

**CHESTER  
CITY  
VISION  
2000**

**Section Six**

**Transportation & Mass Transit**



Comprehensive Plan & Economic Development Strategy 1994

# SECTION SIX

## TRANSPORTATION & MASS TRANSIT

### INTRODUCTION

Improving the transportation system is one of the most important investments a municipality can make towards enhancing its attractiveness as a location for employment or residential development. The transportation element of this Plan will examine the existing transportation system of the city of Chester and from that examination, develop a conceptual transportation plan that will address the city's most critical transportation issues. This concept plan can become a powerful tool for the city to improve its transportation access and foster economic development in specifically targeted areas.

The first section of this element will document the city's existing transportation system and facilities. This will include a review of road ownership and federal aid eligibility as well as public transit services and facilities. The status and impacts of highway and public transit improvements currently programmed by PA DOT or SEPTA will be discussed in the next section. Also in this section, various improvements to the city's transportation system which have been identified in numerous previously completed studies will be presented. In the next section, a description of

the city's most critical transportation issues will be presented. The last section will address recommendations to the city's most critical transportation issues while developing a Conceptual Transportation Plan based on the analysis of the previous three sections of this element.

### EXISTING TRANSPORTATION SYSTEM

The city of Chester is in the enviable position of having direct access to a myriad of transportation modes and facilities. Chester has direct access to two interstate highways, passenger and freight rail lines, deep water ports, a Delaware River bridge crossing into New Jersey and is located approximately six miles from an international airport. These facilities present unique opportunities for the movement of people and goods into and out of the city of Chester. Although these opportunities exist, the underlying problem that must be addressed deals with interconnecting these facilities in a comprehensive and coordinated manner. This section of the report identifies the components of the city's transportation system and describes key characteristics of each.

## Highway Network

The spine of the city's highway network is I-95. It is unquestionably the most important road in the city in terms of enhancing economic development. Currently portions of I-95 in Chester carry traffic volumes as high as 110,000 vehicles per day. This facility provides direct access to major markets in Philadelphia, Wilmington, Baltimore and Washington and it provides direct access to high speed roads which connect Chester to New Jersey, King of Prussia, the Pennsylvania Turnpike and the US 202 corridor. Unfortunately, within the city of Chester there is inadequate access between I-95 and the city's major trip generators such as the industrial corridor along the Waterfront and the Central Business District (CBD). The problem stems from the retrofitting of an interstate facility on top of an existing city street network. This does not allow for optimal interchange designs or optimal access to the on and off ramps that were constructed. The following is a listing of the current access points to and from I-95 in Chester:

### I-476 (Chester/Ridley)

- on-ramp to I-95 southbound
- off-ramp from I-95 northbound

### Chestnut Street

- off-ramp from I-95 southbound
- on-ramp to I-95 northbound

### Edgmont Avenue

- on-ramp to I-95 southbound (proposed)
- off-ramp from I-95 northbound

### Kerlin Street

- on-ramp to I-95 southbound
- off-ramp from I-95 northbound

### Commodore Barry Bridge

- off-ramp from I-95 southbound
- on-ramp to I-95 southbound
- off-ramp from I-95 northbound
- on-ramp to I-95 northbound

### Highland Avenue

- off-ramp from I-95 southbound
- on-ramp to I-95 southbound
- on-ramp to I-95 northbound
- off-ramp from I-95 northbound

### US 322

- off-ramp from I-95 southbound
- on-ramp to I-95 northbound

The other interstate with direct access to the city of Chester is I-476, more commonly known as the Blue Route. This facility opened to traffic from I-95 to the Pennsylvania Turnpike on December 19, 1991. This facility, which terminates on I-95 a few hundred feet east of the city line, opens up new markets and areas of access for businesses and individuals located in the city of Chester. It has already been credited with spurring development in the region, enhancing the region's mobility and dramatically decreasing travel times in the region.

The only crossing of the Delaware River located in Delaware County is in Chester. The Commodore Barry Bridge, carrying US 322, connects I-95 with I-295/US 130 and the New Jersey Turnpike. The Commodore Barry Bridge connector provides complete access to I-95 and to 9th Street in Chester. However, the bridge connector provides no access between I-95 and 9th Street.

Recent traffic volumes for various streets in the city are presented in Figure T-1. These

volumes depict counts which were taken in 1989, 1990 and 1991 and represent average annual daily traffic (AADT) volumes. AADT volumes represent the average daily traffic over the course of an entire year. The raw daily traffic counts were converted to AADTs to account for day of week and seasonal fluctuation in traffic levels. The numbers appearing on the figure indicate the total number of vehicles crossing over a certain point on a road in both directions on an average day in a given year. The numbers located along I-95 represent directional volumes; the number above I-95 represents the southbound volume for a specific location while the number below I-95 represents the northbound volume for a specific location. 1991 volumes indicate that the highest levels of traffic on I-95 within the city occur between Highland Avenue and the Commodore Barry Bridge.

Most of the roads in Chester are owned and maintained by the city. However, a number of the more heavily traveled roads are owned and maintained by the Pennsylvania Department of Transportation (PA DOT). In addition to jurisdiction on these roads in terms of physical and operating characteristics, PA DOT also has the responsibility for the physical maintenance of the facilities. The state-owned road network in the city of Chester and immediate vicinity can be found in Figure T-2.

Although the state is responsible for funding improvements to its network, the federal government allocates funds to PA DOT for the purpose of constructing new roads and improving their existing highways. The Federal Highway Administration (FHWA) appropriates varying amounts of money to each state's department of trans-

portation in distinct funding categories based on specific allocation formulas. Being located in an urban area, roads in the city of Chester are eligible to receive funds under two broad categories; Federal Aid Urban Systems (FAUS) Funds and Federal Aid Primary (FAP) Funds. To receive funding for road improvements from either FAUS funds or FAP funds, the facility to be improved must appear on the Federal Aid Urban System network or the Federal Aid Primary network. The FAUS network and the FAP network are displayed in Figure T-3. The Delaware Valley Regional Planning Commission (DVRPC) is responsible for making additions or deletions to these networks. Roads/highways must meet specific qualifying criteria to become part of either network. A road can appear on only one network, thereby designating the pot of funds for which the road is eligible to compete. Improvement projects must compete with other projects in the same federal aid category for funding.

For the most part, the FAUS and FAP networks are comprised of state-owned roads. However not all state-owned roads are on the networks and in some cases municipal-owned roads are on the networks. There are currently no city-owned roads on the Federal Aid Primary network. Table T-1 lists the city-owned roads that are part of the Federal Aid Urban System network and are eligible to receive federal funds for improvements.

For planning and design purposes, highways are classified by function. Although highways have two functions: 1) to provide mobility and 2) to provide land access, there is an incompatibility between these two objectives. Mobility requires high speeds for sustained travel while land access mandates low speeds for frequent

**TABLE T-1**  
**CITY OF CHESTER**

**City-Owned Roads on the Federal Aid Urban System**

Facility	From	To
15th Street	Trainer Borough	Highland Avenue
Highland Avenue	15th Street	9th Street
Engle Street	9th Street	2nd Street
7th Street	Highland Avenue	Morton Avenue
Lloyd Street	9th Street	2nd Street
Kerlin Street	9th Street	2nd Street
Concord Avenue	9th Street	2nd Street
Avenue of the States	9th Street	4th Street
Upland Street	Providence Avenue	2nd Street
Melrose Avenue	22nd Street	Morton Avenue
9th Street	Morton Avenue	Eddystone Line
Chestnut Street	Providence Road	18th Street
18th Street	Chestnut Street	Walnut Street
Walnut Street	18th Street	13th Street
13th Street	Walnut Street	Chestnut Street
Chestnut Street	13th Street	10th Street

**TABLE T-2**  
**CITY OF CHESTER**

**Functional Classification System Categories**

**PRINCIPAL ARTERIAL** - Serves statewide and interstate travel, major activity centers in the urbanized area, through movements bypassing the central city, and most of the trips entering and leaving the urbanized area. In addition, significant intra-region travel, such as between central business districts and outlying residential areas or between major suburban centers is served by this class of facilities. Land access is subordinate to mobility.

**MINOR ARTERIAL** - Interconnects and augments the principal arterial system. Carries trips of moderate length. Places more emphasis on land access than the principal arterial and carries less traffic. Accommodates intra-community travel but does not penetrate identifiable neighborhoods.

**COLLECTOR** - Provides both land access service and traffic circulation within residential neighborhoods and commercial and industrial areas. The collector system may penetrate residential neighborhoods distributing trips from arterials to their ultimate destinations. Conversely, collects traffic from local streets and channels it onto the arterial system. Carries less traffic than arterials. May carry a minor amount of through traffic.

**LOCAL** - Primarily permits direct access to abutting land uses and connections to the higher categories. Carries very low volumes and offers lowest level of mobility, usually deliberately discouraging through traffic.

# RECENT TRAFFIC VOLUMES

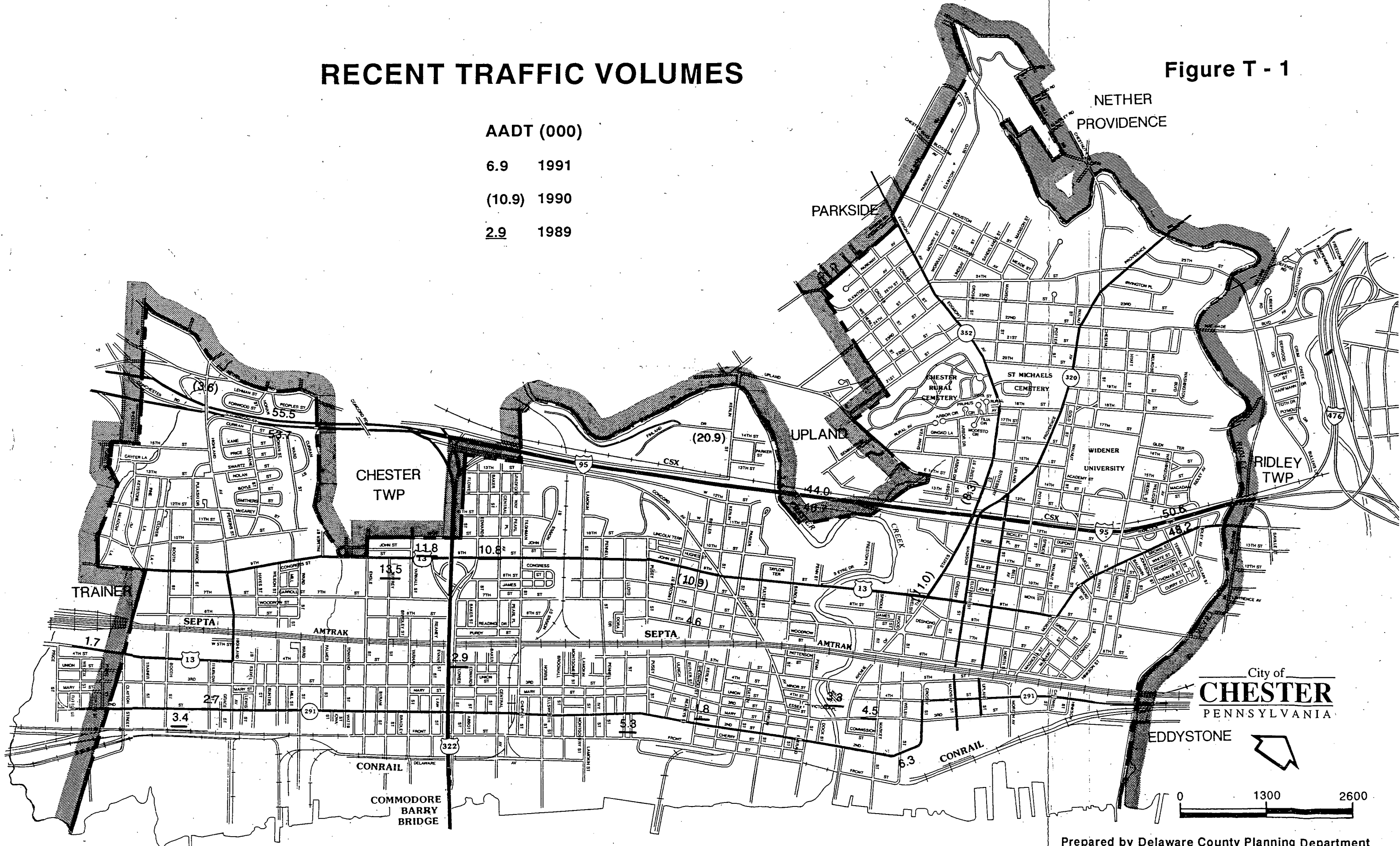
Figure T - 1

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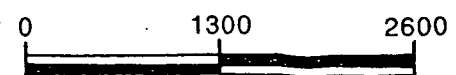
6.9 1991

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2.9 1989






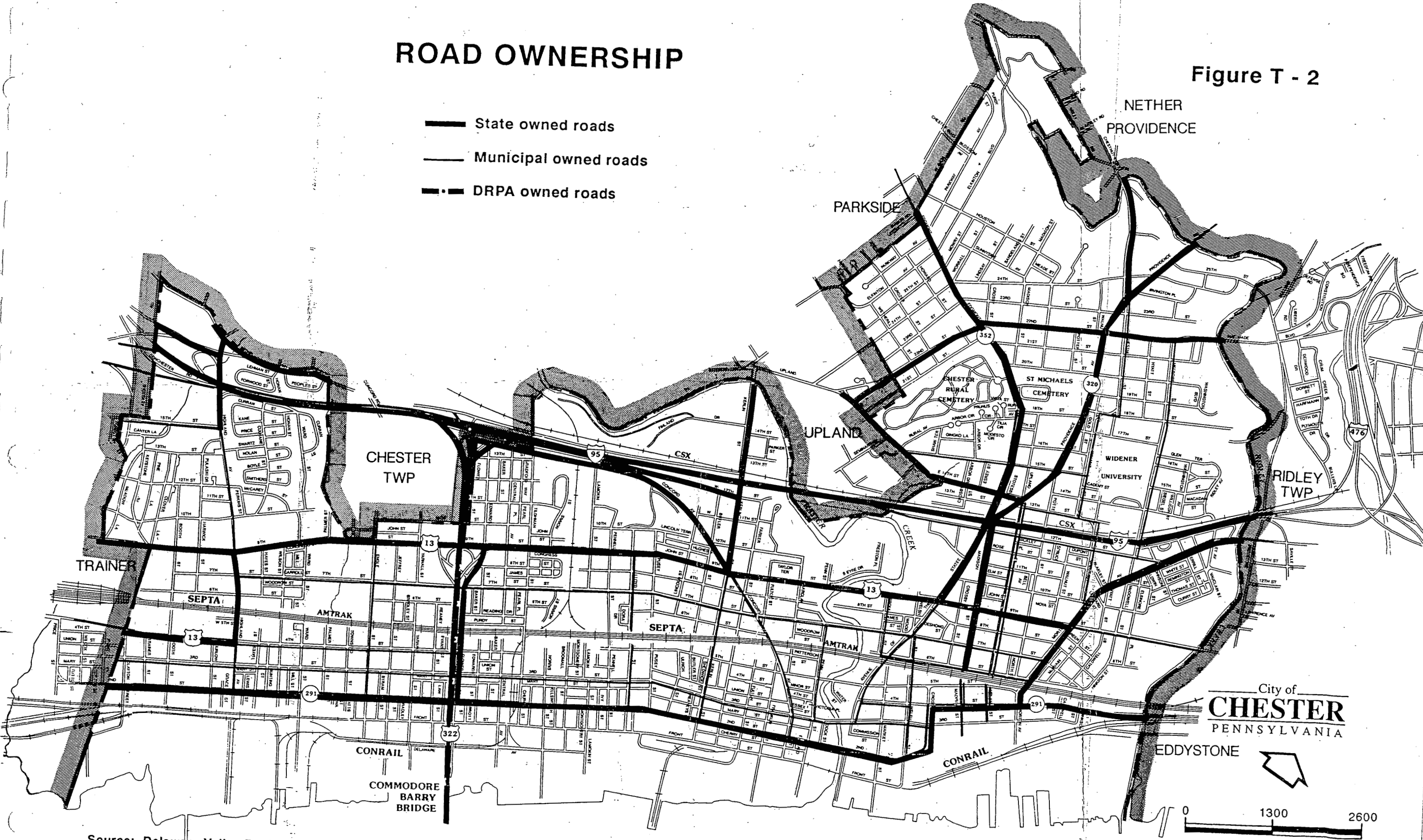
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# ROAD OWNERSHIP

Figure T - 2

-  State owned roads
-  Municipal owned roads
-  DRPA owned roads

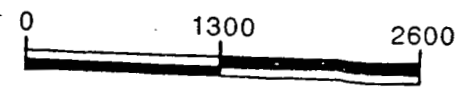


Source: Delaware Valley Regional Planning Commission

DELAWARE RIVER




Prepared by Delaware County Planning Department

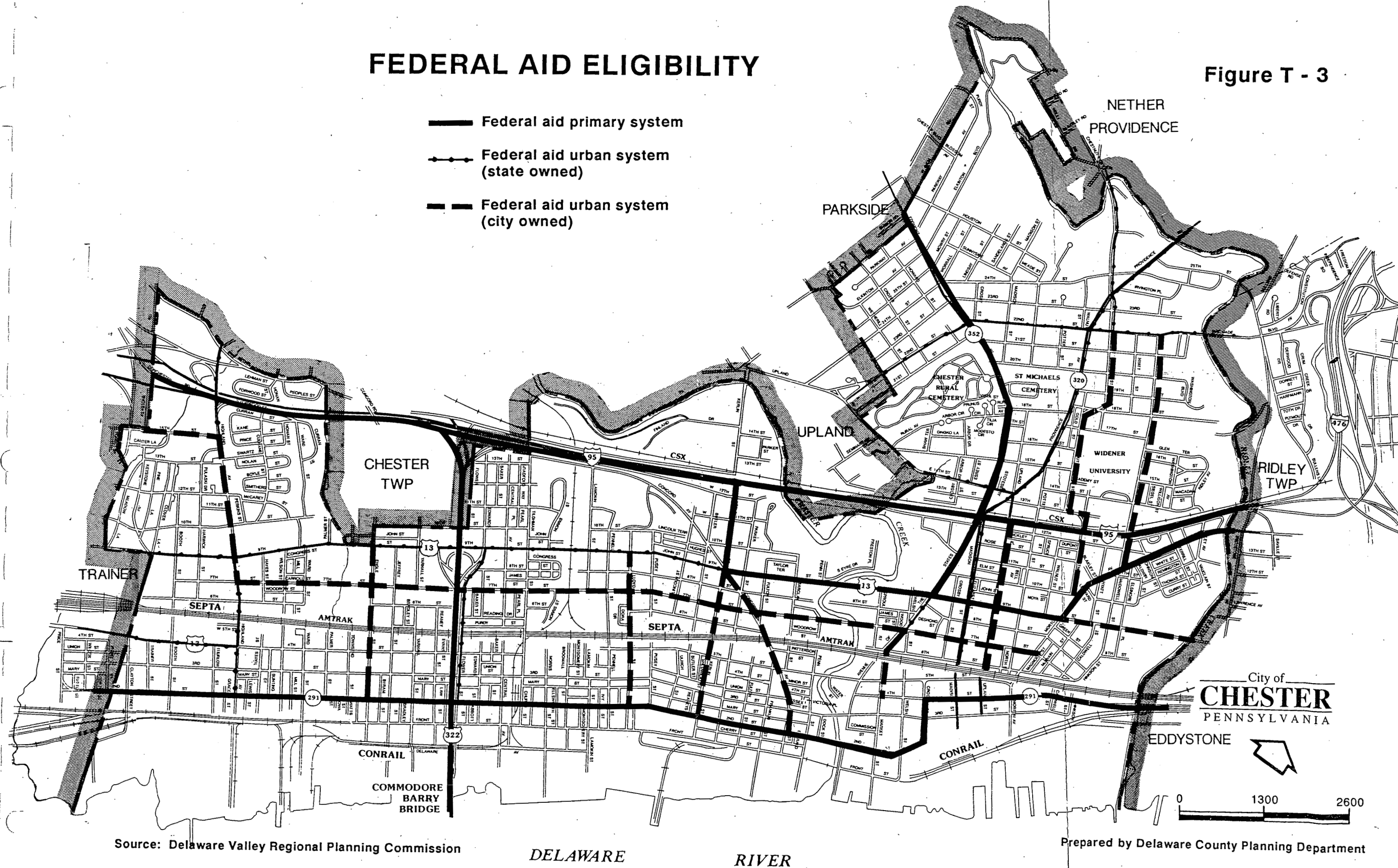
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# FEDERAL AID ELIGIBILITY

Figure T - 3

-  Federal aid primary system
-  Federal aid urban system (state owned)
-  Federal aid urban system (city owned)





turning movements. The Federal Highway Administration through PA DOT has developed a state-wide functional classification system as part of the National Highway Functional Classification. The functional classification categories are described in Table T-2 and the functional classification of the highway network in the study area is displayed in Figure T- 4.

The functional classification serves as the basis of the federal aid system, it is also used by PA DOT to establish design standards for each category of roadway.

### **Bus Service**

Bus service in the city of Chester is provided by the Southeastern Pennsylvania Transportation Authority (SEPTA) which operates eight bus routes in the city. These routes are displayed in Figure T-5. All eight routes interface with the Chester Transportation Center which also serves as a station for SEPTA's R-2 Regional Rail Line between Philadelphia and

Wilmington. The use of the Chester Transportation Center allows passengers on any of the eight routes which traverse the city to transfer to any of the other bus routes or the train line, thereby increasing their mobility. These routes provide riders with an opportunity to reach destinations such as: Philadelphia International Airport, 69th Street Terminal, Cheyney University, West Chester University, Springfield Mall, Granite Run Mall, King of Prussia Mall or Painter's Crossroads. In addition to the Transportation Center, other accessible Chester destinations include Widener University, Crozer-Chester Medical Center, Community Hospital and the Central Business District. Table T-3 lists the eight bus routes and their terminal points:

### **Rail System**

Three active rail lines run through the city. CSX and Conrail carry freight traffic and the Amtrak/SEPTA line carries passengers. CSX runs generally parallel and adjacent to the southbound lanes of I-95. In and

**TABLE T-3**

### **SEPTA Bus Routes in Chester**

- Route 37 South Philadelphia to Chester via Philadelphia International Airport
- Route 109 69th Street Terminal to Chester via Springfield Mall
- Route 113 69th Street Terminal to Marcus Hook Via Darby
- Route 114 Darby Terminal to Boothwyn
- Route 116 Chester to Granite Run Mall via Aston
- Route 117 Feltonville and Chester to West Chester via Cheyney University
- Route 118 Chester to King of Prussia Via Media and Paoli
- Route 119 Feltonville and Chester to West Chester via Painter's Crossroads

The base fare for this bus service is \$1.50, however tokens can be pre-purchased for \$1.05. A transfer between any of these routes costs \$0.40 and travel to an additional suburban zone costs another \$0.40.

around the city of Chester, this line consists of one track, however CSX has expressed an interest in double tracking this line. On the south side of this line, adjacent to the northwesternmost border of the city lies a new intermodal transfer yard. At this facility, located adjacent to the I-95/US 322/Highland interchange in Upper Chichester Township, automobiles are transferred from rail cars to trucks for distribution. Just north of the city, a spur serves three major occupants of the I-95 Industrial Park in Chester Township. No other major facilities are served by the line within the city. This CSX line is the only rail freight line into Philadelphia not owned by Conrail or Amtrak.

The Chester Secondary Track, owned by Conrail, runs generally parallel to PA 291 and serves industrial customers along the waterfront. This line is linked to the Conrail Harrisburg Line (former Reading Line) near the Philadelphia Art Museum. The Harrisburg Line is a major freight line into the Delaware Valley. Within the city, this line alternates between one and two tracks with numerous sidings to access the adjacent industrial properties. It has a connection to Amtrak's Northeast Corridor through the Hook interlocking in Marcus Hook Borough. An interlocking is a location where a train can switch from one track to another.

A segment of Amtrak's Northeast Corridor between New York and Washington, D. C. runs through the heart of the City, centered between I-95 and the waterfront. It carries intercity passenger service and rail freight. The right-of-way is owned by Amtrak with Conrail and SEPTA having trackage rights. Amtrak service, which no longer stops in Chester, does stop in Wilmington and Philadelphia. Conrail operates freight ser-






vice on this right-of-way, moving most of its through freight trains during evening and nighttime hours. Local freight traffic also uses this right-of-way for customers with sidings located along this route and because of the connection with the Chester Secondary Track which serves industries along the waterfront.

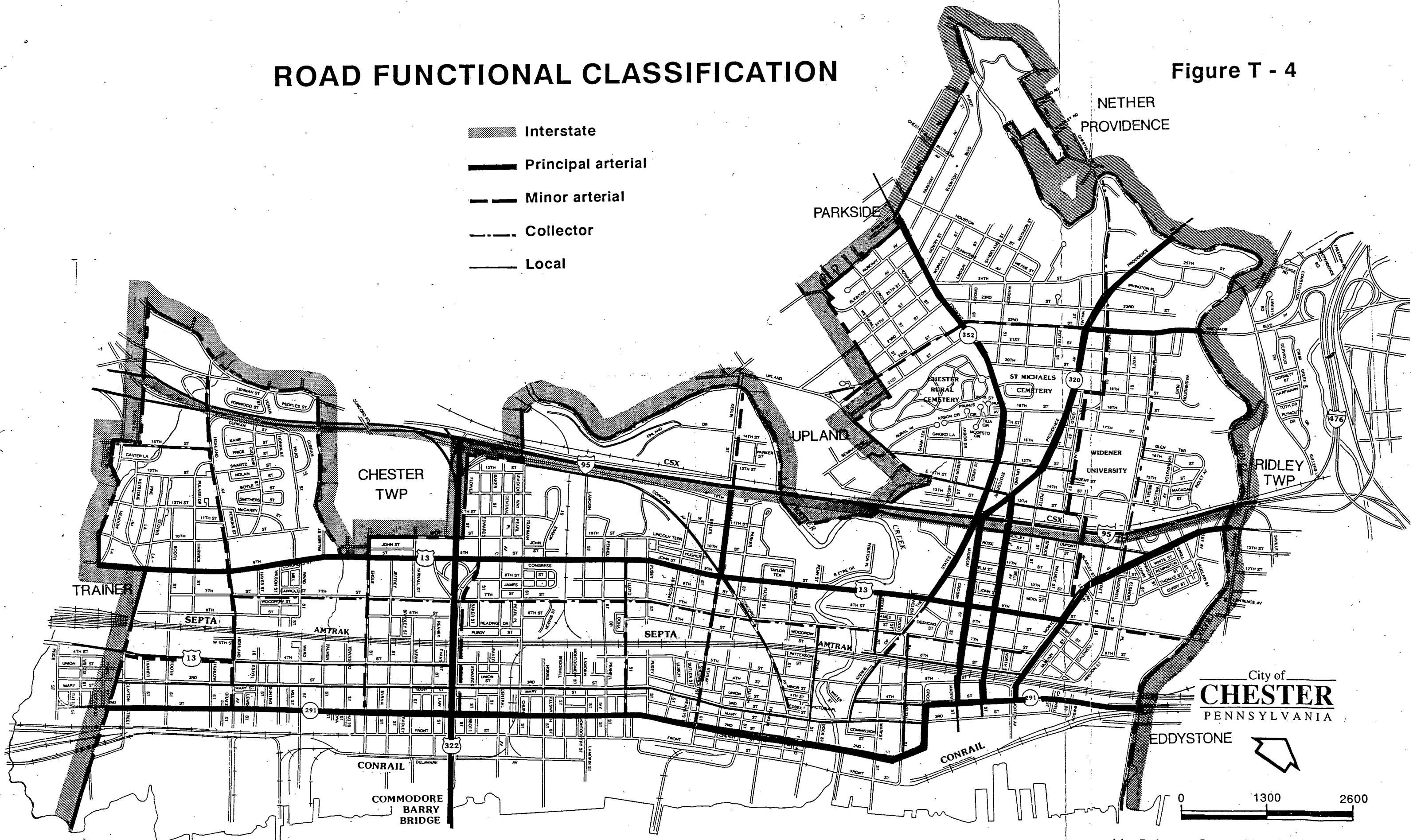
SEPTA operates the R2 Wilmington-Philadelphia Regional Rail Line on this right-of-way with three stops in Chester. The Highland Avenue stop is located in SEPTA's fare zone 4, while the Lamokin Street stop and the Chester Transportation Center are located in zone 3. Limited parking is provided at all three stops. The Chester Transportation Center, by far the most used of the three, is also served by eight SEPTA bus routes. SEPTA's daily passenger counts from April, 1990 recorded 255 passengers per day (129 boarding and 126 alighting) using the Highland Avenue Station; 214 passengers per day (96 boarding and 118 alighting) using the Lamokin Street Station and 715 passengers per day (313 boarding and 402 alighting) using the Chester Transportation Center Station to access the R2 Line. SEPTA lists 158 stations along its Regional Rail System. Based on the passenger activity listed above, the Chester Transportation Center Station ranks 45th, the Highland Avenue Station ranks 109th and the Lamokin Street Station ranks 117th.

There are six trains leaving the Transportation Center towards Philadelphia in the AM Peak period and six trains arriving at the Transportation Center from Philadelphia in the PM Peak period. Peak period travel time from the Transportation Center to Suburban Station in Center City Philadelphia is scheduled to take 33 minutes on the local trains and 24

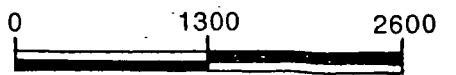
# ROAD FUNCTIONAL CLASSIFICATION

Figure T - 4

-  Interstate
-  Principal arterial
-  Minor arterial
-  Collector
-  Local



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



Prepared by Delaware County Planning Department

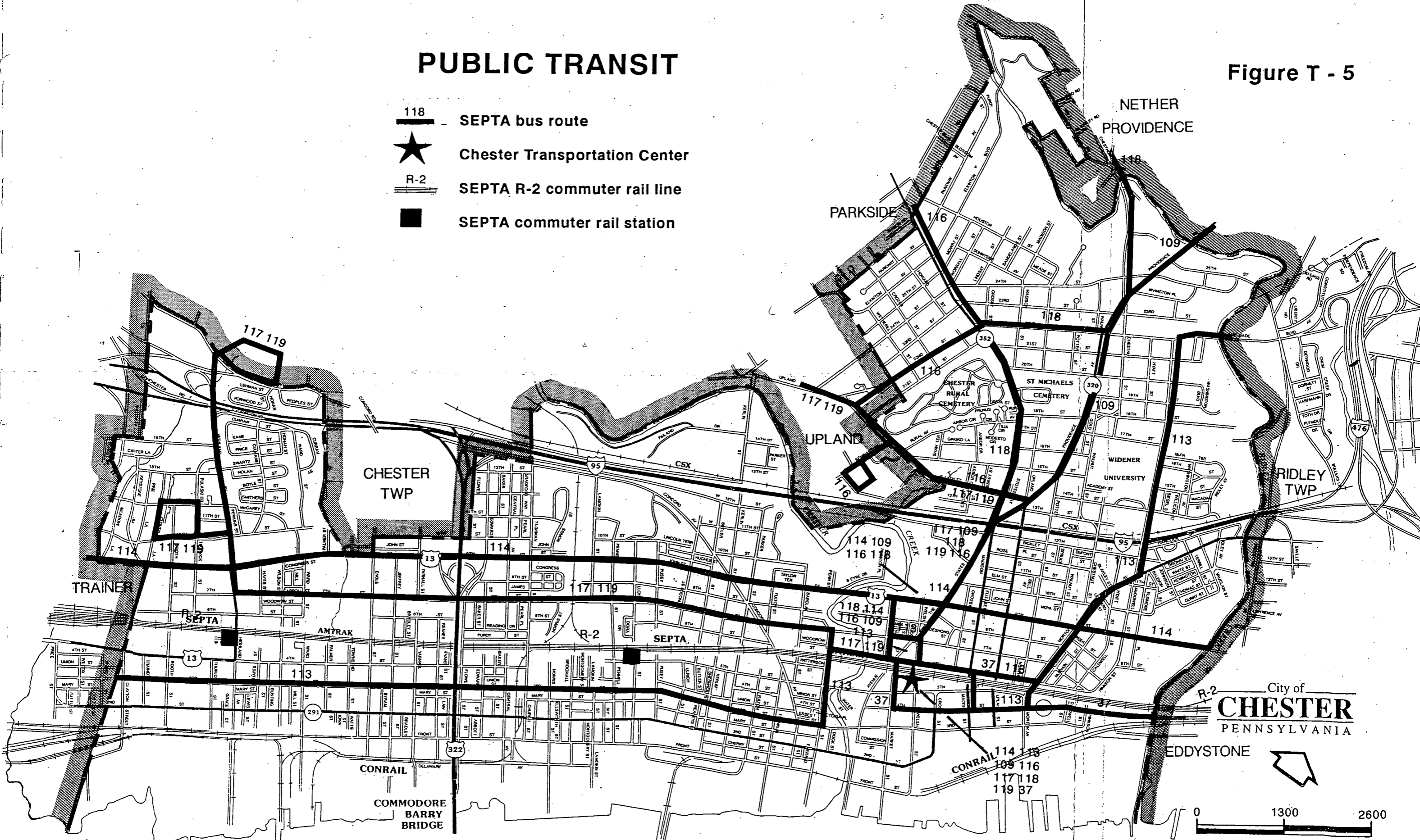
Source: Delaware Valley Regional Planning Commission

DELAWARE RIVER

# PUBLIC TRANSIT

Figure T - 5

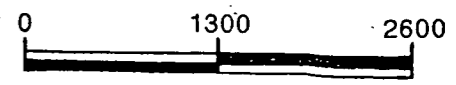
-  SEPTA bus route
-  Chester Transportation Center
-  SEPTA R-2 commuter rail line
-  SEPTA commuter rail station



Source: Delaware Valley Regional Planning Commission

DELAWARE RIVER

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City of  
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minutes on the express trains. A one-way daily cash fare in the peak period is \$4.50 from zone 3 and \$5.25 from zone 4. Zone 3 weekly and monthly trailpasses cost \$28.00 and \$102.00 respectively, while the same passes for zone 4 cost \$32.00 and \$117.00 respectively. SEPTA also offers several other fare instruments which are discounted from the one-way cash fare.

### **Water Access**

The city of Chester is bounded on the southeast by the Delaware River, providing excellent opportunity for port activities. Historically, Chester has used its waterfront to its advantage, enticing companies which relied heavily on water access to locate in the city. These industries pumped funds into Chester's once thriving economy. While many of the companies on Chester's waterfront located there originally for the purpose of shipping or receiving goods via water, it was also common for those companies to have rail sidings into what is now Conrail's Chester Secondary Track. In fact, an important factor in why these companies actually located on the waterfront was their option of shipping and receiving goods via highway, rail, water or any combination of the three. Due to changes in economic conditions most of the original companies such as Ford Motors, Reynolds Metals and Sun Shipbuilding are no longer there. Although these once productive companies are no longer there, the port access is still there and with the right uses along the waterfront it has the possibility to become a viable asset to Chester once again. Today, shipping activities along Chester's waterfront are virtually nonexistent compared to several decades ago. Scott Paper is one of the few companies that still receives some raw materials by

ship. However most of the port facilities are now in a deteriorated condition and it would require a substantial capital investment to rehabilitate or reconstruct this infrastructure.

Delaware County has recently commenced operations of a trash to steam facility at the base of Thurlow Street between Front Street and the Delaware River. Because of the facility's location on the river, there is potential opportunity for the use of barge transport of non-Delaware County municipal solid waste.

### **TRANSPORTATION IMPROVEMENTS**

This section documents those improvements to the city's transportation system which have been identified by numerous sources. Two categories of improvements are presented; those projects sponsored by SEPTA or PA DOT and those projects identified by other groups. The projects sponsored by SEPTA or PA DOT have been included on their respective capital improvement programs, for which dedicated funding has already been secured. These improvements have been studied, reviewed, programmed and are scheduled for implementation. A description of the proposed improvement and its current status is discussed below.

Other improvements have been identified by public and private organizations who have been involved in local as well as regional studies which address issues that impact Chester's transportation system. These improvements have not been approved by the implementing agencies and therefore funds have not been committed for their implementation. The sources

of these unapproved improvement recommendations are cited in this section. The fact that a recommendation is unapproved is not a statement of merit. Due to funding constraints faced by the implementing authorities, all worthwhile recommendations may not be approved. However, with support from the proper state, regional, county or municipal government, the public and/or the business community those improvements which are beneficial to the city's transportation system can be advanced.

## **PROGRAMMED PROJECTS**

The following is a list of programmed improvements. The transit project is to be funded by SEPTA and the highway projects are to be funded by PA DOT. The number next to each project description corresponds to the project number found on Figure T-6.

### **Transit Improvements**

#### **1. SEPTA's FY 1992 - 2001 Capital Program**

The Handicapped Accessibility Project will provide transit facility modifications to improve system access to the disabled at selected rail stations. This mandated project provides for modifications to stations at the rate of one station per year. The Chester Transportation Center station on the R2 Marcus Hook Line has been selected to be one of the stations programmed for this improvement.

### **Highway Improvements**

#### **2. PA 291: Ridley Creek to Price Street**

This project calls for widening and rebuilding PA 291 from Ridley Creek to Price Street in Trainer. This highway corridor is programmed for a widening to five lanes (two travel lanes in each direction and a center turn lane) which would join the existing four-lane section in Eddystone. Contributing to the long delay of this project were right-of-way acquisition problems which surfaced when hazardous materials were found on sites adjacent to the road. The worst of these sites are located at the western end of the corridor.

The scheduled reconstruction of the road includes straightening the turns at 2nd Street and Crosby Street and at 4th Street and Crosby Street through a realignment. PA 291 will be built on a new right-of-way between 2nd Street and 3rd Street from Franklin Street to Avenue of the States and between 3rd Street and 4th Street from Crosby Street to Upland Street. This project is currently listed in the first four years of PA DOT's Twelve Year Program for engineering and right-of-way acquisition and listed in the second four years for construction. A consultant has been selected to assist in the right-of-way acquisition process and a draft relocation plan is currently under review by the Federal Highway Administration. PA DOT expects to start property appraisals in Mid 1992 and begin right-of-way acquisition by mid 1993. The estimated let date is Mid 1994 with an estimated completion date of December 30, 1995.

### **3. 9th Street Ramps: Commodore Barry Bridge Connector**

This project would construct the two missing ramps at the interchange between the Commodore Barry Bridge connector and 9th Street. These ramps would serve traffic from 9th Street heading to I-95/US 322 west and traffic from I-95/ US 322 east headed to 9th Street. The existing ramps provide access to 9th Street from the Commodore Barry Bridge and from 9th Street to the Bridge. The two new ramps would solve one of the city's most critical transportation problems: direct access between I-95 and the waterfront. A feasibility study was started in 1989 to determine if these ramps could physically fit in with the existing structure. Engineering and construction appear in the 2nd four years of the Twelve Year Program. The currently estimated let date is Mid 1995 and the estimated completion date is November 30, 1996. According to PA DOT, there is a possibility that this project will be dropped but will be addressed by the Design Consultant Team in the I-95 Intermodal Mobility Project.

### **4. Edgmont Avenue (PA 352): I-95 on-ramp**

This project calls for the construction of a southbound on-ramp from Edgmont Avenue to I-95. CSX operates a rail line parallel to I-95 at this location. The ramp will pass over the rail line as it descends from Edgmont Avenue to I-95. An environmental impact statement has been completed and PA DOT has initiated final design. A decision by CSX to consider double tracking the rail line caused a delay while PA DOT determined if the ramp would be physically feasible with a double

track rail line adjacent to I-95. As a result of preliminary field views, both improvements appear to be feasible within the same right-of-way. The Twelve Year Program lists engineering, right-of-way acquisition and construction the first four years. An estimated let date is now projected for Spring 1995.

### **5. PA 352: Roland Road to 22nd Street**

This corridor was studied under PA DOT's Energy Conservation, Congestion Reduction and Safety (ECONS) Program in Fiscal Year 86. Improvements along this corridor include installation of new traffic signal equipment and interconnection of signals. This project is listed on the Twelve Year Program in the first four years for engineering and construction. The estimated let date is May 1994 and construction should start in June 1994.

### **6. Fifth Street Bridge**

This bridge over the Chester Creek is currently closed and is scheduled to be replaced. At the City's request engineering and construction were advanced to the first four years of the Twelve Year Program in order to expedite the project and get the bridge reopened to traffic. This project replaced the Third Street Bridge Project in the first four years of PA DOT's Twelve Year Program.

### **7. 9th Street Bridge**

This bridge over the Chester Creek is programmed for rehabilitation. This section of 9th Street carries US 13 and is critical to the movement of east/west traffic across

the City. Because this project is a maintenance project utilizing 100% state funds, it does not appear on the current 12 Year Program. It is, however, an active project with an estimated let date of late 1992 and an estimated completion date of September 30, 1993.

### **8. Third Street Bridge**

This bridge over the Chester Creek was originally programmed for rehabilitation in the first four years of the Twelve Year Program. At the request of city officials, this bridge was replaced by the project to replace the Fifth Street Bridge which is currently closed. Engineering was initiated on this project before it was removed from the first four years and this work will continue. Right-of-way acquisition and construction are currently listed in the third four years.

### **9. 25th Street Bridge**

The 25th Street bridge over the Ridley Creek has been identified for replacement. This project was originally programmed on the first four years of the Twelve Year Program but due to a prioritization of the programmed bridges by the Delaware County Planning Department, the engineering, right-of-way acquisition and construction were moved to the third four years of the program.

### **10. Concord Road Bridge**

This bridge over the SEPTA tracks is programmed to be replaced. Engineering, right-of-way acquisition and construction are listed in the third four years on PA DOT's Twelve Year Program.

## **IDENTIFIED IMPROVEMENTS**

This section documents improvements to the city's transportation system which have been identified by various parties in the past but have not reached the phase of approval and funding. In fact, many of these concepts may never reach that phase. Not all of these improvement suggestions are viable projects or they may lack the support from the appropriate authorities for implementation. These projects do however aim to address transportation issues perceived as critical to some individual or group with interests in the city. The importance of this list can not be understated, for from it may come solutions to some of Chester's critical transportation problems.

### **I-95 Intermodal Mobility Project**

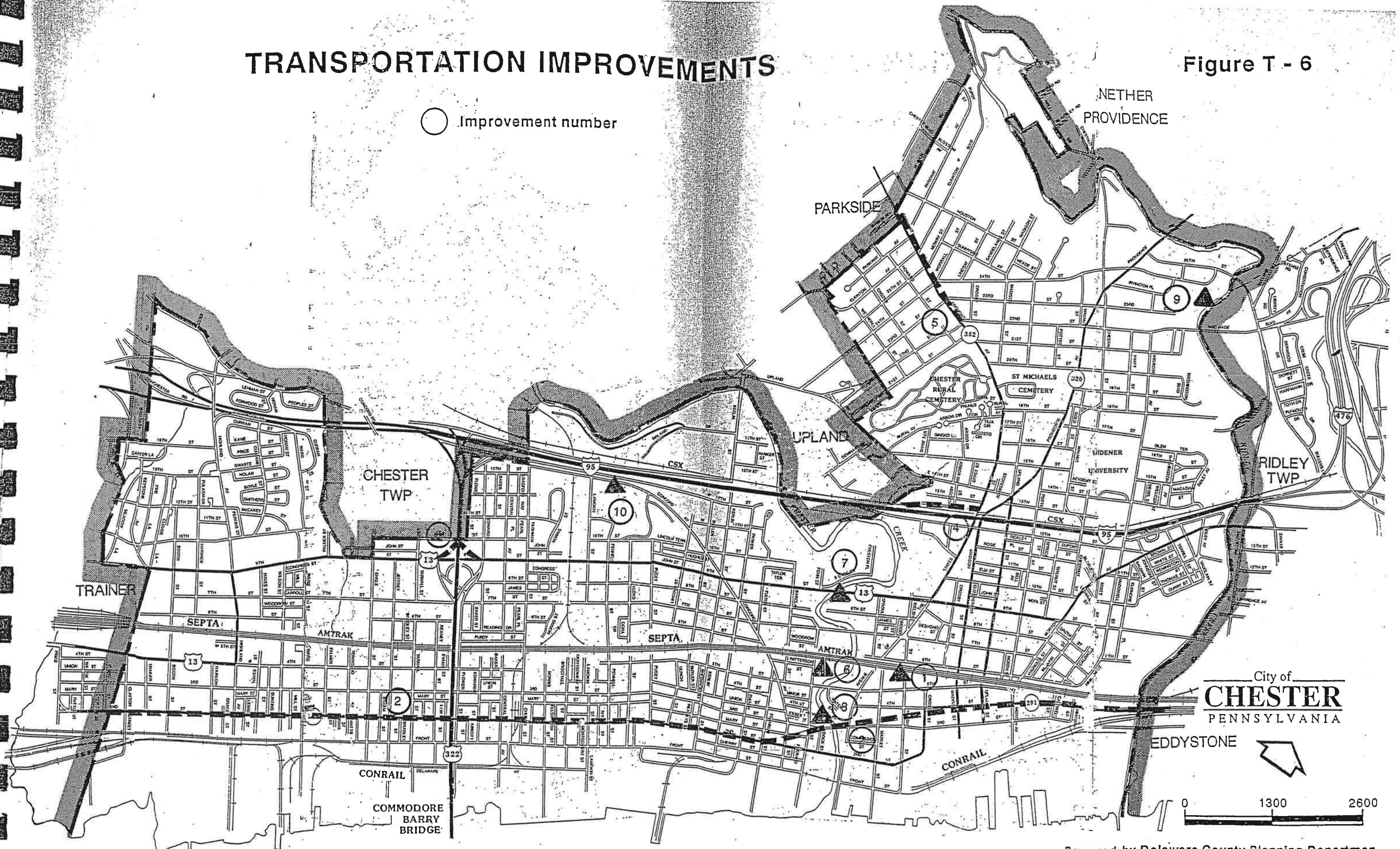
In order to minimize today's traffic problems and to meet tomorrow's growing needs, PA DOT and the Federal Highway Administration, in cooperation with other federal, county and private agencies are undertaking a long range I-95 corridor modernization program. PA DOT's efforts to make the I-95 corridor a model of 21st Century transportation technology continue to move forward. In early 1991, the Department initiated a Design Concepts Competition among several consultant teams. In August of 1991, Ebasco Infrastructure of New York was selected as the winner of the competition and given the opportunity to perform preliminary engineering work and manage the final design and the reconstruction of I-95 from the Delaware State Line to the New Jersey State Line. The following are improvements affecting Chester culled from the reports submitted by the consultants in the Design Concepts Competition. Obviously, all of these projects will not be implement-



# TRANSPORTATION IMPROVEMENTS

Figure T - 6

○ Improvement number



Source: Delaware Valley Regional Planning Commission

Prepared by Delaware County Planning Department

DELAWARE RIVER

ed, however they represent concepts which address perceived transportation problems in the City. Some concepts are contradictory, reflecting the views of the opposing consultant teams.

An improvement recommended by all five teams in the Design Concepts Competition is the redesign and reconfiguration of the US 322/Highland Avenue Interchange with I-95. Various scenarios of this concept called for the relocation or elimination of some existing ramps and the addition of new ramps.

Another concept identified was the construction of an intermodal center at the location of the Highland Avenue Station on SEPTA's R2 Wilmington Line. This new intermodal center would consist of a new train station building with a high level platform and a 1,000 space parking lot and serve as a bus and rail transfer point as well as a ride sharing park and ride facility. This study does not recommend this intermodal center because it will detract from the existing Chester Transportation Center and will attract large volumes of traffic into this residential area.

A major focus of the I-95 Intermodal Mobility Project is to add capacity to I-95 where possible and several concepts have been presented which address this issue. These concepts include: construction of a "double decker depressed highway" from the US 322/Highland Avenue Interchange to the Commodore Barry Bridge which would carry four lanes plus a high occupancy vehicle (HOV) lane in each direction; widen I-95 from the Commodore Barry Bridge to Edgmont Avenue to four lanes plus an HOV lane northbound and three lanes plus an HOV lane southbound; widen I-95 from Edgmont Avenue to north

of the Blue Route to four lanes in each direction plus an HOV lane; and widen I-95 from US 322 to the Blue Route to four lanes in each direction plus an HOV lane. This reconstruction also calls for installing state of the art technology for incident detection systems and dispersing traffic information via variable message signs or highway advisory radio.

## **CRITICAL TRANSPORTATION ISSUES**

This section identifies the most critical transportation issues which affect the future development potential of the city of Chester. To be sure, there are numerous transportation issues not explicitly mentioned here which impact mobility in the city and are legitimate concerns to specific communities, however the five issues identified below are macroscopic in nature and have a wide range of impacts. These issues, in fact, encompass several smaller isolated issues and some of the five are interrelated.

The most critical transportation issue facing Chester is the inadequate access between the city's industrial corridor along the waterfront and the high-speed interstate facilities. The waterfront corridor is critical to the city's industrial employment activity and the interstate facilities are essential to the mobility of workers and goods into and out of employment sites. This under utilized industrial corridor needs increased accessibility to have any chance of reaching its potential as a dominant employment center. This access problem has several components: 1) absence of an appropriately designed interchange in Chester from either I-95, I-476 or US 322 that could accommodate movements in all

directions between these facilities and the waterfront corridor, 2) absence of an adequate connector road between the interstates and the waterfront which is designed to serve passenger vehicles as well as the numerous trucks generated by the industrial activity and 3) absence of a carefully planned and clearly signed route to direct traffic from the interstates to the waterfront.

Another critical transportation issue is the movement of traffic along the waterfront corridor. The primary facility to carry traffic through this corridor is PA 291. This principal arterial highway consists of one travel lane in each direction and a parking lane in each direction. With traffic volumes in the range of 5,000 to 8,000 vehicles per day, the problem isn't so much a capacity problem as an incompatibility problem. The land uses along this corridor run the gamut including residential, commercial, industrial, institutional, recreation, abandoned and vacant parcels. Due to the number of industrial uses in the vicinity, a considerable amount of truck traffic is evident on PA 291. In essence, this highway is not "user-friendly": its 34 foot curb to curb width must accommodate two travel lanes and two parking lanes; street signs, directional signs and informational signs are inadequate; intersection turning radii for semi-trailer combination trucks (wheel base 50 feet) is substandard; the placement and visibility of traffic signals is poor and the perception to the driver is more of a local residential street than a principal arterial, industrial highway.

The third critical issue is restriction of truck travel between I-95 and PA 291 caused by the low underclearances of the Amtrak rail line. This rail line runs the length of the city virtually centered between and parallel to I-

95 and PA 291. Any truck attempting to travel between I-95 and PA 291 within the city limits must cross this line. Between Morton Avenue on the east side of the city and Booth Street in the West End there are 23 streets which provide access to both sides of the tracks. All the streets pass under the rail line except for Lloyd Street which passes over the tracks on a bridge structure. Those streets in Chester which cross the Amtrak Line are listed in Table T-4 along with their posted underclearances and comments related to the location or conditions of the signs.

The PA vehicle code identifies the legal maximum height for trucks to be 13'6". Trucks exceeding this height are required to obtain a special routing permit from PA DOT which allows them access to the state highway network and informs them of any underclearances on their proposed route through which they are not able to pass. Any vertical clearance over a state road which does not exceed 13'6" is posted by PA DOT; identifying the actual underclearance height. Municipalities are responsible for posting the vertical clearance over municipal roads. Table T-4 identifies the party responsible for posting the clearance over each road in the city. In addition to posting all underclearances which do not exceed 13'6", PA DOT also posts some underclearances which are below 14'6" depending on various factors such as percentage of truck traffic or importance as an access route for truck traffic.

The availability of public transportation is a Fourth issue critical to the mobility of the work force of the city. Chester is considered to have a large transit-dependent population and therefore public transportation service is essential not only for work trips but for all types of trips. Average weekday

**TABLE T-4**

**CITY OF CHESTER**

**AMTRAK Northeast Corridor Underclearances in Chester**  
Listed in order from east to west

<b>STREET</b>	<b>RESPONSIBLE AGENCY</b>	<b>POSTED CLEARANCE</b>	<b>COMMENTS</b>
Morton Avenue	State	12'9"	Posted at bridge
Potter Street (one way WB)	City	12'9"	Posted at bridge
Upland Street (one way WB)	City		Not posted, actual underclearance is 12'6"
Madison Street (one way WB)	State	13'8"	Posted at bridge
Welsh Street (one way EB)	City	13'8"	Posted on bridge, no advance signs, inches erased on signs
Ave. of the States (one way EB)	City	13'6"	Posted on bridge, no advance signs
Sproul Street (one way WB)	City	12'9"	Posted on bridge, inches erased on sign
Penn Street	City	16'4"	
Barclay Street	City	13'11"	EB sign at bridge but faces 6th St; no WB sign; no advance signs
Concord Road	City	13'1"	No EB sign; WB sign on bridge; no advance signs
Parker Street	City	13'11"	EB and WB signs at bridge; no advance signs
Kerlin Street	City	12'6"	EB and WB signs at bridge; poor placement; no advance signs
Lloyd Street		Bridge	
Tilghman Street	City	13'1"	EB sign on bridge; no WB sign; no advance signs

TABLE T-4 (continued)

STREET	RESPONSIBLE AGENCY	POSTED CLEARANCE	COMMENTS
Central Avenue	City	12'6"	EB and WB signs at bridge; no advance signs
Flower Street	State	14'1"	EB and WB signs at bridge; no advance signs
Reaney Street	City	12'5"	EB sign at bridge; WB sign at bridge but obstructed; no advance signs
Yarnell Street	City	12'8"	EB and WB signs at bridge; no advance signs
Jeffery Street	City	12'8"	EB and WB signs at bridge; no advance signs
Engle Street	City	14'3"	EB sign at bridge but turned; WB sign at bridge; no advance signs
Wilson Street	City	12'7"	EB sign at bridge; no WB sign; no advance signs
Highland Avenue	State	12'9"	EB sign at bridge; no advance sign; WB sign at bridge
Booth Street	City	12'0"	EB and WB signs at bridge; no advance signs

\* EB: East Bound WB: West Bound

ridership has declined on SEPTA's R2 Wilmington Line between 1985 and 1991 from 7,100 to 6,700 passengers per day even though this line was extended from Marcus Hook to Wilmington in 1989. A SEPTA rail station survey conducted in 1991 by DVRPC produced data supplied by riders boarding the R2 at the Chester Transportation Center. The information gathered from the Chester Transportation Center was compiled from the 46 respon-

es to the 133 questionnaires distributed. Although this number of responses may be difficult to justify large capital investments to improve the station or the service, the responses do provide a general overview of ridership characteristics and opinions towards the services offered by SEPTA. The survey responses indicated a rating of average for reliability, customer service and information while cleanliness of the station was rated below average.

The fifth critical issue addresses access to the city's major trip generators. These generators account for locations in the city which produce or attract large numbers of trips into a concentrated area such as an employment center, shopping center, medical complex or school. Chester's major trip generators include the waterfront corridor, the CBD, Community Hospital (Formerly Sacred Heart Medical Center), and Widener University. Although a considerable amount of activity occurs in the CBD, most of these trips are not generated from long distance travel using I-95 or I-476. Much of the activity is generated by local trips and is well served by transit. Chester's major employers are located in three general areas of the city: the Waterfront Corridor, the East Side and the West End. Of the city's top 15 employers,

which are listed in Table T-5, only Widener University and Community Hospital are located outside the Waterfront Corridor. This study defines the Waterfront Corridor as the area between Eddystone and Trainer Boroughs and south and east of the Amtrak Line.

## RECOMMENDATIONS

In this section of the report, recommendations are presented which address the previously identified critical transportation issues. These recommendations were developed by reviewing the data that was collected during this study, conducting field views, and reviewing improvements identified in previous studies. These recommendations are intended to serve as a menu of transportation improvements from

**TABLE T-5**  
**CITY OF CHESTER**

**Major Chester Employers\***  
(full time employment - 12/91)

1. Scott Paper Company	1,700
2. Widener University	766
3. Sacred Heart Medical Center	675
4. Fidelity Bank	300
5. Medford's Meats	250
6. Teledyne-Wirz	175
7. Dee Paper Company	150
8. Chester Water Authority	120
9. Joseph Stong Inc.	120
10. DELCORA	102
11. Fisher Tank Company	100
12. Philadelphia Electric Company	95
13. Wm A. Schmidt	94
14. Westinghouse (Resource Recovery)	93
15. Riverbridge Industrial Center	240

\* Does not include city of Chester or Chester-Upland School District

Source: RDC Institute Inc. employer survey 1991

which the city should order. In some instances a broad recommendation is stated and followed by several alternative ways of addressing the critical issue. In this case, the city is left to decide which alternative best solves the problem while balancing the public's interests and the business community's needs. In other instances, recommendations are presented which will address aspects of several critical issues simultaneously since some of these issues are inter-related. Figure T-7 graphically presents the location of these recommendations.

### **Access Between I-95 and the Waterfront Corridor**

In addressing the most critical issue, access between the waterfront and I-95, several concepts are presented. These concepts are directed at identifying routes which provide the best possible access, can be designed to accommodate passenger vehicles as well as truck traffic and can be designated as an access route through signing. Although several alternatives will be offered and it is certainly possible to select more than one or individual aspects of more than one. However, it may be best to select one route and develop it so that it will become recognized as the primary access route. By designating multiple access routes which serve limited movements, the effectiveness of one which attempts to serve all movements becomes diffused.

- The most beneficial and most direct access would be provided by the construction of the on and off-ramps between 9th Street and the Commodore Barry Bridge connector. By using the bridge connector, the new ramps and Flower Street, vehicles would have access to the waterfront in approximately the center of the corridor.

Since the west side of Flower Street abuts the right-of-way of the Barry Bridge, a minimum number of residential properties would be impacted. Flower Street appears to be wide enough to accommodate this type of traffic activity. The clearance of the Amtrak overpass is 14'1" which can accommodate most trucks. The major drawback of this option is the question of whether the construction of these ramps is physically feasible in that location in light of the existing infrastructure. If the engineering of ramps to 9th Street proves impossible, one alternative that should be investigated, would be to keep the ramps tight against the bridge connector and intersect with 7th Street instead of the originally programmed connection at 9th Street.






Any improvement at this location, if proven to be feasible, would require a major capital investment and considerable changes to the existing infrastructure. Realizing that this connection to the waterfront would prove highly beneficial to enhancing its economic development, the City should vigorously pursue this improvement with PA DOT and should urge PA DOT to be creative in identifying alternatives.

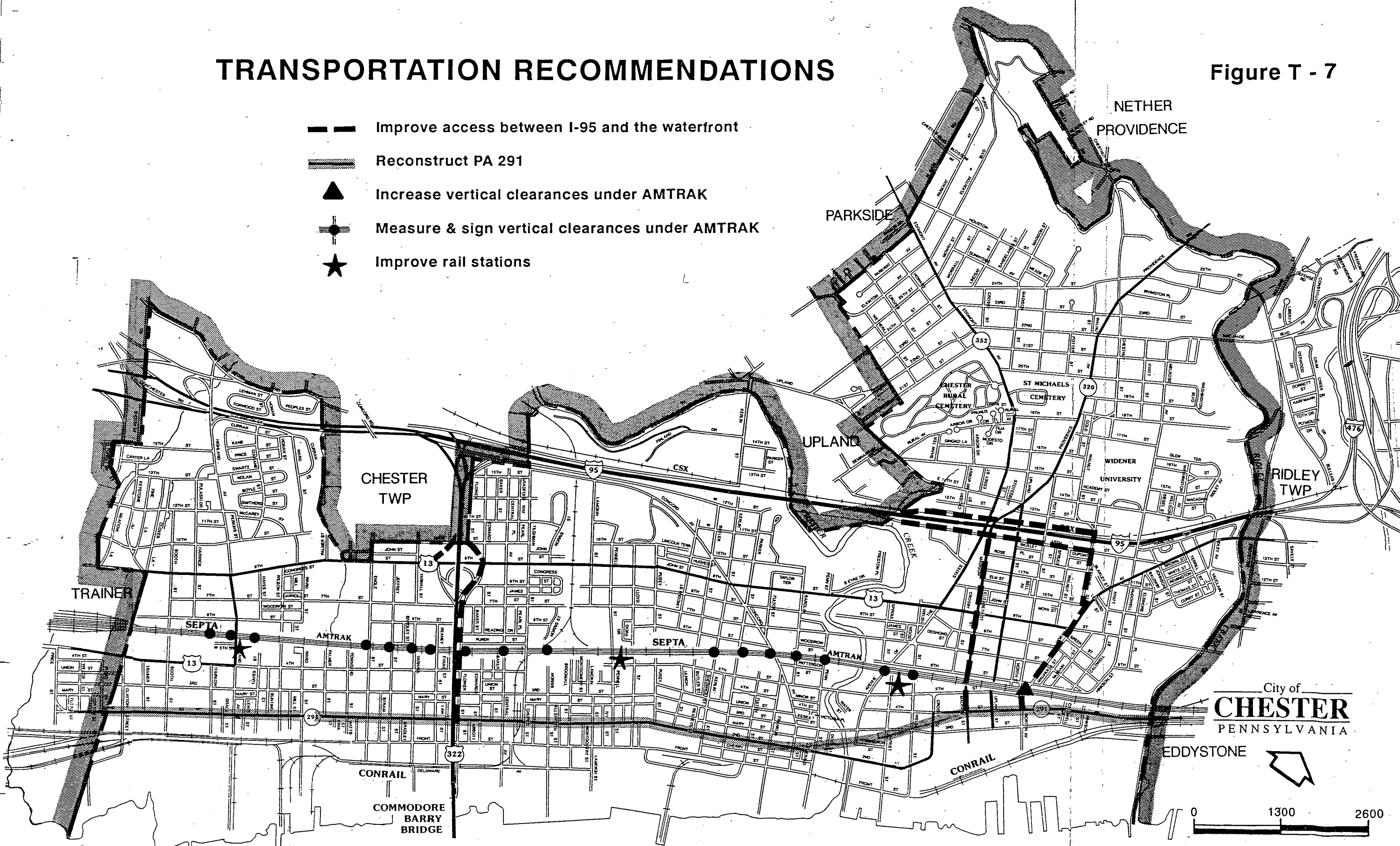
- A complementary access route that should be pursued is the development of the Morton Avenue/Chestnut Street corridor between I-95 and PA 291. This corridor would utilize the existing on and off-ramps at Chestnut Street for traffic to and from the north. This would form the western terminus of a "Waterfront Access Loop" loop for the waterfront balanced on the east by the proposed Flower Street ramps.

Morton Avenue is a state-owned, principal arterial which is 40 feet wide curb to curb. No widening on Morton Avenue is recom-

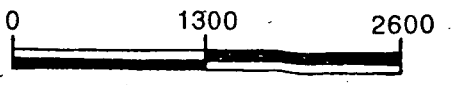
# TRANSPORTATION RECOMMENDATIONS

Figure T - 7

-  Improve access between I-95 and the waterfront
-  Reconstruct PA 291
-  Increase vertical clearances under AMTRAK
-  Measure & sign vertical clearances under AMTRAK
-  Improve rail stations



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mended. The land use is largely vacant, abandoned or commercial uses. There would be very limited residential impact along Morton Avenue. Chestnut Street is a City-owned, minor arterial which is 30 feet wide curb to curb. Some widening may be necessary especially at the intersection with 10th Street and Morton Avenue. The geometrics should be improved by cutting off the corner of the used car lot to eliminate the difficult turn between Chestnut Street and Morton Avenue. The land use on Chestnut Street is mostly industrial with a small amount of residential uses. Some of the residential units appear to be currently unoccupied. Improvements to Chestnut Street would create minor residential impacts.

One potential drawback to the Morton Avenue/Chestnut Street corridor is the low underclearance at the Amtrak crossing. The vertical clearance is 12'9" and creates a serious restriction to the movement of large trucks along this corridor. Previous planning studies as well as recent field views suggest that it may be possible to increase the vertical clearance by lowering Morton Avenue under the Amtrak Line. Morton Avenue should be lowered to increase the underclearance from 12'9" to at least 14'3". The redevelopment of Morton Ave and Chestnut Street should be encouraged by promoting its location for commercial or light industrial uses.

- Although the entire length of Morton Avenue in Chester is a state-owned road and it is classified as a principal arterial, the section between 9th Street and 4th Street does not appear on either the Federal Aid Primary or Federal Aid Urban Systems. Therefore it is currently not eligible to receive federal funds for improvements. The city should petition DVRPC for inclu-

sion of this section of Morton Avenue on the Federal Aid Urban System.

- A modification to the Morton Avenue / Chestnut Street corridor would be to use Madison Street for traffic from PA 291 to southbound I-95. Advantages and disadvantages also exist for this option. This alternative directs traffic headed from PA 291 to southbound I-95 onto Madison Street (PA 320) and eliminates the need to construct a southbound frontage road between Melrose Avenue and Edgmont Avenue and the need to convert 12th Street to a two-way operation between Madison Street and Potter Street and reduces, to some extent, the impacts on the residential uses on 12th Street. However, it doesn't eliminate the use of eastbound 12th Street for traffic from the Edgmont Avenue off-ramp to the Morton Avenue/Chestnut Street corridor.

Madison Street is a state-owned principal arterial road. Between PA 291 and I-95 the land use is a mix of vacant and abandoned parcels, residential uses and commercial uses. An elderly housing high-rise building is located on the west side of Madison Street between 10th Street and 12th Street. Madison Street also has a low clearance at the Amtrak crossing. The vertical clearance is 13'8", however the possibility of increasing the clearance by lowering the road has not been evaluated.

- The easiest alternative, although probably not the most effective, is to upgrade the signing on I-95, I-476, US 322, Stewart Avenue and PA 291 designating the access to the Chester Waterfront via I-95, Stewart Avenue and PA 291. Signs were recently erected on I-95 northbound and I-95 southbound to use Stewart Avenue to get to the Chester Waterfront, however after exiting

I-95 onto Stewart Avenue there is no sign at the Stewart Avenue approach to PA 291 to direct traffic to turn right onto PA 291 to the Chester Waterfront. This access route is extremely circuitous for traffic heading northbound on I-95 and attempting to get to a destination in the western end of the waterfront corridor and then returning to its origin via southbound I-95.

- It is recommended that the designation of Highland Avenue as an access route between I-95 and the waterfront not be pursued. Highland Avenue is a state-owned road from 4th Street to 9th Street and from 15th Street to Bethel Road. Between 9th Street and 15th Street Highland Avenue is a city-owned street. Currently, truck restrictions are posted on northbound Highland Avenue north of 9th Street and trucks are prohibited from turning right from eastbound 15th Street to southbound Highland Avenue. Although the disjointed Highland Avenue interchange allows access to and from both directions of I-95 and US 322, the adjacent land use types discourage the use of this road for truck traffic. Residential uses dominate this corridor. Three schools and several churches are located adjacent to Highland Avenue. The underclearance of the Amtrak crossing is posted at 12'9". Designation of this road as a truck route would create significant community impacts.

- Designating Kerlin Street as a primary access route between I-95 and the waterfront corridor is also not recommended. Kerlin Street is a state-owned road from 9th Street to Upland Avenue in Upland Borough. East of 9th Street, Kerlin Street is owned by the city. The Kerlin Street access to I-95 is only a partial interchange, providing an off-ramp from northbound I-95 and an on-ramp which serves both

southbound I-95 and the Commodore Barry Bridge. No access is available to northbound I-95 or from southbound I-95. The adjacent land use on Kerlin Street is predominantly residential with numerous schools and churches within one block. The underclearance of the Amtrak crossing is posted at 12'6". Designation of this road as a truck route to the waterfront would also create significant community impacts.

### **Traffic Flow Through the Waterfront Corridor**

The problem of traffic flow through the waterfront corridor will largely be addressed by the reconstruction of PA 291 by PA DOT. This widening and realignment project from Ridley Creek to Price Street will address many of the issues which currently prevent the highway from being "user-friendly". The widening will permit a five lane cross section with a parking lane on one side only, turning movements will be made easier for trucks and the installation of new traffic signal equipment will insure better placement and visibility.

Despite previous suggestions that the widening of PA 291 should be terminated at Franklin Street, it is essential to the long term economic potential of the City that this key road be widened all the way through the City. Recognizing the environmental clean up problems associated with the western terminus of PA 291 near Price Street, an interim terminal point should be set at Harwick Street. The City, the Borough of Trainer and PA DOT can then join together in seeking appropriate resolutions to the clean up question while the remainder of the road is being widened. Widening of PA 291 to Harwick Street

would accomplish several important objectives:

- The large volume of truck traffic serving the Delaware County Resource Recovery facility could be channeled more efficiently.
- Other existing industries, including Scott Paper, PQ, Dee Paper, etc. will have significantly improved access to their facilities.
- Prospective new uses of land in the waterfront corridor, including the proposed state correctional facility and a revitalized ship yard would have a road capable of servicing their access needs.
- Almost the entire city waterfront will be opened to new development possibilities, generating additional traffic for the expanded capacity of PA 291.
- Construction of the Flower Street Ramps and improvement of the Chestnut Street/Morton Avenue corridor will join with a widened PA 291 to form a major "Waterfront Access Loop" from I-95 to the city's waterfront.

In addition to the widening of PA 291, there are a number of additional improvements that should be pursued to upgrade this facility to serve its function as a waterfront service corridor:

- The city should initiate a signing plan to erect new street signs, regulatory signs, warning signs, directional signs and informational signs. This can be staged over a several year period with the initial stages

emphasizing the replacement of missing or damaged signs. This plan should be coordinated with PA DOT to make sure that the design and placement of these signs are appropriate. Coordination with PA DOT should also result in the replacement of the destination signs, route marking signs and other signs maintained by PA DOT.

- Parking restrictions should be posted and enforced at all intersections along the corridor to eliminate the conflicts between turning trucks and parked vehicles.
- Crosswalks are recommended to increase pedestrian safety along PA 291. Pedestrian activity in the corridor is generated by the scattered residential uses, the various employment sites and SEPTA's bus route 113, which runs along 3rd Street.
- Installation of increased street lighting and landscaping along the corridor will contribute to safety and help change the current image of the corridor.

These improvements, along with the widening of PA 291 from Ridley Creek to Price Street by PA DOT, will improve traffic flow and enhance the perception of a modern commercial/industrial service highway instead of a local street.

#### **Amtrak Underclearances**

There are several recommendations presented to address the impacts of the Amtrak low clearances on truck circulation in the city. The implementation of one of these recommendations does not preclude doing any of the others. In fact, some of these recommendations could be implemented simultaneously.

- The most important recommendation for this issue is for the city to accurately measure all underclearances to determine if the proper height is posted. Any underclearance that is not properly marked must be posted in a visible location. The city is responsible for posting the vertical clearances over city-owned roads and PA DOT is responsible for state-owned roads. PA DOT should be contacted if the city discovers any discrepancies on state-owned roads between what is measured and what is posted. Priority treatment should be given to the following roads: Upland Street, this underclearance is not posted; Welsh Street, a sign is posted but the inches designation has been erased; Sproul Street, a sign is posted but the inches designation has been erased.

- In addition to verifying all underclearance heights, the city should develop a plan to: 1) replace all missing signs (Upland Street, westbound on Barclay Street, eastbound on Concord Road, westbound on Tilghman Street, westbound on Wilson Street), 2) increase the visibility of all obstructed or turned signs, 3) erect advance warning signs which allows trucks to turn onto an approved route before getting to a crossing under which they can not pass. This can be staged over a several year period, addressing the missing signs and roads with the highest number of trucks first.

- The city should investigate the need and feasibility of increasing the vertical clearance by lowering the roads at locations which are important to truck circulation in the city. The street which has the best potential to be designated as a truck route and needs to be lowered is Morton Avenue; Flower Street has the potential to be desig-

nated as a truck route but does not need to be lowered. Together, these two roads would form the proposed "Waterfront Access Loop". An engineering feasibility study should be conducted to determine if it is possible to lower Morton Avenue under the Amtrak crossing. The city should then petition PA DOT to include the improvement on the Twelve Year Capital Improvement Program.

- A number of streets in the city are signed to prevent truck traffic, however there are no officially designated truck routes. The city needs to designate truck routes which will serve those locations which generate a lot of truck traffic while attempting to avoid areas of residential development and school zones. Since this routing will undoubtedly consist of state-owned roads, the PA DOT developed and approved methodology for designating truck routes should be followed.

- Since truck travel in the city faces many constraints and since this has a direct effect on doing business in Chester, a promotional pamphlet should be developed for truckers and trucking companies which identifies the routes that the city has deemed to be the best to serve truck circulation. These routes should be graphically presented on a map which locates destinations of interest to truckers and the routes that have been designated to reach them. The map should also identify constraints to truck travel such as the heights of Amtrak underclearances, streets which prohibit trucks, one-way streets and closed or weight-restricted bridges. This could serve as a marketing tool to help promote economic activity for Chester.

## Public Transit

Several recommendations are presented that deal with various elements of the public transit system. They should be pursued simultaneously and implementation of one should not preclude the others.

- The Chester Transportation Center is the focal point for public transportation activity in the city. However, the station building is deteriorating, the service hours are limited, the amenities are poor and security is a concern. Improvements such as painting and physical improvements to the ticketing area, waiting room, inside and outside stairways and platform area would make the station a more comfortable and more attractive place. Other improvements such as extending the service hours, keeping the building open longer which could be used as a heated or air conditioned shelter, providing amenities such as a newsstand, ticket or food vending machines and route information as well as increasing security would create the feeling of an actual transportation center rather than a transfer location. The objectives of these improvements is not only to make this a viable and vibrant transportation center but also to increase ridership on the routes it serves.

Beyond these immediate basic operational improvements, the city should initiate discussions with SEPTA regarding more significant improvements to the Chester Transportation Center in conjunction with the proposed "Government Office District" project and other development activity discussed in the economic development section of this plan.

- Lamokin Station on SEPTA's R2 Wilmington Line is not much more than a low level stop with no platform, no shelter,

an unpaved parking lot and no opportunity to purchase tickets. There are no signs on PA 291 identifying the route to the station. This is the first stop in fare zone 3 which means that passengers boarding at Highland Avenue, the next station to the west - which is in fare zone 4, must pay a higher fare. Although this station experiences low ridership it should be improved with at least minor improvements such as signs on PA 291, 3rd Street, Pennell Street and on Lamokin Street, paving and lighting the parking lot, and installing a ticket vending machine. It is SEPTA's policy to charge a \$1.00 penalty to purchase fare on board the train even if there are no means of purchasing it at the station before the passengers board. For that reason, a ticket vending machine is recommended at this location.

- Identification of the public transit needs of the employers and employees in the city should be determined through a survey. This survey should address both transit riders and non riders in an attempt to improve services to satisfy the existing passengers and to capture new passengers.

## Access to Major Trip Generators

Several recommendations presented here have been addressed in previous recommendations. This demonstrates the point that several of the city's critical transportation issues are interrelated.

- Auto access between the Waterfront Corridor and I-95 can be accommodated by any of the existing interchanges depending on the location of the trip's origin or destination within the Waterfront Corridor. Construction of the proposed ramps at Edgmont Avenue and the Commodore

Barry Bridge connector will enhance the existing access for autos. Truck access has been discussed extensively in a previous recommendation.

- Traffic to and from the central business district from the south would use the existing Edgmont Avenue off-ramp and the proposed Edgmont Avenue on-ramp. Two options to provide improved access between the CBD and the improved Morton Avenue/Chestnut Street Corridor include: minor widening on 12th Street to allow a two-way traffic flow or the construction of a southbound only frontage road adjacent to the north side of I-95 between Melrose Avenue and Edgmont Avenue at grade level to Edgmont Avenue.

12th Street is a City-owned, local street which is 30 feet wide curb to curb. It operates one-way eastbound between Madison Street and Potter Street and two-way east of Potter Street. Between Edgmont Avenue and Chestnut Street, the north side of 12th street abuts the right-of-way for I-95 and the south side is residential. The north side of 12th Street is posted for no parking, however it was observed on several field views that the restrictions were not being enforced. Some minor widening on the north side of 12th street may be necessary. Improvements to 12th Street would create minor impacts to the residents.

Construction of a southbound only frontage road along the north side of I-95 from Chestnut Street to Edgmont Avenue would complete an extended form of a full interchange for downtown Chester. It would also remove a significant amount of through traffic from the Widener campus and lead it more directly to the downtown area.

- Auto and truck access between I-95 and Widener University should be directed to use the Edgmont Avenue and Chestnut Street ramps.

- The proposed I-95 Ninth Street ramps to and from the Commodore Barry Bridge connector would provide the best access to Community Hospital as well as the previously discussed access to the Waterfront.

The vital role that the proposed Commodore Barry Bridge connector ramps and the proposed Edgmont Avenue on-ramp could play for Chester's mobility can not be overstated. The city should vigorously pursue these two desperately needed additions to their transportation system.

### Miscellaneous

In addition to those recommendations which address the previously identified critical transportation issues, several supplemental recommendations should be mentioned.

- Because of its potential impact on I-95 through Chester, the city should play an active role in the advisory committee structure established to support the I-95 Intermodal Mobility Project.

- As part of the I-95 Intermodal Mobility Project, sound barriers should be erected along I-95 in noise sensitive areas. The most obvious area is the residential neighborhoods from Highland Avenue to north of the Commodore Barry Bridge. A noise impact analysis, which measures the decibels of existing traffic as well as decibel estimates of projected traffic, should be

conducted in areas such as the William Penn Elementary School at 15th Street and Highland Avenue, the Christopher Columbus Elementary School at 11th Street and Parker Street, Chester High School and the Crozer Chester Medical Center. The city should request that PA DOT include these elements into the overall project.

- Another recommendation associated with the I-95 Intermodal Mobility Project addresses the concept to develop a Highland Avenue Intermodal Center. This report recommends that the city urge PA DOT not to pursue this concept. This concept provides minimum benefits to the city or its residents while having an adverse effect on the neighborhood, local traffic conditions and the existing Chester Transportation Center.

- Due to the poor physical condition of the city's traffic control devices, traffic regulatory signs, traffic warning signs and pavement markings, the city should retain the services of a qualified traffic engineer to perform a traffic signal and signage study. The purpose of this study would be to inventory all traffic related signs and signals including street signs and pavement markings, identify their physical condition, determine if they are warranted and determine if there are locations where signs or signals are missing. In addition to the inventory, an implementation plan describing necessary improvements should be developed. The improvements in this implementation plan should be prioritized to allow the city to address the most deficient areas first and phase-in the improvements over time.

- Either separately or as part of the traffic signal and signage study, the city should retain a qualified traffic engineer to assist in reviewing the current street traffic patterns in the city. This review should have a special emphasis on ingress and egress to the central business district and should be coordinated with the CBD revitalization study proposed in the economic development section of the Plan.

- The city should actively support private efforts to improve the appearance of key city highways through promotion of "adopt-a-highway programs", "gateway signage programs" and other initiatives.

## GOALS AND OBJECTIVES

**GOAL:** Provide for efficient and effective movement of people and goods within the city limits.

Objective 1: Complete long delayed critical highway improvement projects including widening of Route 291 and installation of the I-95 southbound ramp at Edgmont Avenue.

Objective 2: Improve access between I-95 and the Chester waterfront through the establishment of new "Waterfront Access Loop".

Objective 3: Upgrade the existing public transit system in the city to improve access to serve job generators and shopping areas both within and outside the city.

Objective 4: Provide an effective signage and traffic control system to maintain an efficient traffic flow throughout the city.

Objective 5: Establish highway, street and parking systems which are compatible with existing and planned land uses.

Objective 6: Actively pursue completion of programmed highway improvement projects, especially the replacement of critical bridge connections.

## SUMMARY

The city of Chester has excellent geographic positioning from a highway accessibility perspective. The city needs to capitalize on this accessibility by completing missing highway components, by establishing strong new links to the waterfront and by improving and taking full advantage of its existing transit capacity.