SECONDARY ROADS REPORT

REPORTED TO

THE GOVERNOR

AND

GENERAL ASSEMBLY OF VIRGINIA

DECEMBER, 1974

SENATE DOCUMENT NO. 11

1975

COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
1974

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF HIGHWAYS & TRANSPORTATION
1221 EAST BROAD STREET
RICHMOND, 23219

December 2, 1974

TO: Honorable Mills E. Godwin, Jr., Governor of Virginia
and
The General Assembly of Virginia

In response to Senate Joint Resolution 85, this report is submitted to describe the status of Secondary system development.

Due to the unforeseen circumstances which have plagued this Department over the past few months, this report necessarily includes information describing the status of the entire highway transportation system without being limited to Secondary roads.

The situation regarding further development of the highway transportation system is now critical. We are unable to complete plans which only two years ago seemed entirely practical. Legislative responsibility is not involved in this transportation dilemma and additional legislation is not requested. Our problems stem directly from the economy, inflation and numerous additional requirements to gain project approvals.

This report has been prepared by the staff of the Department of Highways and Transportation and the participation of those personnel is sincerely appreciated.

Respectfully submitted,

Douglas B. Fugate

Douglas B. Fugate, Commissioner

T A B L E O F C O N T E N T S

L I S T O F F I G U R E S

L I S T O F T A B L E S

SECONDARY SYSTEM REPORT

SENATE JOINT RESOLUTION 85

CHAPTER I

INTRODUCTION

Senate Joint Resolution 85 of the 1974 Virginia General Assembly requested the Department of Highways and Transportation to review the needs of the Secondary Road system for five and ten year periods and to report to the Legislature concerning these needs by December 1, 1974. In order to provide for a ten-year description, this report is directed toward the year 1985 as a target year.

This report has been prepared to describe to the General Assembly the current status of the needs and the prospects of meeting these needs for the Secondary Road system. Discussing the Secondary Road system also requires summarizing the status of other systems and particularly the economic situation governing the Department's expenditures. Accordingly, this report will also generally describe the Department's projected ability to finance the Interstate system, the Arterial network, the Primary system, the Urban system and transit facilities.

The Department of Highways and Transportation is in a comparable position to the retired person living on a fixed income. This Department receives revenue from road user taxes,

licenses, fees, etc. which can generally be estimated, and in addition to federal funding, accumulates relatively similar revenue with a slight increase on a year by year basis. This year, however, the effect of the inflation has produced drastically increased construction and maintenance costs approximating 30% in one year along with higher administrative costs resulting in less funds available for actual construction. Concurrently, numerous additional requirements have been placed upon this Department which must be fulfilled prior to initiation of any project. This involves coordination with air and water control boards, the preparation of environmental quality statements, numerous public hearings and delays in federal project approval. These may all be worthwhile causes; however, the resulting decreasing effect upon the amount of funds available for construction because of these additional overhead charges is significant. In addition to the inflationary trend, the energy crisis has created a situation where less fuel is being sold and as a result, travel is not increasing as rapidly as in previous years. This produces a direct reduction in income for this Department. As a result, the impact upon this Department of the economic and energy crisis in the fall of 1973 and throughout 1974 has resulted in greater charges for individual projects upon the available funds with no appreciable increase in revenues to offset this greater demand.

As the matter of highway needs and particularly secondary road needs is considered on a statewide basis, it is important that the economics of highway facility financing be considered. A needs gap will occur which is the difference between what is required to meet specific standards within a given period of time and that which can actually be accomplished within the same period of time. The ability to efficiently distribute and allocate funds to meet these given needs is the only manner in which these needs can be met. The amount of construction funds available for all systems is being reduced and at the same time the construction dollar is worth approximately 50% of what it was in 1967. Resolving highway system needs in a given period of time is going to be most difficult.

SECONDARY SYSTEM BACKGROUND

The Secondary system came into being during the Depression as a result of the strong leadership of the late Senator Harry F. Byrd, Sr., who was responsible for the authorization by the 1932 General Assembly of what came to be known as the Byrd Road Act. The law had three objectives: first, and foremost, tax relief for hard-pressed property owners; equal distribution throughout the State of the principal engineering and administrative functions needed for highway development; and the financing of the new system on a highway-user basis.

Initially, 96 of the then 100 counties availed themselves of the opportunity of having their roads included in the State System. Four counties--Arlington, Henrico, Nottoway and Warwick--elected to maintain their own roads, and later Nottoway transferred their roads to the State. Arlington and Henrico continued to maintain their roads and in July, 1952, Warwick County became the City of Warwick. The original system consisted of 35,900 miles of roads, which included 2,000 miles of hard-surfaced roads, 8,900 miles of stabilized (gravel) roads, and 25,000 miles of unstabilized roads. Despite the years during World War II when progress was tremendously impeded, the system has undergone a remarkable development, so that today it comprises 42,723 miles of roads, which includes 27,358 hard-surfaced miles, 14,976 stabilized miles and only 389 unstabilized miles. Such progress is due to the passage of important legislation by the General Assembly, the adoption of important policies by the State Highway Commission, and the close cooperation that has existed between the Highway Department, boards of supervisors, town councils and interested citizens.

The formative years prior to World War II were utilized in planning and development of an organization to administer the system. During those early years, secondary road matters were handled by the Maintenance Division, but in the postwar period mounting problems and an ever-increasing work load made it apparent that a separate division was needed. Consequently, on

January 1, 1951, the Secondary Roads Division was formed, with the objective of providing the citizens of Virginia with the best possible Secondary system within available funds.

The Secondary Roads Division is responsible for planning and administering all matters involving the Secondary system, including fiscal and budgetary planning for each of the 93 counties and the rural area of the City of Suffolk (formerly Nansemond County) whose roads are now a part of the system. This Division is also responsible for the development of overall plans for the Secondary system including the federal-aid secondary program. Liaison is maintained with the governing bodies of the several counties and the towns of less than 3,500 population.

Control and guidance procedures are implemented to assure compliance with applicable laws, policies and goals. They include annual secondary budgets, six-year working plans, and long range master improvement plans. Since funds for the Secondary system are distributed by formulae in accordance with the Code of Virginia as amended, each county Secondary system is an entity in itself so far as financing is concerned. However, close cooperation is maintained between adjoining counties, so that bottleneck conditions will not develop on intercounty roads.

A most important ingredient in the administering of an effective Secondary system is the cooperation between the Department of Highways and Transportation, boards of supervisors

and town councils. From the Department's point of view, the Resident Engineer is the man who projects the real image of the Department, since he is the man on the scene. He or an assistant attends all of the regularly scheduled board meetings, and one or the other is also available for day-to-day contacts. In addition, district and central office personnel are available for similar consultation. This degree of contact goes beyond that required by Section 33.1-70 of the Code and stimulates a closer harmony and more effective communication.

In 1973, the Secondary Roads Division, through the District and Resident Engineers, arranged informal meetings with 93 of the Boards of Supervisors to reaffirm the excellent relationship which the Department desires to maintain with the local officials. The meetings were considered highly successful, and others are being planned for the future.

In the current process of administering the Secondary system, the annual budgets are presented to the boards of supervisors for their concurrence, and work sessions are held with them to establish priorities for road improvements. Their counsel and assistance are encouraged at every opportunity.

CHAPTER II

CURRENT HIGHWAY SYSTEMS

The Department of Highways and Transportation currently operates and maintains the third largest system of state highway facilities in the United States. Highway systems which the state is responsible for maintenance and construction are comprised as follows:

Interstate	1,079 miles
Arterial	1,740 miles
Primary(other)	6,577 miles
Urban	7,348 miles
Secondary	42,723 miles
Total Mileage	59,467 miles

All mileage is constructed and maintained by the Virginia Department of Highways and Transportation excepting the Urban system. The Urban system reflects thoroughfares actually operated and maintained by local governments. However, maintenance funds are provided from state sources to these local governments to be applied toward the maintenance of the urban street system.

Federal aid through the Federal Highway Administration is available for all systems in Virginia. The Federal Aid System does not necessarily follow the same classification as the State Highways Systems. Table 1 reflects the system structure and

and illustrates the relationship of Federal systems; such as Interstate, Primary, Secondary and Urban to the State Highway Systems previously indicated. The Federal Aid Urban System was established by the 1973 Federal Highway Act and incorporates previously designated Federal Aid Secondary and Thoroughfare Systems.

In considering the relative impact of highway systems to the construction needs throughout the Commonwealth, the objectives of each system should be fully considered. For example, both the Interstate system and the Arterial network have given objectives. The Interstate system consists of over a thousand miles with the objective of completing a nationwide network and providing limited access, minimum four-lane divided, high-type facilities throughout the state within given corridors. This system is approximately 80% complete on a mileage basis. The Arterial network was established by the 1964 Legislature and represents approximately 1700 miles of Primary highway specifically designated to serve as principal routes and connection between major cities and towns in the state, supplementing the Interstate System. Virginia's Arterial network has served as a model for a number of states and the Federal Highway Administration is now beginning to consider improvements to what is described as the Priority Primary system which draws definition from our previously established arterial program. For administration purposes, the Arterial network is classified with the Primary system.

TABLE 1

SYSTEM STRUCTURE

FEDERAL SYSTEMS		STATE SYSTEMS
FEDERAL-AID INTERSTATE (F.A.I.)	and corresponding	
This system is limited by Federal law to 42,500 miles nationwide. The vast network of freeways is financed with 90% Federal funds for construction, right of way and preliminary engineering.		As of January 1, 1974, Virginia had a total of 1,079 miles as its portion of the Interstate System. 884 miles of this are in rural areas.
		ARTERIAL NETWORK
		Some 1,700 miles of Virginia's 1,740-mile Arterial Network are on the FAP System.
FEDERAL-AID PRIMARY (F.A.P.)	includes	This network of roads complements the Interstate System and was created by the General Assembly of Virginia in 1964.
While the Federal-Aid Primary System actually includes the Federal-Aid Interstate System, the latter is excluded here due to funding differences described above.		In accordance with Section 33-23.1 of the Code of Virginia roads must satisfy the following criteria for the Commission to consider as arterial by resolution:
By law the FAP System is restricted to seven percent of the total rural mileage for the year 1921 in each state. Additionally this mileage may be increased by increments of one percent of the 1921 mileage whenever certain specified conditions are satisfied.		1. Supplement and complement the Interstate System to form a complete network of through highways to serve both interstate and principal intrastate traffic flow; 2. Carry a sufficient volume of traffic by 1975 to warrant a minimum of four lanes; 3. Carry a substantial volume of heavy trucks, buses, and through traffic; 4. Serve as the principal routes of major traffic corridors; 5. Provide reasonable connections to or between the major cities and towns in the State.
As of January 1, 1974, over 3,600 miles of Virginia's highways had been disignated Federal-Aid Primary with 3,150 miles in rural areas by present Urban boundaries (corporation limits)		
Construction projects on this system are normally financed on a 70 percent federal and a 30 percent state basis. However, due to restrictions on federal monies, it is not at all unusual to finance projects on this system entirely with state funds.		OTHER PRIMARY
After June 30, 1976, some of the Federal-Aid Primary mileage will be in the new Federal-Aid Urban System.		Of the 6,577 miles comprising Virginia's "Other Primary" System some 1,948 miles are on the Federal-Aid Primary System. The "Other Primary" System includes main arteries and some Primary extensions.
		OTHER PRIMARY
		All but a relatively small percentage of the remaining rural "Other Primary" mileage not included in the Federal-Aid Primary System is included in the Federal-Aid Secondary System.
FEDERAL-AID SECONDARY (F.A.S.)	includes	Those communities and courthouses in the Commonwealth not directly provided service by the Interstate System, Arterial Network or by the "Other Primary" System (F.A.P.) are connected by this system.
As provided in Federal-Aid regulations, the FAS System shall not exceed in any state at one time a mileage that can be initially improved within a reasonable period of years and thereafter maintained with income expected to be available.		This system comprises by far the largest segment of our rural road network and certainly to our rural people it is one of the most important. While the great bulk of this system is composed of rural two-lane roads, there are some heavily traveled multi-lane sections in and adjacent to our urban areas.
Construction projects on this system are normally financed on a 70 percent Federal 30 percent State.		
This is by far the largest Federal-Aid System in terms of mileage. To day, Virginia has over 20,000 miles of State Primary and Secondary roads in this system of which 19,471 miles are in rural areas.		As of January 1, 1974, Virginia had approximately 42,800 miles of Secondary roads. Of this total, more than 15,000 miles were in the Federal-Aid Secondary System with the remainder not being in a Federal-Aid System.
FEDERAL AID URBAN (F.A.U.)	includes	REMAINING PRIMARY
This system is located to serve the major centers of activity and includes high traffic arterial and collector routes. Routes on this system are selected by local officials, with concurrence of the Highway Department and the Secretary of Transportation. After June 30, 1976, this system with consist of arterial and collector routes, most of which will be transferred from the Federal-Aid Primary System and Federal-Aid Secondary System.		A portion of the mileage contained in the Federal-Aid Urban System will consist of "Other Primary" urban routes from the Federal-Aid Secondary System and their municipal extensions.
As of January 1, 1974, approximately 840 miles of Virginia's urban roads had been designated Federal-Aid Urban. The length of this system will greatly increase by June 1976.		The Federal-Aid Urban System will contain mileage predominately from the Federal-Aid Secondary System urban routes and other locally important arterial and collector routes.
After June 30, 1976, all of the "Other Primary" - Urban mileage and most of the Secondary Urban mileage presently shown on the Federal-Aid Secondary System will be transferred to the new Federal-Aid Urban System.		OTHER CITY STREETS
		Extensions of Federal-Aid Secondary urban mileage and other locally important arterial and collector streets will also be included in the Federal-Aid Urban System.

The Primary, Secondary and Urban systems consist of existing highway facilities throughout the state serving all types of vehicular traffic in providing door-to-door transportation and access to land throughout the Commonwealth. The Urban system and portions of the Primary and Secondary systems in urban and suburban areas are particularly adaptable to developments for mass transit. Fringe parking lots, bus shelters, specific bus uses of certain highway facilities and other operational features can be designed to maximize bus service and passenger movements.

CHAPTER III

SYSTEM FUNDING

Highway funding legislation has established procedures to be followed in the distribution of funds by area and by system. For background purposes, allocation procedures can be described by the funding legislation that has been passed by previous legislatures. Funds established by Acts of the General Assembly prior to 1964 are distributed on such factors as area, population, road mileage, vehicle miles of travel. The Acts of 1964 distribute funds solely on the basis of remaining need. Revenues derived from the Acts of 1966 are designed as a discretionary fund for the Highway Commission and are used to fill the gap of each district's estimated total need. The 1972 Highway Funding Program further distributes funds to highway districts based on a six-factor formula and to each system within the district based on the need of that system. The 1974 Acts of Assembly provide the opportunity to match revenue sharing funds from counties to be utilized on the state Secondary System in the event any county designated up to 10% of their revenue sharing fund for use on the Secondary system. The 1974 Act also established a biennial sum to be assigned to transportation districts and local governments for the purposes of supporting mass transit capital costs and administration.

Funding and Allocations

Statutes and policies governing the distribution of highway funds in Virginia are designed to assure as equitable a sharing of these resources as possible among the various systems and geographic regions.

Funds are distributed by the State Highway and Transportation Commission yearly as required by statute in the following general manner.

*Interstate System -- Construction, including right of way and engineering, is financed 90% Federal, 10% State. Federal funds are allocated to the eight highway districts on a cost-to-completion basis with the state matching share taken from the districts' total primary allocations. The state funds allocated to the districts each year represent the amount necessary to finance approximately 10% of the construction program and 100% of maintenance.

*Urban System -- As directed by the General Assembly at least 14% of all highway funds derived from the Acts of 1964 and prior years exclusive of Federal Interstate funds are allocated each year to this system. Additional funds derived from the Acts of 1966 and 1972 are allocated at Commission discretion and in accordance with need. Some of these funds are used to make maintenance payments to the cities and towns at the rate of $2,500 per moving-lane mile available to peak hour traffic for primary extensions and $1,500 per moving-lane mile available to peak hour traffic for certain other streets each year. The

remainder, except for those funds earmarked as aid to mass transit, is allocated for construction purposes to the municipalities on the basis of population and needs.

*Secondary System -- This system receives not less than 33% of all highway funds exclusive of Interstate Federal-aid and revenues derived from the Acts of 1966 and 1972. The revenues derived from the Acts of 1966 are primarily designed for the Arterial network of the Primary system until construction of this is completed. However, a portion of these funds may be used on the Secondary System at the discretion of the Commission. The revenues derived from all of the Acts of the General Assembly prior to 1964 and allocated to the Secondary system are distributed among the counties on the basis of area, population, road mileage, and vehicular miles of travel. The funds provided by the Acts of 1964 and subsequent years are distributed on the basis of need.

*Arterial Network and Regular Primary System -- The balance of highway construction funds are distributed to those roads comprising the Arterial and Primary systems by district. Distribution is based on such items as area, population, road mileage and relative need. The 1972 Act monies are distributed on the six factors of population, area, road miles, miles of travel, vehicle registration, and relative need to each district. Within each construction district, funds are allocated among the several highway systems solely on the basis of need as determined by the Commission.

Federal-aid monies are appropriated from the Highway Trust Fund yearly by the Federal Government to provide Virginia's proportionate share of the interstate matching (90%) money. In addition, matching funds (70%) are also provided for the so-called ABC (Primary, Secondary and Urban Federal-aid) systems. In recent years, some 75% of the Trust Fund revenues have been allotted to the Interstate System.

State and Federal monies are combined and allocated in the most desirable and expeditious manner by the Commission to accomplish the broad goals and objectives. For example, Federal-aid funds to the Primary, Secondary and Urban systems, while comprising a relatively small portion of the total revenue, are generally expended on large, major projects to eliminate additiona overhead that would occur if these funds are expended on many smaller projects.

Total income for the 1974-75 fiscal year is comprised of 64% State and 36% Federal funds as shown in Figure 1. This ratio varies considerably from year to year.

Table 2 presents a summary of statutory and policy requirements for highway fund allocations as applied to final allocations for 1974-75 estimate of funds allocated by statute, policy and formula.

A pictorial summary of the historical distribution of funds by system is depicted in Figure 2.

FIGURE 1
Virginia's
HIGHWAY TRANSPORTATION DOLLAR
1974-1975

Income

Motor Fuel Taxes ..... 40¢

Interstate Federal Funds (Require 90-10 Matching) ..... 23¢

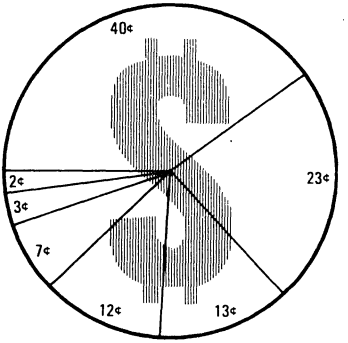
Primary, Secondary, Urban Federal Funds (Require 70-30 Matching) ..... 13¢

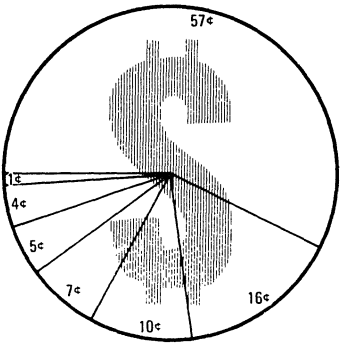
Motor Vehicle Licenses ..... 12¢

Motor Vehicle Sales and Use Tax ..... 7¢

Motor Vehicle Registration, Operators' Permit Fees ..... 3¢

Miscellaneous ..... 2¢





Expenditures

57¢ ..... Construction

16¢ ..... Maintenance

10¢ ..... Right - of - Way

7¢ ..... Payments To Municipalities, Mass Transit Aid

5¢ ..... Support of Other State Agencies

4¢ ..... Administration, General Expenses, Capital Outlay

1¢ ..... Two Counties Not In Secondary System

TABLE 2

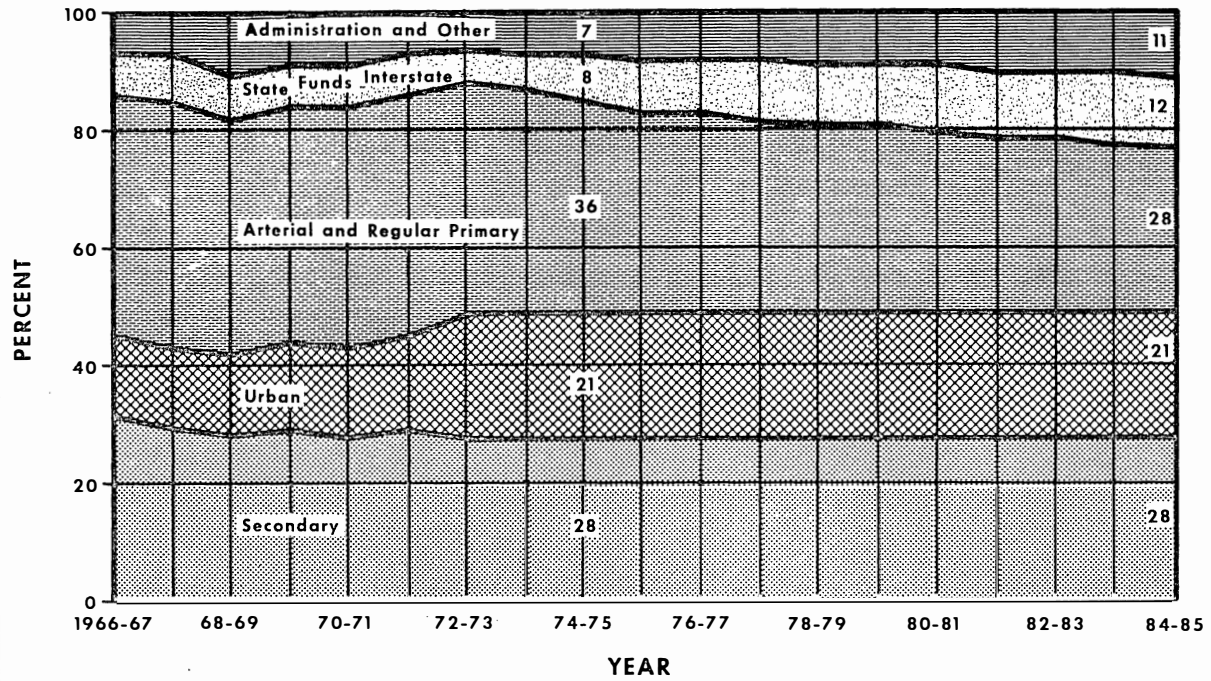
STATUTORY AND POLICY REQUIREMENTS FOR HIGHWAY FUND ALLOCATIONS AS APPLIED TO FINAL ALLOCATIONS FOR 1974-75
ESTIMATE OF FUNDS TO BE ALLOCATED BY STATUTE, POLICY AND FORMULA
($556.4 MILLION LESS INTERSTATE FEDERAL-AID – $139.9 MILLION = $416.5 MILLION)

HIGHWAY SYSTEM OR ACTIVITY	ABC FEDERAL-AID ($76.8 MILLION) AND STATE FUNDS ($244.6 MILLION) PROVIDED BY LAWS ENACTED PRIOR TO 1966		FUNDS PROVIDED BY 1966 ACT TO BE USED BY HIGHWAY COMMISSION IN BEST CARRYING OUT FISCAL PLAN		FUNDS PROVIDED BY 1972 ACT DISTRIBUTED BY SIX-FACTOR FORMULA		TOTAL	
	AMOUNT (MILLIONS)	PERCENTAGE OF PRIOR TO 1966 FUNDS	AMOUNT (MILLIONS)	PERCENTAGE OF 1966 FUNDS	AMOUNT (MILLIONS)	PERCENTAGE OF NEW FUNDS	AMOUNT (MILLIONS)	PERCENTAGE
MATCHING STATE FUNDS FOR 90-10 INTERSTATE PROGRAM	17.5	5.4% DETERMINED BY AMOUNT OF INTERSTATE FEDERAL-AID TO MATCH	0	0	0	0	17.5	4.2
MAINTENANCE OF INTERSTATE AND PRIMARY SYSTEMS	45.6	14.2% DETERMINED BY ESTIMATED NEED	0	0	0	0	45.6	11.0
DEPARTMENT OVERHEAD AND GENERAL EXPENSES	25.1	7.8% DETERMINED BY ESTIMATED NEED	0	0	0	0	25.1	6.0
SECONDARY SYSTEM FUND TO BE DISTRIBUTED TO COUNTY SECONDARY SYSTEMS ON BASIS OF 5 FACTOR FORMULAE OF SECONDARY MILEAGE, SECONDARY TRAVEL, SECONDARY NEED, COUNTY AREA, COUNTY POPULATION (STATUTORY)	106.1	33.0% AS REQUIRED BY STATUTE	1.2	2.9 COMMISSION DISCRETION	6.1	11.5 SIX FACTOR	113.4	27.2
URBAN SYSTEM FOR (1) DIRECT MAINTENANCE PAYMENTS OF $2,500 PER LANE MILE PRIMARY AND $1,500 PER LANE MILE OTHER STREETS TO CITIES AND TOWNS OF OVER 3,500 (2) 85-15 URBAN CONSTRUCTION PROGRAM ON BASIS OF NEED AND (3) AID TO MASS TRANSIT	45.0	14.0% AS REQUIRED BY STATUTE	16.5	39.3 COMMISSION DISCRETION	23.6	44.1 SIX FACTOR	85.1	20.4
AID TO MASS TRANSIT	11.6	3.6% - FROM § 81, ITEM 329.1 OF CHAPTER 681, 1974 APPROPRIATIONS ACT	0	0	0	0	11.6	2.8
ACCESS ROAD TO BICENTENNIAL CENTERS	1.0	0.3% - FROM § 33.1-221.1 CODE OF VIRGINIA	0	0	0	0	1.0	0.2
METROPOLITAN TRANSPORTATION PLANNING	1.2	0.4% - AS REQUIRED BY FHWA	0	0	0	0	1.2	0.3
INDUSTRIAL ACCESS	2.5	0.8% (1.5 MILLION IS STATUTORY REQUIREMENT	0	0	0	0	2.5	0.6
PRIMARY SYSTEM INCLUDING ARTERIAL NETWORK DISTRIBUTED TO 8 CONSTRUCTION DISTRICTS ON 3 FACTOR FORMULAE OF POPULATION (INCLUDING 1/2 OF CITY AND TOWN POPULATION) PRIMARY SYSTEM MILEAGE, DISTRICT AREA, AND AID TO MASS TRANSIT	65.8	20.5% - AMOUNT REMAINING AFTER SATISFYING OTHER NEEDS AND STATUTORY REQUIREMENTS	24.3	57.8 COMMISSION DISCRETION	23.4	44.4 SIX FACTOR	113.5	27.3
TOTAL	321.4	100.0	42.0	100.0	53.1	100.0	416.5	100.0

FIGURE 2

DISTRIBUTION OF FUNDS TO SYSTEMS

(Excluding FAI, Metropolitan Transportation Plan and Mass Transit)



Revenue Projections

The following summary is a tentative projection of highway funds covering a ten-year period assuming a 2% annual increase in state revenues. This projection reflects the shortage of funds created by the energy crisis in 1973 and 1974 and recognizes a lower growth rate of motor vehicle fuel usage to reflect annual funds available from current sources. The energy crisis and its related drop in fuel tax revenue has created a change in direction in the anticipated funds for this Department.

This projection is developed based on actual revenues for fiscal year 1973-74 taking into consideration the inflation factor and fixed expenditures such as general expense and maintenance. Total funds, less Interstate Federal-aid, for the 10-year period amounts to over four billion dollars with the major portion being distributed to the Primary (Arterial and Regular), Urban and Secondary systems. It will be noted on the summary of projected funds that the amount for mass transit was initially set aside from the total amounts as required by the 1974 Acts of the General Assembly before the funds were distributed for other purposes. Table 3 represents these figures.

Secondary funds projected for the 10-year period total 1,149.1 million dollars or 28% of total funds excluding transit funds from the Acts of 1974. It is anticipated that maintenance

TABLE 3

TENTATIVE PROJECTION OF HIGHWAY ALLOCATIONS

(Less Interstate Federal-Aid)

PURPOSE	1975-76 AMOUNT (MILLIONS)	1976-77 AMOUNT (MILLIONS)	1977-78 AMOUNT (MILLIONS)	1978-79 AMOUNT (MILLIONS)	1979-80 AMOUNT (MILLIONS)	1975-80 SUBTOTAL (MILLIONS)	1980-81 AMOUNT (MILLIONS)	1981-82 AMOUNT (MILLIONS)	1982-83 AMOUNT (MILLIONS)	1983-84 AMOUNT (MILLIONS)	1984-85 AMOUNT (MILLIONS)	1980-85 SUBTOTAL (MILLIONS)	1975-85 TOTAL (MILLIONS)
MATCHING STATE FUNDS FOR 90-10 INTERSTATE PROGRAM	16.5	17.9	17-9	17.9	18.2	88.4	18.2	18.2	18.5	18.5	18.5	91.9	180.3
MAINTENANCE OF INTERSTATE ARTERIAL AND PRIMARY ROUTES	49.7	53.7	57-5	61.0	64.1	286.0	67.3	70.7	74.2	77.9	81.8	371.9	657.9
DEPARTMENT OVERHEAD AND GENERAL EXPENSES	26.7	28.3	30-0	31.8	33.7	150.5	35.7	37.8	40.1	42.5	45.1	201.2	351.7
ARTERIAL NETWORK AND REGULAR PRIMARY SYSTEM CONSTRUCTION	97.8	93.2	91-8	89.2	86.9	458.9	87.8	85.3	82.3	79.3	76.0	410.7	869.6
URBAN SYSTEM CON. & MAINT. LANE MILES PROJECTED	80.4	81.4	82-4	83.6	84.8	412.6	87.3	88.6	89.9	91.1	92.4	449.3	861.9
SECONDARY SYSTEM CON. & MAINTENANCE	107.2	108.5	109-9	111.4	113.1	550.1	116.4	118.1	119.8	121.5	123.2	599.0	1149.1
INDUSTRIAL ACCESS	2.5	2.5	2-5	2.5	2.5	12.5	2.5	2.5	2.5	2.5	2.5	12.5	25.0
BICENTENNIAL CENTERS	1.4	1.4	---	---	---	2.8	---	---	---	---	---	---	2.8
METROPOLITAN TRANSPORTATION PLANNING	.6	.6	-6	.6	.6	3.0	.6	.6	.6	.6	.6	3.0	6.0
SUBTOTAL	382.8	387.5	392-6	398.0	403.9	1964.8	415.8	421.8	427.9	433.9	440.1	2139.5	4104.3
MASS TRANSIT - ACTS OF 74	11.6	11.6	11-6	11.6	11.6	58.0	11.6	11.6	11.6	11.6	11.6	58.0	116.0
* TOTAL	394.4	399.1	404-2	409.6	415.5	2022.8	427.4	433.4	439.5	445.5	451.7	2197.5	4220.3

* This total does not reflect total State funds available. Funds distributed to other State agencies and administrative funds have been extracted, resulting in this total. The assignment of funds to other agencies and administrative costs are variable, thus a 2% increase in remaining funds available does not apply.

cost for the Secondary system will increase substantially due to inflation and additional mileage. This will greatly reduce the amount to be applied to construction projects on this system.

The Highway Commission at the initiation of the Interstate Program adopted a policy of matching federal designated funds as they became available and has adhered fully to this policy. Federal funds have not been apportioned at a rate sufficient to keep the program on schedule. Assuming Interstate Federal-aid is to continue at or near the present rate, it will be many years before the System is completed in Virginia.

Urban funds projected for the same period total 861.9 million dollars or 21% of total funds excluding transit funds from the Acts of 1974.

Transit funds as mentioned earlier are set aside in accordance with the 1974 Acts of the General Assembly as an aid to regional transportation commissions or local governments from special revenues, including federal funds in aid of the capital cost of mass transportation. An amount of 11.6 million dollars was allocated for the current fiscal year. For planning purposes, an equal amount has been considered to be utilized in subsequent years, since funds may be required for state participation in transit activities if programs now being considered by Congress are enacted. An additional 6.8 million dollars was allocated for the current fiscal year for the acquisition and construction of parking lots, purchase of buses and ancillary facilities. The 6.8 million dollars was allocated from Primary and Urban systems funds.

The Arterial network and Regular Primary system receives the balance of funds. Over the 10-year period the projected funds total 869.6 million dollars. Due to the annual increase of funds to other systems, there is a continuous decline in Primary funds even though the total State funds were projected with a 2% annual increase.

Secondary allocations for fiscal year 1974-75, a record $111,423,969, were distributed for construction and maintenance on Virginia's 42,700 miles of Secondary road system. This is approximately $2,300,000 higher than the amount for the previous year.

As in the past, by far the largest part of the Secondary system budget--$100,427,260--will be derived from state road user taxes. That sum is about $3,000,000 below last year's figure because of expected reductions in revenue from the state gasoline and motor vehicle sales and use taxes as a result of the energy problem.

Other than a small amount of revenue sharing money which the counties are permitted to make available to the Department on a 50-50 matching basis, the only other source of funds for the Secondary system is Secondary system federal aid.

Federal funds for secondary roads increased from $5,504,384 in 1973-74 to $10,996,709 in 1974-75 as a result of a larger apportionment from the Federal Highway Trust Fund. The federal apportionment includes additional funds to aid the State's safety improvement program on the Secondary system.

The 1974-75 allocations to the other highway systems total $324,463,134. This total includes 201 million dollars in federal-aid, provided to Virginia through the Federal Highway Trust Fund, and 123 million dollars in revenue expected from the State motor fuel tax and other State road user taxes. A breakdown of the funds by highway systems follows:

Interstate -- 155.1 million dollars, an increase of 41.3 million dollars over 1973-74 as a result of increased federal funding.

Arterial network and Regular Primary system -- 112.2 million dollars, down 9.2 million dollars because of losses anticipated from the gasoline shortage.

Urban system (within corporate limits of cities and towns)-- 57.1 million dollars, up $488,023 over the previous fiscal year.

Transit -- $18,405,140, up more than 7 million dollars over the previous fiscal year's total of $11,340,000. The $11,575,140, as provided by the 1974 General Assembly, has been taken off the top of total highway funds and consequently are not reflected in the combined Interstate, Primary and Urban systems totals. The $6,830,000 allocated to assist mass transit under Section 33.1-46.1 is included in the urban and/or rural allocations totals listed above.

Figure 3 illustrates the anticipated revenue to the year 1985 based upon current trends as described herein.

Maintenance Costs

Considering the maintenance of highway facilities, Figure 4 illustrates that a unit mile of a highway facility maintained in

FIGURE 3

FEDERAL AND STATE FUNDS
(Excluding Federal-Aid Interstate)

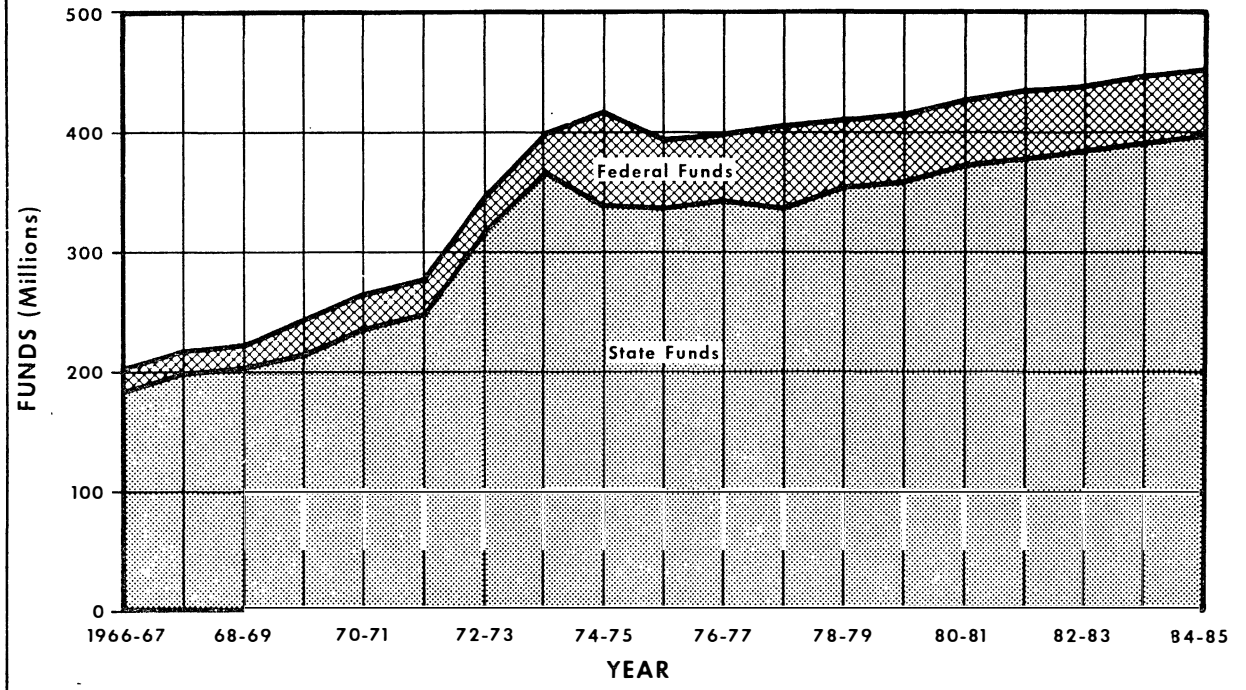
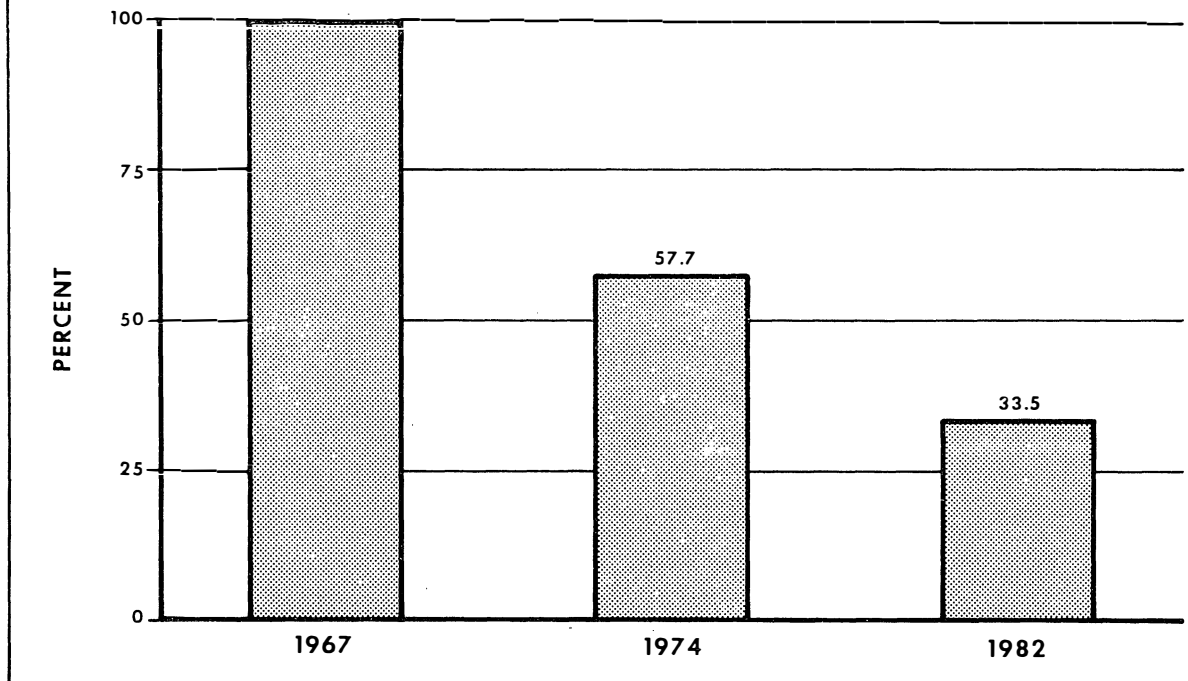


FIGURE 4
MAINTENANCE COSTS



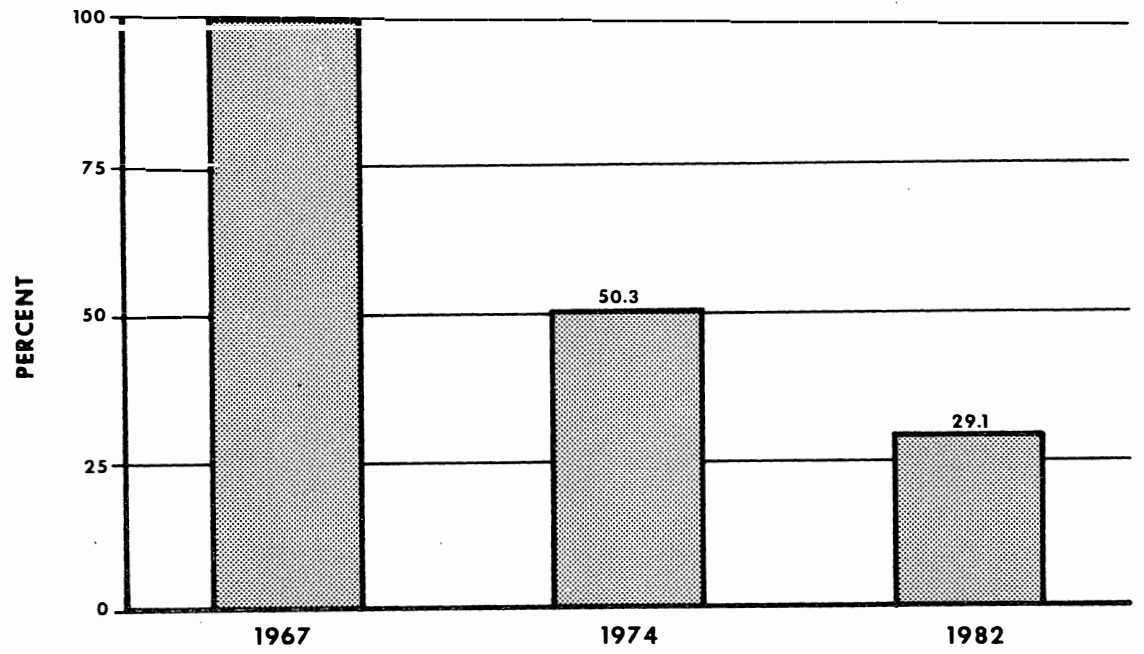
1967 is now represented by .58 of a mile for the same maintenance dollar. This is a vivid illustration of the fact that our maintenance costs have increased drastically since 1967. The rapid increase in prices of materials and supplies for maintenance purposes in the last year will certainly have a profound effect for next year's maintenance cost.

Construction Costs

Construction costs are suffering from a similar impact of the nation's economy. In 1967 a unit mile of highway facility could be constructed for a given sum. Today, that same sum will only construct 50% of that same unit mile. This is illustrated in Figure 5. It can be anticipated that the construction cost to accomplish what is currently being advertised for all systems will soon exceed our ability to fund. If the present circumstances continue, all systems will suffer from cutbacks in the construction program due to lack of funds.

Thus, considering construction and maintenance responsibilities, the construction program will of necessity decrease each year in order to stay within the limits of current revenues. Reviewing this overall situation, it is quite possible that highway facilities construction will be practically non-existant before the year 2000. If the funding situation indeed produces this dilemma, this Department's entire function may be geared toward operation and maintenance of existing facilities.

FIGURE 5
CONSTRUCTION COSTS



Overview

Fund receipts through 1985 have been projected to incorporate into this study assuming a cautious annual increase of 2% in revenues to the Department. This 2% increase is greatly reduced from the figures previously used in projecting revenues due to several factors. These are 1) increasing cost of fuel thus a reduction in the amount of fuel purchased by the user; 2) energy conservation resulting in lower speed limits, fewer trips, constant emphasis on reduction of unnecessary travel and the action of all levels of government in reducing fuel usage and attempting to convert person trips to other modes of transport in lieu of the automobile.

As previously reported, maintenance and construction costs are rapidly destroying the ability of the Department to continue advertisting projects for construction at the same rate of a few years ago. Consequently, a resulting slowdown in projects is necessary in order to fund those projects which are eligible for construction. In addition, the project development cost related with each project is now taking on new major costs due to requirements for additional public hearings, environmental agencies and additional delays resulting from lack of approval of projects. As an example of these activities, in the last few years project development time from initiation to award of contract has changed from approximately three years per project to almost six years per project. These new requirements have had a disastrous effect upon the programming of projects in addition to the cost of the development of the projects.

Consequently, the consideration of needs requirements in anticipating federal transportation developments results in a rather academic discussion of the definition of "needs." This report addresses needs as reported in 1972 in the 10-Year Plan and at the same time reports how the accomplishments anticipated in the 1972 plan can no longer be achieved on the schedule previously established. Accordingly, this report results in a description of what is expected to be accomplished which may not necessarily agree with the definition of "needs." It is certainly the intention of the Department to finance those projects which represent the highest priority of need at the same time living within the means of its revenue.

CHAPTER IV

TEN-YEAR PLAN

The 1972 10-Year Plan submitted to the Legislature described a variety of programs and capabilities which could result from additional revenues generated by an increase in the gasoline tax. Three years ago the plan seemed quite realistic and did provide for vast programs of improvement in all systems throughout the state. The 1972 10-Year Plan was based on a target year of 1982. This report incorporates an assessment of that 10-Year Plan as an illustration to describe not only what was promised and what has been accomplished, but also to illustrate the severe limitations regarding the completion of that plan. In an overview statement, it is clear that the 1972 10-Year Plan cannot be completed within ten years and will require deferral of projects in order to remain financially solvent.

Considering the Primary highway system, the original 10-Year Plan established 1,311.1 million dollars for construction purposes over the 10-year period. This estimate anticipated a 4% annual inflation of highway costs. Allocations during the first three years of the program are approximately 26% and are slightly less than the projected revenue. However, the allocations to date are within reasonable range of the total funds predicted in the 1972 report.

In reassessing the 10-Year Plan of the Primary system, it first appears that the plan must be extended beyond 1985 rather than be completed in 1982 as originally projected. Also inflation so far, instead of increasing at the rate of 4% annually as anticipated, has increased at a rate averaging over 15% annually over the three years of the plan so far elapsed. Assuming that this 15% inflation will gradually level off by 1985 to a range of 5% to 7% annually, the same plan were it to be presented to the Legislature today would more than double the cost estimated in the 1972 report.

Similarly, the Urban system, including maintenance payments and aid to mass transit in 1972, was assigned 873.2 million dollars. Approximately 27% of those funds have been allocated in the first three years of the program which is within range of the anticipated allocation schedule. In reassessing the entire program outlined in the 1972 10-Year Plan on the basis described above, it is now reported that the same projects which in 1972 would cost 873.2 million dollars will now more than double the original estimate. As a result, more than 700 million dollars of construction, maintenance payments and mass transit aid is expected to be extended or deferred beyond 1985 in order to maintain a balanced budget.

The Secondary system also reports similar problems. In the original 10-Year Plan 1,174.9 million dollars was anticipated to be allocated to the Secondary system over a 10-year period. To

date approximately 27% of these funds have been allocated representing a reasonable level of funding. As an example of the financial situation, even though some 27% of the funds have been allocated, only approximately 18% of the mileage of roads and individual bridges originally forecast in the 1972 plan has been completed. The 1972 needs plan projected a construction program of 9,800 miles of secondary road and 2,080 bridges to be improved. If that plan were to be proposed today, the Secondary system objective would reflect 4,212 miles of road and only 947 bridges within the same funding capabilities. As a result of this reassessment, it is now evident that an amount nearly equal the original 10-Year Plan estimate will represent construction that will have to be deferred beyond 1985 to stay within the financial capabilities of funding for the Secondary system. This is equivalent to extending nearly half of the original miles of road and number of bridges for improvement beyond 1985.

Regarding the Secondary system, if the same amount of work were reported today that was reported in the 1972 10-Year Plan, the amount of funds required would total 2,387.6 million dollars, which is more than twice the amount originally established for this same amount of work in the 1972 plan. To concisely summarize the reassessment of the 1972 10-Year Plan, it is quite obvious that the work originally anticipated is completely beyond the realm of financing over a 10-year period. In fact, many projects previously anticipated to be incorporated into the 10-year program will now be deferred beyond even 1985.

As a result, there is constant review and evaluation of the higher priority projects anticipated in the 10-year program to establish relationships with adjacent projects and assure that the best systems approach toward overall public service can be accommodated with those projects which require construction. Accordingly, the definition of the phrase "highway needs" produces academic discussion which, in fact, is reflective upon the ability to accomplish previously stated objectives, such as the 10-Year Plan. Previously those facilities which have the greatest priority of need appear within the immediate programs of the Department. However, "need" also represents the comparison of the capability of any given facility to accepted standards and, based upon present service and priority, may result in maintaining a sub-standard facility which is still sufficient for a low level of traffic service, placing the project in a lower priority category.

CHAPTER V

THE SECONDARY SYSTEM

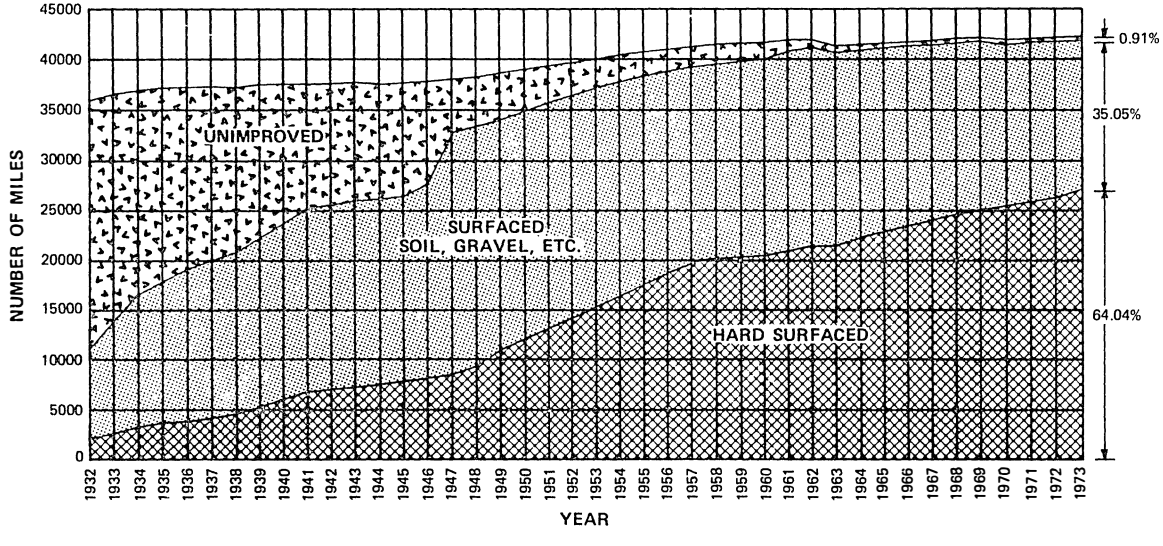
The Secondary system became a most significant system in 1932 with the accumulation of county systems as a result of the Byrd Road Act. Tremendous emphasis has been placed on the serviceability of the farm to market system and as a result, the Secondary system has increased drastically in the serviceability of the system due to the high percentage of mileage paved and the remaining adaptability of the all-weather surface to the very low traffic volume facilities. Figure 6 represents the development of the Secondary system since 1932 and illustrates the status of the development of the system since 1932 in terms of improved roadways.

Planning work for secondary roads is based upon two documented procedures. A 6-Year Plan for estimated secondary allocations in each county of the state is prepared and maintained each year by every Resident Engineer. This 6-Year Plan is a fiscal plan and it does reflect allocations to each project and results in an assignment of funds to each of the various projects within every county on the order of priorities as they are discussed with each Board of Supervisors. The 6-Year Plan is a working plan which reflects actual construction funds and is annually updated. The 6-Year Plan is a most important document in the assignment of funds as the proposed secondary project nears construction.

FIGURE 6

DEVELOPMENT OF THE SECONDARY SYSTEM

1932 – 1973



In addition to the 6-Year Plan, each Resident Engineer is guided by what is identified as a Master Plan for each county. This plan relates to the existing secondary road system and describes what is required to improve the existing system to reach what is identified as tolerable standards. These tolerable standards generally stated are:

1. A light stone or gravel surface of at least 14 feet in width on roads carrying less than 10 vehicles per day.
2. An all-weather stone or gravel surface of at least 16 feet in width on roads carrying 10-50 vehicles per day.
3. A hard surfaced width on roads carrying 50 or more vehicles per day, while not necessarily conforming to present day design standards for the minimum width, generally adequate to carry existing traffic volumes. These accepted widths range from a minimum of 16 feet of pavement on the lesser traveled roads, 22 feet for those roads carrying between 4000 and 6000 vehicles per day and possible multi-lane roads for those sections carrying over 6000 vehicles per day. In addition, the existing pavement structure must generally be of sufficient strength for present traffic loads.
4. Bridges, while not necessarily conforming to present day design standards as to width and capacity, having at least a 10-ton capacity and a roadway width of at least the approach surface width if same is deemed tolerable.

5. Alignment, gradient, sight distance, grade crossing protection and other features which while not necessarily possessing present day design standards, generally adequate to safely handle existing traffic volumes.

The Secondary Master Plan does not reflect any new growth or new facilities. It is a plan to identify sub-standard highway facilities and to develop projects toward realizing tolerable standards identified above as a basis of operation for the Secondary system.

The tolerable standards listed above do not reflect the most desirable standards for secondary facilities. Obviously standards vary by area served. For example, suburban secondary roadways often are provided by subdivisions and reflect curb and gutter facilities on a 50' right of way with storm drainage, asphalt pavement and in excess of 30 feet in width. In rural areas, a heavily used secondary might be developed on a 50' right of way with shoulders, ditches and a 22-foot pavement. A lightly traveled secondary highway may have a standard of 18' in width and a surface treated pavement. In addition, bridges should desirably be replaced as 20-ton structures. In many cases this does require totally new construction to replace an older bridge of less carrying capacity. Often, projects can be accomplished which will improve the capacity of an existing bridge from a lower tonnage to a higher tonnage; however, these projects may not reach the 20-ton "standard" carrying capacity. Considering

the need to accommodate as many projects as possible with the given funds, in many areas it is more practical and economical to improve an existing structure to a higher tonnage rather than to totally replace it with a new 20-ton structure which would require heavy investment.

In preparing this study, the Master Plan for each county was evaluated and compared with other counties along with unit construction prices to prepare an estimate of the cost of constructing the entire amount of work listed in the Master Plan. If the entire Master Plan for each county were to be totaled over a 10-year period, the entire construction cost by 1985 to accomplish what is identified in this plan as re-building substandard facilities would cost approximately $3,643,000,000. This figure does include inflationary factors and certainly represents a severe increase in maintenance and construction costs currently being experienced by the Department. Obviously, the total standardization of all secondary roads in accordance with the Master Plan over a 10-year period is fiscally impossible. Thus the development of Secondary programs must be related to current objectives which are annually evaluated and reviewed with each Board of Supervisors. The 6-Year Secondary road plan does allow the opportunity for the shifting of priorities of projects and the identification of these projects which are most important in the development of each county.

The question of the definition of "need" again arises. To one degree the "need" represents the completion of all facilities

identified in the Master Plan bringing the entire existing system to current tolerable standards. In other areas, the Master Plan is insufficient to provide for any additional growth, particularly in areas adjacent to developing metropolitan areas. For these reasons, the question of the definition of "need" will be referred to the objectives of the 1972 10-Year Plan and the ability of the Department to accomplish those objectives which were outlined in that plan. It should certainly be recognized that the objectives described in the 1972 10-Year Plan certainly do not provide for the improvement of secondary roads to tolerable standards as identified herein on a statewide basis. However, the inability to finance the objectives of the 1972 10-Year Plan, now require that those objectives be established for the purpose of this report as needs even though they do not accomplish a statewide raising of standards of the Secondary roads system.

Considering the funds anticipated to be available through 1985 representing $1,467,000,000 for the Secondary system, the cost of completing the objectives of the 1972 10-Year Plan are anticipated to be $2,375,000,000. This represents the fact that approximately 60% of the cost to complete the objectives can be funded. In addition, by 1980 at the 5-year level, the Department expects to have completed approximately 38% of the Secondary roads and bridges outlined in the original 1972 10-Year Plan.

Secondary funds are currently allocated based on three specific legislative requirements. These include all Acts prior

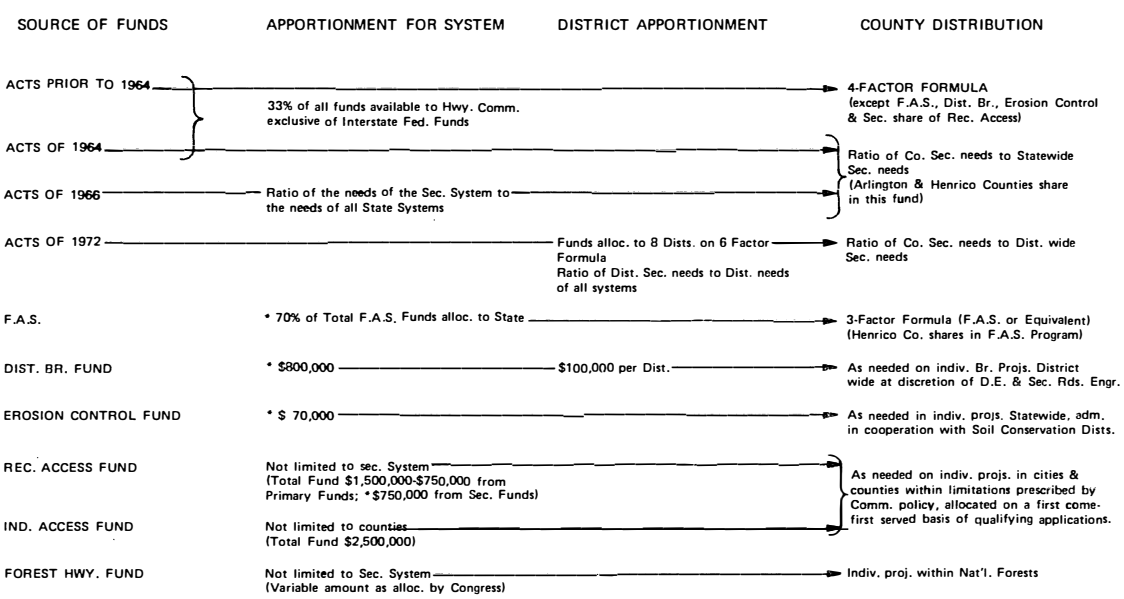
1964, the Acts of 1964 and 1966 grouped and the Acts of 1972. Generally, all acts prior to 1964 required 33% of all funds available to the Highway Commission exclusive of Interstate system federal funds to be distributed to the Secondary system. Acts of the Legislature since 1964 have been related to needs to the extent that the Secondary system now receives 28% of the total funds available for distribution to all highway systems. These distribution percentages are also reflected in the 1972 10-Year Plan. Table 4 illustrates the financial allocation procedure for Secondary system funding. After considerable review, the Highway and Transportation Commission has agreed upon this distribution arrangement and fund projections illustrated in this report reflect these percentages.

Traffic Requirements for Paving

Current policy of the Commission reflects that when the volume of a secondary road exceeds 50 vehicles per day, the road is then eligible for re-building for paved surface.

Actual volumes of traffic, to reflect revenue versus cost, need to be considered for two conditions regarding pavement of secondary roads. The first condition is that of annual maintenance. In order to properly maintain the secondary road, the maintenance cost per mile must be considered. Today's maintenance cost reflects that a traffic volume of at least 115 vehicles per day is required to produce enough revenue to reflect that maintenance cost.

TABLE 4
SECONDARY SYSTEM FINANCIAL STRUCTURE



The 1974 Gen. Assembly added Section 33.1-75.1 which allows the counties to designate up to 10% of their Revenue Sharing Fund for Secondary Roads and which must be matched from State Funds as "first priority".

*Note: These sums were included within the 33% of Acts 1964 & prior funds in determining the funds for the Sec. System in accordance with Sec. 33.1-75 of the Code.

Considering initial hard surface construction, it is necessary to consider the cost of the initial construction including the surface over a period of time suggested at 20 years. This can then be reduced to an annual cost which can be related to the traffic volume and the revenue necessary to meet the cost of construction. Recent information within the Department has indicated that the annual cost of an initial hard surface project would approximate $1320 per mile per year over a 20 year period. This, in turn, would require approximately 240 vehicles per day to utilize this facility to meet the construction cost on an annual basis.

It appears reasonable to conclude that the annual maintenance cost of a facility is that which must be considered appropriate for the motorist to participate directly. Consequently, it is conceivable that the traffic volume for surfacing of secondary roads which would warrant the hard surfacing of these roads could be increased to a level of 115 vehicles per day which would then reflect adequate payment for the maintenance required. It is suggested that this policy regarding traffic volumes to justify paving of secondary roads be reviewed by the State Highway and Transportation Commission.

CHAPTER VI

CONCLUSIONS

This report has deviated to some degree from the instructions of the General Assembly in evaluating 5 and 10-year levels of Secondary system needs. Due to the economic crisis which has seriously affected all programs within the Department and the Commonwealth, the Department has elected to report on the basis of previously reported goals and objectives as documented by the 1972 10-Year Plan. At the same time, the Department has elected to reassess that plan and provide information relating to the ability to finance the remaining portions of the 10-Year Plan.

It is quite obvious that long range planning needs are more difficult to define, and at the same time, our immediate 10-year program as previously reported to the Legislature is in jeopardy. Slightly over twice as much revenue will be required to support the construction as outlined in the 1972 10-Year Plan. Thus, the question of "needs" becomes somewhat academic. Due to the long standing tradition of this Department to operate within revenues available, it is imperative that even our 10-Year Program be extended beyond 1985.

As a result of investigating the needs of the Secondary system as requested by the Legislature, it has developed that

this report must be written to describe not only the Secondary system, but all other systems as well. The ultimate conclusion resulting from this collection of information is that construction programs in all systems must be reduced and extended over a long period of years or that sufficient additional revenue must be provided to counterbalance the effects of inflation and declining income. Highway needs which also reflect mass transit facilities will continue to increase. However, the Department's approach to answering these needs will most certainly involve exhausting all public means to improve operational efficiency and live within the means available.

SENATE JOINT RESOLUTION NO. 85.

Offered February 28, 1974

Directing the State Highway Commission to study secondary highway system.

Patrons-Messrs. Buchanan, Warren, Anderson, Gray, E. T., Goode, Truban, Barnes, Thornton, Brault, Fears, Yeatts, Edmunds, Marye, Waddell, Rawlings, Michael, Manns, Gray, F. T., Aldhizer, Campbell and Smith

---

Referred to the Committee on Rules

Whereas, the Virginia secondary system of highways is a proper concern of every citizen of every geographic section of the Commonwealth; and

Whereas, the highway funds presently allocated to the secondary system do not permit the construction and maintenance of the roads in this system to keep pace with the needs; now, therefore, be it

Resolved by the Senate, the House of Delegates concurring, That the State Highway Commission is hereby directed to study (a) the expected needs of the secondary highway system during the next five years and during the next ten years, and (b) the prospects of meeting those needs, with due consideration to the commitments of the Commission to the other highway systems.

The Commission shall report its findings and recommendations to the General Assembly no later than December one, nineteen hundred seventy-four.

#

A P P E N D I X

PREPARATION OF A COUNTY SECONDARY ROAD BUDGET

Section 33.1-69 vests the control, supervision, management and jurisdiction of the Secondary system with the Highway and Transportation Commission. Section 33.1-70 provides the manner of cooperation between the Highway and Transportation Department and the Boards of Supervisors of the several counties including a public meeting to allow citizen input in plans for use of the funds available for use in each county.

First call, of course, on the funds is for maintenance and maintenance replacement which currently consumes about 45% of the funds available. The balance is then planned to provide a balanced approach to meeting the long standing goals of the Highway and Transportation Commission for the Secondary system. These goals are as follows:

1. A hardsurface of width and strength adequate for traffic volumes served on all roads carrying 50 or more vehicles per day.
2. An all-weather stone or gravel surface on all roads carrying 10 to 50 vehicles per day.
3. A light stone or gravel surface on all roads carrying less than 10 vehicles per day.
4. Bringing all bridges of less than 10-ton capacity up to standard.

In working toward these goals, the entire Secondary system is evaluated by the Resident Engineer and the planning divisions of the Highway and Transportation Department, setting priorities based on a balanced program of improvement for each county and taking into consideration the inadequacies of the existing system insofar as traffic groupings, surface width, surface type, alignment, grade and structural inadequacies are concerned.

An annual public hearing is conducted by the county Boards of Supervisors, at which time the Highway and Transportation Department's representative is present. The requests made at this public hearing, as well as those requests from previous hearings, are evaluated by the Resident Engineer, taking into consideration the recommendations of the Board of Supervisors insofar as they are compatible with State law, Commission policy and availability of funding. It is from these evaluations and after consultation with Boards of Supervisors that the Resident Engineer prepares his budget for each fiscal year.

SECONDARY SYSTEM FUND ALLOCATION

Section 33.1-75 of the Code of Virginia provides that not less than 33% of all funds available to the State Highway and Transportation Commission through Acts of the General Assembly of 1964 and prior years, exclusive of any Federal funds made available for the Interstate system, shall be allocated for use on the Secondary system.

Section 33.1-75.1 provides that when a county designates a sum, not exceeding 10% of the county's Revenue Sharing Funds, for use by the Highway and Transportation Commission for the construction, maintenance, or improvement of Secondary roads in such county that the Highway and Transportation Commission shall match such Revenue Sharing Funds as a first priority allocation.

Section 33.1-24 (Acts of 1966) and Section 33.1-24.1 (Acts of 1972) state that the funds provided by the 1966 and 1972 Act of the Assembly be allocated among the highway systems solely on the basis of need on each system as determined by the Highway and Transportation Commission.

Section 33.1-69 vests in the Highway and Transportation Commission the responsibility for the control, supervision, management and jurisdiction of the Secondary system in 94 of the 96 counties in Virginia. Arlington and Henrico Counties

maintain their own county roads and receive from the State Treasurer their share of the motor fuel taxes collected according to the statutes. They also share in the revenues provided by the Acts of the Assembly of 1962 and 1966 (no part of which was from motor fuel taxes) in an amount equal to the percentage such counties received of the total motor fuel tax for the preceding year. These latter funds are a part of the total Secondary system allocation and are assigned to Arlington and Henrico Counties before any other distribution is made.

There are also other funds that are set aside before the regular distribution of funds is made for use within the counties

(a) Section 33.1-223 sets up the $1,500,000 Recreational Access Fund from Primary, Secondary, or Urban allocations. The Commission has decided that 1/2 of this fund should come from the Secondary allocation and 1/2 from the Primary allocation.

(b) In order that funds be provided to cooperate with Soil Conservation Districts, the Commission established the Erosion Control Fund of $70,000 per year for use within Soil Conservation Districts to provide soil erosion practices along the Secondary right of way. This work is done in cooperation with the Soil Conservation District and they arrange for easements, movement and replacement of fencing and technical advice as to the program.

(c) Realizing that the construction of a large bridge in a county could create a hardship on the Secondary funds for use in that county, the Commission established the District Bridge Fund of $100,000 per year per district. This fund is assigned to specific projects each year upon the recommendation of the District Engineer and approval by the Secondary Roads Engineer.

(d) Section 33.1-215 and Section 33.1-216 of the Code provide for the use of Federal Aid funds on the various highway systems. About 70% of the Federal Aid Secondary System is on the State Secondary System and 30% is on the State Primary System. The Commission, therefore, assigns 70% of the Federal Aid Secondary fund grant to the Secondary system and 30% to the Primary system. This 70%, however, is all a part of the 33% allocation made under Section 33.1-75. The Federal grant provides that 1-1/2%, with optional additional 1/2%, of all Federal funds be set aside for planning and matched on a 70% Federal, 30% State fund basis. Therefore, 2% of the 70% of Federal Aid Secondary funds and 30% State matching funds are set up as the Secondary system's share of highway planning and research.

The remainder of the 70% Federal Aid Secondary funds is matched on a 70-30 basis with state funds revenues collected from taxes assessed by Act of the Assembly prior to 1964. This matched fund is then distributed for use within the several counties on the same basis as it is allotted by the Federal government for use in the several states, i.e., area, current population, and miles of Secondary roads in each county as compared to the state as a whole. These funds are known as "Matched FAS or Equivalent."

The remaining state funds derived from taxes levied by Act of the General Assembly prior to 1964 are then distributed for use within the several counties on the basis of the area, current population, road mileage, and vehicular mileage on the Secondary system in each county as it compares with the same items for the state as a whole. These funds are known as "4-Factor Funds."

Section 33.1-75 (Acts of 1964) requires that funds from "new sources of revenue" be distributed for use within the several counties on the basis of needs in each county as compared to the state as a whole. Section 33.1-24 (Acts of 1966) and Section 33.1-24.1 (Acts of 1972) require that funds be assigned to the several systems on the basis of need. Therefore, the funds assigned to the Secondary system from the Acts of 1964, 1966 and 1972 are assigned for use within the several counties on the basis of need in each as they compare to the whole. These funds are known as "Acts of 1964, 1966 and 1972."