

TRAFFIC RECORDS NEEDS OF LOCAL GOVERNMENTS IN VIRGINIA

by

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(The opinions, findings, and conclusions expressed in this  
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## PREFACE

This study was conducted for the Highway Safety Division of Virginia under the Federal Highway Safety Program Standard on Traffic Records. It was conducted in cooperation with the Traffic Records Information System Project initiated by Secretary of Transportation and Public Safety, Wayne A. Whitham, and has as its objective the design and implementation of a State Traffic Records Information System that will meet the needs of local governments.

The Highway Safety Program Standard on Traffic Records states, "Each state, in cooperation with its political subdivisions, shall maintain a traffic records system. The statewide system (which may consist of compatible subsystems) shall include data for the entire state. Information regarding drivers, vehicles, accidents, and highways shall be compatible for purposes of analysis and correlation. Systems maintained by local governments shall be compatible with, and capable of furnishing data to the state system. The state system shall be capable of providing summaries, tabulations and special analysis to local governments on request."

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## ACKNOWLEDGEMENTS

The author acknowledges the coordination effort provided by the late S. L. Campbell, the Highway Safety Division's Area Coordinator Supervisor; and the assistance provided by all of the Highway Safety Division's area coordinators. The author also expresses his gratitude to the twenty Virginia localities who participated in the traffic records survey and to C. P. Heitzler of the Division of Automated Data Processing for his aid in the collection and analysis of the traffic records survey information.

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## SUMMARY OF FINDINGS

The state of Virginia has a unilateral traffic records system whereby localities are compelled by law to provide law enforcement information to the state without any assurance that usable information will be returned to the localities. This situation has forced localities to develop and maintain their own traffic records systems to satisfy state reporting requirements and meet the localities' operation, evaluation and planning needs.

While the localities' roadway systems account for only 17% of the total state mileage, they also account for 35% of the travel, 52% of the reported accidents, 23% of the persons killed, 44% of the persons injured, 54% of the property damage accidents, and 27% of the economic loss due to traffic accidents.

The typical traffic records system employed by Virginia localities is similar to the "Standard City Traffic Accident Reporting System" actively promoted for many years by the National Safety Council with modifications to satisfy the particular characteristics of the individual locality. The small communities make use of the standard system with certain tasks deleted because of the lack of demand. In the medium size communities, the standard system incorporates minor modifications to accommodate the specific characteristics of the community. The large communities exhibit the standard system as the basic structure or skeleton for their computer automated tasks. Thus, the primary elements of the standard system are evident in the small local traffic records systems as well as the large complex local systems.

The basic informational needs of local agencies from a traffic records system are similar to those of their counterparts on the state level. The needs of local police departments are analogous to those of the Department of State Police and the needs of local engineering departments are analogous to those of the Department of Highways and Transportation. The necessity of these informational needs has been expressed by localities for many years through the establishment and maintenance of local traffic records systems. However, the performance of these local systems is limited to the percentage of traffic accidents occurring in the community which are reported by the local police department and to the manpower resources available within the localities. In 1973 local police departments reported only 76% of the accidents reported to the state for cities and 68% of the accidents reported to the state for counties of population 50,000 and greater. Hence, it appears that local authorities are not aware of 24% of the reported accidents in cities and of 32% of the reported accidents in counties of population 50,000 and greater.

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## RECOMMENDATIONS

In the course of the local traffic records survey, a number of traffic records activities were identified as unnecessarily time-consuming for localities. The following are recommendations which can alleviate some of the problems which were found to exist.

- (1) The state should return to localities general traffic accident and summons summary information on a monthly basis and more comprehensive summary information on an annual basis. To be of most benefit to the localities, the information should be returned to localities within 30 days of the close of each reporting period. In addition, the information should be returned to the localities in a format which can be used without additional manpower consumption.
- (2) The state should develop a crash investigation course for local police. This course would be modeled after similar courses conducted by The Traffic Institute, Northwestern University. It would provide every police officer with the most efficient and effective crash investigation techniques and would provide uniformity in crash investigation practices.
- (3) The state should develop an accident report manual. This manual would provide a definition of terms and outline a step-by-step procedure for completion of the accident report. It would provide uniformity in accident reporting.
- (4) The State Accident Report (FR 300) should be redesigned to accomplish the following:
  - (a) Reduce or eliminate typing.
  - (b) Utilize standard typewriter line spacing if typing is required.
  - (c) Utilize standard typewriter tabs if typing is required.
  - (d) Provide more space for driver's address.
  - (e) Utilize the standard TAD personal injury and vehicle damage scales.

- (5) The state should develop, through a pilot project, a standardized multilevel locator system. This standardized locator system would allow each locality to select the level of traffic safety analysis desired. Each locality would develop and maintain its locator system within the guidelines and specifications of the standardized locator system. The standardized locator system concept provides each locality with the automated capabilities of the state traffic records analysis programs commensurate with the selected level of the standardized locator system.
- (6) The state should develop a form to be completed and exchanged by the drivers at the scene of an accident. The form would contain information necessary for the completion of the state accident report and insurance information such as company name and policy number. This form would reduce the police clerical time required following an accident by providing the drivers with the necessary information for completion of the accident report and would allow the drivers to perform a beneficial task while the officer performs his duties.

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INTRODUCTION

The state of Virginia has a unilateral traffic records system in which localities are responsible for providing law enforcement information to the state with no legal requirement for usable information to be returned to localities. This situation has forced localities to develop and maintain their own traffic records systems to satisfy state reporting requirements and meet the localities' operation, evaluation, and planning needs.

The Report of the Virginia Traffic Records Feasibility Study Team to the State Traffic Records Committee, January 1973, cites one of the seven "major deficiencies in the present traffic records system of the Commonwealth [as] ... Failure to provide feedback of accident data to localities." The report continues, "... localities account for 55.6 percent of all [1971] accident reports submitted [to the state]. Some of the larger counties and cities have traffic engineers and accident analysis operations. Certainly officials of these localities may, and do, keep records of accidents investigated by their policemen, but they are ignorant of the total accident picture in that they receive no data concerning accidents reported [to the state] by state troopers or individuals within their jurisdictions."

To describe the localities' situation, the following comparison is presented. The state roadway system includes approximately 860 miles of interstate, 7,800 miles of primary, and 42,700 miles of secondary routes. This system does not include approximately 9,000 miles of roads and streets in urban areas with populations over 3,500. The localities' roadway systems account for only 17% of the total state mileage but 35% of travel, 52% of the reported accidents, 23% of the persons killed, 44% of the persons injured, 54% of the property damage accidents, and 27% of the economic loss due to traffic accidents. This traffic activity is monitored on the local level for the most part by manual systems. These manual systems are insufficient to satisfy local needs due to the lack of information concerning all reportable accidents within their communities and the lack of resources to fully process this information.

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The augmentation of local traffic records systems with usable information from a state traffic records system would alleviate many of the inadequacies of the present local systems and would reduce the manpower expenditures now being consumed in support of local manual systems.

#### PURPOSE

The purpose of this report is to describe (1) current local traffic records systems, (2) the magnitude of local traffic records systems' activities, (3) the manpower expended in specific local traffic records activities, (4) the traffic records informational requirements of localities, and (5) a brief overview of a proposed state and local traffic records systems interface.

#### METHODOLOGY

To provide a comprehensive survey of the local traffic records systems, twenty localities were selected by the Highway Safety Division's area coordinators in such a manner as to provide a broad spectrum of local jurisdictions. Each area coordinator was requested to identify a small city or town, large city, urban county, and rural county from his geographical area of the state. In each locality selected, the area coordinator identified an individual knowledgeable in local traffic records activities for coordinating the traffic records survey. To provide a standard, a questionnaire was developed which addressed many facets of traffic records including data collection, document input, processing and document distribution, data and document storage, information analysis and retrieval, and system output. The questionnaire form is attached as Appendix A of this report.

The questionnaire was personally delivered to the local representative by the area coordinator and reviewed in order to reduce any misconceptions that might develop. Within four weeks after delivery of the questionnaire, members of the Traffic Records Information System Project Team personally visited the local representative to review the completed form and discuss other relevant traffic records items.

The synthesis of the information obtained from the local survey constitutes the major source of information for this report. Additional support data were obtained from the Department of State Police, the Division of Motor Vehicles, the Department of Highways and Transportation, and the Highway Safety Division.

The following local jurisdictions participated in the traffic records information system survey. See Figure 1 for a map showing the location of these communities.

- Cities & Towns:
1. Alexandria
  2. Bedford
  3. Buena Vista
  4. Bristol
  5. Charlottesville
  6. Danville
  7. Franklin
  8. Hopewell
  9. Newport News
  10. Pulaski
  11. Richmond
  12. Winchester

- Counties:
1. Albemarle
  2. Amherst\*
  3. Arlington
  4. Henrico
  5. Montgomery
  6. Prince George\*
  7. Roanoke
  8. Warren\*

In addition to these localities, Fairfax County and Virginia Beach submitted completed questionnaires. These two questionnaires were not included specifically in this report due to the initial selection process, but were used to substantiate and confirm conclusions from the information supplied by the twenty localities surveyed.

It should be noted that due to the comprehensiveness and format of the questionnaire, the time and effort required to complete the form increased with the complexity of the local system. Great care and considerable time, effort, and thought were expended by each locality surveyed to provide a comprehensive document. The professional attitude, strong interest, and courtesies extended to the interviewers conveyed an intense desire of local governments to improve their present traffic records systems.

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\*Telephone interviews were conducted with these localities after delivery of the survey by the Highway Safety Division's area coordinators.

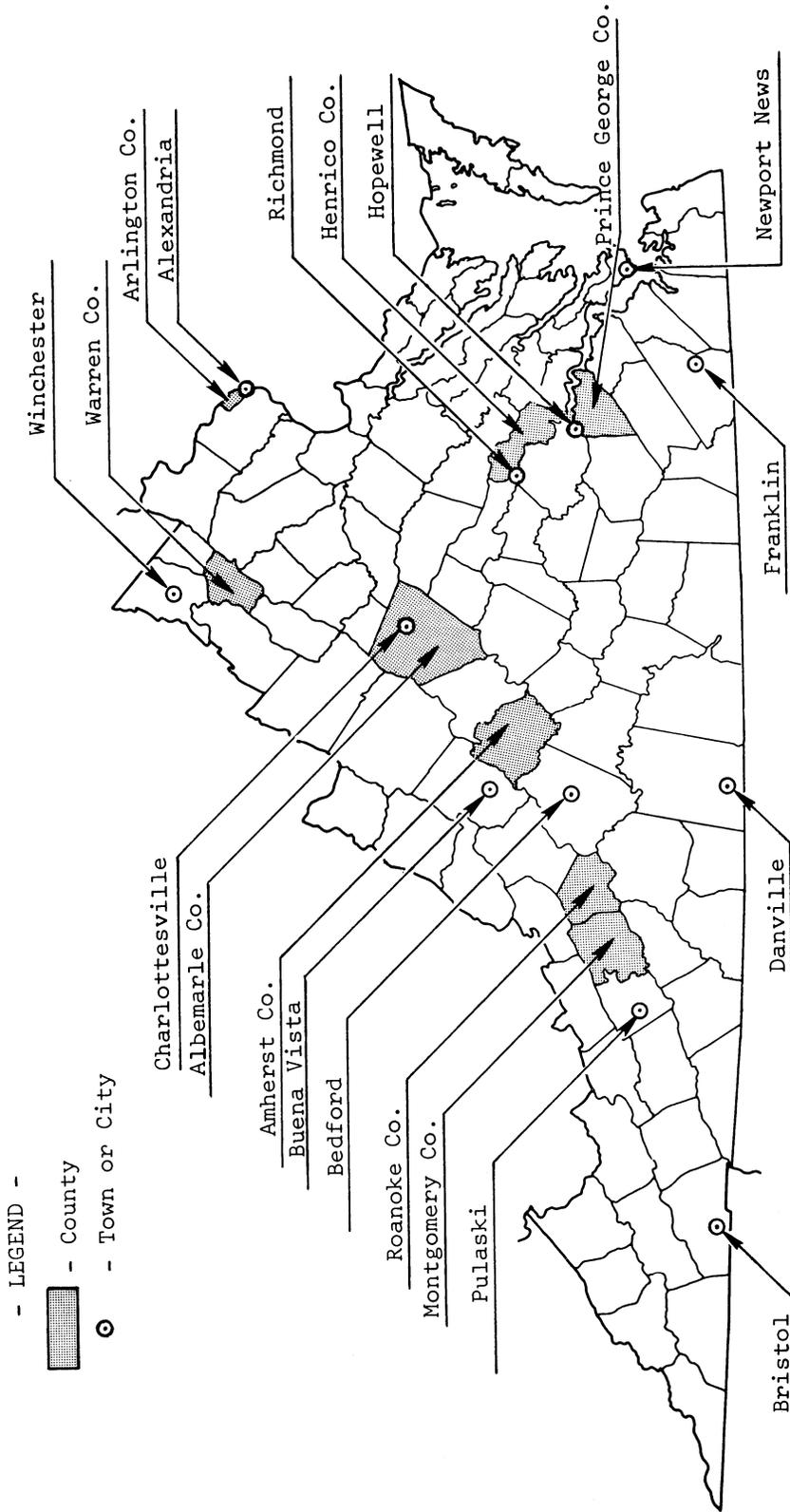


Figure 1. Virginia localities participating in the Traffic Records Information System Survey.

## CLASSIFICATION, SAMPLING, AND REPRESENTATIVENESS

Because of the diversity of the traffic records systems encountered within the state, consolidation of the surveyed systems into similar characteristics systems was necessary to provide a comprehensive presentation of the information. The completed questionnaires were reviewed and the stratification by population given in Table 1 was used for the synthesis of common characteristics into typical traffic records systems.

Table 1

## Stratification of Localities by Population

Localities	Population Stratum	Population
Cities and Towns:	1	Less than 10,000
	2	10,000 to 24,999
	3	25,000 to 49,999
	4	50,000 and greater
Counties:	5	Less than 50,000
	6	50,000 and greater

The stratification of localities in this manner is not intended to imply that there are differences in the quality of local traffic records systems, but is intended to provide a means for the presentation of pertinent information.

It is necessary that the selected localities be representative of the statewide population in order that the results can be used on a statewide basis. The distribution of the selected localities, by population stratum, yields the information in Table 2.

While all population strata are satisfactorily represented, the small percentage of the localities in strata 1 and 5 are due to the large number of localities in these strata. There were 12 cities and towns selected from the 170 cities and towns in the state and eight counties selected from the 95 counties in the state. On a population basis, the cities and towns surveyed represent 33% of the cities and towns in the state and the counties surveyed represent 19% of the counties in the state. Overall, 25% of the state's population resides within the selected localities.

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Table 2

Distribution of the Surveyed Localities

Localities	Population Stratum	No. of Localities Surveyed	No. of Localities In State*
Cities & Towns:	1	3	140
	2	4	16
	3	2	4
	4	3	10
<hr/>			
Total Cities & Towns,	-	12	170
<hr/>			
Counties:	5	4	88
	6	4	7
<hr/>			
Total Counties	-	8	95
<hr/>			
Total Localities	-	20	265

\*Source: Department of State Police for Accident Reporting.

To establish if the selected localities are representative of the other localities in their population stratum, a comparison of the local police departments' traffic accident reporting activities was considered. The Department of State Police was requested to furnish, by population stratum, the total number of 1973 crashes reported by State Police, by other police officers, and by individuals for the localities surveyed and for all localities in the state. See Table 3 for a presentation of the results.

Localities in population strata 2, 4, and 6 are well represented by the surveyed localities since the accident reporting activities are similar. The surveyed localities in population strata 1, 3 and 5 reported considerably higher percentages of the traffic crashes in their respective jurisdictions. Localities in strata 1 and 5, which are representative of small cities and towns and rural counties where the Department of State Police is active in the area of traffic crash investigation, are the least representative.

Of the accidents reported in cities and towns, 76% are reported by local police departments, 18% by individuals only, and 6% by State Police (see Table 3). Since local police departments are not informed of those accident reports submitted by individuals

Table 3

## Sources of 1973 Crash Reports

Population Stratum	Percentages of 1973 Crashes Reported By		
	State Police	Other Police Officers	Individuals
<u>Cities &amp; Towns</u>			
1. Surveyed	1	84	15
All by stratum	13	67	20
2. Surveyed	0	87	13
All by Stratum	2	84	14
3. Surveyed	1	85	14
All by Stratum	8	78	14
4. Surveyed	5	76	19
All by Stratum	5	77	18
All Cities & Towns in Virginia	6	76	18
<u>Counties</u>			
5. Surveyed	59	25	16
All by Stratum	85	4	11
6. Surveyed	14	66	20
By Stratum	14	68	18
All Counties in Va.	51	35	14
Total For State	28	56	16

Source: Department of State Police.

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and State Police, the average city is aware of only 76% of the reported accidents in its jurisdiction. Of the accidents reported in counties, 35% are submitted by local police departments, 14% by individuals only, and 51% by State Police. To conclude that the average county is aware of only 35% of the reported accidents in its jurisdiction would be correct but misleading in that the Department of State Police is active in rural counties in the area of traffic crash investigation. The average county in population stratum 5 submits only 4% of the reported accidents in its jurisdiction. In contrast, the average county in population stratum 6 submits 68%. Thus, the urban counties in population stratum 6 are not aware of a comparable percentage of reported accidents as are the cities and towns in the state. Note that while the Department of State Police submits 6% of the reported accidents in cities and towns and 51% of the accident reports in counties, it has access to and utilization of 100% of the reported accident data to meet its operation, evaluation, and planning needs.

TYPICAL LOCAL TRAFFIC RECORDS SYSTEMS

The typical traffic records system currently employed by Virginia localities is similar to the "Standard City Traffic Accident Reporting System" actively promoted for many years by the National Safety Council. The standard system "was initially developed by the Committee on Uniform Traffic Accident Statistics of the Traffic Conference to guide cities in the development of a standard accident reporting and records system ... [This system] deals with provisions for reporting on traffic accidents ... filing reports, maintaining spot maps, developing summaries of traffic accident experience, and the use of developed data in the traffic accident prevention program."\*

Throughout Virginia, characteristics of the standard system are evident in all systems surveyed. The smaller communities make use of the standard system with certain tasks or facets deleted because of the lack of demand. For example, having an elaborate locator system to help in the identification of accident prone locations would be unnecessary in a small community where even the average citizen is aware of the problem locations. In the moderate or medium size communities, the standard system is incorporated in its entirety with minor modifications to accommodate the specific characteristics of the community. The large urbanized communities exhibit the standard system as the basic structure for their automated tasks. The automating of various facets of the standard system has added flexibility to specific tasks, but as in the state system has provided disjunctive and fragmented subsystems. However, the basic elements of the standard system are still evident in the complex local traffic records systems.

The typical traffic records system for law enforcement and engineering departments centers around the accident report. An analysis of the information contained in the accident report provides local personnel with an indication of (1) the nature and extent of the traffic accident problem, (2) the possible methods of correction, and (3) the effectiveness of the methods applied.

Figure 2 identifies the work flow characteristics for the law enforcement traffic records system. The accident report (FR300) is completed by the investigating officer at the scene of the accident. Upon completion of the officer's tour of duty, the accident report is turned in at police headquarters. The accident report is typed

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\*"Standard City Traffic Accident Reporting System," Traffic Safety Memo No. 69, National Safety Council.

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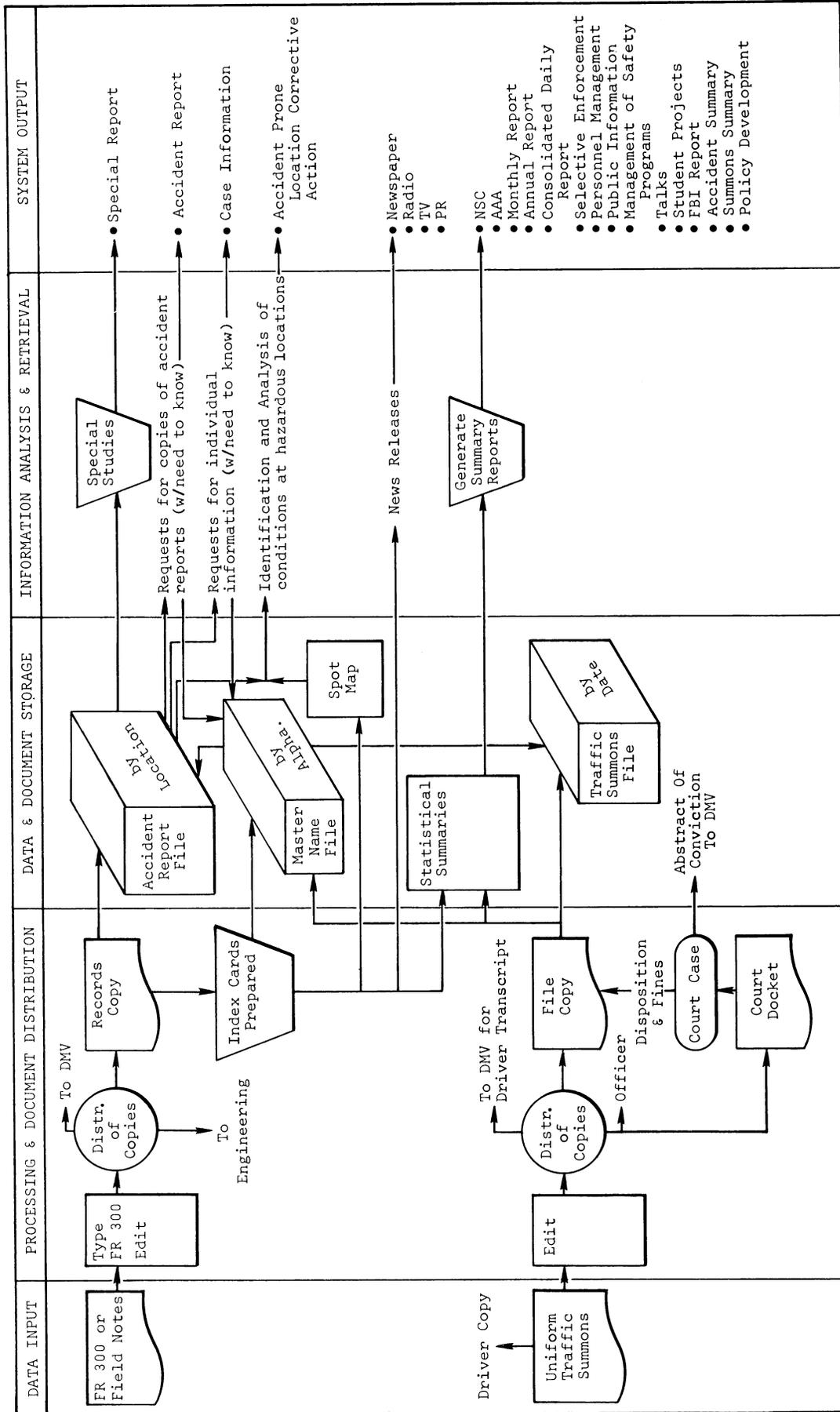


Figure 2. Standard local traffic records work flow diagram - law enforcement.

and returned to the officer for his audit, drawing the collision diagram, and signing the report. The officer then submits the accident report to the report review officer. The report review officer checks for accuracy and completeness. Copies of the verified report are forwarded to the Division of Motor Vehicles, and a copy is forwarded to the local engineering department. From the file copy, information is extracted for statistical tabulations, file index cards are prepared for the master name file, and the accident location map is updated. The accident report is then filed by accident location.

The processing of the accident report in this manner allows the local police department to perform tasks such as extract a specific accident report by knowing the name of an involved driver, the identification of an accident prone location from a cluster of pins on the spot map, and the extraction of all accidents occurring at an intersection from the accident report file.

The Uniform Traffic Summons (a five-page, ten-part form) is completed at the scene and the accused is given the lower portion of the first page. Upon completion of the officer's tour of duty, the traffic summons is turned in at police headquarters. The upper portion of the first page is retained by the officer until the case is disposed of in court and is then turned in to headquarters for permanent record of arrest and disposition. The update of the master name file and statistical tabulations are also obtained from this page. The second page is forwarded to the court and attached to the warrant. Upon conviction, the upper portion is forwarded to the Division of Motor Vehicles as an Abstract of Conviction. The lower portion remains with the warrant in the court's record. The third page is used as a temporary record of the arrest at police headquarters. The upper portion of the fourth page is used to request a record check from the Division of Motor Vehicles in those cases where it is requested by the officer or required by statute. The lower portion is used administratively by police headquarters to monitor the officer's activities and to identify the location of arrest. The fifth page is retained by the issuing officer for his records.

The processing of the Uniform Traffic Summons in this manner allows the local police department to perform such tasks as extract traffic summons information for a specific individual, monitor each police officer's activities, and determine the officer's and department's conviction rate.

The typical traffic records system for local engineering departments (see Figure 3) centers around the accident report, pedestrian and traffic counts, traffic light control data, and roadway deficiencies noted by the police and public. The accident reports

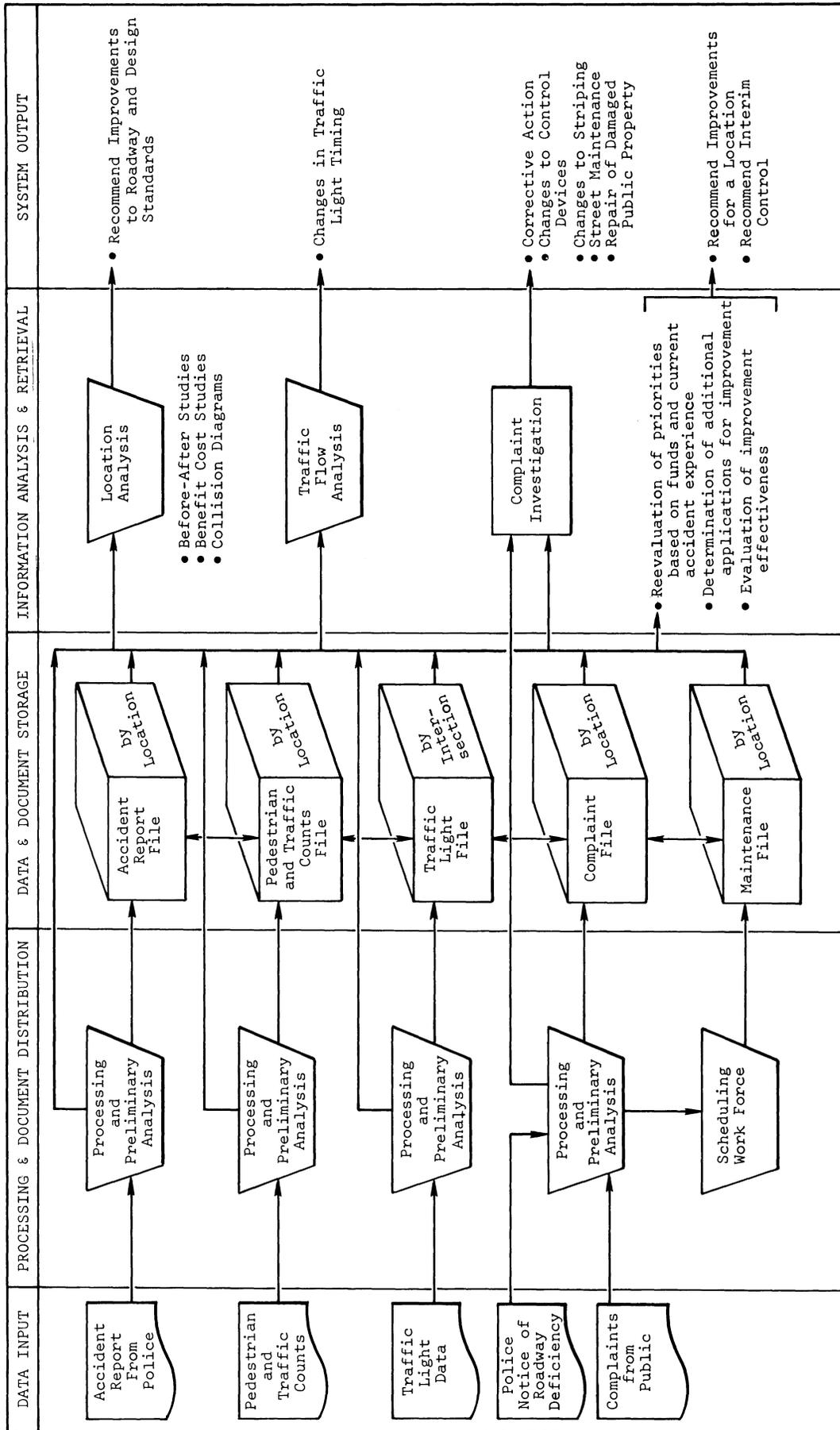


Figure 3. Standard local traffic records work flow diagram - engineering.

pedestrian and traffic counts, and traffic light control data are processed and filed by location. The information is extracted by location in the performance of studies such as location and traffic flow analyses. The roadway deficiencies noted by police and public are identified as routine maintenance or emergency conditions. The routine maintenance conditions are scheduled to be corrected by routine maintenance crews and the emergency conditions are corrected immediately.

The processing of information in this manner by local engineering departments allows the correction of dangerous roadway conditions which are noted by police and public and also which are noted through the occurrence of traffic accidents.

The following describes by population stratum the traffic records activities identified in the surveyed localities.

#### Cities and Towns — Population Stratum 1

The cities and towns in population stratum 1 use the standard traffic records system with the following modifications. In those communities surveyed, the accident reports are filed by date, there are no spot maps, and there is no communication line between the master name file and the traffic summons file. The small volume of traffic activity does not necessitate the maintenance of these characteristics. A manual search of the year's records could be accomplished in far less time than would be required to maintain these additional characteristics. The statistical reports produced by this system are basically monthly accident and summons summaries to monitor traffic activities and an annual report for local governmental use. The need for more statistical information was expressed by the surveyed localities for use in the area of selective traffic law enforcement techniques and personnel management. The present manpower resources of these localities preclude the development of the necessary statistics to the desired level for implementation of these techniques.

The engineering tasks performed in communities with populations greater than 3,500 are basically maintenance oriented. Most traffic analysis activities are performed with the aid of consultants and the Department of Highways and Transportation. In communities with a population of 3,500 or less, the roadway systems are maintained by the Department of Highways and Transportation. Thus, the engineering aspects of the traffic records system are not necessary in these communities.

## Cities — Population Stratum 2

The standard manual system is typical of the systems prevalent in cities within population stratum 2. The increase in complexity of the system from that in population stratum 1 is due to the increase in system output, the establishment of a communication line between the accident report file and the traffic summons file by way of a master name file, the maintaining of a spot map to identify hazardous locations, and the filing of accident reports by location. The establishment of a traffic records file in engineering departments was also noted. The cities surveyed in this population stratum generate a comprehensive yearly report of their activities with monthly or quarterly reports used for operational purposes. In most instances, the work load being placed on the manual system and the lack of manpower resources have forced the consideration of the more sophisticated processes of microfilming and computer automation of specific tasks.

The engineering tasks performed in these localities are again basically maintenance oriented with the engineering department (or section within the police department) maintaining an accident report file by location for hazardous location analysis. However, most of the traffic analysis activities are performed in cooperation with consultants and the Department of Highways and Transportation.

## Cities — Population Stratum 3

The standard system provides a model for localities in population stratum 3 (see Figures 2 and 3). The most notable exception was the establishment of a card index location file in support of an accident report file. This modification provides access to the accident report file by date, by location, and by driver name. The engineering system is similar to the standard system, thus the filing system is more complex than those in population strata 1 and 2. The cities surveyed in this population stratum generate a comprehensive yearly report of their activities with monthly summaries and consolidated daily reports. The automation of dispatcher's calls and of the accident reporting system is in progress.

The engineering tasks performed in these localities are maintenance and traffic engineering oriented and aid is obtained from consultants and the Department of Highways and Transportation.

#### Cities — Population Stratum 4

The standard system also forms the basic structure of the traffic records system for localities in population stratum 4. The major difference between this population stratum and those previously discussed is the automation of various subsystems within the traffic records system. One surveyed locality had a highly sophisticated automated traffic accident system with key-to-tape entry, accidents identified by location, and direct access storage capabilities. The accident statistical reports were all produced from this automated system. In addition, the traffic summons system was automated, with a comprehensive system output.

The engineering tasks performed in these localities are both maintenance and traffic engineering oriented and assistance is provided by consultants and the Department of Highways and Transportation. While the basic engineering systems were similar to the basic standard system, one surveyed locality had sophisticated traffic engineering capabilities with an automated accident analysis master file, traffic volume master file, and street name master file. From this system accident prone location listings by (1) priority index, (2) alphabetical order, (3) number of accidents, (4) accident rate, and (5) severity index for intersection and nonintersection were produced.

#### Counties — Population Stratum 5

The Department of State Police submitted 85% of the traffic accident reports submitted to the Division of Motor Vehicles from the state roadway system within the counties in population stratum 5. Only 4% of the traffic accident reports were submitted to the Division of Motor Vehicles from "other police officers," which indicates that the primary role of traffic crash investigation is maintained by the Department of State Police. The communities surveyed in this population stratum had minimum traffic records systems with little or no information analysis.

The roadway system within these counties is under the state system with all engineering activity being performed by the Department of Highways and Transportation.

#### Counties — Population Stratum 6

The counties in population stratum 6 submitted 66% of the traffic accident reports to the Division of Motor Vehicles. Only 14% were reported by the Department of

State Police. These figures indicate that these counties are, because of their urban nature, more akin to the cities of Virginia in their traffic crash investigation activities than to the counties in population stratum 5. The police traffic records system is basically modeled after the standard system (see Figure 2) with similar monthly and yearly publications.

The roadway system within these counties is under the state system except in Arlington and Henrico Counties. In these two counties the secondary road system is maintained by the counties with engineering systems similar to the standard system (see Figure 3) in support of their activities.

### MANPOWER CONSUMPTION

The manpower expended in the accomplishment of specific local traffic records system tasks is identified in this section. The source document for this information is the Local Government Traffic Records Information System Survey (see Appendix A). The subsystems contained in this analysis are limited to accident reporting and traffic summons reporting. An attempt was made to identify various engineering systems in a similar manner, but the multiple-task, non-routine nature of these systems prohibited its accomplishment.

Table 4 identifies by total state, cities, counties, and population stratum, the local manpower consumed yearly in specific accident reporting tasks. The percentage of investigated accident reports forwarded to the Division of Motor Vehicles (Column 1) is the average percentage by population stratum as noted by the surveyed localities. The number of accidents investigated by local police (Column 2) is obtained by dividing the number of accidents reported by all local police departments as furnished by State Police within a population stratum by Column 1. Columns 3 through 8 are obtained by multiplying Column 2 by the average time to perform the tasks as noted by the surveyed localities. Note that the figures in Columns 5, 6, and 7 are developed on the assumption that all localities perform these tasks, and thus provide the maximum possible manpower consumption.

The information in Table 4 provides a number of interesting facts concerning the accident reporting process. The percentage of investigated accident reports forwarded to the Division of Motor Vehicles by local police departments indicates that in small towns and in large counties, local police departments investigate a higher percentage of non-reportable accidents than do other local police departments. One explanation of this fact is that the investigation is performed as a service to the involved citizens for either insurance or personal reasons.

Table 4  
Local Police Manpower Consumed in Accident Reporting Tasks

Population Stratum	Local Police Manpower Consumed Yearly in Accident Reporting Tasks							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Percentage of Accidents Investigated by Local Police	No. of Accidents Investigated by Local Police	Investigation at Scene of Accident (Man-days)	Fill Out Report (a) (Man-days)	Type Report (b) (Man-days)	Edit Report (c) (Man-days)	Statistical Summaries (d) (Man-days)	Filing (Man-days)	
72	11,090	1,320	540	320	70	180	50	
76	8,260	780	340	450	120	230	30	
89	5,680	540	240	100	30	70	20	
97	44,040	3,490	1,700	1,360	250	520	100	
Total	69,070	6,130	2,820	2,230	470	1,000	200	
<b>Counties</b>								
1	1,770	190	110	50	20	30	10	
2	32,040	1,910	1,660	430	220	820	70	
Total	33,810	2,100	1,770	480	240	850	80	
State Total	102,880	8,230	4,590	2,710	710	1,850	280	

(a) "Report" includes FR300 or field notes. The recorded time may or may not be part of the time recorded in column 3.  
 (b) Some localities do not type reports. Results obtained by assumption that all reports are typed, which results in maximum possible figure.  
 (c) Some localities do not edit reports. Results obtained by assumption that all reports are edited, which results in the maximum possible figure.  
 (d) Some localities do not develop statistical summaries. Results obtained by assumption that all reports are used in the development of statistical summaries, which results in the maximum possible figure.

In the order of time consumed, the following are the traffic records tasks which require the greatest yearly expenditure of time by local police departments.

- (1) Investigation at the scene of an accident, 8,230 man-days.
- (2) Filling out the accident report, 4,590 man-days.
- (3) Typing the accident report, 2,710 man-days.
- (4) Generation of statistical summaries, 1,850 man-days.
- (5) Editing the accident report, 710 man-days.
- (6) Filing the accident report, 280 man-days.

Typing the accident report represents a 59% increase in the time to basically "fill out the report." The local police department's time consumed in generating statistical summaries does not include local engineering time consumed in accident analysis programs. The time consumed in local engineering analysis programs has not been estimated in this report but is believed to be in excess of that consumed by local police departments in generating statistical summaries.

From the localities surveyed, a number of recommendations were proposed for the reduction of the time consumed in traffic records tasks. The following are those recommendations most often identified by the surveyed localities.

- (1) A standardized state traffic crash investigation course could reduce the time consumed at the scene of an accident by instructing each police officer in the most efficient and effective methods of investigating traffic accidents.
- (2) A standardized state accident report manual which includes a definition of terms and a step-by-step procedure for completing the accident report could reduce the time consumed in filling out the accident report.
- (3) A redesign of the accident report form to provide more check type responses and the use of TAD injury and vehicle damage scales would reduce the time consumed in filling out the accident report.
- (4) The use of standardized typewriter line spacing and tabs could reduce the accident report typing time.

- (5) The state accident report form should be re-designed to reduce or eliminate typing.
- (6) The generation of statistical summaries from a state traffic records system could reduce or eliminate the local time consumed in that task.
- (7) The development and use of a state form, which contains driver identification and insurance type information, to be completed and exchanged by drivers at the scene of the accident, would provide each driver with the required information for completion of the accident report form and insurance information concerning the other driver. This form would reduce the clerical time now being expended by local police departments in providing drivers with the necessary information for completion of the accident report. In addition, it would allow the drivers to perform a beneficial task while the officer performs his duties at the scene of the accident.

The information in Table 5 provides a number of interesting facts concerning the local traffic summons process. Local police departments spend 7,020 man-days, or 85% as much time as spent at the scene of accidents, at the scene issuing traffic summonses. Filling out the traffic summonses consumes 3,170 man-days, or 69% as much time as spent filling out accident reports by local police departments. Editing of the traffic summonses consumes 470 man-days, or 66% as much time as spent by local police departments in editing the accident reports. Generating statistical summaries from traffic summonses consumes 380 man-days, or 20% as much time as spent by local police departments in generating statistical summaries from accident reports.

These facts concerning the local traffic summons process identify this process as a major expenditure of local police department time, but there is a lack of generation of statistical information as compared to the accident reporting process. However, this same trend is reflected in the state system, where processing of traffic summons summary information is minimal.

6034

Table 5  
Local Police Manpower Consumed in Traffic Summons Tasks

Population Stratum	No. of Traffic Summons Issued (1)	Local Police Manpower Consumed Yearly in Traffic Summons Tasks				
		Investigation at Scene (Man-days) (2)	Fill Out Report (Man-days) (3)	Edit Report (Man-days) (4)	Statistical Summaries (Man-days) (5)	Statistical Summaries (b)
<b>Cities &amp; Towns</b>						
1	50,430	1,520	380	60	80	
2	26,210	680	220	40	70	
3	13,540	280	140	10	20	
4	137,210	2,860	1,430	200	110	
<b>Total</b>	<b>227,390</b>	<b>5,340</b>	<b>2,170</b>	<b>310</b>	<b>280</b>	
<b>Counties</b>						
1	12,270	260	120	10	10	
2	84,260	1,420	880	150	90	
<b>Total</b>	<b>96,530</b>	<b>1,680</b>	<b>1,000</b>	<b>160</b>	<b>100</b>	
<b>State Total</b>	<b>323,920</b>	<b>7,020</b>	<b>3,170</b>	<b>470</b>	<b>380</b>	

(a) Some localities do not edit summons. Results obtained by assumption that all summonses are edited, which results in maximum possible figure.

(b) Some localities do not develop statistical summaries. Results obtained by assumption that all summonses are used in the development of statistical summaries, which results in maximum possible figure.

INFORMATIONAL NEEDS AND STATE SYSTEM INTERFACE

The basic informational needs of local agencies from a traffic records system are similar to those of their counterparts on the state level. The needs of local police departments are analogous to those of the Department of State Police and the needs of local engineering departments are analogous to those of the Department of Highways and Transportation.

Earlier documentation, on a national level, of those needs was published in 1947 by the Committee on Uses of Developed Information<sup>1/</sup> and in the "Traffic safety Memo(s)" published by the National Safety Council. The most recent Virginia documentation of these needs was published by Wilbur Smith and Associates<sup>2/</sup> in 1970 and by the Highway Safety Training Center at Virginia Commonwealth University<sup>3/</sup> in 1974. These publications and the examples of reports currently produced by localities in Virginia contained in Appendix B make up the basic data elements required by localities. The listing of the specific data elements would be a duplication of the previously mentioned publications and would not convey the essential consideration of format. For localities, and all other users of traffic records information, a simple listing of traffic activity information would provide a long and unmanageable listing which would require an unnecessary consumption of manpower to convert into useful information. The report formats in Appendix B are intended to provide a developmental guide for the state to follow in its format design if it redesigns the State Traffic Records System. The information provided to localities in these formats will possess the unique characteristic of immediate useability.

Basic statistical summaries of traffic accident and traffic summons information are desirable on a monthly basis for local police department operations, with more comprehensive summary information being returned to the localities on an annual basis. In those localities with computer capabilities, the transmittal from the state system of a magnetic tape of accident and summons information

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1/ Uses of Traffic Accident Records, Committee on Uses of Developed Information, National Conference on Uniform Traffic Accident Statistics, 1947.

2/ Newport News Accident Surveillance System, Wilbur Smith and Associates, 1970.

3/ Virginia Selective Traffic Law Enforcement Manual, Highway Safety Training Center at Virginia Commonwealth University, 1974.

3011  
to the community would be sufficient. However, for those communities without data processing capabilities the state traffic records system should be capable of returning printed summary information. In order for the information to be of most benefit to local police departments, the summary information should be returned to the localities within 30 days of the close of the reporting period.

A presentation of locational information is necessary for traffic law enforcement activities and engineering accident analysis programs. For example, if a certain traffic law violation at a specific street intersection was identified as the cause of most accidents occurring at that intersection during a specific time period, an increase in patrol activity at that intersection during the specific time period may reduce the occurrence of that traffic law violation and reduce the number of traffic accidents. However, because of the high number of accidents at that location, an engineering analysis may also be called for. The engineering analysis may indicate the need for a left turn lane, a traffic light timing change, or a complete redesign of the intersection. After the corrective changes have been made, a before-after study may be required to determine if the changes are beneficial and that other hazards have not been created.

To obtain traffic accident information from the state traffic records system for a specific location in support of these activities would require the utilization of a standardized locator system to facilitate the return of locational information to the localities. At present, the capability of performing these types of analysis on the state roadway system is the result of encoding locational information with the accident report information by the Department of State Police and the Department of Highways and Transportation.

To provide the same ability to localities, it is proposed that the state and a selected locality, through a pilot program, develop a standardized locator system with multiple levels of refinement which would allow each locality to identify the degree of sophistication desired in the analysis of its traffic safety environment. Those localities that wish only general statistical summaries would require no locator system. Other localities would be required to develop and maintain a locator system commensurate with the degree of sophistication desired in the analysis of their traffic safety environment, within the guidelines, specifications, and formats identified in the standardized locator system. A locality that wishes to obtain summary information by "police beats" and for the locality as a whole would select the specific level of the standardized locator system which would allow the analysis of information by "police beats."

The highest level in the standardized locator system would allow a locality to obtain summary information for the locality as a whole and for specified "police beats" and would also allow intersection and street segment analysis such as benefit-cost studies and before-after studies. This level of the standardized locator system would also allow the identification of accident prone locations, and with input of traffic count data from the locality would allow the computation of accident rates. The accident reports processed through the local police departments would be encoded as to location before forwarding to the state. The remaining accident reports submitted by State Police and individuals would be encoded as to location by the state. This proposed system would allow each locality within the standardized locator system to achieve its desired level of sophistication and would provide a comprehensive and flexible traffic records system which is jointly developed and jointly maintained by all involved agencies to an extent necessary to meet the needs of each. Through the development of a set of computer programs or the modification of current state traffic analysis programs, the computer capabilities of a comprehensive state traffic records analysis system would be available to all agencies which require it.

The benefit to the state of this standardized locator system lies in the concept that the return of usable information to the localities provides an avenue of communication not presently available in the current traffic records system by providing feedback to the localities, promoting punctuality in the submission of reports by localities to the state, and conveying to the localities the usefulness of their efforts to their community and to the Commonwealth.

PROPOSED IMPROVEMENTS

The local traffic records systems are molded by the traffic enforcement requirements imposed by state law. The basic structure is designed primarily to satisfy state reporting requirements and secondarily to satisfy local operation, evaluation, and planning needs. Most localities surveyed have organized their traffic records systems to efficiently utilize the manpower and resources available to them. There are, however, a number of improvements which can be implemented to provide more efficiency and effectiveness in local traffic records operations.

- (1) Each locality should compare its operations with those of the standard traffic records system presented in this report. There may be some tasks which can be eliminated or modified to provide more effective utilization of current resources.

- 3316
- (2) Active support of the development and implementation of a standardized state crash investigation course is necessary to provide more uniform and effective crash investigation techniques.
  - (3) Active support of the development of a standardized accident report manual is necessary to provide uniformity in accident reporting.
  - (4) The state accident report form should be redesigned considering the time required by the officer to complete the form and the clerical time required to type and process the accident report.
  - (5) The state should consider the development of a form to be completed and exchanged by the drivers at the scene of an accident. The form would contain information necessary for the completion of the state accident report and insurance information such as company name and policy number.
  - (6) The state should give consideration to providing statistical summaries to localities since most of the accident report statistical information required by localities is currently maintained in an automated fashion within the state systems.
  - (7) The state should give consideration to the development of a standardized locator system. The proposed locator system would require each locality to develop and maintain its own locator system and would provide each locality with the automated capabilities of the state traffic records system.

Most of the proposed improvements are dependent on state action. State and local action is required for their implementation. The benefit to localities is a more efficient and effective use of traffic records information to improve their traffic safety environment. The benefits to the state are a more uniform and complete reporting of accidents, promotion of punctuality in the submission of reports by localities to the state, and conveyance to the localities of an awareness of the usefulness of their efforts to their communities and to the Commonwealth.

APPENDIX A

3947

LOCAL GOVERNMENT TRAFFIC RECORDS INFORMATION SURVEY

3078





COMMONWEALTH OF VIRGINIA  
OFFICE OF THE GOVERNOR

3009

JOHN T. HANNA  
DIRECTOR  
HIGHWAY SAFETY DIVISION

TELEPHONE NO.  
272-1431 EXT. 274  
P. O. BOX 27472  
RICHMOND 23261

The attached survey form is part of a comprehensive project initiated by the Secretary of Transportation and Public Safety under the Highway Safety Program Standard 4.4.10 to document the present state traffic records system and to define the Commonwealth's Traffic Records Information System which will meet the total needs of all levels of government in the Commonwealth. To insure that the needs of your jurisdiction are properly represented in this endeavor, I am soliciting your time and effort to provide the information requested in the attached form.

Your response to the questions and the results of a personal interview, to be scheduled by the Highway Safety Division's Area Coordinator, will be used to provide the foundation upon which the Commonwealth's Traffic Records Information System will be built. The importance of your answers and views can not be overemphasized, since the benefits to the localities throughout the Commonwealth will depend upon your response.

In completing the attached survey you are requested to contact those agencies in your community which can best respond to the particular question and to have all questions answered prior to the personal interview. You may request the presence of one or two representatives of these agencies at the interview in order that their views might be accurately represented in areas within traffic records but not specifically addressed in the survey. The interview will be conducted by Mr. Toby Heitzler, Division of Automated Data Processing, and Mr. Frank Lisle, Virginia Highway & Transportation Research Council, and will take two to four hours, depending on the complexity of your system and the extent to which you feel the Commonwealth's Traffic Records Information System can help your community.

"WE'RE ALL OUT HERE TOGETHER"

2070

Your cooperation, time, and effort are deeply appreciated and will be a profitable investment in the benefits derived from the Commonwealth's Traffic Records Information System.

Sincerely yours,

John T. Hanna, Director  
Highway Safety Division

FNL/lak

CC: The Honorable Wayne A. Whitham  
Secretary  
Transportation and Public Safety

Attachment

LOCAL GOVERNMENT

TRAFFIC RECORDS INFORMATION SYSTEM SURVEY

1. Please indicate which of the following traffic records files are maintained by your jurisdiction.

Accident Report File Yes \_\_\_\_\_ No \_\_\_\_\_

Accident Location File Yes \_\_\_\_\_ No \_\_\_\_\_

Driver Name File Yes \_\_\_\_\_ No \_\_\_\_\_

Traffic Summons File Yes \_\_\_\_\_ No \_\_\_\_\_

Roadway Characteristics File (Traffic & Pedestrian Counts, Traffic Control Device

Inventory, etc., exclude construction drawings).

Yes \_\_\_\_\_ No \_\_\_\_\_

Accident Prone Location File (may be within Accident Location File, include spot maps)

Yes \_\_\_\_\_ No \_\_\_\_\_

Accident Prone Driver File (may be within Driver Name File)

Yes \_\_\_\_\_ No \_\_\_\_\_

Accident Prone Vehicle File (by type, make, model, year, etc.)

Yes \_\_\_\_\_ No \_\_\_\_\_

Statistical Data File (exclude National Safety Council Reports and AAA Reports)

Yes \_\_\_\_\_ No \_\_\_\_\_

Other Files (Specify) \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_

2. For each traffic records file maintained by your jurisdiction in question No. 1, please

provide the following descriptive information.\*

File Name: \_\_\_\_\_

(1) Number of Records \_\_\_\_\_

(2) Record Content \_\_\_\_\_

(3) Record Sequence \_\_\_\_\_

(4) Media \_\_\_\_\_

(5) Update Frequency \_\_\_\_\_

(6) Retention Time \_\_\_\_\_

\* See definition of terms No. 1 through No. 6 (attached)

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**File Name:** \_\_\_\_\_

(1) **Number of Records** \_\_\_\_\_

(2) **Record Content** \_\_\_\_\_  
\_\_\_\_\_

(3) **Record Sequence** \_\_\_\_\_

(4) **Media** \_\_\_\_\_

(5) **Update Frequency** \_\_\_\_\_

(6) **Retention Time** \_\_\_\_\_

**File Name:** \_\_\_\_\_

(1) **Number of Records** \_\_\_\_\_

(2) **Record Content** \_\_\_\_\_  
\_\_\_\_\_

(3) **Record Sequence** \_\_\_\_\_

(4) **Media** \_\_\_\_\_

(5) **Update Frequency** \_\_\_\_\_

(6) **Retention Time** \_\_\_\_\_

**File Name:** \_\_\_\_\_

(1) **Number of Records** \_\_\_\_\_

(2) **Record Content** \_\_\_\_\_  
\_\_\_\_\_

(3) **Record Sequence** \_\_\_\_\_

(4) **Media** \_\_\_\_\_

(5) **Update Frequency** \_\_\_\_\_

(6) **Retention Time** \_\_\_\_\_

**File Name:** \_\_\_\_\_

(1) **Number of Records** \_\_\_\_\_

(2) **Record Content** \_\_\_\_\_  
\_\_\_\_\_

(3) **Record Sequence** \_\_\_\_\_

(4) **Media** \_\_\_\_\_

(5) **Update Frequency** \_\_\_\_\_

(6) **Retention Time** \_\_\_\_\_

3. Please indicate which of the following are utilized by your jurisdiction by providing the requested information.

2050

a. FR300 Accident Report

- (1) Number of Accidents Investigated Annually \_\_\_\_\_
- (2) Number of FR300's Forwarded to DMV Annually \_\_\_\_\_
- (3) Number of Supplemental Reports Submitted to DMV Annually \_\_\_\_\_
- (4) Time From Accident to Submittal of FR300 to DMV \_\_\_\_\_  
(Max.)
(Ave.)
(Min.)

b. Traffic Summons

- (1) Number of Traffic Summons Issued Annually \_\_\_\_\_
- (2) Office Time Required to Process the Traffic Summons \_\_\_\_\_

4a. Please indicate the following steps that are performed in your traffic records system by providing the number of persons assigned and the average time per person, per day to complete the step. (If the step is not in your traffic records system, X out the block.)

<u>Step</u>	<u>FR300</u>		<u>Traffic Summons</u>	
	Persons Assigned	Average Time Per Person Per Day	Persons Assigned	Average Time Per Person Per Day
Investigation at Scene				
Fill Out Report (FR300 or Field Notes & Summons)				
Type Report				
Edit Report				
Distribution of Copies				
Batching Reports				
Generate Statistical Summaries				
Manual Filing				
Other (Specify) _____				
(Data Processing)				
Coding Information				
Keypunch or Entry				
Automated Processing				
Check Output				
Distribution of Output				
Other (Specify) _____				

4b. If your traffic records system utilizes automated data processing equipment, please indicate the manufacturer's name, model number, and the average daily processing time \_\_\_\_\_

0000

5. Please indicate which of the following traffic records studies or functions are performed routinely by your jurisdiction by specifying the purpose, the manpower required, how often they are performed and what prompts their initiation.

- (a) Traffic Counts \_\_\_\_\_  
\_\_\_\_\_
- (b) Pedestrian Counts \_\_\_\_\_  
\_\_\_\_\_
- (c) Before-After Studies \_\_\_\_\_  
\_\_\_\_\_
- (d) Benefit Cost Analyses \_\_\_\_\_  
\_\_\_\_\_
- (e) Spot Speed Studies \_\_\_\_\_  
\_\_\_\_\_
- (f) Other (Specify) \_\_\_\_\_  
\_\_\_\_\_

6. Please indicate which of the following publications are used by your jurisdiction and how they are used (input source for files, reference material, etc.). If not used, please indicate why.

- State Police "Crash Facts" \_\_\_\_\_  
\_\_\_\_\_
- Highway Department "Summary of Accident Data" \_\_\_\_\_  
\_\_\_\_\_
- National Accident Summary \_\_\_\_\_  
\_\_\_\_\_
- National Safety Council Reports \_\_\_\_\_  
\_\_\_\_\_
- Other (Specify) \_\_\_\_\_  
\_\_\_\_\_

7. Please indicate which of the following traffic records informational items are produced by your jurisdiction.

Summary Reports

- (a) National Safety Council                      Yes \_\_\_\_\_ No \_\_\_\_\_
- (b) AAA    Yes \_\_\_\_\_ No \_\_\_\_\_
- (c) Other (Specify) \_\_\_\_\_                      Yes \_\_\_\_\_ No \_\_\_\_\_

Please use reverse side if additional space is needed.

Reports Produced by or for

- (a) Mayor Yes \_\_\_\_\_ No \_\_\_\_\_
- (b) City Council Yes \_\_\_\_\_ No \_\_\_\_\_
- (c) City Manager Yes \_\_\_\_\_ No \_\_\_\_\_
- (d) City Planner Yes \_\_\_\_\_ No \_\_\_\_\_
- (e) Police Chief (Sheriff) Yes \_\_\_\_\_ No \_\_\_\_\_
- (f) Traffic Engineer Yes \_\_\_\_\_ No \_\_\_\_\_
- (g) Public Works Yes \_\_\_\_\_ No \_\_\_\_\_
- (h) Schools Yes \_\_\_\_\_ No \_\_\_\_\_
- (i) Safety Commission Yes \_\_\_\_\_ No \_\_\_\_\_
- (j) Planning District Yes \_\_\_\_\_ No \_\_\_\_\_
- (k) Emergency Services (Rescue Squad, Fire Department, Ambulance Service, Hospital)  
Yes \_\_\_\_\_ No \_\_\_\_\_
- (l) Other (Specify) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_

Reports Produced for State Agencies

- (a) DMV Yes \_\_\_\_\_ No \_\_\_\_\_
- (b) State Police Yes \_\_\_\_\_ No \_\_\_\_\_
- (c) Highway & Transportation Yes \_\_\_\_\_ No \_\_\_\_\_
- (d) Education  
  - (1) Driver Education Yes \_\_\_\_\_ No \_\_\_\_\_
  - (2) Student Transportation (Pedestrian, Bike, or Bus)  
Yes \_\_\_\_\_ No \_\_\_\_\_
- (e) Health  
  - (1) Emergency Medical Services Yes \_\_\_\_\_ No \_\_\_\_\_
  - (2) Medical Examiner Yes \_\_\_\_\_ No \_\_\_\_\_
- (f) Other (Specify) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_

Specific Reports, Indexes or Rates

- (a) Selective Enforcement Yes \_\_\_\_\_ No \_\_\_\_\_
- (b) Enforcement Index Yes \_\_\_\_\_ No \_\_\_\_\_
- (c) Conviction Rate for  
  - (a) Agency Yes \_\_\_\_\_ No \_\_\_\_\_
  - (b) Individual Officer Yes \_\_\_\_\_ No \_\_\_\_\_
- (d) Spot Maps Yes \_\_\_\_\_ No \_\_\_\_\_

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**Specific Reports, Indexes or Rates (Cont.)**

- (e) Traffic Summons Summary Yes \_\_\_\_\_ No \_\_\_\_\_
- (f) Complaint Summary for
  - (1) Police Yes \_\_\_\_\_ No \_\_\_\_\_
  - (2) Engineering Yes \_\_\_\_\_ No \_\_\_\_\_
- (g) Court Docket Yes \_\_\_\_\_ No \_\_\_\_\_
- (h) Court Disposition Yes \_\_\_\_\_ No \_\_\_\_\_
- (i) Accident Prone Locations Yes \_\_\_\_\_ No \_\_\_\_\_
- (j) Accident Prone Driver Yes \_\_\_\_\_ No \_\_\_\_\_
- (k) Accident Prone Vehicle Yes \_\_\_\_\_ No \_\_\_\_\_
- (l) Severity Index Yes \_\_\_\_\_ No \_\_\_\_\_
- (m) Traffic Count Summary Yes \_\_\_\_\_ No \_\_\_\_\_
- (n) Pedestrian Count Summary Yes \_\_\_\_\_ No \_\_\_\_\_
- (o) Pedestrian & Bike Accident Summary Yes \_\_\_\_\_ No \_\_\_\_\_
- (p) Accident Rates Yes \_\_\_\_\_ No \_\_\_\_\_
- (q) Collision Diagrams (Roadway or Intersection Analysis) Yes \_\_\_\_\_ No \_\_\_\_\_
- (r) Street Maintenance Priority Reports Yes \_\_\_\_\_ No \_\_\_\_\_
- (s) ASAP Reports Yes \_\_\_\_\_ No \_\_\_\_\_
- (t) Reports to Other Jurisdictions Yes \_\_\_\_\_ No \_\_\_\_\_
- (u) News Releases (Newspaper, Radio, TV) Yes \_\_\_\_\_ No \_\_\_\_\_
- (v) Other (Specify) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_

**Individual Requests for Traffic Accident Information by**

- (a) Attorney Yes \_\_\_\_\_ No \_\_\_\_\_
- (b) Insurance Co. Yes \_\_\_\_\_ No \_\_\_\_\_
- (c) Credit Reference Yes \_\_\_\_\_ No \_\_\_\_\_
- (d) Employment Yes \_\_\_\_\_ No \_\_\_\_\_
- (e) Private Individual Yes \_\_\_\_\_ No \_\_\_\_\_
- (f) Government Yes \_\_\_\_\_ No \_\_\_\_\_
- (g) Other (Specify) \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_



2018

9. Which of the following accident location methods are utilized by your jurisdiction?

- (1) Street name and house number \_\_\_\_\_
- (2) Intersection \_\_\_\_\_
- (3) Fixed Objects \_\_\_\_\_
- (4) Milepost \_\_\_\_\_
- (5) Graphic Log \_\_\_\_\_
- (6) Coordinate Grid System \_\_\_\_\_
- (7) Dime System (Census Bureau) \_\_\_\_\_
- (8) Other (Specify) \_\_\_\_\_

10. Does your jurisdiction have need of collision diagrams? \_\_\_\_\_

Do you currently use collision diagrams? \_\_\_\_\_

What is your source of collision diagrams? \_\_\_\_\_

11. Identify other local or state agencies whose area of responsibility extend into your jurisdiction and describe their activities in your jurisdiction. (e.g., Highway & Transportation, State Police.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

12. What suggestions can you offer as ways to:

(a) Provide more effective accident investigation? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(b) Improve the quality of accident data collection? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please use reverse side if additional space is needed.

(c) Improve the information recorded on FR300 Accident Report Form by the addition or deletion of items recorded? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(d) Speed up the accident reporting process? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(e) Reduce the existing delays in the submission of accident reports to DMV? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Please indicate any characteristics of your traffic records system which you feel would be helpful to other localities. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

14. Please indicate any plans that your jurisdiction has for the implementation of a new traffic records system or of additional processes to your present system. Give a brief topic identification and an expected completion date. (e.g., locator system, statistical reports, selective law enforcement methods, before-after studies.) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please use reverse side if additional space is needed.



2001

### DEFINITION OF TERMS

1. Number of Records — Total number of individual records within the file, and the number of individual records added each year, e.g., total number of accident reports within the file and number of accident reports added each year. (Question No. 2.)
2. Record Content — Indicate content by category or class, e.g., vehicle description, driver identification, collision diagram, traffic sign inventory, roadway geometry. (Question No. 2.)
3. Record Sequence — Order in which the file is maintained or the criteria used to determine the arrangement of records, e.g., by date of accident, by name of driver in alphabetical order, by street address, by number of accidents, by successive report numbers. (Question No. 2.)
4. Media — Media on which the information is recorded, e.g., paper, index cards, computer cards, magnetic tape, film. (Question No. 2.)
5. Update Frequency — Normal interval of file update, e.g., daily, weekly, monthly, annually. (Question No. 2.)
6. Retention Time — Length of time the record is retained on active file and length of time the record is retained on inactive file, e.g., accident report active 3 years, inactive 2 years, driver name active 2 years, inactive 3 years. (Question No. 2.)
7. Frequency — Normal time interval between report publications, e.g., weekly, monthly, annually, on request. (Question No. 8.)
8. Manpower — Number of persons and the number of man-days required to produce a particular report, e.g., 2 people, 2 days plus 2 people, ½ time for 4 days = 4 people, 8 man-days. (Question No. 8.)
9. Time — Elapsed time required to produce a particular report, e.g., 2 people part-time over two weeks = two weeks elapsed time. (Question No. 8.)
10. Automated/Manual — Is the report produced by computer (Automated) or is report handwritten and then typed (Manual)? (Question No. 8.)
11. Distribution — Who receives copies of the report under normal distribution? (Question No. 8.)

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## APPENDIX B

## EXAMPLES OF TRAFFIC RECORDS ANALYSES

This Appendix contains copies of reports published by the city of Richmond, a copy of applicable portions of the AANSYS User Manual published by the city of Newport News, and a copy of the National Safety Council's "Summary of Motor Vehicle Traffic Accidents" report. These reports and manual are reproduced for the express purpose of conveying to the reader the type, format and sophistication of traffic records analyses being performed by localities in the state of Virginia.

3301



THREE OR MORE ACCIDENTS IN PAST YEAR

AS OF 10/01/74

DATE	TYPE OF ACCIDENT	KILLED INJ.	DAMAGE	CONTRIBUTING VIOLATIONS	LOCAL OR FOREIGN	DIRECTION HEADED
MO DA YR	(COLLISION WITH)			(DRIVER)	NO.1 NO.2 NO.3 NO.4	NO.1 NO.2 NO.3 NO.4

ADAMS	ST BROAD ST					
11 15 73	0743 MOTO VEH IN TRAFF 1 STOP REAR END		\$ 1000	NONE	F L	E E
02 23 74	2215 MOTO VEH IN TRAFF LTV		\$ 350	DRUNK DRIVING	F L	S N
03 01 74	1629 MOTO VEH IN TRAFF RIGHT ANGLE		\$ 1000	F TO YIELD	F L	N W
07 02 74	1347 MOTO VEH IN TRAFF 1 STOP REAR END		\$ 950	FG TOO CLOSE	L L	E E

ADAMS	ST CLAY ST					
11 16 73	1711 PEDESTRIAN	2	\$ 40	SKID AFT BRAKE	L	W
11 21 73	1720 MOTO VEH IN TRAFF RIGHT ANGLE		\$ 1500	DIS LIGHT	F F	N W
04 11 74	1634 MOTO VEH IN TRAFF RIGHT ANGLE		\$ 1100	SKID AFT BRAKE	F L	N W
07 04 74	0150 MOTO VEH IN TRAFF RIGHT ANGLE	2	\$ 4800	SKID AFT BRAKE	L L	S W

ADAMS	ST FRANKLIN ST					
10 05 73	1326 MOTO VEH IN TRAFF RIGHT ANGLE	1	\$ 750		L L	E N
10 08 73	2157 MOTO VEH IN TRAFF RIGHT ANGLE	1	\$ 625	SKID AFT BRAKE	L L	S E
01 03 74	1641 PEDESTRIAN	1		CROSS INTER	L	S
01 28 74	2214 MOTO VEH IN TRAFF 1 TURN 1 STRAIGHT		\$ 825	IMP TURN WLA	L L	E E
04 16 74	1337 MOTO VEH IN TRAFF RIGHT ANGLE		\$ 1000	F TO YIELD	L L	E S
09 14 74	0140 MOTO VEH IN TRAFF RIGHT ANGLE		\$ 750	DIS LIGHT	L F	S E

3305

0300

FULLICE BUREAU  
CONSOLIDATED MONTHLY REPORT  
9 PAST MONTHLY

DATE 04/30/74

OFFENSES

500	TRAFFIC ACCIDENTS	
511	FATAL	233
512	PERSONAL INJURY	488
513	PROPERTY DAMAGE	28
514	PEDESTRIAN	10
515	HIT AND RUN	

600	HAZARDOUS ENFORCEMENT	1556
601	HAZARDOUS VIOLATIONS	726
602	OTHER VIOLATIONS	
603	PARKING	51
604	DWI	31
605	HIT AND RUN	715
606	ARRESTS, CITATIONS, CUSTODY AT ACCIDENTS	

2364

TOTAL HAZARDOUS VIOLATIONS

2613012

POLICE BUREAU  
MOVING TRAFFIC VIOLATION REPORT  
AS OF 09/30/74

PAGE ONLY

	TRAFFIC DIVISION		PATROL DIVISION		OTHERS		TOTAL	
	SUM	ARR	SUM	ARR	SUM	ARR	SUM	ARR
24-001 DRUNK DRIVING		6		44		1		51
24-002 HIT AND RUN	1	10	2	18			3	28
24-003 RECKLESS	178	11	144	30	3	1	325	42
24-004 SPEEDING	304	2	57	2	5		366	4
24-005 REC LIGHT, STOP OR YIELD	59	4	120	3	5		224	7
24-006 FOLLOWING TOO CLOSELY	21		48		2		71	
24-007 FAILURE TO YIELD	58		71	2			129	2
24-008 ALL OTHER HAZARDOUS	188	4	171	18	3	2	362	24
24-009 ALL OTHER NON-HAZARDOUS	380	17	258	62	3	6	641	85
TOTAL	1,229	54	871	179	21	10	2,012	243
TOTAL OF VIOLATIONS INVOLVING ACCIDENTS	363	28	267	54	2	1	632	83

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POLICE BUREAU  
TRAFFIC SAFETY DIVISION  
MONTHLY ACCIDENTS AND ARRESTS  
AS OF 09/30/74

HOUR BEGINNING	TOTAL ACC ARR	WEEKDAY ACC ARR							SATURDAY ACC ARR		SUNDAY ACC ARR	
		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	FRIDAY	FRIDAY	SATURDAY	SATURDAY	SUNDAY	SUNDAY
Midnight	14	1	1	2	1	1	1	1	2	1	1	1
1 AM	17	2	6	3	10	12	10	7	7	5	5	18
2 AM	13	1	5	1	5	2	9	4	7	3	3	19
3 AM	8	1	5	1	6	2	6	2	3	1	1	20
4 AM	4	4	1	1	1	1	1	1	1	1	1	23
5 AM	3	3	2	3	1	1	1	1	3	2	2	2
6 AM	7	2	7	0	1	1	1	3	4	4	1	1
7 AM	31	3	8	5	9	7	9	7	1	4	1	1
8 AM	51	12	19	5	23	10	23	10	1	8	1	10
9 AM	32	4	17	3	7	6	7	6	2	8	5	13
10 AM	29	6	12	3	8	6	7	6	2	8	2	3
11 AM	37	10	15	3	8	4	8	4	7	3	2	3
12 AM	49	18	25	8	11	10	11	10	7	14	1	4
1 PM	49	18	19	8	10	8	10	8	6	11	4	14
2 PM	41	17	16	3	9	3	9	6	12	11	7	32
3 PM	49	11	14	8	10	13	10	13	12	21	7	32
4 PM	32	11	11	6	11	13	11	13	5	19	1	20
5 PM	58	22	17	4	14	16	11	16	7	15	2	17
6 PM	29	7	12	7	16	21	11	16	5	18	6	20
7 PM	28	5	10	6	16	21	16	21	5	16	8	29
8 PM	28	5	10	6	12	1	12	1	6	14	6	27
9 PM	37	11	14	3	11	8	11	8	5	15	4	14
10 PM	19	4	15	5	17	8	17	8	7	12	8	21
11 PM	18	2	11	1	11	4	14	4	8	28	5	18
TOTAL	723	115	261	83	276	149	333	119	363	84	486	

END OF REPORT.

STANDARD MOTOR VEHICLE TRAFFIC ACCIDENT MONTHLY REPORT  
 CITY OF RICHMOND, VIRGINIA FOR 09/30/74

	TYPE OF ACCIDENT (COLLISION OF MOTOR VEHICLE WITH)										NUMBER OF PERSONS INJURED			TOTAL PERSONS INJURED
	NUMBER OF ACCIDENTS		NON-FATAL INJURY			PROPERTY DAMAGE ONLY		KILLED			INJURED			
	TOTAL	FATAL	A	B	C	A	B	C	A	B	C	A	B	
1. RAN OFF ROAD	21			7	1	13						7	2	9
2. OVERTURNED ON ROAD	6		2	1	1	2						2	2	5
3. PEDESTRIAN	28		8	17	3							6	17	23
4. MOTOR VEHICLE IN TRAFFIC	535		8	91	50	386						9	139	150
5. PARKED MOTOR VEHICLE	72		1	9	2	60						1	13	16
6. RAILROAD TRAIN														
7. BICYCLIST	11			10	1								1	11
8. ANIMAL														
9. FIXED OBJECT	36			12	2	24							18	22
10. OTHER OBJECT														
11. OTHER NON-COLLISION	4			3		1								3
12. NOT STATED														
TOTAL	715		19	150	60	486						20	209	344

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STANDARD MOTOR VEHICLE TRAFFIC ACCIDENT MONTHLY REPORT  
CITY OF RICHMOND, VIRGINIA FOR 09/30/74

TWO MOTOR VEHICLE INTERSECTION ACCIDENTS

	FATAL	NON-FATAL INJURY	PROPERTY DAMAGE ONLY
ENTERING AT ANGLE		65	112
FROM SAME DIRECTION, BOTH GOING STRAIGHT		11	48
SAME-ONE TURN, ONE STRAIGHT			14
SAME-ONE STOPPED		9	24
SAME-ALL OTHERS			
FROM OPPOSITE DIRECTION, BOTH GOING STRAIGHT		2	3
SAME-ONE LEFT TURN, ONE STRAIGHT		26	60
SAME-ALL OTHERS			
NOT STATED			
TOTAL		113	261

## CITY OF RICHMOND, VIRGINIA FOR 09/30/74

## TWO MOTOR VEHICLE NON-INTERSECTION ACCIDENTS

	FATAL	NON-FATAL INJURY	PROPERTY DAMAGE ONLY
GOING OPPOSITE DIRECTION, BOTH MOVING		3	12
GOING SAME DIRECTION, BOTH MOVING		14	33
ONE CAR PARKED		12	60
ONE CAR STOPPED IN TRAFFIC		16	36
ONE CAR ENTERING PARKED POSITION			
ONE CAR LEAVING PARKED POSITION		1	12
ONE CAR ENTERING ALLEY OR DRIVEWAY		1	10
ONE CAR LEAVING ALLEY OR DRIVEWAY		1	18
ALL OTHERS			4
NOT STATED			
TOTAL		48	185

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STANDARD MOTOR VEHICLE TRAFFIC ACCIDENT MONTHLY REPORT  
 CITY OF RICHMOND, VIRGINIA FOR 09/30/74

09/30/74

OTHER VEHICULAR ACCIDENTS

	FATAL	NON-FATAL INJURY	PROPERTY DAMAGE ONLY
COLLISION WITH NON-MOTOR VEH., TRAIN, STREETCAR, BICYCLE, ETC. AT INTERSECTION		7	
SAME-NOT AT INTERSECTION		4	
COLLISION WITH FIXED OBJECT IN ROADWAY-AT INTERSECTION		4	13
SAME-NOT AT INTERSECTION		10	11
OVERTURNED IN ROADWAY AT INTERSECTION		3	
SAME-NOT AT INTERSECTION		1	2
LEFT ROADWAY-AT INTERSECTION		1	3
LEFT ROADWAY-AT CURVE (NOT AT INTERSECTION)		6	5
LEFT ROADWAY ON STRAIGHT ROAD (NOT AT INTERSECTION)		1	5
FELL FROM MOVING VEHICLE		1	
ALL OTHERS		1	1
NOT STATED		1	
TOTAL		40	40