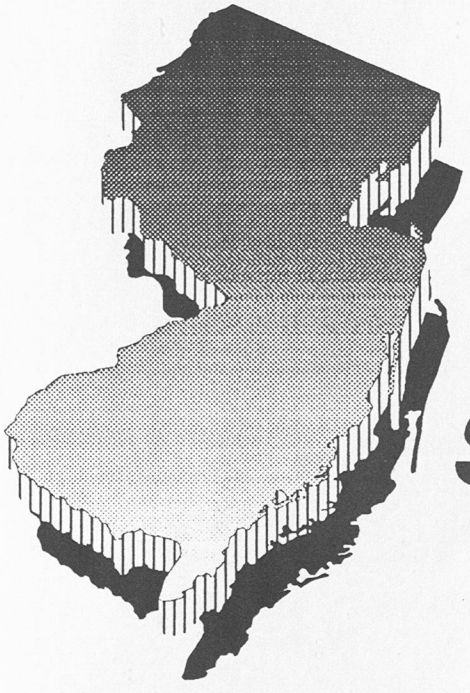
State Transportation Plan



Urban Transportation Supplement

Trenton

New Jersey Department of Transportation
NJ TRANSIT
June 1993

TRENTON

—

URBAN TRANSPORTATION SUPPLEMENT

FUTURE ECONOMIC CONDITIONS, EMPLOYMENT GROWTH CENTERS, AND PUBLIC TRANSPORTATION REQUIREMENTS

TRENTON

URBAN TRANSPORTATION
SUPPLEMENT

FUTURE ECONOMIC CONDITIONS,
EMPLOYMENT GROWTH CENTERS, AND
PUBLIC TRANSPORTATION REQUIREMENTS

Prepared by:

Rutgers University, Center for Urban Policy Research

Principal Investigators:

Robert W. Burchell, Ph.D.
Emilie Schmeidler, Ph.D.

City Reseachers:

Bratati Biswas - Trenton
Dimitri Ioannides - Atlantic City
Daniel Kueper - Jersey City
Lawrence Newton - Newark
Grant Saff - Camden
Emilie Schmeidler - Elizabeth
Sean Thompson - Paterson

New Jersey Department of Transportation

William S. Beetle
James B. Lewis
Helene Rubin

New Jersey Transit

James Redeker
Pippa deCosson Woods
Glenn D. Newman - Intern

TRENTON

TABLE OF CONTENTS

SECTION		PAGE
SECTION I	*Introduction*	1
SECTION II	*Demographic Profile of the City's Population*	3
SECTION III	*Labor Force Profile*	5
SECTION IV	*"At-Place" Employment Profile*	9
SECTION V	*Employment Base and Employment Projections for the City, County, and Labor Area*	12
SECTION VI	*Present and Future Work Locations—A Micro View*	19
SECTION VII	*The Existing Transportation Network*	32
SECTION VIII	*Synthesis of Job Growth Data and Existing Public Transit Network*	51
SECTION IX	*Transportation Problems—City to Suburb*	54
SECTION X	*Transportation Problems—In City*	58
SECTION XI	*Problems Other Than Transportation*	59
SECTION XII	*Transportation Strategies*	61
SECTION XIII	*Summation*	70

I. INTRODUCTION

State legislation (P.L. 1991 Chapter 481) approved January 18, 1992, mandates that the New Jersey Department of Transportation (NJDOT), in conjunction with NJ TRANSIT (NJT), prepare and submit to the Legislature an Urban Transportation Supplement to the State Transportation Plan. In order to improve access into and out of New Jersey's major urban centers, the Plan is to identify and address transportation needs and issues of each of seven cities. In particular, the legislation places emphasis on "the transportation problems of the state's inner-city residents who are employed by or who are seeking employment with employers located in suburban areas of the state." The seven cities included in the legislation are Atlantic City, Camden, Elizabeth, Jersey City, Newark, Paterson, and Trenton. The Urban Transportation Supplement is to be updated every five years.

This report focuses on Trenton. Information for the analysis has been gathered from the U.S. Census, the New Jersey Transportation Plan, the NJ TRANSIT Capital Plan, county and local master and transportation plans, population and employment projections from the State Development and Redevelopment Plan, numerous other forms of published data, and from personal interviews with Trenton and Mercer County professionals working in planning, transportation, economic development, and job placement or training.

Trenton today is a city of 88,000 residents on the banks of the Delaware River. It serves as the center of government for the State of New Jersey. Over time, Trenton has witnessed significant change in both form and function. Its historical development is overviewed below.

In colonial times, Trenton provided the overland link between Philadelphia and New York City for passengers and freight using the Delaware and Raritan rivers. Trenton was chosen as the state capital in 1790 and was incorporated as a city at that time. The first iron works in Trenton dates back to 1723. The first bridge to span the Delaware River was built at Trenton in 1806. The development of water power, construction of the Delaware and Raritan Canal, and building of the Camden and Amboy Railroad enhanced local industrial activity. The city's greatest expansion occurred between 1880 and 1920, during which time the population grew by almost 250 percent as more people came to work in its flourishing industries; thereafter, industries in Trenton declined as a result of both the Great Depression of the 1930s and perennial suburban locational competition. Today, Trenton functions primarily as the capital of New Jersey with its greatest employment in the government and services employment classification.

The city of Trenton has traditionally been a manufacturing center. The leading industries during the nineteenth and early twentieth centuries were iron and steel, pottery, sanitary ware, and rubber. Other significant industries included textiles, steam turbines, compressors, tobacco, and baking. Industrial activity, which started around 1850, grew spectacularly until 1880 and continued to grow steadily until the 1920s. Thereafter, economic growth in Trenton, as in all areas, slowed as a result of the Depression. The advent of suburban industrial park development in the 1950s allowed industries to move from the city to the suburbs. Since then, Trenton has changed its economic base from manufacturing to services, with the greatest growth in services and public sector employment.

The population and employment trends of Trenton coincided with its economic highs and lows over time. Trenton's population was 6,461 in 1850, rising to 17,228 (166.6 percent) in 1860 with the establishment of more than 15 new factories. The 1880s witnessed a tremendous population growth. Between 1880 and 1890, the population grew from 29,910 to 57,457, or 92.1 percent. The city's population continued to rise via economic expansion until the 1920s, when the rate of increase fell to 3.4 percent and the number of employees in manufacturing dropped. The city's population peaked in 1950 with 128,009, declining to 104,638 in 1970 and 92,124 in 1980. As of 1990, the population again had fallen to 88,675.

Trenton's emergence as a major center of manufacturing, commerce and government can be credited to its varied transportation system. The city's unique location on the Delaware River, midway between New York City and Philadelphia, was used to great advantage by freight and passengers travelling by water. The old Boston Post Road (US Route 1), the nation's main nineteenth century north-south arterial, traversed Trenton. In 1834, the Delaware and Raritan Canal linked the rivers of these names, facilitating the transport of coal and goods to and from Trenton. Later, the Pennsylvania and Reading railways joined Trenton to Pennsylvania and New York. Thus, the enhanced transportation network fostered Trenton's industrial and commercial growth.

Trenton continues to have excellent transportation networks. It is well connected by road, rail, and air to all metropolitan centers in the Northeast. Sixteen miles southeast of Trenton is the New Jersey Turnpike. US Route 1 connects Trenton and Philadelphia. Other highways include US Route 206, Route 31, Route 33, and Route 29. Trenton is also linked to US Route 130, I-195 and I-295. Various city and intercity buses operate from Trenton. The Trenton rail station is served by AMTRAK, NJ TRANSIT, and the Southeastern Pennsylvania Transit Authority (SEPTA). Air services consist of the Mercer County Airport and connections with Philadelphia and Newark International Airports. All

these facilities have greatly contributed to the development of Trenton as both the state capital and county seat, serving its state, county, and local employees, state legislators, and numerous private-sector business participants.

II. DEMOGRAPHIC PROFILE OF THE CITY'S POPULATION

As noted earlier, the population of Trenton peaked in 1950 at 128,009 and declined steadily to 88,675 by 1990. The cause of this decline was the outmigration of residents to neighboring suburbs. Between 1980 and 1990 the city's household size increased, while its number of households dropped in number. The number and proportion of working age adults, the very young, and older generations increased. Both per capita and household income showed marked increases and the proportion of residents living in poverty decreased marginally. These demographic changes that occurred in the last decade are described in more detail in this section.

From 1950 to 1980 Trenton's population declined by ten percent every ten years—a pattern experienced by other urban centers. From 1980 to 1990 the city's population fell from 92,124 to 88,675, or 3.7 percent (Table 1). The 3.7 percent drop over the last decade, therefore, represents a slowing of the recent historical decline in population. Trenton's number of households fell from 32,463 in 1980 to 30,673 by 1990, a decrease of 1,790, or 5.5 percent. Average household size increased in the city from 2.75 in 1980 to 2.77 in 1990. This contrasts with the nation as a whole where average household size fell from 2.78 in 1980 to 2.63 ten years later.

Table 2 portrays the age profile of Trenton. The overall pattern of the cohorts for 1980 and 1990 is comparable to the national distribution and reflects the aging of the baby boom generation moving into its middle years. In Trenton, the under-5-years-of-age category increased from 7.7 percent to 8.5 percent between 1980 and 1990, while the 5-19 years category declined to 20.9 percent. There has been a modest increase of 4.9 percent in the 20-64 years group, which comprises the major work force. The over-65-years-of-age category registered an increase of 2.4 percent between 1980 and 1990, following national trends in the aging of the population during the 1980s.

Median household income in Trenton increased by 111.1 percent from $12,182 in 1979 to $25,719 in 1989 (Table 3). These figures fall far below the comparable household incomes for Mercer County and the nation as a whole. As a further example of Trenton's financial disadvantage, while the city's per capita income was $11,018 in 1990, per capita earnings for Mercer County and the nation were $18,936 and $14,056, respectively. The relatively lower incomes in Trenton are attributable to high unemployment and welfare dependency as well as the less-skilled jobs of its working population.

TABLE 1

POPULATION AND HOUSEHOLD IN TRENTON 1980–1990

Population Indices	*1980*	*1990*	*Change* *Number*	*Percent*
Population	92,124	88,675	(3,449)	(3.7)
Household	32,463	30,673	(1,790)	(5.5)
Average Household Size	2.75	2.77	0.02	0.72

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 2

AGE PROFILE OF THE POPULATION IN TRENTON 1980–1990

Age Cohorts	*1980* *Percent*	*1990* *Percent*	*Change* *Percent*
<5 years	7.7	8.5	10.4
5 years to 19 years	24.7	20.9	(15.4)
20–64 years	55.0	57.7	4.9
Over 65 years	12.6	12.9	2.4
Median Age (years)	29.5	31.6	7.1

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 3

INCOME AND POVERTY IN TRENTON 1979–1989

Income Indices	*1979*	*1989*	*Change* *Number*	*Percent*
Household Income	$12,182	$25,719	$13,537	111.1
Per Capita Income	$5,400	$11,018	$5,618	104.0
Percent Population Below Poverty Level	21.2	18.1	—	(3.9)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

Trenton has a very high percentage of its population in poverty. In the 1980s, 21.2 percent of Trenton households were below the poverty level, whereas corresponding figures for Mercer County and the nation were 9.4 percent and 11.5 percent, respectively. Over the decade 1980 to 1990 there was some improvement in the city—a 3.9 percent decline of households in poverty (Table 3). Even so, Trenton falls far behind Mercer County and the nation in any array of economic indicators.

III. LABOR FORCE PROFILE

Between 1980 and 1990 Trenton's resident employment increased substantially, as did the city's proportion of households receiving wage or salary income. However, unemployment levels also rose, as there was a significant increase in the labor force.

Although manufacturing traditionally provided the bulk of the jobs in Trenton, this sector of employment has been declining steadily. The loss, however, has been somewhat offset by the rise of the service economy. Trenton's major employment sectors are manufacturing, retail trade, services, and the public sector (Table 4). Other emerging sectors are construction and transportation. Trenton's residents work mostly in services, sales/technical, managerial occupations, and also as operators and laborers. With a greater proportion of jobs held in service occupations, the average salaries of Trenton residents fell by 10–20 percent, reflective of the salaries for services as compared to manufacturing jobs.

A. Total Employed

The decade 1980-1990 was one of mixed fortunes for both Trenton and New Jersey as a whole. The recession from 1980 to 1982 was followed by an economic growth surge between 1982 and 1987. From 1980 to 1990 the total number of residents employed in Trenton increased from 34,495, or 37.4 percent of the population, to 37,616, or 42.4 percent (Table 4). Although the decade figures indicate an increase of 9.1 percent from 1980 to 1990, absolute employment has declined since its 1987 peak.

B. Employment by Industry

In the past, Trenton's economy has been dominated by two contrasting activities: manufacturing and governmental functions. Manufacturing originally provided the bulk of the employment for Trenton but has declined in the last three decades, even as the city saw dramatic expansion in services and proportional increases in construction and FIRE (finance, insurance, and real estate). The city's four major employment sectors currently are manufacturing, retail trade, services, and government.

TABLE 4

RESIDENT EMPLOYMENT AND EMPLOYMENT CHANGE BY SIC IN TRENTON 1980–1990

Resident Employment	*1980*	*1990*	*Change Number*	*Change Percent*
TOTAL EMPLOYMENT	34,495	37,616	3,121	9.1
	1980 Percent	*1990 Percent*		*Change Percent*
STANDARD INDUSTRIAL CLASSIFICATION (SIC)				
Manufacturing	23.4	15.9		(32.1)
Wholesale Trade	2.6	2.9		11.5
Retail Trade	10.7	12.5		16.8
Transportation	3.6	4.1		13.9
Communications and Utilities	2.0	2.0		0.0
Services	30.6	34.6		13.1
Finance, Insurance, and Real Estate	3.4	3.9		14.7
Construction	3.3	4.9		48.5
Agriculture	0.4	1.2		200.0
Public Sector	20.0	18.0		(10.0)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 5

RESIDENT EMPLOYMENT BY OCCUPATION AND CHANGE IN TRENTON 1980–1990

Resident Employment	*1980*	*1990*	*Change Number*	*Change Percent*
TOTAL EMPLOYMENT	34,495	37,616	3,121	9.1
	1980 Percent	*1990 Percent*		*Change Percent*
OCCUPATIONAL CATEGORY				
Managerial/Executive	15.3	17.6		15.0
Technical/Sales	33.1	32.3		(2.4)
Services	19.0	21.7		14.2
Farming	0.6	1.1		83.3
Precision Production/Crafts	9.2	8.7		(5.4)
Operators/Laborers	22.8	18.5		(18.9)

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

As represented in Table 4, services are the single largest generator of employment in Trenton. In 1980 this sector constituted 30.6 percent of the resident employment, increasing to 34.6 percent in 1990. This reflects Trenton's emergence as a business/services center. Manufacturing has declined by 32.1 percent over the last decade, from 23.4 percent to 15.9 percent.

Construction employment increased dramatically—by 48.5 percent—over the decade due to abundant construction in the central business district and elsewhere in Mercer County throughout the 1980s. Much of the development was stimulated by the erection of new state office buildings. These, in turn, spurred the development of commercial buildings and private offices. Transportation has also grown significantly (13.9 percent), accounting for 4.1 percent of the employment in 1990. Due to inexpensive land, warehousing and trucking are the new players. Wholesale and retail trade increased by 11.5 percent and 16.8 percent, respectively.

C. Employment by Occupation

Table 5 shows the resident employment by occupation type. The largest category is clearly technical/sales followed by services, operators/laborers, and managerial/executive. Together these account for more than 90 percent of jobs. Of these four categories of employment the largest increases over the decade are in managerial/executive and services, both increasing by about 15 percent. In reverse fashion, those involved in technical/sales and operators/laborers decreased over the period. Precision production and crafts, have also decreased in share from 9.2 percent in 1980 to 8.7 percent a decade later. Farming increased sharply, but still only accounts for 1.1 percent of resident occupations.

D. Unemployment Levels

Trenton has high unemployment levels compared to Mercer County and the state of New Jersey. In 1980 the city's unemployment rate was 10.2 percent compared to 5.8 percent for Mercer County and 7.2 percent for New Jersey (Table 6). Although the resident employment increased by 9.1 percent in 1990, the unemployment level went up by 6.8 percent, ending the decade at 10.9 percent. The increase in resident employment was offset by a substantial increase (9.9 percent) in the labor force over the decade. The high unemployment level reflects the recession that hit all New Jersey cities between 1987 and 1990, during which Trenton lost 8.2 percent of its jobs.

TABLE 6

RESIDENT UNEMPLOYMENT AND CHANGE IN TRENTON 1980–1990

City	*Unemployment Level*		
	1980 Percent	*1990 Percent*	*Change Percent*
TRENTON	10.2	10.9	6.8

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 7

PERCENT OF HOUSEHOLDS HAVING WAGE AND SALARY INCOME AND CHANGE IN TRENTON 1979–1989

Local Government	*Households With Wage or Salary Income*		
	1979 Percent	*1989 Percent*	*Change Percent*
TRENTON	68.6	75.6	10.3
MERCER COUNTY	79.0	81.2	2.8

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

TABLE 8

AUTOMOBILE OWNERSHIP AND CHANGE IN TRENTON 1980–1990

City	*Percent of Households Having at Least One Automobile*		
	1980 Percent	*1990 Percent*	*Change Percent*
TRENTON	66.4	69.2	4.2

Source: U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

E. Households Having Wage and Salary Income

The number of households in Trenton having wage and salary income in 1979 was 22,269, representing 68.6 percent of total households (Table 7). This figure was well below Mercer County's 79.0 percent. In 1989 Trenton households with wage or salary income increased substantially to 75.6 percent, a jump of 10.3 percent. Although Trenton is closing the gap, it still falls below the equivalent figures for Mercer County (81.2 percent).

F. Household Automobile Ownership

Although Trenton did not fare well economically during the period 1980 to 1990, automobile ownership increased considerably. Households having at least one automobile went up by 4.2 percent, from 66.4 percent in 1980 to 69.2 percent in 1990 (Table 8). These figures, however, are lower than the 1990 national average of 81.3 percent.

IV. "AT-PLACE" EMPLOYMENT PROFILE

Table 9 depicts the at-place employment change for the city of Trenton, as well as the change in employment by Standard Industrial Classification (SIC) between 1980 and 1990. At-place employment is the number of jobs found within the city and in which both city and non-city residents may participate. It is measured by the data source of covered employment, which is the number of jobs for which unemployment insurance exists.

A. In the City

At-place employment decreased from 35,127 to 31,851 during the decade,[1] a drop of 9.3 percent. While these figures include local, county, and federal government employment, they do not include state government employment which, with Trenton as the state capital, forms a significant sector. Along with the other New Jersey cities, manufacturing in Trenton has declined significantly during the decade, mostly due to economic recession and suburban growth. Services, comprising the biggest and fastest growing segment of the local economy, was responsible in 1990 for more than one-third of Trenton's private-sector employment. It grew by 20.5 percent over the decade. Manufacturing, as in other New Jersey cities, dropped by 34.8 percent to a share of 15.0 percent of at-place employment by 1990.

---

[1] 1980 and 1990 at-place employment for Trenton includes private-sector covered employment and city and federal government covered employment. Data on state government employment in the city are not available.

TABLE 9
"AT-PLACE" EMPLOYMENT AND EMPLOYMENT CHANGE IN TRENTON 1980–1990

Employment By Industry	*Total*		*Change*	
	1980	*1990*	*Number*	*Percent*
TOTAL	35,127	31,851	(3,276)	(9.3)
	1980 Percent	*1990 Percent*		*Change Percent*
STANDARD INDUSTRIAL CLASSIFICATION (SIC)				
Manufacturing	23.0	15.0		(34.8)
Wholesale Trade	4.6	3.9		(15.2)
Retail Trade	8.1	8.3		2.5
Transportation	0.5	1.1		120.0
Communications and Utilities	1.1	1.4		27.3
Services	30.2	36.4		20.5
Finance, Insurance, and Real Estate	5.8	3.9		(32.8)
Construction	2.2	3.9		27.3
Agriculture	0.01	0.1		900.0
Public Sector	24.5	26.0		10.6

Note: Employment statistics include private-sector covered employment and local and federal government covered employment. Does not include state government figures.

Source: New Jersey Department of Labor, *Covered Employment Trends*. 1980, 1990.

TABLE 10
RESIDENT AND "AT-PLACE" EMPLOYMENT TOTAL AND BY SIC—1990 TRENTON

Employment By Industry	*1990 Resident Employment*	*1990 "At-Place" Employment*	*Ratio of "At-Place" Employment to Resident Employment*
TOTAL	37,616	31,851	84.7
STANDARD INDUSTRIAL CLASSIFICATION (SIC)			
Manufacturing	5,981	4,778	79.9
Wholesale Trade	1,091	1,242	113.8
Retail Trade	4,702	2,644	56.2
Transportation	1,542	350	22.7
Communications and Utilities	752	446	59.3
Services	13,015	11,594	89.1
Finance, Insurance, and Real Estate	1,467	1,242	84.7
Construction	1,843	1,242	67.4
Agriculture	451	32	7.1
Public Sector	6,772	8,281	122.3

Note: "At-place" employment statistics include private-sector covered employment and city and federal government covered employment recorded in September 1990.

Source: New Jersey Department of Labor, *Covered Employment Trends*. 1990; U.S. Department of Commerce, Bureau of Census. *U.S. Census of Population and Housing 1980, 1990.*

The recession has had its toll on wholesale trade, with the number of such employees in this sector dropping by 15.2 percent. Transportation and construction activity increased moderately during the 10-year period. Construction of new state buildings spurred the development of other office and commercial expansion. Retail sales jobs, which had previously been dwindling due to suburban outmigration, increased by a modest 2.5 percent, as an additional retail component was incorporated in the Trenton Commons to capture state employee purchasing power.

Comparison of resident and at-place employment for Trenton (Tables 4 and 9) reveals a distinct gap between the two. While overall resident employment in the city is *increasing* by 9 percent, employment found in the city is *decreasing* by 9 percent. For both resident employment and jobs available in Trenton, manufacturing is declining in importance, and the service industry is growing. However, wholesale trade and FIRE are growing in terms of resident employment and declining in terms of at-place employment. Since at-place employment in the public sector in Trenton does not include state jobs (the number of which is considerable), it would be erroneous to compare it with resident employment.

Table 10 shows a comparison of resident and at-place employment in Trenton in 1990. Only in two sectors does at-place employment exceed resident employment—in wholesale trade and the public sector. In all other categories, the number of jobs physically within Trenton falls short of the number held by residents. This clearly indicates that Trenton residents have to look for work in the suburbs or neighboring cities outside Trenton. This discrepancy also indicates that jobs for which a substantial number of city residents are qualified are not growing in the city (in fact are decreasing), while less-skilled jobs in suburban locations are attracting more and more city residents.

Again, a significant share of all jobs located within the city are not filled by Trenton residents. The commuting pattern of the residents reveals that in both 1980 and 1990 about half worked outside the city (Figure 1, Section VI).[2]

---

[2] "Resident employment" in the tables above is not identical to "working residents" in the figures in Section VI below. In counting resident employment, the Census includes those with a job who were not at work during the reference week, but excludes members of the Armed Forces. Conversely, in counting working residents, the Census includes members of the Armed Forces, but excludes people who had a job but did not work during the Census reference week. For more complete descriptions, see the Census definitions of "Employment Status" and "Journey to Work."

B. In the Labor Area

The labor area[3] for the city of Trenton is Mercer County. Total at-place employment in the labor area in 1980 was 172,936 (Table 11), increasing by 7.6 percent to 186,095 in 1990. Services and public-sector employment dominated, each comprising about 28.6 percent of total employment in 1990. They were followed by manufacturing (14.5 percent) and retail trade (12.6 percent).

The manufacturing industry experienced a sharp decline throughout this decade, dropping in share by 25.6 percent; even during the boom between 1982 and 1987, this sector lost jobs. A new economic era became evident as services increased by 30.6 percent, from 21.9 percent in 1980 to 28.6 percent in 1990. Retail trade also increased its share in the labor area economy. It constituted 12.6 percent in 1990, up from 11.2 percent in 1980. Less-important activities of transportation and construction also increased during the decade.

C. The Shift to the Services Sector—Implications for Income

The rise of the services sector and decline of manufacturing jobs is a common story for many New Jersey cities. Associated with this trend is an overall loss of income. This is because nearly equivalent manufacturing jobs pay 10–20 percent higher in annual wages than comparable jobs in the services sector. The gap is indicated in Table 12. Replacing a manufacturing job with a service position at the less-skilled level usually results in a net loss of income to the jurisdiction where this is taking place.

V. EMPLOYMENT BASE AND EMPLOYMENT PROJECTIONS FOR THE LABOR MARKET, COUNTY, AND CITY

This section provides projections of future jobs for Mercer County and the city of Trenton, and for municipalities within the labor area. Growth projected for the future deals with the levels and growth to be expected if the State Development and Redevelopment Plan is followed. The period from 1990 to 2000 is used for population and employment projections. The employment projections are discussed in terms of three categories. *Basic employment* includes the SIC categories for manufacturing, construction, transportation, mining, communications, and wholesale trade. *Services employment* includes finance,

---

[3] **Labor area or labor market area (LMA)** is a geographic area consisting of a central community and contiguous areas that are economically integrated into that community. Within a labor market area, workers generally can change jobs without relocating which makes jobs of a similar type mutually competitive. This is the definition of a labor market. The Bureau of Labor Statistics defines LMAs in terms of entire counties, except in New England where cities and towns are used. LMAs are categorized as either major, which are usually coterminous with a Metropolitan Statistical Area (MSA), or as small.

TABLE 11

"AT-PLACE" EMPLOYMENT AND EMPLOYMENT CHANGE BY SIC IN THE TRENTON LABOR AREA 1980–1990

	Total		
	1980	*1990*	*Change Percent*
TRENTON LABOR AREA	172,936	186,095	7.6
	1980 Percent	*1990 Percent*	*Change Percent*
STANDARD INDUSTRIAL CLASSIFICATION (SIC)			
Manufacturing	19.5	14.5	(25.6)
Wholesale Trade	2.9	3.5	20.7
Retail Trade	11.2	12.6	12.5
Transportation	1.2	1.9	58.3
Communications and Utilities	1.5	1.6	(6.7)
Services	21.9	28.6	30.6
Finance, Insurance, and Real Estate	4.1	5.8	41.5
Construction	1.7	2.2	29.4
Agriculture	0.3	0.6	100.0
Public Sector	35.7	28.7	(19.6)

Note: "At-place" employment statistics include private-sector covered employment and local, state, and federal government covered employment.
Source: New Jersey Department of Labor, *Covered Employment Trends*. 1980, 1990.

TABLE 12

ANNUAL SALARIES FOR DEMAND OCCUPATIONS TRENTON PMSA

Type of Employment	*Annual Wage ($)*
MANUFACTURING OCCUPATIONS—EXAMPLES	
Drafter	26,494
Maintenance Worker	20,509
Material Handler	21,112
Truck Driver, Heavy	29,827
Warehouse Worker	23,566
SERVICE OCCUPATIONS—EXAMPLES	
Accounting Clerk	19,124
Receptionist	16,562
Computer Operator	21,710
Secretary	24,050
Word Processor	19,292

Note: These data do not take into account overtime, premium pay, or shift differential.
Source: Trenton, New Jersey, NJDOL. *Regional Labor Market Review-Southern New Jersey Region*, July 1992.

insurance, and real estate; professional service, business and repair service; personal service, entertainment, and public administration. *Retail employment* involves only retail trade.

Basic employment is projected to decrease both in Trenton and the labor area. Services and retail employment will increase appreciably in Trenton but less so in Mercer County. All the municipalities where Trenton residents currently work will gain jobs over the next decade. The details of these changes are described in subsections A, B, and C below.

A. City

The at-place employment and projections in Trenton are depicted in Table 13. The 1990 employment figures reveal an acute dependence on services, which account for 84.1 percent (or 28,914) of total employment. The city's shares of basic and retail employment are lower than equivalent county figures, comprising 11.9 percent (4,073) and 4 percent (1,379) of the total, respectively.

The projections suggest a 22.4 percent rise in total employment, from 34,366 in 1990 to 42,056 in the year 2000. Basic employment decreases by 6.4 percent and stands at 3,811 in 2000. Trenton, being the state capital and county seat, has a large share of its at-place employment in the services category. This is expected to increase in the future. The services category is expected to expand by 26.3 percent in the year 2000, an increase of 7,589 jobs. Projections for retail employment suggest an increase of 26.3 percent, from 1,379 in 1990 to 1,741 by the year 2000.

B. County

Trenton's labor area coincides with Mercer County (Table 14). Hence, the employment base and projections are the same as those for the labor area, which are described in the following section.

C. Labor Area

The total employment for the labor area of Trenton (Mercer County) was 197,000 in 1990. The basic sector's share of the total employment was 24.6 percent or 48,414. The retail component consisted of 14.5 percent of total employment, or 28,519. The services category dominated, with an imposing share of 120,067 jobs, or 60.9 percent. The total employment change between 1990 and 2000 is expected to be 17,569 (from 197,000 to 214,569) or 8.9 percent (Table 15).

TABLE 13

"AT-PLACE" EMPLOYMENT AND PROJECTIONS IN TRENTON CITY 1990–2000
(New Jersey State Development and Redevelopment Plan)

	Total Employment	*Basic Employment*	*Services Employment*	*Retail Employment*
1990	34,366	4,073	28,914	1,379
1995	37,341	3,833	31,982	1,526
2000	42,056	3,811	36,503	1,741
CHANGE 1990–2000				
NUMBER	7,690	(262)	7,589	362
PERCENT	22.4	(6.4)	26.3	26.3

Source: CUPR Projections: 1990–2000.

TABLE 14

"AT-PLACE" EMPLOYMENT AND PROJECTIONS IN MERCER COUNTY 1990–2000
(New Jersey State Development and Redevelopment Plan)

	Total Employment	*Basic Employment*	*Services Employment*	*Retail Employment*
1990	197,000	48,414	120,067	28,519
1995	203,615	45,623	127,783	30,209
2000	214,569	45,076	137,429	32,065
CHANGE 1990–2000				
NUMBER	17,569	(3,338)	17,362	3,546
PERCENT	8.9	(6.9)	14.5	12.4

Source: CUPR Projections: 1990–2000.

TABLE 15

"AT-PLACE" EMPLOYMENT AND PROJECTIONS IN THE TRENTON LABOR AREA 1990–2000
(New Jersey State Development and Redevelopment Plan)

	Total Employment	*Basic Employment*	*Services Employment*	*Retail Employment*
1990	197,000	48,414	120,067	28,519
1995	203,615	45,623	127,783	30,209
2000	214,569	45,076	137,429	32,065
CHANGE 1990–2000				
NUMBER	17,569	(3,338)	17,362	3,546
PERCENT	8.9	(6.9)	14.5	12.4

Source: CUPR Projections: 1990–2000.

A decrease in basic employment is projected, with employment dropping by 6.9 percent from 1990 to 2000, or 3,338 in absolute terms. In the year 2000, basic employment holds a share of the total employment of 21 percent, compared to 24.6 percent in 1990.

Services employment is estimated to increase significantly over the 10-year period. According to projections, service jobs increase to 137,429 in the year 2000 from 120,067 in 1990. Thus, services are expected to dominate the economic base of the labor area, with two-thirds of the population employed in this sector. Retail employment is also projected to change significantly over the decade. The projections indicate an increase of retail employment by 3,546, or 12.4 percent between 1990 and 2000.

D. Job Growth and Employment Separations in the Trenton Labor Area 1993-2000 by Municipality

An indication of potential employment change affecting Trenton residents is reflected in the 1993 to 2000 employment projections made by occupational category by the New Jersey Department of Labor, Division of Labor Market and Demographic Research. These projections include jobs added annually through growth in jobs and separations[4] of employees from the labor force. Combining this information with other data sets on job growth by municipality (the job growth portion of the labor area data), as well as incidence of job location by municipality (for the job separations portion of the data), allows the projection of less-skilled new jobs and job separations by type for municipalities in the labor area. The municipalities are shown in Table 16; methodology is described in a note at the end of the chapter.

Total job change in the Trenton labor area (Mercer County) shows a gain of 6,222 less-skilled jobs for the period 1993 to 2000. It indicates the net difference between a loss of 1,569 manufacturing jobs and a growth of 7,791 services and retail jobs. On the other hand, job separations will cause 20,224 less-skilled job opportunities in the same areas. These involve job changes amounting to 6,019 in retail and 14,206 in services industries.

As regards municipal locations of significant job change, Trenton will gain 2,643 new less-skilled jobs, followed by Lawrence Township and West Windsor, which will gain 863 and 722 new jobs, respectively. Other significant areas of new less-skilled job

---

4 Job openings include growth and separations. Growth refers to newly created jobs. The New Jersey Department of Labor, Division of Labor Market and Demographic Research, defines separations as openings created when people leave the labor force for reasons such as death, retirement, pregnancy, or other family reasons. Separations do not include movement from one job to another. New Jersey Department of Labor, Division of Labor Market and Demographic Research, *Employment Projections. Volume II: Occupational Outlook for New Jersey and Selected Areas. 1986-2000*. October 1988.

TABLE 16
LESS-SKILLED JOB GROWTH AND JOB OPPORTUNITIES THROUGH SEPARATIONS—1993-2000
TRENTON LABOR AREA [1]

COUNTY	New Less-Skilled Jobs 1993-2000				Less-Skilled Separations [2] 1993-2000				Total Less-Skilled Jobs and Separations [2] 1993-2000			
	Basic	Retail	Service	Total [3]	Basic [4]	Retail	Service	Total [3]	Basic	Retail	Service	Total [3]
MERCER COUNTY												
East Windsor township	-280	159	238	117	0	358	475	833	-280	517	713	950
Ewing township	-319	68	296	46	0	426	1,646	2,071	-319	494	1,942	2,117
Hamilton township	-285	388	514	618	0	1,502	1,761	3,263	-285	1,891	2,275	3,881
Hightstown borough	-93	11	25	-57	0	108	210	317	-93	119	235	261
Hopewell borough	-2	24	19	41	0	43	30	73	-2	66	49	114
Hopewell township	-86	31	57	3	0	107	175	282	-86	138	233	285
Lawrence township	-249	564	548	863	0	1,896	1,631	3,528	-249	2,461	2,180	4,391
Pennington borough	-11	32	55	76	0	83	125	208	-11	115	180	284
Princeton borough	-281	121	639	480	0	574	2,678	3,251	-281	695	3,317	3,731
Princeton township	-63	58	248	243	0	166	632	798	-63	224	880	1,041
Trenton city	-123	195	2,572	2,643	0	303	3,537	3,840	-123	498	6,108	6,483
Washington township	193	123	112	428	0	127	102	228	193	250	213	657
West Windsor township	28	134	559	722	0	326	1,204	1,531	28	461	1,763	2,252
TOTAL FOR MERCER	-1,569	1,909	5,882	6,222	0	6,019	14,206	20,224	-1,569	7,928	20,088	26,447
LABOR AREA TOTAL	-1,569	1,909	5,882	6,222	0	6,019	14,206	20,224	-1,569	7,928	20,088	26,447

Notes:
1. Labor area is a geographic area consisting of a central community and contiguous areas that are economically integrated into that community. Within a labor area, workers can generally change jobs without relocating. See discussion in text.
2. Separations are openings created when people leave the labor force for reasons such as death, retirement, pregnancy, or other family reasons. Separations do not include movement from one job to another. See discussion in text.
3. Numbers may not total exactly due to rounding.
4. These projections are based on the occupational categories with the greatest growth. In this county, all those occupations were in the services or retail sectors. Therefore, the lack of separations in the basic category of industrial occupations results from having no observed cases of growth in the specfic job categories projected. Of course, in actuality there will be some low level of separations in basic employment over time.

Source: CUPR Projections: 1993-2000.

growth will be Hamilton Township (618), Princeton Borough (480), and Washington Township (428).

With regard to separations, the largest job opportunities in this area will be the locations of highest existing employment. These are Trenton, evidencing 3,840 less-skilled job separations from 1993 to 2000, Lawrence Township at 3,528, Hamilton at 3,263, Princeton Borough at 3,251 and Ewing at 2,071. Other significant job separation locations at the 800–1,500 level each over the seven-year 1993 to 2000 projection period are West Windsor and East Windsor townships, and Princeton Township.

Table 16 lists the number of less-skilled job opportunities by municipality within the Trenton labor area. From a transportation point of view, the density of these opportunities is important. Therefore, Maps A and B show this information in terms of densities per square mile. Map A displays the new less-skilled employment opportunities, while Map B displays the less-skilled separations. Rather than showing all the municipalities in the labor area, these maps show the area within about 10–15 miles of Trenton.

Map A shows that Trenton, Cranbury, Princeton, the city of Bordentown, and the city of Burlington are projected to have more than 100 new less-skilled jobs per square mile from 1993 to 2000. The other communities, with a few scattered exceptions projected to lose jobs, will have fewer than 100 new jobs per square mile.

Map B displays projected less-skilled job separations for the same period. Trenton and Princeton are projected to have more than 400 separations per square mile. Pennington and Hightstown are projected to have 200–400 less-skilled separations. The remainder of the area is projected to have fewer than 200 less-skilled separations per square mile from 1993 to 2000.

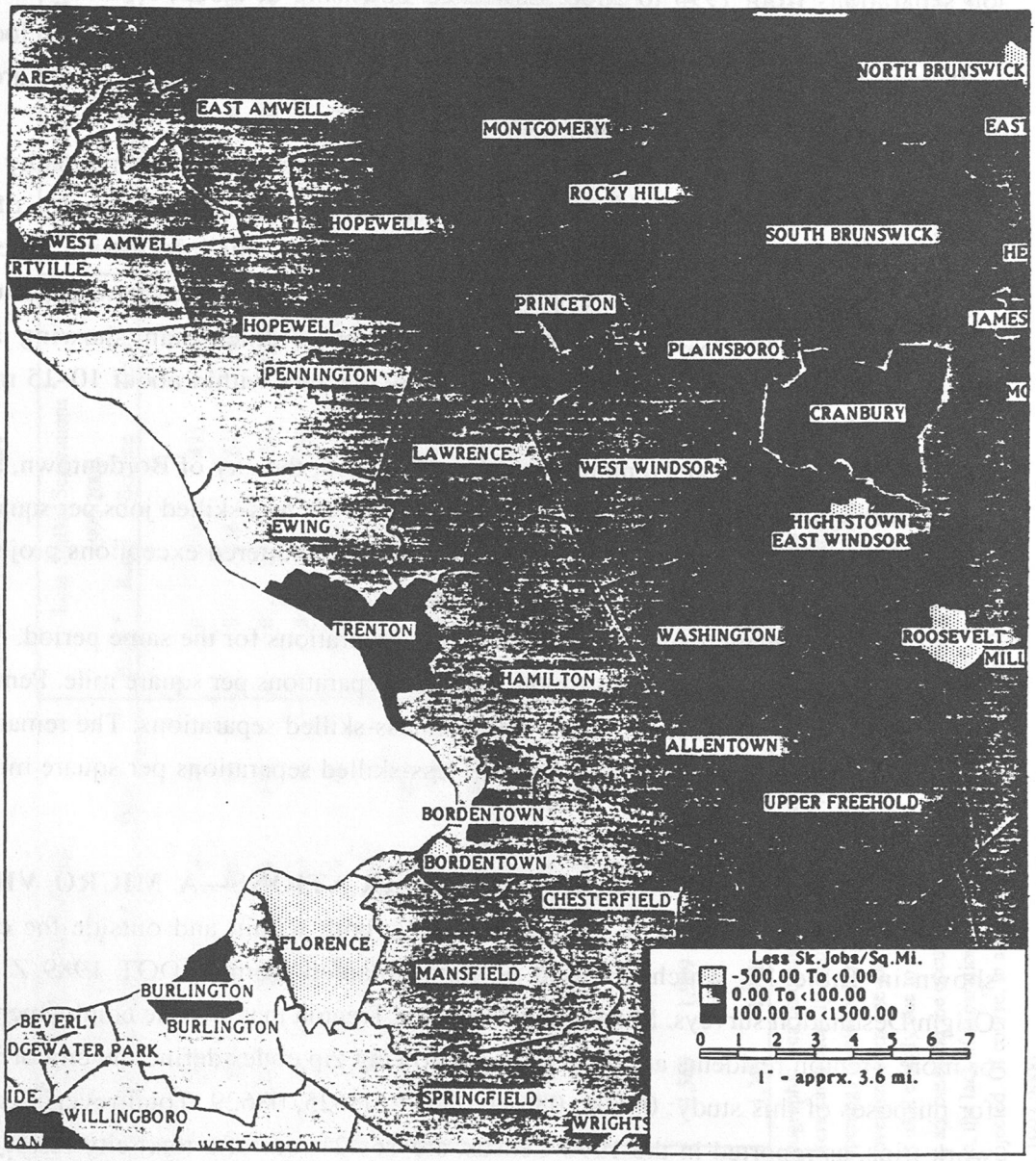
VI. PRESENT AND FUTURE WORK LOCATIONS—A MICRO VIEW

The work locations of Trenton residents, both within and outside the city, are shown in Table 17, which is based on data obtained from NJDOT 1989 Zip Code Origin/Destination surveys. Municipalities outside Trenton that provide employment for 50 or more Trenton residents are shown. The following zip codes define the city of Trenton for purposes of this study: 08608, 08609, 08611, 08625, 08629. Total reverse-commute work trips, as reported in the 1990 Census, are 16,421, out of a total city resident work force of 36,560. Table 17 represents a sample—7,871—which is 48 percent of the 1990 Census total reverse commutes.

The most significant destination for the reverse commute is the neighboring municipality of Ewing. Other locations of importance are Mercerville and Lawrence

MAP A

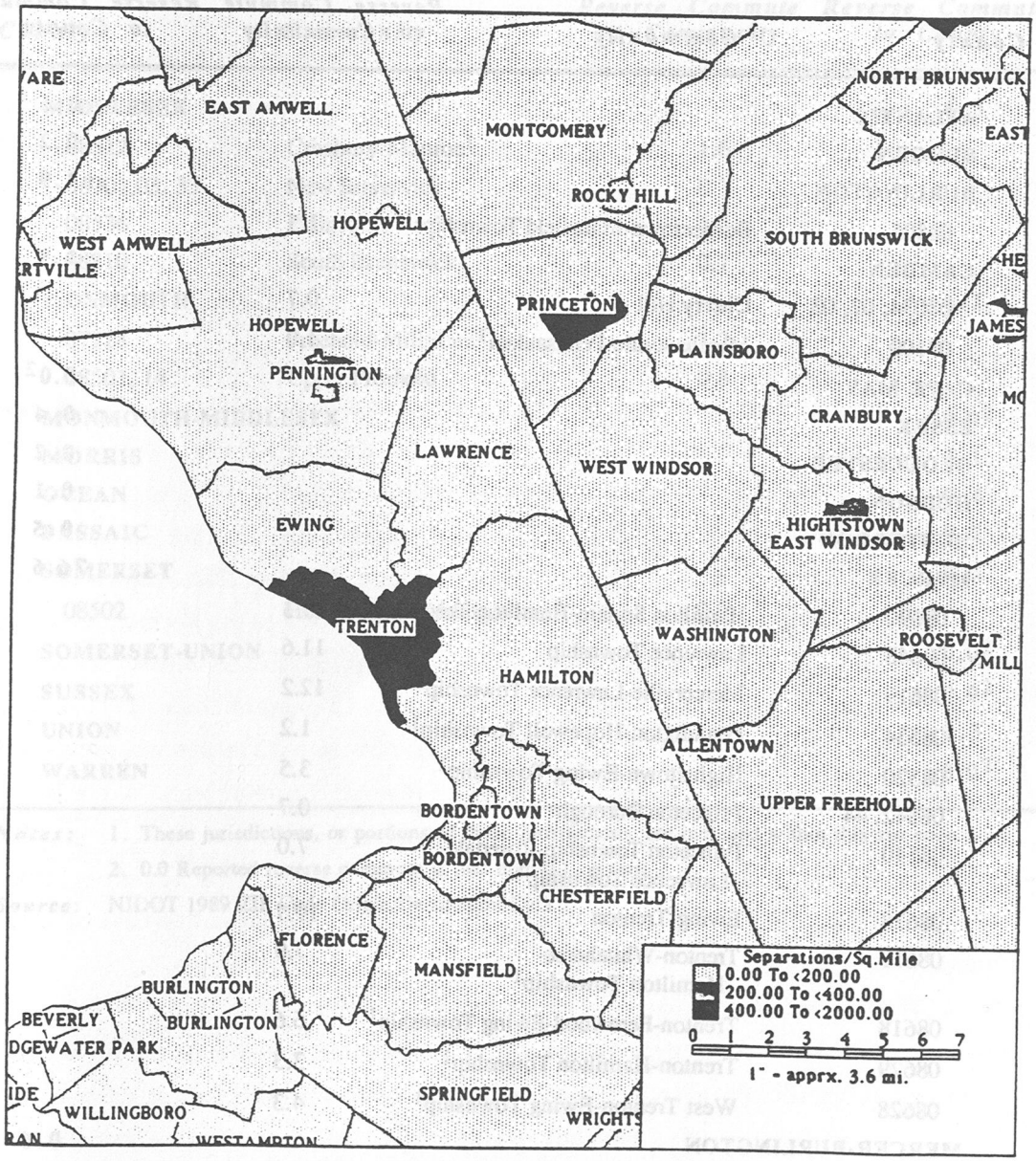
DENSITY OF NEW LESS-SKILLED EMPLOYMENT GROWTH IN THE TRENTON METROPOLITAN AREA, 1993–2000



Source: Projections by Center for Urban Policy Research, Rutgers University, Spring 1993

MAP B

DENSITY OF LESS-SKILLED EMPLOYMENT SEPARATIONS IN THE TRENTON METROPOLITAN AREA, 1993–2000



Source: Projections by Center for Urban Policy Research, Rutgers University, Spring 1993

TABLE 17

WORK LOCATIONS OF TRENTON RESIDENTS IN CITY AND REVERSE COMMUTES 1989

County	*Community*	*Percent Reverse Commute to Community*	*Percent Reverse Commute to County*
ATLANTIC			**0.1**
BERGEN			**0.2**
BURLINGTON			**2.9**
08505	Bordentown-Mansfield Townships[1]	1.5	
CAMDEN			**1.9**
08034, 02, 03	Cherry Hill	0.7	
08109	Merchantville-Pennsauken[1]	1.0	
CAPE MAY			**0.0[2]**
ESSEX			**0.4**
GLOUCESTER			**0.2**
HUDSON			**0.1**
HUNTERDON			**0.5**
MERCER			**76.6**
08690	Hamilton Square-Hamilton Township[1]	5.3	
08648	Lawrence Township	11.6	
08619	Mercerville-Lawrence Township[1]	12.2	
08534	Pennington-Hopewell Township[1]	1.2	
08520	Hightstown-Ewing Township[1]	3.5	
08542, 44	Princeton Borough	0.7	
08540	Princeton Township-Rosedale-Lawrence Township[1]	7.0	
08638	Ewing-Trenton	19.7	
08610	Trenton-Whitehorse-Hamilton Township[1]	7.0	
08618	Trenton-Fernwood-Ewing Township[1]	6.6	
08629	Trenton-Hamilton Township[1]	3.3	
08628	West Trenton-Ewing Township[1]	4.3	
MERCER-BURLINGTON			**0.6**
MERCER-HUNTERDON			**0.4**
MERCER-MONMOUTH			**0.6**

TABLE 17 (continued)

WORK LOCATIONS OF TRENTON RESIDENTS
IN CITY AND REVERSE COMMUTES
1989

County	*Community*	*Percent Reverse Commute to Community*	*Percent Reverse Commute to County*
MIDDLESEX			**6.3**
08512	Cranbury-Monroe[1]	1.6	
08901,03, 33	New Brunswick	0.7	
08536	Plainsboro	1.5	
08810	South Brunswick	0.7	
MONMOUTH			**6.1**
07728	Freehold-Millstone[1]	1.2	
08501, 14	Upper Freehold	0.8	
MONMOUTH-MIDDLESEX			**0.0[2]**
MORRIS			**0.1**
OCEAN			**0.4**
PASSAIC			**0.1**
SOMERSET			**2.1**
08502	Hillsborough-Montgomery[1]	0.9	
SOMERSET-UNION			**0.0[2]**
SUSSEX			**0.0[2]**
UNION			**0.3**
WARREN			**0.0[2]**

Notes: 1. These jurisdictions, or portions of these jurisdictions, are included within this zip code.

2. 0.0 Reported reverse commute is less than 0.1 percent.

Source: NJDOT 1989 ZIP Code Origin/Destination Data.

Township, both of which lie either within or in close proximity to the U.S. Route 1 corridor. Less-significant destinations for the reverse commute are Hamilton Township, Princeton Township, Whitehorse, West Trenton, and Hightstown.

A. City-to-Suburb and In-City Trips in Perspective

Trenton has a parity between within-city and within-state commuters. As indicated in Figure 1, 50 percent of Trenton workers remain within the city for their work trip. The presence of state and county government in Trenton is a major reason for the significant in-city commute. A small number (5 percent) commute to out-of-state locations in both Pennsylvania and New York. The in-state reverse commute is significant, totaling 16,400 trips, or 45 percent of total resident work trips. All figures reflect 1990 Census STF 3 and NJ Transit survey data.

Figure 2 illustrates that the city is the primary focus of transit trips among Trenton residents. About 2,800 Trenton residents utilize transit to work in Trenton, compared to 1,200 residents who use transit to access the entire rest of the county. This indicates the importance of transit for in-city commutes, and the dropoff for reverse commutes. The remainder of transit trips are to New York, Middlesex County, and Essex County. These are primarily by rail and reflect the accessibility of the Northeast Corridor Line.

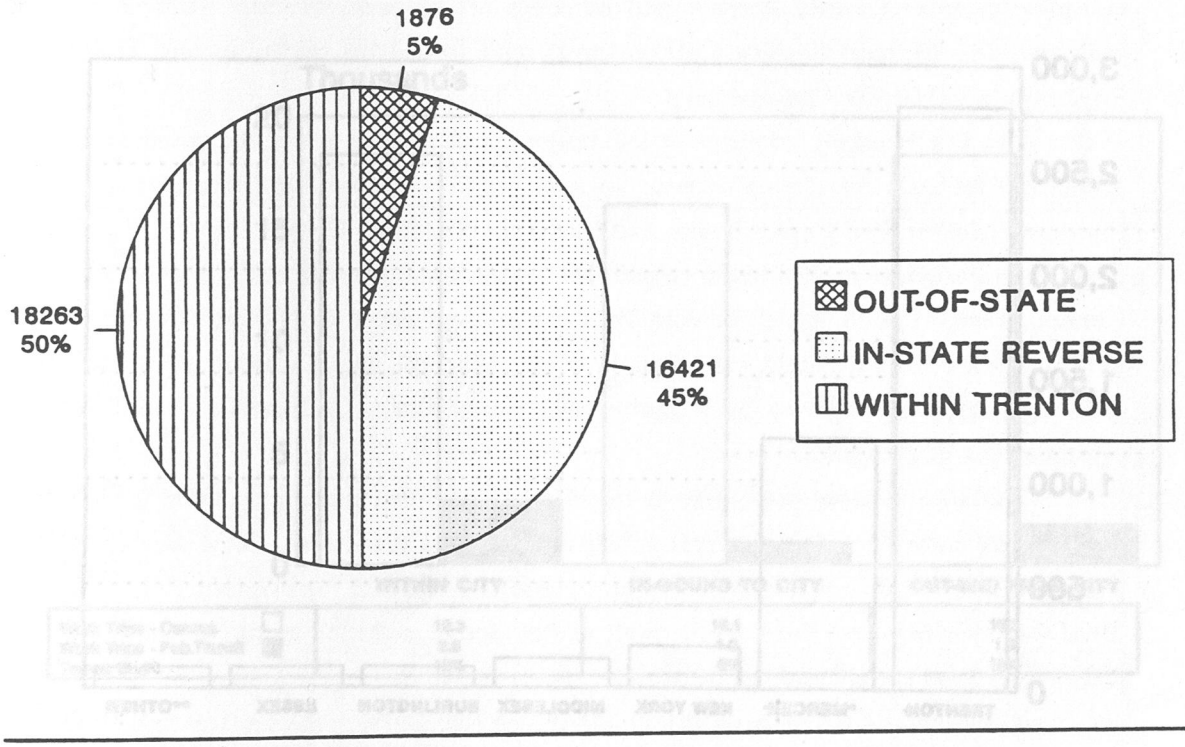
Figure 3 shows that there is a balance among the travel flows between in-city, suburb-to-city, and outbound or reverse work trip travel flows in the Trenton area. Each of these movements has between 16,000 and 18,000 work trips. The within-city trips have the highest transit mode shares, with an approximate 15 percent share. This reflects the good transit coverage within the city and service to downtown Trenton where many of the state and county offices are located. Outbound or reverse-commute trips have a 10 percent transit mode share, which drops to 8 percent without New York trips. This is approximately 50 percent of the transit share for within-city trips. It reflects the more dispersed trip-making pattern and lower densities of employment typical of a reverse commute.

The lowest transit share is found among suburb-to-city trips, which have a 6 percent transit share. Among the reasons for the lower transit share are the higher incomes of suburban residents, greater auto ownership, and the significant amount of free downtown parking provided by state government. Thus, this group remains a large potential market for increased transit ridership, given the volume of trips and levels of service into Trenton from suburban areas.

FIGURE 1

WORKSITE DESTINATIONS OF TRENTON RESIDENTS

(Total Trenton Working Residents—36,560)

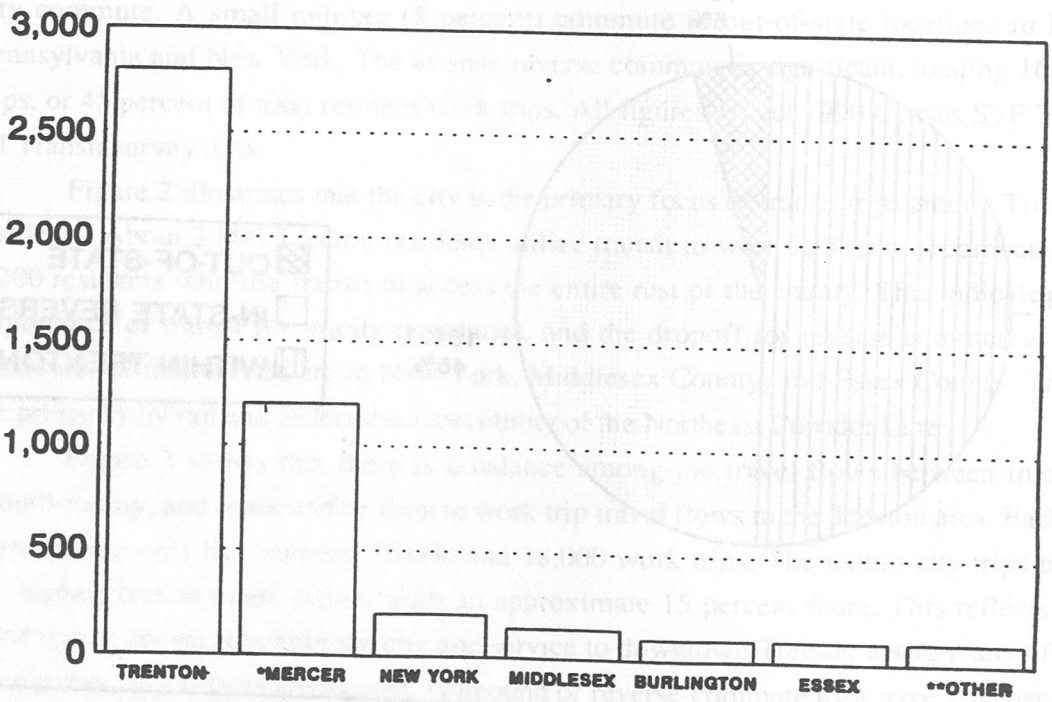


Source: 1990 U.S. Census Data STF-3.

FIGURE 2

WORK TRIP DESTINATIONS OF TRENTON RESIDENTS USING PUBLIC TRANSIT

(Total Volume of Transit Commutes by Trenton Residents—4,600)



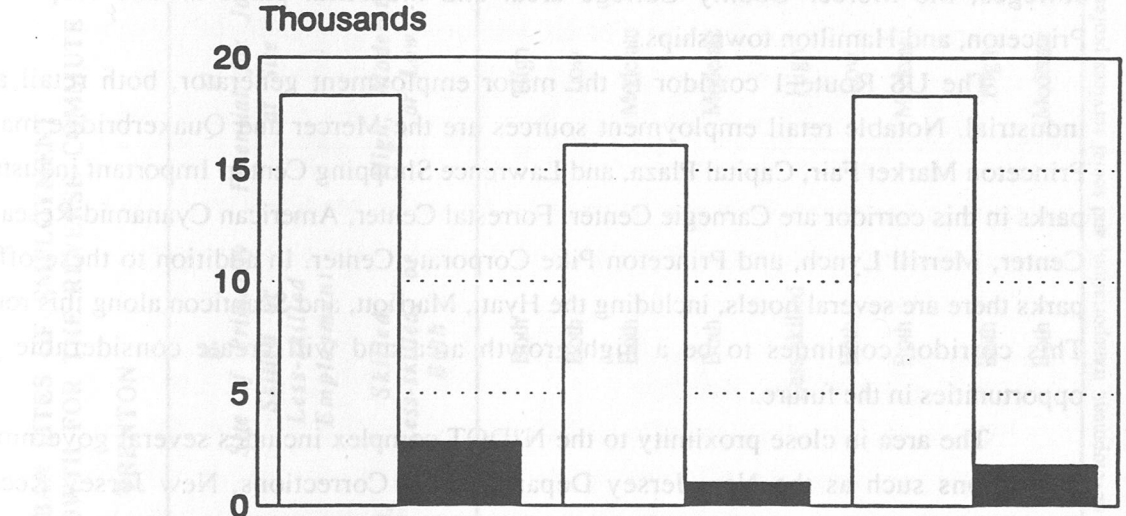
Notes: * Excludes Trenton.
** Includes Hudson, Monmouth, and Union counties.
Totals do not include private carriers and SEPTA.

Source: 1990 NJ TRANSIT Rail, Bus, and PATH Ridership Surveys.

FIGURE 3

TRANSIT SHARE OF WORK TRIPS
TRENTON METROPOLITAN AREA

(1990 Census Data and Public Transit Surveys; NJT Buses, NJT Rail)



	WITHIN CITY	IN-BOUND TO CITY	OUT-BND FROM CITY
Work Trips - Census	18.3	16.1	18.3
Work Trips - Pub.Transit	2.8	1.0	1.8
Transit Share	15%	6%	10%

Notes: All figures are thousands of riders, except transit share, which is percent share.
Transit totals do not include private carriers.

Source: 1990 U.S. Census STF 3 Data; 1990 NJ TRANSIT Ridership Surveys.

B. Suburban Job Locations

Major locations of employment and growth within the labor area are listed in Table 18A. These have been obtained from interviews with professionals in planning, transportation, economic development, job training, and employment placement agencies. Although the information may represent an incomplete list, it essentially parallels the areas of job growth and job separations mentioned earlier. Important concentrations of employment are the US Route 1 corridor, the New Jersey Department of Transportation complex, Mercer County Airport and adjacent office park, Trenton State and Rider colleges, the Mercer County College area, and industrial parks around Hopewell, Princeton, and Hamilton townships.

The US Route 1 corridor is the major employment generator, both retail and industrial. Notable retail employment sources are the Mercer and Quakerbridge malls, Princeton Market Fair, Capital Plaza, and Lawrence Shopping Center. Important industrial parks in this corridor are Carnegie Center, Forrestal Center, American Cyanamid Research Center, Merrill Lynch, and Princeton Pike Corporate Center. In addition to these office parks there are several hotels, including the Hyatt, Marriott, and Scanticon along this route. This corridor continues to be a high-growth area and will create considerable job opportunities in the future.

The area in close proximity to the NJDOT complex includes several government institutions such as the New Jersey Department of Corrections, New Jersey Record Storage Center, Library for the Blind and Handicapped, and New Jersey School for the Deaf. These offices are the sites for both skilled and less-skilled employment but are not likely to expand significantly in the future.

The Mercer County Airport and adjacent office parks in Ewing Township generate moderate on-site employment. Offices located in this area consist of the National Guard, Naval Air Propulsion Center, General Electric, State Police Headquarters and School, New Jersey National Bank, and Mercer County Public Works Department. This is a moderate growth location with more employment potential for those of relatively high skills.

Two regional colleges, Trenton State in Ewing Township and Rider in Lawrenceville Township, are locations of moderate employment. Both are expected to grow somewhat in the future. They generate both skilled and less-skilled employment and, accordingly, offer a reasonable job potential for center city residents. The Mercer County College area is also the location of the County Vocational–Technical school. Both of these institutions will grow in the future. They will provide some moderate employment potential for center city residents. Princeton University and Princeton Medical Center are the major employers in the Princeton area. Although Princeton University is the largest employer in

TABLE 18A

SPECIFIC SUBURBAN SITES OF EMPLOYMENT AND EMPLOYMENT GROWTH FOR THE REVERSE COMMUTE

TRENTON

Corridors and Specific Locations	*A Existing Employment or Growth Node* *Existing, Growth, or Both*	*B Site of Primarily Skilled or Less-skilled Employment* *Skilled, Less-skilled, or Both*	*C Potential for Jobs at Site* *High, Moderate, or Low*	*D Potential for Center City Residents at Site* *High, Moderate, or Low*
Route 1 Corridor	Both	Both	High	High
DOT Complex area	Existing	Both	Low	Low
Mercer County Airport and Adjacent Office Park	Both	Both	Moderate	Low
Trenton State College/ Rider College	Both	Both	Moderate	Moderate
Great Adventure	Both	Less-skilled	High	High
Mercer County College area	Existing	Both	Low	Moderate
Industrial Parks around Hopewell (Pennington)	Existing	Both	Moderate	Low
Princeton	Both	Both	High	Low
Hamilton	Both	Both	Moderate	Moderate

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Mercer County (4,765 employees) and is expected to expand, most of the expansion will be in the high-skill categories, thus offering central city residents minimal potential for employment.

Industrial parks around Hopewell and Pennington consist of the Mobil Technical Center, AT&T Engineering Research Center, Education Testing Service, and Bristol Meyers–Squibb. They are sites of both skilled and less-skilled employment but are not expected to expand in the future. Hamilton Township is the nucleus of significant employment; some of the more important establishments are Hamilton Hospital, Trane Engineering, DeLavel, Building Maintenance Systems, and American Standard.

Parts of the US Route 1 corridor fall within the municipality of Lawrence. Retail employment is generated by Quakerbridge and Mercer malls and the Lawrence Shopping Center. Princeton Pike Corporate Center, New Jersey Motor Vehicles Bureau, Franklin Corner Office Park, Educational Testing Service, and Rider College are the major employers in Lawrence. Princeton University, Princeton Medical Center, and Princeton Shopping Center in Princeton Borough and Township are also employment sites for Trenton residents.

C. In-City Job Locations

Table 18B displays specific city centers of employment and growth and their potential for providing jobs to Trenton residents. The major non-satellite office locations in Trenton are in and around State Street, comprising state government offices as well as several county and city government offices. State Street office complexes include the State House, State House Annex, State Street Square, Taxation Building, Department of Community Affairs, Department of Motor Vehicles, Trenton Tourism Center, the Mary G. Roebling Building, the Capital Center, and City Hall. In the vicinity of the Trenton Railroad Station are relatively newer establishments, such as the Federal Building, Department of Environmental Protection, Station Plaza, and the Carroll Complex. The satellite government complex some distance from the Market Street area comprises the Labor and Industry Building, Health and Agriculture Building, the Justice Complex, and the Mercer County Courthouse. These are the largest employers of both skilled and less-skilled workers, yet they are not expected to expand appreciably.

The next largest employers are the hospitals: St. Francis on Hamilton Avenue, Helene Fuld on Brunswick Avenue, and Mercer Medical on Prospect Avenue. These are undergoing continuous expansion and are centers of skilled and less-skilled employment. They provide ample opportunities for center city residents, primarily in less-skilled occupations. Major industries in Trenton are Hill Refrigeration, Herbert Printing Company,

TABLE 18B

SPECIFIC CITY SITES OF EMPLOYMENT AND EMPLOYMENT GROWTH FOR THE IN-CITY JOURNEY TO WORK

TRENTON

Corridors and Specific Locations	*A Existing Employment or Growth Node*	*B Site of Primarily Skilled or Less-skilled Employment*	*C Potential for Jobs at Site*	*D Potential for Center City Residents at Site*
	Existing, Growth, or Both	*Skilled, Less-skilled, or Both*	*High, Moderate, or Low*	*High, Moderate, or Low*
Downtown				
Cultural amenities	Existing	Both	Moderate	Low
Trenton Commons	Existing	Less-skilled	Moderate	Moderate
Retail				
State Street,	Both	Less-skilled	Moderate	Moderate
Olden Avenue	Existing	Less-skilled	Moderate	Moderate
Hospitals				
St. Francis	Both	Both	High	Moderate
Mercer Medical Center	Both	Both	High	Moderate
Helene Fuld	Both	Both	High	Moderate
County/City/State/ Federal Government				
Downtown Government Offices	Both	Both	High	Low
Satellite Government Complex	Both	Both	High	Low
Colleges/Schools				
Trenton Central High School	Existing	Both	Moderate	Moderate
Mercer County Community College	Existing	Both	Moderate	Moderate
Thomas Edison State College	Existing	Both	Moderate	Moderate
Industrial Parks				
Hill Refrigerators	Existing	Both	Moderate	Moderate
Herbert Printing Co.	Existing	Both	Moderate	Moderate
McCarter Wallis	Existing	Both	Moderate	Moderate

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

and McCarter Wallis. These sites of both skilled and less-skilled employment are not likely to expand. They provide moderate employment for city residents. Other significant employers are PSE&G, the *Trenton Times*, and New Jersey Bell.

In downtown Trenton, retail activity is prevalent on State Street, especially in the Commons area. This is a pedestrian shopping area that includes clothing and shoe stores, as well as fast food establishments. Retail activity on State Street is expected to stabilize, augmented by newly arrived buying power of some state employees. Olden Avenue is a spine wherein heavy commercial activity is found: automobile dealers, automobile services, and supermarkets. This corridor contains significant levels of less-skilled employment, and there is moderate potential for resident employment. The downtown area also has cultural amenities, such as the State Museum, Planetarium, State Library, and State Museum Auditorium. These are sites of existing employment, some of which is less-skilled; they are not sites that will grow significantly in the future.

Colleges and schools within the city include Thomas Edison State College, Mercer County Community College, and Trenton Central High School. They provide skilled and less-skilled employment to significant numbers of residents, but are not expected to grow.

VII. THE EXISTING TRANSPORTATION NETWORK

Trenton's advantageous location, midway between New York and Philadelphia, boosted its importance as a hub for goods and people. It is well served by a network of highways and roads, as well as three train lines. The section below describes, for the region and then for the city, the major roads, rail, and transit bus service, and alternatives to rail and bus service. Transportation problems with regard to these services will be viewed in the next section.

A. Roadways—City to Suburb

1. Major Arterials

Major regional highways serving the Trenton area are listed in Table 19A, and displayed on Map C. I-295, runs north-south on the eastern and southern sides of the city. Together with I-195 and I-95, it forms a beltway around the city of Trenton. Although parts are under construction, it will eventually be linked to downtown Trenton via US Route 129/29.

Regional highways serving the city of Trenton include the New Jersey Turnpike, US Route 1, US Route 130, US Route 206, Route 29, Route 31 and Route 33. The New

TABLE 19A

THE EXISTING TRANSPORTATION NETWORK—ROADWAYS
CITY TO SUBURB

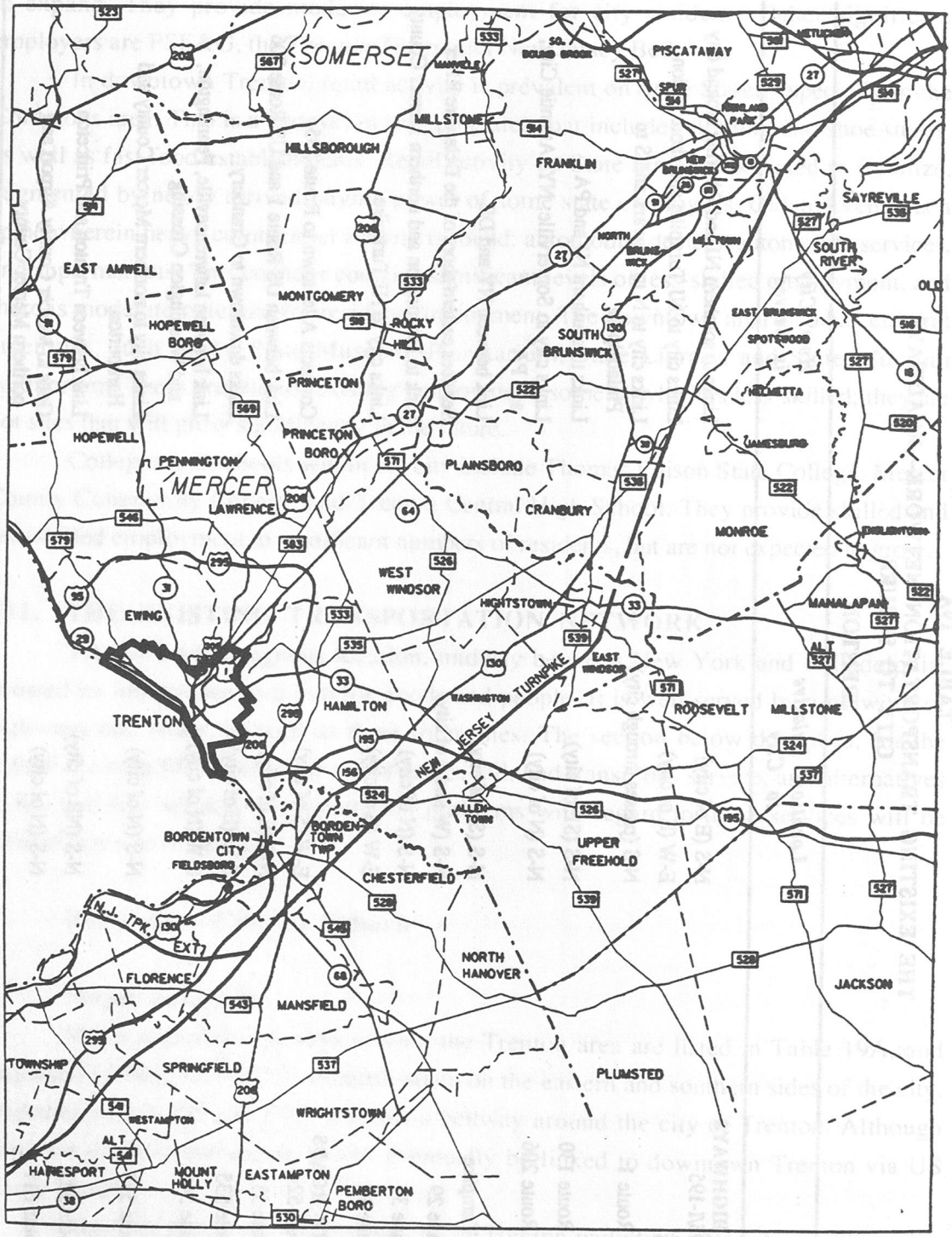
TRENTON

	Location Relative to City	*How City is Served*
STATE HIGHWAYS		
I-295/I-195	N-S (E of city)	Links to southern NJ and PA; ring around city
I-95	E-W (E of city)	Links city to NJ Turnpike and shore region
US Route 1	N-S (passes through city)	Links city to N to Newark and S to Philadelphia
US Route 130	N-S (SE of city)	Links to southern NJ and PA
US Route 206	N-S (N of city)	Links city to Somerville; NY; Atlantic City; and PA
NJ Turnpike	N-S (SE of city)	Link between NY and DE
Route 29	N-S (W and S of city)	Services eastern shore of the Delaware River
Route 31	N-S (N of city)	Link to Flemington and northern Mercer County
Route 33	E-W (E of city)	Links city to NJ Turnpike
COUNTY ROADS		
Route 524	E-W (S of city)	Connects Allentown to Route 535
Route 533	N-S (E of city)	Link between US Route 1 and US Route 206
Route 535	E-W (E of city)	Links downtown to Cranbury
Route 546	E-W (N of city)	Link between Lawrenceville, Pennington, and Washington Crossing
Route 579	N-S (N of city)	Links city to northern Mercer County and Harbourton
Route 583	N-S (NE of city)	Link between Trenton and Princeton
Route 611	N-S (N of city)	Goes to Mercer County Airport and northern Mercer County

Source: CUPR, 1992.

MAP C

REGIONAL ROAD SYSTEM IN THE VICINITY OF TRENTON



Source: New Jersey Department of Transportation

Jersey Turnpike runs in a north-south direction, sixteen miles southeast of the city and links Trenton to New York, northern New Jersey and Delaware.

US Route 1, the historic national north-south highway that originates in Maine and ends in Florida, runs through the heart of the city and across the Delaware River into Pennsylvania. While for the most part it has been replaced by I-95 and the New Jersey Turnpike, it remains a national goods mover and links Trenton to New York and the north, and to Philadelphia and the south. It is also known as the Trenton Freeway between Morrisville, Pennsylvania, and Lawrence Township, New Jersey, due to its limited access on that section.

US Route 130 is a north-south road located southeast of Trenton that links the city to southern New Jersey and Pennsylvania.

US Route 206 links Trenton to upstate New York and southeastern Pennsylvania.

Route 29 runs along the eastern shore of the Delaware River west and south of Trenton. There are bicycle lanes along this route. When it is eventually connected to I-195 as a ring road, its importance will increase.

Route 31 is a north-south arterial, located north of Trenton. It links Trenton to northern Mercer county and to Pennington and Flemington.

Running east of the city is Route 33, also called Greenwood Avenue, which connects Trenton to the New Jersey Turnpike.

2. County Roads

Mercer County is served by a network of county roads, the major ones being Route 524, Route 533, Route 535, Route 546, Route 579, Route 583 and Route 611. Route 524 is an east-west arterial located to the south of the city. It connects Allentown to Route 533 and US Route 206.

Running in a north-south direction and to the east of Trenton is Route 533. It is one of several county roads that link US Route 1 and US Route 206.

Another county road east of the city is Route 535. It runs in an east-west direction, connecting downtown Trenton to Cranbury.

North of the city is found Route 546, linking Lawrenceville, Pennington and Washington Crossing. It runs primarily in an east-west direction.

Route 579 is a north-south road linking Trenton to northern Mercer County and to Harbourton.

Another north-south arterial is Route 583. It is located northeast of the city and is an important road connecting Trenton and Princeton.

Route 611 is a north-south road located north of the city. It runs to Mercer County Airport and to northern Mercer County.

B. Roadways—In City—Municipal Streets

The major roads within the city of Trenton are State Street, Olden Avenue, Perry Street, Broad Street, Prospect Street, Princeton Avenue, Brunswick Avenue, Hamilton Avenue, Pennington Avenue, and Clinton Avenue (Table 19B). State Street is the spine running through the central business district and the state office complex.[5] East State Street passes through the center of the city, primarily in a east-west direction, while West State Street runs in a direction parallel to the Delaware River, westerly from the western edge of the central business district. Olden Avenue is a circumferential arterial running north-south in the eastern part of the city.

Prospect Street, Princeton, Brunswick, and Hamilton avenues comprise a system of radial arterials that converge into the downtown. Perry Street and Broad Street are located in the center of the city, running east-west and north-south, respectively. Broad Street links Princeton Avenue to US Route 206, while Hamilton Avenue links South Clinton Avenue to Route 33. Pennington Avenue runs north-south and is a continuation of Route 31. Clinton Avenue provides a loop for the southeast part of the city.

C. Rail Transit—City to Suburb

Trenton is served by NJ TRANSIT, SEPTA (Southeastern Pennsylvania Transit Authority), and AMTRAK. Information about rail service is shown in Table 20; the routes are displayed on Map D. Approximately 146 trains arrive or leave the Trenton station on weekdays. According to the 1990 Trenton Train Station Profile, 2,782,814 passengers are carried yearly from Trenton. It is the eighth busiest station on the Northeast Corridor AMTRAK line.

The lines serving reverse-commute passengers are NJ TRANSIT's Northeast Corridor Line and SEPTA. NJ TRANSIT operates local trains round-trip from Trenton to New York City, while SEPTA operates trains from Trenton to and from Philadelphia. In this report, New York City, Newark and Philadelphia are excluded from reverse-commute destinations.

Of the total number of passengers riding on NJ TRANSIT for work purposes from Trenton, 60 percent have their final destinations in New York City. Important destinations on this corridor include Princeton Junction, New Brunswick, Edison, Metuchen,

5 "The state office complex" is a collective term for the many state offices in and around State Street in the downtown area.

TABLE 19B

THE EXISTING TRANSPORTATION NETWORK—ROADWAYS IN CITY

TRENTON

	Location Relative to City	*How City is Served*
MUNICIPAL STREETS		
State Street	E-W (center of city)	Major spine between NW city and Olden Avenue
Olden Avenue	N-S (E of city)	Circumferential arterial
Perry Street	E-W (center of city)	Connects Lincoln Chambers with Broad Street and Warren Street
Broad Street	N-S (S and center of city)	Links Princeton Avenue and Route 206
Prospect Street	E-W (W of city)	Links Olden Avenue and State Street radially
Princeton Avenue	E-W (N of city)	Links N. Broad Street radially to Route 583
Brunswick Avenue	E-W (N of city)	Runs radially from Brunswick Circle to intersection of Pennington, Broad, and Princeton
Hamilton Avenue	E-W (SE of city)	Runs from S. Clinton radially to Route 33
Pennington Avenue	N-S (N of city)	Links Route 31 to downtown (Broad St.)
Clinton Avenue	E-W (E and S of city)	Loops SE part of city

Source: CUPR, 1992.

TABLE 20
THE EXISTING TRANSPORTATION NETWORK: RAIL TRANSIT
CITY TO SUBURB

TRENTON

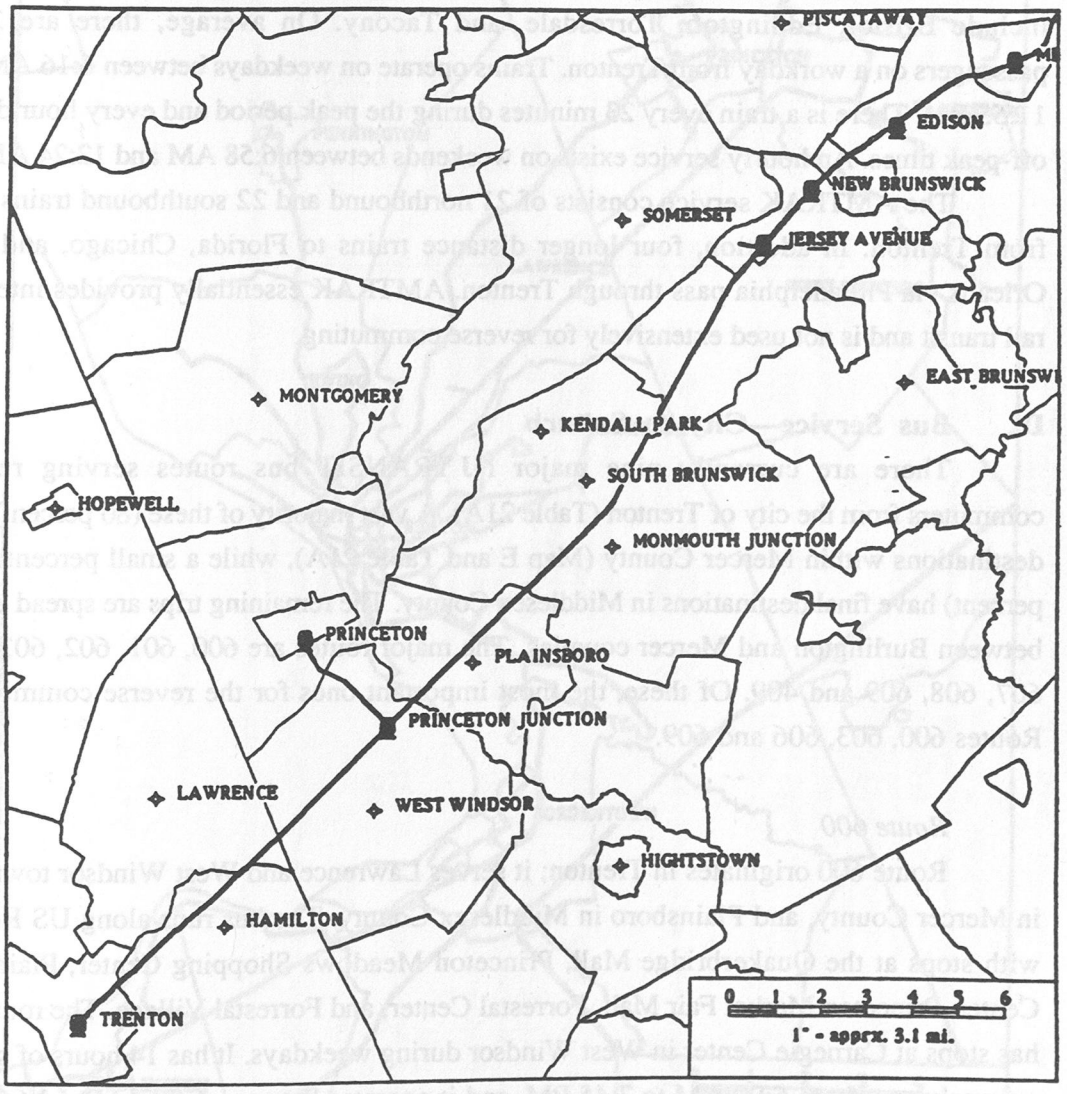
Rail Lines (List)	*Destination Relative to City*	*Number of City Residents Carried Daily (Reverse)*	*Major Employment Markets Served by This Line*	*Times of Service*		*Headway* Peak	/ Off-Peak
NJ TRANSIT (Northeast Corridor)	Princeton Junction, New Brunswick, Newark, New York	4,705	Princeton Junction, Metropark, New Brunswick, Newark, Metuchen, New York	Wkdy Sat Sun	3:50AM-1:08AM 5:30AM-11:30PM 5:30AM-11:30PM	13 min 60 min 60 min	30 min 60 min 60 min
SEPTA	Philadelphia	2,023	Philadelphia and locations in Pennsylvania	Wkdy Sat Sun	6:16AM-11:46PM 6:58AM-1:15AM 6:58AM-1:15AM	23 min 60 min 60 min	60 min 60 min 60 min
AMTRAK	New York, Philadelphia, Washington D.C.	NA	None	NA	NA		

Note: NA = not applicable.

Source : New Jersey Transit.

MAP D

NJ TRANSIT COMMUTER RAIL LINES IN THE TRENTON METROPOLITAN AREA



Source: NJ TRANSIT

Metropark, and Newark. Trains run from 3:50 AM to 1:08 AM on weekdays and 5:30 AM to 2:20 AM on Saturdays and Sundays. On weekdays, the peak-hour service (headway) is 13 minutes, while off-peak service is 30 minutes. An hourly service exists throughout the day on Saturdays and Sundays. The service is adequate for reverse commuters. Rail service also exists between Princeton Junction and Princeton Borough.

SEPTA carries passengers primarily to Philadelphia. Some destinations en route include Bristol, Eddington, Torresdale, and Tacony. On average, there are 2,023 passengers on a workday from Trenton. Trains operate on weekdays between 6:16 AM and 11:55 PM. There is a train every 23 minutes during the peak period and every hour during off-peak times. An hourly service exists on weekends between 6:58 AM and 12:24 AM.

The AMTRAK service consists of 21 northbound and 22 southbound trains daily from Trenton. In addition, four longer distance trains to Florida, Chicago, and New Orleans via Philadelphia pass through Trenton. AMTRAK essentially provides interstate rail transit and is not used extensively for reverse commuting.

D. Bus Service—City to Suburb

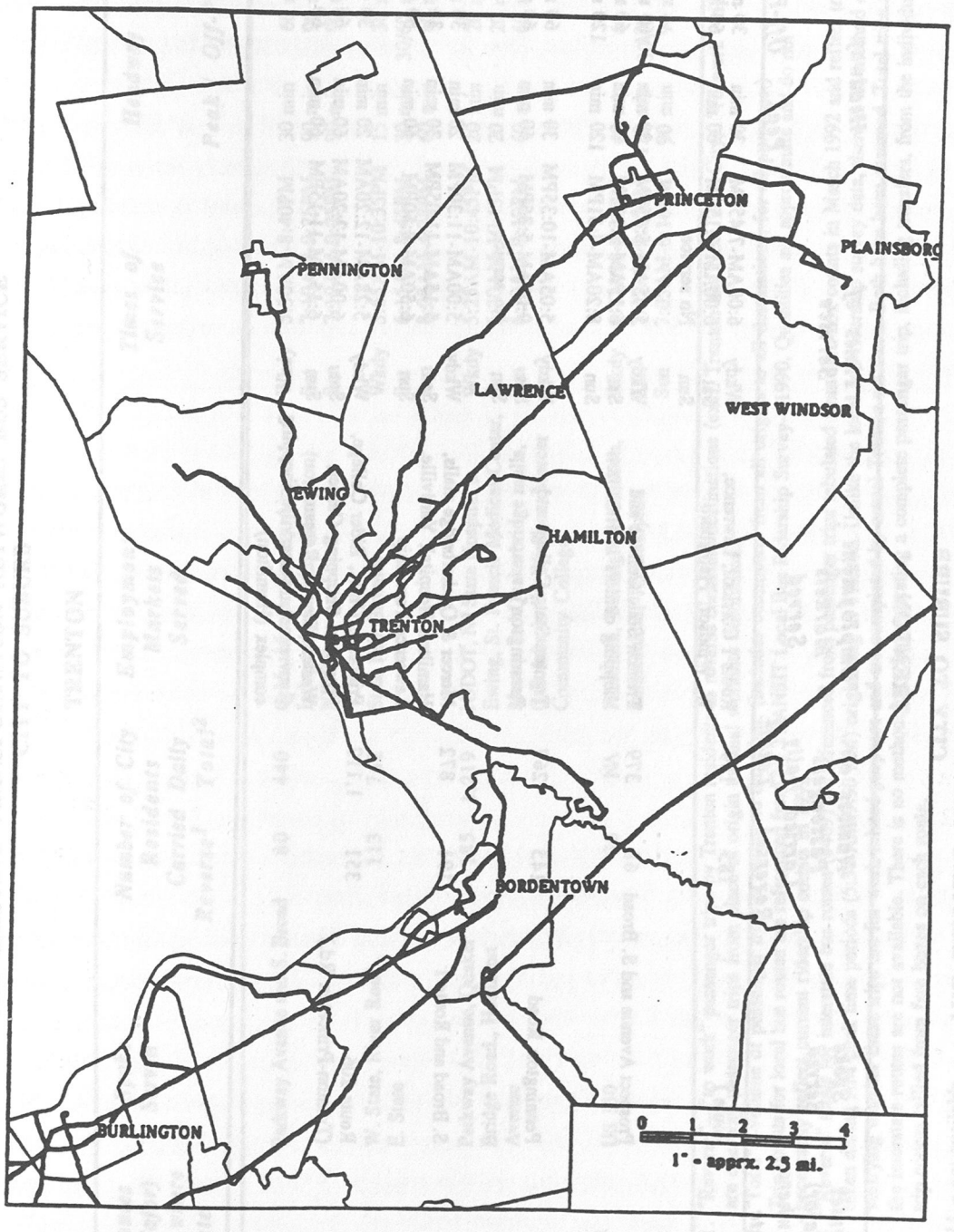
There are currently nine major NJ TRANSIT bus routes serving reverse commuters from the city of Trenton (Table 21A). A vast majority of these (80 percent) have destinations within Mercer County (Map E and Table 21A), while a small percentage (9 percent) have final destinations in Middlesex County. The remaining trips are spread evenly between Burlington and Mercer counties. The major routes are 600, 601, 602, 603, 606, 607, 608, 609 and 409. Of these, the most important ones for the reverse commute are Routes 600, 603, 606 and 609.

Route 600

Route 600 originates in Trenton; it serves Lawrence and West Windsor townships in Mercer County, and Plainsboro in Middlesex County. The bus runs along US Route 1 with stops at the Quakerbridge Mall, Princeton Meadows Shopping Center, Plainsboro Center, Princeton Market Fair Mall, Forrestal Center, and Forrestal Village. The route also has stops at Carnegie Center in West Windsor during weekdays. It has 14 hours of service on weekdays, from 6:00 AM to 7:45 PM, and it operates between 6:00 AM and 6:15 PM on Saturdays. There are 185 riders commuting to work on this route. Alternative service also exists in the US Route 1 Corridor.

MAP E

NJ TRANSIT BUS ROUTES IN THE TRENTON METROPOLITAN AREA



Source: NJ TRANSIT

TABLE 21A

THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE
CITY TO SUBURB

TRENTON

Bus Routes (List Major) Indicate where Private	*Spoke Served*	*Number of Passengers Carried Daily*		*Employment Markets Served*	*Times of Service*		*Headway*	
		Reverse[1]	*Total*[2]				*Peak*	*Off-Peak*
600	Route 1	185	189	Route 1 Corridor, Lawrence, W. Windsor, Plainsboro	Wkdy	6:00AM-7:45PM	30 min	30 min
					Sat	6:00AM-6:15PM	60 min	60 min
					Sun	No service		
601	Prospect Avenue and S. Broad	68	379	Trenton State College and shopping centers in Hamilton	Wkdy	5:45AM-6:45PM	30 min	30/60 min
					Sat	6:15AM-9:15PM	60 min	60 min
					Sun	8:20AM-4:51PM	120 min	120 min
602	Pennington Road	145	267	Trenton State College and Pennington	Wkdy	5:05AM-10:35PM	30 min	60 min
					Sat	9:05AM-5:35PM	60 min	60 min
					Sun	No service		
603	S. Broad and Route 1	191	872	Mercer & Quakerbridge malls, Hamilton Hospital, Yardville, Lawrence Township	Wkdy	5:00AM-11:30PM	20 min	30 min
					Sat	5:15AM-11:05PM	30 min	30 min
					Sun	6:50AM-8:50PM	60 min	60 min
606	Route 206 (Trenton-Princeton Rd.)	351	1,112	Princeton Univ., Rider College, Princeton Shopping Center, Western Electric Research (Lawrence), Mercerville shopping complex (Hamilton)	Wkdy	5:28AM-12:20AM	20 min	30 min
					Sat	6:00AM-12:20AM	60 min	60 min
					Sun	6:15AM-11:15PM	60 min	60 min

TABLE 21A (continued)

THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE CITY TO SUBURB

TRENTON

Bus Routes (List Major) Indicate where Private	*Spoke Served*	*Number of City Residents Carried Daily*		*Employment Markets Served*	*Times of Service*		*Headway*	
		Reverse[1]	*Total*[2]				*Peak*	*/ Off-Peak*
607	Parkway Avenue and S. Broad	80	440	G.M., Mercer County Airport, Independence Mall (Hamilton) NJDOT	Wkdy Sat Sun	5:30AM-8:40PM 7:10AM-9:25PM 7:10AM-9:25PM	30 min 90 min 90 min	60 min 90 min 90 min
608	W. State, River Road., E. State	113	762	State Fair Grounds	Wkdy Sat Sun	5:55AM-10:35PM 6:15AM-8:45PM 8:08AM-4:38PM	15 min 30 min 60 min	30 min 30/60 min 60 min
609	Parkway Avenue, Quaker Bridge Road., Hamilton Avenue	185	1,219	NJDOT, NJ State Hospital in Ewing, St. Francis Medical Center, Mercer and Quakerbridge malls, G.E. labs in W. Windsor, Mercer Community College	Wkdy Sat Sun	5:25AM-10:45PM 5:30AM-10:45PM 6:30AM-9:10PM	20 min 20 min 60 min	20 min 20 min 60 min
409[3]	US 130	36	NA	Hamilton, Burlington, Camden, Pennsauken, Philadelphia	Wkdy Sat Sun	6:17AM-8:35PM 7:45AM-8:55PM 7:05AM-6:16PM	60 min 120 min 90 min	60 min 120 min 90 min

Notes:
1. "Reverse"—"to work" passenger trips by Trenton residents to reverse commute destinations (excl. Trenton and New York City). "To work" trips are one-way passenger trips from place of origin to final worksite destination.
2. "Total"—volume of passenger trips in outbound direction. (Includes commuters from all origins to all destinations, for all purposes.) Trip counts for local bus routes are referenced from NJ TRANSIT Local Bus Ridership Survey—1990. Quantities are approximate and do not necessarily reflect current ridership counts in 1992.
3. "Reverse" totals for interstate bus routes (#409) are referenced from passenger trips tabulated from fare-box counts in March 1992 and reflect trips taken during AM peak time periods (5:30 AM-9:30 AM) originating in Trenton. Unlike the local bus ridership survey data, there is no method of verifying whether these trips are for work-related purposes and are completed by actual Trenton residents. Both have been assumed. Total trips for the interstate routes are not available. There is no methodology for separating a complete passenger trip, including transfers, from the individual trip counts tallied from fare boxes on each route.

NA = not available.

Source: New Jersey Transit.

Route 601

Destinations served by Route 601 are Ewing Township north of Trenton and Hamilton Township east of Trenton. The major spokes traversed are Prospect Street in Ewing and Arena Drive in Hamilton. Prominent stops include the Briarwood Shopping Center and K-Mart Department Store in Hamilton, and Trenton State College in Ewing. It operates from 5:45 AM to 6:45 PM weekdays, from 6:15 AM to 9:15 PM on Saturdays, and from 8:20 AM to 4:51 PM on Sundays. Peak-hour headway on weekdays is 30 minutes; the off-peak headway varies between 30 minutes and one hour; Saturday headways are one hour, while Sunday headways are two hours. Although service from Trenton State College on weekdays ends at 6:45 PM, alternative bus service from Trenton State College exists. Of 379 total trips made, 68 are reported as reverse-commute work trips by Trenton residents.

Route 602

Originating in Trenton and serving destinations in Ewing and Pennington is Route 602. The route is located primarily on Pennington Road (Route 31). Prominent stops on this route are Trenton State College and Delaware Avenue in Pennington. Weekday service is from 5:05 AM to 10:35 PM; Saturday service starts at 9:05 AM and ends at 5:35 PM. The peak-hour headway on weekdays is 30 minutes, with hourly service at off-peak times. The total ridership on this route is 267 of which 145 are reverse commutes by Trenton residents for work purposes.

Route 603

Route 603 serves Hamilton and Lawrence Townships, travelling on South Broad Street in Hamilton and Brunswick Avenue/US Route 1 in Lawrence Township. Employment markets served by Route 603 include Mercer and Quakerbridge malls, Hamilton Hospital, the Groveville and Yardville areas in Hamilton, and a single limited run to the Princeton Corporate Center during peak hours. It has a 19-hour service (5:00 AM to 11:30 PM) on weekdays, running every 20 minutes during peak and 30 minutes during off-peak hours. Saturday service from 5:15 AM to 11:05 PM is nearly 18 hours, with a 30-minute headways throughout the day. There is hourly service on Sundays between 6:50 AM and 8:50 PM. The total ridership on this route is 872 of whom 191 passengers are Trenton residents who reverse commute for work purposes. Hamilton is the major destination on this route.

Route 606

Route 606 serves the Trenton-Princeton corridor along US Route 206 and also serves Hamilton and Lawrence townships. It is the the longest route in Mercer County. Prominent stops include Rider College, the Western Electric Research Facility in Lawrence, Princeton University, Princeton Shopping Center, and Mercerville Shopping Center. Nineteen-hour service, from 5:28 AM to 12:20 AM, with 20-minute headways during peak and 30 minutes during off-peak hours, characterizes weekday coverage. Saturday and Sunday service averages 18 and 17 hours, beginning at 6:00 AM and 6:15 AM, respectively. Route 606 has a substantial total ridership of 1,112 of which 351 are reverse-commute work trips by Trenton residents.

Route 607

Route 607 serves locations in Hamilton and areas of Ewing, travelling on Parkway Avenue in Ewing and South Broad Street in Hamilton. Prominent work locations on this route are General Motors, the NJDOT offices, Mercer County Airport, and Independence Mall in Hamilton. Weekday service is from 5:30 AM to 8:40 PM, with 30-minute and one-hour peak and off-peak service. On weekends Route 607 operates for 14 hours from 7:10 AM with 90-minute headways. Survey information reveals a total ridership of of 440, of which 80 are for reverse commute purposes by Trenton residents.

Route 608

Route 608 serves the West Trenton area of Ewing, the city of Trenton, and the State Fairgrounds area of Hamilton. Route 608 travels on West State Street and River Road in Ewing and East State Street in Hamilton. The service is adequate, between 5:55 AM to 10:35 PM on weekdays. Headways vary between 15 minutes at peak and 30 minutes at off-peak hours. Saturdays it operates from 6:15 AM to 8:45 PM, with 30–60 minute headways. Sundays it operates from 8:08 AM to 4:38 PM with one hour headways. It has a reverse-commute ridership by Trenton residents of 113 of its 762 total riders.

Route 609

Route 609 is the most important reverse-commute route. The route is located primarily on Parkway Avenue in Ewing, Hamilton Avenue and Mercerville Road in Hamilton, and Quaker Bridge Road in Lawrence Township. Major employment centers served are NJDOT, the New Jersey State Hospital in Ewing, St. Francis Medical Center, Mercer and Quakerbridge malls, Mercer Community College, and General Electric Laboratories in West Windsor. It has 20-minute peak and off-peak service on weekdays between 5:25 AM and 10:45 PM. On Saturdays and Sundays, it operates for 17 and 15

hours, with 20-minute and one-hour headways, respectively. It has a significant total ridership of 1,219, of which 185 represent reverse trips by Trenton residents.

Route 409

The only route from Trenton southwest in Mercer County to Pennsylvania is Route 409. It runs primarily along US Route 130, serving Hamilton, Burlington, Willingboro, Camden, and Pennsauken, with a final destination in Philadelphia. On weekdays, it has hourly service from 6:17 AM, while the last bus leaving Philadelphia that terminates in Trenton is at 8:35 PM. It has 15 hours of service with two-hour headways on Saturdays, and 13 hours of service with 90-minute headways on Sundays.

E. Bus Service—In City

The bus routes that serve the city of Trenton exclusively are Route 604 and Route 611. The other routes are essentially regional routes that pass through the city. They include Route 600, 601, 602, 603, 606, 607, 608, and 609. All of these routes are listed in Table 21B. The most important of them are Routes 603, 606, 608, and 609.

Route 604

Route 604 is primarily confined within the city of Trenton, originating at the Trenton Rail Station. The final destination at Royal Engineering is on the northern city limits of Trenton where it abuts Hamilton Township. Major employment and transit centers served by the route include the Labor and Industry Building, the Justice Complex, Royal Engineering, and the Trenton Rail Station. It has 12 hours of service (6:25 AM to 5:55 PM) on weekdays, with a 30-minute headway during peak and 60 minutes during off-peak. There is no weekend service. Of the 204 "to work" commuters served by the route, a minimal amount of reverse commutes were reported (27), with destinations split between Ewing (73 percent) and Princeton (27 percent), all requiring a subsequent transfer.

Route 611

Three different routes, i.e., Route A, Route B, and the Lunchtime Route comprise Route 611. Route A originates at the Perry Street lot and goes through the Trenton Freeway, Stockton Street, East State Street, Clinton Avenue, and Perry Street. Employment centers on this route are the Division of Motor Vehicles and Department of Environmental Protection and Energy Buildings, as well as the Station Plaza Complex. The Route B bus serves the state government offices around Warren and Broad streets, Capital Center, and returns to the Perry Street lot. The Lunchtime Route links the state offices

TABLE 21B

THE EXISTING TRANSPORTATION NETWORK: BUS SERVICE (WITHIN CITY ROUTES) IN CITY

TRENTON

Bus Routes (List Major) Indicate where Private	*Avenue or Street Served*	*Number of City Passengers Carried Daily*[1] *In-City*[2]	*Total*[3]	*Employment Markets Served*	*Times of Service*		*Headway*
604	Trenton Railroad Station, North Clinton Avenue	27	204	Royal Engineering, Justice Complex, Labor and Ind. Bldg., Offices around Trenton Rail Station	Wkdy Sat Sun	6:25AM-5:55PM no service no service	30/60 min
611	Warren St., Broad St., State St., N. Clinton Avenue, Perry St.	NA	NA	State offices, DMV, DEP, Station Plaza	Lunch A Route B Route (weekday peak and lunch hour service only)	11:30AM-1:30PM 7:30AM-5:45PM 7:30AM-5:40PM	20 min 20 min 20 min
600	Perry St., Trenton freeway (US 1)	42	46	State offices	SEE TABLE 21A		
601	Prospect Ave., State St., Warren St., Montgomery St., S. Clinton Avenue	247	532	Trenton Station Plaza, State offices	SEE TABLE 21A		
602	Pennington Ave., Warren St., Front St., Broad St.	68	167	State offices	SEE TABLE 21A		
603	Brunswick Ave., Princeton Ave., Warren St., Broad St.	500	791	State offices, Helene Fuld	SEE TABLE 21A		
606	Princeton Ave., Calhoun St., State St., Warren, Greenwood Ave.	465	928	State offices, Station Plaza, Trenton High School	SEE TABLE 21A		
607	Parkside Ave., Pennington Ave., Broad St.	218	585	State offices, Mercer County Courthouse, Mercer County Admn.Bldg.	SEE TABLE 21A		
608	Sullivan Way, State St., Warren St., Front St.	579	1,343	N.J. State Hospital, Station Plaza State offices	SEE TABLE 21A		
609	Stuyvesant Ave., Prospect St., State St., S. Clinton Ave., Hamilton Ave.	551	1,532	N.J. State Hospital, Mercer Medical, State offices, St. Francis	SEE TABLE 21A		

Notes: 1. Trips counts referenced from NJ TRANSIT Local Bus Ridership Survey—1990. Quantities are approximate and do not necessarily reflect current ridership counts in 1992.
2. "In-City"—one way "To work" passenger trips by Trenton residents to destinations within Trenton.
3. "Total"—total volume of passenger trips boarding and deboarding within city limits. (Includes commuters from all origins to all destinations, for all purposes.)
NA = not available.

Source: New Jersey Transit.

around Warren and Broad streets and the Trenton Commons to the Trenton Station. It runs along Front Street, Armory Drive, East State Street, and Clinton Avenue, terminating at the Perry Street lot. All these routes operate only on weekdays, at intervals of 20 minutes. The Lunchtime Route is available only between 11:30 AM and 1:30 PM. Route A and Route B buses both operate during peak hours only starting at 7:30 AM and stopping at 5:45 PM.

Route 600

The Route 600 bus has limited stops within the city serving primarily the state offices complex. Major avenues on its route are Perry Street and Trenton Freeway (US Route 1). Total passenger trips amount to 46 within the city, of which 42 are by Trenton residents for work purposes.

Route 601

Route 601 essentially links Ewing, Trenton, and Hamilton. In Trenton, it passes through Prospect Avenue, State Street, Warren Street, and Montgomery Avenue, and South Clinton Avenue. It has a moderate daily passenger trip count of 532, out of which 247 are by Trenton residents and are work related. Notable employment centers are state offices at Warren Street, and Broad Street, and Trenton Station Plaza.

Route 602

Connecting the downtown state offices complex to Pennington in Mercer County is Route 602. It traverses Warren Street, Front Street, Broad Street, and Pennington Avenue. Daily passenger trips amount to 167 of which 68 trips are by Trenton residents for work purposes.

Route 603

Route 603 serves downtown state offices (the state offices complex) and Helene Fuld Hospital and runs along Brunswick Avenue, Princeton Avenue, Warren Street, and Broad Street. Total passenger trips amount to 791, of which 500 are by Trenton residents for work purposes.

Route 606

Route 606 runs along State and Warren streets in the downtown and then through Greenwood Avenue, Calhoun Street, and Princeton Avenue. It serves the Trenton Station area, the state offices complex, and Trenton High School. Total passenger trips amount to 928; trips by Trenton residents work purposes are 465.

Route 607

Moving along Parkside Avenue, Pennington Avenue, and Broad Street are buses on Route 607. This route has a modest passenger trip count of 585, of which 218 trips are by Trenton residents for work purposes. It links the state offices, Mercer County Courthouse, and Mercer County Administration Building.

Route 608

Route 608 serves downtown state government offices along Sullivan Way and State Street. This route has significant in-city work-related passenger trips by Trenton residents (579). Employment centers served are the New Jersey State Hospital and Station Plaza.

Route 609

The most popular route in Trenton is Route 609, with the maximum daily ridership of 1,532 of which 551 are by Trenton residents fro work purposes. The route serves major hospitals such as Mercer Medical Center, St. Francis, and the New Jersey State Hospital. Streets traversed on this route are Stuyvesant Avenue, Prospect Street, State Street, South Clinton Avenue, and Hamilton Avenue.

F. Alternatives to Rail and Bus—City to Suburb

Alternatives to bus and rail outside the city of Trenton are shown in Table 22A. Shuttle bus service is operated by the Greater Princeton TMA from Princeton Junction to various employment centers on US Route 1, connecting with NJ TRANSIT trains on the Northeast Corridor Line. These buses carry workers to Carnegie Center, Forrestal Village, and Merrill Lynch. Approximately 20–25 percent of the riders on these buses are from Trenton.

Six Flags Great Adventure, located near Exit 7A of the New Jersey Turnpike, has a bus service (seasonal) for its employees from Trenton. It picks up the employees from Trenton City Hall at 8:45 AM; the return trip starts from Great Adventure around 7 PM. There is only one roundtrip daily.

The TRADE Bus is a county-run "dial-a-ride" para-transit service that operates within Trenton and also serves the rest of Mercer County. It is a free service for the elderly, disabled, and economically disadvantaged. The service consists of a fleet of 22 vans with a capacity of 15 passengers per van. It operates on demand, and reservations have to be made in advance. It is a door-to-door service that operates five days a week. In addition, it sometimes transports patients to hospitals for dialysis on Saturdays.

TABLE 22A

THE EXISTING TRANSPORTATION NETWORK—ALTERNATIVES TO PUBLIC RAIL AND BUS CITY TO SUBURB

TRENTON

	Who is Served	*Approximate Number*	*Employment Markets Served*	*Times of Service*	*Frequency of Service*
DIAL-A-RIDE, etc.					
Great Princeton TMA shuttles from Princeton Junction	Commuters by rail on NE Corridor	Not available	Carnegie Center/ Forestal Village Merrill Lynch	Not available	Not available
Bus service	Trenton residents	Not available	Great Adventure	8:45AM-7:00PM	once daily

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 22B

THE EXISTING TRANSPORTATION NETWORK—ALTERNATIVES TO PUBLIC RAIL AND BUS IN-CITY

TRENTON

	Who is Served	*Approximate Number*	*Employment Markets Served*	*Times of Service*	*Frequency of Service*
JITNEYS, UNLICENSED CABS, ELDERLY PICK-UP, etc.					
TRADE Bus	Elderly, disabled, economically disadvantaged	NA	Service within Mercer county No employment markets served	4:30AM-7:00PM	No fixed time demand-responsive
Car Pool Informal service	Polish community	Not available	State Street, Hamilton Twp.		No fixed time

Note: NA = Not Applicable

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Taxis provide yet another alternative to public transit. While they do offer flexible service on demand, they are more expensive than public transit, and few Trenton residents are likely to use them for regular commuting to jobs located at distances from the city.

G. Alternatives to Rail and Bus—In City

An informal car pool service exists within the Polish community of North Trenton (Table 22B). This has been operating for several years, the service being kept alive by new members. It transports workers to the downtown government offices complex and to Hamilton Township. No specific information exists about the times or frequency of service. Licensed taxis provide flexible service on demand. However, as noted above, taxis are more expensive than public transit, it is unlikely that many people use them as a regular mode for commuting.

VIII. SYNTHESIS OF JOB GROWTH DATA AND EXISTING PUBLIC TRANSIT NETWORK.

Before turning to the challenges that confront NJ TRANSIT and NJDOT, it is helpful to merge the job opportunities data with the existing bus route network to help illustrate the information collected. Generally, a reasonable commute can be defined as anywhere in the vicinity of a city that can be reached in an hour. Using the job growth data contained in Section VI, municipalities with the greatest job growth potential within the 'reasonable commute' distance were mapped. These locations were then overlaid upon the existing bus route network detailed in Section VII. The criterion used to assess the existence of transit service is whether there is direct service. Table 23 and Map F illustrate where service appears to be rich and point out places where service opportunities exist. This illustration is a useful tool to help visualize the public transit route networks and locations where job growth is projected, helping to define an agenda for further study.

While these are locations where job growth is expected, the true potential for transit demand requires detailed study of specific employment locations, availability of existing services, and the potential for new services.

In addition to the job growth data, the interview data collected generally corroborate that these locations are identified as key for growth. The connection between economic projections and perceptions gathered through interviews allows NJ TRANSIT and NJDOT to work on an agenda for further study that will prove responsive to the specific transportation challenges discussed in the next section.

TABLE 23

MUNICIPALITIES WITH GREATEST JOB GROWTH POTENTIAL IN THE TRENTON AREA

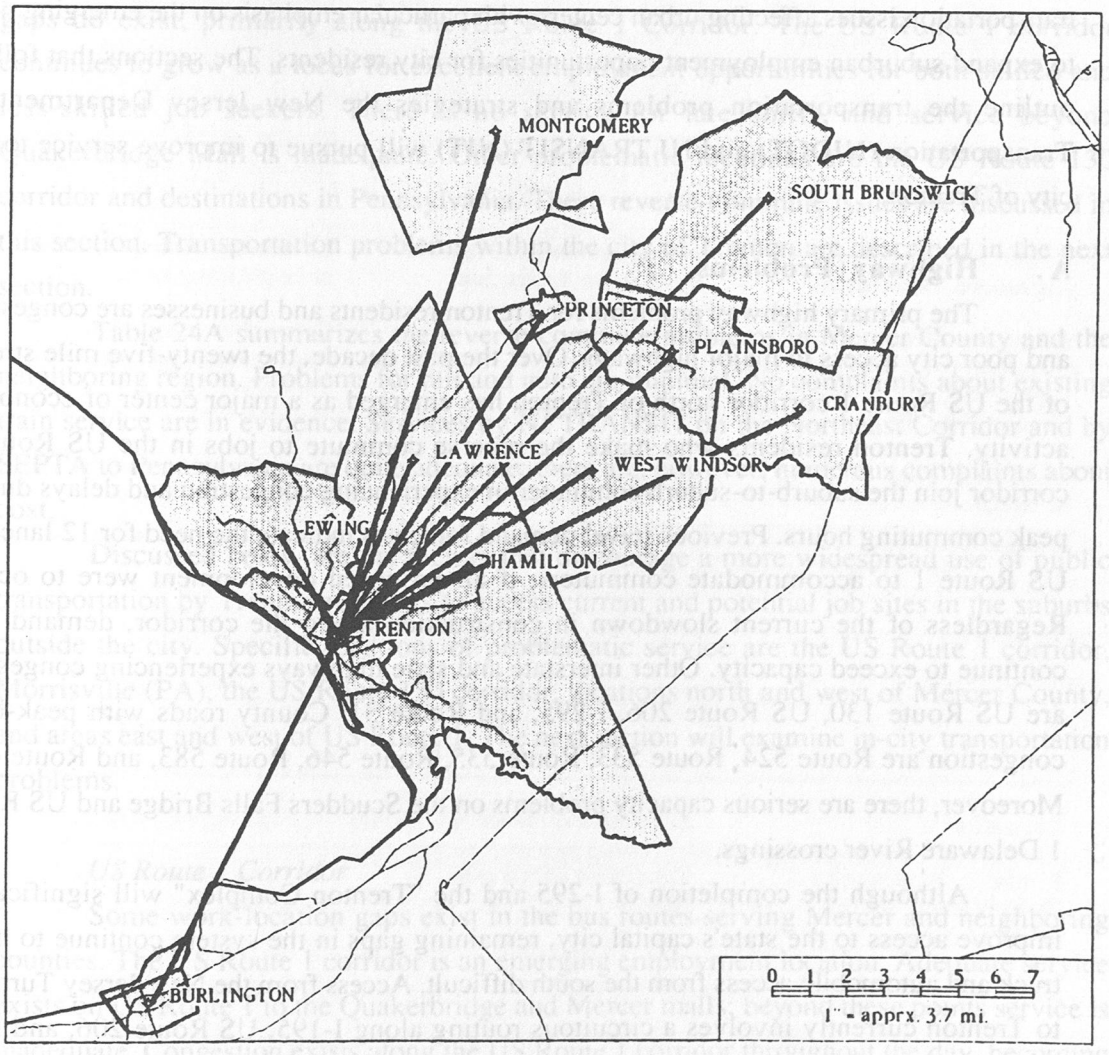
Location	*New Jobs*	*Job Separations*	*Total*	*Transit Service Yes/No*
Lawrence	863	3,528	4,391	Yes
Hamilton	618	3,263	3,881	Yes
Princeton Borough	480	3,251	3,731	Yes
Cranbury	1,512	1,136	2,648	No
West Windsor	722	1,531	2,253	Yes, Limited
Burlington Township	973	1,268	2,241	Yes
Plainsboro	905	1,294	2,199	Yes
Ewing	46	2,071	2,117	Yes
South Brunswick	696	1,249	1,945	No
Montgomery	573	995	1,568	Yes

Note: Rows may not total exactly due to rounding.
Source: CUPR and NJ TRANSIT.

MAP F

EMPLOYMENT DESTINATION DESIRE LINES FOR CENTRAL CITY RESIDENTS IN THE VICINITY OF TRENTON

(Overlaid on Existing Bus Routes)



Source: Projections of Less-Skilled Job Growth 1993–2000 by the Center for Urban Policy Research, Rutgers University, Spring 1993

IX. TRANSPORTATION PROBLEMS—CITY TO SUBURB

Whether reverse commute workers from the city of Trenton use the automobile, bus, or train for their daily commute, they travel on one of the most extensive—and within the city, one of the oldest—road networks in the nation. In order to ensure the economic vitality of New Jersey's cities, the state of New Jersey will continue to put a high priority on investing in the repair and upgrade of these urban systems. This report focuses on transportation issues affecting urban centers with particular emphasis on the emerging need to expand suburban employment opportunities for city residents. The sections that follow outline the transportation problems and strategies the New Jersey Department of Transportation (NJDOT) and NJ TRANSIT (NJT) will pursue to improve service to the city of Trenton.

A. Highway Problems

The primary highway problems for Trenton residents and businesses are congestion and poor city access to major highways. Over the past decade, the twenty-five mile stretch of the US Route 1 corridor north of Trenton has emerged as a major center of economic activity. Trenton residents who make the reverse commute to jobs in the US Route 1 corridor join the suburb-to-suburb commuter in experiencing congestion and delays during peak commuting hours. Previous travel demand forecasts indicate the need for 12 lanes on US Route 1 to accommodate commuters, if all proposed development were to occur. Regardless of the current slowdown in construction along the corridor, demand will continue to exceed capacity. Other interstate and state highways experiencing congestion are US Route 130, US Route 206, I-295, and Route 31. County roads with peak-hour congestion are Route 524, Route 533, Route 535, Route 546, Route 583, and Route 611. Moreover, there are serious capacity problems on the Scudders Falls Bridge and US Route 1 Delaware River crossings.

Although the completion of I-295 and the "Trenton Complex" will significantly improve access to the state's capital city, remaining gaps in the system continue to make truck and automobile access from the south difficult. Access from the New Jersey Turnpike to Trenton currently involves a circuitous routing along I-195, US Route 206, and local streets.

B. Public Transit Problems

Transportation Problems in Perspective

	Service Adequacy	*Service Frequency*	*Service Cost*
City to Suburb	Good	Good–Fair	Good

Most of the work locations outside Trenton are quite well served although some gaps do exist, primarily along the US Route 1 Corridor. The US Route 1 corridor continues to grow as a locus for excellent employment opportunities for both skilled and less-skilled job seekers. There is no service for late shifts, and service beyond Quakerbridge Mall is inadequate. Other problematic locations are the US Route 130 corridor and destinations in Pennsylvania. These reverse-commute issues are discussed in this section. Transportation problems within the city of Trenton are described in the next section.

Table 24A summarizes the reverse-commute problems in Mercer County and the neighboring region. Problems for rail and auto are minimal. No complaints about existing train service are in evidence. Services by NJ TRANSIT on the Northeast Corridor and by SEPTA to Pennsylvania are quite adequate; there are, however, numerous complaints about cost.

Discussed below are the factors that discourage a more widespread use of public transportation by Trenton residents to access current and potential job sites in the suburbs outside the city. Specific locations of problematic service are the US Route 1 corridor, Morrisville (PA), the US Route 130 corridor, locations north and west of Mercer County, and areas east and west of US Route 1. The next section will examine in-city transportation problems.

US Route 1 Corridor

Some work-location gaps exist in the bus routes serving Mercer and neighboring counties. The US Route 1 corridor is an emerging employment location. Adequate service exists on US Route 1 to the Quakerbridge and Mercer malls; beyond these points service is inadequate. Congestion exists along the US Route 1 corridor throughout the day, becoming acute during peak periods.

There is no service on this corridor for late shifts. The last bus on Route 603 from Quakerbridge Mall is at 10:15 PM. There are a number of hotels and industries on US Route 1 that employ city residents for late shifts (12 AM to 8 AM). However, when the E Bus was introduced to provide this late-period coverage it was discontinued due to

TABLE 24A
LOCATIONS OF PROBLEMATICAL TRANSPORTATION SERVICE—CITY TO SUBURB
TRENTON—1992

Location	*Service Problems or Times*	*Population Affected*
Route 1 Corridor Quaker Bridge & Mercer Malls, Plainsboro, Princeton Area	No service for late shifts Poor bus stop location relative to work place congestion Frequency of service beyond Quakerbridge Mall is poor	Reverse commuters and workers on Route 1 and those working on late shifts
Morrisville, PA Morrisville Township	SEPTA #127 hourly service from Trenton Taxis refuse to take fares	Trenton and Morrisville residents commuting in either direction
Route 130 Corridor Hightstown, Bordentown	No bus service from Trenton Taxis refuse to take fares	Reverse commuters from Trenton or neighboring towns
Locations North or West of Mercer County Lamberville, Hunterdon County Sesame Place, PA	No bus service	Commuters from Trenton looking for or holding jobs in these areas
Locations East & West of Route 1	Inadequate service	Reverse commuters from Trenton

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 24B
LOCATIONS OF PROBLEMATICAL TRANSPORTATION SERVICE—IN CITY
TRENTON—1992

Location	*Service Problems or Times*	*Population Affected*
Route 1 within city Barlow Circle Industrial Area	Congestion during peak No exit	In-city workers, industrial workers
Calhoun St. Bridge	Peak-hour delays	Commuters to Trenton
Olden Avenue	Lack of continuous crosstown route	City residents travelling crosstown

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

inadequate ridership. Controversy remains as to whether sufficient demand for such service exists. The current and future needs of the US Route 1 corridor need to be studied; employers in this corridor should be surveyed on this issue. Another complaint about the corridor is that the bus stops are not properly coordinated with employment hubs. Workers often have to walk a significant distance from scheduled stops.

Morrisville

Although SEPTA operates the 127 route on an hourly frequency, interviews reported that Morrisville, Pennsylvania, opposite Trenton and across the Delaware River, is not well served. It has been reported that taxis from Trenton dislike taking fares to Morrisville. Although it is adjacent to Trenton, just across the Delaware River, drivers complain of never being able to pick up a fare on the way back.

US Route 130 Corridor

Another corridor of emerging importance is US Route 130, from Bordentown to Hightstown in East Windsor. At present, there is no service from the city of Trenton in that corridor.

Locations North or West of Mercer County

Interviews also reported that Lambertville in Hunterdon County lacks public transportation services but there is round trip service on weekdays via the NJ TRANSIT 608 route. Locations southwest of Trenton in Pennsylvania are also poorly served. Route 409 provides hourly bus service from Trenton, but it does not reach Sesame Place, Pennsylvania, which is a sizable employment destination.

Locations East and West of US Route 1

Locations east and west of the US Route 1 corridor are not well served. These include Lawrence and West Windsor. The Route 600 bus, which goes along US Route 1 to Plainsboro in Middlesex County, has inadequate hourly service. Also, the last bus on this route is at 7 PM, a constraint that limits its use by evening commuters.

Distribution of schedule and route information is reported to be poor, presenting riders with difficulty in planning their trips and confirming transfers.

X. TRANSPORTATION PROBLEMS—IN CITY

A. Highway Problems

Trenton has an extensive network of arterials that serve its major employment locations. The two expressways serving Trenton is US Route 1 and Route 29. Major streets are linked to the expressways designed to move traffic through the city. The most significant traffic generator within Trenton is the state offices in the densely developed downtown area. The second primary source of traffic is the industrial area in north Trenton around Enterprise Avenue, New York Avenue, and Pennington Avenue. The train station also generates a considerable number of commuters during the day. These are locations of congestion during morning and evening peak hours. The transportation problems within the city are displayed in Table 24B.

US Route 1

US Route 1 serves the train station via the Barlow Circle which, as mentioned above, is also a site of congestion during peak periods. The Barlow Circle must be redesigned and access to the station from US Route 1 and Route 29, as well as the downtown, improved. Presently, when travelling south via US Route 1, there is no exit to the industrial area adjoining US Route 1 and South Olden Avenue. This necessitates travelling farther south to Perry Street at the fringe of the downtown. A southbound off-ramp is needed to establish direct access to the city's industrial corridor along both sides of US Route 1.

Calhoun Street Bridge

The Calhoun Street Bridge over the Delaware River is presently operating beyond capacity during peak hours. Motorists experience delays of about ten minutes at the entry point to the bridge. A new four-lane Calhoun Street Bridge has been proposed by the Delaware River Joint Toll Bridge Commission. The new facility would greatly improve interstate access to the westerly portion of the city, the downtown, and other parts of the city.

B. Public Transit Problems

Transportation Problems in Perspective

	Service Adequacy	*Service Frequency*	*Service Cost*
In City	Excellent	Good–Excellent	Excellent

Olden Avenue

Olden Avenue is a crosstown arterial that links the northern and southern parts of the city. Bus service on the radial arterials converges into the downtown but there is no bus service on the above crosstown arterial. City residents who have to travel between northern and southern parts of the city have to travel unnecessarily to the downtown to transfer.

Passengers are affected by infrequent service. Buses delayed by congestion may not arrive on time and commuters are delayed. Published schedules should be designed in a user-friendly manner to facilitate comprehension. Lack of knowledge about transit alternatives by non-users is common. Bus stops should be well posted with signs and route identifiers.

XI. PROBLEMS OTHER THAN TRANSPORTATION

Interview-based data concerning reasons unemployed people fail to secure available jobs are summarized in Tables 25A and 25B. Trenton and Mercer County professionals were asked about specific obstacles that inner-city residents face in securing employment as well as the lack of transportation relative to these obstacles. The most important employment problem is inadequate skills. This is followed by competition for jobs, transportation insufficiency, and lack of communication about available work. Lack of day care and poor prior work history seem to be of less importance in this geographic area of the state.

The major obstacle to city residents obtaining jobs is a lack of skills, including basic education and skills related to occupation. Residents are deficient in basic educational skills such as mathematics. Their ability to express themselves and communicate is also not good. Many are incapable of performing the most fundamental requirement in job hunting, i.e., filling out an employment application. High dropout rates from local schools contribute to residents' lack of basic skills.

The advent of technology in all fields requires skills in many jobs that may not have been required before. Knowledge of electronic equipment in retailing is an example. Jobs are available but cannot be filled by city residents who do not possess these skills. A pervasive problem in skills training is insufficient funding. Finally, skills training should be keyed to those areas in which education is most likely to result in successful job placement.

Competition is another obstacle to securing a job. One has to be trained in the precise skill the job requires; even then, hiring is not assured. Trenton has a large number of state jobs that require competitive examinations. Many city residents don't have the educational prerequisites for these examinations.

TABLE 25A

TRANSPORTATION IN THE CONTEXT OF OTHER PROBLEMS TRENTON—1992

Type of Problem	*Importance*
Inadequate Skills	High
Competition	High
Communication of Work Opportunities	Moderate
Transportation Insufficiency	Moderate
Child Care	Moderate
Prior Work History	Low

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

TABLE 25B

SPECIFIC PROBLEMS OTHER THAN TRANSPORTATION TRENTON—1992

Type of Problem	*Description*
Skills Training	Lack of basic skills, i.e., simple math, communication, filling out an application
Work Histories	May have been on welfare, or had bad experience at a prior job, or may have been without a job for a considerable length of time
Communication or Knowledge of Job	Most of the jobs on Route 1 are not advertised; also lack of knowledge of temporary jobs, retail and clerical positions
Other	Lack of discipline and employability skills; some racial discrimination also exists; poor work values

Source: CUPR interviews with city and county planning, economic development, transportation, and social services professionals, Summer 1992.

Transportation is another hindrance in securing employment. For those who cannot afford private transport, public transportation is the only alternative. Bus routes do not cover some employment locations; in other locations where bus routes do exist, the times of operation are often insufficient. For those employed in low-paying jobs, transit costs are sufficiently high as to be an employment barrier.

Day care has been a problem in the past; now, although it is a less significant barrier, additional affordable facilities within Trenton are required. Previous work history was ranked the least important problem. Lower income Trenton residents seem to have entry-level work experience, which enables them to be considered for slight upgrades of these jobs.

Job readiness is another issue. Job seekers, once hired, do not show up on time or for work regularly. This work ethic must be cultivated during training. Potential employees must learn how to treat both co-workers and superiors, behave in a pleasant manner, and dress properly.

Lack of knowledge about available positions is also an obstacle. Many job opportunities are not advertised but instead are passed along through word of mouth. People learn about jobs via newspaper advertisements, the State Employment Services, the Job Training Partnership Act (JTPA), community-based agencies, or bulletin boards. A job applicant may have to visit multiple job locations to obtain even temporary employment.

In order to rectify the above-mentioned problems, several programs exist within the county. They are the Realizing Economic Achievement (REACH) and JTPA programs administered by the Mercer Private Industry Council and Mercer County Office of Training Employment (MCOTE). These programs not only provide skills training facilities but are also involved in job search and placement activities. The New Jersey State Employment Service also provides employment search and placement services.

XII. TRANSPORTATION STRATEGIES

Since initiation of the New Jersey Transportation Executive Council (TEC) Local Outreach Program in September 1990, Mercer County, the city of Trenton, NJDOT, and NJ TRANSIT have been working together to structure a multimodal transportation strategy for improving the movement of people and goods from, through, and within the city of Trenton. The strategies and planned improvements presented in this section represent achievement of the following NJDOT and NJ TRANSIT investment objectives for the city of Trenton and the region.

1. Improve and preserve the existing system and enhance safety.
2. Improve access to the regional transportation network.
3. Improve highway operations and alleviate congestion.
4. Encourage greater use of public and nonstandard transportation.
5. Continue the TEC Outreach Program.
6. Implement traditional transit service strategies.
7. Advance nontraditional transit service strategies.
8. Implement major new transit initiatives.

A. Highways

By statute, the focus of this report is on reverse-commuting problems and opportunities. This relates primarily to public transportation (bus and rail) services. The Urban Transportation Supplement report is not intended to be a comprehensive detailed analysis and assessment of the major cities' transportation infrastructure needs. However, Sections IX, X, and XII on existing highway problems and strategies, respectively, have been included to provide a view of the comprehensive approach being advanced to improve transportation in and around New Jersey's largest cities.

1. Improve and Preserve the Existing System and Enhance Safety

Rehabilitation and replacement of deficient bridges and highways will continue to be a top priority for state transportation investments. These improvements, which often include shoulder-widening and drainage improvements, prolong the life of the facility and provide a smoother, safer, and often quicker journey. NJDOT will invest heavily in resurfacing during the five-year plan period, continuing a trend begun in Fiscal Year 1991. NJDOT's Pavement Management System, with the aid of sophisticated new testing equipment, will be used to develop a multiyear program of improvements for the most efficient investment of highway rehabilitation and reconstruction funding.

2. Improve Access to the Regional Transportation Network

As the state transportation system developed over the past several decades, certain connections between individual segments in the system were not made. These "gaps" in the system detract from its efficient operation and hinder its ability to move people and goods as effectively as possible.

NJDOT has a major construction project underway to eliminate the Greenwood and Barlow circles to improve access to the Trenton Train Station from US Routes 1 and Route 29, as well as from the central business district. The Calhoun Street bridge, which is obsolete and operating beyond capacity, is under study for replacement.

Perhaps the most obvious of these gaps is that of the remaining "missing" links in the state's interstate system. During the five-year period of the capital program, NJDOT will complete the final segment of I-295 through Burlington County to join with I-195, the extension of the Route 29 Freeway, and the new Route 129 in a major interchange of the four highways. These improvements, known as the "Trenton Complex," will significantly improve access to the state's capital city. Construction of the Route 29F missing section from Ferry Street to Lamberton Road will provide a crucial link between I-195/I-295 and Trenton. These improvements will reduce delays on the southern approaches to Trenton and improve connections to the New Jersey Turnpike and points south.

3. Improve Highway Operations and Alleviate Congestion

Traditional means of addressing congestion through new highway construction, widening existing highways by adding new through lanes, and building interchanges to replace at-grade intersections, are difficult and extremely expensive in dense urban areas due to rapidly increasing costs, increasingly more stringent environmental restrictions, and existing congestion. State policy is to de-emphasize investment in major capacity increases in favor of investment in system management and operational improvements.

The term "system management" is given to investments that improve the operational sufficiency of existing transportation systems to move people and goods with little or no physical construction. Improvements in this broad category are typically much more "doable" than major capacity increases in terms of cost, environmental restrictions, right-of-way needs, community support, and time and money required for design. These projects are typically classified as "highway operational improvements" or "traffic management" measures.

Highway Operational Improvements

Highway operational investments consist of relatively low-cost, small-scale improvements made to relieve spot-congestion problems. Improvements to at-grade intersections constitute the largest number of jobs in this category. Others include improvements to existing grade-separated interchanges and the addition of center turning lanes. Reverse commuters and goods movement will benefit from projects under construction, which include replacement of the Greenwood and Barlow circles with at-grade intersections, and projects being planned, which include the I-95/I-295 interchanges with Route 31, Scotch Road and Federal City Road.

NJDOT policy is to be extremely selective about advancing major capacity-increase projects and to fund only those that have very high priority from the standpoint of overall

state policy and need. NJDOT is in the midst of a major capacity improvement program for Route 1 which includes the following projects:

- US Route 1 and I-295—removal of signal and jughandles at the motor vehicle inspection station, including widening of US Route 1 and the ramps to I-295 westbound.
- US Route 1—widening from two lanes plus shoulders to three lanes plus shoulders in each direction from north of Quaker Bridge Road Interchange to Alexander Road, and construction of a grade-separated interchange at Alexander Road.
- US Route 1—Penns Neck replacement of a railroad structure and widening from 4 to 6 lanes.

Traffic Management

NJDOT is implementing a computerized traffic signal program to substantially improve traffic flow. These projects "wire together" traffic signals in a corridor so that traffic signal timing patterns can be varied according to traffic conditions. Traffic engineers have found that improving the efficiency of signal systems can stretch a road's capacity by up to 25 percent without widening, thus yielding significant congestion relief and air quality benefits for a modest cost. Computerized systems are planned for US Route 1 from south of Franklin Corner Road in Lawrence Township to US Route 9 in Woodbridge Township, and US Route 206 from Vanderveer Drive in Lawrence Township to north of the Raritan River in Somerville.

4. Encourage Greater Use of Public and Nonstandard Transportation

The New Jersey Traffic Congestion and Air Pollution Control Act—the state response to the 1990 Federal Clean Air Act Amendments (CAAA)—is lending impetus to the efforts undertaken by the city of Trenton to reduce automobile traffic in and through the city. A major component of these efforts is the encouragement of greater use of public transit and van and car pooling through the following strategies:

- Legislation mandating large employers statewide to increase ridesharing.
- Legislation allowing employers to give employers using transit a $60 per month rebate.
- Transportation management associations (TMAs), the purpose of which is to work with employers, their employees, transportation providers,

and local officials to develop programs for greater use of transit, ridesharing, flextime, and staggered work hours to reduce employees' use of single-occupant vehicles for their work trips. The Greater Princeton TMA has been serving the Trenton area since the 1980s.

5. Continue the TEC Outreach Program

NJDOT and NJ TRANSIT staff will continue the annual outreach effort to give Trenton officials the opportunity to submit their top transportation needs and current project priorities to NJDOT for possible project development and state funding. The process includes face-to-face dialogue with NJDOT and other transportation agency management and is considered a major opportunity for Mercer County and city of Trenton officials to gain direct access to the annual capital programming process.

B. Public Transit

Agenda Setting

Focusing attention on one transportation market, the reverse commute, helps set an agenda that targets improvements. The transportation problems discussed in Sections IX and X were reported in interviews with city officials, social service agencies, and practitioners in the employment search field. While the interview sessions did identify some transportation problems in each of the cities, a common problem appeared to be the lack of adequate information about transit. However, it is important to note that interviewees in each city did not rate "transportation insufficiency" as the major problem relative to gaining and keeping employment for city residents. In fact "inadequate skills" was consistently identified as more critical, along with other factors such as current economic conditions, lack of adequate child care, and communication of work opportunities.

Before detailing the strategies that can best serve Trenton, it is important to respond to the issue of cost and fares. The comparative costs between public transit and autos are predicated upon the cost of driving and the availability of an auto. Provided that a worker drives a car, suburban commuting rarely incurs major toll or parking costs. Therefore, the perceived out-of-pocket driving costs are low. Interviews raised the issue that transit fares seem high in comparison. However, the recent Comprehensive Energy Policy Act provides tax incentives to employers who subsidize employee fares. Employers can provide a tax-free benefit to their workers worth up to $60 per month towards the purchase of a transit ticket. This benefit can significantly reduce, if not completely offset, the fare on NJ TRANSIT bus services. For example, NJ TRANSIT's one-zone and two-zone

monthly bus fares in South Jersey are $37 and $49, respectively. Many of the major suburban employment clusters outside the urban areas examined in the Urban Transportation Supplement can be reached by a one- or two-zone bus trip.

The issue of bus stop signs and shelters was also raised. Both in urban and suburban areas, bus stop signs and shelters are controlled by the local government and NJDOT (for code conformance). Another local responsibility is parking enforcement. When bus stops are designated but parking restrictions are not enforced, buses cannot exit traffic flow and use the bus stop zone, effectively undermining one of the important purposes of bus stops as a congestion-management tool. With greater movement for buses, traffic flows more smoothly and air quality is improved. Another purpose served by bus stop signs and shelters, also reported by interviewees, is in the promotion of transit for both the regular rider as well as the non-user. This is an effective form of public communication about where routes go. Bus stops need to be designated and parking enforced so that buses can exit and enter the traffic flow, easing congestion, ensuring curbside access for passenger safety and accessibility, and providing an important promotion and visible reference for public transit, thereby improving communication about services.

Implementation of improvements to the existing service network and infrastructure described below requires that they be evaluated and subjected to rigorous review to prepare them for inclusion in NJ TRANSIT's operating and/or capital budgets. Annually, NJ TRANSIT seeks appropriations to meet its operating budget. Although recent pressures for NJ TRANSIT to reduce expense growth and cut costs are not central to this Urban Transportation Supplement, they are a limiting factor on the ability of NJ TRANSIT to implement projects.

Targeted Strategies

Tables 24A and 24B note locations or corridors and transportation problems reported through the interview process. The following project descriptions are organized into either traditional or nontraditional service strategies and major new initiatives.

6. Implement Traditional Transit Service Strategies

Traditional service strategies refer to those projects, large or small, that are designed to enhance the existing bus, rail and light-rail transportation network. Traditional service strategies concentrate on the basic building block used by all public transit providers. Schedule improvements and service modifications are the result of a constant process that culminates in quarterly schedule changes. Traditional service strategies, in many cases,

reflect service modifications through schedule changes—adjusting running time to meet worksite hours, extending service to meet closing hours at shopping malls, and so on.

Traditional Service Project Descriptions

US Route 1 Traffic Mitigation. As a part of the traffic mitigation effort undertaken in response to major construction planned for US Route 1, NJ TRANSIT is significantly expanding the operation of its #600 line, which operates from the city of Trenton to Princeton Forrestal Village via US Route 1. Historically, this service had been operated at much greater frequencies and spans of service but was cut back during times of tight budgets due to low ridership. The planned improvements to the service include an increase in frequency from one hour to every 30 minutes, direct connections to rail stations (thus allowing connections from urban areas as far away as Newark and Elizabeth), and the initiation of express service, which should reduce the overall travel time.

Morrisville, Pennsylvania is served hourly by SEPTA, but is currently showing low ridership. *Olden Avenue* crosstown service was discontinued in the mid 1980s due to low ridership. However, Olden Avenue is bisected at frequent intervals by other bus service. Most of Trenton's bus routes cross Olden Avenue, and points along the avenue can be accessed via transfer.

7. Advance Nontraditional Transit Service Strategies

"Nontraditional service strategies" refers to a newly developed Suburban Initiatives program that is seeking new ways for transit to serve suburban travel needs without the constraints of standard bus and rail service alternatives. With the Federal Clean Air Act Amendments (CAAA) of 1990, the Suburban Initiatives program becomes an important component of compliance. The urban centers in the state of New Jersey are all in severe non-attainment zones. The requirement of the CAAA that employers of more than 100 staff reduce single-occupant vehicle trips magnifies the importance of looking for transportation solutions for the work commute—traditional or nontraditional—peak direction or reverse commute. NJ TRANSIT, as an integral part of the solution, has made a commitment to a leadership role in defining nontraditional service strategies to help the state meet these mandates. In this role, NJ TRANSIT has a working approach that is pertinent to many of the issues raised in this first Urban Transportation Supplement.

A. NJ TRANSIT's Service Development team has begun a joint partnership with NJDOT to support the suburban TMAs. This special Suburban Initiatives program is now identifying the potential for

nontraditional services within the service area of the TMAs. The TMA service areas include Burlington-Camden, Greater Princeton, the Meadowlands, Middlesex, Monmouth, Morris, and Somerset and comprise a base of approximately 1,800 employers.

B. The Business Transit Alliance (BTA) is an outreach program to businesses throughout the state. The BTA assists companies located in areas where there is not a TMA. In addition to the traditional BTA services, such as Transit Days and Resources Centers, companies will be able to conduct ridesharing programs for car and van pools. With the help of the BTA, employers will be able to develop their compliance plans and implement Employee Trip Reduction (ETR) programs. There are approximately 2,700 private sector companies with 100 or more employees in non-TMA service areas, and equally as many local, state and federal agencies that will require special assistance for compliance with the Clean Air Act, for a total of more than 5,000 potential clients.

Nontraditional Service Project Descriptions

Greater Princeton TMA. Prior to Fiscal Year 1993, NJDOT funded and supported the TMA program for the state of New Jersey. For Fiscal Year 1993 and beyond, NJDOT and NJ TRANSIT have formed a partnership with the TMAs to develop and support an entirely new type of TMA program. The combined new TMA program includes the following:

Projects Required for TMAs:

- Transit development and promotion
- Business planning
- Computerized ride-matching

Projects Optional for TMAs:

- Suburban transit initiatives:
  Operations, marketing
- Service/system assessments:
  Market research, traffic mitigation,
  park-ride needs
- Clean Air initiatives:

Employee transportation coordinator training, travel-demand management (TDM) seminars

- Demonstration projects: Compressed work week, guaranteed ride home, telecommuting, parking management, travel demand reduction ordinances

NJ TRANSIT–NJDOT Projects to Support TMAs:

- TDM training program
- Business planning workshops
- Feasibility studies for potential TMAs
- Start-up money for new TMAs
- Clean Air tool kit
- Transit experts assigned to TMAs
- Computerized ride-matching
- Technical assistance from NJ TRANSIT and NJDOT

US Route 1 Area Nontraditional Transit Project. NJ TRANSIT is currently working with the Greater Princeton TMA, Mercer County, and area employers to design innovative new transit services for the employment centers in the US Route 1 corridor. Employers working with NJ TRANSIT on the programs include Sarnoff Research Center, FMC, Scanticon Hotel, Merrill Lynch, Carnegie Center, Quakerbridge Mall, Princeton Market Fair, and Hyatt. These services will likely include options for Trenton residents.

NJ TRANSIT is surveying area employees to determine origins and destinations, travel patterns, commute habits, and attitudes towards commuting. Employment levels and locations are being assessed. Focus group interviews with employers are also being conducted. This qualitative and quantitative data will form the basis for recommended transit options.

These innovative transit recommendations will provide new, less-expensive, smaller-scaled transit options to meet the demand for suburban travel. Instead of NJ TRANSIT's traditional fixed bus routes using 40-foot buses, these innovative options may include shuttles from bus stops or rail stations, smaller size buses operating on fixed routes, "on request" route deviation services, expanded reverse commute services, demand responsive routes, "dial-a-commute," shared ride services, subscription buses, van pools, and car pools.

NJ TRANSIT is preparing an operations plan (routes, schedules, staffing, hours and days of service, carrier resources, dispatching, vehicles), a management and administrative plan (staffing and the responsibilities of the public sector, private sector, and contractors), a financial plan (operating and capital costs, ridership, and revenue estimates), and an implementation plan (assignment of responsibilities for all primary activities as well as support activities such as marketing) for the US Route 1 corridor. Final recommendations are expected in the summer of 1993.

8. Implement Major New Transit Initiatives

Major new initiatives are capital-intensive projects such as the Burlington-Gloucester corridor study, designed to improve the transportation infrastructure. These projects have all undergone extensive study and conceptual planning; some have been discussed for decades. These projects will provide travel time savings, new travel pattern opportunities for all New Jerseyans, and will substantially improve the existing bus and rail network in the state. Some of the projects have the potential to open up new worksites for urban residents, improve ambient air quality by replacing vehicle trips with transit trips, and provide access to more job sites. In part, the projects are perceived as tools to support and enhance economic development in the targeted corridors.

XIII. SUMMATION

A. City's Role

Trenton's role in New Jersey and its evolving importance are based on two contrasting activities. During its early years, it was a major manufacturing center; later it became the administrative capital of the state. The city early on prospered as a manufacturing center and became a shipping point for commodities between New York and Philadelphia. There has been a steady decline, however, of Trenton's industries since World War II. Today, Trenton exists as the capital of New Jersey with the major proportion of its work force employed in services. State offices and related facilities have injected considerable amounts of money into the city's economy and serve both as a base of stability and as a catalyst for future growth.

B. Dominant Demographic Trends

Trenton's demographic trends closely follow the pattern of its economic highs and lows. Its largest growth occurred between 1880 and 1920, when a large number of immigrants came to Trenton to work in its flourishing industries. Population peaked at

128,009 in 1950. Since then, there has been a steady decline in population, with more and more people and jobs migrating to the suburbs. Trenton's population fell to 92,124 in 1980 and to 88,675 in 1990. Although Trenton's per capita and median household income more than doubled during the decade, the city's statistics in these areas are below those for Mercer County and for the state as a whole.

C. Dominant Characteristics of Labor Force

While total resident employment in Trenton increased by 9.1 percent during the 1980 to 1990 period, unemployment levels increased to 10.9 percent in 1990—an increase of more than 7 percent over 1980. Some of this rise in unemployment may be explained by a large increase in the local labor force. The 1980s was a period of economic boom and bust. The city prospered during 1982-1987 and than experienced one of the worst recessions after this period, during which it lost 8.2 percent of its jobs. Manufacturing has been declining since World War II, with the emergence of a new economic base in the form of services (34.4 percent of employment in 1990). Another emerging industrial category is public-sector employment, supported by the administrative requirements of state government. Still other budding industries are construction, transportation, and retail trade.

D. Dominant Characteristics of "At-Place" Employment and the Difference Between Employment Characteristics of Resident and Worker Populations

The at-place employment profile for Trenton reveals the dominance of services, which employs nearly 50 percent of its workers. Although the manufacturing industry has been steadily declining, it retains an important position, encompassing 20.6 percent of total local employment. In 1990, retail trade was next in order of importance, comprising 11.4 percent of workers. Other emerging employment sectors for at-place employment are finance, insurance, and real estate, and construction.

There has been stability in government jobs in Trenton, over of period 1980 to 1990 while jobs in manufacturing, wholesale trade, and FIRE categories are declining.

E. Employment Projections

Within the city of Trenton, the primary locations of employment are the state offices along State Street, the Satellite Government Complex, and the Station Plaza. The three hospitals and retail corridors of State Street and Olden Avenue also contribute a substantial portion of the jobs. Outside Trenton, the US Route 1 corridor generates significant

employment and will continue to do so in the future. Other reverse-commute destinations include the communities of Ewing, Hamilton, Princeton, and Lawrence.

F. Existing Transportation Network

The city of Trenton has an excellent transportation network. Its road network and train connections make it readily accessible to all of the Northeast's metropolitan centers and significant employment locations.

Trenton is well served by an elaborate network of interstate highways, federal highways, and state roads. Apart from US Route 1, which runs through the heart of the city, a maze of county roads links core to national highways beyond the state's boundaries. Within the city, a system of arterials facilitates movement in all directions.

Train service links Trenton to New York and Philadelphia, and also to numerous reverse-commute destinations in the Northeast corridor. Bus service is also extensive, especially to destinations of employment in the immediate vicinity of Trenton. Commuters within the city are very well served, although certain gaps exist in service to specific suburban locations.

G. Transportation Problems

The primary highway problems affecting the movement of vehicles through the city of Trenton and its suburbs are poor highway connections and congestion. Highway connections and access to Trenton will significantly improve with the completion of I-295 and the "Trenton Complex." However, the gaps that remain in the state system make truck and automobile access into the city from the south difficult. Access from the New Jersey Turnpike to Trenton currently involves a circuitous route along I-195, US Route 206, and local streets. North of the city along the US Route 1 corridor to suburban employment locations, congestion causes delays for all travelling markets.

The US Route 1 corridor caters to the employment needs of numerous inner-city residents. Absence of night bus service in this corridor hinders working late shifts. In addition, bus stops are not coordinated with work locations, and beyond the Quakerbridge Mall, service is infrequent. Other reverse-commute destinations lacking service are the US Route 130 corridor, Morrisville (Pennsylvania), Lambertville, and locations east and west of US Route 1. Problems that are more generic are poorly designed bus schedules and irregular service.

H. Problems Other Than Transportation

The most serious obstacle to employment for Trenton residents is the lack of basic educational and vocational skills. This is followed by competition for jobs, transportation insufficiency, and lack of communication about work opportunities. Lack of job readiness and a work ethic are other drawbacks of job seekers in this area. Of somewhat less importance are lack of affordable day care and unfavorable work history.

I. Conclusion

The preparation of this Urban Transportation Supplement marks a beginning. The road and transportation infrastructure network will be extensively overhauled during the next decade and, in consonance with the New Jersey State Development and Redevelopment Plan, central city areas will receive high priority for these capital investments. Public transit deficiencies have been clearly defined; services designed to respond to these deficiencies are in active preparation. How much of this service materializes will be financially dependent and, in any event, will evolve over time as air quality mandates become more imminent and agreements are forged between public transit service providers and employers facing these mandates.

Other deficiencies demand non-financial solutions. The designation of bus stops requires more concerted, cooperative efforts between NJ TRANSIT, municipalities, and NJDOT, since stops must be agreed to by municipalities and NJDOT, and since parking prohibitions at bus stops must be enforced by police forces having jurisdiction over these stops. Design deficiencies—including median barriers, suburban site plans with large setbacks, and the lack of pedestrian amenities—pose more daunting challenges, and suggest the need for new site planning standards and road/sidewalk design accommodations to govern future development approvals and roadway improvement efforts.

In summary, the Urban Transportation Supplement defines an ambitious agenda for transit service improvement, and the update called for by state statute in 1996 will serve as an important milestone for measuring progress.

A METHODOLOGICAL NOTE ON LESS-SKILLED EMPLOYMENT GROWTH AND LESS-SKILLED JOB SEPARATIONS

LESS-SKILLED EMPLOYMENT GROWTH

Less-skilled employment growth for the period 1993–2000 is estimated by using projections for the year 2000 for the twenty largest occupational growth categories in a county or group of counties (Job Training Partnership Act [JTPA] labor areas) in 1986 and sifting from these occupations those that are typically less-skilled. Less-skilled occupations *would* include salespersons, janitors, parking-lot attendants, waiters and waitresses, stock clerks, factory workers, and so on. Less-skilled occupations *would not* include registered nurses, bookkeepers, cooks, accountants, teachers, sales representatives, truck drivers, and so on. Projections were undertaken for the following JTPA labor area county groups:[1]

Atlantic and Cape May
Bergen and Passaic
Burlington and Camden
Cumberland, Gloucester, and Salem
Essex and Hudson
Hunterdon and Somerset
Mercer
Middlesex and Union
Monmouth and Ocean
Morris, Sussex, and Warren

These projections of less-skilled employment growth were obtained from occupational employment projections by the New Jersey Department of Labor (NJDOL) for each of the above geographical areas.[2]

In order to estimate less-skilled employment growth by individual county and ultimately by municipality within a county, the less-skilled share of all occupations was determined for a county or county group and this ratio applied to total employment projections also by county or county group undertaken by the Center for Urban Policy Research (CUPR) at Rutgers University. For instance, if CUPR determined that of the job growth of all occupations in Bergen and Passaic counties (from the NJDOL projections), less-skilled job growth constituted 60 percent, the 1990–2000 employment projection for each of these counties would be multiplied by 60 percent to obtain a figure for less-skilled employment. These would further be multiplied by 70 percent to account for the seven-year projection period (1993–2000) used for less-skilled employment as opposed to the ten-year projection period (1990–2000) used for total employment.

Less-skilled employment projections were assigned to municipalities by the municipalities' shares of county total employment growth over the period 1970 to 1990. If, for example, Paramus in Bergen County had 40 percent of the county's total employment growth from 1970 to 1990, it would receive 40 percent of the projected less-skilled employment for the county from 1993 to 2000.

Finally, less-skilled employment growth is divided into three categories (basic, retail, and services) according to the existing local distribution of these broad classification types in 1990. Thus, less-skilled employment growth is a fractional share of CUPR's projection of total employment growth. NJDOL's figures for less-skilled employment growth are not used directly because these projections are dated and reflect the much more generous estimates of employment growth typical of a state economy viewed in the mid- to late-1980s. Currently new projections are underway but as of April 15, 1993 are available only at the state level. CUPR's adaptation of these projections anticipates the change in magnitude of (lower) employment projections taking place in the 1993 versus the 1988 projections.

Currently, new NJDOL projections are underway. They are available only at the state level. They show considerably less annual employment growth (–25 percent) and significantly less annual job separations (–50 percent) than prior projections. These numbers are in keeping with the lower projections employed by CUPR in this analysis.

---

1 These labor areas are slightly different from the ones used elsewhere in this report. Those labor areas used elsewhere are the New Jersey recognized labor areas. Occupational projections by NJDOL were already undertaken by the JTPA labor areas, thus limiting the choices available for agregation.

2 See New Jersey Department of Labor, *Employment Projections. Volume II: Occupational Outlook for New Jersey and Selected Areas 1986–2000* (Trenton, NJ: New Jersey Department of Labor, October 1988).

LESS-SKILLED JOB SEPARATIONS

Job separations (at the time of this study)[3] involve departures from the labor force due to death, ill health, pregnancy, or for personal or undetermined reasons. Job separations are not those jobs that result from individuals moving up the ladder of employment and, through this, the release of jobs that other aspiring workers fill. They thus represent removal from the labor force as opposed to removal from a specific job title.

Job separations are more prevalent where the employment base is large. They are concentrated in the older central core areas of employment, the older close-in suburban areas, or the newer suburban nodes of office space, retail, or industrial development.

Less-skilled job separations are also predicted by occupation for the period 1993–2000. Job separations are determined from procedures recommended by the U. S. Department of Labor and are essentially a percentage share of existing employment at any one time. These types of occupational projections, also available from the New Jersey Department of Labor and found in the prior-listed source, are somewhat less subject to widescale variation than are the occupational employment-growth projections discussed previously.

Using a procedure similar to that discussed above, the less-skilled occupations were sifted from those occupations experiencing the most growth and their average *annual* number of separations tallied. This was multiplied by 7 for the seven-year projection period 1993–2000 and divided by two-thirds to account for all occupations, not just those experiencing the most growth.

Less-skilled employment separation projections are assigned to each municipality in a JTPA labor area according to the ratio of total employment of that municipality in 1990 to total employment in the JTPA labor area, also in 1990. Employment separations are divided among basic, retail, and services categories at the municipal level according to the existing distribution of these types of employment in the municipality in 1990. On a statewide base, the components of annual job openings, i.e., job separations and job growth, are in a ratio of about 2–3 to 1.

WHAT IS THE EFFECT OF JOB GROWTH VERSUS JOB SEPARATIONS?

Much of the above discussion leads to an obvious question: Which is more important—job growth or job separations? The answer is that they are both important for different reasons.

Job growth is the net new addition of jobs to an area. The demand for workers does not bring with it an associated supply of workers. Job separations are losses of workers currently filling job billets in an area with an essentially similar number of workers ready to enter the labor force to take their places. In this case, job demand brings with it an almost equal amount of job supply. Thus, in a labor area, if 1,000 workers leave the labor force due to separations, and labor demand grows by an additional 250 jobs, there is a potential for 1,250 job openings in this labor area. If the community has 500 unemployed and another 900 ready to enter the labor force, the 1,250 openings theoretically could be filled immediately, yet with some workers still remaining unemployed.

For the job aspirant in the central city, both types of employment opportunity are important. Job growth provides net new employment opportunities. Job separations provide few net new employment opportunities from a macro perspective but potentially significantly more opportunities from a micro perspective. The latter is true for the following reason. If the central city of a labor area contains most of the job openings in the form of *separations,* and suburban workers will not go into the central city for employment, this provides a tremendous supply of available jobs to urban workers. On the other hand, if most of the job *growth* is in the suburbs and must be accessed by automobile, even though these are net new jobs, the urban resident, in only 50–75 percent of the cases having an automobile, could be at a significant disadvantage. Thus, each type of job creates a potential for employment with biases towards and biases against different types of workers (urban versus suburban).

A SUBNOTE ON THE ATLANTIC CITY/CAPE MAY AND MERCER COUNTY LABOR AREAS

Both of these labor areas have low levels of less-skilled basic employment. In the Atlantic City/Cape May case, this is due to manufacturing being almost totally eclipsed by services (casino) employment. In the case of Mercer, most of the basic employment that remains is higher skilled. In both of these cases, there is a projection of zero job separations for the basic sector.

---

3 There are slight definitional changes underway for the 1993 occupational projections.

REFERENCES

INTERVIEWS:

Albert, Sheila. Executive Director, Mercer County Private Industry Council. 9/16/92.

Carton, Andrew. Director, Division of Planning, Trenton. 8/3/92.

Maiman, Alan. Manager of Service Planning, New Jersey Transit. 8/12/92.

Mallach, Alan. Director, Department of Housing and Development, Trenton. 9/16/92.

Marchwinski, Tom. Manager of Transportation Modelling, New Jersey Transit. 9/10/92.

McDermott, James. Planner, New Jersey Transit. 7/31/92.

McGough, Thomas. Principal Planner, Department of Housing and Development, Trenton. 8/3/92.

Olanipekun, Olayinka A. Director, Division of Traffic and Parking, Trenton. 8/3/92.

Velez, Virgin. Director, Mercer County Office of Training and Employment. 9/1/92.

TEXTS:

City of Trenton, Department of Housing and Development. *A Comprehensive Planning Process for Trenton*. 1985.

City of Trenton, Division of Economic Development. "Growing with Trenton." *Business Opportunities in New Jersey's Capital City*.

City of Trenton, Division of Economic Development. *Trenton Profile*. June 1992.

City of Trenton, Division of Economic Development. *Trenton Train Station Profile*. January 1990.

City of Trenton, The OEDP Committee. *Overall Economic Development Plan*. 1986.

Mercer County Division of Economic Development. *Mercer County's 1992 Regional Market Profile & Investor's Guide*. 1992.

Mercer County Planning Board. *Growth Management Plan*. 1989.

Mercer County Private Industry Council. *Annual Report* . 1990-1991.

Murph Quinn. *City Ideas That Work. Trenton, NJ Revitalizes Core With Enterprise Zones. Nation's Cities Weekly*. June 29, 1992.

Newberry, Lida, ed. *New Jersey: A Guide to its Present and Past*. New York: Hastings. 1977.

New Jersey Department of Transportation. *Fiscal Year 93 Study and Development Program Planning. Preliminary Engineering—Scoping. Preliminary Draft.* June12, 1992.

New Jersey Family Development Program. *Preliminary County Guidelines.* 1992

New Jersey Office of State Planning. *Impact Assessment of the New Jersey Interim State Development and Redevelopment Plan. Report I: Research Strategy.* Trenton, NJ: NJOSP. Report prepared by Rutgers University, Center for Urban Policy Research. February 1992.

NJ TRANSIT. *NJ Transit Business Plan 1992-1996. The Way To Go.* Draft. November 1991.

NJ TRANSIT. *Transit in South Jersey: The Mobility Challenge.* May 1989.

New Jersey TRANSIT. Executive Council. *Recommendations for Northern and Central New Jersey.* November 14, 1990.

Palmer, Douglas H. "Trenton's Economic Game Plan." *Mercer Business.* May 1992.

Procter, M., and Matuszeski, B. *Gritty Cities.* Philadephia: Temple University Press, 1978.

Seneca, Joseph J., and Hughes, James W. *New Jersey Cities in the 1980s: An Employment Report Card.* Rutgers University. February 1992.

Transportation Executive Council. Trenton, NJ: *Local Outreach Program.* October, 1991.

USDOT, UMTA. *Outcommuting from the Inner Ring.* October 1989.

Westergaard, Barbara. *New Jersey: A Guide to the State.* New Brunswick, NJ: 1987.