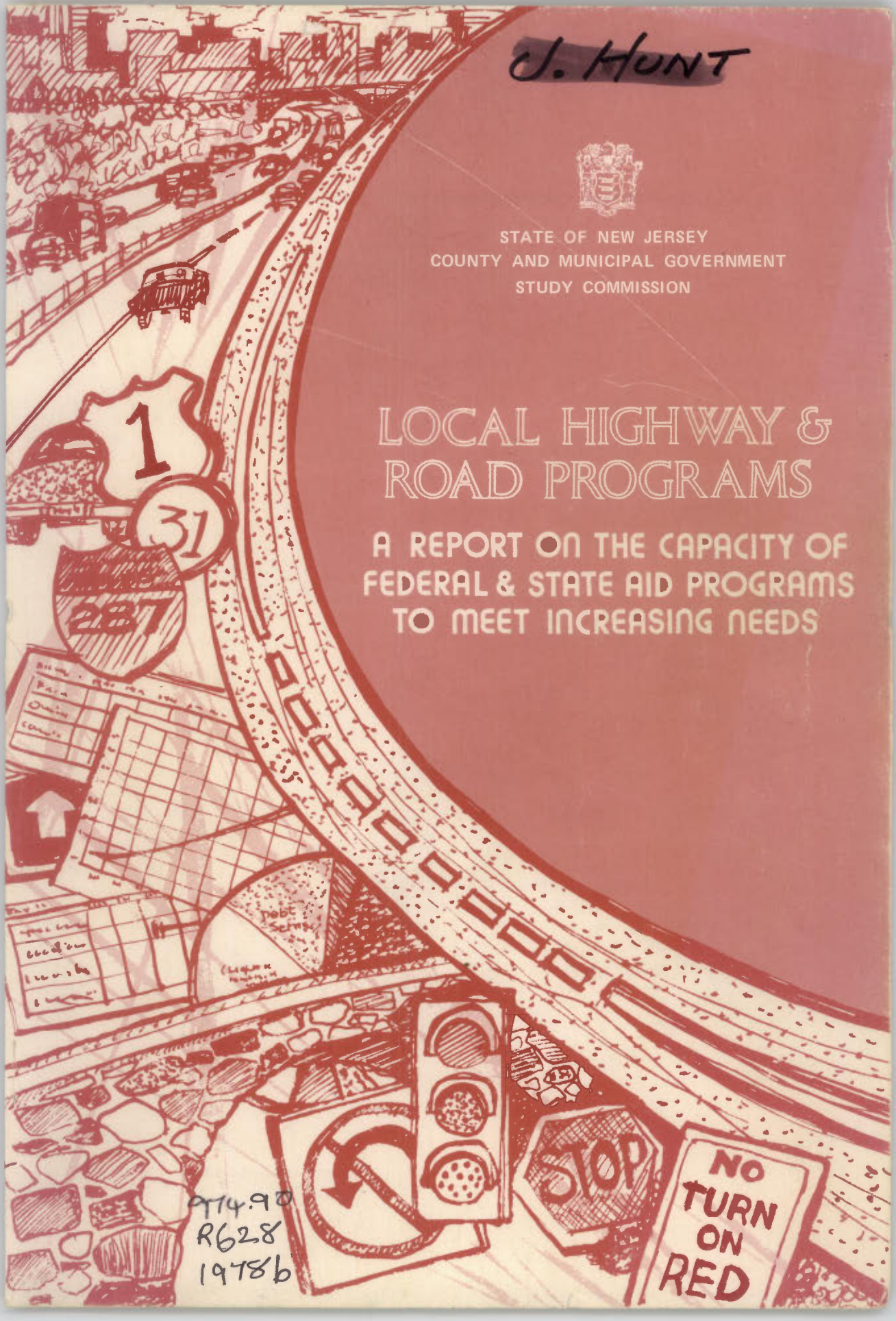
J. HUNT

STATE OF NEW JERSEY
COUNTY AND MUNICIPAL GOVERNMENT
STUDY COMMISSION

LOCAL HIGHWAY & ROAD PROGRAMS

A REPORT ON THE CAPACITY OF FEDERAL & STATE AID PROGRAMS TO MEET INCREASING NEEDS



A list of Commission publications appears on the inside back cover.

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[redacted]

State of New Jersey

COUNTY & MUNICIPAL GOVERNMENT STUDY COMMISSION

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SIXTEENTH REPORT

September, 1978

[redacted]

COUNTY AND MUNICIPAL GOVERNMENT STUDY COMMISSION

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State of New Jersey

COUNTY AND MUNICIPAL GOVERNMENT STUDY COMMISSION
115 WEST STATE STREET TRENTON, NEW JERSEY 08625

TO HIS EXCELLENCY GOVERNOR BRENDAN T. BYRNE, AND HONORABLE MEMBERS OF THE SENATE AND GENERAL ASSEMBLY:

The County and Municipal Government Study Commission is pleased to submit its 16th report, LOCAL HIGHWAY AND ROAD PROGRAMS: The Capacity of Federal and State Aid Programs to Meet Increasing Needs. The report focuses principally on the 29,954 miles of roads which are under the jurisdiction of municipal and county governments, constituting 92% of the State's road system. The importance of these roads and highways (in addition to bridges under counties' jurisdiction) to the well-being of our population is undeniable; their neglect and deterioration will only compound the economic and social problems of communities and individuals throughout the State.

The accumulated investment in roads and highways of some $10 billion (at current replacement cost) requires extensive maintenance, improvement, reconstruction, and new construction to serve the diversified needs of the citizens of the State. Such requirement was recognized well over three decades ago with the institution of State and federal programs to aid counties and municipalities to maintain local roads in an acceptable condition to serve as components of a State-wide system. In time, these programs became integral parts of the intergovernmental commitment to the viability of this system. In recent years, the necessary support to fulfill this commitment, however, has not been forthcoming. As indicated by its subtitle, this report examines the capability of existing programs to meet current and foreseeable needs.

The survey on which this report is based was wide-ranging, covering municipal, county, State and federal agencies involved in virtually every aspect of road and highway programs. There was little disagreement among those who responded to the Commission's survey concerning the *dimensions* of the problem:

local roads are faced with physical deterioration;

inadequate fiscal investment has lead to deferral of improvements;

reconstruction required to maintain road viability has been delayed in many instances to a point where it is virtually foregone.

The causes for current dilemma are described in the following chapters, dealing respectively with fiscal, planning, and programming aspects of this intergovernmental process. The causes for current problems in traffic control and safety-related issues are covered in a separate chapter. Each chapter contains individual findings, conclusions, and recommendations, which are further integrated and summarized in the final chapter of the report. At this point, however, the Commission wishes to emphasize the need for:

an expanded fiscal commitment to the local road, highway and bridge system;

changes in the eligibility, participation, and related characteristics of current local aid programs;

restructuring of the intergovernmental relationships in the administration and management of highway aid programs, including the area of shared responsibility -- traffic control and safety.

We urge the careful consideration of this report's recommendations. The Commission is ready to assist in any effort to bring about their realization.

Respectfully submitted by the members of the County and Municipal Government Study Commission:

/s William V. Musto, Chairman
/s/ Garrett W. Hagedorn
/s/ Joseph A. Maressa
/s/ Joseph W. Chinnici
/s/ Christopher J. Jackman
/s/ Steven P. Perskie
/s/ Alan Augenblick
/s/ Doris Dealaman
/s/ Robert Cawley
/s/ Robert H. Fust
/s/ Fred G. Stickel, III
/s/ Myles J. Gilsenan
/s/ Andrew S. Polito
/s/ Samuel A. Alito, Secretary

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The Commission is indebted to many municipal, county, State and federal officials who took time from their busy schedule to respond to our numerous inquiries and questionnaires.

For their interest, cooperation, advice and support, the project team extends its gratitude to the following individuals in the Department of Transportation, for their assistance and understanding in developing this report: Russell H. Mullen, Assistant Commissioner of Highways; Frank Parker, Chief Engineer, Design; Edward Baker, Chief, Bureau of Local Aid; David Majofsky and Alan Abronski, Supervising Engineers, Bureau of Local Aid; Charles Fell, Chief and Robert McLaughlin, Principle Engineer, Bureau of Capital Programming and Monitoring; and Jeffrey Hall, Deputy Attorney General.

The Commission would like to extend its special appreciation and recognition to John Obermeier, Chief of Bureau of Urban Transportation Planning; William Gwynn and Jarrett Hunt, Chief Engineer and Assistant Chief Engineer, respectively, Traffic Operations; and Robert Nolan and Norman Deitch, Bureau of Traffic Engineering, for the countless hours assisting and advising the project team, and for their substantive contributions to many areas of this complex study.

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In the Office of Fiscal Affairs to: Karl Weber and William Zuzzio. The Commission appreciates Mr. Weber's assistance in reviewing the report. Also, in the Department of Community Affairs, Local Finance Board, to Helen Matthews, Secretary, for her assistance.

Appreciation is extended to Messrs. John J. Kessler and Richard Tompkins of the Federal Highway Administration. Also, special recognition to Mr. William Schmitt for assisting in assessing and reviewing the report.

Many county and municipal officials were contacted throughout the course of the study. At the county level, the Commission wishes to extend its appreciation to the County Engineers and Planners, and in particular to Charles Van Benschoten, Monmouth County Engineer; Neil Clarke, Cape May County Engineer, Richard Lane, Ocean County Engineer, and Robert Halsey, Monmouth County Planner. At the municipal level, the Commission wishes to extend its appreciation to municipal engineers, and in particular to Michael Barrett, Osborne Campbell, James Lowe, and Stanley Stires.

Finally, our appreciation to Ellis Vieser, New Jersey Alliance For Action, for his general advice, insights, and contributions to the study.

While the responsibility for this report, its conclusions and recommendations, and its implications rests solely with the Project Team and the Commission, it is accurate to say that without the assistance of these many individuals this report could not have been written.

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CHAPTER 1

INTRODUCTION

The continuing need for adequate highways, roads, and bridges in general, and in particular for meeting the present and future demands of New Jersey, is hardly subject to dispute. This is the basic assumption of this report. Currently, there are legitimate and important debates on issues relating to transportation policies, e.g., the appropriateness of further expansion of the highway system or the public sector's choices regarding alternative transportation modes. Such issues, however, are beyond the scope and purpose of this study, which concentrates on the management and administration of existing highway programs, and on those needs and problems rooted in the existing highway system. Within this more narrowly defined, but extremely important context, there exists no serious debate. The need to preserve and maintain our existing highway system remains essential for a functioning society and viable economy in the State. While commitment to highway transportation, funding levels and mechanisms, and other basic or program choices may vary, even those who advocate major change would not support the abandonment of the existing roadway system, allowing it to crumble into a state of uselessness and decay.

Within the overall highway system, comprised of interstate, major federal and state highways, county roads and bridges, and municipal roads and streets, this report has focused upon the needs and responsibilities facing county and municipal governments. Since fully 90% of New Jersey's road mileage, and all bridges except for those on federal or state highways, are statutorily committed to the care of the respective counties and municipalities in which they are located, the significance of local government's role in the highway system is apparent. The decentralization of responsibility to county and municipal government has placed a corresponding fiscal burden upon those governmental units. At the same time, because local governments have limited revenue sources, and because county and local roads are most often secondary roads or feeders, and primarily of local importance (in comparison with federal and state roads), historical forces as well as policy trends have led to local government reliance upon supplemental sources to finance their highway and bridge responsibilities. More recently, heavy federal involvement of local government assistance in highway concerns has supplied a pool of available money to aid states in their responsibilities and to further national goals and objectives. Thus, concomitant with an understanding of local roles, any contemporary treatment of road and bridge needs requires an accounting, acknowledgement, and assessment of the existing *intergovernmental* relationships. Treatment of such issues is given prominent attention in this report.

Beyond a recognition of the importance of these intergovernmental relationships, chapters two, three and four each undertake to discuss and analyze, in detail, different aspects of local governments' participation and responsibilities in highway aid programs. Chapter II provides an analysis of State and federal aid programs which are examined in light of perceived and quantified needs. Chapter III deals with the planning and selection of local highway projects, including a discussion of the roles and responsibilities of each of the various governmental entities involved. Chapter IV presents the problems and processes associated with the actual implementation of highway projects and utilizes a series of case studies to examine the nature of current efforts. Each of these chapters is concluded with a specific set of recommendations pertaining exclusively to their respective topics. Chapter V has as its subject a somewhat more discrete topic of traffic control, in which intergovernmental relationships again form a key element.

Chapter VI contains the Commission's conclusions and recommendations. Its purpose is to present, in summary form, a broad perspective of the more detailed findings of this report. In addition, it presents a synthesis of the various threads and themes that are found throughout this study.

Several initial conclusions emerge from the report's findings and analysis: first, it is difficult to see how this fundamental and vital public service will be provided in the future without a rejuvenated State aid program; second, there is a need for the re-examination and redirection of State aid policies; third, the system for reconstructing, resurfacing, and maintaining New Jersey's roads must become more responsive to local needs because over 90% of New Jersey's roads are under the jurisdiction of county and municipal governments; and fourth, there is a clear opportunity to reduce time-consuming delays by permitting greater flexibility for professionals in municipal and county governments, and increasing their overall involvement in the planning and implementation of federal and State aid programs.

CHAPTER II

STATE AND FEDERAL AID PROGRAMS AND LOCAL ROAD NEEDS

A. OVERVIEW

The State's counties and municipalities have invested billions of dollars into building and developing their road systems – an enormous capital investment amounting to an estimated present value of $10 billion. Realizing the extensive wear and tear on our county and municipal roads, it is understood that 1½% of the present value (ten billion dollars) represents (as a rule of thumb) minimum annual expenditures for resurfacing and reconstructing the local road system. This 1½% or some $150 million is considered a necessary improvement figure, aside from the amounts needed for normal maintenance and any new construction.

In 1974, State aid for county and municipal roads was discontinued after some twenty-eight years of State support. The absence of State aid, and the fact that only 9% of all municipal road miles qualify for Federal aid by virtue of their inclusion on a federal system, has seriously hurt the municipal road program. As this chapter demonstrates, there is a clear need for a redesigned (and expanded) State aid program which would respond systematically and with continuity to municipal and county needs in this critical service area.

State Aid Road Programs

State aid to local governments for road purposes has been available in New Jersey since before the turn of the century. As early as 1891, the State had enacted a program of assistance to counties, totaling some $75,000 per year. Present State aid statutes were enacted beginning in 1946, and were substantially expanded in 1965-66. The earlier 1946 statutes remain as the primary State aid programs, even though the funding levels have never been raised to reflect present day costs. In general, state aid for highways has been discontinued since October 1974 with no new applications having been accepted since that date, although the program legislation is still in effect. Relatively small appropriations have been made since 1974 to fulfill prior commitments.

Figure II-1 is a list of the presently legislated State aid programs, indicating the 1946 and the 1965-66 enactments. A seventh program was enacted in 1966 as a *one-time* appropriation of $34 million for the use of both counties and municipalities. This 'extraordinary aid' was allocated by formula, with $20 million provided to counties and $14 million to municipalities. In terms of this presentation, it is not considered as a program because of its one year aspect.

Figure II-1
Present State Aid Programs

Program Titles	Enabling Legislation	Past Annual Appropriations*	Type of Work Permitted	State Share
Mun. Aid Construction (Herrick Act)	N.J.S.A. 27:15-1.14 (1946)	$ 2.1 million	construction reconstruction	90%
Municipal Aid Formula	N.J.S.A. 27:15-1 (1946)	$ 4.5 million	construction reconstruction	90%
County Aid Operations	N.J.S.A. 27:13-1, 14-1, and 52:27B20 (1946)	$9.155 million	construction reconstruction maintenance	100%
Reimbursed Highway Safety Lighting	N.J.S.A. 27:7-21 (1946)	$423,725 (average per yr)	Lighting maintenance	50% 50%
Construction damage	N.J.S.A. 27:13-10 (1964)	$200,000	reconstruction	90%
State Aid Road System	N.J.S.A. 27:13A-1 (1967)	$15 million	construction reconstruction	county 50% mun. 75%

*State assistance for construction and reconstruction was on a reimbursement basis for all programs. For maintenance programs, State assistance was on a pre-payment basis.

Source: NJDOT/N.J.S.A.

Figure II-2 is a synopsis of state appropriations under these programs from 1946 to the present. As can be seen, a total of $588.5 million has been granted to New Jersey local governments in the last 30 years with some $262 million in the primary county aid program, and some $183 million in municipal aid.

Municipal Aid Programs

There are two primary municipal aid road programs, both enacted in 1946: the Municipal Aid Construction program and the Municipal Aid Formula program. The Municipal Aid Construction program, otherwise known as the Herrick Act, provided $100,000 per county, to be further allocated to the municipalities within each county at DOT's* discretion. Throughout most of the life of this program, the State practiced 'Senatorial courtesy': i.e., permitting members of the State Senate to participate in assigning the funds within their respective counties.

The program was limited by the fact that $2.1 million divided up among the 567 municipalities in New Jersey resulted in very small amounts going to any one municipality. The inflationary trends in the early 1970's made apparent the need to concentrate these limited funds on fewer projects. But under the 'Senatorial courtesy' procedure the funds continued to be spread so thin that the project processing alone was frequently more expensive than the entire authorization, thus making "red tape" an issue for the first time. In order to overcome this inadequacy, NJDOT eliminated the "Senatorial courtesy" practice

*As cited in this report DOT or NJDOT refers to the New Jersey Department of Transportation.

Figure II-2

STATE GRANTS-IN-AID FOR ROAD PURPOSES 1946 – 1977

(FY) Year	To Counties	To Municipalities	Highway Lighting Reimbursement	Construction Damage	State Aid Road System	Extraordinary Aid County	Extraordinary Aid Municipal	Total
1946	$ 6,735,000	$ 3,150,000	$ 330,000					$ 10,215,000
1947	8,155,000	4,200,000	330,000					12,685,000
1948	9,155,000	5,746,446	340,000					15,241,446
1949	9,155,000	6,802,049	325,000					16,282,049
1950	9,155,000	5,755,742	325,000					15,235,742
1951	9,155,000	5,755,742	340,000					15,250,742
1952	9,155,000	5,721,127	325,000					15,201,127
1953	9,155,000	5,721,700	335,000					15,211,700
1954	9,155,000	6,771,700	340,000					16,266,700
1955	9,155,000	6,771,700	340,000	– Enacted in 1965 –	– Enacted in 1965 –	– Enacted in 1966 –	– Enacted in 1966 –	16,266,700
1956	9,155,000	6,771,700	378,000					16,304,700
1957	9,155,000	6,768,700	380,000					16,303,700
1958	9,155,000	6,769,403	210,000					16,134,403
1959	9,155,000	6,769,403	210,000					16,134,403
1960	9,155,000	6,769,403	375,000					16,299,403
1961	9,155,000	6,769,403	375,000					16,299,403
1962	9,155,000	6,588,189	392,000					16,135,189
1963	9,155,000	6,588,189	400,000					16,143,189
1964	9,155,000	6,588,189	411,000					16,154,189
1965	9,155,000	6,588,189	385,000					16,128,189
SUB TOTAL	$179,680,000	$123,366,974	$6,846,000	–0–	–0–	–0–	–0–	$309,892,974

Figure II-2 (Continued)

STATE GRANTS-IN-AID FOR ROAD PURPOSES 1946 – 1947

(FY) Year	To Counties	To Municipalities	Highway Lighting Reimbursement	Construction Damage	State Aid Road System	Extraordinary Aid County	Extraordinary Aid Municipal	Total
1966	$ 9,155,000	$ 6,600,000	$ 410,000	$ 200,000				$ 16,365,000
1967	9,155,000	6,600,000	310,000	200,000		$20,000,000	$14,000,000	50,265,000
1968	4,577,500[1]	3,300,000[1]	215,000	100,000	$ 7,500,000	– 0 –	– 0 –	15,692,500
1969	9,155,000	6,600,000	435,000	100,000	15,000,000	– 0 –	– 0 –	31,290,000
1970	9,155,000	6,600,000	445,000	200,000	15,000,000	– 0 –	– 0 –	31,400,000
1971	9,155,000	6,600,000	445,000	200,000	15,000,000	– 0 –	– 0 –	31,400,000
1972	9,155,000	6,600,000	450,000	200,000	– 0 –	– 0 –	– 0 –	16,405,000
1973	9,155,000	6,600,000	200,000	200,000	– 0 –	– 0 –	– 0 –	16,155,000
1974	9,155,000	6,500,000	300,000	200,000	5,170,000	2,163,498	1,000,000	24,488,498
1975	4,577,500[1]	3,300,000[1]	550,000	200,000	6,000,000	1,000,000	1,000,000	24,505,000
1976	– 0 –	– 0 –	625,000	– 0 –	– 0 –	– 0 –	8,000,000[2]	8,625,000
1977	– 0 –	– 0 –	700,000	– 0 –	– 0 –	– 0 –	11,182,681[2]	11,882,681
TOTAL	$ 82,395,000	$ 59,300,000	$ 5,085,000	$1,800,000	$63,670,000	$23,163,498	$35,182,681	$278,573,679
TOTAL	$262,075,000	$182,666,974	$11,931,000	$1,800,000	$63,670,000	$23,163,498	$35,182,681	$588,466,653

[1]Half-year appropriations.

[2]These amounts were appropriated to cover prior commitments under both SARS and Extraordinary Aid, county and municipal.

SOURCES: Wilbur Smith Study, OFA, and NJDOT.

and began to limit the number of projects approved, basing their decision on need as determined by engineering criteria. Figure II-3 is an illustration of the different allocations in one county. As can be seen, the 1965 municipal apportionments were relatively small while the 1975 apportionments were consolidated so that more funds could be applied to fewer and supposedly more essential projects.

Prior to DOT's effort to distribute Herrick funds more judiciously, the municipalities frequently found it to their best interest to permit their Herrick Act authorizations to accumulate over a period of years until the amount was sufficient to cover all or a major portion of a designated project. From 1968 to 1975, the ratio of Herrick funds expended to total Herrick Act appropriations averaged 77% per year (see Figure II-4). According to State officials, this annual inability to use approximately one-fourth of the Herrick authorizations was interpreted by executive and legislative policy makers as evidence that the programs were not essential, and contributed to the 1974 decision to discontinue funding.

Figure II-3
Herrick Act Apportionments – Atlantic County, 1965 and 1975

Municipality	Apportionments	
	1965	1975
Absecon City	2,500	–
Atlantic City	26,000	15,000
Brigantine City	4,000	–
Buena Borough	–	–
Buena Vista Township	2,500	15,000
Corbin City	–	–
Egg Harbor	5,000	
Egg Harbor Township	–	20,000
Estell Manor City	3,000	–
Folsom Borough	1,000	8,000
Galloway Township	4,000	–
Hamilton Township	8,000	–
Hammonton Town	5,000	–
Linwood City	2,500	–
Longport Borough	7,500	15,000
Margate City	4,000	–
Mullica Township	3,000	7,000
Northfield City	5,000	–
Pleasantville City	5,000	–
Port Repulic City	2,000	–
Somers Point City	2,000	20,000
Ventnor City	4,000	–
Weymouth Township	4,000	–
TOTAL	100,000	100,000

Source: NJDOT

Figure II-4

Ratio of Municipal Aid Construction (Herrick Act)
Funds Expended to Total Appropriated, 1968 – 1975

FY	Appropriated	Expended	(%)
1968	$1,050,000	$	
1969	2,100,000	1,634,092	(77.8)
1970	2,100,000	1,414,500	(67.3)
1971	2,100,000	1,729,794	(82.4)
1972	2,100,000	1,506,466	(71.7)
1973	2,100,000	1,735,322	(82.6)
1974	2,100,000	1,589,422	(75.7)
1975	1,050,000	1,708,697	(81.4)
		Average	77%

Source: NJDOT

Another aspect of the Herrick Act, which served as a limiting factor, was that the funds could only be used for capital construction, and not for maintenance and operations. Since road maintenance is a major municipal budget item, local governments frequently were forced to use their limited financial resources in support of maintenance activity instead of new construction or reconstruction. This again, caused the Herrick Act funds to remain idle and added to the misconception that the program was unneeded.

New Jersey municipalities were somewhat more successful in making use of the Municipal Aid Formula program than the Herrick Act. Two of the Formula program's characteristics account for this relative success. First, the Formula funds were distributed annually, with each municipality receiving roughly the same amount each year, thus enabling the local governing body to plan in advance for the use of the funds and include them in its budget. Conversely, under the Herrick Act, a municipality could not always count on assistance. For example, in 1969, when 'Senatorial Courtesy' was in effect, only 18 of Camden County's 37 municipalities were awarded a Herrick Act project, ranging from $2,000 to $9,000 for each.

Second, the Formula funds could be used for maintenance activities, and, when so used, could be received as *prepayment*. The Herrick Act funds could only be used for construction and reconstruction, and thus were paid only as *reimbursement* for completed work. This Herrick Act stipulation necessitated an ability, on the part of the municipality, to pay the entire cost of the project before State aid would be granted. Municipalities did not always have this ability, especially as construction costs have risen in this decade.

In spite of its relative success, the Formula program did not always adequately address the needs of local governments. Normally, the allocation formula itself contained variables for population, road mileage, and vehicle registration. Various combinations of these variables have been tried over the years, but none has been judged to be completely adequate. For one thing, the formula method assures that each municipality will get something. While this may be totally equitable, it cannot always be justified in terms of actual need. The 1969 Municipal Formula Aid distribution showed the generally small amounts available to municipalities, as reflected in the following examples:

Asbury Park: $8,216	Cherry Hill: $10,792	Lambertville: $2,668
Atlantic City: $26,742	Jersey City: $108,171	Trenton: $49,000
		Union City: $19,750

In some rural areas, the annual Formula funds amounted to the entire municipal budget figure for road maintenance, while in urban areas it was frequently only a small portion of the total maintenance budget. The formula also left no flexibility to account for those needs which were not addressed by the basic formula components. Thus, the Municipal Aid Formula program, while not as underutilized as Herrick, was still fraught with many problems.

County Aid Programs

In general, it can be concluded that the municipal aid programs, because of their inherent limitations and underutilization, have caused serious misunderstandings about the local state aid programs. Other state aid programs do not reveal the same degree of limitations and utilization. In fact, the county program has demonstrated a high degree of effectiveness. As Figure II-5 shows, the counties have been successful in putting to use nearly all available State aid funds, using most of the money in the same year it was appropriated.

The county aid legislation provided two different distribution mechanisms for the $9,155 million annual appropriation: $8 million was allocated to the 21 counties by formula,* and the remainder, $1,155,000, was distributed in equal amounts of $55,000 to each county.** Significantly, all of these funds could be used by the counties for maintenance activities, a major distinction from municipal aid programs illustrated in the follow comparative figures. There are 6,795 miles of county roads in the State which require maintenance, compared to 23,159 miles of municipal roads. The State has provided $9.155 million to maintain these county roads, or $1,347 per mile, compared with $4.5 million in municipal aid which could be used for maintenance, or $194 per mile.

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*Distributed by formula, for the purposes of construction, reconstruction, maintenance and repair, operation, policing, and lighting of county roads and bridges; for the payment of principal and interest on obligations heretofore incurred for any such purposes, and for the extension of the county highway system, pursuant to N.J.S.A. 52:27b-20.

**Construction, reconstruction, maintenance and repair of county roads and bridges on the basis of $55,000 per county pursuant to N.J.S.A. 27:14-1.

Figure II-5

Ratio of County Aid Funds *Expended* to Total County Aid Funds *Available*, 1968 – 1976

FY	Total Appropriated	Total Available*	Total Expended	% Expended
1968	$ 4,577,500	$ 4,736,511	$4,125,900	87.1
1969	9,155,000	9,765,611	9,715,238	99.5
1970	9,155,000	9,205,373	9,145,751	99.4
1971	9,155,000	9,214,622	9,093,035	98.7
1972	9,155,000	9,276,587	8,983,217	96.8
1973	9,155,000	9,448,370	9,242,346	97.8
1974	9,155,000	9,361,024	9,115,944	97.4
1975	9,155,000	9,360,080	6,097,329	65.1
1976	-0-	3,262,751	3,107,196	95.2
TOTAL	$68,662,500	$73,630,929	$68,625,956	93.2

*Includes reappropriation of prior year's unexpended balance
Average Expenditure Rate = 94.6%

SOURCE: DOT/OFA

It is also significant that there are only 21 counties to share the $9.155 million annual appropriations, while 567 separate political divisions must share the $6.6 million in municipal aid funds. The counties were thus better able either to focus state aid funds on a priority capital construction project, or to disperse them throughout the county for general maintenance, as need would dictate. A third major difference between county and municipal programs was that county aid project costs were 100% reimbursable by the State, while the State's share of municipal aid projects could not be greater than 90% of total project cost.

Another factor, not related to the program itself, but nevertheless having a substantial effect on county utilization of state aid, is that the counties generally have an experienced cadre of full-time engineering and professional personnel who possess an extensive familiarity and knowledge of programs and procedures. In contrast, most municipalities do not have those staff capabilities. Responses to a Commission questionnaire indicate that the average county engineering department has 16 full time professional staff members, 11 of whom are associated with roads and bridges, and two of whom are traffic engineers. Most municipalities, by contrast, normally employ only one engineer, and 68% of the municipal engineers are part-time employees. Moreover, 43% of the municipalities responding stated

that there had been a change in their engineering personnel in the last five years, indicating a lesser degree of stability than at the county level.

The distinction between county and municipal ability to use state aid becomes apparent when one examines the number of projects still active over two years after the programs have been discontinued. Figure II-6 indicates that, as of June 1977, out of a total of 291 still active projects, 267 were municipal projects, and only 24 were county projects. Of the 267 municipal projects, 143 were Herrick Act projects and 74 were Formula type construction projects. By comparison, only 13 of the 267 were maintenance projects.

The right hand columns of Figure II-6 show the numbers of projects for which funds have been approved, but no action was taken to get the projects underway. The 170 projects in this category total over $2 million.

Joint Programs

The remaining local-State aid programs, designed for the use of both counties and municipalities, are more specialized in purpose than the foregoing programs. These include:

1. Reimbursed Highway Safety Lighting is a program to assist local governments in maintaining roadway lighting at highway-rail crossings, and at the intersections of state highways and local roads. The annual appropriation varies in that it reflects the cost of such work performed during the previous year, whatever that cost might be. This program is still being funded annually, and has averaged $423,750 per year during 1966-1977.

2. The Construction Damage Program was instituted in 1965 for the purpose of providing aid to local governments in reconstructing roads destroyed by construction equipment, i.e., vehicles weighing over 40,000 pounds and bearing "contractor" license plates. The annual statewide appropriation was $200,000. Applications for the Construction Damage Program greatly exceeded available funds. In 1969 applications were forwarded from 15 of the 21 counties and, including both county and municipal projects, a total of 41 applications were recorded.

Total Projects Requested	$3,410,889.29
Total Amounts Awarded	$ 200,000.00

3. The State Aid Road System (SARS) program was created in 1967 as probably the most ambitious program of local-state road aid attempted in New Jersey. It was unique in that a system of roads was designated irrespective of political jurisdiction. Roads were placed on the system based upon their area-wide importance. The aid funds for projects in this system were granted to any unit of local government wishing to make capital improvements on the portion of the system under their jurisdiction.

The SARS program made use of certain highly beneficial administrative tools, such as time limits for submission of project applications; target dates for the start and completion of construction; and phased funding.

The $15 million annual appropriation for SARS was significant in that it doubled the amount of state aid being provided. This large figure, however, was also partially responsible for the demise of the state aid program. Because of the high dollar amounts, the projects were sizeable, and thus took a substantial amount of time in the design and preparation stage, during which time the authorized funds were accumulating rapidly. By 1971 a total of $51 million had amassed in the account and only $1 million had actually been spent in three years time. Upon discovering this large sum, the State Legislature, feeling it could be better used elsewhere, lapsed $35 million in 1971, assuring DOT that the funds would be restored as they were needed. However, the restoration of funds did not take place for two reasons:

Figure II-6
Program Status as of June 1977

	MUNICIPAL								COUNTY				INACTIVE MUNICIPAL PROJECTS					
	CONSTRUCTION						M&R[3]		CONSTRUCTION									
	HERRICK	FORMULA	X-AID[1]	SARS[2]	CONSTRUCT. DAMAGE	TOTAL	FORMULA	TOTAL MUNICIPAL	X-AID	SARS	TOTAL COUNTY	GRAND TOTAL	HERRICK	$000's	FORMULA	$000's	X-AID	$000's
Atlantic	9	1		2		12	1	13		1	1	14	2	14.8				
Bergen	8	13	5	2		28	1	29	1		2†	31			1	11.0		
Burlington	8	5	1	2	1	17	2	19		4	4	23	5	60.0	5	22.0	2	40.7
Camden	7	4				11	1	12	1	1	2	14	5	51.0	3	12.0	1	0.1
Cape May	4	1				5		5			-	5	3	23.5				
Cumberland	6	1		1		8		8	1		1	9						
Essex	9	9	3			21		21		1	1	22	1	31.0				
Gloucester	4	2				6		6			-	6	3	45.7	1	1.0		
Hudson	10	7	1	1		19		19		1	1	20	2	55.0	4	91.0	1	2.7
Hunterdon	8		1		1	10		10		1	1	11	6	101.6			3	22.5
Mercer	6	2				8	1	9	1		1	10	2	30.6			2	122.3
Middlesex	10	3		1	1	15	1	16	1	1	2	18	8	112.6	7	161.2	4	81.2
Monmouth	7	6	1	3		17	2	19		2	2	21	15	142.4	17	79.4	6	71.4
Morris	8	2	2			12	3	15		1	1	16	5	55.6	9	89.3	3	98.9
Ocean	5	4	3			12	1	13			-	13	11	100.9	3	17.2	9	47.3
Passaic	4	8	2	1		15		15	1		1	16						
Salem	3					3		3	1	1	2	5						
Somerset	9	1				10		10		1	1	11	2	55.5	1	3.2		
Sussex	5					5		5			-	5	4	50.5	1	5.0	1	12.3
Union	2	3		1		6		6	1		1	7	3	47.0	2	3.9	1	22.9
Warren	11	2	1			14		14		2	2	16	6	72.7			1	4.7
Total	143	74	20	14	3	254	13	267	8	17	26	293	83	1050.4	54	496.2	34	527.0

1. X - Aid - Extraordinary Aid — 2. SARS - State Aid Road System — 3. M & R - Maintenance & Report — † Includes 1 "other"

the fiscal crisis of the mid 1970's and the creation of large local-federal aid programs, which removed the need for the entire SARS program since most, if not all, of the SARS mileage is now contained on one or another of the federal aid systems. The SARS program is now defunct.

It should be mentioned that the Extraordinary Aid provided in 1966, and listed in Figures II-2 and II-6, was a very significant appropriation -- $34 million -- and that there were still some 28 of these "X-Aid" projects active in mid 1977, while 34 of these projects are inactive, leaving more than $500,000 potentially available in the State Treasury.

In summary, the joint programs are a mixture of high potential and little success. The SARS program was unique in concept and well funded, but failed due to an administrative system that could not process the projects and utilize the dollars in a timely manner. Extraordinary aid acted as a boost for State aid but was so vague in terms of purpose and use as well as process and procedures, that unused funds remain some 10 years after the one-time allocation was passed. The Highway Lighting Program is essentially reserved for use at locations and on projects of interest to the State but under the jurisdiction of local government. While Construction Damage was a reasonable program it was very limited by its special purpose nature, and appropriations were so small that they were inconsequential on a state-wide basis.

Summary

In general, counties were better able to make use of primary State aid programs than were municipalities. The reasons for this relate to the programs themselves, and to the units of government to which the programs were directed. It is acknowledged that not all local government units are alike in their capabilities, but under the State aid programs counties and municipalities are separated and considered to be homogeneous with all others of their kind. Figure II-7 recapitulates the differences in various aspects of State aid for county and municipal road programs.

Since the discontinuance of local-state aid in 1974, local governments in New Jersey have had to look to other sources for funds to support local road programs. The main source of support has become the federal government. In lieu of actual state grants-in-aid to local governments, the New Jersey Department of Transportation made a policy decision to redirect those resources to fulfill the local matching requirements of federal aid. The amounts of money generated by this type of assistance are greater than that generated by past State aid programs, but the federal programs do not always adequately address local needs, and therefore cannot properly function as a substitute for traditional State aid to local governments. The following section will explain these points in greater detail.

Figure II-7

DIFFERENCES BETWEEN COUNTY & MUNICIPAL GOVERNMENTS IN STATE AID ROAD PROGRAMS

	County Aid	Municipal Aid	Significant Difference
Engineering Staff	High degree of continuity; high level of expertise in intergovernmental procedures.	Moderate degree of continuity (43% turnover in 5 year period); lesser degree of expertise in intergovernmental procedures.	YES – County advantage
Funds	$9.155 million per year	$6.6 million per year	YES – County advantage
Eligible Work	All $ eligible for construction and maintenance.	$2.1 million construction only. $4.5 million construction and maintenance.	YES – County advantage in maintenance area.
Payments	Maintenance - quarterly prepayment. Construction - reimbursement; can be phased.	Maintenance - annual prepayment. Construction - Reimbursement; can be phased.	NO
Approval Procedures	Maintenance - annual work program. Construction - project application	Maintenance - annual work program. Construction - project application.	NO
Number of separate governmental units eligible	21	567	YES – County advantage
Road mileage eligible	6795 miles - plus all bridges	23,159 miles	YES – County advantage

B. FEDERAL AID ROAD PROGRAMS

Article 1, Section 8 of the U. S. Constitution authorizes Congress "to establish post roads." Since 1912, when Congress passed the first Federal-Aid for Highway Construction Act, the number of authorization categories has grown, until 1970, when 15 separate programs were funded from the Highway Trust Fund.

The great majority of our national roads and streets are the responsibility of local governments - counties and municipalities. Nationally, the federal interest in highway efforts is confined primarily to the 902,631 miles of federal-aid highways or the interstate, urban, primary, and secondary systems. These roads have been selected by the states in conformance with criteria established by Congress to connect major traffic generators and serve the most important traffic movements in the nation.

In New Jersey, too, the preponderance of the State's roads and streets are the responsibility of the counties and municipalities. There are some 32,488 state, county, and municipal road miles in the State:[1]

Municipal Road Miles	23,159 (71.3%)
County Road Miles	6,795 (20.9%)
State Road Miles	2,534 (7.8%)

Roads are grouped by their administrative arrangements - by systems - or by transportation function they provide. In 1970, the national road systems by classification and by the percent of miles was:[2]

Interstate	–	1%
Federal Aid Primary	–	6%
Federal Aid Secondary	–	17%
Other State Highways	–	5%
Local Rural Roads	–	53%
Local Urban Streets	–	12%
Other	–	6%

1. Source: NJDOT
2. Source: NJDOT

In the United States Department of Transportation's 1972 Highway Functional Classification and Needs Study, states and local governments were asked to classify all roads and streets according to their functional groupings. It is expected that by 1990, the top four functional systems, which will encompass less than 12 percent of all road miles, will carry the vast proportion of all highway travel - about 70-75 percent.

The functional classification approach is an important federal tool in deciding which roads have the greatest national interest, and how each should be funded. The four major Federal-Aid highway programs are - the *interstate, primary, secondary,* and the extensions of primary and secondary into *urban* areas. These four programs and systems form the bulk (92%) of the Federal Aid funds for New Jersey roads:

1 - FAI - Federal Aid *Interstate* System
2 - FAUS - Federal Aid *Urban* System
3 - FAP - Federal Aid *Primary* System
4 - FARS - Federal Aid Rural *Secondary* System

Some eleven other programs account for the other eight percent of the Federal Aid funds for New Jersey.

In general, New Jersey's record has been undistinguished with regard to utilization of federal Aid. A 1976 report by the U. S. Secretary of Transportation to the Congress* reveals that New Jersey ranks 48th in the U.S. (including the 50 states, the District/of Columbia and Puerto Rico) in terms of its record in obligating FAUS funds. According to this report, as of June 1976 New Jersey had obligated only 26.8% of its total apportionment. Significantly, only six states outrank New Jersey in terms of the total FAUS funds *available*. Other information released by FHWA corroborates this low rank, and also indicates the same situation for Federal Aid Interstate (FAI) *construction and other* Federal Aid programs.

While this report focuses on those federally aided highway programs which benefit primarily local governments, it should be noted that, as a matter of policy, the FHWA has consistently emphasized a federal-state relationship, thus restricting direct local access to the federal decision-making machinery. In reality then, even when a program benefits primarily *local* roads in New Jersey, it is still a *State* controlled and operated program. Local governments have little control over the disposition of federal Aid programs except through the planning and programming process described in Chapter III of this report.

Thus, any examination of the local role in highway construction and maintenance begin with an examination of the State's role. Of particular concern, in order to address adequately the financial issues involved, is NJDOT's performance, on behalf of local governments, in making timely use of available federal aid. Subsequently, the discussion in this report recognizes all participants in the federal aid process - federal agencies, the State, counties, and municipalities.

The Four Major Federal Aid Programs

Figure II-8 illustrates how the four federal aid systems are aligned by governmental level in New Jersey, as of June 1977. As indicated, the FAI (Federal Aid Interstate) and FAP (Federal Aid Primary) programs are nearly totally of State concern, since 100% of the Interstate system is under State jurisdiction, as is 95% of the Primary system. By contrast, the State has jurisdiction over only 4% of the Rural Secondary mileage and 9% of the Urban System. County roads alone account for 85% of the Rural Secondary mileage, and another 10% is under the purview of municipalities. Similarly, the Urban System is comprised of 56% in county mileage, and 35% in municipal roads.

Significantly, 99% of all State highway mileage is eligible for Federal Aid in these four categories, while 68% of all county road miles qualify. Even more striking is that fully 91% of all municipal road miles *do not* qualify for Federal aid under these programs, even though some 71% of the total State-wide road mileage is in municipal roads. A review of Figure II-8 indicates that there are:

- 2,534 State road miles, of which 99%, or
  2,517 State road miles, are eligible for Federal Aid;

- 6,795 County road miles, of which 68%, or
  4,603 County road miles, are eligible for Federal Aid; and

- 23,159 Municipal road miles, of which 9%, or
  1,991 Municipal road miles, are eligible for Federal Aid.

*Urban System Study: Report of the Secretary of Transportation to the United States Congress. Washington, U. S. Government Printing Office, Jan. 1977.

FIGURE II-8

FEDERAL AID ROAD SYSTEM MILEAGE BY POLITICAL JURISDICTION

	STATE			COUNTY			MUNICIPAL			TOTAL		
	Miles	% of Total State	% of Total System	Miles	% of Total County	% of Total System	Miles	% of Total Municipal	% of Total System	Miles	% of Grand Total	% of Total System
FAU (Urban)	487	19%	9%	2893	43%	56%	1799	8%	35%	5179	16%	100%
FARS (Rural Secondary)	103	4%	5%	1641	24%	85%	189	1%	10%	1933	6%	100%
FAP (Primary)	1510	60%	95%	69	1%	4%	3	0	1%	1582	5%	100%
FAI (Interstate)	417	16%	100%	0	0	0	0	0	0	417	1%	100%
Total Fed. Aid	2517	99%	27%	4603	68%	51%	1991	9%	22%	9111	28%	100%
Non-Fed. Aid	17	1%	0.1%	2192	32%	9.5%	21168	91%	90.4%	23426	72%	100%
Grand Total (All roads)	2534	100%	8%	6795	100%	21%	23159	100%	71%	32488	100%	100%

Source: NJDOT & Commission

The FAI, FAP, FAU,* and FARS are similar in that they all relate to designated systems for roads, and can be defined and identified in New Jersey by mileage under the jurisdiction of each governmental level. These four programs represented 92% of all Federal highway aid for New Jersey in 1977. In addition, it should be noted that only *two* of these programs are primarily local aid programs - the FAU and FARS (Figure II-8).

The FY 1977 Federal Aid Program submitted by NJDOT to FHWA, showing all projects which the State and local governments intend to pursue during the year, indicated the following funding levels for the four major programs:

Figure II-9, 1977 Federal Aid Program Summary (in millions)

Federal Program	Federal Amount	Share %	State/Local Amount	Share %	Total	Number of Projects
FAI	$ 94.1	90%	$10.5	10%	$104.6	39
FAP	$ 33.0	70%	$14.2	30%	$ 47.2	158
FAU	$ 50.1	70%	$21.5	30%	$ 71.6	283
FARS	$ 1.1	70%	$ 0.5	30%	$ 1.6	29
Sub total	$128.3 (92%)		46.7 (95%)		$225.0 (92.5%)	509 (74%)
Total	$194.1 (100%)		49.0 (100%)		$243.1 (100%)	689 (100%)

Source: NJDOT

Since only 9% of all municipal road mileage in New Jersey qualifies for federal aid under the four main "road systems" programs, the other 91% (21,168 municipal road miles representing over 90% of all non-federally aided roads and 65% all state-wide road miles) must compete for the remaining 8% of federal highway aid in other programs. Figure II-10 indicates the modest dimensions of these remaining eight federal programs and their relative share of total federal aid.

Figure II - 10
Distribution of Federal Aid in Special Purpose Programs

Federal Program	Federal Amount	Share %	State/Local Amount	Share %	Total	Number of Projects
Off System	$ 0.8	70%	$ 0.3	30%	$ 1.1	8
Safety	$ 3.3	90%	$ 0.4	10%	$ 3.7	64
Bridge Replacement	$ 1.8	75%	$ 0.6	25%	$ 2.4	9
High Hazard Elim.	$ 3.1	90%	$ 0.3	10%	$ 3.4	19
Rail-Highway Grade Crossings Elim.	$ 2.4	90%	$ 0.3	10%	$ 2.7	44
Pavement Marking Demon. Prog.	$ 1.7	100%	-	-	$ 1.7	17
Emergency	$ 0.8	80%	$ 0.2	20%	$ 1.0	3
Sub-Total	$ 15.8 (8%)		2.3 (5%)		18.1 (7.5%)	180 (26%)
Total	$194.1 (100%)		$49.0 (100%)		$243.1 (100%)	689 (100%)

Source: 1977 Federal Aid Program, NJDOT

* Throughout this report the terms FAUS and FAU System are used interchangeable. The correct reference is FAUS, however.

The following discussion focuses on issues associated with the major federal aid programs having a significant local impact, in particular, the FAU (Urban System) and FARS (Rural Secondary System) program which are the primary programs for the local levels of government.

The Federal Aid Urban System

The Federal Aid Urban System (FAU) was established by the Federal Aid Highway Act of 1970. The FAU system in New Jersey consists of 487 miles of State highway; 2,893 miles of county roads; and 1,799 miles of municipal roads; totalling 5,179 miles in the system. The percentage breakdown is 9% state; 56% county; and 35% municipal. The 5,179 mile Urban System comprises 16% of all the road miles in the State, and over half of all eligible federal aid mileage. The Urban System is second only to the Interstate System in terms of the amount of Federal funds available. However, New Jersey, which ranks seventh in the Nation in terms of the size of its Urban System apportionment, is 48th in its ability to make use of the program.

Since, by definition, the Urban System mileage must lie in the State's major urban areas, 71% of all FAU mileage is concentrated in only nine of New Jersey's 21 counties. Seven of these counties are in the New Jersey portion of the Tri-State Region (N.Y. - N.J. - Conn.) and two, Camden and Mercer, are in the Delaware Valley Regional Planning Commission area (N.J. - Penna.).

The total annual federal FAU allocation is approximately $32 million. Of this, some $25 million is apportioned to the ten-county New Jersey portion of the Tri-State Regional Planning Commission area, including separate allocations to Newark and Jersey City, and the balance directed to the remaining eleven counties in the State. Three quarters of the allocation in the State's portion of the Tri State region are distributed among the sub-regions (i.e. counties) while NJDOT withholds 25% of all FAUS dollars for FAUS projects on State highways, or for projects of a regional significance which cannot be attributed to a particular sub-regional entity (county). It should be noted that the FAUS apportionment in its entirety is made available for project initiation to the local units of government. The 25% withheld for State projects as well as the sub-urbanized area breakdowns are unofficial guides only. Figure II-11 presents a county-by-county breakdown for the Tri-State area.

Figure II-11 Tri-State Subregional FAUS Breakdown[1]

County	FAUS Miles *	Federal $	Match $	Total $
Bergen	739	$ 3,409,686	$1,461,294	$ 4,870,980
Essex	450	3,538,700[2]	1,516,585	5,055,285
Hudson	192	2,322,271[3]	995,259	3,317,530
Middlesex	338	2,101,103	990,472	3,001,575
Monmouth	380	1,363,874	584,517	1,948,391
Morris	452	1,161,136	497,630	1,658,766
Passaic	321	1,695,626	726,697	2,422,323
Somerset	205	571,353	244,865	816,218
Union	326	2,064,243	884,675	2,948,918
Ocean	206	202,738	86,888	289,626
Total		$18,430,730	$7,898,882	$26,329,612

[1] This breakdown was issued by NJDOT only as a guide to programming in 1976 and is intended only as a general picture of the annual amounts each county can expect to receive.

[2] of which, Newark's share is 2,080,039

[3] of which, Jersey City's share is 1,421,799

* Mileage indicated in this column is for comparative purpose only. Distribution of funds is based on urbanized population, not on mileage.

Figure II-12 shows the funding history of the FAU program. During FY 1977, the State was able to obligate some $41.9 million in FAU funds for 247 local projects of which 141 were county and 106 were municipal projects.

Figure II-12 Federal Aid Urban System Funding History (Federal Share Only)

FY	Annual Apportionment	Cumulative Apportionment	Amount Authorized	Cumulative Authorization
1972	$ 4,696,496	$ 4,696,496	$ 48,522	$ 48,522
1973	4,908,743	9,605,239	901,312	949,834
1974	31,108,030	40,713,269	2,491,120	3,440,954
1975	31,821,375	72,534,644	10,969,129	14,410,083
1976	31,905,672	104,440,316	13,684,192	28,094,275
1977	32,152,365	136,592,681	41,824,342	69,918,617
1978	32,641,995	169,234,676		

Since the beginning of the FAU program the State has provided the entire 30% local matching share on behalf of local governments. As the fedal amounts increased so did concommitantly the required local matching share. This prompted a State policy that required matching contribution to constitute the *entire* State effort to aid local governments in their road programs. Thus, in 1974 State aid was discontinued, and State resources were thereafter focused on matching FAU funds.

New Jersey is relatively unique among the states in its provision of the entire local FAU match. According to the federal survey of matching policies,* 13 of the 50 states provide the entire match for FAU projects under the jurisdiction of municipalities, and only eight states provide the match for county FAU projects. There is clear precedent for a sharing of the local match between State and local government.

Federal Aid Rural Secondary System (FARS)

While county governments have jurisdiction over a slight majority of State-wide FAUS mileage, county roads heavily dominated the Rural Secondary system. Out of a total of 1,933 FARS miles, 1,641 miles (85%) are county roads. The remainder is split: 103 miles (5%) State and 189 miles (10%) municipal.

The county FARS mileage amounts to 24% of all county road miles (1,641 out of 6,795 miles). When added to the county FAUS mileage (2,893 FAUS out of 6,795 total county miles, or 43%), fully two-thirds (67%) of all county road miles in New Jersey qualify for federal aid under these two programs. In comparison with the 9% of municipal roads which qualify under these major federal programs, the counties are in a relatively better position to receive needed assistance of a substantive nature.

This picture is somewhat misleading, however, in that until this year the State has not provided the local match for the Rural Secondary program. Therefore, in an era of tight finances, when local governments are unable to produce the required match, the federal funds are not utilized and in that sense become unavailable. In addition, even though the Rural Secondary System is the second largest in New Jersey from the standpoint of mileage,

*Urban System Study: Report of the Secretary of Transportation to the U.S. Congress, Washington, Jan. 1977, U.S. Govt Printing Office.

the Urban System funding level is some 16 times greater than the Rural Secondary ($2 million annually for FARS compared to $32 million for FAUS). In terms of funding then, the Rural Secondary System is not really in the same category with the Federal Aid Interstate, Primary, and Urban Systems.

Some Other Categorical Federal Aid Programs

The Off System Program has been so small that it is almost inconsequential. The eight projects programmed for 1976 would average some $137,500 each - enough to repair a bridge or do some other minor work. In light of such monumental needs - 91% of all municipal road mileage in New Jersey, and 32% of all county mileage - the amount is miniscule. However, for FY 1978 the apportionment made to New Jersey for this program is $3.9 million.

According to the responses of New Jersey County Engineers to a questionnaire administered by the Commission, bridge repair and replacement is the primary area of capital need for the counties. The Federal Bridge Replacement Program is one place where the counties can seek assistance in meeting this need. Again, however, the dollar amount required far exceeds the funds provided.

The county engineers questionnaire indicates that roughly $121.8 million is currently needed by New Jersey counties to replace 1,219 inadequate bridges. The questionnaire also indicates that some $58.3 million is needed for simple bridge repair. Yet, the Federal Bridge Replacement Program provides only some $2 million per year Statewide. Of course, bridge replacement and reconstruction are allowable items under FAUS and FARS, but even if all funds from the three programs combined were used for bridge related work, it would only be an initial step in alleviating the problem.

The other federal aid programs are designed predominantly to address State needs and concerns, and while local government projects are eligible, the funding level is low. For example, Section 203 of the Federal Highway Act provides a program designed to assist states in improving the safety of rail-highway at-grade crossings. One-half of the funds must be used for the purchase and installation of protective devices. Another federal program sets aside funds for the improvement of conditions at high hazard locations. The New Jersey State Police, the Governor's Office of Highway Safety, and the New Jersey Department of Transportation work closely together to identify these locations and obtain funds for corrective action projects.

In summary, with the termination of State aid programs, and the inability of the Federal aid programs to meet their needs, only 9% of all municipal road miles qualify for any significant amounts of federal assistance. Relatively, the present federal aid programs are better able to meet county needs than municipal needs - some 68% of county road mileage qualifies for Federal aid. However, presently, there are significant funds to meet the county's primary need: reconstruction and replacement of bridges.

Having identified and analyzed the scope and degree of State and federal aid for local roads, the next section will assess the degree of local needs and the financial efforts that have been made by counties and municipalities in the road area.

C. LOCAL ROAD NEEDS AND EFFORTS - AN ASSESSMENT

Introduction

It should be apparent from the foregoing discussions that there is a significant gap in the State's system of providing aid to local governments. Briefly, the major findings thus far are:

1. State aid programs for local roads have not been available since 1974.

2. While, technically, all New Jersey local roads are eligible for federal aid, in reality only 9% of municipal roads and 68% of county roads qualify for any substantial amount of aid by virtue of their inclusion on a major Federal Aid Road System. The remaining 91% municipal and 32% county road miles qualify for only minimal amounts of federal aid.

3. While federal aid funds are substantial, especially in FAU, these funds cannot be used for repaving. Also, while reconstruction is permissible, federal regulations normally require corollary improvements, such as widening, which are not always prudent or acceptable from the local viewpoint.*

In order to focus more clearly on the areas of road need, and to establish firmly the exact financial dimensions of the local road needs in the State, the Commission took a combined empirical-analytical approach. Discussions with professionals seemed to indicate that, in the absence of any substantial State aid in the last three years, local roads have been neglected to such a degree that their condition has *reached near crisis proportions.* In order to confirm or deny this assertion, county and municipal engineers were asked by questionnaire, to "assess the seriousness of the road problems" for their respective communities. The responses to this question represent the best judgments of the State's professional personnel - the persons most knowledgeable in local road needs. Analysis of the responses indicates that 62% of the municipal respondents feel *that the condition of municipal roads has reached near crisis proportions.* In response to a separate question 11% of the municipal engineers felt they have *"very* serious" road problems; 44% incicated "serious problems"; 39% had only "sporadic problems"; and 6% had "few problems." No respondent indicated that he has "no major problems" with roads.

Eleven of the 21 county engineers responding to the same questions indicated that the condition of roads *has reached "near crisis proportions" with* "serious" or "very serious" problems, 16 of the 21 *indicated that their bridges are in "serious" or "very serious" trouble.*

County Road Needs and Efforts

An analysis of actual 1975 county road expenditures, as shown in Figure II-13 indicates that the counties spent 47 cents of every road related budget dollar on maintenance. This figure also indicates that, on a per-mile basis, the counties are spending more on maintenance than on improvements. From a professional engineer's viewpoint this relatively high proportion is not considered to be an optimal investment of financial resources. Maintenance costs normally include the cost of snow removal, de-icing, street cleaning, landscaping, and minor patchwork repairs, as opposed to repaving, drainage improvements, widening, and realignments which are considered "improvements" or "betterments."

In keeping with their statements on the "very serious" condition of county bridges, the county engineers indicate that bridge construction is their single most important capital need at present. This highest ranked need is followed by: realignment and widening; general roadway reconstruction; and repaving, as the next three categories of need. (Figure II-14)

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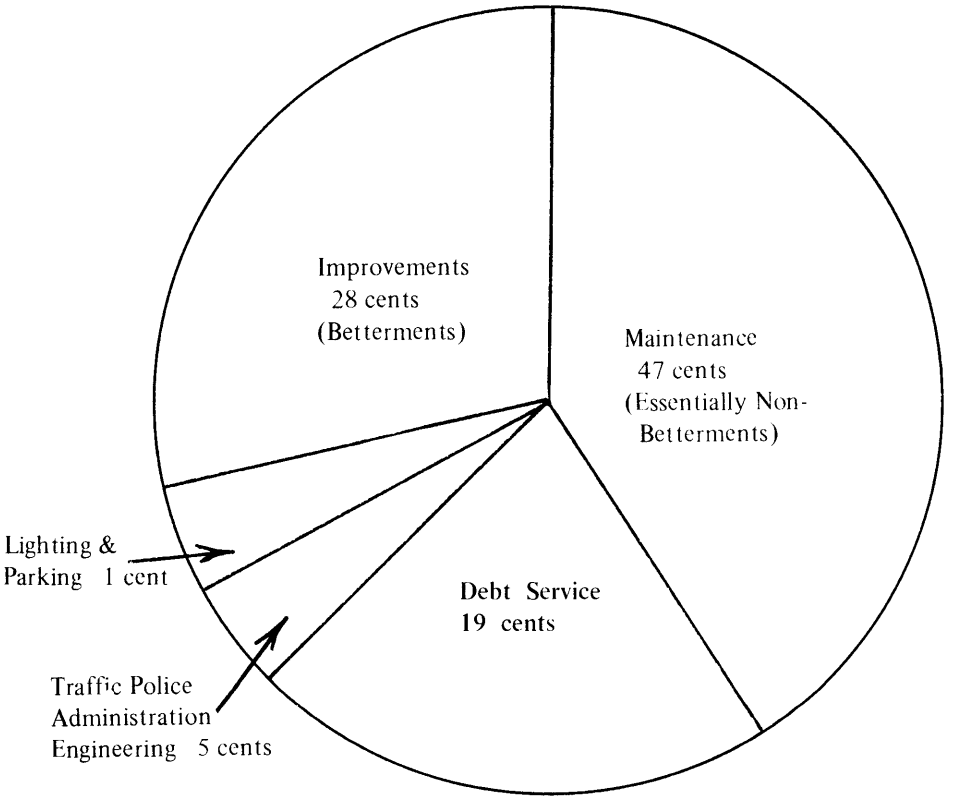
* Please refer to footnote page 30 for clarification.

Figure II-13

The County Road and Bridge Dollar - 1975 Breakdown (including State Aid)



*Maintenance work involves primarily the costs of snow removal, deicing, street cleaning, lawn mowing, landscaping, materials, and salary and wages.

Figure II-14

County Capital Needs Ranking

Rank	Category	Score*
1	Bridge Reconstruction	160
2	Realignment and Widening	103
3	Roadway Reconstruction	102
4	Repaving	,95
5	Traffic Control Improvements	90
6	Maintenance	78
7	New Construction	62

Considering the categories above, roadway realignment, widening, and reconstruction would be grouped into a category called "minor improvements". By consolidating, the order of need of the five primary county needs are:

1. Bridge Reconstruction/Replacement
2. Major Improvements
3. Minor Improvements
4. Maintenance
5. New Construction

Two points are of significance about these findings. First, new construction, which some years ago would have been a high ranking item, is now at the bottom of the list of needs. Second, and even more significant, is the fact that *maintenance ranks* lower than all other needs except new construction, in spite of the fact that it is the single higest road related budget expense. New Jersey's county and municipal engineers have been attempting, for some time, to draw attention to the fact that, *if more funds were applied toward improvements, less would be required in the maintenance area, resulting in overall saving.*

In order to obtain more specific information on funding needs in each category, the county engineers were asked how many of the total county road miles have been constructed or reconstructed in the last 20 years. It is generally understood that the life of a road is 20 years, after which time the road must be reconstructed, or at least resurfaced. Based on such understanding, the balance of the county mileage is assumed to be in need of reconstruction at present. In response, the county engineers reported that of a total of 6,820 county road miles in New Jersey (NJDOT records indicate 6,795 miles of county roads - less than a 1% difference), 1,454 miles have been constructed or reconstructed in the last 20 years. Thus, many of the remaining 5,366 miles are in real need of major repair or reconstruction. The cost for this betterment is calculated as follows:

. Normal reconstruction cost = $80 per linear foot or $422,400 per mile.

. $422,400 X 5,366 miles = $2.267 billion

Of course this figure is extremely high, since the counties have been engaged in resurfacing and maintenance programs which prolong the useful life of a roadway. However, the $2.267 billion figure *demonstrates the potential disasterous situation* that exists if roads are not maintained and reconstructed at regular intervals. A crisis could arise very rapidly, and a majority of the professionals are stating that road conditions have reached near crisis proportions.

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* The reader should refer to the questionnaire analysis available in the Commission's files for a more complete explanation of how the Commission arrived at this figure.

The county engineers were further asked how many bridges are in each county, and of the total, how many need repair and how many need replacement. The respondents reported a total of 8,958 bridges,* of which 1,219 (14%) need to be replaced and 2,332 (26%) are in need of repair.

The counties generally include, in their bridge counts, any span of 5 feet or more. For the purpose of the present analysis, the Commission chose to use the federal and State definition of what constitutes a bridge – i.e. any structure 20 feet or more in length. New Jersey Department of Transportation records indicate that there are some 2,971 local bridges in the State measuring 20 ft. or more.

In order to obtain an estimate of bridge needs on these 2,971 bridges, the Commission assumed that the ratio of deficient bridges to total bridges is essentially the same here as the ratio reported in the questionnaire responses. Thus, it is assumed that 14% of 2,971, or 416 bridges need to be replaced, and 26% of 2,971, or 772 bridges are in need of repair. These percentages are considered very reasonable by the State Department of Transportation personnel and selected county officials.

If the average bridge replacement cost is $200,000, then the *total local bridge replacement need* for 416 bridges would amount to $83.2 million. If the average bridge repair cost is $50,000, then the total local bridge repair need for 772 bridges would amount to $38.6 million. The Total State-wide local bridge need, then, would amount to some $121.8 million for local bridges over 20 ft. long.

Local bridges under 20 ft. in length require special consideration. There are approximately 5,987 of these bridges in the State, of which 803 need to be replaced and 1,560 need repair. Many are on municipal roads even though they are the administrative and financial responsibility of the counties. In order to meet the needs of these 2,363 deficient bridges, the following investment will be necessary, assuming an average $50,000 replacement cost and an average $25,000 repair cost:

Replacement	– $40.15 million
Repair	– $39 million
Total small bridge need	– $79.15 million

Bridges under 5 ft. in length would more properly be termed "culverts". According to experts in the environmental disciplines, there is a need for a systematic, Statewide effort to enlarge all culverts to permit flood passage. It is not known at this time what the required dollar amount would be for such an effort. It is expected that, if the above small bridge needs were adequately funded, some of these funds could serve as seed money to get such a program underway.

Approximately one hundred million dollars ($99.2M) was spent on county roads in 1975. As Figure II-15 indicates the largest proportion (75%) of the money was spent on improvements (betterment) and maintenance. Figure II-16 identifies the 1975 road expenditures for each of the 21 counties by the major categories. Excluding the State Aid contribution, the counties expended some $65 million dollars on maintenance ($41M) and improvements ($24M) in 1975.

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*The counties have responsibility for all bridges except for those on State highways, Interstate routes, and toll roads. Also, maintenance problems persist with railroad overpasses. The responsibility is vested in the railroads and many of the railroads are in bankruptcy. This situation results in tremendous problems trying to upgrade the structure to acceptable standards. State DOT is investigating the problem and may have to assume responsibility.

FIGURE II–16
1975 TOTAL EXPENDITURES BY COUNTIES FOR ROADS*

COUNTY	IMPROVEMENT	MAINTENANCE(%)	ADMINISTRATION & ENGINEERING	TRAFFIC POLICE	STREET LIGHTING	DEBT SERVICE	PARKING	TOTAL
Atlantic	$ 701,451	$ 943,856(28)	$ –	$ –	$ –	$ 1,734,016	$ –	$ 3,379,323
Bergen	4,140,389	3,098,637(27)	907,217	–	16,208	3,165,946	3,308	11,331,075
Burlington	1,750,821	5,321,876(74)	–	–	13,206	93,400	–	7,179,303
Camden	3,091,072	2,476,162(41)	–	–	18,444	467,977	–	6,053,655
Cape May	241,314	1,649,069(79)	884	–	1,377	199,565	2,492	2,094,701
Cumberland	301,751	825,258(53)	–	32,406	12,957	388,709	–	1,561,081
Essex	1,227,720	3,472,968(38)	–	–	9,747	4,262,758	121,672	9,094,865
Gloucester	384,085	1,368,291(65)	366,966	–	–	–	–	2,119,342
Hudson	53,192	1,068,194(56)	–	–	82,367	709,026	7,208	1,919,987
Hunterdon	583,932	1,852,321(76)	–	–	2,060	–	–	2,438,313
Mercer	2,603,425	1,706,152(29)	579,966	–	75,149	1,007,995	4,044	5,976,731
Middlesex	2,472,667	3,160,437(39)	909,019	–	22,971	1,529,158	2,089	8,096,341
Monmouth	1,377,653	4,766,285(67)	646,978	–	11,257	350,147	–	7,152,320
Morris	2,125,130	3,276,390(42)	362,675	–	141,471	1,843,755	–	7,749,421
Ocean	2,570,469	2,645,153(50)	24,068	–	6,871	–	–	5,246,561
Passaic	1,062,522	1,232,200(27)	171,688	–	107,493	2,017,842	–	4,591,745
Salem	100,752	983,376(90)	–	–	1,491	–	–	1,085,619
Somerset	1,392,644	1,220,824(33)	431,087	–	2,180	617,580	27,224	3,691,539
Sussex	408,251	3,253,473(87)	38,039	–	8,270	42,954	–	3,750,987
Union	117,817	994,258(45)	–	–	5,340	1,031,126	36,946	2,185,487
Warren	1,049,127	1,248,862(52)	103,160	–	8,513	15,214	–	2,424,876
Totals	$27,756,184	$46,564,042	$4,541,747	$32,406	$547,372	$19,477,168	$204,983	$99,123,908
(%)	(28.0)	(47.0)	(4.6)	(0.03)	(0.6)	(19.6)	(0.2)	

SOURCE: DOT
*Includes State Aid

Figure II-15

1975 County Road Expenses (Includes State Aid)

Expense Category	Amount (millions)	% of Total	$ per mile[1]
Improvements	$27.8	28.0%	$4091
Maintenance	$46.6	47.0%	6858
Debt Service	$19.5	19.6%	$2800
Lighting & Parking	$ 0.7	0.7%	$ 103
Traffic Police	$ 4.6	4.7%	$ 677
TOTAL	$99.2	100%	$14584

[1]County road mileage = 6795 centerline miles
SOURCE: NJDOT Records

In concluding this section on county road needs and efforts, expenditures for county roads have gone from $86 million in 1971 to $99 million in 1975. Figure II-17 gives a comparative view of county efforts for 1971 and 1975.

Figure II-17

Expenditures by Counties for Roads, 1971 and 1975

	Improvements	Maintenance	Administrative & Engineering	Debt Service	Traffic Police Lighting & Parking	Total
1971 -	$21,131,601 (24.6%)	$39,730,008 (46.3%)	$4,238,119 (4.9%)	$19,676,073 (22.9%)	$1,123,002 (1.3%)	$85,898,806
1975 -	$27,756,184 (28.0%)	$46,564,042 (47.0%)	$4,541,747 (4.6%)	$19,477,168 (19.6%)	784,671 (.8%)	$99,123,902

The county increases in expenditures have occurred in the improvements and maintenance areas. The record indicates that the counties are able, willing, and have expended much of their own monies in maintaining their roads. The greatest limitations on county efforts have been the discontinuance of State aid and the inevitable administrative and review problems that result from working with increasing layers of governmental reviews. Also, state and federal programs and dollars are not sufficient to assist the counties with their greatest need – bridge reconstruction and replacement. County bridge needs are universally recognized at a "crisis state" and a very serious safety problem.

Municipal Road Needs and Efforts

Analysis of Commission questionnaire responses indicates that New Jersey municipalities spend an average of 10% of their total budget on road related items, *with some 42% going to maintenance activities.* The actual breakdown of these two questionnaire items are shown below: (Figure II-18, and II-19)

Figure II-18
Percent of Total Municipal Budget Devoted to Roads

%of Budget	Number of Responses	% of Responses
0 – 5%	35	37%
6 – 10%	22	23%
11 – 15%	22	23%
16	16	17%
TOTAL	95	100%

SOURCE: Commission questionnaire.

Figure II-19
Percent of Road Budget Devoted to Maintenance

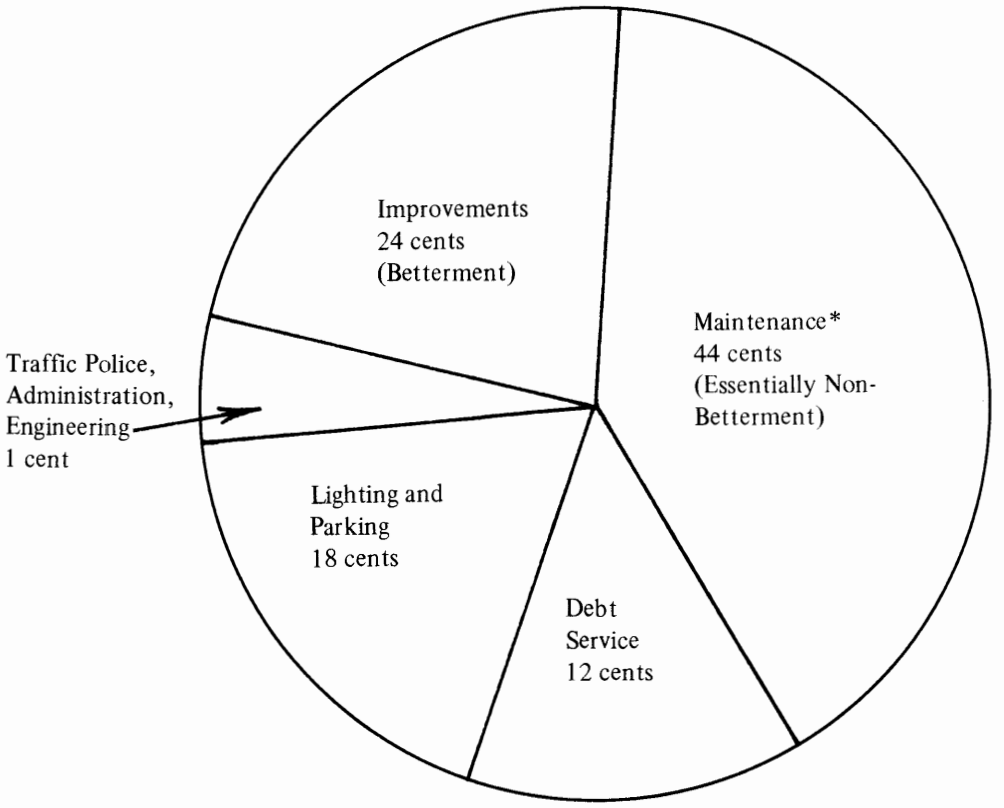
% of Budget	Number of Responses	% of Responses
0 – 25%	49	51%
26 – 75%	22	22%
76 –100%	26	27%
TOTAL	97	100%

SOURCE: Commission questionnaire

By comparison, an analysis of actual 1975 municipal road expenditures for the 567 municipalities, as shown in Figure II-20, indicates that the *municipalities spent 44% of all road related budget dollars on maintenance.*

Figure II-20

The Municipal Road Dollar – 1975 Breakdown



*Maintenance work involves primarily the costs of snow removal, deicing, street cleaning, lawn mowing, landscaping, and the costs of materials, salary and wages.

While only 27% (35 of 131) of the municipalities responding to the Commission's questionnaire indicated that they have a capital needs plan* for roads, the municipal engineers were able to list their needs in general categories. The following is a list of the various categories in descending order of priority at the municipal level. (Figure II-21)

The municipal engineers clearly indicated that the three major capital needs in the municipal road areas are: the resurfacing of roads, the reconstruction of roads, and the maintenance and repair of municipal roads. For resurfacing, no State aid is available and the use of federal funds is not presently permitted for such purpose; for reconstruction, no State aid is available and 91% of municipal roads are not eligible for federal funds; for maintenance, no State aid is available and federal aid is not permitted.

*This was confirmed by reviewing the records at the Department of Community Affairs. Relatively few communities prepare a capital needs plan.

Figure II-21

Municipal Capital Needs Ranking**

Rank	Category
1	Roadway Resurfacing
2	Roadway Reconstruction
3	Routine Maintenance and Repair
4	Realignment and Widening
5	Traffic Control Improvements
6	Bridge Reconstruction/Replacement
7	New Construction
8	Other (Primarily drainage improvements)

SOURCE: Commission questionnaire

**A further explanation of this ranking is contained in the detailed questionnaire analysis (available in the Commission's files.)

Bridge reconstruction and replacement is not a responsibility of municipalities because the counties are responsible for all bridges on municipal roads. Of significance here is the fact that resurfacing and reconstruction outrank maintenance in terms of need while the reverse is true of actual expenditures. According to both DOT officials and local engineers, since the discontinuance of local-State aid for roads, the municipal betterment expenditure has been so low that the roads have deteriorated beyond the point at which maintenance activity is useful. *Reconstruction and resurfacing are the needs of the day.**

In order to obtain more specific information on the actual dollar amount needed by municipalities, municipal engineers were requested by questionnaire, to estimate their present funding needs. An analysis of questionnaire responses indicates that municipal road reconstruction and resurfacing needs are in the order of $100 million per year. A more extensive analysis by the Task Force** estimated the annual municipal reconstruction and resurfacing needs at $103,382,400.

*In some cases resurfacing is considered maintenance. The definition depends primarily upon the thickness of the asphalt overlay. Thick overlay (3 inches or more) is generally felt to increase the structural integrity of the road, and thus is usually considered an improvement, whereas an overlay of less than 3 inches would more accurately be defined as maintenance. If overlay is to be considered maintenance, however, it must be understood that it is a very special kind of maintenance which produces greater direct benefits to the road itself than do some other maintenance activities, such as landscaping, street cleaning, snow removal, etc. While the need for these latter activities is obvious, they do not address the problems that have led to the present "near crisis" road situation.

FHWA funds by law cannot be utilized for maintenance but rather must be utilized for construction and/or reconstruction. FHWA (NJ region) has taken the position that resurfacing will be considered reconstruction without regard to thickness of the overlay if it is applied to the entire surface are of the roadway.

**The reader should refer to the questionnaire analysis available in the Commission's files for a more complete explanation of how the Commission arrived at this figure.

Figure II-22

1975 Municipal Road Expenses (Includes State Aid)

Expense Category	Amount ($ Millions)	% of Total	$ per Mile[1]
Improvements	$53.9	23.9%	$2,327
Maintenance	100.0	44.3	4,318
Debt Service	26.6	11.8	1,149
Lighting & Parking	41.8	18.5	1,805
Traffic Police Admin, & Engineering	3.5	1.5	151
TOTAL	$225.8	100%	$9,750

[1]Municipal road mileage = 23,159 centerline miles
SOURCE: NJDOT records

Two hundred twenty-five million dollars ($225.8M) were spent on municipal roads in 1975. As Figure II-22 indicates the largest proportion (68%) of the money was spent on maintenance (44%) and improvements (24%). Figure II-23 identifies the 1975 road expenditures for the 567 municipalities by county. Excluding the State aid contribution, the municipalities expended $135 million on maintenance ($88 million) and improvements ($47 million) in 1975.

In concluding this section on municipal road needs and efforts, expenditures for municipal roads have gone from $189 million in 1971 to $225 million in 1975. Figure II-24 gives a comparative view of municipal road efforts for 1971 and 1975. The largest municipal increases in expenditures have occurred in the maintenance area (up $21 million) and the parking and lighting areas (up $13 million). The record indicates that the greatest limitation on the municipal road system is that the State (no monies) and federal (few programs) aid policies do not address New Jersey's local needs.

Figure II-24

Expenditures for Municipal Roads, By County, 1971 and 1975

	Improvements	Maintenance	Administrative & Engineering	Debt Service	Traffic Police Lighting & Parking	Total
1971 -	$47,699,677 (25.2%)	$79,141,468 (41.8%)	$1,023,197 (0.5%)	$28,122,356 (14.8%)	$33,529,963 (17.7%)	$189,516,660
1975 -	$53,903,520 (23.9%)	$100,015,454 (44.3%)	814,428 (0.4%)	$26,623,540 (11.8%)	$44,491,561 (19.6%)	$225,848,521

FIGURE II–23
SUMMARY OF TOTAL 1975 EXPENDITURES BY MUNICIPALITIES FOR ROADS*

COUNTY	IMPROVEMENT	MAINTENANCE(%)	ADMINISTRATION & ENGINEERING	TRAFFIC POLICE	STREET LIGHTING	DEBT SERVICE	PARKING	TOTAL
Atlantic	$ 777,466	$ 3,520,473(57)	$ –	$ –	$ 576,108	$ 1,029,917	$ 289,462	$ 6,193,426
Bergen	7,866,318	13,212,575(43)	–	322,443	3,289,395	4,819,583	926,769	30,437,083
Burlington	1,740,965	4,085,779(47)	25,824	25,214	1,264,884	1,475,577	29,388	8,647,631
Camden	1,549,845	4,999.158(52)	38,547	34,863	1,994,981	680.248	286.676	9,584.318
Campe May	1,248,361	2,476,488(49)	–	–	748,593	434,273	186,456	5,094,171
Cumberland	365,541	1,586,348(60)	–	32,891	538,443	100,356	24,101	2,647,680
Essex	3,092,328	8,478,304(41)	–	872,883	4,231,232	1,764,922	2,304,760	20,744,429
Gloucester	726,331	3,182,262(65)	–	57,820	771,187	181,754	5,832	4,925,186
Hudson	2,366,954	4,355,042(35)	453,323	258,081	2,577,043	860,522	1,534,270	12,405,235
Hunterdon	646,585	2,137,226(72)	–	224	149,849	–	14,644	2,948,528
Mercer	2,472,117	3,510,235(35)	122,434	–	702,867	517,322	2,608,548	9,933,523
Middlesex	8,268,961	7,021,036(30	–	421,279	2,265.627	4,062,845	1,038,155	23,077,903
Monmouth	5,185,416	8,472,719(44)	–	209,621	2,283,566	2,702,062	506,849	19,360,233
Morris	4,576,703	8,299,088(50)	12,500	–	1,096,467	2,005,791	614,222	16,604,771
Ocean	1,847,785	4,474,708(54)	159,900	,35,427	1,417,906	234,163	154,508	8,324,397
Passaic	4,417,204	4,740,644(31)	–	–	1,616,895	3,342,594	961,626	15,078,963
Salem	952,636	1,349,334(51)	–	–	328,101	–	1,994	2,632,065
Somerset	1,323,163	4,040,750(62)	–	11,727	557,411	525,427	59,180	6,517,658
Sussex	,891,798	2,653,038(69)	–	–	139,340	136,271	47,846	3,868,293
Union	2,882,585	5,726,488(40)	1,900	400,430	2,287,725	1,746,239	1,135,403	
Warren	704,476	1,693,759(64)	–	–	183,694	3,674	56,655	2,642,258
Totals	$53,903,520	$100,015,454	$814,428	$2,682,903	$29,021,314	$26,623,540	$12,787,344	$225,848,521
(%)	(23.9)	(44.3)	(0.4)	(1.2)	(12.8)	(11.8)	(5.7)	

SOURCE: DOT

*Includes State Aid

D. CONCLUSIONS

The State and its counties and municipalities have invested some $10 billion into building and developing their road system - an enormous capital investment. Over $225 million is being spent each year on improving and maintaining municipal and county roads. This is generally recognized as insufficient to meet the State's needs.

With the termination of State aid programs, and the inability of the federal aid programs to meet their needs, the municipalities and counties are expending the largest portion of their road budgets on maintenance. In 1975, 47% of all monies spent on county roads and 44% of all monies spent on municipal roads was for maintenance.

The absence of State aid has hurt municipal road programs to a greater degree than county programs. For counties there remains a critical need for bridge replacement and repair and a serious need for reconstruction and resurfacing assistance for about 1/3 of all county road mileage.

At the municipal level there is a critical need for some form of additional aid for reconstruction and resurfacing of 91% of all municipal roads which are now ineligible for aid -- greater than twice the total sum of all State, county, and municipal road miles which are eligible for aid.

It is difficult to see how this fundamental and vital public service will be provided in the future without a rejuvenated State aid program designed to replace existing programs, and to address systematically the needs of many more municipal road miles.

There is a need to reexamine and redirect State policies. The system for reconstructing, resurfacing, and maintaining New Jersey's roads must become more responsive to local needs because over 90% of New Jersey's roads are under the jurisdiction of county and municipal governments.

New Jersey's need for road and highway improvements projected for the period 1970 - 1990 are listed at $25 billion -- based on 1969 prices, with no adjustment for inflation.*

The annual executive budget message indicates that the New Jersey Department of Transportation is responsible for overseeing the operation and maintenance of the State's transportation system. Maintenance and preservation of the existing transportation system, with a special emphasis on the problems of safety, is the Department's *first* priority. The *second* priority is to improve and upgrade the system through the resurfacing and

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*U.S. Dept. of Transportation, 1972 Nat'l Transp. Report. A two-year comprehensive study based on reports from state and local governments. The nation's total transportation capital needs for the 20 years between 1970 - 1990 were projected to be $703 billion, with about 85% of these needs - $593 billion - related to highway improvements. Of the nation's 1.25 million miles of arterial highways (excluding local roads and streets), five out of six miles will require some kind of improvement before 1990 to handle traffic safely and efficiently. Significantly, 70 percent of the rural miles and 49 percent of the urban miles identified by the States as needing improvements by 1990 were already deficient in 1970.

reconstruction of existing roads. The *third* priority is to provide the necessary additions to the transportation system to accommodate the predicted and reasonable growth in the State's transportation needs.

The Commission's analysis has concentrated on the ability of the State to meet its *first two* priorities: maintaining and improving the existing system. These two priorities are of mutual concern to the State's counties and municipalities which are responsible for over 90% of the State's road system. Presently, this system provides the means by which 70% of the State's work force journey to work and in most of the State, is the only major means of transportation.

For 1978 FY Budget, none of the income tax proceeds are reflected in the General State Budget. The sales tax, corporation franchise taxes, and motor fuels and motor vehicles taxes represent the four largest tax sources in the State's General Fund for 1977-78:

Sales	-	$ 977,500,000
Corporation	-	557,600,000
Motor Fuels	-	303,000,000
Motor Vehicles	-	226,000,000
		$2,064,100,000
All Other Resources	-	1,047,719,414
Total Resources		$3,111,819,414

As sources of income, Motor Fuels and Motor Vehicles account for $529 million for FY 1978. Transportation's budgeted appropriations for FY 1978 is $239.9 million with the following breakdown:

General State Operations	-	$140.4 Million
State Aid	-	11.9
Capital Construction	-	40.3
Debt Service	-	47.3
		$239.9 Million

As concluded previously, the State's fiscal policies relating to reconstructing, resurfacing and maintenance of New Jersey's roads must become more responsive to local needs because over 90% of New Jersey's roads are under the jurisdiction of county and municipal governments.

The Commission's program recommendations for State Aid are based upon the findings that the existing local-State Aid programs are inadequate both in funding levels and administrative considerations. The State Aid program recommendations, which are very modest in comparison to recognized State needs and the Task Force's recommendations, are based upon a needed administrative ability to perform and an ability to complement the Federal Aid program. Also, after discussion with State officials (in particular, the Capital Needs Commission) it is conceivable that two of the recommendations (1) Bridge Aid Program, and (2) Safety Needs - Chapter V), could be incorporated in a discrete bond issue.

E. RECOMMENDATIONS

Based upon the findings of this Chapter, the Commission recommends: 1) a new program of State aid to municipalities for roads, and to counties for bridges; and 2) a change

in the sharing formula for State aid programs. The Commission's local State aid recommendations follow.

1) It is recommended that a State aid betterment program for reconstructing and resurfacing municipal roads be instituted to insure that the seven billion dollars in municipal capital investment does not literally crumble. The municipal State aid program totalling $65 million should be apportioned on a 75/25 basis between the State and the respective local jurisdiction. This recommended program should replace currently legislated State aid programs, and it should apply to betterment *only* – i.e., resurfacing and reconstruction.

2) It is recommended that the sharing ratio for thy non-federal proportions in the Federal Aid Urban System should be 20% State and 10% local to assure greater utilization and local participation and committment. The FAU is the only substantive program of local federal aid and it must be utilized more extensively than it has been in the past. This sharing approach should greatly assist in alleviating some of the problems in the planning and programming process, as well. The State should also significantly increase its efforts and accept responsibility for utilizing the federal monies that are available under this program. In its annual review the Legislature should assess the Department's success in meeting the State's goals and needs.

3) It is recommended that a $10 million State aid program be enacted to assist the counties in meeting their primary need -- bridge construction and replacement -- with the counties contributing 25% of such costs. Bridge reconstruction and replacement is generally recognized as one of the major road needs in the State and as the greatest need for New Jersey counties. Presently, few federal funds and no State aid funds, are available for local bridges; however, it is understood that Congress is expected to increase the Federal Bridge Replacement Program funds to $2 billion per year nation-wide. The bridge needs of New Jersey's counties would be substantially addressed by such a program, particularly if the program permits bridge rehabilitation and repair without extensive changes in configuration. If and when the revitalized Federal Bridge Replacement Program is enacted, in keeping with the principle of shared responsibility, it is recommended that the counties contribute 1% of the cost of each project.

4) It is recommended that the State contribute 20% and the counties 10% to the Federal Aid Rural Secondary (FARS) program, in sustaining the principle of a local contribution in all federal aid programs, and to assist the rural counties in meeting their major road needs. Some eighty-five percent (85%) of the State's road miles under the FARS program are the responsibility of the county. The counties have been expected to meet the entire 30% local share, but the State recently found it necessary to set aside the 30% local share, to prevent the federal dollars from being lapsed in this small but very important federal aid program for rural counties.

5) It is recommended that the State Department of Transportation submit a detailed annual report to the Legislature analyzing and assesing the effectiveness of each of the federal aid and State aid programs to insure that the Legislature and the public are informed of the nature and scope of governments efforts to maintain and improve the State's road system, and to assist in formulating appropriate public policies and decisions. The analysis should assess the overall impact and significance of each program on a regional and county level, and the degree to which the programs (projects) are able to meet the State's needs.

CHAPTER III

PLANNING PROGRAMS AND EFFORTS

A. OVERVIEW: Components of the Planning Process

Before moving into a discussion of the specific highway planning efforts involving county and municipal government, which is the primary focus of this chapter, it is advisable to highlight the general context of current highway planning activities. For the purposes of this report, 'planning' many be considered as a continuous, compreshensive, cooperative, and rational process which seeks to project and order future development according to what is presently known and what is desired.

There are many different types of planning, of which three in particularly are useful for an analysis of the work and products of planning agencies, those being *policy, systems,* and *project planning. Policy planning* in transportation concerns the determination of broad public policy and the impact of transportation on other state-wide goals in areas such as land use and economic development. Policy-planning, the "broadest" type of planning, formulates consciously arrived-at goals determined at high state government levels. It is the function of policy planning to ensure that the established policies are carried out and are consistent with planning at all other levels. It lends direction and leadership to those planning transportation *systems* -- the so-called a "tops-down" process.

By contrast, *systems planning* concerns itself with various topical fields or modalities, e.g., aviation, buses, rail transportation, and highways. While systems planning includes as a proper subject the development and achievement of a coordinated state-wide (multi-modal) system, it also concerns itself with the development of unimodal concerns. While state-wide policy planning – if addressed at all – must be dealt with exclusively at the State level, systems planning is quite different -- it can be and is performed at state, regional, and sub-regional levels. Effective systems planning involving various levels of government must be marked by a constant flow of information between the State, regional and sub-regional planning units with regard to the activities and decision-making at each of these designated levels. The advantage of such an approach is that it provides a "bottoms-up" planning process which gives full weight to local and, in turn, regional planning determinations. At the same time, the aggregation of these determinations at the State level provides a complete picture of State-wide activities, needs, and demands.

Systems planning is also a "bottoms up" process since its basic building blocks are data collection and retrieval from which needs and demands are assessed and decisions made. This information can then be utilized as the basis for creating meaningful State-wise planning guidelines, drawn from: (1) policy planning determinations, and (2) established regional and sub-regional needs and priorities. Both coordinate local and regional planning directed at a coherent system within the multi-level planning structure. While systems planning and policy planning are conceptually distinguishable, the need for close interaction between the two is obvious. The importance of a two way flow between these functions is vital if established policies are to be formulated and carried out. It is thus important that the State act to foster this close interation.

*Project planning** is the third type of planning in this conceptual schema and refers to the detailed work associated with *particular* projects, e.g., design, environmental impact studies, engineering, etc. Project planning ensures that transportation projects are properly designed and formulated to meet understood needs, that the environmental impact on the local area is properly assessed, and that the project is in conformance with the larger planning picture of which it is part. Project planning, especially with respect to highway projects, functions within the guidelines set by systems planning, attempts to address perceived needs and the demand for improved facilities, and renders the necessary improvements within the established system planning guidelines and parameters.

It should be evident that although the types of planning described above are conceptually distinguishable, they are inextricably connected and dependent upon each other. To be fully effective, there must be a mutual flow between the various types since each provides important information for the effective funcioning of the other. The administrative procedures and practices that create and foster the channels for: (1) the interaction of policy, systems and project planning, and (2) the effective functioning of each individual planning type, can be termed the *planning process.* A rational, orderly *process* is most important for planning effectiveness because the elements of coordination and continuity, so necessary in planning, can be achieved only by providing procedural mechanisms adequate to the task. The planning process is the roadway upon which *each* of these planning vehicles must travel. Without a rational, orderly, and planned process, the utility of any planning can only be marginal. The results of a disordered or unordered planning process will severly curtail planning effectiveness.

The need for effective planning in the provision of adequate highways becomes quite apparent in considering the number of factors that must be weighed, including: limited funds, competing transportation modes, adequacy of existing facilities, specified priorities, etc. Planning is necessary so that due consideration can be given to each of the relevant factors involved and so that a rational decision may subsequently emerge.

There exists an additional rationale for planning efforts: federal regulations stipulate mandatory planning activities as a prerequisite for eligibility for federally aided transportation programs. These planning requirements are embodied in the Federal Highway Act and its amendments, and in the implementing regulations. These laws and regulations set forth specific roles and responsibilities for state government, appointed regional bodies designated as Metropolitan Planning Organizations (MPO's), and local government officials. The organizational planning structure and role responsibilities of these parties, as required for federal program eligibility, is outlined below.

> **State Government.** While not directly responsible for carrying out the urban transporation planning process, state government involvement and cooperation with the MPO is explicitly required in the regulations. In addition to this cooperation with regional transportation planning bodies, State government also assumes a coordinative role with regard to State-wide activities.

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*Project planning is sometimes defined to reference only those activities relative to a particular project prior to the point when any portion, such as design, is authorized. For purposes herein, an expanded meaning has been employed that includes all project-related activity up to the point of construction. This aspect of project planning differentiates it from other types of planning which remain more conceptually remote from operations-type activity.

Metropolitan Planning Organizations. (MPO's) are designated by the Governor for each urbanized area in the State, and these regional bodies are to be reviewed annually by federal officials for compliance with the federally mandated responsibility of carrying out the transportation planning process. The elements of this process are detailed in the federal regulations.* For the purposes of this report, the most important of the federal requirements is the formulation of a Transportation Improvement Program (TIP), including an annual element.

Local Government. The federal regulations are explicit in stating that "the MPO shall be the forum for cooperative decision-making by principal elected officials of **general local purpose government.**" In addition, the regulations require even more specific local participation for FAUS projects which must be initiated by local officials.

B. CURRENT PLANNING EFFORTS: County and Municipal Government Roles

The organizational structure of planning activities with regard to transportation is, quite naturally, strongly influenced by the federal planning requirements. Continued eligibility for federal funding participation is contingent upon periodic federal certification of the MPO planning processes. It should be noted, nonetheless that while these requirements shape the nature of the planning effort, they do not completely control it. States still retain a great deal of planning flexibility which surfaces in two areas. First, in order to cooperate and effectively participate in MPO planning activities, NJDOT must develop plans with regard to those highway needs that are wholly within NJDOT jurisdiction. Secondly, MPO's are exclusively concerned with regional planning efforts of intra-regional impact. The assessment of State-wide priorities remains primarily within the purview of NJDOT as a State agency. Unless NJDOT addresses itself to broader inter-regional questions and pursues an active coordinative role, the impact of aggregate regional planning efforts upon the State as a whole will remain unaddressed and fragmented.

The regional planning process in each of New Jersey's designated MPO's is marked by a significant organizational structure *not* imposed by the federal regulations. This variation, which serves to supplement other regional activity, is the decentralization of specified planning and project selection activities to subregional planning units. The primary responsibility delegated to these sub-regional bodies, now operating in nineteen counties and two cities, is the formulation of a county Transportation Improvement Program (TIP). Sub-regional planning units are also accorded other responsibilities as part of the urban transportation planning process, including the development of a transportation plan and the related transportation system management element (TSME).

As pointed out earlier, the TIP is the most important of the planning responsibilities insofar as counties and municipalities are concerned. Indeed, the TIP is probably the single most significant aspect of transportation planning with regard to federal aid programs. As defined by the federal regulations, the TIP is a "staged multi-year program of transportation improvements, including an annual element," for the purpose of identification, selection and setting priorities for proposed federal aid projects. Federal regulations require the TIP annual element to contain all proposed federal aid projects and may permit inclusion of non-federally funded projects, as well. All projects require relevant information, including: project description and identification, estimated total cost, estimated program year costs, source of federal and matching funds, project work phases, and other information. In addition, the annual element must be reasonably consistent with the amount of federal funds expected to be available in the area. *Viewed against these facts, the singular*

* As well as the Urban Mass Transportation Act and the UMTA/FHWA planning regulations.

importance of the TIP Annual Element should be clear: it is the tangible end-product of the planning efforts which sets forth a program of proposed projects for an upcoming program year.

The formation of sub-regional transportation planning units, essentially along county jurisdictional lines represents a significant organizational decision. These planning units have varying degrees of responsibility for the formulation of county Transportation Improvement Plans (TIP's). The aggregation of these respective county TIPs at the regional level, together with TIP segments developed by other Metropolitan Planning Organization (MPO) participants, forms the basis for the federally-required TIP formulation of the regional MPO.

This delegation and subsequent aggregation of county planning efforts provides for county and municipal projects in the regional TIP and gives effect to a "bottoms-up" planning process. Local needs are assessed and projects identified at the county level and then fed up to the responsible regional body. Federal funds are made available to counties on the basis of poupulation, with certain guaranteed amounts to qualified urban areas. As a rule of thumb, 75% of an urbanized area's FAUS share is available for local and county projects, while 25% is reserved for projects of a more regional nature. This approach is designed to gain local participation in the planning effort as *required* by the federal regulations, and to reflect, at the same time, *local* priorities in the project selections contained in the county TIP. In addition, utilization of the county planning units as the basic building block in TIP formulation has another decided advantage. It provides a single body within which all "local officials" (as designated in the federal regulations) can effectively participate to "initiate" proposed FAUS projects.

For the most part, county officials have responded favorably to their responsibilities in the planning framework and have recognized the importance of their delegated role. Seventeeen of the nineteen county planners who responded to the Commission's questionnaire indicated their own viewpoints regarding the significance of the TIP process. Of these, only two felt it was not significant. While eight felt it was significant, and an additional seven felt that the TIP process was very significant. The most often stated reasons for the importance of the TIP process was that it established priorities and that it aided the county in planning for capital improvements. A smaller number of respondents indicated that the TIP was useful as an accessible reference document to proposed projects, and that the TIP was useful in gaining public participation in transportation planning.

Vesting responsibility for the formulation of county TIP's in sub-regional transportation planning units remains promising in theory. The reality of existing practices, however, falls far short of the potential effectiveness exhibited by these bodies. Foremost among the current problems in the TIP process are the vastly different efforts and varying scopes of activities exhibited by the respective counties. As of August 1977, not all counties had even organized a formal committee to create a county TIP. At least one county has elected instead to solicit local project initiation solely on the basis of telephone and written inquiry. The vast majority of counties, however, have instituted the more formalized decision-making process, examined in this report.

Diversely represented Transportation Coordinating Committees (TCC's) are generally staffed by personnel from the county planning boards. The availability of such personnel varies widely. The Commission's survey of county planning boards indicated that their respective staffs number from a high of 46 to a low of 3. Staff members who devote their activities primarily to the transportation area number from seven to one. The importance of having adequate staff to carry out TCC activity that includes a variety of technical matters, acting as information conduits, and performing the necessary work activities that enable the planning process to function, cannot be overstated. The scope and degree of effort put forth by TCC's is contingent to a great extent, upon the availability of staff.

Participation in TCC activities, by municipal officials and community interest groups (e.g. senior citizens, business interests, handicapped persons) also varies widely among counties. Some TCC's have pursued a highly structured, working-committee approach emphasizing selective involvement, analytical tools and "informed" decion-making based on careful study. Other TCC's have modelled their activities on a "town-meeting" approach to decision-making. Participants are actively and widely solicited from various communities in the county, and attendance at TCC meetings may number fifty or more individuals. In still other counties, TCC's are not involved in any significant ongoing activity, but merely "update" the existing TIP formulation.

The scope of activities pursued by the various county TCC's also varies significantly. Some counties have assumed a great deal of responsibility, deploying their available manpower resources and technical expertise to continually refine and improve sub-regional planning efforts. The staff serving some county TCC's have focused on maintaining communication with municipal officials and acting largely in a liaison capacity for local officials who are relatively shut off from regional and state activity. On the other hand, some counties have not taken any initiative in assuming responsibility beyond the minimum requirement of producing a county TIP and submitting it to the MPO. In such counties, the evidence is that municipal officials play a much reduced role in the whole process. The following listing, Figure III-1, indicates the diversity of municipal representation in the TIP formulation process.

Figure III-1: Municipal TIP Representation

In answering a question on the Commission's questionnaire--Who represents your municipality in TIP formulation?--the municipal engineers responded:

Municipal Engineer	55 (40%)
Municipal Planner	7 (5%)
Elected Official	12 (9%)
Other	7 (5%)
Not represented	30 (20%)
Unknown	20 (19%)

Approval of the final TIP formulation at the county level is also subject to some variation. TCC's function in an advisory capacity to their respective county board of freeholders which, as stipulated by contractual agreements between the MPO (or the State) and counties, retain final authority for approval of the final TIP.

While there are great differences between county TCC's, there are some aspects of TCC activity which they share in common. *The TIP, as already noted, should be a list of proposed projects in order of priority, which is reasonably consistent with the amount of federal funds expected to be available in the area.* No less is demanded by federal regulations. Despite these requirements, some TCC's have experienced great difficulties in formulating county TIP's consistent with these requirements. The inability of county TIP's to (1) develop

priorities for proposed projects; and (2) to keep proposed projects consistent with the amount of funds available (avoid oversubscription), create crucial problems because they undermine the very purpose which the TIP is designed to serve, i.e., project selection. Unless the county TIP presents to the Metropolitan Planning Organization a realistic project list compatible with existing funds, no useful purpose is served by the sub-regional level activity.

One other broad area of the TIP process hindering existing operations, is a lack of program knowledge amoung local officials. Many local engineers and government officials have limited or no knowledge of the TIP process and, consequently, of federal aid programs. When asked, by the Commission's questionnaire, what is the significance of TIP, 29% of the municipal engineers said they never heard of TIP and 21% said TIP had little significance. This may reflect, in part, the limited eligibility of most municipal roads for federal aid. Where county planning boards serving as TCC staff have made an effort to communicate regularly with local officials on this subject, familarity generally increases. However, county personnel, too, are often unsure of the existing programs due to constantly changing procedures and guidelines. In addition, there seems to be no single source of information which clearly details the entire workings of the federal aid programs relating to local government in New Jersey. NJDOT personnel have made efforts to keep local officials informed by holding seminars and meeting regularly with sub-regional units. One factor cited by State officials and corroborated by the Commission survey, is the turnover of local officials (see Chapter II).

To reiterate, current federal regulations require planning activities and these in turn prescribe state, regional and local roles. Existing local government planning efforts, related to federal aid programs, are organized on a county basis with participation by municipal officials. Of the local planning activities, the Transportation Improvement Program (TIP) is most significiant among the different types of planning within the planning process. In general, planning efforts vary widely in quality and committment with the major shortcomings reflected in establishing project priorities and tailoring of proposed projects to available funds.

C. PROGRAMMING

Programming provides the link between the initial stages of a proposed project (usually a planning issue) and subsequent project development and implementation. Two important functions are accomplished through the programming process: initial federal approval of projects is gained and funds are designated for these individual projects by federal authorities. The mechanism for carrying out these two tasks is the Federal Aid Program. This program (dubbed the "105 program" in reference to that section of the Highway Act mandating the activity) contains all projects proposed for funding during an upcoming program year, accompanied by brief descriptive material concerning each one. Upon submission and approval of this program by federal authorities, the planning and programming stages are terminated. All further activity regarding these proposed projects is solely within the scope of operations.

The first step in the programming process, from the local perspective, is the submission of a project request application to the Bureau of Local Aid, for its evaluation of engineering practicability, community acceptance and overall feasibility factors. Those programming requests deemed to have a realistic chance of advancement during the year, are forwarded to the Bureau of Capital Programming and Monitoring to be checked against the TIP-Annual Element. Conforming projects are placed on the 105 Program. Incomplete or otherwise faulty projects are returned for modification and may be resubmitted prior to the 105 Program submission deadline. This process is further complicated by a variety of factors --

many of which are rooted in fiscal considerations -- which present significant management problems.

The Programming Bureau does not ordinarily maintain direct contact with the initiators of project requests. Instead, it is dependent upon and reacts to the flow of information and programming requests received from the Bureau of Local Aid. Its function is that of monitoring and formulating the 105 Program so that it approximates (with some over-programming to allow for projects that may not be advanced during the year) the amount of funds available for the upcoming program year.

Several fiscal factors bear directly on the programming process: first, since all local match for FAUS -- to date -- has been that amount which the State has provided, the amount of federal funds actually available (up to the maximum federal allottment for New Jersey) is contingent upon the amount of State funds which can be used for matching purposes. Second, the annual 105 Program formulation must also consider utilization of federal funds which were allotted for New Jersey in prior years, but which have never been authorized or obligated. These funds could be eventually – or in some cases imminently – lapsed and thus lost unless utilized. Third, the amount of matching State dollars available for anticipated or back-logged FAUS funds is only one of several programs competing for a piece of the Department's legislative appropriations, which are determined as part of the Department's other funding considerations, including other matching programs. Fourth, most projects programmed for inclusion in the 105 Program are phased, multi-year projects which are funded yearly. Once "in the pipeline", successive projects phases require continued inclusion in each annual 105 Program, drawing funding authorization for each phase until the project is completed. These fiscal considerations underscore the importance of the close interplay between planning and programming that is associated with federal aid programs.

During the course of its research, the Commission analyzed the number of county Federal Aid Urban (FAUS) projects that were on both the TIP list and on the 105 Program List. For FY 1978 planning, approximately half of such projects had not been programmed as of September 1977. (Figure III-2 – Counties in the Tri-State Region).

Figure III-2

County FAUS Projects Programmed and on the TIP List

County	FAUS Projects on the TIP	FAUS Projects Programmed	Projects Unprogrammed (%)
Bergen	46	29	17 (37%)
Essex	107	36	71 (66%)
Hudson	88	26	62 (70%)
Middlesex	61	23	38 (62%)
Monmouth	28	24	4 (14%)
Morris	40	24	16 (40%)
Ocean	7	7	0 (0%)
Passaic	38	15	23 (61%)
Somerset	46	13	33 (72%)
Union	28	21	7 (25%)
TOTALS	489	218	271 (55%)

These discrepancies reflect the current difficulties which confront the various parties involved. The proposed FAUS projects included in each of the sub-regional TIP-Annual Elements represent the county's determination of those projects deemed appropriate and possible within its share of the total amount of FAUS funds allotted to date, including unused funds from previous years.

By contrast, Column 2 of Figure III-2 shows the number of FAUS Projects *programmed* on the Annual 105 Program. The significance of the disparity between these figures is that column 2 is formulated not on the basis of the total amount of FAUS funds *potentially* available, but rather on a more realistic assessment of funds *actually* available for use in the upcoming year. In other words, column 2 reflects those projects deemed possible (with some allowance for overprogramming so that alternative projects are available to replace those which may not prove feasible) within the limit of available FAUS funds as determined in turn by the amount of *State* appropriations available for matching purposes, as well as the workload capable of being carried out by the available professional staffs.

As stated, sub-regional planning and project selection processes must choose realistic and feasible projects which can be initiated and phased for completion with available funds. To the extent that these processes are carried out successfully, the management of the programming process should reflect a corresponding improvement. The accomplishment of such objective, however, will require a more coordinated, interdisciplinary approach between the Department's various Bureaus, so that the planning and programming functions are more meaningfully related.

Significance of the Planning/Programming Relationship

In spite of this conceptual linkage between the 105 Program and the TIP-Annual Element, which gives promise of a coherent system and close interplay between the planning and programming areas, the realities of current practice present quite a different picture. The causes of this breakdown can be laid to a number of factors, including over-programming and lack of priority-setting in the TIP; uncertainties regarding the amount of funding available for timely use in planning and project selection; exigencies created by the threatened lapse of unused funds; lengthy and often unanticipated processing delays; and insufficient knowledge by local governments regarding program requirements and obligations. Many of these factors are so highly interrelated that separating cause and effect becomes very tricky indeed.* The broader effects of these factors can, however, be more easily identified.

One of the essential problems that frustrates better linkages between the planning and programming functions relates to the very processes through which they are implemented. The planning process is structured to be keenly sensitive to local needs. By comparison, the highly centralized programming process is less responsive to local needs. Because setting project priorities by sub-regional units has not been achieved to date,** and has therefore been largely unascertainable, the preparation and completion of programming requests turns largely on other considerations primarily of a fiscal nature, e.g., the threatened lapse of funds.

*Another consideration is the requirement that all projects on the 105 program must also be on the annual element of TIP, although the reverse is not required.

**The Department has recently implemented a plan to achieve project prioritization through involvement of both the county engineers as well as the county sub-regional planning units. The plan, to be implemented for FY 1979, is still too fresh to allow any assessment at this time.

The fact that FAUS Projects must be initiated by the local jurisdiction could be viewed as the initiator's indication of project priorities. But such local initiation, required by program guidelines, does not address priority-setting from a sub-regional or regional perspective. Faulty priority setting in the TIP-Annual Element, coupled with the existing practices which make the Programming Bureau dependent upon the Bureau of Local Aid for the submission of programming requests create a situation where the 105 Program is compiled without benefit of the priority determinations which*should* have emerged from the planning process.

The distribution of federal aid by this approach excludes a more rational basis for meeting New Jersey highway needs. The planning and programming processes, as presently constituted, exhibit sensitivities to different forces. The former provides for strong local participation in the cooperative planning process, while the latter, affected at times by certain shortcomings in the planning process, subordinates participation to fiscal constraints and project development uncertainties.

Availability of Information

A major problem area that has retarded the success of local planning efforts, and, hence, regional and state-wide efforts, is the lack of available information about the entire federal aid process. The State-developed "Action Plan", which provides the blue-print for State involvement in federal aid programs. Perhaps even more importantly, the "action plan" is generally unintelligible to any but the most persistent and knowledgeable of readers. While this blueprint carries much information, it imparts little understanding to the uninformed. To further intensify this problem, the action plan is the primary state-published document designed to describe the administration and implementation of federal aid programs in New Jersey. No simplified explanation is available to laymen and local government officials. This deficiency has a significant impact on the planning process because it is difficult for local government officials to be effective in planning activities without a reasonable understanding of the purpose, limits and constraints of the various programs.

The need for change has been recognized previously. A major rewrite of the Action Plan document was recommended by FHWA officials in 1977 . Many Department officials have also acknowledged the need for major change in the "action plan", especially with regard to the need to inform local officials more fully of their respective roles and their relationship to the entire federal aid process. While considerable support for change exists, such an undertaking is recognized as a major effort that would entail coordination of various concerned DOT personnel and, possibly, local officials as well. To date, the Department has taken no action to identify the parties to whom this responsibility should be delegated.

The Commission's survey of county planners further supports these conclusions. Respondents named their Metropolitan Planning Organization and NJDOT personnel as "very helpful" sources of assistance in TIP preparation, almost to the exclusion of any available documents or to any federal contacts. Conversely, the most helpful written documents identified by respondents emanated from federal sources. State-produced documents were rated "very helpful" by only four respondents, seven said these were somewhat helpful and an equal number said State documents were not helpful.

In another question 82% of the survey respondents indicated that the "Action Plan", as the only State document, was helpful in explaining the federal aid process, while 18% said

it was not. It is noteworthy here, however, that several respondents replied affirmatively but stated an important qualification to their replies, i.e., that the Action Plan was not helpful in the planning stage or in detailing local government responsibilities. Realizing that the existing planning structure was implemented in response to 1975 federal guidelines, and thus was organized subsequent to the issuance of the Action Plan, it is surprising that *most* respondents did not similarly qualify their responses.

Given the existing "bottoms-up" planning structure, it is clear that the lack of information available to local government officials constitutes a problem that demands correction. Since only NJDOT has a State-wide scope of jurisdiction necessary for providing and maintaining the flow of information to all parties involved in the process, NJDOT should undertake to more fully inform local governments of those matters which have an important impact on their planning efforts.

The Need for Guidelines: TCC Organization and Planning Criteria

A second problem area, and in some ways closely connected to the first, is the lack of sufficient guidelines for local involvement in the planning process. The great variation and uneveness of effort evidenced at the sub-regional level by county transportation coordinating committees can, in large part, be attributed to this fundamental deficiency.

To some extent, variations of approach and scope of activity at the sub-regional level is inevitable due to such factors as available personnel, local commitment and other factors. Indeed, these variations may even have a positive effect in allowing experimentation and flexibility, creating in effect, a number of different approaches which may exhibit various strengths and weaknesses. Notwithstanding these notable factors, there remains a need for additional guidance and standardization of sub-regional activities so that a greater level of comparability is maintained. It is hard to understand how a "bottoms-up" planning process involving many different sub-regional and sub-state planning units can be aggregated at the regional or state level without rigorous standardization of the basic elements common to the activities of each. Although a work program and contractual relationship is presently employed to order sub-regional activity, more is needed.

Membership on the Transportation Coordinating Council (TCC) is one area where greater standardization is necessary. Without guidelines for effective local involvement beyond the minimum requirement that local governments must be represented in sub-regional planning activity, such involvement--a key provision of the federal requirements--will continue to vary greatly between counties. The minimum scope of county-municipal relationships is also an appropriate target for more detailed guidelines. Without such requirements, the variations in this relationship that presently exist, e.g., from intensive, ongoing involvement to infrequent phone contact, will continue. Other appropriate areas for standardization of minimum requirements include: a number of meetings, ex-officio membership, expected staff requirements, etc. Through the promulgation of such guidelines, it is possible to make sub-regional activity more meaningful and to deal with a number of concomitant problems.

A problem often repeated by NJDOT officials has been that TIP-Annual Elements are overprogrammed. Imposing a ceiling on the percentage of allowable oversubscribed projects on an Annual Element, relative to available federal funds (on a matching basis) for the year, and applying this rigorously to all sub-regional units is certainly one way of approaching this problem. The Department has suggested, at least informally, that a 25% ceiling on Annual Elements is an acceptable figure that may meet the need for flexibility in project selection while providing a meaningful and realistic range of projects. Such a limitation would greatly

aid the programming process. If 25% is deemed an appropriate figure, the remaining step is to formally implement and enforce adherence to it at the sub-regional level.

In addition to addressing these kinds of questions, guidelines need to be established for use as standard **planning** criteria. Such criteria would be utilized by all county TCC's in their development of project selections. In response to the Commission survey, 16 of 19 county planners responded affirmatively to a question of whether they use established criteria to guide TIP development. The responses, however, showed that these criteria differed widely between counties. In addition, the establishment of, and the responsibility for promulgating these criteria varied widely. Some counties indicated that existing plans, as diverse as bridge surveys, land use plans and zoning restrictions, were the controlling criteria; while other counties indicated program-related factors such as project readiness, scope, and size were the more telling factors used in project selection. Only 3% of the county planners indicated that criteria were not utilized or necessary. Although program-related factors were named as important criteria by some counties, it is significant to note that 14% of the county planners indicated that the length of the implementation period for federal aid projects had a substantial effect on project selection for the TIP. Only one respondent said that length of implementation had little or no effect.

The development and use of standard planning criteria by all sub-regional planning units would promote an orderly assessment of many of the important factors that should be considered in project selection, e.g.: state or regional priorities, local priorities, projects which are "easier" or "harder" to process, estimated time frames for project completion based upon types of projects or project-factors which demand special consideration. The availability of this kind of information to TCC's at the time of TIP formulation is critical if their project selection is to be based upon the projected outcome of decisions. This factor of *predictability* is most important for TCC's because it furthers the reasonable bases for decision making.

To the extent that certain planning criteria reflect state-wide or regional concerns, important policy matters, or practical realities such as processing limitations or extraordinary review procedures, they should be explicitly and uniformly addressed. The promulgation of, and compliance with, such standard criteria should be strictly enforced. Such an approach is advantageous, expecially where DOT and regional staff may be shorthanded, because it would identify and provide necessary planning information for subregional units while simultaneously forcing less discretionary assessments of proposed projects. Additionally, it may serve to minimize the number of proposed projects which can be attributed to factors other than realistic and fair considerations of merit, need and feasibility.

The Need for Written Guidelines: Delineation of Intergovernmental Responsibilities

Yet another major factor which inhibits the effectiveness of planning within federal and highway programs is the lack of specificity regarding the various responsibilities accorded each of the parties involved in the planning process. While the intergovernmental relationships and shared responsibilities that comprise the organization of planning efforts appear sound, the absence of clearly defined roles and of a system of accountability for carrying out these responsibilities hampers their attainment. Given the complexity of the planning process, it is absolutely mandatory that clear, concise, written guidelines be formulated and be made readily available for all parties involved.

Neither the State Action Plan nor the current federal regulations regarding planning provide adequate details to guide the intergovernmental activities which comprise the

planning process. The former does not address itself to this subject in any clear or comprehensive way. The latter creates an organizational structure and minimum requirements, but does so in a general format which is appropriate only as a guideline for State activity. For example, the use of counties as sub-regional planning units is never mentioned in the federal regulations: it is strictly a discretionary refinement promulgated by intrastate considerations.

County sub-regional planning units are organizationally related and responsible to the regional Metropolitan Planning Organizations. State involvement with the counties, insofar as planning is concerned, is thus part of MPO activity in which the Department participates. An ambiguity in the State-county relationship exists, however, largely due to the Department's relative control of federal aid highway activities *outside* of the planning sphere. In order to plan effectively, subregional units must be closely attuned to Departmental activities, e.g.: which kinds of projects are viewed favorably by NJDOT; which types of projects seem more easily implemented; which meet long processing delays, etc. Much of this kind of information is not to be found among the Department's planners but rather as a result of the work carried out by the Bureau of Local Aid. Though such concerns are legitimate planning considerations, the county planning units have an official line of communication only with the Bureau of Urban Planning. Accordingly, since much of the relevant information is not known, or not available except through another office, the experience seems to indicate that without a special effort by county officials, it is not ordinarily forthcoming.

Another problem that has emerged due to insufficient definition of intergovernmental responsibilities is a lack of accountability. This has led to misunderstanding and recommendations by various parties in an attempt to remedy failures in the process, and further underscores the need for clearer definition of respective responsibilities.

The local planning effort is severly hampered by insufficient information regarding federal program funding levels available for use in any particular year. Sixty-two percent of the responding county planners indicated that this failure to receive sufficient information on the amount of funds allocated for use in their respective counties curtailed their effectiveness in project selection. The most commonly named deficiencies were (1) that the information provided by State and federal representatives was too general and (2) that the amount of funds to be available was not firmly established. These comments reflect the fact that, while federal funds potentially available are known early on in the planning cycle, the actual amount of funds available for the year--as determined by the amount of State matching funds available--is not known until a much later date.

Other problems have also been cited by local officials. Since the bases for amendments and changes in the TIP are not governed by any written guidelines or firm timetables, the process tends to be an open ended one. This allows additional political pressures to be exerted simply because the basic ground rules are generally unarticulated and subject to ad hoc change. In addition, the lack of guidelines for project selection may lead to local project choices which--while eligible for federal aid--may, for a host of reasons, make a particular project a difficult one to carry out if federal funds are involved. Inability to "move" such projects or unavoidable delays attributable to the process itself, may present problems and time-delays which are not understood by local officials who often are not fully conversant with the complications of the federal aid programs. Without this understanding by local officials at the time the project is initially considered, the Department may serve as an easy scapegoat for imputing blame when difficulties arise at a later date.

Until a comprehensive set of guidelines is formulated and implemented as a formal aspect of the planning process, these problems will continue unresolved. The intergovernmental planning structure is dependent upon mutual efforts and shared responsibilities. By addressing these considerations and by carefully detailing the roles of each of the parties involved, the necessary accountability between the parties can begin to develop and thereby provide a means for resolving problems on an ongoing, cooperative basis.

D. CONCLUSIONS

At this time there is a dichotomy in the present intergovernmental system. The planning-programming side suffers from insufficient mutual understanding of goals, roles, and responsibilities between those levels of government involved. This is manifested in the TIP process and the responses of county and municipal officials. Conversely, in the project processing and operations area, NJ DOT has exercised its responsibility in the federal aid process by minimizing possible roles for county and municipal government with practically exclusive control over the actual processing and implementation of federally funded projects. Or to state it another way, on the planning side, where there is a need for goal setting, widespread dissemination of information, and standardization, the process and system is generally lacking these considerations. Conversely, on the project planning (engineering) side, where municipal and county capabilities are strongest, the system is overregulated. While existing federal law mandates that certain functions and responsibilities are to be carried out exclusively by the State agency which is ultimately responsible for the operation of the federal aid programs, the experiences of many other states indicates that the method employed for discharging this responsibility need not be solely limited to State agency personnel.*

To the extent that the Department is involved in the actual operations of individual project processing and implementation, resources must be committed accordingly. Consequently, as a result of directly discharging those activities which could be delegated to other governmental units (with State oversight), the Department has undertaken detailed and time-consuming responsibilities for individual projects. The exigencies of such detail has tended to shift the Department's focus from the broader perspective (i.e. such responsibilities as goal setting, policy planning, and oversight and monitoring) to a much narrower one emphasizing individual project authorization and completion. As a result, the impact of the planning function in the entire federal aid process is curtailed.

Clearly, basic changes and increased efforts must be made by all parties involved in the federal aid area. While this applies no less to those at the county and municipal level, than it does to NJDOT, it is evident that the State response remains the crucial factor in bringing about the necessary change. This State responsibility for federal aid programs in transportation is essentially exercised by three NJDOT Bureaus: the Bureau of Urban Transportation Planning, the Bureau of Local Aid, and the Bureau of Capital Programming and Monitoring. The discharge of their respective responsibilities, and of related responsibilities of local and county government, impacts significantly on the operations, and indeed the ability of the other Bureaus to function effectively. The separation of the planning and programming functions -- while perhaps necessary at the State level for administrative purposes -- undermines the relationships that these functions must exhibit in order to make the federal schema effective.

*For example see: Michigan's Action Plan Procedures for Local Agencies Under the Federal Aid Urban Systems Program, Michigan Department of State Highways and Transportation, October 31, 1974.

The important conceptual linkages between the planning and programming process point to a single objective: to select appropriate, fundable and implementable projects based on a careful weighing of local, regional, and State priorities and to move these projects to the implementation phase.

A major impediment to this process that currently exists is the failure of the existing system to create the environment, incentive, and ability to enable effective project prioritization at the regional and subregional levels. At least some of the causes which have created the current environment are external factors which are impervious to any direct control by the Department. Perhaps the most important of these is the almost exclusive reliance on State funds to provide the necessary local match for federal programs and, correspondingly, on the fact that Legislative appropriations to NJDOT have fluctuated, thereby preventing a reliable fiscal basis on which to plan.

Other aspects of the current effort seem more susceptible to NJDOT control and recommended changes would have the effect of promoting greater knowledge and understanding of the parties involved; greater accountability and more even and effective planning efforts at the sub-regional level. The key rests in the creation of a partnership relationship designed to maximize--consistent with program requirements--the expertise and special institutional capabilities of each level of government involved. A revision of the Action Plan or the promulgation of a document of similar status, designed to explain the relative roles and responsibilities of local government in the federal aid process, would alleviate much of the present confusion and misunderstanding exhibitied by local government officials.

E. RECOMMENDATIONS

As noted throughout this chapter, the planning process is a complex interaction of individuals and agencies at all levels of government. The preceding conclusions point to areas of need in providing remedies to problems encountered in the planning process. Unlike remedies and changes related to levels of funding, specific legislation or reorganization, the recommendations related to planning are more general and assume changes in attitude, perspective and approach to the activities encompassed in the process. The Commission hopes that recognition of the need for change will improve the planning process and its output in various transportation-related programs.

It is the Commission's view that the need to ascertain local priorities and to devise a system to address them systematically, must develop from a commitment to aid local government, and not merely from a need to do so for programmatic purposes. To meet county and municipal governments' transportation planning and concerns and recognized State needs, the Commission offers the following recommendations:

1) It is recommended that the intergovernmental responsibilities in the planning process be clarified and that the related roles of the State, the MPO's, the counties, and the municipalities, be clearly delineated in the planning process. A basis for mutual accountability must be developed so that any problems arising between the parties can be resolved within the existing framework.

While certain individuals and units within the Department are responsive, the existing system of planning ineffectively involves local government representatives because the development of shared responsibility to the local level has not been sufficient. As a results, accountability is not demanded - nor is it forthcoming in many localities - so that frustration builds at both the State and local levels. A well defined planning process should reduce ineffectiveness and 'finger pointing' by all parties. A contributing factor to the achievement of this recommendation could be

incorporated into the Legislature's approval of the Department's annual budget, which should be based, among other factors, upon DOT's formulation of an understood intergovernmental planning process.

2) It is recommended that a revamped planning-programming relationship be created which will reflect and complement the priority-setting process for projects in the subregional TIP-Annual Elements. The problems of oversubscription and undersubscription should be resolved in the course of realigning these relationships to facilitate the proper formulation of TIP-Annual Element for programming purposes.

To accomplish this recommendation, county TCC's must be informed as to the amount of funds actually available for use within the county in time to assess adequately annual priorities and to consider carefully the final project selection. Subregional units must correspondingly limit proposed projects so as to be reasonably consistent with the amount of funds available for the area. A crucial additional factor necessary to effect this revamped relationship is legislative cognizance and sensitivity to the impact of the appropriations process on transportation planning. Without timely identification of funding constraints, the planning effort--which seeks to rationally discharge transportation policy--is seriously undermined.

3) It is recommended that the Department cooperatively develop and issue more comprehensive guidelines and criteria for planning and programming actions, including reasonable time frames, levels of standardization, and provisions for ensuring mutual accountability. Minimum guidelines must be developed and applied to the operation of subregional planning units and MPO's, to achieve a greater uniformity of scope and degree of effort.

Reasonable time frames must be established which will reflect realistic limits for the processing of applications and which will serve to make accountable each of the individuals and units involved in the process. Also, general guidelines and criteria utilized by decision-makers in the process must be known and made available to all parties. The dissemination of decision-making criteria in the early stages of formulation provides the basis for stable and considered decisions.

4) It is recommended that the Department act to more fully inform county and municipal governments of those matters which have an important impact on their planning efforts and apprise them of significant transportation activity pertaining to federal aid highway problems, policies, and procedures, in general.

5) It is recommended that those projects which municipalities and counties submit for inclusion of the TIP-Annual Element also be included in their annual capital improvement program and budget. It is further recommended that these capital improvement programs and budgets be in accordance with what is submitted each year to the Department of Community Affairs. Many municipalities realize that there is a need for greater local commitment to federal aid projects and that it is not unusual for local governments to withdraw their concurrence; it is anticipated that this recommendation would have the effect of sustaining serious local commitment.

Sub-regional planning units should be vested with an identifiable role in the development of county capital improvement programs. Sub-regional planning units are ideally suited for a role in this process, as they are involved in both highway and mass transit programs. In addition, they are expected to have significant representation from a county's constituent municipalities.

CHAPTER IV

PROCESSING AND IMPLEMENTING FEDERAL AID PROJECTS

A. OVERVIEW

Chapter III indicated that the FAUS planning and programming process should accomplish two basic objectives: 1) Local governments will initiate, identify, and substantiate needed road and highway projects based upon understood goals, policies, and funding levels; and 2) the State will assemble those recommendations and formulate an understood priority programming process identifying a schedule of authorized projects that should be implemented and that are realistically associated with the available finances.* Once the planned projects have been programmed for action, one now moves to the last major area of concern: the implementation of projects. An open planning and priority programming process amounts to little if the governmental units so charged are unable to implement the approved projects in a timely fashion. The inability of governmental agencies to implement and process the approved projects expeditiously is one of the major areas in need of immediate attention and one of the chief reasons, according to local spokesmen, why the State has not been able to obligate more federal funds.

The primary federal aid program from the local government perspective, the Federal Aid Urban (FAUS) System, requires local participation in planning for the use of these funds. The TIP process represents a "bottoms-up" attempt to plan for highways and it emphasizes the role of local decision-making and priority-setting. In contrast to this decentralized planning thrust, New Jersey has centralized the implementation function to such a high degree that nearly all aspects of project approval and implementation reside with NJDOT.

This pattern, which is presumably derives from the fragmentation of New Jersey's local units (567 municipalities) on one hand, and the State's provision of matching FAUS dollars on the other, has been the source of misunderstanding and confusion. The result is that strong forces are pulling both ways on the existing framework in New Jersey for the distribution of federal aid to meet the State's local needs. Apart from this dichotomy, the existing situation in New Jersey is further compounded by:

(1) the low rating of the State in obligating federal funds;

(2) the limited knowledge at the local level of the optional roles local government might play;

(3) the need to reduce and simplify existing federal and State regulations and procedures and to avoid duplication or overlapping responsibilities and efforts; and

(4) the need to use county and municipal professional personnel for Federal Aid projects in an effective efficient, and timely manner.

Chapters Two and Three of this report have discussed the Federal and State Aid programs and indicated the local concerns regarding their limited options and understandings. This chapter will review the administrative or "red tape" problem and

*It would seem that the significant parties that should be involved in the priority process are DOT, the TCC, and the County Engineer and the County Planner. When asked--"who should prioritize all municipal projects within the county"--municipal engineers said: the Conty Engineer (32%); the County TCC (27%); NJDOT (21%); and the County Planning Board (17%). Ninety-seven (97%) percent of the responses covered those four entities, with three (3%) opting for the Regional Agency (MPO).

suggest the need to develop a governmental partnership and more effective use of existing professional personnel.

B. REDUCING RED TAPE

Reduction and simplification of existing FHWA directives and guidelines indicate that the FHWA's role traditionally has been to work in partnership with the states, and through them with local governments, in carrying out the highway program. In the past, all Federal–Aid highway projects were approved in Washington and, generally, by the same people who issued the requirements. In time, as approval authority was delegated downward, FHWA Regional and Division Offices were created with units for construction and maintenance, right-of-way, planning, design, and administration. As the scale and scope of the highway program increased, authority was transferred to those 'operational' levels and with it went more detailed instructions on procedures and regulations. As those who promulgated rules and regulations became more removed from actual involvement with project activity, the project level personnel--now distinct from those who actually formulated the written criteria--needed or requested more directives and clarification of requirements.

Within time, copies of project proposals, engineering studies, environmental reviews, fiscal documents, plans, specifications, and costs were forwarded 'up the line', for review, which could be considered essentially as "second guessing". As problems were perceived, new requirements were directed to those operating in the field; procedures drafted to fit the "most difficult" situation were applied to all project situations just to be sure.

The Federal–Aid Highway Program Manual (FHPM) consists of over 250 directives containing some 2,500 pages. As the following case studies indicate, the challenge and responsibility for State and federal officials is to attain an effective management and decision-making system and to demonstrate how multi-level reviews can be minimized.

Paper Work Processing–Time on Federal and County Funded Projects: A Case Study

Monmouth County recently made a comparison between a federally funded intersection project and a County funded intersection project. The federally funded project, the Lincroft Intersection in the Township of Middletown, moved from a pre-design to design stage and then back to pre-design. This resulted, in part, from a decision by the Middletown municipal officials, following a public hearing on its fourth draft environmental assessment, to consider a totally new design.

The Lincroft Intersection was originally a State Aid project and part of a $1.1 million effort to improve 1.27 miles of County Highway. The intersection's construction costs were estimated at $652,000 in 1973 (excluding Right-of-Way acquisition), and the project started out as part of the Traffic Operation Program to Increase Capacity and Safety in the FAUS system program.

In November, 1973, the State DOT informed the County that the FHWA makes the final determinations on what type of Environmental Impact Statement (EIS) is needed, and that for most TOPICS projects the EIS are not as extensive as the ones needed for Federal Aid Secondary or FAUS (Urban) projects. The County complained about the inability to obtain guidelines on the necessary environmental limits. The county engineers noted that

*The perspectives noted in this Introduction are based on discussions with State-county-municipal officials and reviews of federal and state reports; in particular, the June, 1977 FHWA report, Regulations Reduction Review, pp. 13-15.

"the environmental limits are important because they determine the limits of the EIS which must be processed prior to the time of the public hearing for the project."*

In addition, much of the delay resulted from local citizen objections. A citizends advisory committee developed a 1977 report on the improvement of the Lincroft Intersection. The Committee reviewed such items as pedestrian and vehicular traffic, safety, community impact, business and residential consequences, and environmental changes. On November 30, 1977, the Citizens Committee accepted a county plan for the Lincroft Intersection but with six major conditions.

Conversely, the County funded project at the intersection of Tinton Avenue and Wayside Road in the Borough of Tinton Falls was the result of the construction of a new federal building at Fort Monmouth. The project was completed in October, 1974 -- slightly over two years from the time it was conceived. The project cost $390,000 (excluding Right-of-Way acquisition).*

As Figures IV-1 and IV-2 indicate, according to County officials, there was a difference of 1,280 hours of staff time spent on paper work between the federally and the County funded projects. Monmouth County tabulated this data in 1977 as part of a national study for the National Association of Counties (NACO).

The Monmouth County Planning Board also made an assessment of the time factor associated with paper work for the construction of two County bridges. County Bridge MN-55 at Tepehemers Brook in Manalapan Township, was an existing structure, scheduled for reconstruction in 1975. The original cost estimate was $110,000. The contract, funded entirely with County monies, was awarded competitive bidding at $104,000. The County funded bridge was completed in April, 1977 and 144 man-hours were associated with paper work. County officials indicate that the time sequence on this county funded bridge (approximately two years) is actually longer than the typical time sequence for a comparable bridge.

In comparison, County Bridge H-2, at Willow Brook in the Township of Holmdel, had an original (1973) cost estimate of $225,000. The most recent 1977 cost estimate was $1.2 million. As Figure IV-2 indicates, the federally funded bridge has amassed 1,541 county man-hours of paper work in comparison to the 144 man-hours for the county funded bridge. However, the increased hours associated with the federally funded project should not suggest that the responsibility rests solely with the FHWA.

The County Bridge H-1 Project was begun in 1968 following a survey which indicated the inadequacies of the bridge. Preliminary plans and specifications in 1971 provided for a bridge width which could potentially accommodate four lanes of traffic and which would eliminate the need for future widenings. A construction contract was prepared in the fall of 1972 and, since the State was seeking projects for Federal Aid Secondary funding, an application by the County was made in November, 1972. A State-County agreement was executed in March, 1973, and a consultant firm was hired to perform the environmental

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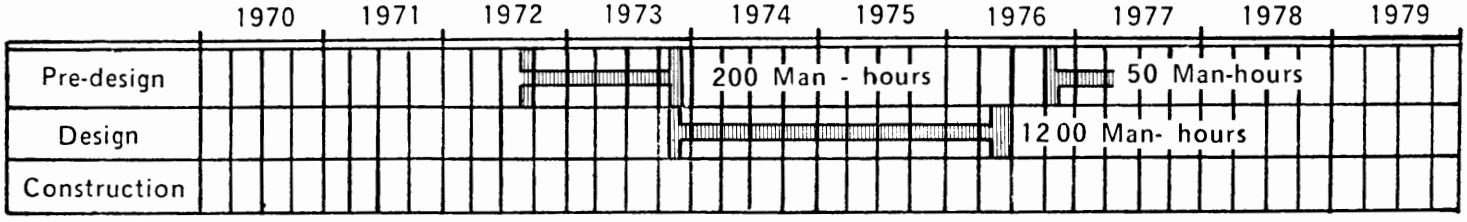
*NJDOT Records and Files.

*The examples are not presented as comparable projects in scope and environmental considerations but as illustrations of the administrative process time involved in two intersection projects occurring in the same county at approximately the same period of time. The Lincroft intersection is recognized as a more complicated project involving controversy with a school, parklands, small businesses, and residential homes.

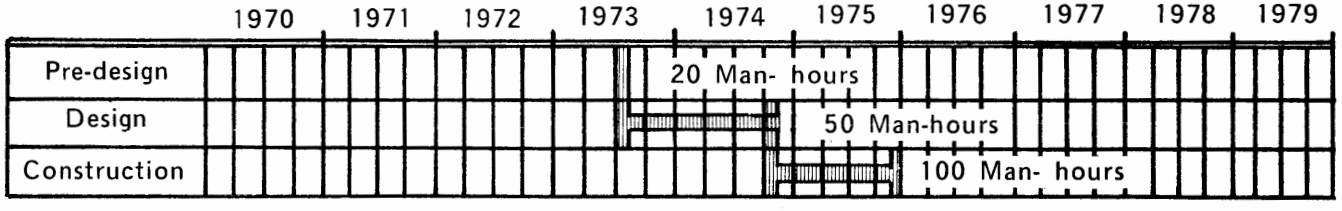
Figure IV - 1

MOUNMOUTH COUNTY, N.J.

LINCROFT INTERSECTION, FEDERALLY FUNDED



TINTON AVENUE AND WAYSIDE ROAD INTERSECTION, COUNTY FUNDED

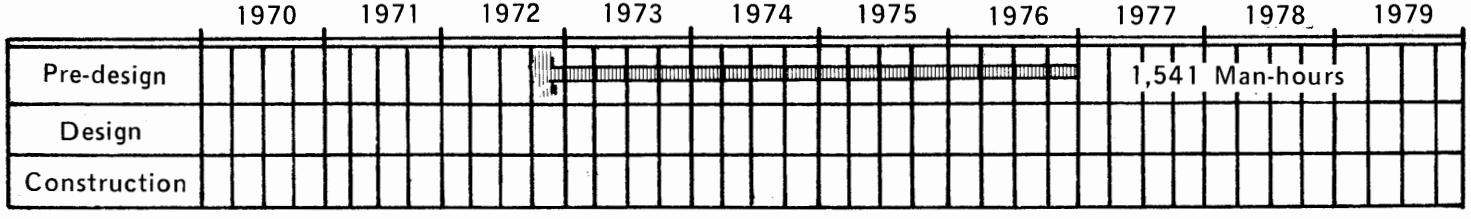


NOTE: Man-hours refers to time spent on paperwork only. Prepared by the County.

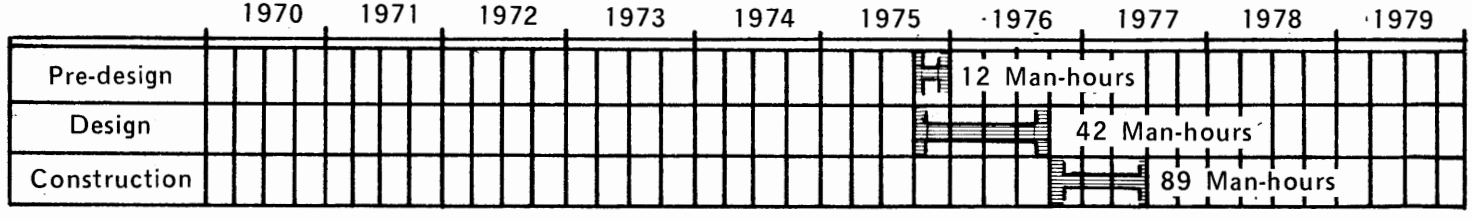
Figure IV- 2

MONMOUTH COUNTY,N J

COUNTY BRIDGE, H-2 FEDERALLY FUNDED



COUNTY BRIDGE, MN - 55, COUNTY FUNDED



NOTE: Man-hours refers to time spent on paper work paperwork only. Prepared by the County.

studies. Between July, 1974 and January, 1977, seven draft negative declarations* were prepared and apparently all seven were found to be unacceptable by the FHWA.

Also during 1976, two additional surveys were made of the bridge. A July, survey found the bridge to be structurally unsound. As a consequence, the weight limit was reclassified (to a 7 ton capacity) and emergency repairs were undertaken.

In February, 1977, inasmuch as emergency repairs had to be undertaken, a re-evaluation of the project was made, and NJDOT, on behalf of the County, requested FHWA to change the project from 4 lanes to 2 lanes. On this basis, the project would be considered a non-major action and a 2 lane bridge would not be subject to the environmental requirements necessary for the 4 lane structure.* Also, as a result of transferring the project from Rural Secondary to the Bridge Replacement Program, the funding ratio changed from 70% Federal : 30% County to 75% Federal : 25% State.

In conclusion, reviews of federal–state–local communications and documents on diversified projects indicate the need for classifying the appropriate mission to be carried out for each governmental level. Whether it be the FHWA New Jersey office, or NJDOT Trenton or Regional offices, it is difficult for some of those agencies to be responsible for policy interpretation and guidance, formulation of procedures, program implementation and monitoring, and at the same time assume responsibility for doing project related work. One of the prominent themes in this Chapter is the degree to which federal-county-municipal governments can develop program management systems that enable each unit of government to realize mutually understood roles and responsibilities as projects move through the approval and implementation phases. This is particularly true when different segments of the same project process necessity varying levels and degrees of federal and state participation and concurrence.

Also, traditionally, the basic approach to measuring program accomplishments was to determine if procedures had been followed. A primary premise was that if the procedures are followed, the products of a program will be acceptable. However, the continued growth of more categories of funds and additional legislative requirements necessitates different management approaches. Moreover, federal requirements indicate that transportation systems should be developed that will serve the states and local communicities*efficiently* and *effectively*. To determine and measure the accomplishment of this Congressional goal, some definition and basis must be developed as to what is effective and efficient. A procedural analysis alone will not assess *efficiency* and *effectiveness*.

Red Tape: Who creates it: – A Case Study

It is said that the bureaucratic system is created by all of us. It results in part from special interest groups insisting on legislative and administrative regulations to protect their particular programs. It results from public hearings and other processes established to provide individuals and groups the opportunity to be heard on issues which may affect them.

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*A written announcement, prepared after the environmental review, which indicates that the agency has decided not to prepare an Environmental Impact Statement (EIS) and which summarizes the environmental impact approach.

*Federal and State officials indicated that considerable time could have been saved if county spokesmen would have originally concurred with the 2 lane bridge recommendation.

It is also given impetus by the rapid growth in opportunities to litigate governmental actions, both before and after they are taken.

The sixty year history of federal aid highway programs and legislation has brough an increase in both program size and complexity. Originally there was only one class of funds, while currently there are thirty-eight categories administered under Title 23.* In addition to the increases in program size to approximately $7.5 Billion per year and thirty-eight categories, legislation outside of Title 23 has also significantly influenced project complexity and development time.

There are many road and bridge projects that are discussed by local, state and federal officials as "classics" because of the delays and "red tape." The following case study, the Columbia Turnpike Bridge, is cited as an illustration of how a seemingly simple and obviously necessary project may become a major task when a project moves from one program to another for funding reasons.

Background: County Route 510, between Morristown, in Morris County, and Newark, in Essex County, was scheduled for widening from two lanes to four, in the mid-1960's. On the Morris County side of the road it is known as Columbia Turnpike, and in Essex County it becomes South Orange Avenue. The road crosses the Passaic River (the boundary between the two counties) at Florham Park Borough in Morris County and in Livingston Township in Essex County, over the so-called Columbia Turpike Bridge. This bridge, some 110 feet long, was constructed in the early part of the 20th century, and is in dire need of repair or reconstruction. The two lane span is also clearly inadequate given the four lane approaches now nearing completion at each end. On the Essex County side, the bridge passes through a Greenacres* tract known as West Essex Park, which runs along the riverbank.

Chronology of Events: On February 1, 1968, New Jersey DOT received applications from Morris and Essex Counties for State Aid Road System (SARS) funds to repair and widen this bridge to coincide with the proposed four lane approaches. On January 6, 1969, DOT approved $400,000 in SARS funds for this purpose. The County Engineer's estimate of the total project cost at that time was %536,767.

Subsequent to the SARS approval, plans and specifications were prepared and bids were advertised by the counties. By November 8, 1972, only two bids had been received, both of which were nearly double the Engineer's estimate. The low bid was $940,298. On December 14, 1972, Morris County adopted a resolution rejecting all bids, as it was felt that since simple repair and widening was so costly, the bridge may as well be replaced entirely.

While new plans and specifications were being drawn up for replacement of the bridge, the State (DOT) was meeting with County officials to discuss the possibility of using Federal Aid instead of State Aid Road System (SARS) funds. In 1971 the State Legislature had lapsed $35,000,000 in the SARS account with the assurance that when the funds were needed they would be reappropriated. By 1974, DOT had become aware that the SARS program was effectively dead, and that the promised funds would not being made available. In a parallel development, the Federal Highway Act of 1973 created a new program known as the Federal Aid Urban System (FAUS), and Columbia Turnpike was placed on this system thus becoming eligible for Federal aid.

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*U.S. Code Title 23, Transportation.

*A state, or state-local matching program, for acquiring open space.

Following a March 3, 1974 State/County meeting, the project costs (Federal – $616,273 and State $264,177 for a total of $880,390) were estimated, and in July, 1974, the County submitted its application for Federal Aid Funds to NJDOT. The initial project documents, although incomplete, were submitted by NJDOT to FHWA in December, 1974; the A-95 clearance† was submitted in April, 1975; and the project received federal authorization in May, 1975.

In the meantime, the State DEP's Water Policy and Supply Council issued a Stream Encroachment Permit in anticipation that construction would begin in the near future. By June of 1975, the Stream Encroachment Permit, issued the previous year, had to be extended to May, 1977, and it would later be extended to 1979.

In addition to the required environmental Negative Declaration, the DOT Bureau of Environmental Analysis (BEA) begain in 1975 to prepare a 4 (f) statement. The 4 (f) requirement is an assessment of the environmental effects of any project to be constructed on park land and the Section 4 (f) statement is to show that there is no feasible nor prudent alternative to the use of parklands for the project.

Another problem developed during this time: State DEP was requiring that all new bridges be built to permit passage of the 100 year frequency flood. The County believed that this consideration should have been presented earlier. Moreover, the FHWA anticipated some of these considerations in their 1974 memorandums to the State.*

In response to the Mayor of Florham Park's concern over the project's delays, NJDOT wrote in April, 1977, that "we do not anticipate final approval by FHWA of the EIS until December, 1977, or January, 1978." In response to a citizens concern, NJDOT wrote in June, 1977, to one of the State's U.S. Senators: "the NJDOT has prepared a draft Negative Declaration. Once this document is submitted to the Divisional FHWA, it is forwarded to the Regional Office and FHWA Washington Office for their review and approval."**

The 1977 estimated capital cost of the project was $1,350,000, more than 50% higher than the 1974 estimates.

In conclusion it is generally recognized that the national and state transportation objectives will be realized only if there is a federal–state partnership. It is also beginning to be apparent that the last decade has brough enormous changes and that the former management practices may not be appropriate to present conditions.

One of the most repeated concerns stated to the Commission was the need to reduce red tape burdens, and to develop more effective operational approaches to managing the federal aid highway programs. In a 1977 report to the FHWA, multi-level project review was identified as one of the most frustrating examples of "red tape."*** Some recent reports have indicated that one of the more feasible ways of giving project development responsibility to states and counties, and of minimizing the step-by-step project approvals, is through the Certification Acceptance (CA) option. The CA holds the greatest potential for providing latitude to states in meeting Title 23 objectives, by transferring the approvals from the federal government to the State. The concept is highly compatible with those states which are confident of their own staff's capabilities and concommitantly support FHWA's

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† A review for compliance with planning, fiscal and other conditions for federal funding.

*NJDOT Records and Files.

**Ibid.

***Regulations Reduction Review, FHWA, June, 1977. This point was also dicussed in the September, 1977 edition of Public Works, an article entitled, "Why Counties Fail to Use All Available Federal–Aid Highway Funds."

involvement in overall program performance rather than project-by-project monitoring. It must be understood, however, that Certification Acceptance does not eliminate the need for meeting the same federal requirements.

Another of the concerns made known to the Commission was the need for greater consideration on how new or revised policies and procedures would be implemented with regard to projects already in the "pipeline". In such instances, federal and state officials should reach prior agreement and understanding with local officials on the appropriate issues, considerations, methodology, and procedures that will prevail. To avoid duplication, excessive review, and multi–level concurrences, *prior* agreement is needed and State and federal advice and timely assistance should be made available directly to the appropriate local government officials.

Expediting Projects: – A Case Study

The Commission's interviews and questionnaires revealed deep frustration on the part of the local officials when their projects were moved from one program to another and when project phases had to be repeated. The Columbia Turnpike Bridge Case Study demonstrated the enormous delays when a project is moved from one program to another for funding reasons and when compliance with new or revised regulations are required. The Cooper River Bikeway System in Camden County represents an unwarranted expenditure of time and money in repeating the same phase of the review process without meaningful resolution.

Under the Federal Highway Act of 1973, federal funding assistance is available to local governments for the planning and construction of bikeways. In April and May 1974, Camden County and two of its municipalities, (Cherry Hill and Haddonfield) submitted an application for bikeway funds to the New Jersey Department of Transportation and proposed establishing a continuous bicycle trail within the Camden County Park system and passing through Haddonfield Borough and Cherry Hill Township. This trail represented an extension of the existing 2.5 mile long Cooper River Bike Trail, and was adopted by the Camden County Planning Board as an integral part of the County Master Plan.

The president of the Camden County Park Commission indicated that the proposed bikeway would be built in the park on existing gravel road shoulders and existing gravel paths and that no trees or shrubs would be disturbed. He also noted that the Camden County Park Commission, an agency with fifty years of expertise in the management of a system of county parks and their facilities, would assume full responsibility for the operation and maintenance of the bikeways after construction was completed.

The project appeared to be a relatively simple one, extending an existing 2.5 mile bike trail aready in use. The county indicated that the proposed bike trail would result in the separation of bike from motor vehicle routes, thereby alleviating the dangerous condition "where currently, automobiles and bicyclists are forced to compete for the use of the existing roadways, or bicyclists are forced to use gravel pedestrian walkways which are not signed or designed for bicycle use." The proposal entailed construction of a bikeway some 7 feet wide, and consisting of a four inch gravel base with a two inch bituminous surface.

In April, 1975, NJDOT, in accordance with federal requirements, submitted a five page Draft Negative Declaration to FHWA for the Cooper River Regional Bike Trail System, and the Department stated that in view of the limited scope of the bike trail, "it would not have a significant effect upon the human environment." The FHWA did not find the Draft Negative Declaration acceptable.

On June 10, 1975, the Haddonfield Planning Board wrote to NJDOT expressing its extreme disappointment over the delay in the project. The chairman of the planning board

noted "we cannot understand how there can possibly be delays caused by additional environmental considerations. The whole purpose of the Bikeway Project is to encourage people to ride their bikes instead of their automobiles. The beneficial environmental impacts are obvious to everyone."*

In June, 1975, NJDOT indicated that the project was found to be non–regional in scope "and that no adverse effects were obvious. However, the project was considered a 'major action' since it was built on park land." Consequently, NJDOT submitted the project application for the review of NJDEP's Historic Sites Unit. Also in June, the Department was answering calls from Congressional offices on the $143,000 project (70% FHWA – 30% State) and it was responding to a citizen's complaint that the federal and State governments could not decide on the terms of an environmental impact statement and that "red tape" prevailed.

Shortly thereafter a second draft Negative Declaration was sent to FHWA, and including exhibits, it was a 48 page document. The FHWA did not find it acceptable. One of the FHWA's comments was that it was far too long and contained excessive unnecessary information.

The State DOT submitted a third draft Negative Declaration which was prepared by NJDOT's Bureau of Environmental Analysis, and was designed to serve as a general model for other bikeway projects.

In the review process, FHWA indicated that this third draft, just as the two previous ones, was inadequate. Five major deficiencies were cited, including: (1) the project was predicated on the use of park lands, without alternative considerations regarding site location; (2) measures to minimize harm to 4(f) lands should be discussed; (3) the submission should treat discussion of the project more logically, e.g., the project segments should be more logically treated, for instance in an east to west methodical manner.

The fourth and latest submission of the 4(f) statement was submitted by the Park Commission on November 10, 1976 and was based on a simplified formate approved by the Washington office of FHWA in May, 1976. Significantly, the accompanying text of this Draft Statement was extremely brief, amounting to about two pages and accompanied by several maps illustrating the sections of the project. Included also were letters of support from the affected public governing bodies and a cutaway section diagram of the proposed bikeway.

Federal spokesman indicated that the Declarations' inadequacies were attributable to the fact that the County had neither accepted its suggestions nor had they answered the federal concerns. The record does not indicate that the fourth draft was returned with an approval.

In conclusion a review of publications on bikeway planning indicates that the best way to obtain funding is to prepare a clear project proposal. This is not considered a difficult task and the primary elements of such proposals are:

> clear location maps showing bikeway construction, important connecting roads, and significant land uses and bicycle traffic generators;
>
> a statement of goals, objectives, needs, demands, and copies of master plans;

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*NJDOT Records and Files.

a description of the present and proposed bikeways and roadways, including traffic volumes and the effects on traffic and safety considerations;

an assessment of the community's bicycle programs (safety, education, enforcement, and registration), funding efforts and levels, and operational and maintenance plans; and

a presentation of public (citizen) and private agency involvement, coordination, support, and approval.

It should also be realized that even for a matter relatively as simple as a proposed bikeway goes through several successive stages. Once a community has developed a project proposal, it must then apply to the county to have the project included in the Transportation Improvement Program (TIP) of the Metropolitan Planning Organization (MPO). Upon approval, the Bureau of Local Aid will request from FHWA that the project be included in the New Jersey Department of Transportation's Annual Federal Aid Program. After the project is programmed it must now enter the implementation stage and, as the next section indicates, there are many steps in this process, as well.

C. THE NEED FOR A PARTNERSHIP IN IMPLEMENTING FEDERAL AID PROJECTS

An undisputed virtually univeral claim is that federal aid projects take longer to process than projects funded by any other level of government. The reasons given for this phenomenon vary according to individual experience, but the basic fact remains unchanged. *A survey of New Jersey's county engineers indicates that on the average it takes 6 years to complete a federal aid project; 3 years to complete the same project funded by State aid; and only 1½ years if the project were funded completely with local funds.* In general, it appears that the project time period doubles with each additional level of control. It is conceivable that a federally funded project could take as long as 12 years to complete, in the normal sequence of events. Should any problems arise, the time period could be lengthened beyond that. Can these federal aid projects be expedited?

The Federal Highway Act of 1970 mandated that each state adopt an "Action Plan", laying out the sequence for considering economic, environmental, and social effects of any Federal Aid project. The feeling of many local officials contacted throughout the course of this study is that NJDOT's "Action Plan" is not an adequate source of information for processing local projects.* Apparently the "Action Plan" was written to explain the federal aid process for all federal projects. The process is essentially the same for local projects, as it is for State projects. Because of the complexity this gives substantial misunderstanding, misinterpretation, and distrust on the part of local officials trying to thread their way not only through the maze of regulations, but also the mountains of paperwork and the myriad departments and agencies that are involved.

Essentially, for Urban System (FAUS) projects, the State does most of the work. That is, while a local governing body must "initiate" any project on the Urban System by formally requesting federal funds, the remainder of the project sequence is carried out by NJDOT. Thus the responsibility for making appropriate changes in order to speed up the process lies with DOT. Within the federal legislative framework there are certain options which DOT can exercise to reduce substantially the time element in federal aid project processing.

*State officials concur that the Action Plan should be revised.

There are numerous steps in implementing or processing federal aid projects. Once the request for authorizing federal funds has been made, the major implementation or processing steps include:

1. Federal Authorization
2. Federal-State-Local Agreements
3. Consultant Selection and Execution of Engineering Agreements
4. Preparation of Plans and Specifications
5. Environmental Considerations and Statements
6. Public Hearings
7. Right of Way (ROW) Plans and Acquisitions
8. Permit Applications
9. Advertising Bids and Contract Awards
10. Supervising Construction and Administering Contracts
11. Project Finalization and Inspection
12. Audits and Certifications

State personnel in Trenton need not closely monitor all areas to the same degree, particularly when local competence and control are adequate. However, the State should provide more attention and assistance with the processing areas that are in critical need of attention. There are certain areas in which the State could use its good offices to assure greater leadership and direction and there are other areas in which decentralization is clearly in order.

In reviewing the previously noted implementation steps there are definite areas in which leadership and decentralization are in order and the following are noted as illustrations. Under the State aid programs, applications were reviewed by only one agency--NJDOT. The application approval process was relatively simple and direct and, at most, was completed in three months. The approval process for federally funded projects necessitates several layers of review and can approximate a year before Federal-State authorization. As a case in point, in the Columbia Turnpike Bridge example, there was a ten month interval between the time the County submitted its application for federal funds to NJDOT in July 1974, to May 1975, when the project received federal authorization.* At an October, 1976 New Jersey Red Tape Conference, county officials indicated numerous other instances of delays in the approval process.

For federal aid programs, consultant selection can take anywhere from a month to four months and the processing of engineering agreements can take from eight months to a year. Under State aid programs, local governments were able to select and work with their own consultants, and the execution of contracts took from two weeks to one month. Under federal aid programs, if local governments select their own consultants they are not reimbursed for their efforts and time. With understood policies and procedures, there does not seem to be any reason why most counties and many municipalities could not assume this responsibility, be reimbursed, and considerably shorten the time lag and red tape.

While project application and consultant selection and execution of engineering agreements are areas in which understood responsibility could be decentralized to the regional and local levels, the permit and application area is an opportunity for the State to utilize its offices to coordinate the reviews and use its resources to facilitate the process. In

*The complete documents were submitted to the FHWA in April, 1975 and authorization was granted in May 1975.

many instances the type of information submitted and the general reviews performed by the various agencies cover the same general areas of concern. In some instances one State agency will require enlargement and straightening of a water course while the review comments of another State agency will require protection of fish and game and indicate that the stream is to be left in its original condition. The resultant time lags are further magnified by the federal agencies' requirement that the State agencies be satisfied.

Associating responsibility with issues and needs, and developing a partnership that anticipates available human resources and time schedules, as opposed to one agency attempting to do everything, is also true in the areas of right of way (ROW) plans and acquisitions. State records indicate that communities seeking assistance with ROW problems do not necessarily receive timely responses and assistance, yet the State wishes to assume and retain this responsibility in all cases.

At the October, 1976 Ocean County Red Tape Conference, "right of way acquisition as it pertains to land dedication" was identified as one of the major problems in the processing of many Federal Aid projects. The Red Tape Conference Report noted "the current Federal legislation regaring right-of-way acquisition is detrimental to local governments best interests." After extensive review by Federal-State-County officials it was concluded in November, 1977, that highway projects may be eligible for federal funding in cases where dedication of property is made in accordance with New Jersey's Revised Statutes (N.J.S.A. 40:27-6.2 and 40:27-6.6).*

Obviously, the responsibility before the State is significant while the staff resources at its disposal are limited. All decisions can not and should not be made in Trenton–by NJDOT and FHWA. Greater reliance and use must be made of NJDOT's regional offices, county departments, and local professional engineers. Responsibility must be delegated, management principles must be employed, and greater use of local resources must be developed. There is a need to develop an effective partnership that recognizes both the respective strengths and limitations of the federal, State, and local governments. An effective and sensible working partnership appears to offer the greatest likelihood of assuring that New Jersey roads are maintained and that the state receives its fair share of federal aid.

D. CONCLUSIONS

Throughout the first years of the FAUS program, NJDOT attempted to manage the entire program, in addition to administering the other federal aid programs, from its main office in Trenton. During the past 18 months, the State has started to decentralize the process. State officials readily admit that only now are they beginning to acquire the knowledge and experience to handle a program of FAUS's magnitude. Progress is being made however, as evidenced by the $41.9 million which was authorized for expenditure in FY 1977, compared to the $13.7 million in FY 1976.

The ability of the State to maintain its roads, which are at a critical stage, and the ability of the State to implement its programs in a timely fashion, will be contingent upon the formulation of a system of administration. Such system must allow for interaction among many organizations; provide for both centralized and decentralized arrangements; and constitute a dynamic, evolving process which keeps institutions in tune with current problems and resources.

*It should be further noted, that once an application for federal funds is made, assuming the project has been determined to be eligible, no further dedications may be exacted from any parcel within the limits of the proposed right of way.

A review and analysis of recent federal reports and documents seems to place many of these issues in a policy context with clear admonitions against excessive delays and regulations. The federal government has recognized that complicated procedures do exist which contribute to inaction and prolonged delays in completing highway projects. Congress directly reflected its concern with the federal requirements through Section 108 of the Federal Aid Highway Act of 1973, which states "that the Federal Highway Programs shall encourage the substantial minimizations of paperwork and interagency decision procedures and the best use of available manpower and funds so as to prevent needless duplication and unnecessary delays at all levels of government."

Also, FHWA's December, 1976 Statement of National Highway Transportation Policy says: "It is FHWA policy that the flexibility of states in developing and carrying out projects using federal highway funds should not be restricted by excessive federal regulations." Morevover, Section 302 of Title 23 requires a state to be adequately organized, staffed and equipped to carry out the Federal Aid Highway Improvement Program. When state assistance to local government can be construed as project related, the associated costs are eligible for federal aid participation.

It is the Commission's view: that the emphasis must be put on reducing administrative snags; that determinations of responsibility for the various programs must be based on efficient and effective management approaches; that tax dollars are spent wisely; and that the road projects comply with regional considerations. It is also the time to recognize and support the competencies of county and municipal personnel and hold professionals responsible in the design of roads and highways, in their ability to administer contracts, to deal with consultants, and to carry out contracts.

E. RECOMMENDATIONS

1. It is recommended that a working partnership in the processing of federal aid be instituted immediately and that the State be mandated to make greater use of the engineering and planning professionals at the county and local levels. The elements of this proposed partnership are: that local governments will be actively involved in most aspects of the program; that decision making will be decentralized (i.e., that review and approval authority is at the lowest qualified level) and "red tape" minimized in all actions; and that the partnership--distribution of responsibilities--will build upon the existing State regional offices and the county structure.

Many significant decisions will have to be made as to what role NJDOT is able to play in the implementation process and to what degree the implementation process should be centralized and decentralized. This decision needs to be made now and it should not be made by the State alone. The counties have sufficient experience and resources and the municipalities have experienced professional engineers (as staff members or consultant staff) for both to assume many more responsibilities, particularly with State overshight and direction. In a more decentralized system the counties must be prepared to assume greater responsibility.

2. It is recommended that a Task Force of State DOT officials, county engineers, and municipal engineers, be authorized to formulate a revised program of responsibility for each of the steps in processing and implementing federal aid projects.* The State of New Jersey must realize and utilize its share of federal aid in a more timely fashion and this will only be realized if the responsibilities for each of the

*The Task Force should also confer with FHWA and NJDEP.

processing steps are revamped. A redirected effort could be formulated within two-three months, by an experienced Task Force team, and its report should be made to the Legislature.

3. It is recommended that the State of New Jersey assume responsibility for Certification Acceptance, or indicate why it is not to the State's best interest to do so. The intent of Certification Acceptance is to formally recognize State competence and ability to design highways, acquire rights-of-way, administer contracts, confer with consultants, supervise construction, and perform audits without step by step monitoring by federal representatives. By obtaining Certification Acceptance the State will be essentially certifying that it is willing and able to assure that federal policies are and will be upheld. It appears that maximum benefits could be obtained by a concurrent State-county assumption for Certification Acceptance. By such an arrangement the State and the counties would indicate a willingness to accept a number of review and approval responsibilities of FHWA. It is also recommended that NJDOT issue a position paper on the State's ability to reduce "red tape". The State must assume responsibility for reducing excessive review procedures and the red tape burdens.

4. It is recommended that a "local aid action plan," tailored to local needs and showing the local aid project sequence, be prepared and made available for local officials, to provide much needed clear and precise statements and documents on the processing and implementation of projects. This Plan should supplement the State Action Plan which both State and local officials did not consider an adequate source of information for processing local projects.

A more positive federal and State attitude must be developed in the relationships between federal, State and local governments and the following concept which was developed by a National Task Force on Reducing Regulations, might well be applied towards its formulation. This management concept states that:

> administrative requirements should be designed on the assumption that State and local recipients of federal highway aid are competent and possess or have access to skills of the highest order. FHWA requirements should also be based on the assumption that State and local officials through close interation with the public are best able to judge local values and needs. Future Administration legislative initiatives should be based on the same philosophy.

The Commission strongly supports this philosophy and suggests it be applied to improving inter-agency communications and strengthening institutional arrangements. Local governments on the other hand must be receptive to federal-State efforts and be willing to assume a shared responsibility, as well.

CHAPTER V

TRAFFIC CONTROLS: THE INTERGOVERNMENTAL PROCESS

A. INTRODUCTION

The U. S. Department of Transportation's Federal Highway Administration, in its *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD),* has defined traffic control devices as "all signs, signals, markings, and devices, placed on or adjacent to a street or highway by authority of a public body or official having jurisdiction to regulate, warn, or guide traffic."** The MUTCD also specifies that, "to be effective, a traffic control device should meet five basic requirements: 1) fulfill a need; 2) command attention; 3) convey a clear simple meaning; 4) command respect of road users; and 5) give adequate time for proper response."** The MUTCD further indicates that, "in the case of regulatory devices the actions required of motorists and pedestrians should be specified by State statute, or by local ordinance or resolution."**

In New Jersey, authority for the regulation of traffic and the use of traffic control devices is a responsibility shared between the State (whose authority is exercised by the DOT) and local governments, including both counties and municipalities.

From the statutes and regulations, one can identify three basic types of traffic control devices: directional, warning and regulatory. All three types are important, but the regulatory category is the most significant because a device of this type *requires* a response from the motorist. Also, the use of regulatory devices requires intergovernmental coordination and understanding to insure highway safety and enhance traffic flow.

The primary traffic control regulatory devices are: traffic signals, parking restrictions, stop and yield signs, speed limits and 'No Passing' zones. The MUTCD was created to provide, with specific detail, the criteria which FHWA recommends to be followed in the design, placement, operation, maintenance, and uniformity of each device. New Jersey's statutes provide that each locally adopted traffic control ordinance, and each device authorized by such an ordinance, is subject to the approval of the State Commissioner of Transportation.* The New Jersey Administrative Code further specifies that, in the exercise of this power, the Commissioner shall require that each local traffic control device be in accordance with the MUTCD.**

The New Jersey Department of Transportation has published a guide for the use of counties and municipalities to assist them in preparing traffic ordinances which will be acceptable with respect to State law.*** The Guide identifies all applicable laws and contains model traffic ordinances. The Guide also notes that traffic ordinances or devices will not be considered for approval by the Commissioner of Transportation unless the device and its installation have been duly authorized and inspected by NJDOT.

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*MUTCD, U.S. DOT-FHWA, Washington, 1971

*N.J.S.A. 39:4-183.27 et seq.
**N.J.S.A. 27:1A-44 and 39:4-8; Title 16, Transportation N.J. Administrative Code.
***Guide for Preparation of Traffic Ordinances, N.J. DOT, Trenton 1976.

The Bureau of Traffic Engineering, a unit of the Division of Transportation Operations and Local Aid is the designated agency responsible for review of local traffic ordinances on behalf of the Commissioner of Transportation. The Bureau is also responsible for supervision of the installation and use of all traffic control devices throughout the State. Personnel of this Bureau indicate that, for various reasons, a difficulty exists in assuring that proper standards are met and maintained with regard to traffic control devices. The area of primary concern for the Bureau is that of *regulatory* devices. Warning and directional devices are of lesser importance, whereas a *significant safety hazard frequently accompanies misapplication of a regulatory device.** Also, since all locally imposed regulatory controls are governed by ordinance, there are legal penalties for violation of those controls.

The decision to use a particular device at a particular location should be made on the basis of an engineering study of the location. While the MUTCD provides standards for design and application of traffic control devices, the Manual is not a substitute for engineering judgment. Qualified engineers are needed to exercise the engineering judgment inherent in the selection of traffic control devices, just as they are needed to locate and design the roads and streets which the devices complement.

The focus of this chapter will be the intergovernmental process in the important regulatory area of traffic control. The following sections will analyze the four primary traffic control regulatory devices (traffic signals, parking, stop signs and speed limits) and the municipal, county, state and federal perspective on many of the related issues.

B. TRAFFIC SIGNALS AND PARKING

In the State of New Jersey there are approximately 6,200 signalized intersections on 32,500 miles of roadway. Some 4,500 of these are on 30,000 miles of roads under the jurisdiction of local governments, of which counties have sole or shared responsibility for some 1,725 signals. The remaining 1,700 are on 2,500 miles of State highways.

According to State officials, only 1,000 of the 4,500 local signals are officially approved by the Commissioner of Transportation. Most of the 3,500 unapproved traffic signals require some type of improvement to bring them up to standards.

The Bureau of Traffic Engineering recognizes two problems with regard to these approximately 3,500 unapproved signals. *The first is locating the unapproved signals making the appropriate analysis, and obtaining an agreement from the involved county or municipality to upgrade the signal and have it approved. Second, the Bureau indicates that the major obstacle in upgrading traffic signals is capital cost.* The Bureau indicates that roughly $10,000 to $20,000 is usually required to bring a signal up to standards. About $30 million would be required to upgrade all substandard signals in New Jersey.

According to the Commission's survey of municipal engineers, traffic control ranks fourth among all road related items at the municipal level in terms of need for State aid. Within the area of traffic control itself, the ranking of needs, as determined from the Commission's questionnaires, is presented in Figure V-1.

As can be seen, signal upgrading ranks second only to intersection improvements, which normally involve such things are channelization to provide stacking lanes, widening, corner cutbacks, etc., which are equally related to road improvements and traffic control devices.

In associating cost with stated need, the county engineers indicated, by questionnaire response, that a total of 1,071 county singals are in need of *upgrading* and that there is a

* Since no legal penalty devolves on a motorist who ignores a warning or directional sign, the misuse of warning and directional devices is of lesser importance, although the installation of an incorrect warning device may still present a significant safety hazard.

Figure V-1

Traffic Control Needs

Rank	Area
1	Intersection Improvements
2	Signal Upgrading
3	Pavement Marking
4	Sign Replacement
5	Parking Improvements
6	Roadside Hazards
7	Surveys

need for some 186 *new* signals. Assuming the average cost to upgrade a signal is $15,000 and that the average new signal costs $30,000, then county needs are:

Upgrade Needs: $16.065 million
New Signal Needs: $ 5.58 million
Total Needs (County Traffic Signals): $21.645 million

In the absence of a State aid program for signal upgrading, local governments must rely primarily on Federal Aid Urban System funds (FAU) to improve intersections and upgrade signals. The following narrative illustrates the frustrations and misunderstandings that emerge in the complicated inter-governmental policies, procedures, and processes. It also leads to the conclusion that the federal aid programs and regulations, which are based on national considerations, cannot be as flexible as State aid programs in responding to the legitimate concerns and interests of individual communities.

The Kenilworth (Union County) Case study is not necessarily typical of federal-state-local relationships in the traffic control area, but it does represent one of the clearer instances of differences in philosophy and approach among these governmental levels. Also, it is a case study that has impacted the administrative and political levels of the federal, State and local governments.

Kenilworth Borough has been negotiating with county, State, and federal officials for the past couple of years to replace five old traffic lights along the Borough's boulevard. The need for such action was based on the recognition by federal, State, and local officials that existing traffic control devices at five intersections were inadequate, but the community's desire to eliminate traffic hazards and congestion on the boulevard has been stymied by federal program requirements that the community eliminate angle parking.

State officials originally recommended that the ideal solution would be to replace the inadequate traffic lights under the TOPICS Program.* The community opposed the elimination of the angle parking, primarily because of the fear that the already short supply of parking facilities would be exacerbated, and that such a situation would negatively impact on the local business community.

The Kenilworth citizenry supported a public referendum opposing the elimination of the Boulevard's angle parking and the Kenilworth town council passed a resolution stating

*Traffic Operations Programs to increase capacity and safety. TOPICS no longer exists as a program - supplanted by the Federal Aid Urban System (FAUS).

that the angle parking would not be eliminated as a condition of federal assistance for the traffic light replacement.

In view of the local desire to retain the angle parking, the NJDOT and the county took the position that definite safety benefits would be gained by the proposed traffic signal improvements, despite the retention of the angle parking as desired by the local community. It is NJDOT's and the County's contention that the existing street system is sufficiently wide to retain the angle parking without placing an additional burden on the capacity of the streets. Also, off-street parking available to handle those who now park on the street is inadequate and the local businessmen contend it will have an adverse effect on their business.

The NJDOT and the County also state that the existing signals do not meet the federal requirements as set forth in the MUTCD and that the signals create a safety hazard. The equipment is old and subject to unusually high maintenance and repair. By assuring that the signals are properly designed, timed, and in accord with the MUTCD requirements, obvious safety benefits are assured. The State DOT has stated to the FHWA that "there appears to be no doubt that even with the retention of angle parking, the overall safety benefits would be in excess of the existing conditions."

The FHWA has indicated that if it can be shown (i.e. by a proper engineering study) that the retention of angle parking on the Boulevard would not result in a condition more hazardous than would exist with paralled parking, the FHWA could approve the project for federal aid without the elimination of angle parking. However, to the State and local officials this position has "catch 22" qualities since, in general, traffic engineering research indicates that angle parking is relatively more hazardous than parallel parking. It is the contention of local spokesmen that the boulevard is unique and that its safety should be judged on its own accident record.

The State and federal correspondence clearly illustrates the fundamentally different postures taken by the two agencies, and that the respective parties discuss the same issue, but without the common ground necessary to the resolution of the problem. One NJDOT official has described the resulting impasses as "a situation where the ideal solution, which is impossible, prevents the attainment of significant improvement, which is possible."* Conversely, the FHWA is obliged to adhere to its regulations and has responded to NJDOT: "the proposed signal changes cannot be approved unless the angle parking is changed or unless a proper engineering study shows it retentions does not constitute a hazardous situation."

For Kenilworth and for other New Jersey municipalities, the pressure of budget CAPS, the absence of State aid, the realization that 91% of their roads do not qualify for federal aid, their inability to reconcile federal policy and program requirements with State regulatory policy means that the funds necessary to meet many of their most important local road and traffic needs are not available. Absent State aid for such purposes, it is clear that municipalities must either assent to rigid program standards to qualify for applicable federal programs, assuming that sufficient local resources are not available, or continue living with the substandard situation unabated.

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*State DOT officials indicate that improving the signals by themselves seems to be permitted according to FHWA reports, particularly the report "Improving the Highway System by Upgrading and Optimizing Traffic Control Devices", Apr. 1977, US DOT, FHW, Office of Traffic Operations.

The Kenilworth case also associates two of the four primary traffic control regulatory devices – traffic signals and parking -- generally parking is a noncontroversial item in the State-local approval process. In that sense, the Kenilworth case is an exception to the general rule. NJDOT generally approves parking ordinances and parking related issues with little question.

However, the issues identified in the traffic signal area demonstrate that the intergovernmental process is frequently unable to bring about compliance in an orderly fashion. The problem is more one of *substandard* signals which require the addition of sophisticated and costly timing and actuating devices in order to meet State and federal standards. In many instances the municipality will not only install an unwarranted signal but will install it poorly, and will do so without conducting an engineering study and without State knowledge or consent. The same is true of many counties. For instance, in 3 counties with some 1,500 municipal and county traffic signals, only 35 of the 1,500 signals have been approved by the State.

Finally, the consequences of an unresponsive governmental process has serious impact upon the health and safety of the driving public. A recent court decision noted that imporper maintenance of a signal on the part of two municipalities was 50% of the cause of a traffic accident.* The court stated that:

> "In a helter-skelter manner, both municipalities exercised control over the traffic lights and shared maintenance costs. On the date of the accident, during a four-second interval in the cycle, the light governing traffic flowing north....did in fact show amber and green at the same time. The light facing west....went from green to amber to total darkness for four seconds."

As evident from this case and others, not only should traffic signals be properly constructed and maintained, but without the cooperation of State, county, and municipal governments, the present regulatory process is not always responsive to changing traffic needs.

C. STOP SIGNS

In the fase of the two other regulatory traffic control devices - stop signs and speed limits - the problem of bringing their use up to standards does not involve prohibitive capital expenditures. The major problem is one of obtaining compliance in the use of these devices by counties and municipalities.

Maintaining the proper flow of traffic is of primary concern in traffic safety, and to traffic engineers. Whenever traffic is compelled to slow down or stop, the potential for accidents increases. Frequently, according to DOT sources, a local government will put up stop signs to control traffic at intersections without the assistance of traffic engineering studies to indicate whether there is an actual need for a stop sign, and, if so, which flow of traffic should be stopped (normally the minor flow). Some local officials prefer to base their decisions with regard to these matters on intuition, casual observation, and requests by citizens and local police. The Commission's findings indicate that local police are the primary traffic control "experts" in two-third of the State's municipalities. Only about half of the municipalities require traffic engineering studies to support these traffic control decisions.

*N.J. Law Journal "Digest of Recent Opinions," Vol C. - No. 4 January 27, 1977, P.22.

The locating of unapproved stop signs is an insurmountable task for NJDOT, which must rely on the good-will and cooperation of the municipalities in recording them. Stop signs, being relatively inexpensive ($25 to $30 each), can be easily obtained, erected, removed and moved so quickly and frequently, that DOT may never know the precise location of many unapproved stop signs in the State. Therefore, the cooperation of local governments in assuring adherence to standards is of paramount importance.

The State DOT has made two notable efforts to alleviate this problem. One involves the designation, by the Department, of "through streets" in some municipalities. This designation is based upon the determination that the traffic volumes are sufficient to warrant a stop sign at each intersecting side street. The municipalities are encouraged to seek this designation for as many streets as possible since it alleviates the need to seek separate approval for each intersection.

The other effort has been the Department's sign replacement program. This was a federally funded program to replace damaged and outdated signs of all kinds. In the process, DOT was able to discover many unapproved stop signs and take action either to approve their use or cause their removal. Department officials indicate that this program, now virtually complete, met only about one-half of the sign replacement need. Many of the communities were unable to complete the necessary inventories. Even so, these officials felt that the program was a success and fostered good State-local relations which, hopefully, will be of benefit in future dealings on these matters.

D. SPEED LIMITS

As with stop signs, the issue with speed limits is the appropriate (warranted) use of the speed limit device from a traffic engineering perspective. The bureau of Traffic Engineering officials find that the approval of local speed limits is one of the most intractable intergovernmental problems with which they must deal. At the heart of the matter is the fact that, generally, municipalities take a more conservative approach to speed limits than traffic engineering standards would dictate. While local officials and concerned citizens view lower speeds as providing a greater measure of safety for their children and preserving the character and quality of life of their community, the traffic engineer sees the reduction in flow resulting in traffic congestion and unsafe driving conditions.

A road is designed for a particular speed, and when newly opened for travel, the posted speed limit should be in accordance with the design speed. As land use and traffic conditions change, the safest maximum speed may also change. In order to determine the safest maximum speed under conditions other than those for which the road was designed, a traffic engineer will measure the speed of all vehicles passing a given point during a typical day. The 85th percentile of all speeds recorded is generally accepted as a safe maximum speed, and, if in accordance with the roadway environment, the speed which should be posted as the legal limit.

In spite of the engineering findings, however, many local officials yield to the wishes of their constituents and post lower than proper speed limits. This frequently contributes to congestion, unsafe driving conditions, and false feeling of security. State DOT traffic engineers recognize the legitimate concern for pedestrian safety but still feel that, in most cases, a lower than proper speed limit increases the safety hazard rather than reducing it. The Bureau of Traffic Engineering acknowledges, however, that it is frequently futile to attempt to raise a speed limit in a municipality where the local officials are besieged by public opinion to the contrary, particularly when it is generated by parents who are concerned about the safety of their children. In most such cases, DOT is willing to negotiate with

municipality for a speed limit which they feel is lower than appropriate for the location. The Bureau feels that it is more important to have the cooperative support of local governments than it is to quibble over an extra five miles per hour.

E. NO PASSING ZONES

The Department of Transportation is concerned with assuring that the pavement markings are of the proper configuration and that the places where passing is permitted are of sufficient length. This area, as well as that of parking restrictions, does not present much of an intergovernmental problem for DOT because a safety hazard is not implied in the over-restrictive use of such controls by local government. Most counties and municipalities rely heavily on the State in assuring that the no passing zones are marked and are in accordance with standards.

F. MUNICIPAL AND COUNTY PERSPECTIVE

When asked, by questionnaire, "Does your municipality avail itself of the traffic engineering services by NJDOT?", 59% of the State's municipal engineers who responded said yes; 28% said no; and 13% are not aware of those services. Some 52% of the municipalities rely primarily on their own municipal engineer for traffic engineering advice, while 20% look to the county for assistance. Approximately half of the counties (10 of 21) and few of the larger cities have their own full time qualified traffic engineer.

Sixty-seven percent of the municipalities rely on their local police as the agency primarily responsible for recommending traffic control improvements, and some 5% of the respondents rely on local police for traffic engineering advice. Most police time however is not devoted to traffic control, in spite of the heavy reliance on police for this function.

As Figure V-2 reveals, 69% of the responses indicate that less than 30% of the local police time is spent on traffic control matters.

Figure V-2
Percent of Police Time Spent on Traffic Control

% of Time	Number of responses	% of Total
0 – 10	41	34%
11 – 20	28	23%
21 – 30	14	12%
31 – 40	5	4%
41 – 50	6	5%
51 – 60	0	0%
61 – 75	6	5%
75	4	3%
No Police Force	8	7%
Unknown	9	7%
	121	100%

SOURCE: Commission survey

By comparison, only 26% of the municipalities queried rely on the municipal engineer to recommend traffic control improvements, and only slightly more than half of the municipalities (56%) require a traffic engineering study to support the use of each new traffic control device. Thus, *as many as 45% of the municipalities have traffic control devices in place which have not been approved by NJDOT.*

When asked by questionnaire "What level of government, State or local, should have final decision-making authority over the following traffic control devices - signals, stop signs, speed limits, and parking regulations?", the municipal engineers responded as follows: (Figure (V-3).

Figure V-3
Final Authority

Category	Number of Responses and % of total State Authority	Municipal Authority
Stop Signs	54 (42%)	74 (58%)
Traffic Signals	102 (80%)	26 (20%)
Speed Limits	79 (62%)	49 (38%)
Parking Designations	18 (14%)	110 (86%)

SOURCE: Commission survey

As is obvious from this table, municipal engineers overwhelmingly feel that for signals and speed limits, the approval function should continue to be exercised by the State. For stop signs, the bias is in favor of local discretion, but not enough to warrant the transfer of the State's control over this function. An area in which local government *could* exercise local prerogatives is clearly that of parking designations. It was overwhelmingly favored to come under local control, in terms of the questionnaire responses.

In order to discover the counties' interest in the approval function, the Commission asked, "Would your county be willing to accept the responsibility for approving certain traffic control devices needed by the municipalities in your county?" Only six of the 21 county engineers indicated such a willingness, and several of these expressed some reservations about the prospect. Fourteen are not willing to accept this responsibility, primarily because of the lack of manpower or the problems of political pressure.

G. CONCLUSIONS

Regulatory traffic controls are the devices which cause the most problems for DOT in upholding proper engineering standards required for restoring safety and enhanced traffic flow. The problems vary with each type of control, but the problems are also characteristic of the need to institute a positive intergovernmental process. While DOT's efforts to improve traffic controls Statewide have been rigorous and fruitful, they are unable to meet the overwhelming needs. To meet its objective in this area the Department requires: first, the responsive cooperation of county and local governments (which presently lack a mandate to assume responsibility for maintaining standards) and second, regulatory backup powers and penalties.

A recent opinion by a New Jersey Superior Court provides a succinct statement of the Legislative intent on the importance of intergovernmental cooperation in the traffic control area. "There is convincing evidence that the Legislature regards the matter of traffic

regulation as one of combined and cooperative State and local action having regional as well as purely local import. Prior to 1969 no municipal ordinance regulating traffic had any effect unless approved by the Director of the Division of Motor Vehicles.* The determination of that officer was required to be made after investigation and a finding that the regulation was "in the interest of safety and the expedition of traffic on the public highways." By the enactment of L. 1969, c. 65, the powers of the motor vehicle director in review of local traffic regulations was transferred to the State Commissioner of Transportation. Section 1 of that statute made the following legislative findings:

> *"The Legislature hereby finds and declares that the administration, development and enforcement of laws and regulations relating to traffic, and the regulation and control of the character, type, location, placing and operation of all official traffic control devices on the streets, highways and public places in New Jersey require co-ordination and co-operation between the State and individual local authorities; that although there should be a general, State-wide policy concerning the movement of traffic and traffic control devices, that policy should be sufficiently flexible to take into account such factors as aesthetics, practicability and community interests, and should permit a consideration of particular circumstances in individual municipalities; and that it is the purpose of this act to provide for the efficient formulation of such a flexible State-wide policy concerning the movement of traffic and traffic control devices in the public interest."*

The foregoing legislative action and declaration indicates that in the area of traffic control and regulation the localities and the State Department of Transportation are constituted a collaborative team to subserve not only purely local interest, but those of contiguous areas as well. It is common knowledge that many of our municipalities form common transportation and roadway networks irrespective of municipal boundary lines. Consequently traffic regulations need to be based on consideration common to the regions as well as those peculiar to localities, and to be comprehensive in their scheme and plan. State participation assures these broader functions.

H. RECOMMENDATIONS

The State Department of Transportation is vested with wide-ranging powers including review and prior approval of many local actions, the establishment of State-wide standards, regulations and procedures; and the ability to generally develop, implement, and enforce State policy as authorized.

The following recommendations regarding traffic control and engineering reflect the realities of the State-local decision making process:

1. It is recommended that, in order to upgrade some 3,500 unapproved traffic signals in the State, which represent one of the more important public safety needs, an eight year State aid capital program of $2.5 million per year be instituted. This 75% State aid and 25% matching local share program should enable the State and the communities to upgrade the traffic control signals in a planned priority manner.

It is also recommended that the State DOT make an annual report to the Legislature identifying all of the unapproved regulatory signs (excluding parking signs)

*N.J.S.A. 39:4-8.

by municipality, and the projected costs to address the priority problems (on a county basis).

2. It is recommended that before any municipality (or county) receives a State transportation grant in aid, the municipality or county must submit a listing of all the traffic control devices in the community (authorized and unauthorized), and an anticipated schedule for improving the unauthorized devices. The State DOT, by re-instituting an inventory section in the Bureau of Traffic Engineering, should assist any municipality or county, desiring assistance, in this effort. In addition, the Bureau would develop a uniform system of reporting, updating and retrieving the information, and advising the communities on the justification (warrant) process.

3. It is recommended that the State DOT should decentralize its manpower to place qualified engineering personnel in each of the regional offices to serve in a liaison capacity between DOT and the local communities, especially assisting those counties and municipalities which do not have an in-house traffic engineering capability. The implementation of this recommendation will require additional funding compared to the present organizational structure.

4. It is recommended that all counties and municipalities with populations over 50,000 should have a qualified traffic engineer. Presently, there are some 10 counties and 10 municipalities with a qualified traffic engineer. In addition to the obvious safety benefits, and the ability to expedite traffic, a local traffic engineer is more aware of the needs and conditions, and is able to respond more quickly to the problems. Also, those counties with qualified traffic engineers have a higher proportion of approved traffic signals. Also, to save time, money and more efficiently redistribute the work load, counties and municipalities with qualified traffic engineers should be encouraged to formalize a certification acceptance process with the State DOT for all regulatory signs.

5. It is recommended that the statutes be revised to mandate that prescribed engineering studies be carried out by local governments as part of their traffic control decision-making process, and that the community should file with DOT suitable documentation showing these and all other factors which are considered in any traffic control decisions. Municipalities should be required to seek the advice of the County Traffic Engineer or the State DOT in all such matters, in order to facilitate the process, the State DOT should be available to render assistance when requested.

6. It is recommended that the statutes be revised to permit State DOT – after consultation with the State Safety Council and the communities – to have final determination over the sufficiency of the traffic control signals at any and all dangerous intersections or locations. State DOT would review the signals at the most hazardous intersections/locations and it would assist the communities, under the matching State Aid programs, in upgrading the traffic control devices.

7. It is recommended that the statutes be revised to permit State DOT to take appropriate administrative and legal action against a community in which it has been demonstrated that there is actual misuse of a traffic control device or in cases in which it has been determined that an existing traffic control device is being improperly operated or maintained.

In order to uphold standards, the process must include incentives (State technical assistance and State Aid) to comply, and penalties for non-compliance. Communities (local officials) must be willing to accept the responsibility for assuring that the controls they authorize are in accordance with State standards and statutes. In

such cases and as part of the revised State statutes, there should be a hearing process at which time the community's supporting evidence and the State's position should be presented.

8. It is recommended that the traffic regulation statutes (Titles 39 and 40) be updated and integrated to reflect the reality that in the intergovernmental process, traffic ordinances generally are not of a permanent character. Traffic ordinances lend themselves to and are the subject of frequent change, whether that change be necessitated by the growth of the community and region or affected by the decision of the local community to implement what it considers to be a more efficient and effective ordinance. The periodic updating of the statutes should be based on an analysis and review made by representative of DOT, the county, the municipalities, and Legislative Services.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

A. SUMMARY OF FINDINGS AND CONCLUSIONS

Simply stated, the basis of this report and the findings related herein, revolve around a central reality: New Jersey roads and bridges committed to the jurisdiction of county and municipal government are rapidly deteriorating; a significant amount of these roads are already in serious condition; the existing funding patterns and available aid to local governments necessary to ameliorate this condition has not changed and -- if the current situation continues unabated -- it will imperil a capital investment estimated at a present value of some $10 billion.

Although this assessment of the problem enjoys broad concurrence, the more difficult task is how to remedy the situation thus presented. The Commission has concluded that fundamental changes are warranted, including:

(1) re-assessing the existing level of fiscal commitment;

(2) re-examining the policies underpinning current local aid programs with regard to both adequacy and appropriateness;

(3) restructuring of intergovernmental relationships in the administration and management of highway aid programs.

The sources and availability of funds for meeting local government highway and bridge needs, in addition to those raised by local tax levy, have changed rather dramatically in recent years. Until 1974, aid to local governments was provided under a number of State-aid programs. For a whole host of reasons, including the fact that the level of fiscal support provided to local government was virtually unchanged since the late 1940's (with the brief exception of the SARS and Extraordinary Aid programs), the sufficiency of State aid to counties and municipalities in 1974 was wanting.

In 1974, a major policy change was instituted in highway aid programs to local government. State-aid, previously supplied directly to local governments, was terminated. Instead, these dollars were utilized by the State to "match" available Federal aid in an attempt to maximize the use of State aid dollars. In this light, the 70% federal-30% State funding formula seemed an attractive one.

While federal programs have proved beneficial and continue to provide needed funds for transportation, their applicability for many purposes is limited. By committing the State's local aid dollars for use as 'match' in the federal programs, local governments are locked into complex federal regulations, time-consuming procedures, and federally determined categories of need and permitted use of funds. *This situation, whereby local governments can find highway aid only through adherence to complex federal aid requirements, which often do not meet local government needs and conditions, has been exacerbated by administrative and programmatic difficulties which have limited the obligation of federal dollars.*

The Commission's efforts have firmly established that the existing highway aid programs do not meet many of the needs which counties and municipalities have articulated, or include significant limitations on their use and appropriateness for local purposes. Bridge replacement and betterment, the foremost need cited by counties is not, at this time, significantly addressed by federal aid programs. Correspondingly, the top priority of municipal governments, resurfacing and reconstruction, is not an eligible category for

current local aid programs. In addition, only 9% of all municipal roads qualify for inclusion under major federal aid programs. There is thus a fundamental shortcoming in local aid programs in New Jersey, namely that those priorities, viewed as most important at the local level, are categories expressly precluded or seriously limited from funding eligibility.

Since the realities of federal aid program limitations - absent federal legislative or administrative change -- must be accepted, the *policy issue which surfaces is whether the highway and bridge needs of New Jersey's counties and municipalities can be adequately addressed within such limitations, without additional aid programs. The Commission's findings indicate that they cannot. Highway-related needs are such that local tax levies and federal aid programs must be supplemented by State-aid programs designed to alleviate serious, documented needs that will otherwise remain neglected.*

A second problem area, beyond the issue of adequacy, is the *utilization* of currently available funds, now the exclusive source of aid to counties and municipalities. This report addresses the ineffectiveness of existing intergovernmental relations in confronting growing administrative requirements and the resulting need for reevaluation and reformulation of intergovernmental roles throughout the current federal aid administrative framework. Among the factors contributing to this problem area are:

The erosion of local commitment to federal-aid projects, selected by local governments, by first, the length of the implementation process carried out almost exclusively by NJDOT; and second, the lack of a sufficient stake, including financial commitment, by local government officials who often do not fully understand programmatic limitations and complexity.

Federal requirements for planning and programming, combined with the pressure of external factors, has introduced unintended delays in implementing the local federally funded projects.

The limited responsibility devolved to local governments in those areas where adequate talent and expertise exist. In general, formal NJDOT involvement with county and municipal officials needs to be based on a commitment to work with local governments in recognition of obvious professional competency, and to streamline unwieldly and time-consuming administrative processes.

The failure to achieve a system of intergovernmental accountability, and hence responsibility, at various levels of government. Instead of promoting partnership concepts, the agencies at all governmental levels have experienced frustration, accompanied by the under-utilization of federal aid.

The inadequacy of information regarding the nature of the local role, or of a commonly understood framework for setting and achieving goals. A too-centralized administrative approach minimizes the need and desire to fully inform other participants in the process.

The importance of sound intergovernmental relationships in effectively discharging governmental responsibilities is an important aspect of the Commission's findings in the final area of this study, Traffic Control. Responsibility for traffic control and related safety considerations is now shared between local jurisdictions and NJDOT. The Commission's research has revealed important factors in the management, control and financing of traffic control that strongly suggest the continuation of this bifurcate approach. A number of

recommendations do follow, however, which seek to resolve existing problems in carrying out these shared responsibilities by providing the fiscal means and by affording administrative procedures for resolving those conflicts which will inevitably arise from the joint exercise of authority.

B. RECOMMENDATIONS

The recommendations presented below represent a synthesis and broad reformulation of those recommendations which are to be found at the conclusion of Chapters II, III, IV and V. While these cannot serve as a substitute for the specificity contained in the individual chapters, they are nonetheless useful in understanding the scope of the Commission's recommendations for change. In addition, the interrelation of the specific problems dealt with in this study, re-emerges in this section to provide a more complete perspective of the fundamental changes which the Commission believes are necessary for solving the current difficulties.

1. New State-aid programs are necessary to maintain the existing road and bridge network

The termination of State-aid programs in 1974 and the redirection of all State funds for local aid as "match" for federal aid programs has resulted in serious funding gaps. Specifically, resurfacing and betterment of municipal roads, and repair and replacement of county bridges, are fundamental needs which are left essentially unaddressed by the existing funding pattern. In addition, some 3,500 unapproved traffic signals in the State represents one of the more important public safety needs. Accordingly, the Commission recommends immediate action as follows:

> Enactment of a $65 million municipal State-aid program for betterment (i.e. road reconstruction and resurfacing) of municipal roads which constitute the great bulk of all roads within the State and which now qualify for virtually no local aid. The Commission recommends that costs for all such projects be apportioned on a 75/25 basis between the State and the respective local jurisdiction.
>
> Enactment of a $10 million State-aid program for county bridge replacement and reconstruction, with counties contributing 25% of such costs. Bridge reconstruction and replacement is recognized by nearly all sources as one of the major road needs in the State and as the greatest need for New Jersey counties. It is consistently estimated that county bridge needs approximate $200 million.
>
> Enactment of a $2.5 million State-aid program for improving traffic control signals. Only 1,000 of the 4,500 local traffic signals have been approved by the State. Although many of the remaining signals are warranted, it is conservatively estimated that about $30 million would be required to upgrade the substandard signals in the State.

2. Expanded State-local level participation in existing federal aid programs

The Commission recommends an expanded State-local participation as an effective way to enhance the total amount of dollars available for transportation needs. Some changes are recommended with regard to the nature of such expanded participation:

> To increase local commitment and utilization of Federal Aid Urban System Funds (FAUS), the Commission recommends that the sharing ratio for non-federal proportions be changed from the current 30% State share to a 20% State and 10%

Local share. The FAUS program is the only substantive program of local federal aid, and it should be utilized more extensively than it has been in the past. This sharing approach should greatly assist in alleviating some of the problems in the planning and programming processes.

To increase local commitment and utilization of Federal Aid Rural Secondary System Funds (FARS), the Commission recommends that the sharing ratio for non-federal proportions be changed from a 30% local share to 20% State and 10% local share. To prevent the federal dollars from being lapsed, the State recently found it necessary to set aside the 30% local share. It should be realized that the FARS program is a relatively small Federal Aid Program (some $2 million) but a very important one for rural communities.

To insure that the Legislature and the public are informed of the nature and scope of governments efforts to maintain and improve the State's road system, it is recommended that the State DOT submit a detailed annual report to the Legislature analyzing and assessing the effectiveness of each federal and State local aid program, including those proposed in this report. In the absence of such an annual written presentation, it is difficult to asses needs, efforts, and programs and to formulate appropriate public policies and decisions.

3. N. J. DOT exercise a leadership role in addressing, clarifying and -- where necessary -- reformulating intergovernmental relationships

Based on the Commission's findings, a restructuring of intergovernmental responsibilities is recommended. This recommendation reflects a determination that local governments and their employees retain a great deal of expertise and professional capability that is largely underutilized by the current administrative structure. Accordingly, the Commission recommends the formulation of a more decentralized structure, including the following changes:

That the intergovernmental responsibilities in the planning process be comprehensively addressed and that the related roles between the State, the MPO's, the counties, and the municipalities, be clearly delineated in the planning process. A basis for mutual accountability must be more fully developed so that any problem arising between the parties can be resolved within the existing framework. Accountability is not presently demanded -- nor is it forthcoming in many instances -- so that frustration builds at both the State and local levels. The need for more clearly delineating the responsibility and authority of all parties involved -- based on a realistic assessment of ability and appropriateness -- is the key to building a responsive system for meeting highway needs.

That the Department develop and issue guidelines and criteria for planning, programming and decision-making that include reasonably time frames, degrees of standardization, and the levels of accountability. Minimum guidelines must be developed and applied to the operation of sub-regional planning units and metropolitan planning units, to achieve greater uniformity of scope and degree of effort.

Though flexibility and a retention of the ability to deal with atypical situations are virtues too often lost in the attempt to create orderly process, there is a greater danger in a

lack of standardization because without it there is no orderly process. The dissemination of decision-making criteria provides the basis for stable and consistent decisions.

An essential element in a cooperative, intergovernmental planning and decision-making process, is the widespread dissemination of policy and technical information. Only the Department has a state-wide scope of jurisdiction which is necessary to promulgate such information uniformly throughout the State. New Jersey Department of Transportation is urged to undertake sustained efforts to keep county and municipal governments apprised of significant transportation activity pertaining to federal aid highway programs, policies, and procedures.

More fully informed local units would have several benefits that would enhance the federal-aid planning process, including:

(a) greater local understanding of what is or is not possible under existing programs, thereby providing the opportunity for improved local planning and the development of priorities;

(b) greater local accountability could be developed, thereby alleviating the extent of local reliance on State technical assistance on those matters that can be handled adequately at the local level; and,

(c) a growing sense of real partnership in meeting the needs of municipalities, based upon an understanding of mutual roles and the limitations that do, in fact, exist.

4. N. J. DOT realign its administrative responsibilities to assume a greater coordinative and state-wide role of oversight consonant with the unique position occupied by that agency

In the reformulation of intergovernmental roles previously addressed, NJDOT should take greater cognizance of its own unique position. Rather than intensive involvement with practically every phase of each federal-aid project, a refocusing of State energies to evaluation, oversight, and a broader policy perspective seems appropriate. Accordingly, the Commission recommends that:

A working partnership in the processing of federal aid be instituted immediately and that the State agency be mandated to make greater use of the engineering professionals at the county and local levels. The elements of this proposed partnership are: that local governments will be actively involved in most aspects of the program, that decision-making will be decentralized (i.e. that review and approval authority is at the lowest qualified level) and "red tape" minimized in all actions; and that the partnership--the redistribution of responsibilities--will build upon the existing State regional offices and the county structure.

A task force of State DOT officials, county engineers, municipal engineers, and county planners, be authorized to formulate a revised program of responsibility for each of the areas in processing and implementing federal aid projects. The State must move to be among the top 10 states (and not be among the last 10 states) in utilizing federal aid. Also, it is recommended that the task force issue a position paper on the State's ability to reduce "red tape" and the advisability of the State assuming responsibility for Certification Acceptance. The intent of Certification Acceptance is to formally recognize State competence and ability to design highways, acquire rights-of-way, administer contracts, confer with consultants, supervise construction, and perform audits without step by step monitoring by federal representatives. By obtaing Certification Acceptance the State will be

essentially certifying that it is willing and able to assure that federal policies are being upheld.

A "Local Aid Action Plan", tailored to local needs and sharing the local aid project sequence, be prepared and made more available for local officials. There is a dire need for clear, precise statements and documents on the processing and implementation of projects. Frequently, it takes from five to seven years for a project to proceed from application for funds to an award of contract. A near universal comment of local officials is that the "Action Plan" is not an adequate source of information for processing local projects.

Also, it is recommended that a more positive federal and state approach be developed between federal-state-local governments, based on the concept advanced by a National Task Force on reducing regulations. That concept suggests that:

> administrative requirements should be designed on the assumption that State and local recipients of federal highway aid are competent and possess, or have access to, skills of the highest order. FHWA requirements should also be based on the assumption that State and local officials through close interaction with the public are best able to judge local values and needs. Future Administration legislative initiative should be based on the same philosophy.

The Commission strongly supports this philosophy and suggests it be applied to improving inter-agency communications and strengthening institutional arrangements.

5. Ensure adequate safety standards and retain optimal traffic flow

Traffic control and related safety considerations comprise a final area of Commission concerns within the scope of this study. The nature of the issues involved here revolve around the need to ensure adequate safety standards and yet still retain optimal traffic flow. Responsibility for traffic control is shared between local jurisdictions and the New Jersey Department of Transportation. When judgments of the respective jurisdictions conflict, there exists no adequate administrative process for resolving such conflicts. Local sentiments may give rise to traffic regulation which, by existing standards of traffic engineering, are not warranted. While this situation may not usually result in serious consequences as a matter of course, improperly controlled traffic in particular circumstances may not only burden traffic flow but can also result in serious safety problems. The problem is compounded by other considerations: (1) inadequate and unapproved signals are costly to replace; and (2) there is often an absence of proper engineering studies prior to the installation of traffic control devices.

To address these issues, in addition to the State Aid program for improving traffic control signals, the Commission recommends:

> That before any municipality (or county) receives a State transportation grant-in-aid, the municipality (county) must submit a listing of all the traffic control devices in the community and an anticipated schedule for correcting those which are unauthorized. By decentralizing its manpower to place qualified engineering personnel in each of the regional offices, and by re-instituting an inventory section in the Bureau of Traffic Engineering, NJDOT should be able to

assist any municipality or county desiring assistance, particularly in the need for traffic control devices to be warranted.

That prescribed engineering studies be carried out by local governments as part of their traffic control decision-making process and that municipalities be directed to seek the advice of the County Traffic Engineer or the State DOT in all such matters. It is also recommended that all counties, and municipalities with populations over 50,000 have access to a qualified traffic engineer. In addition to the obvious safety benefits, and the ability to expedite traffic, a local traffic engineer is more aware of the local needs and conditions, and is able to respond more quickly to the problems. To affect savings and unnecessary duplication of effort, counties and municipalities should be encouraged to formalize a certification acceptance process with NJDOT for all regulatory signs.

That statutory enactments regarding traffic regulation statutes (Title 39 and relevant provisions in Title 40) be:

a) Revised and integrated to reflect the reality that, in the intergovernmental process, traffic ordinances generally are not of a permanent character. Periodic updating of the statutes should be based on analysis and review by representative of NJDOT, counties, municipalities, and the Legislative staff.

b) Revised to permit NJDOT to take appropriate administrative and legal action against a community in which it has been demonstrated that there is actual misuse of a traffic control device or where an existing traffic control device is being improperly operated or maintained. Communities (local officials) should be willing to accept the responsibility for assuring that the controls they authorize are in accordance with State standards and statutes. Necessary elements of this process include incentives (State aid and technical assistance) to comply, penalties for non-compliance, and the provision of an administrative hearing to air the relevant contentions, review evidence, and resolve the conflict.

c) Revised to permit State DOT – after consultation with the State Safety Council and the communities – to have final determination over the sufficiency of the traffic control signals at any and all dangerous intersections or locations. NJDOT should be authorized to review the signals at those intersections and locations deemed most hazardous and to assist communities, under the matching State aid program, in upgrading such traffic control devices.

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