

Chapter 8

Transportation and Circulation Plan

Introduction

The relationship between the use of land and its impacts on the circulation network is an important element in the comprehensive planning effort. A community's quality of life is highly dependent on the efficient use of land as well as effectiveness of its circulation network. In order for a network to adequately serve adjacent land uses, it must be regularly evaluated as new development or redevelopment occurs. Different land uses require different road characteristics, and addressing future transportation needs is dependent on a sound understanding of the current network.

Existing and proposed development areas must be considered when making future road programming decisions. In turn, future development patterns should not adversely affect the circulation system. It is necessary to follow appropriate design standards, improve existing roads and manage access so the road network will be capable of performing its intended function. Municipal and individual land use decisions are strongly influenced by existing or proposed circulation systems, while at the same time these same land use decisions can affect the circulation systems and the functions which the roads are expected to perform.

The circulation system within a community has an important influence on the type and location of development which occurs. The location of residential, commercial, and industrial uses can influence the function or classification of roads, their design and their condition. In addition to influencing the character of the community by influencing land uses, the perception of a community can be influenced by the circulation system itself. A municipality with relatively narrow winding roads abutting agricultural and wooded areas will often be perceived as having a rural character, while a municipality with high traffic volumes, unsynchronized signalization, and delays at intersections could be perceived as gridlocked. In areas where development has occurred which does not respect the limitations of the circulation system, the perception can be one of poor planning and frustration.

IMPORTANCE OF TRANSPORTATION

Transportation affects the daily lives of most people. It is important to understand the impact of transportation needs on an area. One aspect of transportation needs is travel to and from work. The U.S. Census provides information that can be used to determine the circulation needs of a community. The following chart shows the methods used for commuting to work for the Region's labor force 16 years and older in 2000.

COMMUTING TO WORK - 2000

| | Washington Township | | Borough of Waynesboro | |
|--|---------------------|-------------|-----------------------|-------------|
| Total Workers 16 years and over | 5,577 | 100% | 4632 | 100% |
| Drove alone to work | 4,795 | 86% | 3,814 | 82.3% |
| Carpooled | 555 | 10% | 502 | 10.8% |
| Public Transportation (including taxicabs) | 22 | 0.4% | 36 | 0.8% |
| Walked to work | 81 | 1.5% | 170 | 3.7% |
| Other means | 21 | 0.4% | 27 | 0.6% |
| Worked at home | 103 | 1.8% | 83 | 1.8% |
| Mean travel time to work (minutes) | 24.5 | | 21.5 | |

Source: U.S. Census Bureau

As the chart above reflects, of Washington Township's labor force, 16 years and older, 4,795 (86%) drove alone to work, another 555 (10%) carpooled. Waynesboro had similar numbers with 3,814 (82.3%) traveling alone to work, and 10.8 percent carpooling. The mean travel time to work was 24.5 minutes for the Township and 21.5 minutes for Waynesboro as compared to Pennsylvania at 25.2 minutes. The National mean travel time to work was 25.5 minutes.

Since the reliance on the automobile is so strong in the Region, it is very important that transportation and circulation issues are addressed.

Addressing transportation issues has three critical benefits:

- It increases the quality of life for the residents by facilitating circulation and making travel safer.
- Attractiveness of the Region as a destination and place of work or residence can be enhanced if congestion is mitigated; and, the level of service and visual attractiveness of area roads are maintained.
- PA Route 16 is considered the main economic growth corridor of the Region. Providing a well maintained transportation system is necessary to support optimum economic development.

Regional Influences on Traffic Circulation

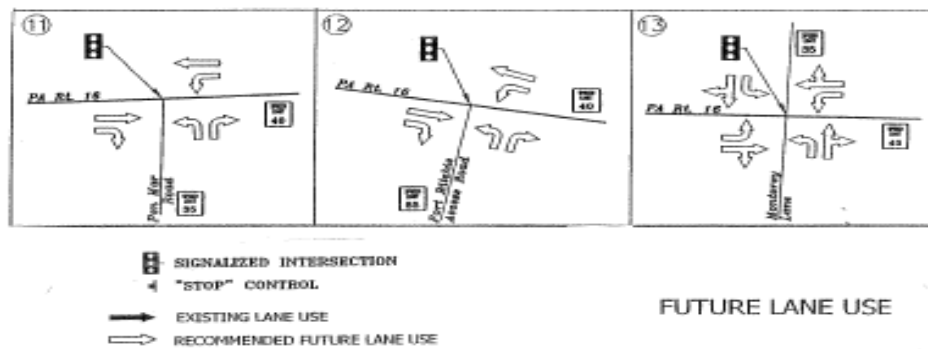
PA Route 16 (Buchanan Trail East) - The main principal arterial in the region, PA Route 16 contains the highest traffic volume in the planning area and bisects the Township and Borough as the main east-west artery. There is approximately 12 miles of roadway through Washington Township and another two miles in the Borough limits.

PA Route 997 (Anthony Highway) – Is one of two north-south routes for the Region providing access to Chambersburg and Fayetteville to the North, and Hagerstown and Smithsburg, Maryland to the South.

PA Route 316 (Wayne Highway) - Is the second north-south route for the Region providing access to Route 30 east, Chambersburg and Fayetteville to the North, and Hagerstown and Smithsburg, Maryland to the South.

Fort Ritchie Redevelopment - The proposed development of the Fort Ritchie site will include approximately 673 residential units and over 1.6 million square feet of office development. This will present an increase in traffic to the Region

In the Traffic Impact Analysis prepared for Fort Ritchie by The Traffic Group, recommended road improvements were presented for the intersections shown below.



It was noted the road improvements that are detailed above have not been designed. The recommendation for these road improvements is conceptual in nature and is based upon the mathematical computations/capacity analyses that are provided in the report. Feasibility studies would be necessary to determine actual design.

COMPOSITION OF THE CIRCULATION NETWORK

Township and State road mileage for Washington Township and Borough of Waynesboro are listed below in Table 8-1.

Table 8-1: Road Miles - Washington Township/Waynesboro Borough

| Municipality | State Miles | Township/Borough Miles | Total Miles |
|-----------------------|-------------|------------------------|-------------|
| Washington Township | 43.92 | 83.39 | 127.24 |
| Borough of Waynesboro | 10.81 | 29.95 | 40.76 |

Important Transportation Corridors

PA Route 16, PA Route 997 and PA Route 316 are the most important corridors in the Region.

PA Route 16 (Buchanan Trail East) is the major east/west corridor in the Region. The road provides access to Greencastle, Mercersburg, and Emmitsburg, Maryland. It is a direct conduit to Interstate 81, which is an important national highway providing north-south transit from Canada to the southern United States, as well as US Route 15 in Adams County, which provides access to Harrisburg and Frederick, Maryland..

PA Routes 997 and 316 provide a north-south route to the Township with access to Chambersburg and Fayetteville to the north, and Hagerstown and Smithsburg, Maryland to the South. In the north, these roads provide secondary access to Interstate 81 and in the south; they provide secondary access to Interstate 70.

ROADWAY FUNCTIONAL CLASSIFICATION

How a particular highway is used determines the function that it serves in the system. Highway and roadway classification are based on analysis of the volume of traffic using the facility, the type of trip provided, the length of the trip, and the speed of the trip.

Road classifications are shown on the Transportation Map, Figure 8.1. The following is the list of each existing type of functional classification in the Region based on the Penn DOT criteria:

Principal Arterial System - The principal arterial system consists of a commercial road network of continuous routes having the following characteristics:

- Serve the corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel.
- Provides connections to all, or nearly all, urban areas of 50,000 and over population and a large majority of those with population of 25,000 and over.
- Provide an integrated network without stub connections except where unusual geographies or traffic flow conditions dictate otherwise (e.g., internal boundary connections and connections to coastal cities).

The principal arterial system is stratified into the following two subsystems:

Interstate System - The interstate system consists of all presently designated routes of the Interstate System located outside small urban and urbanized areas.

Other Principal Arterial System - This system consists of all non-Interstate principal arterial highways located outside small urban and urbanized areas.



There are no Principal Arterials in the Region.

Minor Arterial System - The minor arterial system should, in conjunction with the principal arterial system, form a network having the following characteristics:

- Link cities and towns (and other generators, such as a major resort area, that are capable of attracting travel over similarly long distances) and form an integrated network providing interstate and inter-county service.
- Be spaced at such intervals, consistent with population density, so that all developed areas are within a reasonable distance of an arterial highway.
- Provide service to corridors with trip lengths and travel density greater than those predominately served by rural collector or local systems. Minor arterial highways therefore constitute routes whose design should be expected to provide for relatively high overall travel speeds, with minimum interference to through movement.

Minor Arterials in the Region:

- PA Route 16 – Township and Borough
- PA Route 316 – Township and Borough
- PA Route 997 – Township and Borough
- S. Potomac Street - Borough
- N. Church Street – Borough
- N. Grant Street - Borough
- E. Fifth Street - Borough
- Midvale Road

Collector Road System – The collector routes carry local traffic between minor streets and arterials and provide land access service and traffic circulation in residential neighborhoods, commercial and industrial areas.

Collector Roads in Washington Township:

- Airport Road
- Amsterdam Road
- Charmian Road
- Country Club Road
- Fort Ritchie Access Road
- Furnace Road
- Gehr Road
- Harbaugh Church Road
- Iron Bridges Road
- Lyons Road
- Marsh Road
- Mentzer Gap Road
- Monterey Lane
- Sabillasville Road
- North Welty Road
- Old Forge Road
- Old Mill Road
- Old Pen-Mar Road
- Old Route 16
- Orchard Road
- Pen-Mar Road
- Stottlemeyer Road
- Tomstown Road
- Waterloo Road
- Welty Road
- Wharf Road
- Washington Township Boulevard

Collector Roads in Waynesboro Borough:

- Clayton Avenue
- Cleveland Avenue
- Fairview Avenue
- Ninth Street/Cemetery Avenue
- Roadside Avenue
- Third Street
- West Sixth Street

Local Road System - The local road should have the following characteristics: (1) Serve primarily to provide access to adjacent land; and (2) Provide service to travel over relatively short distances as compared with collector roads or other highway systems. Local roads will, of course, constitute the remaining road mileage not classified as part of the principal arterial highway, minor arterial, or collector road systems.

The 1999 Franklin County Comprehensive Plan has a similar classification system but further breaks down the classification to identify Major Collectors. In Washington Township the Major Collectors identified by the County are:

- Orchard Road (S.R. 2015)

- Marsh Road (S.R. 2002)
- Salem Church Road (S.R. 2005)
- the State-maintained portion of Polktown Road (S.R. 2005).

**HIGHWAY FUNCTIONAL CLASSIFICATIONS AND
RECOMMENDED DESIGN FEATURES**

| <u>Classification</u> | <u>General Provisions</u> | <u>Right-of-Way Width (ft.)</u> | <u>Cartway Width</u> |
|-----------------------------------|---|--|--|
| Interstate Expressway | 55+ MPH Limited Access No Parking Noise Barrier/Buffer (where required) | Minimum 120; however, may be wider based on local conditions and design | Minimum four 12' wide travel lanes with 10' wide shoulders capable of supporting heavy vehicles |
| Arterial (Principal and Minor) | 35-65 MPH Some access controls to and from adjacent development. Encourage use of reverse and side street frontage and parallel access road. No Parking | 80 | 48-52 feet; 12' wide travel lanes with shoulders in rural area and curbing in urban areas |
| Collector (Major and Minor) | 25-35 MPH Some access controls to and from adjacent development. Parking permitted on one or both sides. | 60 | 34-40 feet; 12' wide travel lanes with stabilized shoulders or curbing; 8' wide lanes provided for parking. |
| Local | 15-35 MPH No access control to and from adjacent development. Parking permitted on one or both sides. | 53 | 28-34 feet with stabilized shoulders or curbing; cartway widths can be reduced based on interior traffic patterns. |

TRAFFIC VOLUMES

Traffic volumes are determined through traffic counts taken at specific locations within a transportation corridor. The volume is usually portrayed in terms of annual average daily traffic (AADT). This represents the average count for a 24 hour period, factoring in any fluctuations due to the day of the week or month of the year. The AADT is an important factor that, in conjunction with the previous factors outlined, helps in determining the functional classification of a road.

Information available on traffic volumes is important in determining the potential for capacity problems. Roads that are not used for the purpose for which they are intended can experience capacity problems. This is particularly evident in areas experiencing a significant amount of new development without concurrent upgrades to the transportation corridors. Capacity problems become particularly evident when the number of lanes is reduced and traffic is funneled from a roadway with a higher number of lanes to one with a lower number of lanes.

In addition to the increased development in the Region, capacity on the Region's roads is also heavily influenced by traffic originating outside the area. Roads most likely to experience capacity problems are PA Route 16, PA Route 316 and PA Route 997, because these roads are carrying traffic to Borough locations as well as regional traffic at increasingly higher volumes. Traffic volumes are beginning to increase on other roads throughout the Township as well.

There are several factors contributing to the traffic impact in Washington Township and Borough of Waynesboro. There is regional traffic, which includes trucks, tourists, and commuters going to Chambersburg, Hagerstown employment centers (and Interstate 81) local traffic patronizing businesses in Waynesboro, as well as, local traffic that must travel through the Borough to connect to highways from the center of the Borough and commercial areas of the Township. The proposed development of the Fort Ritchie site into approximately 673 residential units and 1,618,421 square feet of office development with access at Pen Mar Road and Fort Ritchie Access road has been studied for traffic impacts and found that two intersections would be operating at a poor service level: PA Route 16 and Monterey Lane; and PA Route 16 and Fort Ritchie Access Road.

Highest average daily traffic volume in the Region is PA Route 16, with AADT counts in the Region of 15,805 at the eastern end, 10,831 on the western side and 25,978 between Church Street and N. Grant Street.

AADT numbers for selected roads can be found on Figure 8.1 the Transportation Map.

The Washington Township Comprehensive Plan of 1999 contained a traffic volume map. Volumes on roads in the Township can be compared.

| | 1999 Comprehensive Plan | 2008 Comprehensive Plan | % Change |
|------------------------------------|------------------------------------|------------------------------------|-----------------|
| Five Forks Road | 1,178 | 1,113 | -5.5 |
| Wharf Road | 395 | 700 | +77.2 |
| Wayne Highway (North of Borough) | 5,101 | 5,728 | +12.3 |
| Wayne Highway (South of Borough) | 4,800 and 4,000 | 5,864 | +46.6 |
| Marsh Road | 354 and 954 | 566 and 1,066 | +59.9 and +11.7 |
| Iron Bridges Road | 621 | 550 | -11.4 |
| Anthony Highway (North of Borough) | 6,609 | 5,264 | -20.4 |
| Anthony Highway (South of Borough) | 3,810 | 3,881 | +1.9 |
| Old Forge Road | 2,031 | 4,303 | +112 |
| Mentzer Gap Road | 1,925 and 709 | 4,303 and 3,300 | +124 and +365 |
| Welty Road (near Anthony Highway) | 1,020 | 1,773 | +73.8 |
| Midvale Road | 2,246 | 3,712 | +65.3 |
| Harbaugh Church Road | 986 | 599 | -39.2 |
| Pen-Mar Road | 1,950 | 950 | -51.3 |
| Monterey Lane | 971 | 945 | -2.7 |
| Sabillasville Road | 3,886 | 2,900 | -25.4 |
| Fort Ritchie Access Road | 5,610 | 6,547, 2,000 | +16.7, -64.3 |
| Old Route 16 | 767 | 618 | -19.4 |
| Route 16 (Zullinger) | 8,773 | 9,925 | +13.1 |
| Route 16 (Main Street) | 17,172 | 15,805 | -8.0 |
| Route 16 (Buchanan Tr. East) | 9,461 to 6,084 | 11,744 to 6,255 | +24.1 and +2.8 |

The largest percentage increases occurred on Wharf Road (likely because of development of the industrial park), the western portion of Marsh Road, two major roads leading to Maryland-Wayne Highway and Midvale Road, Welty Road, and roads on the fringe of the Township's growth area – Mentzer Gap Road and Old Forge Road.

Largest percentage decreases occurred on Harbaugh Church Road, Pen-Mar Road, and Fort Ritchie Access Road. Initially, over time traffic volumes increased on the Fort Ritchie Access Road, but upon the closing of the Fort, volumes declined dramatically.

Transportation and Circulation Plan

Goal:

Plan for a circulation system which will allow safe and efficient vehicular, bicycle, and pedestrian travel throughout the Region.

Objectives:

- Complete Washington Township Boulevard.
- Coordinate land use and road improvement policies.
- Improve the safety of intersections along PA Route 16.
- Preserve and improve the capacity of the existing roads within the area as future development occurs through cooperative efforts with developers and PennDOT.
- Monitor impacts on roadway capacity from new development and require developers to address projected increased traffic volumes in the road system by improving the existing system.
- Investigate providing additional parking opportunities in Waynesboro Borough.
- Assure adequate access management occurs along the major road corridors such as PA Routes 16, 316, 997, and Washington Township Boulevard to minimize the number of access points to the road system.
- Facilitate pedestrian circulation within the business areas of the community through such means as benches, landscaping and other pedestrian amenities.
- Preserve the scenic road corridors and vistas within the Township.
- Maintain and upgrade the existing road system as necessary and encourage PennDOT to improve state-controlled roads and intersections.
- Institute appropriate traffic calming and noise abatement techniques in the Region.
- Encourage and support the development of a network of trails linking residential areas to open space and recreation resources, surrounding municipalities' trail systems.

- Encourage maintenance and improvement of sidewalks and curbs, completion of gaps in the sidewalk system, and extension of the sidewalk system.
- Expand the pedestrian system to the area of the Waynesboro Area School District facilities.
- Relieve truck congestion along PA Route 16, particularly in the Borough.
- Determine the merits of and appropriate locations of park and ride facilities and other multi-modal facilities.
- Encourage Franklin County to implement a County-wide public transit system.

Actions:

- A. Update zoning ordinances as necessary.
 1. Include access management standards in zoning and/or subdivision and land development ordinances as determined by the Borough and Township:
 - a. Establish access location standards
 - b. Establish access point separation requirements
 - c. Require access to streets of lower functional classification
 - d. Require internal road systems
 - e. Require coordinated/shared ingress and egress
 - f. Require interconnection of properties, including access, parking, loading
 - g. Establish separations from intersections
 - h. Require coordinated traffic movements
 - i. Require acceleration and deceleration lanes where appropriate
 - j. Require left and right turn lanes where appropriate
 - k. Refine design standards for intersections, driveways, internal circulation, and parking lot design

- l. Minimize entrances to roads
 - m. Prohibit inappropriate turning movements
 - n. Consider signalization of high volume driveways
 - o. Refine location, size, and design requirements for billboards and signs.
2. While particularly crucial along the PA Route 16, PA Route 997, and PA Route 316 Corridors, access should be managed along all roads within the Region.
 3. In mixed use areas, where pedestrian activity can be higher, discourage curb cuts over sidewalks to limit pedestrian/vehicular conflict.
- B. Update subdivision and land development ordinances as necessary.
1. Establish appropriate design standards for each functional classification of road. Safe, buffered, and sufficiently set back bike and pedestrian lanes can be included in the cross-sections with consideration given to the Pennsylvania Statewide Bicycle and Pedestrian Master Plan and Guide for the Development of Bicycle Facilities by American Association of State Highway and Transportation Officials (AASHTO). Bike and pedestrian lanes may be required on those roads deemed appropriate by the municipality.
 2. Require traffic impact studies for proposed developments. Such studies require analysis of existing circulation conditions, the impact of proposed development and resulting circulation conditions and the need for traffic improvements to adequately support the development.
 3. Establish appropriate standards for driveway design and access to streets for access management. Coordinate with zoning ordinance design standards and access management provisions. Plans should be reviewed for access management concerns.
 4. Require developers to recognize existing and planned trails and to provide new trails. Standards for trails can be included in the Ordinances. Sufficient rights-of-way and easements may be required during the review process.

5. Require developers to provide pedestrian paths and sidewalks to enhance foot traffic.
 6. Request right-of-way dedication along existing roadways to meet design standards.
 7. Require necessary roadway improvements along the frontage of developments.
 8. Review setback and building location policies along major road corridors to refine regulations that will facilitate future road improvements.
 9. Implement the recommendations of the Franklin County Open Space and Greenway Plan.
- C. Consider the adoption of Official Maps designating proposed public facilities, streets, intersection and road improvements, bike paths, and trails.
 - D. Implement Capital Improvements Programs, and projects recommended by this plan.
 - E. Establish pedestrian pathway improvement programs to enhance foot traffic in the Region, as well as provision of trails to provide improved access to schools, local shopping areas, community facilities and recreation areas, and employment opportunities. ADA requirements should be complied with.
 - F. Work with PennDOT to ensure adequate maintenance of roads with substantial volumes of truck and school bus traffic as well as automobile traffic.
 - G. Continue use of Transportation Impact Fee ordinances in the Township and require land developers to address needed transportation improvements in the Region.
 - H. Work with PennDOT and the Franklin County Planning Commission to recommend appropriate speed limits, reducing them as necessary, in developed areas.
 - I. Prepare multi-year programs for street maintenance and improvement.
 - J. Develop access management plans in cooperation with PennDOT to address access to major roads and access design standards. Encourage cooperative efforts of landowners to manage and share access.

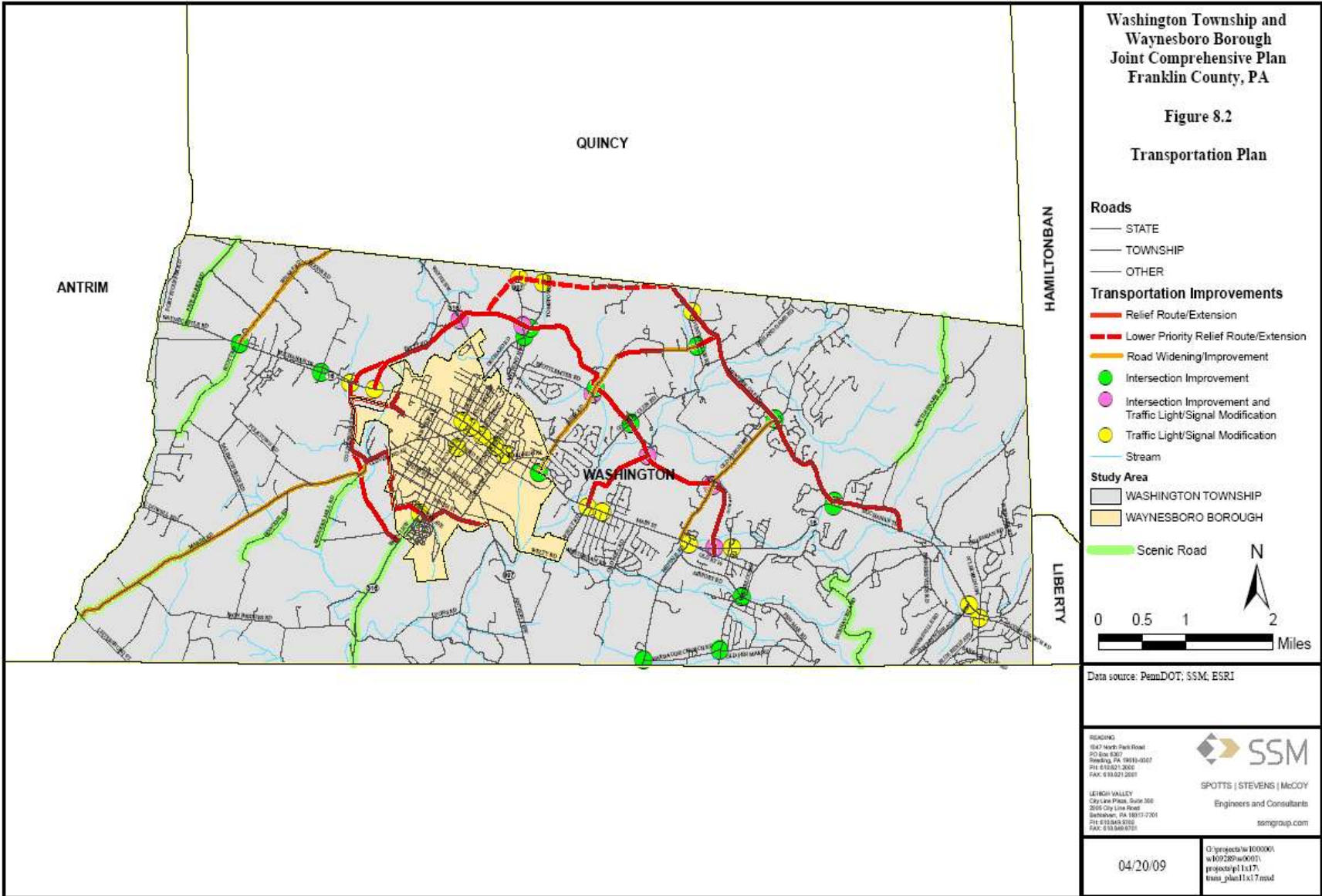
- K. Continue to implement the recommendations of the 2005 Washington Township Roadway Sufficiency Analysis Report and Capital Improvements Plan.
- L. Encourage landowners to cooperate with PennDOT and the municipalities in the redesign of existing strip development areas to manage access and improve streetscapes.
- M. Coordinate utility and road improvements so that utilities are constructed before road improvements are made.
- N. Work with PennDOT, Franklin County, and Quincy Township to improve the single lane bridge on Wharf Road in Quincy Township.
- O. Require property owners to keep street rights-of-way available for required improvements and pedestrian systems.
- P. Work together as a Region with the County, Legislators, and PennDOT to list needed transportation improvements on the Twelve-Year Transportation Program.
- Q. Work with transportation organizations and agencies providing services to seniors to facilitate mobility of seniors by determining desired destinations and means of providing access to those destinations.
- R. Pursue all funding opportunities to fund the completion of Washington Township Boulevard.

Recommended Road Improvements

Intersection Improvements, Realignment, and Widening Projects

The following transportation improvements in the Region should be included in future transportation capital improvement budgets, as well as the PennDOT Twelve-Year Program where applicable. These intersections or roads have been identified as having one or more of the following characteristics: poor sight distance; bad alignment; lack of proper signage or signalization; insufficient width; and/or lack of turning lanes.

Recommended improvement projects for the transportation system for the Region are listed on Figure 8.2, the Transportation Plan Map. All proposed intersection improvements on State roads require PennDOT Highway Occupancy Permits. The intersection improvements are represented by a yellow circle with corresponding numbers by municipality as listed in the following paragraphs.



Washington Township

Suggested Intersection Improvements

1. PA Route 16 and Mentzer Gap Road
2. Old Forge Road and Mentzer Gap Road
3. Country Club Road and Gehr Road
4. Country Club Road and Washington Township Boulevard
5. Gehr Road and Washington Township Boulevard
6. PA Route 997 and Orchard Road
7. Orchard Road /Tomstown Road and Washington Township Boulevard
8. Airport Road and Pen Mar Road
9. Harbaugh Church Road and Old Pen Mar Road
10. Northeast Avenue and PA Route 16
11. Scott Road and PA Route 16
12. Koons Road extended and PA Route 16
13. Harbaugh Church Road and Midvale Road

Realignment/New Road Sections or Extensions

1. Washington Township Boulevard (portion of relief route)
2. North Welty Road from PA Route 16 to proposed Washington Township Boulevard.
3. Koons Road
4. Relief Route Waynesboro Borough (see narrative later in this chapter)

Road Widening/Repairs

Recommended roads or sections of road in need of widening and / or repairing for safety or traffic volume reasons (as highlighted on the Transportation Plan Map, Figure 8.1) include the following:

1. Old Forge Road between PA Route 16 and Mentzer Gap Road
2. Wharf Road between PA Route 16 and the Township line.
3. Portions of Gehr Road between PA Route 16 and Mentzer Gap Road.
4. Marsh Road from Cleveland Avenue to Leitersburg Street.

Traffic Light /Signal Modification

1. PA Route 16 and Monterey Lane
2. PA Route 16 and Fort Ritchie Access Road
3. PA Route 16 and Pen Mar Road Extended

4. PA Route 16 and Midvale Road
5. PA Route 16 and Oller Avenue
6. PA Route 16 and Welty Road
7. Mentzer Gap Road and Country Club Road
8. PA Route 16 and Prices Church Road
9. PA Route 16 and Cold Springs Road
10. PA 997 and Northern (lower priority) Relief Route
11. Tomstown Road and Northern (lower priority) Relief Route

Intersection Improvements AND Traffic Light /Signal Modification

1. PA Route 16 and Washington Township Boulevard
2. Old Forge Road and Washington Township Boulevard
3. Washington Township Boulevard and Welty Road Extension
4. Gehr Road and Stottlemyer Road
5. PA Route 997 and Washington Township Boulevard
6. PA Route 316 and Washington Township Boulevard

Intersection improvements are detailed in Appendix D.

At the intersection of Scott Road and Route 16, turning movements are affected by the narrow condition of Scott Road and the bank and sight distance restrictions to the east of the Scott Road cartway.

At the intersection of Koons Road Extended and Route 16, Koons Road has a narrow cartway.

At the intersection of Harbaugh Church Road and Old Pen Mar Road, realignment to remove the island should be considered.

At the intersections of Beartown Road with Route 16 and Mentzer Gap Road, there are two intersections very close together and horizontal curvature on Mentzer Gap Road as it approaches Beartown Road. Redesign of this area should be considered.

At the intersection of Airport Road and Pen Mar Road, with Waterloo Road, horizontal and vertical alignments need to be addressed.

Waynesboro Borough

Intersection Improvements

1. PA Route 16 and Northeast Avenue

Realignment/New Road Sections or Extensions

1. Relief Route (see narrative later this chapter)
2. Extension of Third Street to PA Route 16.

Road Widening/Repairs

Recommended roads or sections of road in need of widening and repairing for reasons of safety and/or traffic volume include the following:

1. Ninth Street and Cemetery Avenue for Southern Relief Route (see narrative later this chapter)

Traffic Light /Signal Modification

1. S. Potomac Street and Cemetery Avenue
2. S. Potomac Street and Third Street
3. Main Street and Clayton Avenue
4. Main Street and Broad Street
5. Main Street and Church Street
6. Main Street and Potomac Street
7. Main Street and Grant Street
8. Northeast Avenue and Main Street

The Borough is currently undertaking a traffic signalization program where many of the intersections and traffic lights in the Borough will be investigated and updated if necessary.

PENNSYLVANIA'S 2009 TRANSPORTATION PROGRAM

The 2009 Transportation Program projects for Franklin County are listed in Appendix C. Key projects affecting the Region include restoration of Second Street in Waynesboro and resurfacing Route 316 from the Quincy Township line to Route 16.

LONG RANGE PLANNING

The projected future development in the Region, as well as the proposed redevelopment of Fort Ritchie will undoubtedly impact the transportation system in the Region. Therefore, it is important to discuss long range transportation recommendations to

mitigate the implications of increased development. This section will present a vision for the future transportation network in the Region, including strategies for priority corridors, and traffic relief routes, which were identified as the most critical to the Region in terms of a functioning transportation system.

PA Route 16

PA Route 16 is the corridor most in need of future upgrades. Route 16, with the highest traffic volumes, is the principal east/west route and the main transportation corridor in the Region. It also provides access to regional highways including US Route 15 in Adams County, Interstate 81 in Antrim Township, and Maryland Route 15. This corridor bisects the Region's growth area, including the Borough of Waynesboro, where future residential, commercial, and village development is expected. This impending development will increase traffic in the corridor, and eventually surpass the highway's carrying capacity. Washington Township must continue to coordinate efforts with PennDOT, the Borough of Waynesboro, Antrim Township, and Adams County. Develop a strategy to meet this expected increase in traffic.

Fort Ritchie Access

As a result of the federal Base Realignment and Closure Commission's (BRACC) decision, Fort Ritchie will be converted from a U.S. Army base to civilian uses. A military post located in the northeastern corner of Washington County, Maryland (near the Pennsylvania border), the Fort is being redeveloped by the PenMar Development Corporation as a corporate conference and training center. Plans include some residential development as well. The proposed development of the Fort Ritchie site will include approximately 673 residential units and over 1.6 million square feet of office development. Access using Pen Mar Road Extended and Fort Ritchie Access Road have been studied for traffic impacts and found that the following two intersections would be operating at a poor service level: PA Route 16 and Monterey Lane; and PA Route 16 and Fort Ritchie Access Road. Other improvements required include intersection improvement at Harbaugh Church and Midvale Road, Airport Road and Pen Mar Road, and Harbaugh Church Road and Old Pen Mar Road.

RELIEF ROUTES

The Transportation Plan Map, Figure 8.2, presents three possible traffic relief routes around the Borough of Waynesboro. They are described below.

North – Washington Township Boulevard Extension

The proposed relief route around the north side of Waynesboro would extend the existing portion of Washington Township Boulevard in phases to eventually reach PA Route 316. Currently, Phase III is in progress and should be completed in 2009. Phase III would extend Washington Township Boulevard from Country Club road to Gehr Road. Phase IV would extend from Gehr Road to PA Route 997, and the final phase, Phase V, would extend it to PA Route 316.

North – Alternative Route

The northern alternative route is a lower priority to the Washington Township Boulevard extension. It would involve the extension of Mentzer Gap Road to the Quincy Township line, where the proposed road would continue west just south of the Township line, crossing Tomstown Road and PA Route 997 before intersecting with the proposed Washington Township Boulevard extension.

South

The potential for a traffic relief route around the south side of Waynesboro presents a much more difficult undertaking than the north. The Transportation Plan Map, Figure 8.2, depicts some of the more plausible solutions, however, is by no means a finalized portrayal of the options. One option would be to maneuver through a combination of existing and extended Borough Streets, before exiting the Borough in the vicinity of the Mount Vernon Terrace Apartments. From here, the route can cross open lands to reach an extension of Cold Springs Road, or continue to traverse the western border of the Borough to Cleveland Avenue and then to Cold Springs Road, ultimately intersecting with PA Route 16.

A relief option for traffic travelling west to east, would be to extend Cold Springs Road to PA Route 316.

These proposed routes would require exceptional cooperation between the Borough, Township, PennDOT, and Franklin County to plan and mitigate the issues and impacts, particularly environmental, before a final route can be determined. It is also assumed that numerous transportation studies, particularly for roads with deficient capacities, will be undertaken before any route is finalized.

Long Range Strategies

The corridors identified are or are proposed to be State and Municipal-owned and maintained highways. It is critical that the municipalities continue communications with PennDOT and Franklin County, to discuss future planning and upgrades. Reactionary

spot improvements will not suffice, and will ultimately lead to a poorly functioning transportation system. The Township, Borough, PennDOT, and Franklin County Planning Commission need to agree on a vision for these corridors and plan accordingly to accommodate future development. Some of the improvements and concepts recommended by this Plan include the following:

- Complete Washington Township Boulevard.
- Road Widening: add travel and turning lanes to improve traffic flow. The Township and Borough should include provisions for right-of-way preservation in their subdivision ordinances and develop standard design criteria to ensure seamless road corridors between municipalities.
- Signal light coordination: new traffic signals should be located at least one-half mile apart. The cycle lengths of each light should be coordinated to allow for smooth traffic flow along the corridor. Signals with self-adjusting timing mechanisms can optimize flow at intersections. Higher density and village development should occur near signalized intersections, to lessen the need for additional signals.
- Access management: An effective transportation system cannot allow unlimited land access. Every additional driveway and street intersection introduces traffic and reduces the road's ability to move traffic safely and efficiently. Especially within the growth areas, it is imperative to limit the access points, particularly along PA Route 16 and the Washington Township Boulevard extension. This applies to Township collector roads as well. The Township and Borough must discourage subdivision along the frontages of main transportation corridors to lessen points of access. PennDOT has developed guidelines for municipalities to use when formulating their own access management regulations. The Township and Borough should coordinate with PennDOT to develop access management regulations to include in their respective ordinances.

Roadway Conditions

An inventory of roadway conditions is necessary in order to identify problems within the circulation system and to address these problems as appropriate. Roadway conditions are generally evaluated from the following perspectives.

- Safety
- Access
- Corridor Segments

Safety

Safety concerns are evident at those locations within the circulation system that may pose hazards due to poor road alignment, limited sight distance, design, or structural problems, lack of road shoulders or obstacles near the roadway. These all create hazardous conditions, which can slow traffic and cause congestion and potentially lead to accidents.

Pavement conditions affect travel costs with respect to operation, delay and accidents. Vehicle operation is affected by excessive wear on tires and suspensions misalignments due to uneven road surfaces or worn edges of roadway. Delays occur when drivers have to slow down for potholes or uneven surfaces. Accidents can be caused by all of the above.

Access Management

Access management problems are situations where conflicts between mobility and access are, or will be, intense and result in congestion and safety problems. Access management problems typically occur on roads serving high volumes, high speed traffic, and abutting intense trip generating uses. An example of an access management problem would be where commercial development occurs on a road and the mobility of traffic is adversely affected by the increase in driveways from adjacent land to the road on which the land fronts. As the number of driveways increases, the safety and efficiency of the road can decrease. Access management will be an increasing concern on the roads in the Region in the future. Roads of particular concern are:

- Pen Mar Road
- PA Route 16
- PA Route 997
- Monterey Lane
- Harbaugh Church Road
- Old Forge Road
- Mentzer Gap Road

The Township and Borough should consider working with PennDOT to develop a joint access management plan for the area.

The major elements in access management planning include the following:

- Driveway design standards
- Access management regulations, in coordination with PennDOT.
- Limited number of road entrances

- Traffic Impact Analysis where development is proposed
- Left and right turn lanes constructed at road and driveway intersections
- Installation of medians
- Adequate parking lot/internal circulation design in developments
- Shared access to properties
- Prohibition of inappropriate turning movements
- Interconnection of properties developed along roads
- Improved intersection design/spacing
- Signals at high volume driveways
- Control of access
- Direct new development access to roads with traffic signals.

Corridor Segments

Corridor segment problems are usually found in more densely developed areas when congestion, access and safety issues are all present. Corridor segment problems can include those roads that may possess maintenance issues or exhibit structural problems.

The PA Route 16 corridor is the most heavily traveled road in the Region and also passes directly through downtown Waynesboro. This is an area of concern for safety, maintenance, and congestion.

Transportation Development Districts

The Transportation Partnership Act (Act 47 of 1985 as amended) allows municipalities to create Transportation Development Districts to assist in the financing of transportation facilities and services including roads, railroads, and public transit systems. If municipalities propose a district, property owners who represent more than fifty percent of the assessed valuation in a proposed district must be in favor of the district. The creation of the Transportation Development District allows municipalities to impose assessments upon benefited properties in the District to construct transportation improvements. The needs for such districts in the Region should be monitored.

Congestion Management System Strategies

Congestion management system strategies have been used by some communities to reduce traffic. The major elements are:

- Employee trip reduction plans to increase average vehicle occupancy
- Creation of transportation management associations in which municipalities work with local businesses to identify measures to reduce travel demand. These may include:
 - reducing vehicle concentrations at peak periods by staggering work hours;
 - encouraging commuting by carpool and public transit rather than by single occupancy vehicles;
 - eliminating unnecessary commutes;
 - funding informal paratransit/vanpool operations.

With the potential for more commercial and residential development in the Region, the appropriateness of these strategies should be reviewed. The Transportation Plan Map includes Annual Average Daily Traffic (AADT) numbers for major road segments in the Region. High traffic volume areas, such as the PA Route 16 and PA Route 997 (Church Street) corridors, are most in need of congestion management techniques.

Shoulder Improvements

Developers should be required to improve shoulders along the frontages of the tracts they develop when curbs will not be constructed. In addition, the Township should improve the shoulders along existing Township roads where appropriate. Shoulders should be wide enough to accommodate trails in accordance with the guidelines in the Statewide Bicycle and Pedestrian Master Plan. The Borough and Township's ordinances may mandate these actions.

Traffic Calming

As development in the Region occurs and traffic volumes increase, residential streets and roads will have more traffic. Means of dealing with this additional volume include road improvements, providing increased opportunities for pedestrian and bicycle traffic, supporting efforts to increase automobile occupancy rates, and managing access. If these steps are not sufficient, the Township and Borough may consider traffic calming techniques.

The purpose of traffic calming is to manage movement through an area in a way that is compatible with the nearby land uses. Streets should be safe for local drivers, and traffic should not adversely affect the quality of life of residents.

The general methods of traffic calming include the following:

- Active speed reduction (constructing barriers to traffic movements)
- Passive speed reduction (installation of signage)
- Streetside design (landscaping that changes the appearance of the area and driver attitudes)
- Regional planning efforts that direct external traffic to other routes
- Opportunities for use of alternative modes (mass transportation, pedestrian, bicycle)

1. *Active Speed Reduction (constructing barriers)*

- a. Speed tables are raised areas in the street surface that extend across the width of the street. Speed tables, which are really raised pedestrian crosswalks, may be more successful. They are most appropriate in areas with substantial pedestrian traffic.
- b. Changes in roadway surface may include rumble strips, milling, and special roadway surfaces. These techniques can increase noise in areas and raise objections from area residents.
- c. Intersection diverters may involve a barrier placed across an intersection, typically to alter travel plans, such as permitting right turns only, to make travel through a neighborhood more indirect.
- d. Channelization may involve provision of pedestrian refuge areas, providing protected parking bays through landscaped islands, altering motor vehicle traffic movements, and restricting movements at intersections by narrowing the space available for vehicular movement.

The active controls require changes in driver behavior. Although active methods convey that the street is not just for through traffic, such methods are costly, and can be viewed negatively by some.

2. *Passive Methods of Control*

- a. Traffic signs saying “Do Not Enter”, “Stop”, “Not a Through Street”, “Local Access Only”, “No Trucks”, or signs establishing speed limits, indicating one-way street, or prohibiting turns.
- b. Traffic signals.

- c. Pavement markings, including crosswalks, edgelines, and use of different materials for pedestrian crosswalks.
- d. Permitting on-street parking.
- e. Speed watch.

These methods have lower costs and can apply to only certain times of the day, if appropriate; however, signs are often ignored and enforcement is necessary.

The main emphasis should be on the passive traffic calming techniques. Active traffic calming techniques should be used only if passive techniques are not successful due to their cost and the inconvenience of their construction.

Prior to implementing any traffic calming program, it is necessary to identify the specific problems to be addressed; identify and evaluate the alternative techniques and their drawbacks, benefits, and cost; to identify alternative traffic patterns that could result from implementation of the techniques and the effects of those patterns on other streets and neighborhoods; and to involve residents in the evaluation and selection of techniques. Such techniques should not detract from the character or visual quality of a neighborhood.

Gateways

Formal gateways should be considered at the entrances to Washington Township, Waynesboro, and Villages of Zullinger and Blue Ridge Summit along PA Route 16. A gateway is an entrance corridor that defines the arrival point as a destination. Gateway planning addresses the arrangement of the landscape to create a visual experience that establishes a sense of arrival at the destination and provides a positive image of the destination. The Township and Borough can work with property owners to enhance these gateways. Consistent road corridor overlay zoning could be adopted along the major roadways.

The primary gateways to the Region include both ends of PA Route 16 and PA Route 997, and PA Route 316. At these gateways, the Township and Borough can work with property owners to enhance commercial areas through coordinated landscaping, signage, lighting, street furniture, paving materials, site improvement design, building facades, and window displays. When infill, redevelopment, or new development occurs, developers should be required to comply with performance and design standards that would address these elements. When new parking facilities are constructed, they should be landscaped, buffered, and located to the side or rear of buildings.

Signage should be minimal, and appropriate to the character of the Region.

Property owners should be encouraged to maintain and improve properties, particularly those that may have negative impacts on surrounding properties. In places where the rear of commercial properties face or abut residential properties, the appearance of the commercial properties and their impact on the residences should be mitigated.

Scenic Roads

Scenic roads are an important element in the circulation system within the Region and should be maintained. Scenic roads include roadways that offer picturesque views of the surrounding countryside, or offer a pleasant drive under a canopy of trees. The Township should decide whether it would be appropriate to adopt scenic road overlay zoning along scenic roads. Within such overlay areas, greater setbacks along the roads may be required, additional landscaping and screening requirements may be established, and design standards for siting of buildings may be established in order to minimize visual impacts of any development.

Discouraging intensive development along the scenic roads also has another benefit. It can lessen traffic volumes and driveway intersections along roads, which are typically not suited for intensive traffic volumes.

Roads identified as scenic include:

- Five Forks Road
- Scott Road
- Sections of Honodel Road
- Hoovers Mill Road
- PA Route 316 South of Cemetery Avenue
- Rattlesnake Run Road
- Buena Vista Road.

Bicycle/Pedestrian Circulation

The Township and Borough should incorporate bicycle and pedestrian improvements into the transportation planning process. The Community Facilities Plan recommends that the Township and Borough strengthen their zoning and subdivision ordinances to ensure that bicyclists and pedestrians are accommodated in the transportation system. As roads are maintained and improved, design requirements for pedestrian and bicycle access should be addressed, such as the provision of bike lanes, sidewalks, and appropriate curb radii at intersections. Limiting radii at intersections to the minimum necessary to allow safe traffic flow can make intersections more pedestrian and bicycle friendly. According to the U.S. Department of Transportation, a curb radius measurement of zero to ten feet is

safest for pedestrians. Pedestrian crossings at street intersections, particularly along the trail routes, should be facilitated by crosswalks, stop signs, and pedestrian islands. Gaps in the sidewalk system (where feasible) should be eliminated. New developments, particularly within Designated Growth Areas, should have sidewalks. Access to community facilities and commercial areas in the Region should be enhanced through expanded and repaired sidewalks and greenways and by establishing crosswalks. Streetscape amenities such as benches, trash receptacles, information signs, and landscaping should be provided in the villages where appropriate.

The Community Facilities Plan, Chapter 7, recommends a greenway and bike trail network for the Region. A conceptual Greenway and Pedestrian/Bicycle System is mapped on Figure 7.4, the Greenways and Pedestrian/Bicycle System Map

Safe Routes to School

This program is designed to work with school districts and pedestrian and bicycle safety advocates to make physical improvements that promote safe walking and biking passages to schools. Collectively, these efforts would save on school busing costs and promote a healthy lifestyle for children. In addition, some funding may be used for pedestrian education efforts. Examples of these types of improvements include sidewalks, crosswalks, bike lanes or trails, traffic diversion improvements, curb extensions, traffic circles, and raised median islands.

Capital Improvements Planning

Capital Improvements planning should be considered for programmed transportation improvements. Capital improvements planning includes financial analysis of past trends in the community, present conditions, and a projection of the community's revenues and expenditures, debt limit, and tax rates, to determine what the financial capabilities of the municipality are. It also includes a capital improvements program which establishes a system of priorities. The final element is the capital budget which lists the schedule of improvements over a 5-year period on the basis of the community's financial capacity and availability of grant money.

In the capital improvements program, capital expenditures are separated from Operational expenditures. Operational expenditures are those for administration, payroll, employee benefits, maintenance and similar functions, and are short term. Capital expenditures are for assets which have a substantial value compared to the total municipal budget and are expected to provide service for a number of years. The construction of a road is an example of a capital expenditure.

The capital improvements program schedules the purchase of capital items in a systematic manner rather than allocating a large amount of money for all expenditures in

one year. Based on the assessment of future needs, future expenditures are planned so that the municipality can anticipate major expenditures prior to the budget year. The program is based on identified capital needs, goals for capital acquisitions, and a priority list of all proposed capital expenditures.

A time frame is established for the capital improvements program. Five-year programs are typical. Every year the schedule for capital improvements must be revised and updated as necessary, based on the current municipal priorities. For each project included in the program, estimated costs must be established and a budget prepared.

Benefits of capital improvements programs include the following:

- It ensures that projects will be based upon the ability to pay and upon a schedule of priorities determined in advance.
- It helps ensure that capital improvements are viewed comprehensively and in the best public interest of the municipality as a whole.
- It promotes financial stability by scheduling projects at the proper intervals.
- It avoids severe changes in the tax structure by the proper scheduling of projects and facilitates the best allocation of community resources.

ALTERNATIVE FORMS OF TRANSPORTATION

In a plan for circulation, it is necessary to not only address vehicular traffic but multi-modal facilities such as bicycle-pedestrian, transit-pedestrian, and bicycle-transit opportunities.

Bus Service

Chambersburg and Greencastle have Greyhound Bus terminals but there are no designated stops or terminals that specifically serve The Region.

The Franklin County Transportation (FCT) is a shared ride demand responsive transportation program. Funding for FCT is made available through the Pennsylvania Lottery, Department of Public Transportation, Pennsylvania Department of Welfare, and other cooperating agencies. Demand responsive means that the route varies each day based on the needs of the public. Shared ride means that the service is available to all Franklin County residents. Door-to-door service is provided which covers the entire Franklin County area.

Transportation service is provided Monday through Friday. Office hours are 7:00 a.m. to 5:00 p.m. Trips for medical appointments are provided between the hours of 9:00 a.m. and 2:00 p.m. Medical appointments must be finished by 3:00 p.m. to receive transportation home from the appointment. All appointments must be scheduled prior to 12:00 p.m. the day before the appointment.

Rail Service

There is no freight rail service in the Region, however Franklin County is served by Norfolk-Southern, Pennsylvania & Southern, and CSX Transportation Railway. Their freight offices are located nearby. The main lines go through Chambersburg and Greencastle.

Currently there is no passenger rail service in The Region. However, AMTRAK has a commuter rail terminal in downtown Pittsburgh, Philadelphia, Lancaster, and Harrisburg.

Airport Services

The nearest airport is the Hagerstown Regional Airport in Washington County, Maryland approximately ten miles away. Services are limited and there is a hiatus during the winter months. The nearest passenger, commuter, and charter air service are located between 55 and 65 miles away. They are Harrisburg International Airport (MDT), Baltimore Washington Thurgood Marshall International (BWI), Washington Dulles International (IAD), and Washington Ronald Reagan National (DCA).

Pedestrian/Bike Facilities

The 2002 Franklin County Comprehensive Recreation, Park, and Open Space Plan includes recommendations for a county wide trail plan.

Seven (7) miles of eight foot wide aggregate shoulders will be added to Washington Boulevard to serve as pedestrian walkways. Future residential developments accessible from Washington Boulevard should add pedestrian walkways to their roads. As new walkways are added they will connect the trails to Washington Boulevard.

The South Mountain Conservation Greenway includes Michaux State Forest, Mont Alto State Park, Caledonia State Park, Happel's Meadow, and other forested areas of South Mountain. This greenway area will be connected to other areas of Cumberland and Adams County. Another area to be connected is along the Antietam Creek in the Antietam Creek Conservation Greenway. This will follow the eastern branch from Michaux State Forest to the confluence.