10265	6851					
6. APPARENTLY NORMAL	160823	762	49086	110975	06. WALKING ON ROADWAY WITH TRAFFIC	270	29	251	TOTAL ACCIDENTS	156559	1318	49927	105274					
7. FATIGUED (TIRED)	622	8	227	447	07. WALKING ON ROADWAY AGAINST TRAFFIC	136	12	124	KIND OF LOCALITY									
8. OTHER HANDICAP	319	2	107	210	08. STANDING IN SAFETY ZONE	94	4	80	0. MANUFACTURING OR INDUSTRY	9009	43	2613	6253					
9. NOT STATED	23		23		09. GETTING ON OR OFF VEHICLE	142	2	140	1. SHOPPING OR BUSINESS	29426	123	8926	20407					
TOTAL DRIVERS	297618	1897	89377	206344	10. STANDING ON SIDEWALK	132	10	122	2. RESIDENTIAL DISTRICT	73670	445	20675	50560					
WHAT DRIVERS WERE DOING				CONDITION OF PEDESTRIAN				TOTAL ACCIDENTS										
0. GOING STRAIGHT	156160	1343	52538	102279	0. INATTENTIVE	4885	255	4680	3. SCHOOL OR PLAYGROUND	2281	9	822	1610					
1. TURNING RIGHT OR LEFT	56322	86	9091	26145	1. HAD BEEN DRINKING	308	36	272	4. OPEN COUNTRY	41912	696	14907	26309					
2. MAKING U TURN	508	5	118	385	2. SICK	18	3	15	5. NOT STATED	41	2	4	25					
3. CAR PARKED	25642	75	4318	21249	3. VERY TIRED	9	1	7	TOTAL ACCIDENTS	156559	1318	49927	105274					
4. STOPPED IN TRAFFIC	27833	30	10423	17400	4. BODY DEFECTS	56	14	42										
5. SLOWING OR STOPPING	9812	24	3223	6565	5. APPARENTLY NORMAL	2510	60	2450										
6. AVISING VEHICLE OR PEDESTRIAN	3859	19	1087	2751	6. OTHER HANDICAP	96	6	90										
7. REIDING	25124	295	6124	18725	7. NOT STATED	1		1										
8. RACING	5770	12	809	4949	TOTAL ACCIDENTS	7882	375	7507										
9. STARTING INTO TRAFFIC	7520	8	1226	5896														
TOTAL DRIVERS	297618	1897	89377	206344														
DRIVER VISION OBSCURED				CONDITION OF PEDESTRIAN														
0. RAIN, SNOW ON WINDSHIELD	19986	176	6061	13809	0. INATTENTIVE	4885	255	4680										
1. LOAD ON VEHICLE	592	6	192	454	1. HAD BEEN DRINKING	308	36	272										
2. TREES, BUSHES, ENCUMBRANCE	4384	31	1398	2960	2. SICK	18	3	15										
3. BUILDING	1441	9	459	973	3. VERY TIRED	9	1	7										
4. PARKED CARS	7928	46	3059	4829	4. BODY DEFECTS	56	14	42										
5. MOVING CARS	3846	21	1297	2588	5. APPARENTLY NORMAL	2510	60	2450										
6. BLINDED BY HEADLIGHTS	1890	22	615	1858	6. OTHER HANDICAP	96	6	90										
7. BLINDED BY SUNGLARE	1073	11	371	681	7. NOT STATED	1		1										
8. OTHER OBSCUREMENT	6829	107	2071	4621	TOTAL ACCIDENTS	7882	375	7507										
9. NO OBSUREMENT	149669	1468	73965	174236														
TOTAL DRIVERS	297618	1897	89377	206344														

TABLE C
 PERCENTAGE DISTRIBUTION OF COST OF
 COMPLIANCE WITH PHYSICAL
 RE-EXAMINATION PROGRAM

<i>Cost of Compliance</i>	<i>Percentage Distribution</i>
(1)	(2)
\$ 0- 1.49	1%
1.50- 3.49	3
3.50- 5.49	23
5.50- 7.49	35
7.50- 9.49	16
9.50- 11.49	7
11.50- 13.49	3
13.50- 15.49	1
15.50- 17.49	1
17.50- 19.49	1
19.50- 21.49	3
21.50- 23.49	2
23.50- 25.49	1
25.50- 27.49	1
27.50-108.00	2

SOURCE: Joint State Government Commission survey.