TRAFFIC SPEED REPORT NO.87

NOVEMBER 1969 - NUMBER 32

BY

S.S. HEJAL

JHRP

JOINT HIGHWAY RESEARCH PROJECT

PURDUE UNIVERSITY AND
INDIANA STATE HIGHWAY COMMISSION

TRAFFIC SPEED REPORT NO. 87

To: J. F. McLaughlin, Director
Joint Highway Research Project

From: H. L. Michael, Associate Director
Joint Highway Research Project

November 18, 1969

File: 8-3-3

Project: C-36-10C

The attached Progress Report No. 87 on Traffic Speeds is the report of the 1969 study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, other 4-lane and 2-lane highways in Indiana. The study and report have been performed by Mr. Salim S. Hejal, a Graduate Instructor in Research on our staff, under the direction of Professor Michael.

The results indicate an increase of about 3.4 mph in the average speed of all passenger cars and an increase of about 1.7 mph for all heavy trucks to those speeds noted in the 1968 study. A regression analysis of the speed data for the past eleven years indicated that the speed trend for all classes of vehicles on all classes of highway studied is an increasing one. Average speeds for passenger cars over all classes of highway have increased 1.03 mph annually and for all heavy trucks over all classes of highway the increase has been 0.97 mph annually.

Copies of this report are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Office of Traffic Safety as is normal procedure for these reports. Copies will also be sent to the Bureau of Public Roads and several Departments within the ISHC. The report is presented for the record and for release as noted.

Respectfully submitted,

Harold L. Michael / myf
Harold L. Michael
Associate Director

HELM:maz

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Progress Report

TRAFFIC SPEED REPORT NO. 87

by

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Graduate Instructor

Joint Highway Research Project

File No.: 8-3-3

Project No.: C-36-100

Purdue University
Lafayette, Indiana
November 18, 1969

ABSTRACT

This report is the annual continuing study of the speeds of vehicles on rural Indiana highways. Observations of spot speeds were taken on interstate, other four lane, and two lane highways throughout the state during the months of July and August, 1968.

Analysis of the speeds showed the over-all average speed for passenger cars was 67.9 miles per hour. The over-all average speeds for trucks on the three types of highways was 59.5 miles per hour.

A regression analysis on the available results of the past eleven years showed an annual increase of 1.03 miles per hour for the over-all average speed of passenger cars and 0.97 miles per hour for the over-all average speed of heavy trucks.

TRAFFIC SPEED REPORT NO. 87

This report is an analysis of spot speed observations made during July and August 1969. All observations were made of free-flowing vehicles on level, tangent sections of rural Indiana highways during daylight and under favorable weather conditions. The same locations on selected Federal and State highways as used in 1968 were used again. Most of these locations have been the same for many years. Stations were classified as - two lane, four lane, or interstate highways. A representative sample of traffic speeds was obtained at each of the four stations in each classification. The specific site of each station was as follows: (see Figure A)

Interstate Highways

1. I-69	3.3 Miles South of Junction of S. R. 18
2. I-65	1.0 Miles West of Junction of S. R. 334
3. I-74	1.0 Mile East of Junction of Post Road
4. I-65	2.9 Miles North of Junction of S. R. 160

Four Lane Highways

5. U. S. 31	1.2 Miles South of Junction of S. R. 38
6. U. S. 52	1.0 Mile East of Junction of S. R. 28
7. U. S. 41	1.0 Mile North of South Junction of S. R. 2
8. U. S. 52	1.0 Mile West of Klondike

Two Lane Highways

9. U. S. 41	1.0 Mile North of Boswell
10. S. R. 43	2.0 Miles South of Chalmers
11. U. S. 31	3.0 Miles South of Rochester
12. S. R. 25	0.7 Miles West of Americus

The vehicles were classified as passenger cars or trucks. Passenger cars were further classified into two groups - Indiana or Non-Indiana and the analysis was performed as thus classified and combined. The trucks were also classified into two groups - Light (less than 5000 pounds gross weight) or Heavy (equal to or more than 5000 pounds gross weight), and again the analysis was performed as classified and combined.

The maximum speed limits in Indiana are as follows: 70 miles per hour on interstate highways and 65 miles per hour on other highways, unless otherwise posted. The stated maximum speed limits were applicable at all interstate, four lane and two lane stations of this study.

Equipment and Field Procedure

The observations for this report were obtained by use of an "Electromatic" Radar Speed Meter, built by Automatic Signal Division, Eastman Industries, Inc., East Norwalk, Connecticut. The meter was placed approximately four feet from the edge of the pavement at an angle less than 10° with the highway center line. Speed inaccuracies are negligible at small angles (less than 10°) and therefore, corrections for angle were unnecessary.

At the beginning of the study the accuracy of the meter was checked; a constant discrepancy of minus two miles per hour was found and hence all readings of speed were corrected accordingly.

Results of Analysis

The data collected were analyzed and are summarized in Tables 1 to 12 in the Appendix. Tables 13, 14, and 15 summarize the data for the three types of facilities: interstate, four lane, and two lane. Table 16 is the summary for all facilities observed.

FIG. A - LOCATIONS OF SPEED-STUDY STATIONS

Figures 1 to 16 in the Appendix show the accumulative speed curves for each of the stations studied.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	70.2	67.7	64.7
Non-Indiana	71.2	68.3	64.6
85 percentile (all)	76.6	74.6	71.9
<u>Trucks:</u>			
less than 5000 lbs.	65.3	64.0	60.5
5000 lbs. or more	59.9	58.0	55.9

The percent of vehicles exceeding the speed limit for each classification of vehicle and each type of highway was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	48.9	65.4	45.0
Non-Indiana	57.6	70.1	45.4
<u>Trucks:</u>			
less than 5000 lbs.	17.1	50.0	24.9
5000 lbs. or more	5.5	13.8	6.7

The percent of vehicles traveling 5 miles per hour or more above the speed limit for each case was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	20.6	36.6	22.5
Non-Indiana	25.0	36.7	21.0
<u>Trucks:</u>			
less than 5000 lbs.	10.4	18.5	15.7
5000 lbs. or more	0.8	2.0	1.1

The results of this study and similar studies conducted since 1959 are tabulated in Table A. A linear regression analysis on these results was conducted and a summary is given in Table B.

The hypothesis $\beta = 0$, where β is the slope of the linear graph of speeds versus year (annual trend), was tested and it turned out significant for all classifications at the 5% level. A second hypothesis $\beta = 1.0$ was tested to draw limits on the annual trend. It was not significant for all the 9 cases, that is the slope is not significantly different than 1.0, mph/year for a 5% level of significance. Finally, the hypothesis $\beta = 1.5$ was tested, it was significant for all cases except for the 85%tile of interstate passenger cars.

A graphical representation of tables A and B is given in Figure B.

TABLE A
SUMMARY OF SPOT SPEED OBSERVATION
ON INDIANA HIGHWAYS

(Free-Moving Vehicles on Level, Tangent Sections)

		Passenger Cars				Trucks		
		Ind. Mean	Non-Ind. Mean	All Mean	All 85%	Light Mean	Heavy Mean	All Mean
Two-Lane Highways								
Aug.	'59	55.6	55.3	55.9	63.2	49.7	46.7	48.0
Sept.	'60	55.7	55.6	55.6	62.0	53.0	48.1	49.1
Aug.	'61	56.2	55.7	55.9	62.2	50.4	48.9	49.3
Aug.	'62	56.7	57.5	57.0	63.7	53.1	49.3	50.1
June	'63	56.9	57.7	57.2	64.0	52.3	47.9	49.7
July	'64	59.1	60.1	59.5	66.6	53.9	51.7	52.4
Sept.	'65	58.2	57.9	58.1	64.6	54.3	50.6	51.7
Sept.	'66	60.1	59.5	59.9	65.5	55.4	50.8	52.0
Aug.	'67	61.0	61.9	61.3	68.0	53.8	51.9	52.7
June	'68	61.2	62.4	61.5	68.1	54.4	54.2	54.3
July	'69	64.7	64.6	64.7	71.9	60.5	55.9	57.9
Four-Lane Highways								
Aug.	'59	58.4	60.1	59.1	64.5	50.0	53.1	49.5
Sept.	'60	59.5	60.2	59.7	65.8	54.8	51.3	52.0
Aug.	'61	57.6	57.6	57.6	63.5	53.6	50.3	51.0
Aug.	'62	59.2	59.3	59.2	65.8	54.7	51.3	51.9
June	'63	60.4	60.6	60.5	66.3	55.0	48.6	51.3
July	'64	61.4	63.0	62.0	69.4	55.1	54.5	54.7
Sept.	'65	60.1	62.2	61.0	67.2	55.5	53.1	53.7
Sept.	'66	63.1	64.3	63.5	69.0	58.7	52.8	54.2
Aug.	'67	64.3	65.7	65.0	70.3	57.0	54.0	54.9
June	'68	64.2	66.2	64.9	70.4	58.4	55.4	56.2
July	'69	67.7	68.3	67.9	74.6	64.0	58.0	59.6
Interstate Highways								
Aug.	'61*	56.7	56.9	58.2	64.0	55.9	51.5	52.4
Aug.	'62	58.7	59.1	58.8	65.6	55.8	52.7	53.2
June	'63	59.7	61.2	60.3	66.3	55.2	51.5	52.7
July	'64	61.9	64.0	62.7	70.5	56.8	54.6	55.2
Sept.	'65	61.2	62.1	61.5	67.7	54.9	53.6	53.9
Sept.	'66	62.1	63.3	62.5	68.5	56.1	54.9	55.3
Aug.	'67	66.4	68.3	67.1	73.6	60.0	56.9	57.5
June	'68	66.2	67.9	66.8	72.4	60.5	57.9	58.5
July	'69	70.2	71.2	70.6	76.6	65.3	59.9	61.4
All Highways								
Aug.	'59	56.5	58.4	57.4	63.5	50.6	47.8	48.6
Sept.	'60	57.3	57.6	57.4	63.7	53.7	49.4	50.2
Aug.	'61	56.9	56.7	57.3	63.4	53.1	50.3	51.0
Aug.	'62	58.2	58.7	58.4	65.1	54.5	51.2	51.8
June	'63	59.0	59.9	59.3	65.2	54.1	49.5	51.2
July	'64	60.8	62.4	61.5	69.2	55.2	53.7	54.1
Sept.	'65	59.9	60.9	60.3	66.7	54.9	52.6	53.1
Sept.	'66	61.8	62.4	62.0	68.0	56.7	52.7	53.8
Aug.	'67	63.9	65.8	64.5	71.4	56.3	54.6	55.1
June	'68	63.8	66.0	64.5	70.8	57.2	56.2	56.5
July	'69	67.3	68.8	67.9	75.1	62.7	57.9	59.5

* Data was only for three stations on Interstate Highways

TABLE B. SUMMARY OF LINEAR REGRESSION ANALYSIS IS

Classification	No. of Observ.	b_0	b_1	R^2	S_{b1}	Hypothesis Testing		
						$\beta = 0.0$	$\beta = 1.0$	$\beta = 1.5$
Interstate Passenger Cars 85%	9	-20.88	1.390	.850	.222	S*	NS**	NS**
4 Lanes Passenger Cars 85%	11	14.79	.831	.792	.142	S*	NS**	S*
2 Lanes Passenger Cars 85%	11	11.77	.838	.841	.121	S*	NS**	S*
Mean of All Passenger Cars	11	- 5.06	1.03	.919	.105	S*	NS**	S*
Mean of All Light Trucks	11	3.25	.814	.802	.135	S*	NS**	S*
Mean of All Heavy Trucks	11	- 9.99	.971	.907	.105	S*	NS**	S*
Interstate Heavy Trucks 15%	9	-12.77	.945	.870	.140	S*	NS**	S*
4 Lanes Heavy Trucks 15%	11	- 2.58	.755	.781	.134	S*	NS**	S*
2 Lanes Heavy Trucks 15%	10	- 9.85	.841	.842	.122	S*	NS**	S*

S* Significant @ 5% Level of Significance

NS** Not Significant @ 5% Level of Significance

FIG. B - INDIANA RURAL SPEED TRENDS 1959 - 1969

Summary and Conclusions

The average speeds in this study were found to be 3.4 and 1.7 miles per hour faster for passenger cars and trucks respectively than the results of the previous year.

The linear regression on the results of the past eleven years proved:

1. There has been a definite increase in speed for all vehicles and highway classifications studied. The slopes of the linear graphs were significantly different from zero for the nine different speed characteristics tested such as 85 percentiles, average speeds, and 15 percentiles for passenger cars, light trucks and heavy trucks on the three classes of highway.
2. The slopes of the linear graphs indicate the annual trends in speeds for the past decade. These trends are not significantly different from a rate of increase of one mile per hour per year.
3. The 85 percentile of passenger cars on the Interstate System was the only speed statistic not to be significant from an annual rate of increase of 1.5 miles per hour.

The increase in the mileage of high type facility highways such as the Interstate System in Indiana and the growing percentage of automobiles violating current maximum speed limits tend to support the fact that drivers select the travel speeds they consider safe irrespective of maximum speed limits.

It was stated that a full investigation of the
the aspects of passenger travel
The results reported to the
The results of the investigation

It was stated that the
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APPENDIX

It was stated that the
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Determination of Sample Size

It was desired that a 95% confidence interval of the true mean of the speeds of passenger cars should not be wider than two miles per hour. For trucks weighing 5,000 lbs. or more a 95% confidence interval with a four mile per hour band was desired.

Assuming a normal distribution of speeds and using the standard deviation of the grouped data of the 1968 study, the minimum sample size requirements was determined by:

$$N = \left[\frac{2t S}{L} \right]^2$$

N = sample size required

t = tabulated "t" value for 5/2 significance

S = estimated standard deviation

L = width of the interval

For passenger cars:

$$N = \left[\frac{2 \times 1.96 \times 6.9}{2} \right]^2 = 183 \text{ observations}$$

For trucks:

$$N = \left[\frac{2 \times 1.96 \times 6.1}{4} \right]^2 = 36 \text{ observations}$$

Note

At all stations more than 235 passenger car observations and 53 truck observations were obtained for the study reported herein.

TABLE 1 SPEED DATA

Station	1	Highway	I-69	Location	3.3 Miles South of S.R. 18
No. of Lanes	4	Type of Surface	Portland Cement Concrete	Weather	Hozy
Date	August 13, 1969	This Observation	Last Previous Observation	Speed Report No.	86
Time	11:40 - 2:15 p.m.	Date	July 2, 1968	Date	9:30 - 11:30 a.m.
		Time		Time	

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	216	248	142	147	74	101	93	84	12	20	81	64
Average speed (m.p.h.)	67.4	71.90	66.7	71.3	68.7	72.8	58.8	61.24	60.5	66.3	58.6	59.7
Standard deviation	6.40	7.01	6.06	6.77	6.84	7.27	6.54	6.96	9.89	7.08	5.54	6.16
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.2	0.0
44 m.p.h.	0.5	0.0	0.7	0.0	0.0	0.0	3.2	0.0	8.3	0.0	2.5	0.0
49 m.p.h.	1.4	0.0	1.4	0.0	1.4	0.0	5.4	3.6	8.3	0.0	4.9	4.7
54 m.p.h.	4.2	0.8	4.2	0.0	4.1	2.0	20.4	15.5	16.7	5.0	21.0	18.8
59 m.p.h.	9.3	5.24	9.2	6.1	9.5	4.0	54.8	41.7	58.3	15.0	54.3	50.0
64 m.p.h.	29.2	12.9	31.7	12.9	24.3	12.9	86.0	64.3	75.0	35.0	87.7	73.4
69 m.p.h.	63.0	35.9	69.7	41.5	50.0	27.7	97.9	89.3	91.7	70.0	98.8	95.3
74 m.p.h.	90.3	64.5	93.0	70.1	85.1	56.4	97.9	95.2	91.7	80.0	98.8	96.9
79 m.p.h.	96.8	86.3	98.6	89.8	93.2	81.2	98.9	98.8	91.7	95.0	100	100
84 m.p.h.	100	96.4	100	98	100	95.1	100	100	100	100		
89 m.p.h.		99.6		99.3		100						
No. of vehicles obs.	108	127	70	77	38	50	49	43	9	9	40	34
Average speed	67.8	73.2	67.3	72.7	68.6	73.9	59.7	61.8	60.4	64.0	59.5	61.2
No. of vehicles obs.	108	121	72	70	36	51	44	41	3	11	41	30
Average speed	67.0	70.6	66.1	69.8	68.9	71.8	57.9	60.7	61.0	68.2	57.6	57.93

TABLE 2 SPEED DATA

Station	2	Highway	I-65	Location	1.0 Mile West of S.R. 334
No. of Lanes	4	Type of Surface	Portland Cement Concrete	Weather	Fair
		This Observation	August 8, 1969	Last Previous Observation	(Speed Report No. 86)
		Date	2:25 - 4:00 p.m.	Date	June 26, 1968
		Time		Time	10:00 a.m. - 12:30 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	308	315	203	210	105	105	125	86	25	26	100	60
Average speed (m.p.h.)	66.5	70.32	65.9	70.1	67.7	70.7	58.4	61.2	59.9	66.0	58.0	59.2
Standard deviation	6.00	6.89	6.06	7.14	5.70	6.36	5.74	8.93	8.20	9.45	4.92	7.93
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	0.0	3.5	0.0	3.8	0.0	3.3
49 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	8.0	10.5	12.0	3.8	7.0	13.3
54 m.p.h.	2.60	0.6	3.0	0.5	1.9	1.0	22.4	24.4	28.0	11.5	21.0	30.0
59 m.p.h.	11.7	7.9	14.3	8.1	6.7	7.6	58.4	39.5	44.0	23.1	62.0	46.7
64 m.p.h.	34.1	18.1	37.9	19.5	26.7	15.2	86.4	62.8	72.0	42.3	90.0	71.7
69 m.p.h.	69.2	41.3	72.4	41.9	62.9	40.0	96.8	81.4	84.0	53.8	100	93.3
74 m.p.h.	92.9	73.0	95.1	74.3	88.6	70.5	99.2	93.0	96.0	76.9		100
79 m.p.h.	98.7	93.6	99.0	94.3	98.1	92.4	100	98.8	100	96.2		100
84 m.p.h.	99.7	97.1	99.5	96.7	100	98.1		98.8		96.2		100
89 m.p.h.	99.7	99.0	99.5	98.6		100		100		100		100
No. of vehicles obs.	147	159	100	114	47	45	72	33	16	7	56	26
Average speed	66.3	69.6	65.9	69.3	67.0	70.4	58.5	58.4	59.9	67.6	58.1	56.0
No. of vehicles obs.	161	156	103	96	58	60	53	53	9	19	44	34
Average speed	66.7	71.1	65.8	71.1	68.2	71.0	58.3	62.96	60.0	65.4	57.9	61.6

TABLE 4 SPEED DATA

Station 4 Highway I-65 Location 7.5 Miles North S.R. 160

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Hazy

This Observation August 14, 1969 Last Previous Observation (Speed Report No. 86)

Date 1:15 - 2:30 p.m. Date 1:00 - 3:30 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	323	283	154	114	169	169	127	104	29	26	98	78
Average speed (m.p.h.)	66.8	70.25	66.3	69.6	67.2	70.7	58.4	61.38	62.2	64.6	57.3	60.3
Standard deviation	6.01	6.91	6.46	7.28	5.72	6.32	5.25	7.96	5.33	8.34	4.67	7.57
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.3	0.0	0.7	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	2.6
49 m.p.h.	0.6	0.4	1.3	0.9	0.0	0.0	4.7	7.7	0.0	3.8	6.1	9.0
54 m.p.h.	2.8	1.4	3.9	1.8	1.8	1.2	22.8	18.3	6.90	3.8	27.6	23.1
59 m.p.h.	11.5	7.1	11.7	7.9	11.2	6.5	53.4	34.6	24.1	26.9	62.2	37.2
64 m.p.h.	32.5	18.0	37.7	20.2	27.8	16.6	89.8	66.4	65.5	57.7	96.9	69.2
69 m.p.h.	67.2	44.2	69.5	50.0	65.1	40.2	98.4	86.5	93.1	73.1	100	91.0
74 m.p.h.	92.0	73.1	91.6	75.4	92.3	71.6	100	95.2	100	88.5		97.4
79 m.p.h.	98.1	92.2	98.1	91.2	98.2	92.9		98.1		92.3		100
84 m.p.h.	100	97.9	100	97.4	100	98.2		100		100		
89 m.p.h.		98.9		99.1		98.8						
No. of vehicles obs.	146	141	65	62	81	79	52	61	16	13	36	48
Average speed	67.2	70.5	66.7	70.1	67.7	70.9	59.0	62.1	62.4	65.8	57.5	61.1
No. of vehicles obs.	177	142	89	52	88	90	75	43	13	13	62	30
Average speed	66.4	70.0	66.0	69.1	66.8	70.5	58.0	60.4	62.0	63.5	57.1	59.0

All vehicles at or less than 24 m.p.h.

TABLE 5 SPEED DATA

Station 5 Highway U.S. 31 Location 1.2 Miles South of S.R. 38 Weather Cloudy

No. of Lanes 4 Type of Surface Asphalt Concrete Last Previous Observation (Speed Report No. 86)

Date July 28, 1969 Date June 26, 1968

Time 12:35 - 5:15 p.m. Time 1:30 - 4:30 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	277	289	227	243	50	46	85	102	38	42	47	67
Average speed (m.p.h.)	64.7	69.21	64.3	69.2	66.2	69.2	56.4	61.52	59.1	65.9	54.3	58.8
Standard deviation	7.00	7.13	7.11	7.35	6.19	5.92	6.75	8.15	6.92	8.74	5.83	6.43
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	1.1	0.0	1.3	0.0	0.0	0.0	5.9	0.9	2.6	0.0	8.5	1.5
49 m.p.h.	2.2	0.4	2.2	0.4	2.0	0.0	16.5	5.5	10.5	4.8	21.3	6.0
54 m.p.h.	6.1	2.1	7.1	2.5	2.0	0.0	37.7	18.4	23.7	9.5	48.9	23.9
59 m.p.h.	20.6	10.4	22.0	12.4	14.0	0.0	71.8	45.0	52.6	21.4	87.2	59.7
64 m.p.h.	49.8	22.2	52.0	23.0	40.0	17.4	87.1	62.4	76.3	45.2	95.7	73.1
69 m.p.h.	76.9	52.2	79.7	50.6	64.0	60.9	96.5	83.5	92.1	64.3	100	95.5
74 m.p.h.	94.2	78.6	93.8	77.4	96.0	84.8	100	92.7	100	83.3		98.5
79 m.p.h.	98.2	92.7	97.8	93.0	100	91.3		98.2		95.2		100
84 m.p.h.	99.2	98.3	99.1	97.9		100		99.1		97.6		
89 m.p.h.	100	100	100	10.0				100		100		
No. of vehicles obs.	124	151	106	127	18	24	29	68	13	29	16	39
Average speed	65.0	70.3	64.6	70.5	67.7	69.5	56.8	62.9	58.9	65.7	55.1	60.9
No. of vehicles obs.	153	138	12	116	32	22	56	41	25	13	31	28
Average speed	64.4	68.0	64.1	67.9	65.4	68.8	56.2	59.2	59.2	66.5	53.8	55.8

TABLE 6 SPEED DATA

Station 6 Highway 4 U.S. 52 Location Asphaltic Concrete 1.0 Mile East of S.R. 28 Weather Cloudy

No. of Lanes 4 This Observation July 31, 1969 Last Previous Observation (Speed Report No. 86)

Date 9:45 - 12:30 p.m. Date June 28, 1968

Time Time 1:00 - 3:00 p.m.

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	308	251	196	124	112	127	70	137	12	35	58	102
	Average speed (m.p.h.)	65.9	70.20	65.1	70.6	67.1	69.8	55.3	61.19	59.7	64.8	54.3	59.9
	Standard deviation	5.48	6.33	5.45	6.49	5.33	6.16	6.25	6.44	6.89	6.85	5.76	5.83
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.7	0.0	0.0	1.7	1.0
	44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.7	0.0	0.0	3.5	1.0
	49 m.p.h.	0.0	0.4	0.0	0.0	0.0	0.8	15.7	2.9	8.3	2.9	17.2	2.9
	54 m.p.h.	2.3	1.2	3.1	0.0	0.9	2.4	47.1	15.3	25.0	14.3	51.7	15.7
Bound	59 m.p.h.	10.4	5.6	12.2	5.6	7.1	5.5	71.4	38.7	41.7	22.9	77.6	44.1
	64 m.p.h.	41.9	14.3	48.5	14.5	30.4	14.2	94.3	66.4	75.0	31.4	98.3	78.4
	69 m.p.h.	74.0	43.0	77.6	44.4	67.9	41.7	100	92.7	100	77.1	100	98.0
	74 m.p.h.	95.5	78.9	96.9	75.0	92.9	82.7		98.5		94.3		100
	79 m.p.h.	99.0	92.8	99.5	91.1	98.2	94.5		100		100		
	84 m.p.h.	99.7	98.8	99.5	97.6	100	100						
	89 m.p.h.	100	100	100	100								
	No. of vehicles obs.	148	123	105	62	43	61	32	75	4	25	28	50
	Average speed	66.6	71.2	65.8	71.4	68.5	71.0	56.8	63.4	58.8	65.8	56.5	62.2
	No. of vehicles obs.	160	128	91	62	69	66	38	62	8	10	30	52
	Average speed	65.2	69.2	64.4	69.9	66.3	68.6	54.0	58.6	60.1	62.5	52.3	57.8

Station	7	Highway	U.S. 41	Location	1.0 Mile North of S.R. 2
No. of Lanes		Type of Surface	Portland Cement Concrete	Weather	Cloudy
		This Observation	Date	Last Previous Observation (Speed Report No. 86)	
		Date	August 6, 1969	Date	July 1, 1968
		Time	10:45 - 2:15 p.m.	Time	2:00 - 4:30 p.m.

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	252	254	152	136	100	118	102	129	16	26	86	103
	Average speed (m.p.h.)	63.8	66.95	62.9	65.9	65.1	68.2	55.4	56.04	57.0	61.2	55.2	54.7
	Standard deviation	6.20	8.16	6.31	8.14	5.80	8.04	7.21	7.92	6.56	8.99	7.32	7.09
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.3	0.0	0.0	1.2	2.9
	44 m.p.h.	0.4	1.6	0.7	0.7	0.0	2.5	10.8	7.0	0.0	3.8	12.8	7.8
	49 m.p.h.	2.0	3.2	3.3	2.2	0.0	4.2	20.6	17.8	12.5	11.5	22.1	19.4
	54 m.p.h.	7.1	7.1	9.9	8.8	3.0	5.1	40.2	38.8	37.5	19.2	40.7	43.7
	59 m.p.h.	18.7	15.0	19.7	19.1	17.0	10.2	66.7	69.8	56.3	38.5	68.6	77.7
	64 m.p.h.	59.1	33.1	66.5	41.2	48.0	23.8	91.2	8.68	87.5	65.4	91.9	92.2
All vehicles	69 m.p.h.	84.9	63.9	88.8	69.1	79.0	55.9	99.0	96.9	100	88.5	98.8	99.0
	74 m.p.h.	94.4	85.4	95.4	90.4	93.0	79.7	100	98.4		92.3	100	100
	79 m.p.h.	97.6	94.1	98.0	96.3	97.0	91.5		99.2		96.2		
	84 m.p.h.	99.6	99.2	100	99.3	99.0	99.2		100		100		
	89 m.p.h.	100	99.6		99.3		100						
	No. of vehicles obs.	130	127	83	66	47	61	49	68	6	16	43	52
Bound	Average speed	63.7	67.8	62.9	66.2	65.0	69.4	51.6	55.0	57.0	61.1	50.9	53.1
	No. of vehicles obs.	122	127	69	70	53	57	53	61	10	10	43	51
	Average speed	63.8	66.2	62.8	65.5	65.2	66.9	59.0	57.2	57.0	61.4	59.4	56.4

TABLE 8 SPEED DATA

Station 8 Highway U.S. 52 Location 1.0 Mile West of Klondike Weather Cloudy
 No. of Lanes 4 Type of Surface Asphaltic Concrete Last Previous Observation (Speed Report No. 86)
 Date July 30, 1969 Date July 1, 1968
 Time 1:35 - 2:45 p.m. Time 9:30 a.m. - 12:00 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
OBSERVATION		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	266	284	153	167	113	117	101	109	25	27	76	82
	Average speed (m.p.h.)	65.1	65.49	64.3	64.9	66.2	66.3	57.3	60.00	57.6	62.4	57.1	59.2
	Standard deviation	5.74	7.92	5.88	8.34	5.34	7.22	7.2	7.15	8.26	9.60	6.82	6.02
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.0	3.7	1.3	0.0
	44 m.p.h.	0.0	0.7	0.0	1.2	0.0	0.0	5.0	0.9	8.0	3.7	4.0	0.0
	49 m.p.h.	0.8	3.2	0.7	3.6	0.9	2.6	14.9	6.4	16.0	14.8	14.5	3.7
	54 m.p.h.	4.1	8.4	5.9	11.4	1.8	4.3	33.7	18.4	36.0	18.5	32.9	18.3
Bound	No. of vehicles obs.	122	140	77	81	45	59	35	56	9	14	26	42
	Average speed	65.5	66.2	64.4	65.6	67.3	67.1	56.8	61.0	56.1	61.4	57.0	60.8
	No. of vehicles obs.	144	144	76	86	68	58	66	53	16	13	50	40
	Average speed	64.8	64.8	64.1	64.3	65.5	65.5	57.5	59.0	58.5	63.4	57.2	57.6
	No. of vehicles obs.	122	140	77	81	45	59	35	56	9	14	26	42
	Average speed	65.5	66.2	64.4	65.6	67.3	67.1	56.8	61.0	56.1	61.4	57.0	60.8
	No. of vehicles obs.	144	144	76	86	68	58	66	53	16	13	50	40
	Average speed	64.8	64.8	64.1	64.3	65.5	65.5	57.5	59.0	58.5	63.4	57.2	57.6
	No. of vehicles obs.	122	140	77	81	45	59	35	56	9	14	26	42
	Average speed	65.5	66.2	64.4	65.6	67.3	67.1	56.8	61.0	56.1	61.4	57.0	60.8

TABLE 9 SPEED DATA

Station	9	Highway	U.S. 41	Location	1.0 Mile North of Boswell
No. of Lanes	2	Type of Surface	Portland Cement Concrete	Weather	Hazy
This Observation	Last Previous Observation (Speed Report No. 86)				
Date	July 17, 1969	Date	June 21, 1968		
Time	10:20 - 3:15 P.M.	Time	9:00 - 11:30 a.m.		

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	247	250	145	122	102	128	106	146	40	49	66	97
Average speed (m.p.h.)	59.5	63.46	58.7	62.6	60.7	64.3	53.8	57.53	52.8	59.5	54.0	56.5
Standard deviation	7.21	7.57	7.91	8.09	5.91	6.97	6.13	7.91	7.22	7.77	5.37	7.83
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.5	0.0	0.0	0.0
39 m.p.h.	0.0	0.4	0.0	0.8	0.0	0.0	1.9	2.0	5.0	0.0	0.0	3.1
44 m.p.h.	2.01	3.5	3.3	3.3	0.0	0.0	7.6	5.48	10.0	0.0	6.1	8.2
49 m.p.h.	9.3	13.1	7.4	17.2	3.92	2.3	22.6	14.4	25.0	10.2	21.2	16.5
54 m.p.h.	24.7	12.8	30.3	17.2	16.7	8.6	55.7	32.9	57.5	22.4	54.6	38.1
59 m.p.h.	47.0	26.0	51.0	29.5	41.2	22.7	82.1	58.9	82.5	57.1	81.8	59.8
64 m.p.h.	75.7	53.6	77.9	54.1	72.6	53.1	98.1	83.6	97.5	75.5	98.5	87.6
69 m.p.h.	92.3	80.0	90.3	82.8	95.1	77.3	100	93.8	100	89.8	100	95.9
74 m.p.h.	99.2	94.4	98.6	95.9	100	93.0		98.0		93.9		100
79 m.p.h.	99.6	99.2	99.3	100		98.4		99.3		98.0		
84 m.p.h.	100	100	100			100		100		100		
89 m.p.h.												
No. of vehicles obs.	121	128	60	61	61	67	60	82	21	33	39	49
Average speed	60.7	62.3	60.3	61.5	61.2	63.0	54.0	56.3	52.7	58.8	54.8	54.6
No. of vehicles obs.	125	122	84	61	41	61	46	64	19	16	27	48
Average speed	58.5	64.7	57.8	63.7	59.9	65.7	52.9	59.1	52.9	61.0	52.9	58.5

TABLE 10 SPEED DATA

U.S. 43

2.0 Miles South of Chalmers

Location
Asphaltic Concrete

Cloudy

Highway

10

Station

Type of Surface

Asphaltic Concrete

Weather

This Observation

Last Previous Observation

Speed Report No.

Date
July 22, 1969Date
June 21, 1968

86

Time
10:20 - 2:30 p.m.Time
2:00 - 5:00 p.m.

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All vehicles at or less than	No. of vehicles obs.	286	261	245	242	41	19	78	119	33	60	45	59
	Average speed (m.p.h.)	62.8	66.95	62.6	66.9	64.2	67.8	55.0	59.67	55.6	64.0	54.6	55.3
	Standard deviation	7.90	9.11	7.97	9.22	7.43	7.70	7.50	7.69	8.36	7.88	6.78	4.31
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	1.1	0.4	1.2	0.4	0.0	0.0	7.7	0.0	12.1	0.0	4.4	0.0
	49 m.p.h.	3.8	0.8	4.1	0.8	2.4	0.0	25.6	3.4	24.2	3.3	26.7	3.4
	54 m.p.h.	15.0	10.0	15.5	10.7	12.2	0.0	48.7	31.9	48.5	11.7	48.9	52.4
Bound	59 m.p.h.	31.1	19.9	32.7	19.8	22.0	21.0	69.2	56.3	60.6	31.7	75.6	81.4
	64 m.p.h.	61.9	38.3	64.1	39.3	48.8	26.3	89.7	74.0	87.9	51.7	91.1	96.6
	69 m.p.h.	81.8	61.3	82.5	62.0	78.1	52.6	98.7	85.7	97.0	73.3	100	98.3
	74 m.p.h.	92.0	82.4	91.8	82.2	92.7	84.2	98.7	96.6	97.0	93.3		100
	79 m.p.h.	97.2	93.1	97.1	93.0	97.6	94.7	100	98.3	100	96.7		
	84 m.p.h.	99.0	97.3	98.8	97.1	100	100		100				
	89 m.p.h.	99.3	94.5	99.2	98.4								
	No. of vehicles obs.	163	124	140	112	23	12	43	61	20	31	23	30
	Average speed	61.7	66.0	61.4	66.0	63.7	65.8	55.5	59.8	54.2	64.2	56.6	55.3
	No. of vehicles obs.	123	137	105	130	18	7	35	58	13	29	22	29
	Average speed	64.3	67.8	64.2	67.6	64.8	71.4	54.4	59.6	57.7	63.8	52.5	55.3

TABLE 11 SPEED DATA

Station	11	Highway	U.S. 31	Location	3.0 Miles South of Rochester	Weather	Cloudy
No. of Lanes	2	Type of Surface	Asphaltic Concrete	Last Previous Observation	(Speed Report No. _____)		
Date	August 4, 1969	Date	June 24, 1968				
Time	10:25 - 2:00 p.m.	Time	1:45 - 4:00 p.m.				

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	282	240	209	176	73	64	98	98	45	43	53	55
Average speed (m.p.h.)	61.8	64.19	61.2	64.0	63.5	64.7	54.6	57.6	54.6	57.9	54.6	57.4
Standard deviation	7.09	7.16	6.96	7.41	7.21	6.42	6.85	7.24	8.34	8.09	5.36	6.58
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	2.2	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	4.4	2.3	0.0	0.0
39 m.p.h.	0.4	0.4	0.5	0.6	0.0	0.0	3.1	2.0	6.7	2.3	0.0	1.8
44 m.p.h.	1.8	0.8	1.9	1.1	1.4	0.0	4.1	5.1	6.7	7.0	1.9	3.6
49 m.p.h.	4.6	2.1	5.3	2.8	2.7	0.0	18.4	11.2	22.2	7.0	15.1	14.6
54 m.p.h.	12.8	8.3	14.4	9.1	8.2	6.2	49.0	28.6	46.7	32.6	50.9	25.4
59 m.p.h.	32.2	23.3	23.9	22.7	24.7	25.0	75.5	56.1	66.7	60.5	83.0	52.7
64 m.p.h.	69.2	52.1	74.2	53.4	54.8	48.4	93.9	84.7	91.1	79.1	96.2	89.1
69 m.p.h.	90.4	77.9	90.9	78.4	89.0	76.6	100	96.9	100	95.4	100	98.2
74 m.p.h.	97.5	93.3	98.6	92.6	94.5	95.3		9.90		97.7		100
79 m.p.h.	98.2	98.3	99.0	98.3	95.9	98.4		100				
84 m.p.h.	98.9	100	99.0	100	98.6	100						
89 m.p.h.	99.7		99.5		100							
No. of vehicles obs.	140	110	97	84	43	26	36	44	17	20	19	24
Average speed	62.5	64.4	62.0	64.6	63.6	63.8	55.2	59.2	54.2	59.4	56.1	59.1
No. of vehicles obs.	142	130	112	92	30	38	62	54	28	23	34	31
Average speed	61.0	64.0	60.5	63.5	63.4	65.3	54.2	56.4	54.8	56.6	53.8	56.2

TABLE 12 SPEED DATA

Station	12	Highway	S.R. 25	Location	0.7 Miles West of Americus
No. of Lanes	2	Type of Surface	Asphaltic Concrete	Weather	Hazy
		This Observation	Last Previous Observation	(Speed Report No.	86)
		Date	August 18, 1969	June 24, 1968	
		Time	9:00 - 12:30 p.m.	10:00 a.m. - 12:30 p.m.	

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Present	186	Last	Present	217	Last	Present	31	Last	Present	71
No. of vehicles obs.	217	235	186	217	18	18	31	18	31	104	35	36
Average speed (m.p.h.)	61.6	63.82	61.4	63.9	63.4	63.4	63.0	63.4	63.0	56.50	54.9	53.2
Standard deviation	6.79	7.62	6.94	7.54	8.76	8.76	5.77	8.76	5.77	8.19	7.17	5.90
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.9	0.0
44 m.p.h.	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0	4.8	11.4	2.8
49 m.p.h.	2.8	2.6	2.7	1.8	11.1	11.1	3.2	11.1	3.2	13.5	22.8	22.2
54 m.p.h.	15.7	11.9	17.7	11.5	16.7	16.7	3.2	16.7	3.2	41.4	40.0	63.9
59 m.p.h.	40.1	24.3	41.9	24.4	22.2	22.2	29.0	22.2	29.0	68.3	71.4	83.3
64 m.p.h.	69.6	55.7	71.0	56.2	50.0	50.0	61.3	50.0	61.3	86.5	94.3	97.2
69 m.p.h.	88.9	78.7	88.7	78.8	77.8	77.8	90.3	77.8	90.3	90.4	100	97.2
74 m.p.h.	95.4	90.6	95.2	91.2	83.3	83.3	96.8	83.3	96.8	96.2	91.1	100
79 m.p.h.	99.1	98.3	98.9	98.2	100	100	100	100	100	99.0	97.8	
84 m.p.h.	100	99.6	100	99.5							100	
89 m.p.h.		100		100								
No. of vehicles obs.	111	130	95	116	14	14	16	14	16	63	18	18
Average speed	61.5	63.5	61.4	63.6	62.8	62.8	62.1	62.8	62.1	57.2	54.9	55.3
No. of vehicles obs.	106	105	91	101	4	4	15	4	15	41	17	18
Average speed	61.7	64.2	61.3	64.1	65.5	65.5	63.9	65.5	63.9	55.5	54.9	51.1

Station 1, 2, 3, 4 Highway Interstate 13 SPEED DATA
See Individual Stations

No. of Lanes 1 This Observation 1 Type of Surface Weather
Date 1 Last Previous Observation (Speed Report No. 86)
Time 1 Date 1 Time 1

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
OBSERVATION		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		1168	1110	742	615	426	495	444	351	100	96	344	255
Average speed (m.p.h.)		66.8	70.62	66.1	70.2	67.9	71.2	58.5	61.36	60.5	65.3	57.9	59.9
Standard deviation		6.26	7.07	6.34	7.20	5.98	6.75	5.85	7.79	7.27	8.11	5.23	7.13
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.		0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0
44 m.p.h.		0.4	0.1	0.7	0.2	0.0	0.0	1.4	1.4	1.0	1.0	1.5	1.6
49 m.p.h.		1.0	0.4	1.5	0.6	0.2	0.2	6.1	6.6	6.0	3.1	6.1	7.8
54 m.p.h.		3.3	1.5	4.2	1.6	1.9	1.4	22.1	18.8	20.0	7.3	22.7	23.1
59 m.p.h.		10.9	6.6	12.1	7.2	8.7	5.9	55.9	37.9	42.0	21.9	59.9	43.9
64 m.p.h.		33.4	17.0	37.5	18.2	26.8	15.6	87.4	65.0	72.0	45.8	91.9	72.2
69 m.p.h.		66.9	42.1	71.0	45.4	59.6	37.8	97.5	86.0	90.0	67.7	99.7	92.9
74 m.p.h.		91.6	70.6	93.0	73.3	89.2	67.3	99.3	94.9	98.0	85.4	99.7	98.4
79 m.p.h.		97.9	91.5	98.5	92.4	96.7	90.5	99.8	98.9	99.0	95.8	100	100
84 m.p.h.		99.7	97.4	99.7	97.1	99.8	97.8	100	99.7	100	99.0		
89 m.p.h.		99.8	99.1	99.7	98.7	100	99.6		100		100		

All vehicles
at or less than

TABLE 14 SPEED DATA

Station 5,6,7, & 8 Highway 4 lanes Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 86) Weather

Date Date

Time Time

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		1103	1078	728	670	375	408	358	484	91	130	267	354
Average speed (m.p.h.)		64.9	67.93	64.2	67.7	66.2	68.2	56.2	59.62	58.4	64.0	55.4	58.0
Standard deviation		6.15	7.65	6.31	7.94	5.61	7.14	6.93	7.72	7.20	8.62	6.68	6.70
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.		0.1	0.0	0.1	0.0	0.0	0.0	0.8	1.0	0.0	0.8	1.1	1.1
44 m.p.h.		0.4	0.6	0.6	0.4	0.0	0.7	6.4	2.5	3.3	1.5	7.5	2.8
49 m.p.h.		1.2	1.8	1.5	1.5	0.5	2.2	17.0	8.3	12.1	7.7	18.7	8.5
54 m.p.h.		4.8	4.7	6.3	5.5	1.9	3.4	39.1	22.9	29.7	14.6	42.3	26.0
59 m.p.h.		15.7	12.4	18.0	14.6	11.2	8.8	65.9	51.0	51.7	27.7	70.8	59.6
64 m.p.h.		48.9	27.6	54.7	30.3	37.6	23.0	89.7	72.5	78.0	46.9	93.6	81.9
69 m.p.h.		77.8	58.2	80.7	59.0	72.0	56.9	97.2	90.3	94.5	73.8	98.1	96.3
74 m.p.h.		95.6	83.8	96.0	83.3	94.7	84.6	100.0	96.9	100.0	90.0	100.0	99.4
79 m.p.h.		98.4	93.8	98.5	94.0	98.1	93.4		99.4		97.7		100.0
84 m.p.h.		99.8	99.0	99.9	98.5	99.7	99.8		99.8		99.2		
89 m.p.h.		100.0	99.8	100.0	99.7	100.0	100.0		100.0		100.0		

All vehicles
at or less than

TABLE 16. SPEED DATA

Station 1 Thru 12 Highway All Systems Location See Individual Station

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No.) Weather

Date Date

Time Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	3303	3174	2255	2042	1048	1132	1155	1302	344	423	811	879
Average speed (m.p.h.)	64.5	67.85	63.8	67.33	66.0	68.79	56.5	59.46	57.2	62.66	56.2	57.92
Standard deviation	6.94	7.95	7.08	8.21	6.39	7.38	6.70	7.90	7.93	8.70	6.08	6.98
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.9	0.2	0.0	0.0
39 m.p.h.	0.1	0.5	0.1	0.1	0.0	0.0	0.9	0.9	1.7	0.7	0.5	1.0
44 m.p.h.	0.7	1.5	0.9	0.6	0.0	0.3	4.5	2.7	5.5	1.9	4.1	3.1
49 m.p.h.	2.4	5.5	3.0	1.7	0.1	1.3	14.4	8.7	15.4	6.2	13.9	9.9
54 m.p.h.	8.1	5.5	9.8	6.6	4.2	3.4	36.4	25.6	35.2	6.6	36.9	30.0
59 m.p.h.	20.7	13.8	23.3	15.6	15.0	10.4	65.3	50.6	57.3	36.9	68.7	57.2
64 m.p.h.	49.6	30.8	54.7	33.9	38.7	25.1	90.3	73.9	82.8	57.0	93.5	82.0
69 m.p.h.	77.2	57.5	80.0	60.5	71.2	52.2	98.0	89.6	95.4	77.3	99.1	95.6
74 m.p.h.	94.3	81.1	94.9	82.6	92.9	78.5	99.7	96.5	99.1	90.8	99.9	99.3
79 m.p.h.	98.2	94.0	98.5	94.6	97.6	93.1	99.9	99.2	99.7	94.4	100	100
84 m.p.h.	99.7	98.5	99.7	98.2	99.7	98.9	100	99.8	100	99.5		
89 m.p.h.	99.8	99.5	99.8	99.3	100	99.8		100				

All vehicles
% of vehicles traveling
at or less than

PERCENTILE

PERCENTILE

PERCENTILE

PERCENTILE

PERCENTILE

PERCENTILE

PERCENTILE

PERCENTILE

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