TRANSPORTATION PLAN



MASTER PLAN

WARREN COUNTY PLANNING BOARD BELVIDERE, N. J.

WARREN COUNTY TRANSPORTATION PLAN January 25, 1982

Prepared for
Warren County Planning Board

Prepared by

Warren County Planning Office Belvidere, New Jersey

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I hereby certify that the Warren County Master Plan, Transportation Plan was adopted by resolution of the Warren County Planning Board at a meeting held on January 25, 1982.

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Prologue

Adequate transportation is a basic need for the proper and orderly growth of any area. Whenever such an area is dependent upon highly diversified economy, the need becomes even more acute. Unless transportation meets the existing demand for safe, swift and convenient movement of people and goods and makes provision for the future, growth is impossible.

Adjacent to the outer ring of the New York-New Jersey-Connecticut Metropolitan Region and part of the Allentown-Bethlehem-Easton Standard Metropolitan Statistical Area, Warren County is beginning to experience the urbanization characteristic of both areas. Thus, one of Warren County's most important objectives should be to provide an adequate, modern transportation system to fulfill the needs of the general public and promote economic progress.

In an effort to outline the ways and means to achieve this goal, the Warren County Planning Department embarked on a Transportation System Plan Study. The purpose of the plan is to provide an orderly and timely plan for the coordinated development of different transportation modes and identify the deficiencies in the present modes in Warren County. It is a plan which will efficiently and effectively serve Warren County and the regional transportation needs.

Transportation Planning Process

County Transportation Planning

All local jurisdictions in New Jersey are represented in the transportation planning process through comprehensive planning. The County Planning Board conducts all planning for existing and future County roads and highways. It is also concerned with the level and quality of all modes of transportation in the County. Of high priority to the Warren County Board of Chosen Freeholders is the provision of adequate transportation services to the County's elderly and handicapped residents. Acting on this priority, the County Planning Department has been working with local nonprofit paratransit operators to improve and coordinate elderly and handicapped transportation services in the County. There are, however, two additional levels at which transportation planning occurs in Warren County—the Phillipsburg Urban Area Transportation Study and the Subregional Transportation Planning Program.

The Phillipsburg Urban Area Transportation Study

In 1972, the Phillipsburg Urban Area Transportation Study (PUATS) was formed through joint agreement of the municipalities of Alpha, Lopatcong, Pohatcong and Phillipsburg, the County of Warren and the State of New Jersey, Department of Transportation.

The study was initiated in order to meet Federal funding requirements. The Federal Aid Highway Act of 1962 made continuing comprehensive planning a mandatory prerequisite for obtaining Federal funds for transportation improvements in major urban areas. In 1970, the U.S. Census designated the Phillipsburg Area as a portion of the Allentown-Bethlehem-Easton Urbanized Area. It was thus necessary for the four municipalities in the Phillipsburg Urban Area to establish PUATS in order to qualify for future Federal transportation funds. PUATS is responsible for all transportation planning done in the Area (see map for the boundaries of the Study area). In discharging this responsibility, PUATS performs intermediate A-95 Review functions over all transportation proposals originating in the Area's four municipalities. Final A-95 Review is exercised by the Warren County Planning Board.

Subregional Transportation Planning Program

In order to improve Subregional or County transportation planning, the New Jersey Department of Transportation has initiated a program to pass Federal Highway Administration funds through to individual counties rather than use these funds to supplement existing State and Regional planning efforts. This Subregional Transportation Planning effort is aimed at developing staff capability and improving institutional systems in County planning agencies and to advance

high priority transportation projects toward implementation in accordance with accepted plans.

The program is jointly administered by the New Jersey Department of Transportation and the Phillipsburg Urban Area Transportation

Study Policy Committee and has been undertaken in Warren County by the Warren County Planning Department. A prime objective is completion of detailed plans and programs for local transportation facilities and services. Responsibility for planning regional facilities remains with the State.

State Transportation Planning

The New Jersey Department of Transportation is responsible for planning activities associated with the State jurisdictional highway network in Warren County. The State is responsible for the overall planning development of the Statewide transit network and for interregional and regional impact projects over which the State has jurisdiction. The State participates in the local planning process through the review process mechanism.

Status of Plans

The Warren County Planning Board has prepared and maintains a series of master plans which identify and respond to the physical development problems facing the County. In 1975, a Transportation Inventory for the County Road System was prepared by C. Douglas Cherry

and Associates. However, the report did not include the entire County Road System. Also, a Transit Development Program for the County has been prepared by the New Jersey Department of Transportation in cooperation with the Warren County Planning Department. In addition, the following publications adopted by PUATS apply: Socioeconomic Finding--PUATS, June 1973; Travel Patterns and Facilities Inventory--PUATS, May 1975; and Trip Patterns--PUATS, August 1975.

The general location and extent of the mass transportation system and highway network in New Jersey was developed in 1972 by the State's regional planning commissions and the New Jersey Department of Transportation. For Warren County, the following publication applies:

A Master Plan for Transportation, New Jersey Department of Transportation, 1972.

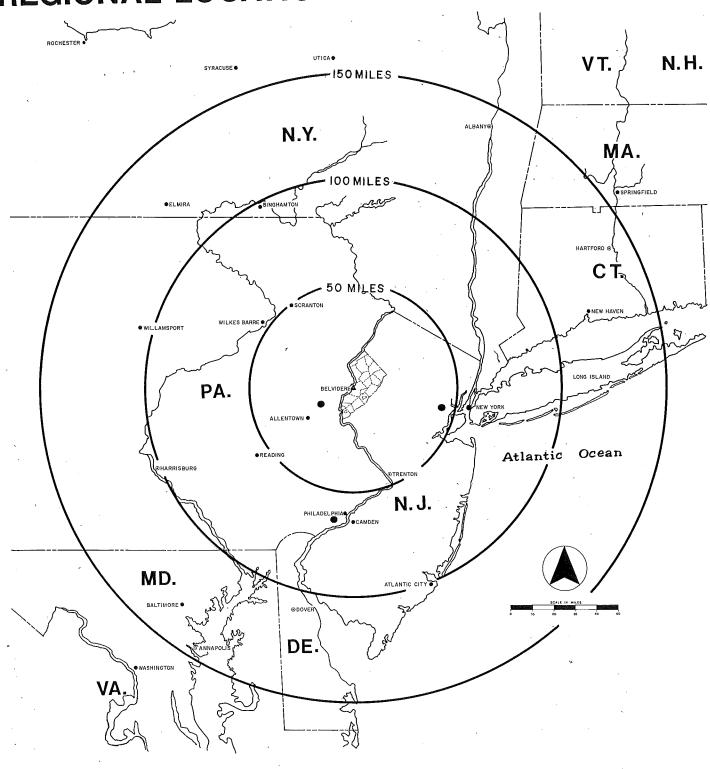
Socioeconomic Characteristics

Location and Setting

Warren County, located in northwestern New Jersey, along the Delaware River, occupies an area of 363 square miles and contains 23 municipalities. It is 32 miles long, with an average width of 13 miles and ranks ninth in size among the State's 21 counties. The County is bounded by the Delaware River and the Commonwealth of Pennsylvania to the west, by the Musconetcong River and Morris and Hunterdon Counties to the east and southeast, and on the northeast by Sussex County. The County is highly accessible yet maintains a predominantly rural character. As part of the Allentown-Bethlehem-Easton Standard Metropolitan Statistical Area, the County is in the path of urbanization pressures heightened by two interstate highways (I-78 and I-80) which cross the northern and southern portions of the County in an east-west direction. New York, Philadelphia and Trenton all can be reached within one and one-half hours or less.

Within the County is some of the most rugged and scenic terrain to be found anywhere in New Jersey. The landscape is characterized by a series of ridges separated by broad valleys.

REGIONAL LOCATION OF WARREN COUNTY



[▲] COUNTY SEAT

⊙ STATE CAPITALS

General Population and Land Use Trends

Although Warren County was not subjected to the growth pressure that had begun on a Statewide basis in the early 1950's post World War II housing boom, during the 1960's, it began to experience some of the growth pressure. In the 1960's, there was a noticeable increase in development activity where farms were sold to land speculators, particularly in the northern part of the County. In the southern part of the County, below Route 46, where farming was in a stronger economic position, development, for the most part, continued to concentrate around the town centers. This development pattern has endured through the 70's up to the present time.

About 60 percent of the County population resides in the town centers. The Phillipsburg town center, including Alpha and parts of Lopatcong and Pohatcong Townships, contains 32 percent, or slightly more than one-third of the entire County population; the Hackettstown town center, including parts of Allamuchy, Independence and Mansfield Townships, contains 17 percent and the Washington town center, 11 percent. Less than one-half, or 40 percent, of the County's population is distributed throughout the rest of the County in small established towns and villages and along highway corridors.

The most densely population municipalities in Warren County are Phillipsburg, Hackettstown, Washington Borough, Belvidere and Alpha. All

are relatively small established communities limited in land area and growth potential when compared with the spreading townships. Overall, the County's population density (1980) is approximately 231 persons per square mile, one of the lowest in the State and Region.

Goals and Objectives

Transportation, the movement of goods and people, has always played a significant role in economic life and, to a large extent, has determined the location and importance of towns. However, with new technical improvements in transport and with rapid growth of population and of suburban sprawl for the past thirty years, transport demands have become a major element in development.

In reality, there exists two transport systems and their requirements and facilities overlap only to a degree. The first of these is goods transport system. This is perhaps the more important for it determines the location of industry and provides economic advantage to some areas. The second system is the one over which people move between one town and another, from home to work or to recreation.

Both of these transportation systems are extremely complicated. The goods transport system consists of highways, railroads, airports and their support system--truck terminals, freight stations and warehouse facilities. The system for moving people includes highways, mass transit lines, railroads, terminals and parking and shelter facilities.

In order to provide a complete and integrated transportation system, the Warren County Planning Board adopted eleven items as goals

and objectives which were used as a guide in the development of the Transportation Plan. These are as follows:

- Promote and maintain a highway system which provides for efficient movement of people and goods within and through the County by:
 - * Bringing roadway shoulders and lane widths up to the minimum standard.
 - * Acquiring additional rights-of-way needed to bring roadways up to the minimum standards.
 - * Constructing connecting roadway links to eliminate jogs along important routes and to connect major traffic generators.
 - * Encouraging the use of reverse frontage and marginal access roads and limit new driveway access points to help maintain the free flow of traffic on arterial and collector roads.
 - * Encouraging the use of holding lanes for turning movements to help maintain the free flow of traffic on arterial and collector roads.
- 2. Upgrade and maintain the traffic safety characteristics of the County Road System by:
 - * Discouraging through trips and excessive traffic on

- roadways primarily serving concentrated residential areas.
- * Concentrating highway safety improvement effort in the area of signing, traffic, channelization, bridge repair and shoulder improvement.
- * Insuring that new land development is designed to prevent the flow of storm water runoff onto County roads and by encouraging drainage improvements along roadway sections that are already problem areas.
- * Identifying and monitoring potentially hazardous locations on County roads and by recommending actions to correct deficiencies.
- 3. Encourage the use of Federal and State funding for all major roadway improvements proposed by:
 - * Selecting roadway improvement alternatives that (1) are eligible for Federal and State aid programs and (2) will have minimal environmental impacts.
 - * Maintaining an active involvement in the Phillipsburg
 Urban Area Transportation Study (PUATS) Committee which
 play a direct role in the allocation of highway aid for
 many State and Federal programs.
 - * Monitoring new developments in Federal and State

Highway Aid Programs.

- 4. Coordinate improvements to existing facilities by:
 - * Continuing negotiations with State and municipal authorities on the redistribution of roads by functional classification.
 - * Encouraging traffic separation methods at all levels of jurisdiction.
 - * Meeting with transportation planners from other counties in the Region to review and coordinate projects of common interest.
 - * Working with New Jersey and Pennsylvania Departments of Transportation and strongly urging the completion of I-78.
 - * Submitting to the PUATS Committees highway projects in Warren County within the Urban Area for inclusion on the Transportation Improvement Program.
- 5. Include environmental concerns in the transportation planning process by:
 - * Encouraging reasonable measures to reduce fuel consumption and improve air quality.
 - * Considering the potential impact of transportation proposals

- on prime agricultural lands.
- * Continuing to coordinate with the New Jersey Department of Transportation in the development of revisions to the Transportation Control Plan in accordance with the Clean Air Act.
- 6. Monitor growth and development patterns and to adjust the transportation plan as required to accommodate unanticipated changes.
- 7. Continue to update and add to the Warren County Highway Inventory by:
 - * Continuing to coordinate the Classification and Inventory Program with municipalities and the PUATS.
 - * Continuing work on an Accident Frequency Inventory for the County Road System.
 - * Continuing to update traffic volumes for County Road System.
 - * Continuing to update the speed survey and passing zone areas for the County.
 - * Continuing to inventory pavement surface conditions.
 - * Continuing to inventory transportation restrictions, weight and clearance, on all County roads and bridges.
- 8. Maintain present level of service.

- 9. Improve commuter rail and bus services by:
 - * Providing park-n-ride/pool lots.
 - * Providing bus shelters.
- 10. Expand the availability and type of transportation systems for all residents by:
 - * Encouraging effective inter- and intra-County transportation facilities for all County residents.
 - * Encouraging continuous effort in the development of a County Transit System.
 - * Proposing a coordinated Demand-Response Transportation
 Program for the elderly and the handicapped.
 - * Continuing to investigate alternatives for a transportation program for the elderly and handicapped and other citizens of Warren County.
 - * Endeavor to expand commuter rail and bus services and facilities when demand warrants.
- 11. Increase public participation in the overall transportation planning process for the County by creating a County Transportation Committee.

Transportation Plan

Highway Network

Overview

The County's highway network is presently adequate for most circulation purposes. Seven highways, consisting of 2 limited access, high speed, large volume transcontinental routes (Interstate 78 and 80); 5 major land service roads (US 22, US 46, NJ 31, NJ 57 and NJ 94); and 12 County roads provide key passage in, through and out of Warren County. Both County and State studies, however, indicate shortcomings based on traffic flow, land use, roadway design and related characteristics. Also, they show that 19 primary roads (the Interstate-arterial-collector system) carry approximately 92 percent of all the traffic in the County, while accounting for only 33 percent of the Countywide mileage.

The highest amount of traffic is registered off and on I-78/US 22 in the southern part of the County, in the Phillipsburg Urban Area; I-80, NJ 31 and US 46 between Buttzville and Columbia; at County Route 519 and Belvidere Road through Harmony and White Townships to Phillipsburg; County Route 519 between Alpha and Greenwich to Warren Glen; and County Route 517 from the Sussex County line through

Allamuchy to Hackettstown.

Though some areas, such as Route 519 in Alpha and Pohatcong, are starting to show some signs of congestion and are beginning to become unstable with tolerable maneuverability and speed, the 1990 traffic projects and level of service ratings depict that most of the major roads in the County will perform adequately with minor congestion. However, traffic projections and levels of service ratings for the year 2000 depict that most of the major roads in the County will not perform adequately and, as a result, temporary restrictions may occur and cause severe drops in operating speeds.

Assuming that no significant improvements are needed in the next decade, one must remember that, by the year 2000, volumes will increase to or near full road capacity in some areas and, in turn, complete stoppages of short duration may occur. None of the County roads are foreseen as capable of continuing traffic flowing under forced conditions (e.g. similar to that attained on US 46 prior to opening I-80).

Circulation Plan

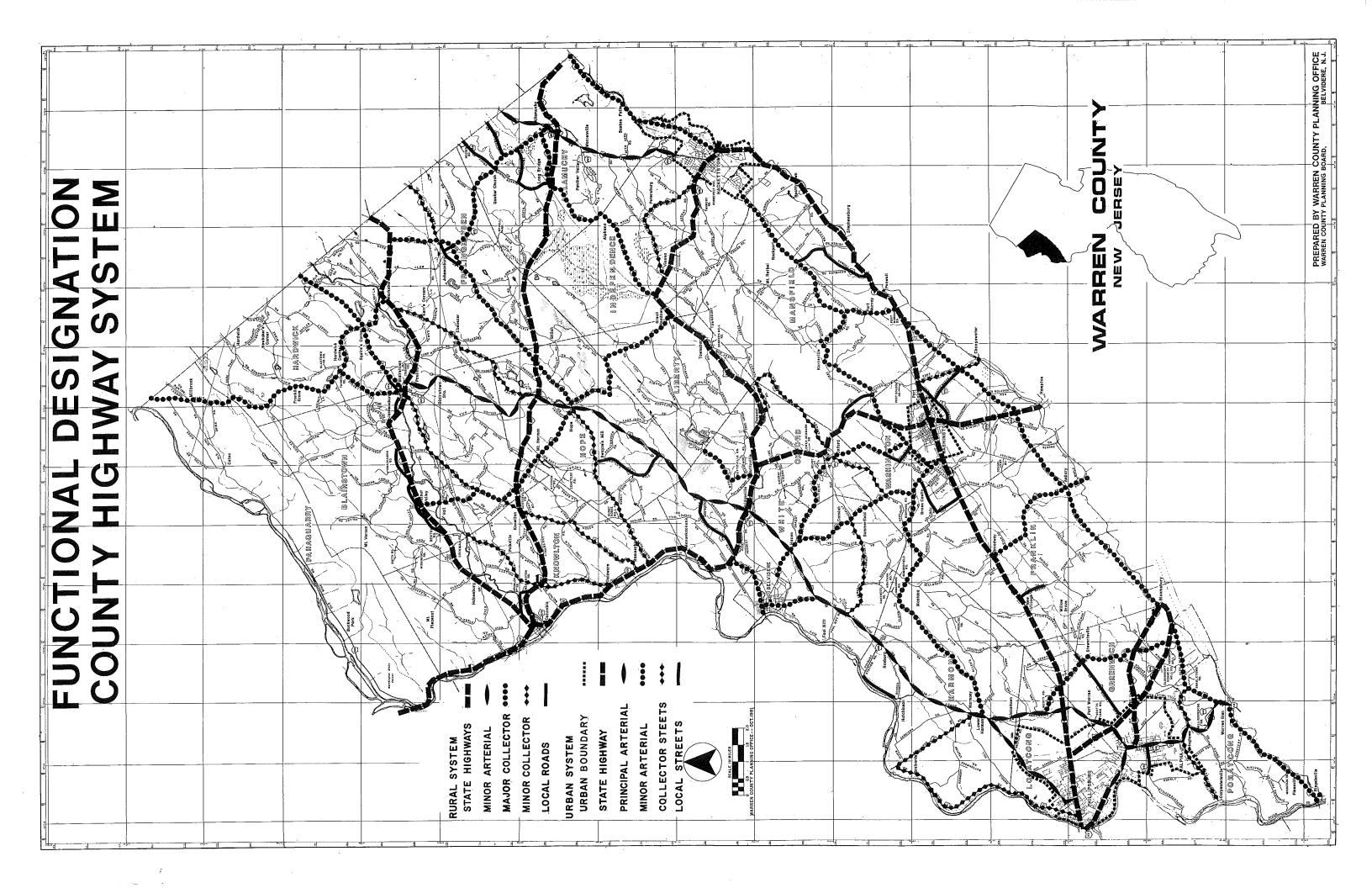
Generally, the plan will serve as a guide to any public decisions that effect on the County Road System and will be used by the County Planning Board as part of the County's subdivision and site plan review process.

The four major elements of the plan are:

- Classification of County roads by their function of level
 of importance in conjunction with the current Development
 Review Standards based on the Federal Functional Classification
 System.
- Identify roads which, by virtue of their proximity to or location within the system, should be added to or deleted from the County Road System.
- 3. Development of highway design standards for the entire County Road System.
- 4. Capital improvements and assigned priorities for each segment of the County system. Priority analysis is based on the existing roadway and bridge characteristics analysis and evaluation.

Functional Designation of the County Road System

The principal objective of the County Road System is to serve the County and State transportation requirements. New Jersey law provides that the Board of Chosen Freeholders may lay out roads "...for the accommodation of travel between two or more communities..." The County Road System is, therefore, to accommodate travel which is not intracommunity in nature—that function is to be provided by the municipal road system. The County Road System functions to connect principal traffic generators and population centers with other County and State



and Interstate roads to serve as access roads to County facilities and County buildings and to serve as interconnectors with local roads.

Recommendations made here consider the principal purpose of the County system and provide a means of inter-community and inter-County travel.

It is proposed that the County Road System be classified in accordance with the Federal Highway Administration, Functional Highway Classification System for both rural and urban areas, and are included in this phase of the plan (see map).

Rural roads consist of those facilities that are outside of small urban and urbanized areas. They are classified into four major systems: principal arterials, minor arterial roads, major and minor collector roads and local roads. The purpose of each classification and its counterpart in the County system is as follows:

Rural Principal Arterial System

In Warren County, the Rural Principal Arterial System consists Interstate highways, I-78 and I-80, and three State highways, Routes US 22, US 46 and NJ 31.

Rural Minor Arterial Road System

These roads are second in importance only to Interstate and State highways serving the area. In some cases, they even exceed the importance of the State highways. The combination of Primary County roads and State highways form the basic framework for land

access routes within the transportation system.

In Warren County, the Rural Minor Arterial Road System consists of five State highways, Routes US Alt. 22, US 46, NJ 57, NJ 94 and NJ 173, and three County highways, Route 519 from Warren Glen to Hope, Route 521 from Hope to NJ Route 94, and Route 517 for its entire length.

Rural Collector Road System

The rural collector routes generally serve intra-County travel rather than Statewide travel needs and constitutes those routes on which (regardless of traffic volume) predominant travel distances are shorter than on arterial routes. Consequently, more moderate speeds may be typical.

The Rural Collector Road System consists of two classifications, Rural Major Collector Roads and Rural Minor Collector Roads. Rural Major Collector Roads provide service to the county seat not on an arterial route, to larger towns not directly served by the higher systems and to other traffic generators of equivalent intra-county importance and link these places with nearby larger towns or cities and routes of higher importance. Rural Minor Collector Roads collect traffic from local roads and provide service to the remaining smaller communities.

Rural Local Road System

Local roads, of course, constitute the rural mileage not classified as Principal Arterial, Minor Arterial Road or Collector Road. Presently, there is no counterpart in the County highway classification.

Urban Roads

Urban roads consist of those facilities in the small urban and urbanized areas. Like their rural counterpart, they consist of four major systems: principal arterial streets, minor arterial streets, collector strees and local streets. The differences in the nature and intensity of development between rural and urban areas are the justification for the urban road classification.

Additions and Deletions to the County Road System

Table I is a list of recommended additions and deletions to the County Road System which was prepared in conjunction with the County Engineer and the County Road Supervisor. This list indicates, by municipality, those sections of roads which no longer function according to the definition of a County road. In most instances, these roads will be deleted from the County system and will be taken over by the municipality; however, in some cases, these lands will revert back to the adjacent property owners where there is no public need for the roadway.

The plan also seeks to determine roads which are presently under County jurisdiction but serve as local access roads. These roads

WARREN COUNTY

DEMADY	סאיקייא	In Panther Valley		From Route 94 to Knowlton line Loop around ballfield in Vail From Route 94 to Hardwick line In town Five loops	In New Village	
EAGE	DELETE	0.37 1.25 1.05 2.67	.85	0.62 0.20 .75 2.65	.94	
MILEAGE	ADD	1.20		0.60 0.17 0.71		
MAME	KOAD NAME	Cat Swamp Road Old Hackettstown Road (653) Ervey Road (669) Cemetery Road (668)	High Street TOTAL	Crisman Road & Polkville Road Vail Road Stillwater Road (521) High Street (601) Bridge Street, Portion of Main St. (602) Edge Hill Road (607) Old Route 94 Alignment Loops	Edison Road (633) TOTAL	
CN A	KEY NU.	23 20 21	99	11,12 9 6 5 7 7 8 10	59	
VIII	MUNICIPALIIY	Allamuchy	Alpha	Blairstown	Franklin	

SYGAMTG	KEMAKNS	In Johnsonburg	In Stewartsville Loop to Greenwich Church		County has taken this over County has taken this over 275 feet south from High Street, Blairstown Part of Blairstown High Street At Squires Corner	
MILEAGE	DELETE	1.32 0.30 1.62	0.40		0.03 0.17 0.20	
MILE	ADD	1.90		0.45	2.10 1.80 0.05 3.95	
TMAIN	KOAD NAME	Dark Moon Road (519) Johnsonburg Bypass (519) Old Route 519 Alignment (661) Johnsonburg-Allamuchy Road (612)	New Village-Stewartsville Road (638) Greenwich Church Road (644) Port Warren Road TOTAL	Bilby Road	Franklin Grove Road (602) Squires Corner-Hardwick Road (659) Stillwater Road (521) High Street (601) Old section of Blairstown-Stillwater Road	
O N	KET NO.	19 17 18	60 66 61	25	− w 0 r 4 .	
VIII INCTOTINIIM	MONICIPALIII	Frelinghuysen	Greenwich	Hackettstown	Hardwick	

	REMARKS	In Brainards Opposite Lanark At Harmony Hardware Lopatcong Township In Hutchinson		Future road (new alignment) South of Rt. 46 in Gt. Meadows Behind Cochran's Funeral Home Leading to Bilby Road By Best's Fruit Farm	Spur left at Route 80 Truck stop at Sadie Cann Road In Columbia	
MIIFAGE	DELETE	0.60 0.20 0.05 0.14 0.31 1.50	2.20	0.30 0.20 0.20 0.50 1.20	0.07 0.80 0.49 1.36	
MIIM	ADD			1.25		
	ROAD NAME	Strykers Road (634) Main Street Old Route 519 Alignment Loop Old Route 519 Alignment Loop Old Belvidere Road at Township Boundary Hutchinson Road (622)	Swayzes Mill Road (610) TOTAL	Cat Swamp Road Bilby Road Relocation Cemetery Road Old Route 517 Alignment Loop Old Route 46 Alignment Loop	Delaware-Knowlton Road Simpson Road Decator Road, Green & Columbia Streets TOTAL	
	KEY NO.	56 53 54 55 55	30	23 25 28 26 27 27	15 13 14	
	MUNICIPALITY	Harmony	Норе	Independence	Knowlton	

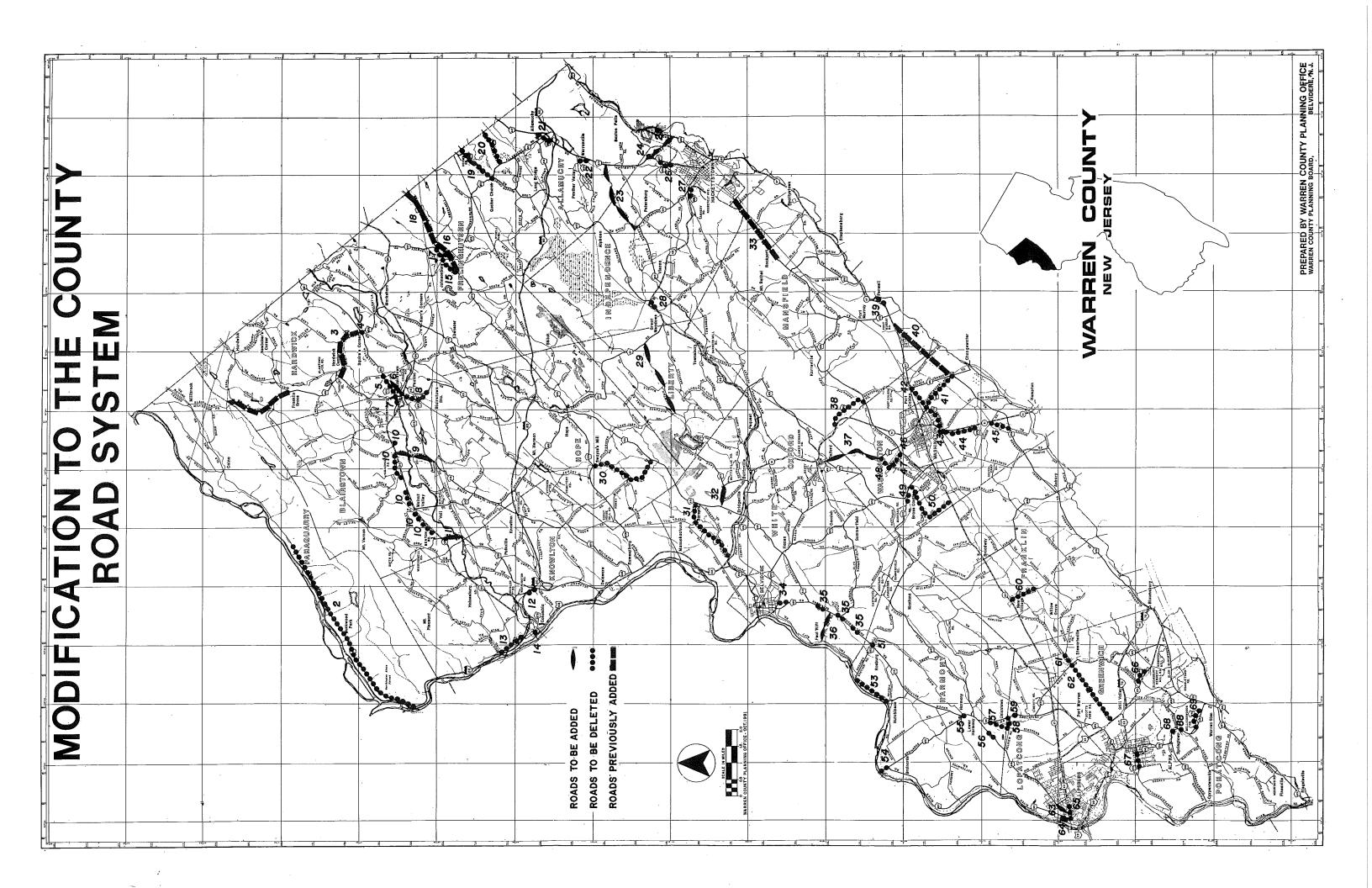
MINITOTONITTY	VII.	BOAN NAME	MILEAGE		REMARKS
MONICIPALII	0	הוייטון העסטו	ADD D	DELETE	
Liberty	29	Mountain Lake Road	3.90		
		TOTAL	3.90		
Lopatcong	55 58 58	Belview Road (634) Strykers Road (634) Old Route 519 Alignment Loop TOTAL		0.20 0.08 0.09 0.37	At Zaccheo's Animal Hospital
Mansfield	33 33 38 38	Anderson Road (632) Rockport Road (629) Penwell Road Tunnel Hill Road (650)	1.38	0.60 1.50 2.10	County has taken this over
0xford	37	Mine Hill Road	1.10		In Oxford
Pahaquarry	2	River Road (606) TOTAL		5.72	

MUNICIPALITY					
_	KEY NO.	ROAD NAME	MILEAGE	AGE	REMARKS
			ADD	DELETE	
Phillipsburg	62 63 64	Belvidere Road Extension North Main Street (621) Morris Street	0.50	0.30	Future road (new alignment) County has taken this over Town has taken this over
		TOTAL	0.50	0.30	
	68 67 67	Melick's Woods Road (640) Old Route 519 Alignment Loop Old Route 519 Alignment Loop		0.70 0.04 0.22	By gas station By John Gercie
		TOTAL		96.0	
Washington Boro	46	Kinnaman Avenue (628)	0.20		County has taken this over
		TOTAL	0.20		
Washington Twp.	37 40 48	1 11 0	1.10	0.45	In Washington County has taken this over
	4444097 44443	Old Brass Castle Road Alignment Little Philadelphia Road (648) South Lincoln Avenue Broad Street Washburn Avenue (630)		0.45 0.24 0.62 0.13	Roaring Rock Road by Schumann's Loop from Brass Castle to Rt. 57 From Cemetery Road to Route 31 From town line to Route 31
	45	Chanyewater Koad (045) Bryant Road		1.70	
		TOTAL	2.10	7.64	

WARREN COUNTY

MUNICIPALITY	KEY NO.	ROAD NAME	MIL	MILEAGE	SYDAMPO
			ADD	DELETE	KEMAKKS
White	888888888 888888888	Mountain Lake Road Foul Rift Road North Beaver Drive (618) Old Route 519 Alignment Loop Old Route 519 Alignment Loop Old Route 519 Alignment Loop Old Route 519 Alignment Loop	0.75	2.00 0.15 0.10 0.10 0.30	At Romani's Behind Gaston's Garage Behind Dairy Queen At Charlie's Garage By Linnaberry's
		TOTAL	1.60	2.82	
		TOTAL	24.23	38.77	

			,		



can be grouped into two district areas. First, short sections of roads which result from relocations of State and County highways and, second, roads which are included in the system but do not serve the County Road System.

It is recommended that Warren County release its jurisdiction over these roads and that they be returned to the various townships to be incorporated into the local road system or to be abandoned.

The above recommendations will delete approximately 38.77 miles from the County Road System and add approximately 24.23 miles. These additions and deletions include all the roads that have already been added and deleted from the system. Although approximately 14.54 more miles of roadway will be deleted than added, the intention is not to reduce the County Road System but to improve its functioning as an integrated system to handle traffic.

County Road Design Standards

Design standards are established to insure that safe and adequate physical roadway features are incorporated into highway design and construction.

The standard for any individual road is dependent upon the type of traffic it is serving or its function. The categories used in the Highway Functional Classification System serves as a basis for establishing these standards.

Road Right-of-Way

All roads classified as Rural Minor Arterial, Rural Major Collector and Rural Minor Collector shall have a 66 foot right-of-way. Design Speed

Design speed represents the maximum safe speed that can be maintained over a specified section of highway where influences, such as adjoining development, are negligible. It is generally set higher than the anticipated operating speed.

Design speed on a highway is influenced by functional classification traffic volumes, man-made features and economics. It controls
the rate of superelevation, minimum sight distances and lengths of
vertical and horizontal curves. Selection of design speed for the County
Road System must be considered a basic step toward the goal of efficient
distribution of traffic to its destination.

Considering all factors which affect design speed, the following standards are recommended.

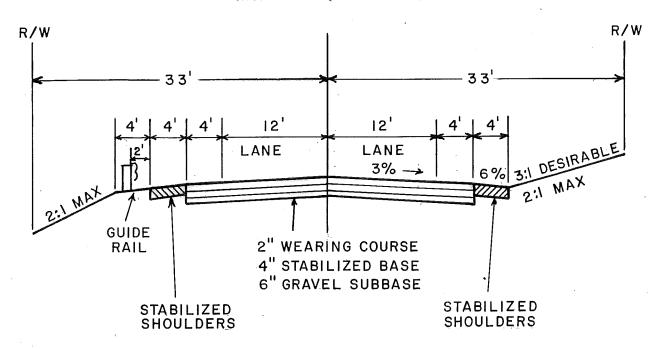
	Design Speed	Operating Speed
Urban and Suburban Areas	50 mph	40 mph
Rural Areas	60 mph	50 mph

Minimum Roadway Cross-Section Standards

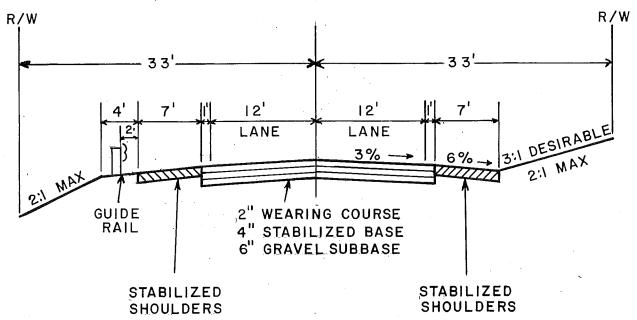
Cross-section standards for each roadway classification category have been established by the County Engineering Department. These standards will be used in implementing the County subdivision and site plan regulations

MINIMUM DESIRABLE CROSS — SECTION COUNTY ROAD STANDARDS

MINOR ARTERIAL



MAJOR & MINOR COLLECTORS



as well as the general implementation of the Circulation Plan.

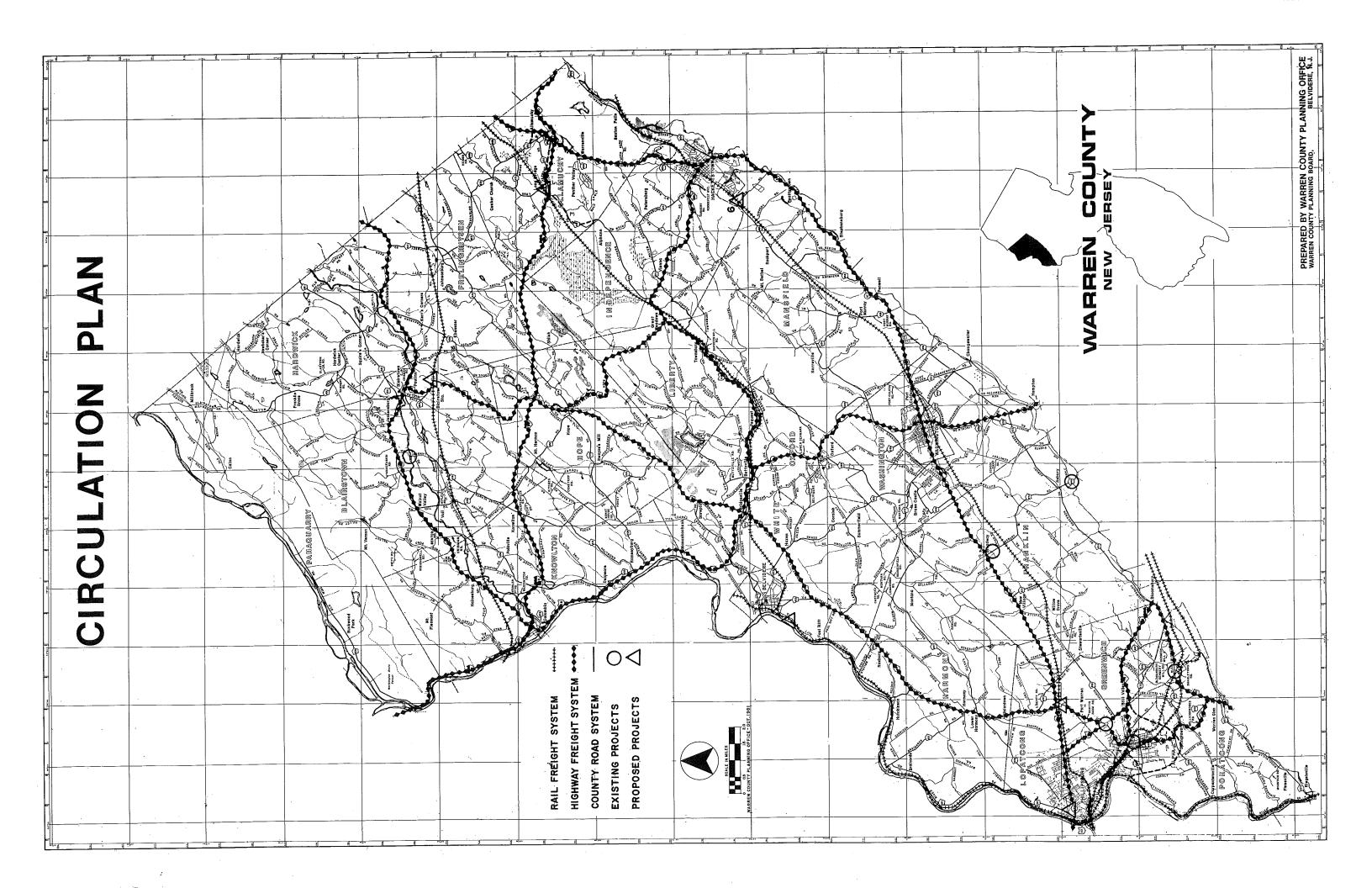
Capital Improvements

Inventories of the County Road System and the major County bridges have been completed by the County Engineering and Planning Departments and various consultants. As a result, there are now records, maps and reports available showing right-of-way widths, pavement widths and types, speed and passing zones, physical restrictions, traffic volumes and accident data. Remaining life of all pavement surfaces and the major bridges has been established to assist in the preparation of a Capital Improvement Program.

Now that this information is available, it is the recommendation of the Warren County Planning Board that the County, through its Engineering Department, embark on a systematic Public Works Maintenance and Capital Improvement Program.

Maintenance Program

A good maintenance program is the most important element in the proper management of any highway and bridge system. Good maintenance practices will prolong the life of the system for many years, improve safety and maximize the public's investment. Warren County's present programs are falling short of meeting these goals due to a shortage of funds, manpower and scheduling priorities. It is recommended that all maintenance activities be improved, increased and given top priority to slow the present rate of deterioration of our roads and bridges.



Capital Improvement Program

It is essential that an annual capital improvement program be established based on our road and bridge inventory. All of our roads must have their surfaces reconstructed after a certain period of time. The type of construction will dictate the cycle which each road will fall under. At the present time, our surface treated pavements are being scheduled on a 3 to 4 year cycle. Our bituminous concrete surfaced roads are being scheduled on a 12 to 15 year cycle.

With changing standards and an every present need for increased safety, we must also continue to widen our roadways, improve horizontal and vertical alignment, and improve drainage. We also should be upgrading our system by reconstructing the irregular, low type surface treated roads.

A bridge reconstruction program will have to be developed based on inspection results. This program will be very costly and alternate funding sources will have to be actively pursued.

Existing Capital Improvement Projects

At the present time, there are seven approved capital improvement projects involving the County Road System to be built with Federal, State and County funds. Three of these projects are State and four are County. In addition to these seven existing projects, there are nine additional projects being proposed.

Public Transportation

Existing and Future Needs

Evaluation of the existing general public transit system serving Warren County indicates that the overall transit availability, on a Countywide basis, is low. However, where public transit is available, levels of service provided are generally consistent with demonstrated levels of current transit useage and trip purpose. Major changes to route structure or frequency of service, except for rail, are not indicated at the present time. Likewise, under existing conditions, it does not appear that there is a current level of general public transit demand within the County that could support extensive new transit services in a reasonable cost-effective manner.

For the immediate future, general public transit needs fall in the categories of maintaining current levels of service, improvements in the area of passenger amenities, such as bus and train shelters, and transportation mangement types of growth within the existing system. Naturally, this does not imply that the need for more expansive service will not arise in future years through growth in particular areas, the placement of greater emphasis on the social benefits of public transportation (energy conservation, benefits to transit dependents, the environment, etc.) or more cataclysmic influences such as drastic reductions in fuel supply or increases in

private auto operating costs.

While the County's existing general public transportation needs can be adequately provided for within the overall framework of the present transit services, the same is not true for the transportation needs of the County's elderly and handicapped. The public transit system is not accessible to wheelchair users or severely handicapped semi-ambulatory persons. Also, the system is geared toward the travel patterns of the line-haul commuter and therefore, cannot adequately serve local trip destinations and corresponding trip purposes of the elderly and handicapped persons who are transit dependent. Due to the County's low current general public transit demand, except for commutation purposes, it is not feasible to accommodate special transit needs of the elderly and handicapped through expansion of and accessibility to the general public transit system, nor does it appear that this will be a viable course of action in the foreseeable future.

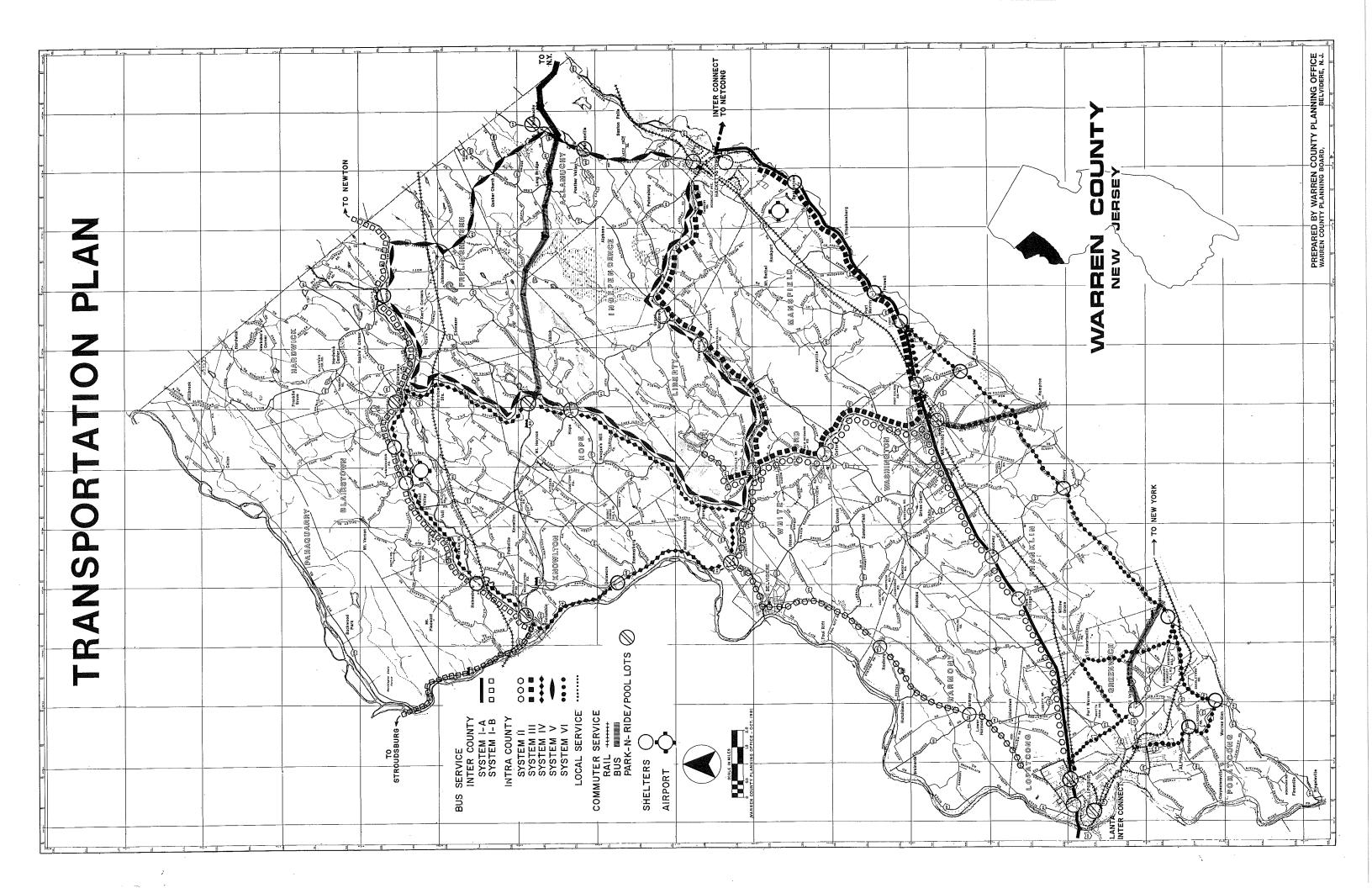
However, the preceding does not mean that the special transportation needs of the elderly and handicapped within the County have
been totally unmet. There are several private nonprofit organizations
within the County that provide specialized paratransit services for
the elderly and handicapped. These existing services are the logical
nucleus around which further efforts to satisfy the travel needs of

the elderly and handicapped should concentrate.

For the most part, these organizations provide transportation for their own clients but the major operator, NORWESCAP, provides transportation to a number of clients on a demand-responsive basis.

With respect to vehicles, there is a need to integrate as many vehicles as possible into one fleet, especially those that are equipped with wheelchair lifts. Presently, there are vehicles in the County which have the capability for transporting wheelchair bound passengers, however, a program should be set up to ensure the replacement of vehicles after five years in service. This replacement program will maintain at least the existing level of service.

Finally, although coordination of special transit services within Warren County is already at a higher level than within many other areas of the State, there is still a need to maximize coordination efforts. NORWESCAP has developed a coordination program for the County that is to start in the Fall of 1981. However, this is only a beginning as all the organizations in the County will have to cooperate with each other and continue to work together to improve service and better serve the elderly and handicapped of the County. In addition to inter-agency coordination, the County is going to have to take a more active role in seeing that the coordination



program is carried out.

Bus Service

In order to improve bus service in Warren County, three programs are proposed, some are short-range and should begin as soon as possible, others are long-range and should begin when they become more feasible to operate.

Inter-County Service

The first program to be proposed, an inter-County system, is actually an intra-inter-County system which will consist of two separate systems. (see map)

System 1-A: As part of the proposed intra-County bus service system, System 1-A will provide service to the Route 57 growth corridor connecting the County's three town centers, Phillipsburg, Washington and Hackettstown, and its two major growth areas, the Phillipsburg Urban Area and the Hackettstown Urban Area. In addition to providing intra-County service, there will be an interconnect at each end of the system in Phillipsburg providing service to Easton and the Lehigh Valley and in Hackettstown providing service to Netcong and western Morris County.

System 1-B: Located in the northern part of the County,

System 1-B will provide intra-inter-County service to

Knowlton, Blairstown, Hardwick and Frelinghuysen Townships' residents via Route 94 to Newton, in Sussex County, and via Route 94 and Interstate 80 to Stroudsburg, in Monroe County, Pennsylvania, with an interconnect in Stroudsburg with the Monroe County Bus System.

Since most of Warren County residents in the Phillipsburg-Washington corridor use the retail, medical and entertainment facilities in the Phillipsburg-Lehigh Valley area and residents in the Hackettstown-Washington corridor use the facilities in the Hackettstown-western Morris County area and most of the County's population is located in this corridor, it is recommended that System 1-A be included in the County's short-range plan. It is also recommended that System 1-B be included in the short-range plan. Though the population may not be as large in the northern part of the County as it is in the southern and eastern part of the County, their dependence on the retail, medical and entertainment facilities located in Newton and Stroudsburg is greater since these are the only centers serving northern Warren County. Therefore, the demand for some form of public transit providing service to these centers is probably greater or the same along the Route 94 corridor as it is along the Route 57 corridor.

Intra-County Service

The second program to be proposed, an intra-County system, is an extension of Systems 1-A and 1-B. As the County grows, the demand for public transportation will also increase. In order to meet this demand, a loop system is being proposed, consisting of five individual loop systems. Each will operate on two different days of the week providing service to different areas of the County and its major service, business and commercial areas. Some of the systems will operate on the same days with interconnects enabling County residents to expand their travel throughout the County. Interconnects will also be provided with the inter-intra-County Systems 1-A and 1-B providing the means for inter-County travel.

The following is a description of each of the individual loop systems being proposed.

System 2: Located in the southern part of the County,

System 2 will provide service to the towns of Phillipsburg,

Washington, Oxford and Belvidere via Routes 57, 31, 46

519 and the Upper Belvidere Pike, with stops in Lopatcong,

Greenwich, Franklin, Washington, Oxford, White and Harmony

Townships. Interconnects will be provided at Washington

Borough and Buttzville with System 3, at Bridgeville with

System 4 and at Washington Borough, Still Valley and

Phillipsburg with System 6. There will also be an interconnect in Phillipsburg with the local service and the inter-County system to Easton.

- System 3: Located in the east central part of the County,

 System 3 will provide service to the towns of Hackettstown,

 Oxford and Washington via Routes 46, 31 and 57, with stops
 in Independence, Liberty, Oxford Washington and Mansfield

 Townships. Interconnects will be provided at Buttzville
 and Washington Borough with System 2, at Hackettstown and

 Great Meadows with System 5 and at Washington Borough and

 Anderson with System 6. There also will be an interconnect
 in Hackettstown with the local service system and the
 inter-County system to Netcong.
- System 4: Located in the northwestern part of the County,

 System 4 will provide service to the towns of Blairstown,

 Columbia and Hope via Routes 94, 46, 519 and 521, with

 stops in Blairstown, Knowlton, White and Hope Townships.

 Interconnects will be provided at Hope and Blairstown

 with System 5 and at Bridgeville with System 2.
- System 5: Located in the northeastern part of the County,
 System 5 will provide service to the towns of Hackettstown,
 Panther Valley, Blairstown and Hope, via Routes 517, 94,

Spring Valley Road, 521, 519, Hope-Great Meadows Road and 46, with stops in Allamuchy, Frelinghuysen, Hardwick, Blairstown, Hope, Liberty and Independence Townships. Interconnects will be provided at Blairstown and Hope with System 4 and at Great Meadows and Hackettstown with System 3. There also will be an interconnect in Hackettstown with the local service and the inter-County system to Netcong.

System 6: The last loop in the system, System 6, is located in the southeastern part of the County and will provide service to the towns of Alpha, Phillipsburg and Washington via Routes 519, Alt. 22, 22, Bloomsbury-Asbury-Anderson Road, 57 and 31, with stops in Pohatcong, Lopatcong, Greenwich, Franklin and Washington Townships. Interconnects will be provided at Phillipsburg, Still Valley and Washington Borough with System 2 and at Anderson and Washington Borough with System 3. There also will be an interconnect in Phillipsburg with the local service system and the inter-County system to Easton.

At this time, none of the five loops proposed above for an intra-County bus system are feasible. Even though there is an indication of demand for these transportation systems, there is not

sufficient population density to support these systems. The actual number of riders who will use these systems most likely is not large enough, at this time, to make any of these systems cost-effective. Local Service

Rounding out the proposed bus service are two additional systems, one is in the Phillipsburg town center and the second is in the Hackettstown town center. Local service is presently being offered in the Phillipsburg town center by the Delaware River Coach Lines Route 1 and 2 between Phillipsburg and Easton and the Lopatcong loop in Lopatcong Township which offers service to Phillipsburg, Warren Hospital and the Hillcrest Mall.

At the present time, there is no local service in the Hackettstown town center. However, the plan calls for three systems, two are to serve the town of Hackettstown and one will service Hackettstown, Panther Valley and Allamuchy State Park.

One additional system is proposed for the Phillipsburg town center. This system will service the Alpha-Pohatcong area providing service to Phillipsburg and Easton.

Commuter Service

Several bus and passenger train routes furnish commuter service in or near the County. In order to augment the existing service and to serve the entire County more efficiently, several additional services are being proposed to augment existing services.

Rail

Presently, the Phillipsburg town center is the only area in the County served by rail. Hackettstown is served by the Morris and Essex Line in nearby Netcong. The extension of this line to Hackettstown is being proposed for the County short-range plan. Not only would the extension improve service to the Hackettstown town center, it would provide service to the fastest growing area in the County and one of the fastest growing areas in Morris County.

Phase II of the County's short-range plan for commuter rail service calls for the extension of service from Hackettstown to Washington town center. This would provide rail service to an area of the County that has not had commuter rail service in over thirty years.

Though development in the Washington town center during the past ten years cannot compare with Hackettstown and Phillipsburg town centers, it was sustained and the potential for growth in the future is very strong. As this growth occurs, the need for commuter rail service will increase so it's important that the right-of-way between Netcong and Washington be preserved in order to guarantee that service will be able to be provided in the future.

The New Jersey Department of Transportation, in its long-range plan, plans to extend the electrification from Dover to Netcong. When this improvement is in place, it is only logical to improve service from

Netcong to Hackettstown and Washington.

It is equally important to maintain and upgrade service on the Raritan Valley Line from Phillipsburg via Hampton to Newark. In its short-range plan, the New Jersey Department of Transportation plans to upgrade the line from Newark to Raritan. Except for the new rolling stock, Phillipsburg will receive no new improvements.

The continuation of improvements of this line from Raritan to Phillipsburg is very important if service and ridership is to improve. The State's present policy of increasing fares not service is having a very negative effect on the present ridership. For lines such as Raritan Valley, from Raritan to Phillipsburg, this can be very detrimental when the need and desire for this service is substantial but the ridership is small because of poor service and old equipment.

Rounding our the commuter rail service plan for the County is a proposal to provide passenger service in the northern part of the County by revitalizing service on the Erie-Lackawanna Line known as the "cut-off" from Dover, westward through Byram, Andover and Green Townships, in Sussex County, and Frelinghuysen, Blarrstown and Knowlton Townships, in Warren County, to Stroudsburg, Pennsylvania. The line presently not in service represents an excellent possibility for improved passenger rail service to connect the Pocono Mountain area with the New York Metropolitan Area.

The County Commissioners of Monroe and Lackawanna Counties, in Pennsylvania, have been in discussion with Conrail, Pennsylvania Department of Transportation and New Jersey Department of Transportation in an effort to restore weekend passenger service on this line to serve the Pocono resort area. The proposed schedule would have one train westbound on Friday evening, one eastbound on Saturday morning, one westbound on Saturday evening and one eastbound Sunday evening.

At the present time, no agreement has been reached. The Warren County Planning Board, interested also in seeing passenger service restored on this line not just on a weekend basis but on a fulltime schedule, has urged the New Jersey Department of Transportation to come to agreement with the Pennsylvania counties so that weekend passenger service can be a reality.

Bus

In order to promote and improve on existing commuter bus service in Warren County, a Park-N-Ride (Bus) Program is proposed. The program consists of a system of parking facilities where County residents will be able to park their cars and board a bus to New Jersey-New York Metropolitan Area.

The system itself is to consist of three separate systems. The first two systems will utilize the County's Interstate System, Route I-78 in the southern part of the County and I-80 in the northern part.

The I-78 system consists of one parking facility located in or near the Still Valley interchange. The I-80 system consists of two parking facilities, one located in or near the Hope interchange and one located in or near the Allamuchy interchange. The third and final system in the program will utilize State Route 31 with a parking facility located in Washington Borough near the intersection of Routes 31 and 57.

At the present time, New Jersey Transit offers service to the southern part of the County via I-78. All that is needed to implement the I-78 system is a parking facility at Still Valley. There is no service along I-80 and Route 31 in the County, however, there are private carriers willing to provide service but the existing Interstate Commerce Commission franchises are preventing them from doing so. Greyhound and Martz Trailways have the franchise for this section of Warren County but only Trailways is providing service which is limited to Hackettstown. As long as Greyhound and Trailways have these franchises and are unwilling to provide the service, the implementation of a Park-N-Ride Bus Program for Routes 31 and I-80 is impossible. In order to initiate this program, action has to be taken to pressure either Greyhound or Trailways to provide this service. If this fails, action should be initiated to transfer the existing franchises from Greyhound and Trailways to a private or public carrier who is willing to provide service for a Park-N-Ride Program.

Ridesharing

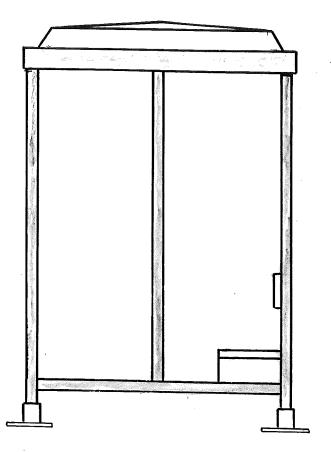
In addition to bus and rail commuter service today, there is another mode of transportation being used by commuters that is becoming more popular each year. Ridesharing is not a new mode of transportation but is a special mode which increases the productivity of existing transportation and workside parking facilities.

It is the recommendation of this plan that those industries, in Warren County, that are large enough, pursue a ridesharing program for their employees in conjunction with the New Jersey Department of Transportation, Office of Ridesharing, which offers employers a commuter matching program to assist in forming employee carpools, training seminars for ridesharing coordinators, consulting and other services. The most successful programs are employer-based.

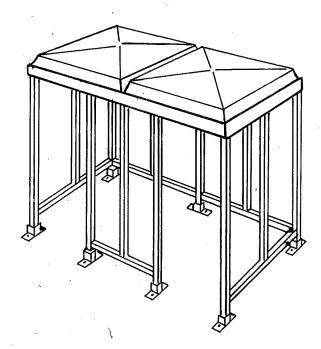
Park-N-Ride/Pool Lots

Used in conjunction with ridesharing, Park-N-Ride/Pool Lots are essential for the success of a ridesharing program. There are nine known sites that are presently being used as park-n-ride/pool lots in Warren County. Three are official and six are unofficial.

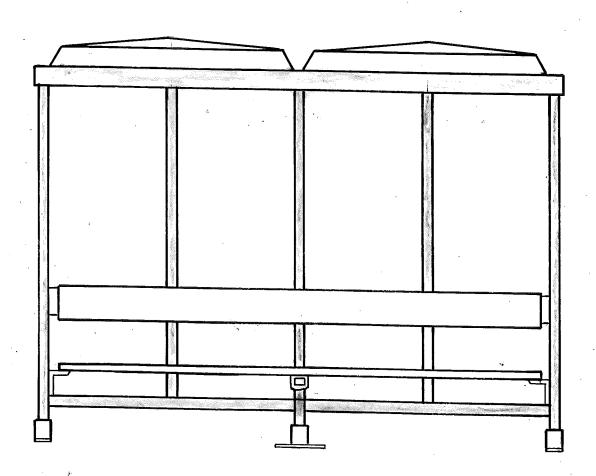
In order to provide an efficient park-n-ride/pool system, it is the recommendation of this study that all nine of the existing sites be included in the system plus four additional sites with official County or municipal park-n-ride/pool lots status. It is also the



BUS SHELTER DETAILS



SIDE ELEVATION



FRONT ELEVATION

recommendation that each of these sites be paved and provided with lighting and shelters.

Shelters

At the present, there are no bus shelters available anywhere in Warren County to protect waiting passengers from the elements. In order to promote and improve public transportation service throughout the County, a shelter program should be instituted. Location of shelters should include all major bus stops, open train stops, and heavy transfer locations. Priority for installing shelters should be based on passenger demand and service frequency.

Related to the shelter program, each shelter installed should have benches to sit on, lighting and include posted schedules for all routes passing the shelters along with a map in such a manner to be vandal proof. Figure shown is the detail of a typical shelter that could be installed in Warren County to meet the need of its transit patrons.

Airports

Increasingly today, the airport facility is emerging as the center of industrial development—the Allentown—Bethlehem—Easton Airport and its industrial park an example—just as the railroad junction was the nucleus of towns and cities of several decades ago. In this respect, the plan would be remiss by not calling attention to

the relevancy of the County's airport facilities and to the need to coordinate with other phases of transportation.

Public use airports, such as Newark, Morristown and A-B-E, provide an essential link in the Region's and County's overall transportation network today and will bear an even greater significance in the future.

Privately owned public use New Jersey Jersey airports, such as Blairstown and Hackettstown, in Warren County, are faced with pressures from spiraling taxes, mounting operational and maintenance costs and lucrative purchase offers from land developers. The lack of adequate funds to meet expenses and the ever increasing demand for service have led to the abandonment of some very essential airports.

Both Blairstown and Hackettstown airports are in imminent danger of being lost in Warren County. Positive action must be taken quickly to see that both are saved. If action is not taken quickly, the County will be left without a site for a general aviation airport. Once these airports are gone, the possibility that a new general aviation airport will be built in Warren County is highly unlikely.

In Warren County, it is proposed that Blairstown Airport and Hackettstown Airport remain in service, along with Andover, Newton and Trinca's in Sussex County, Flanders in Morris County, and Alexander and Cumulus Ridge in Hunterdon County.

Freight Services

In recognition of the need for improved freight service, the County Transportation Master Plan would be remiss if it did not address its present freight system. This is important to the economic future of the County.

In Warren County, freight is either transported on its rail or highway system.

Rail Freight System

At one time, eight separate railroads provided freight service within the County.

Presently, five railroads serve Warren County, operated by Conrail, the Consolidated Rail Corporation, which was created by the Federal government in 1976 as a solution to the bankruptcies of rail carriers in the northeast and midwest.

Though Conrail claims that it has met its first objective, that its physical plant has been restored and now provides reliable freight service to its shippers, service which at least equals that of most American railroads. The same cannot be said for the freight service it offers in Warren County.

Since 1976, service on the Penn-Central's Bel-Del Line Branch has been discontinued between Milford and Trenton and the track has been torn up severing service to the Trenton Urban Area.

Service on the two Erie-Lackawanna Lines in the County has been curtailed. The line, between Netcong and Hackettstown, and the section of the main line known as the "cut-off" in the northern part of the County, have been taken out of service from Port Morris to Slateford, Pennsylvania, severing service to the northeastern part of the State and New England.

On May 28, 1981, Conrail submitted a request to the Interstate Commerce Commission requesting that the ICC waive the Customary 180 day waiting period required under the Rules for Category 1 Abandonment and permit the physical removal of track along not only the Erie-Lackawanna "cut-off" but also to permit the abandonment and immediate removal of track from the Lehigh and Hudson Line from Andover to Belvidere.

Given this situation, Warren County is faced with the possibility of having no rail transportation at all in the northern part of the County. Not only does it concern freight carriers, the future of any potential mass transportation program in this part of the County is in jeopardy.

Over the past two decades, the consolidation of these railroads has been allowed to deteriorate to a deplorable state and this deterioration has led to a reduction in service which, in turn, has encouraged shippers in Warren County, adjacent counties and states, to seek out other modes of transportation and has discouraged industries and businesses from locating in Warren County, adjacent counties and states. The continued operation of these railroads is in the best interests of Warren County

and the Region. If anything, railroad freight line should be increased at this time. Considering the fuel shortage and high cost of commodities being shipped by truck, we must utilize our present rail system to the utmost. To remove these railroads now will have both short and long term detrimental effects on the economic development of Warren County and the Region at a time when the northeast needs all available options to encourage economic development.

In order for Warren County to continue to have a viable rail freight system that can truly provide the service needed and to help the Region's future economic development, it is the recommendation of this plan that:

- 1. The present system be kept in tact.
- Lines that are out of service be preserved and maintained in their present conditions for future use.
- 3. Lines that are presently owned by Conrail and are being considered for abandonment, the Erie-Lackawanna Railroad, Hoboken-Scranton Main Line from Port Morris Junction, New Jersey to West Slateford, Pennsylvania, and the Lehigh and Hudson Railroad, Hudson Secondary from Franklin to Belvidere, be taken off the abandonment list.
- 4. These lines be sold to one of the several private short line transportation companies presently being formed. These

- companies have experienced and knowledgeable people who feel that these lines can be operated profitably.
- 5. The section of track on the Lehigh and Hudson, Hudson Secondary between Franklin in Sussex County and Warwick, New York, be put back in service and rebuild the Poughkeepsie Bridge across the Hudson River in order to make the Hudson Secondary, once again, a viable bypass of the New York yards to New England from the west and southwest.
- 6. The State and counties take a more active role in preserving existing rail lines by either providing financial assistance to these new short line operators or purchase the rail lines and lease them to short line operators.

Highway Freight System

The major system for transporting freight in Warren County today is its highway system, which consists of Federal, State, County and Municipal roads. However, in the past, there have not been any roads designated as official truck routes for freight transportation in the County. Except for County Route 646, which has a weight limit on it, truckers have been left to choose the County road that is most convenient for them to transport their freight regardless of the inconvenience it might cause local residents.

The Circulation Plan Map shows both the County Rail and Highway

Freight Systems proposed for Warren County.

The Freight Highway System being proposed consists of the entire Federal/State Highway System presently serving Warren County and part of the County's Road System. Municipal roads are excluded.

Though there are several roads on the County Road System that are capable of carrying truck traffic, they are not all included on the proposed system. It is the recommendation of the plan that the County roads included in the County Highway Freight System only include the major roads serving the population centers, commercial and industrial zones throughout the County, with minor effect on the County's residential areas. A meaningful County Highway Freight System is vital to the County's economic development.