

XI. TRANSPORTATION

Mobility has become one of the most sought-after qualities of life of the century. The widespread use and development of automobiles, trucks and their road networks have enabled motorists to travel independently with great flexibility as to origins and destinations. Only recently, with increased congestion, has society begun to realize that the extensive use of the automobile may, in fact, be threatening both mobility and safety. This realization has led to efforts to better understand the relationship between transportation planning and land use planning, and has created renewed interest in alternative modes of transportation.

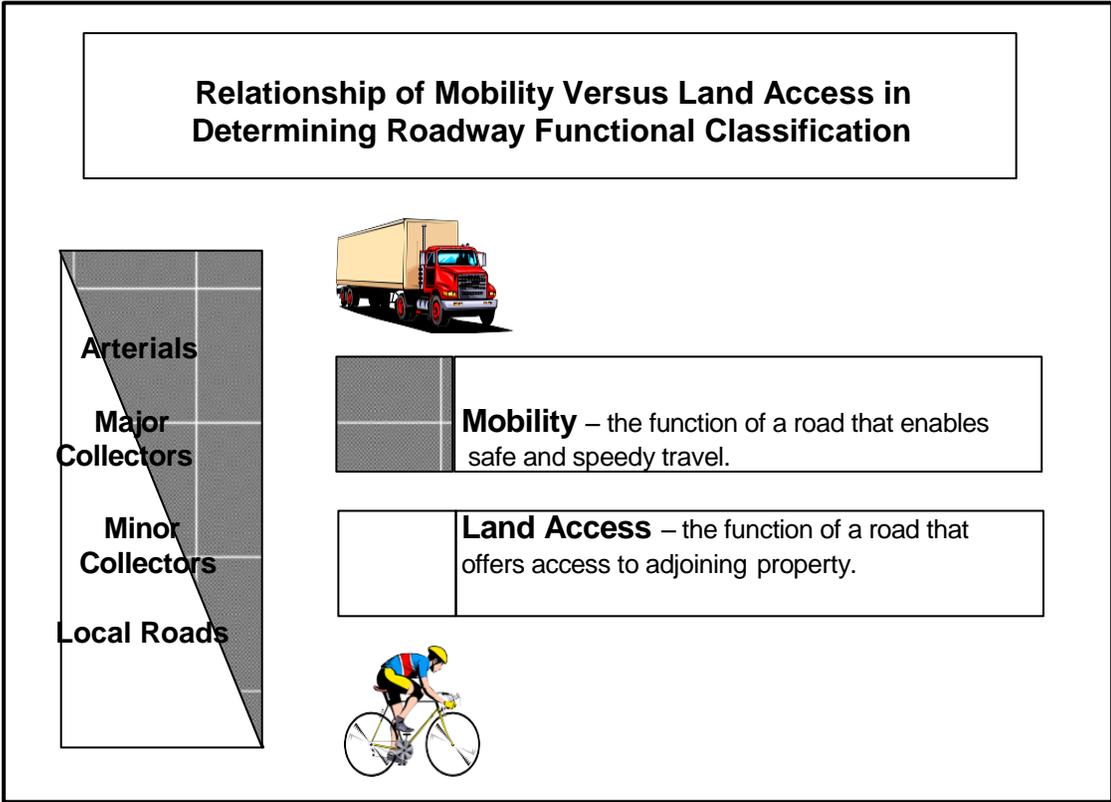
The Transportation system of this region, or any region for that matter, serves a wide range of functions. These functions include the delivery of goods and services necessary for commerce and the movement of people for work, recreation, and social activities. The availability of transportation affects the use of the Region's land. To function properly, each municipality must have adequate access to the transportation system. Each part of the transportation system must function as an interdependent part of the whole, to provide access throughout the region and into neighboring municipalities. Regular maintenance and rehabilitation can prevent the greater cost of complete replacement. When transportation infrastructure elements exceed their useful lifecycle, those elements should be replaced.

This chapter will inventory the Region's transportation system, beginning by categorizing roadway functional classifications, as determined by the Pennsylvania Department of Transportation (PennDOT) and the Berks County Planning Commission, and presenting available traffic volume data. A brief discussion of regional traffic impacts is followed by description of alternative modes of transport and railway access. All of this data is then analyzed and applied to the Region's development objectives and other available plan information to form the basis for the chapter's recommendations on future transportation needs, land use scenarios and implementation strategies.

A. Roadway Functional Classification

Functional classification of roadways refers to a system by which roads are described in terms of their utility. Classification of a highway's function is based on an analysis of the volume of traffic, the type of trip, and the speed of the trip. Transportation experts use these characteristics to determine a road's functional classification.

The diagram on the following page depicts the relationship between roadway mobility and roadway land access for each of the three general road types. Roads that provide for greater mobility provide for reduced land access, and vice versa. This important relationship should always be considered when allocating future land uses along existing or planned roads. The following diagram illustrates three road types: arterials, collectors and locals. These road types can be further subdivided into any number of different categories, depending upon the complexity of the roadway network. However, for the purpose of this study, the Region's roadway network can be described as consisting of minor arterials, major collectors, minor collectors, and local roads. The roads within the Region are classified and identified on the *Transportation Map*.



Arterials

Arterials are intended to provide for a greater degree of mobility than land access and provide for the movement of large volumes of traffic over longer distances. However, these highways generally operate at slower speeds due to the presence of traffic control devices and access points. They can be sub-classified as Principal Arterials, which serve inter-city traffic, and Minor Arterials, which link smaller developed areas within large areas of the County.

Arterials generally convey between 10,000 and 25,000 average daily traffic (ADT) for distances greater than one mile. Arterials often connect urban centers with outlying communities and employment or shopping centers. Consequently, arterials are often primary mass transit routes that connect with “downtown” areas of nearby communities. As of the date of adoption of this plan there are no arterials within the Region; however, PennDOT is in the process of updating functional classifications of roadways throughout the state. This reclassification is slated to be formally adopted in January 2015, as such, Main Street/Weis Street (SR 1010) in the northern portion of Rockland Township and through Topton Borough will be changed from a Collector to a Minor Arterial.

The following table summarizes the characteristics of the Region's Minor Arterial roadways:

MINOR ARTERIAL ROADWAY CHARACTERISTICS

| Road Name | Route No. | Municipality | Est. ADT (2012) | No. Lanes | Cartway Width | Shoulders L/R | MPH |
|-------------|-----------|--------------|-----------------|-----------|---------------|---------------|-----|
| Main Street | 1010 | Rockland | 8100 | 2 | 28 | 4/4 | 55 |
| Weis Street | 1022 | Topton | 6700 | 2 | 22-30 | 4/4 | 35 |

Major and Minor Collectors

Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. Within the context of functional classification, collectors are broken down into two categories: Major Collectors and Minor Collectors. Until recently, this division was considered only in the rural environment. Currently, all Collectors, regardless of whether they are within a rural area or urban area, may be sub-stratified into major and minor categories. The determination of whether a given roadway is a Major or Minor Collector is frequently one of the biggest challenges in functionally classifying a roadway network.

In the rural environment, such as this region, Collectors generally serve primarily intra-county travel (rather than statewide) and constitute those routes on which (independent of traffic volume) predominant travel distances are shorter than on Arterial routes. Consequently, more moderate speeds may be posted.

The distinctions between Major Collectors and Minor Collectors are often subtle. Generally, Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than their Minor Collector counterparts. Careful consideration should be given to these factors when assigning a Major or Minor Collector designation. In rural areas ADT and spacing may be the most significant designation factors. Since Major Collectors offer more mobility and Minor Collectors offer more access, it is beneficial to reexamine these two fundamental concepts of functional classification. Overall, the total mileage of Major Collectors is typically lower than the total mileage of Minor Collectors, while the total Collector mileage is typically one-third of the Local roadway network.

Major Collectors, as opposed to Minor Collectors, provide for a higher level of movement between neighborhoods within a large area. Major Collectors provide for medium length travel distances (generally less than one mile) and convey between 1,500 and 10,000 ADT. Major Collectors also provide land access to major land uses such as regional shopping centers, large industrial parks, major subdivisions, and community-wide schools and recreation facilities. Major collectors primarily serve motorists between local streets and community-wide activity centers or arterial roads.

The following table summarizes the characteristics of the Region's Major Collector roadways:

| MAJOR COLLECTOR ROADWAY CHARACTERISTICS | | | | | | | |
|-----------------------------------------|-----------|--------------|-----------------|-----------|---------------|--------------|-------|
| Road Name | Route No. | Municipality | Est. ADT (2012) | No. Lanes | Cartway Width | Shoulder L/R | MPH |
| Huff's Church Road | 1022 | District | 1600-1800 | 2 | 22 | 2/2 | 40 |
| Fleetwood Road | 1022 | Rockland | 1400-1700 | 2 | 20-22 | 2/2 | 40 |
| Forgedale Road | 1021 | Rockland | 3500-4000 | 2 | 20-22 | 2/2 | 55 |
| Fredericksville Road | 1022 | Rockland | 1700 | 2 | 22 | 2/2 | 40 |
| Lyons Road | 1023 | Rockland | 1900 | 2 | 21-22 | 2/2 | 45 |
| Pricetown Road | 2026 | Rockland | 1700 | 2 | 20 | 2/2 | 40-45 |
| Haas Street | 1031 | Topton | NA | 2 | NA | NA | NA |
| Main Street North | 1024 | Topton | 3700 | 2 | 34 | 2/2 | 35 |
| South Home Street | 1024 | Topton | NA | 2 | NA | NA | NA |

Minor Collectors provide for equal amounts of mobility and land access. These streets can serve as the main circulation roads within large residential neighborhoods. Trip lengths tend to be shorter in “developed” neighborhoods, like that of a borough, due to the presence of nearby destinations or higher order roads. Minor Collectors function to collect traffic within an identifiable area and serve primarily short distance travel. However, within the rural areas of the Region these roads travel greater distances.

The following table summarizes the characteristics of the Region's Minor Collector roadways:

| MINOR COLLECTOR ROADWAY CHARACTERISTICS | | | | | | | |
|-----------------------------------------|-----------|--------------|-----------------|-----------|---------------|---------------|-----|
| Road Name | Route No. | Municipality | Est. ADT (2012) | No. Lanes | Cartway Width | Shoulders L/R | MPH |
| Forgedale Road | 1030 | District | 650-800 | 2 | 20 | 2/2 | 55 |
| Oysterdale Road | 1030 | District | 800 | 2 | 16 | NA | 40 |
| Woodside Avenue | 1024 | District | 500 | 2 | 20 | 2/2 | 30 |
| Bowers Road | 1013 | Rockland | 3000 | 2 | 23 | 0/0 | 55 |
| Henningsville | 1024 | Topton | NA | 2 | NA | NA | NA |

Many of the Region's roads were constructed prior to the issuance of current design standards. Therefore, they may not meet minimum design criteria set forth by PennDOT. The region's municipalities and PennDOT should work collectively over time to correct these deficiencies where necessary and as funding permits. Roads with higher traffic volumes should be given priority status over roads with less volume.

In addition, as new developments are proposed along these highways, developers should be required to provide improvements to the existing roads that bring them in line with suitable design standards. The region should develop standard road design criteria that can be used to ensure seamless road corridors as one moves from one municipality to the next.

As important as road design is land use access. As discussed earlier in this Chapter, an effective conveyor of traffic cannot provide for unlimited land access. Each driveway or roadway intersection introduces conflicting traffic movements that reduce a road's ability to convey traffic quickly and safely. **Therefore, new connections to the collector road system should be minimized to avoid unnecessary driveway and road cuts. Local officials must enforce strict policies that will minimize such connections to ensure efficient traffic flow.**

Local Roads

Locally classified roads account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land. Bus routes generally do not run on Local Roads. They are often designed to discourage through traffic, as public roads, they should be accessible for public use throughout the year.

Local Roads are intended to provide immediate access to adjoining land uses. They provide access to individual properties and serve short distance, low speed trips. These roads are generally short and narrow, and comprise the bulk of road area within rural areas like the Region. Local roads are intended to only provide for transportation within a particular neighborhood, or to one of the other road types already described. Local Roads are often classified by default. In other words, once all Arterial and Collector roadways have been identified, all remaining roadways are classified as Local Roads.

Hence, all of the Region's roads that are not classified as Arterials or Collectors are considered Local Roads.

B. Regional Traffic Patterns

Analysis of the average daily traffic volumes for the Region's roads provides some insight into the Region's role as a destination or thoroughfare.

First, clearly Tipton Borough is the primary destination within the Region. Traffic to-and-from this area, travel the State Street/Weiss Street East/Main Street corridor daily. Many vehicles travel to the east into adjoining Longswamp Township (Mertztown area) and Lehigh County and the more developed Hereford and Washington Townships. In addition many vehicles appear directed towards the US Route 222 corridor via, Main Street North, Old Tipton Road and Valley Road. Finally a large number of vehicles travel to the west into Rockland Township via Main Street/Bowers Road/Lyons Road/Pricetown Road, presumably towards the City of Reading.

Another heavily-traveled corridor serves as east/west traffic flow through the Region. The Huff's Church Road/ Fredericksville Road/Fleetwood Road corridor conveys nearly 2000 vehicles per day, many of whom travel through the Township from adjoining municipalities. This corridor will likely convey even greater volumes that are generated outside of the Region from the more developed surrounding communities.

C. Programmed Transportation Improvements

The Reading Area Transportation Study Coordinating Committee (RATS) is responsible for development of the County’s Long Range Transportation Plan (LRTP) and its Transportation Improvement Programs (TIP). The most recent version of the TIP does not have any projects proposed within the region.

Although the most recent version of the TIP does not include any projects within the region, municipalities plan and program local road projects utilizing their State Liquid Fuels allotment. The following is a list of future road improvements for the region:

| Programmed/Planned Road Improvements Projects | | | |
|-------------------------------------------------------------------|----------------------------|-------------------|---------------------------------|
| Road Name | Project Description | Begin date | Cost and funding source* |
| Rockland Township | | | |
| Schweitz Road | Replace pipe | 2015 | \$2500 - TWP |
| Heffner Road | Overlay & Widen | 2015 | \$30,000 - SLF |
| Day Road | Overlay | 2016 | \$40,000 - SLF |
| District Township | | | |
| No Major Projects Planned | | | |
| Topton Borough | | | |
| No Major Projects Planned | | | |
| * Funding Source Codes: SLF – State Liquid Fuels / TWP - Township | | | |

D. Railroad Access

Presently the Pennsylvania Lines, LLC owns a rail freight line between the Cities of Reading and Allentown. This line is operated by Norfolk Southern which also allows Canadian Pacific trains to pass through the area. This is Norfolk Southern’s main railroad line between Reading and Allentown. On either end it connects with other lines that serve even larger cities and areas. Consequently this line is heavily used with between 40 to 60 trains passing through the Region per day. The number of trains increases later in a typical week. Train length varies between 20 and 120 railroad cars. Goods conveyed include the widest variety of freight goods plus inter-modal truck trailers. As a result of this heavy use, Norfolk Southern, as well as the County, fully supports any efforts to grade-separate this line from adjoining roads and sidewalks.

E. Pedestrian and Bicycle Access

One of the themes of this Comprehensive Plan is to distinguish between “urban” areas where a full range of public services and utilities are provided, and “rural” areas where the protection of the natural environment is given priority over, and protected from, development. Consequently, areas depicted for growth and development should include conveniently accessible schools, churches and parks. These “urban” areas will also, by function, include higher relative densities. Fortunately Topton Borough has an extensive system of sidewalks that blanket its settings.

It may not be necessary to line both sides of every street with sidewalks, but some basic system that enables children to travel throughout the community would be a good gauge. Also, linear paths can replace sidewalks in built-up areas that are highly improved along the street. This approach will better integrate residents and reduce their automobile dependency.

The *Bicycle and Pedestrian Transportation Plan for Berks County* identifies the Main Street/Weiss Street East/State Street/Longswamp Road corridor as an existing on-road bicycle route that extends from Fleetwood to the eastern County line. **The Region should lobby the County Planning Commission and PennDOT's Maintenance Manager to widen road shoulders to allow for a bicycle/pedestrian path along the cartway with proper striping of bike lanes. This could be done as an addition to work already being performed on area roadways. Should this action exceed the scope of a "maintenance task" then the Region should apply for the project under PennDOT's Betterment Program as part of the County's Transportation Improvement Program. This would create an inviting environment that would encourage use of alternatives to the automobile. This may also be particularly beneficial to link the existing bicycle route along Weiss Street East through the Borough's neighborhoods to the high school campus on Old Topton Road. Additional improvements that aid cyclists are bicycle-friendly drainage grates, and "Share the Road" signs.**

"Bicycle PA" is the movement to sign and designate multiple intrastate bicycle routes in Pennsylvania. The Bicycle PA effort was initiated by the Pennsylvania Pedal Cycle and Pedestrian Advisory Committee (PPAC) and involves the development of six cross-state, "border-to-border" bicycle routes. The six Bicycle PA routes use public roads and some rail trails to guide bicyclists through the state. Each of the six routes has an appointed "route development coordinator" who is in charge of soliciting input from knowledgeable individuals and designing a good route for bicyclists. The routes are designed for competent road bicyclists who may undertake a long distance cycle touring trip. Not all Bicycle PA routes will have perfect shoulders or be entirely free of truck traffic.

Bicycle PA includes two routes that run through Berks County, the Route "L" southern east-west route, and Route "Y", the eastern North-south route. Route "Y" travels through the Eastern Berks County Region entering Rockland Township from Pike Township and travels along Lobachsville Road (SR 1023), Lyons Road (SR 1023, SR 1021), Bowers Road (SR 1023), Main Street (SR 1010), Store Street, State Street, Valley Road (SR 1035), and Mertztown Road (SR 1935) before crossing into Lehigh County.

F. Mass Transportation

Mass transportation services provided by either the public or private sector serves three essential functions:

- It provides a means of transportation to those who cannot afford to purchase their own private vehicle.
- It provides an alternate means of transportation to those who do have a choice.
- It lowers the total number of vehicles using the highway system which reduces congestion,

adverse effects on the environment, and decreases the pressure for highway expansion.

The principal provider of mass transportation services in Berks County is the Berks Area Regional Transportation Authority (BARTA). BARTA offers regularly-scheduled fixed-route bus service throughout Berks County. BARTA operates 22 routes within 34 municipalities reaching an estimated population of nearly 300,000. Presently, no such bus service extends into the Region. However, paratransit service is offered to the elderly and disabled throughout the entire County on an upon-request basis. BARTA periodically revises its routes to maximize ridership and coverage. As the Region grows, local officials may want to initiate bus service in and around Topton Borough, particularly if a large employer locates within the Region.

Commuter Services

Commuter Services of Pennsylvania, a program of the nonprofit Susquehanna Regional Transportation Partnership, currently provides services in Berks County and eight additional counties in south-central Pennsylvania. The program, sponsored by the regional transportation planning agencies, transit authorities and chambers of commerce, offers transportation demand management strategies and assistance to employers and individuals for finding options other than driving alone to work. These can include public transportation, car or van pools, telecommuting, biking or walking. The program goal is to reduce the number of vehicle miles traveled and to increase the efficiency of the highway system by reducing congestion and improving air quality. Participation in the program is free and is funded by the Federal Highway Administration through PennDOT and regional planning agencies.

G. Berks County Transportation Improvement Program

Every two years the Reading Area Transportation Study Coordinating Committee (RATS) prepares its Transportation Improvement Program (TIP). The TIP is a prioritized list of transportation projects that require federal funding or non-federally funded projects of regional significance. The TIP lists projects for the following 4 years with projected costs and schedules for their completion. Inclusion of a project in the TIP represents a serious commitment to its implementation. The total cost of any TIP is limited by the amount of funds expected for the County and each project competes for inclusion. While project listing in the TIP is an important step, it does not guarantee funding, final scheduling or an implementation of the project. The TIP-listing represents a collective authorization by Berks County to seek funding for the project and a consensus among regional and State officials as a short-term priority.

Every other year, RATS solicits transportation projects from Berks County municipalities for consideration for the TIP. Standard forms are mailed-out for completion and return. Then RATS evaluates respective applications for their importance and consistency with the County's Long Range Transportation Plan. Once evaluated and determined that they meet the aforementioned criteria, projects are then selected for inclusion on the current TIP.