



[1] Planning and Policy Resources

Introduction

Public transportation is inherently linked to the people it transports *and* the land uses those people frequent. Public transportation moves people between work, shopping, medical appointments, leisure activities, and home. A concentration of people and land use is typically required to effectively serve the needs of riders and to cost-effectively operate and maximize the efficiency of transit.

In Pennsylvania, municipalities have the power to plan and regulate land use. Public transportation agencies or authorities are responsible for planning and operating transit services, including fixed route bus service. While roles and responsibilities are separated, land use and transit are closely related. Land use development and design directly impact public transportation services and ridership.

The Building Better Bus Stops Resource Guide identifies tools available to local governments to incorporate and consider transit in land use plans and policies. The guide focuses on fixed route bus service and specifically bus stops, because they are the first and last touch point between a transit rider and a public transportation provider. The individual's journey does not end at the bus stop; they must navigate through the built environment to reach their destination. Coordination between municipalities, transit agencies, property owners, developers, and residents can increase the use of public transportation, offering numerous community benefits.

Benefits of Public Transportation

Provides economic opportunities

- Pennsylvania's transit agencies spend more than \$1 billion annually with businesses in the state.
- Investments in Pennsylvania's public transportation generates more than \$10 billion in economic activity per year.

Safer than travel by cars

- Traveling by public transportation is 10 times safer per mile than traveling by car.

Saves money

- A household can save nearly \$10,000 by using public transportation and living with one less car.

Reduces gasoline consumption

- For every passenger mile traveled, public transportation uses about one-half of the fuel of private cars, SUVs, and light trucks.

Reduces air pollution

- Public transportation produces 95% less carbon monoxide, more than 92% fewer volatile organic compounds, and nearly half as much carbon dioxide and nitrogen oxides than automobiles for every passenger mile traveled.

Increases mobility

- Public transportation provides personal mobility and freedom for people from every walk of life.

Encourages healthier habits

- More than two-thirds of riders walk to their stop or station.

Sources:

American Public Transportation Association (APTA) Public Transportation Fact Book

Pennsylvania Public Transportation Association (PPTA) Transit Drives Pennsylvania Mobility—Fact Sheet

Pennsylvania Public Transportation Performance Report—FY 2017– 2018



People and Transportation Choice

Public transportation is a necessary and desirable mobility option for many Pennsylvanians. Transportation choice is determined by many factors, often influenced by transportation availability, convenience, and affordability.

For some people, who do not own and have access to a vehicle or are unable to drive, using public transportation is their only option. Individuals who rely on public transportation can include people with lower incomes, persons with disabilities, elderly, and youth. For some people, public transportation is a lifeline for their travel to jobs, medical appointments, school, or shopping.

For others, public transportation is an attractive alternative to driving a vehicle and other modes of transportation. People may elect to use public transit because it saves time and money and is safer and more convenient.

Land Use and Design

Public transportation is influenced by many aspects of land use, particularly density. Density of people and density of development drive the effective operation of public transportation. A larger concentration of people travelling on a bus supports the operation of that bus between areas of employment, shopping, services, and home.

Density and development intensity differ throughout Pennsylvania's 2,560 municipalities. In the Commonwealth's urban centers and surrounding first ring communities, more people tend to live and

work in a concentrated area and therefore, transit choice is available and financially viable.

In suburban communities, transit is often available, but the frequency tends to be limited due to a larger geographic area to cover and fewer people to make transit a financially viable transportation alternative. Pennsylvania's rural communities are limited further by lower densities.

While public transportation is traditionally supported in cities with higher population and employment density and their inner suburbs, all municipalities can influence the density of the built environment to encourage the development of transit infrastructure and increase people's use of transit.

Municipalities can also encourage transit agencies to serve their citizens through transit-supportive land use and development decisions. In Pennsylvania, control over how a community develops is provided through the Pennsylvania Municipalities Planning Code (Act 247 of 1968) (MPC). The MPC gives flexibility to municipalities to determine the density and intensity at which land is developed. Through local zoning ordinances, municipalities may permit, prohibit, regulate, restrict, and determine 'Density of population and intensity of use'. Therefore, if a community wishes to develop with a higher number of residential units per acre or greater industrial or commercial square footage per acre, it can do so to achieve, over time, density that could support a financially viable transit service.

Encouraging and facilitating transit in urban,



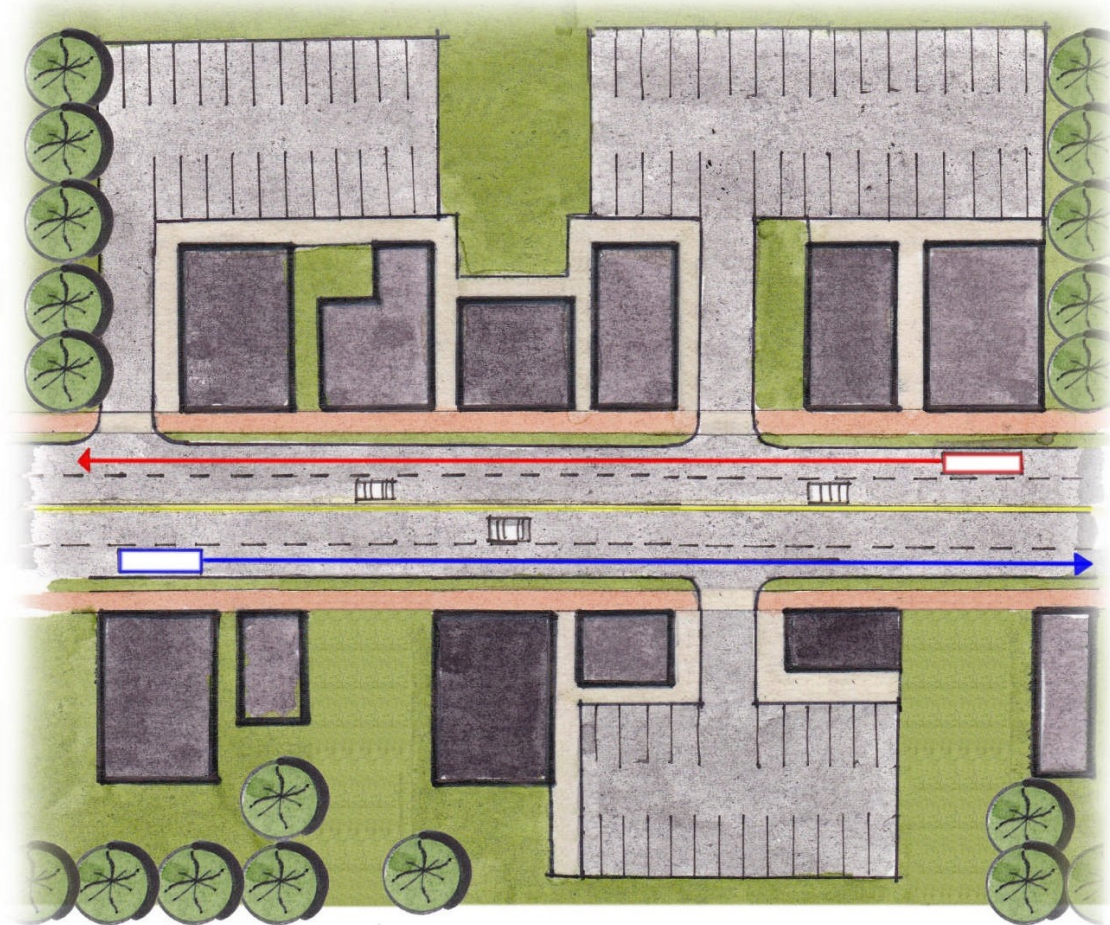
suburban, or rural communities also requires municipalities to consider the design infrastructure required to support transit. Consideration of how motorists, pedestrians, and bicycles interact through roads, sidewalks, and bike facilities is necessary as communities determine where transit connections might be most appropriate. Through comprehensive planning, land use regulations, and other transit-supportive tools, municipalities can encourage development that fosters public transportation to benefit many members of the community.

Building Partnerships

Proactively incorporating transit into municipal planning and design, will strengthen and support transit as an accessible and viable transportation option. Starting this process requires transit supportive partnerships between municipalities, which control land use and community design, and transit agencies, which provide the transit service. Building a robust partnership extends to a community's citizens and the development community. In turn the partnership will result in considering and incorporating transit into local plans and ordinances implemented through investments in private development.

Comprehensive planning enabled through the MPC allows a municipality to assess current transit activity and how it desires to improve upon transit in the future – articulating a vision for transit. A transit agency can provide invaluable assistance to a municipality as it considers transit through development of a comprehensive plan. A

Sample Transit Corridor Rendering



This graphic of a sample corridor with fixed route bus transit service highlights how design of the built environment can impact and support transit. The site layout, building orientation, driveway and parking configurations, and pedestrian infrastructure can provide safe, convenient, and attractive connections between the bus route and destinations. Additionally, with transit-supportive design, buses are able to operate on the desired route without deviating to serve specific land uses. Local land use regulations and design requirements can play a key role in facilitating efficient and quality transit service.

Image Credit: LANTA Transit Supportive Land Use for the Lehigh Valley, September 2013



municipality can assess and plan for locations where people live, where they go to work, and where they travel for shopping, dining, medical services, etc. A transit agency can help a municipality set the foundation to re-evaluate existing and establish future transit routes and plan for transit infrastructure to support future community growth and development. This municipal-transit partnership can set a strong foundation to make locating, waiting for, and riding a bus convenient, safe, and cost-effective.

Developing supportive transit partnerships goes beyond strong municipal-transit agency cooperation. It also requires commitment from the residential, commercial, and industrial development community to make certain that transit is a viable option for people traveling to existing and future developments. Partnering with the development community during community planning to identify why and how transit should be incorporated into existing and future land development will result in the positive transit outcomes articulated through a municipality's comprehensive plan. School districts and non-profit organizations can also help to support and enhance public transportation services and infrastructure in a community.

Finally, citizen participation is a key component in planning for transit. Building community consensus around shared values and aspirations is part of the planning process. Citizens are the users of transit and incorporating transit needs, both current and future, into local planning will ensure community buy in on future transit infrastructure needs.

Incorporating Transit into Municipal Planning

Public transportation is a vital component of the mobility network in many communities across Pennsylvania. Municipal planning should consider how public transportation interfaces with existing and future land uses to maximize transit benefits for riders and the community.

This section provides an overview of key resources and steps for local governments to incorporate transit into various municipal planning processes.

Planning References and Resources

Municipalities Planning Code

The MPC provides municipalities with authority to conduct planning and oversee *how* land is developed, to achieve the type of development and design character they desire. Provisions to incorporate transit into community planning are included in the MPC in key components, discussed below and further in this document.

Comprehensive Plan

As authorized by Article III under the MPC, a comprehensive plan is a long-range policy document to guide the future of a municipality. The plan includes a vision and goals, with specific strategies or actions to achieve the vision. A comprehensive plan typically includes a plan for land use with provisions regarding the amount, intensity, and character of land use development. In particular, Article III, Section 301 of the MPC notes that the land use plan may include “major traffic and transit facilities.” In addition, Section 301 lists a “plan for



the movement of people and goods” as one of the required basic elements of a comprehensive plan and notes that it may include public transit routes and pedestrian systems. To effectively set the stage for transit, a municipality should clearly articulate its transit vision in its comprehensive plan.

Official Map

As authorized by Article IV under the MPC, municipalities have the authority to adopt an official map ordinance to specify locations for future public projects. Through adoption of an official map, a municipality may preserve development rights for land as it becomes available in the future, providing the municipality with ‘first choice’ for purchase. Municipalities can consider public transportation on their official map by identifying locations where additional right of way is needed to construct bus stop infrastructure, intermodal centers, or pedestrian connections.

Zoning Ordinance

In accordance with Article VI of the MPC, a municipality can adopt a zoning ordinance, to establish its community development objectives, giving character to the municipality and citizen needs. Zoning ordinances regulate land use (type), location (where), and density (concentration) of uses, including building coverage and dimensions such as lot size, height, and parking.

Subdivision and Land Development Ordinance (SALDO)

As described in Article V of the MPC, a SALDO regulates how parcels are divided and improved. While a zoning ordinance addresses where and at what intensity land is developed, a SALDO regulates the layout and design of development and infrastructure, such as street layout and construction. A SALDO can set forth the design character a community would like to achieve, including designing for transit.

PennDOT Publications

PennDOT has prepared publications providing guidance on how municipalities can incorporate transit into planning. These publications provide further direction on the MPC’s tools and other PennDOT and Commonwealth transit-supportive resources. Municipalities may consider reviewing these publications as they begin to improve existing and plan for future transit.

[PennDOT PUB 616 - Transportation and Land Use Toolkit](#)

[PennDOT PUB 688 - Integrating Transportation and Land Use in Comprehensive Plans](#)

[PennDOT PUB 703 - The Official Map: A Handbook for Preserving and Providing Public Lands and Facilities](#)



Transit Elements to Include in Municipal Plans

Public transportation can be considered and incorporated into a variety of local government plans and studies, including, but not limited to, the following typical municipal planning documents:

- Comprehensive Plans
- Official Map and Ordinance
- Capital Improvement Plans
- Economic Development/Revitalization Plans
- Open Space/Recreation Plans
- Corridor/Special Area Plans
- Active Transportation Plans

While these types of plans are unique and different, they often have similar elements, such as evaluating existing conditions, identifying future needs, and developing recommendations or actions. Summarized below are ways that public transportation can be considered in each of these steps in the planning process. The public transportation agency should be involved in each step to provide input regarding existing and future service potential.

Evaluate existing conditions

Inventorying existing conditions is a critical first step in any planning process. For most plans, a basic inventory of public transportation should include mapping the location of existing routes, stops or stations, park-n-ride lots, and other transit facilities. The inventory should consider existing and desired

destinations, both within and beyond the planning area boundary. In addition to understanding the geography of the existing transit services, it may be helpful to gather data related to frequency of service, days/hours of service, ridership, fares, and performance measures. Additionally, a demographic analysis should be conducted and include review of data related to commuting patterns, vehicle ownership, and vulnerable populations. This data can be used to evaluate transit needs and identify key issues related to public transportation. The following questions and topics can be explored and evaluated as part of the existing conditions evaluation.

- Where are existing public transportation routes, stops or stations, and facilities, both within and beyond the planning area?
- Are key destinations for transit trips, such as retail hubs, employment centers, medical facilities, and parks/recreational resources accessible via existing routes?
- Are residential areas with vulnerable populations and potential transit riders served by existing routes?
- Does the service frequency of service and days/hours of operation meet the current needs of the community?
- What are the routes and/or stops with the highest or lowest ridership and why? Do stops with high ridership have supportive infrastructure and amenities?

All signalized intersections along the corridor should provide crosswalks. Shoulders along Middletown Road should be wide enough to facilitate bicycle traffic and bus stops.

Middletown Road Corridor Transportation Evaluation, Derry Township, Dauphin County (2016)

Livability Objective 2 - Transportation

Collaborate with transit providers to further improve innovations in transit service.

Positively Altoona, The City of Altoona Comprehensive Plan (2013)

The primary focus of the Alternative Transportation Plan is to reduce single occupancy vehicle (SOV) trips produced by the proposed land development.

Springettsbury Township (York County) Transportation Plan (2019)



- How do people access transit and are there connected bicycle and pedestrian facilities?

Identify future needs

When developing a plan for the future, it is important to consider potential changes in the need or demand for transit. Municipal plans can consider the impact that future land development may have on the public transportation system. Some land use types tend to have a higher demand for bus service than others. For instance, a retail or employment center may have a greater need for transit service than a neighborhood of single-family detached homes. Municipal plans can consider and encourage future growth in areas that are already served by public transit or areas that could be served by public transit in the future.

- Where are future growth areas or areas where there is potential for development/redevelopment? Are these areas within the existing public transportation service area? If not, would anticipated growth warrant consideration of transit in the future?
- Are there other potential land use changes that may influence existing or future transit service?
- Are there opportunities for transit oriented-development along potential transit routes?
- Are there demographic trends that may change the demand for public transportation in the community?

Develop recommendations to support and improve transit

While municipalities are not directly responsible for providing public transportation services, municipal plans can include recommendations or actions to improve public transportation in the planning area. Any recommendations should be developed through close coordination with the public transportation agency. The municipal plan or study can note that any changes to public transit routes, frequency, hours/days of service, fares, etc. will require review and action by the transit provider and will be dependent upon further evaluation and available resources.

Municipalities have jurisdiction over the built environment in their communities and can develop recommendations or actions related to land use and infrastructure to support public transit. Several best practices municipalities may wish to consider to incorporate transit into planning are highlighted on page 1-8.



Best Practices for Transit Supportive Land Use and Design

Land Use

Transit supportive land use refers to encouraging more intense development, a mix of land uses, and infill development or redevelopment near existing public transportation routes and facilities.

- Permit and encourage a mix of land use types, particularly along existing or planned transit routes.
- Permit higher density development near existing transit routes, particularly at identified centers or nodes of development.
- Encourage developments with potential transit ridership, including affordable housing, employment centers, and medical facilities, to be located near existing public transit routes.

Site Design

Site design can promote safe, comfortable, and convenient access to public transportation routes and facilities, particularly for pedestrians and transit riders.

- Minimize walking distances between transit routes and destinations by reducing setback requirements, promoting building entrances that face the roadway, and providing direct pedestrian connections.
- Require comprehensive pedestrian networks that facilitate pedestrian movements into, out of, and throughout the site.
- Encourage parking areas to be located behind buildings and accessed via side streets.

- Require adequate roadway and driveway widths and turning radii to accommodate buses expected to service the site.
- Encourage shared parking, shared driveway accesses, and other access management strategies.

Pedestrian / Bicycle Connections and Amenities

Creating a community that supports public transportation starts by making a walkable and bikable community.

- Require and provide sidewalks on both sides of roadways with existing or planned transit routes, particularly commercial and mixed-use corridors.
- Require and provide marked crosswalks at intersections of roadways with existing or planned transit routes.
- Encourage landscaping and streetscape enhancements to create an attractive environment for walking.
- Provide and promote both on-road and off-road bicycle facilities that connect to transit routes.

Parking

Off-street and on-street parking effect how public transportation service interfaces with residential and commercial land uses. Efficient and thoughtful parking design and management can help to support transit in communities.

- Reduce off-street parking minimums, particularly along transit routes, or set parking maximums.
- Price on-street parking appropriately.
- Require convenient and secure bicycle parking.

Bus Stops

Safe, attractive, and convenient bus stops will promote ridership and best practices for bus stop plans and policies highlighted throughout this Resource Guide.

Sources:

LANTA Transit Supportive Land Use for the Lehigh Valley, September 2013

RRTA Transit-Oriented Development Handbook; September 2010

PennDOT PUB 616: Transportation and Land Use Toolkit, March 2007



Model Municipal Ordinance Language for Bus Stops

The MPC enables municipalities to enact zoning ordinances and SALDOs to protect public health, safety, and welfare and implement the comprehensive plan. Municipalities can incorporate regulations into zoning ordinances and SALDOs to accommodate and support public transportation. This section and Appendix A focus on how municipal zoning ordinances and SALDOs may regulate aspects of the built environment to support fixed route bus service, specifically bus stops.

Model ordinance language to incorporate policies and design guidelines for new or improved bus stops into municipal zoning ordinances and SALDOs is provided in Appendix A.

The intent of the model ordinance language is to:

- Permit and encourage the installation of bus stop infrastructure in appropriate locations as part of the land development process to serve the needs of all members of the community.
- Promote coordination between municipalities, transit agencies, and the development community for the installation of bus stop infrastructure.
- Reference applicable design requirements for bus stop infrastructure.
- Define the roles and responsibilities for the review and approval for new bus stop infrastructure.

The model ordinance language provides basic guidance and design parameters for new or upgraded bus stop infrastructure. The model ordinance language covers items, such as:

- Definitions for common elements of bus stops;
- Guidance related to the location and design of bus stops;
- Requirements for coordination with transit agencies for potential bus stops based on the location and type of proposed development;
- Specific design guidelines and ADA requirements for bus stop infrastructure, including ADA loading pads, bus shelters, benches and other street furniture, and signs; and
- Requirements related to agreements or permits for the installation and maintenance of bus stop infrastructure.

Since each municipality and transit agency is different, the model ordinance language will need to be modified and tailored to the specific needs of the community and transit service. For example, the language could be used to develop a stand alone bus stop ordinance that is referenced in the zoning ordinance and/or SALDO for the municipality. Also, the model language includes several notes, options, and opportunities for customization, which should be reviewed and considered by the municipal governing body, planning commission, and solicitor through coordination with the transit agency prior to adoption. In addition, existing zoning and/or SALDO language may need to be reviewed and revised to

To facilitate the fiscally responsible provision of adequate public highways and streets, vehicle parking and loading, public transportation, water supply, sewage disposal, public and private schools, parks and open spaces and other public requirements, such as public utilities and rights-of-way.

Delaware Township, Juniata County Zoning Ordinance

- Bensalem Township, *Bucks*
- Camp Hill Borough, *Cumberland*
- East Goshen Township, *Chester*
- Ferguson Township, *Centre*
- Lower Providence, *Montgomery*
- Middletown Township, *Bucks*
- Mount Holly Springs Borough, *Cumberland*
- Paxtang Borough, *Dauphin*
- Smithfield Township, *Monroe*
- Upper Chichester, *Delaware*
- Warminster Township, *Bucks*

Several Pennsylvania municipalities, including those listed above, address bus stops or shelters in current ordinances.



incorporate and reference new ordinance sections related to bus stops. The adoption process should comply with the zoning ordinance and SALDO enactment requirements specified respectively by Article VI and Article V in the MPC.

The model ordinance language is specific to requirements associated with new and improved bus stops. As highlighted on the table of Best Practices for Transit Supportive Land Use and Design, there are several other transit supportive policies and designs that can be incorporated into existing ordinances. Because each transit rider is also a pedestrian, requiring ADA compliant sidewalks or pedestrian infrastructure along transit corridors is an important policy to incorporate into municipal ordinances. Additionally, park-and-ride lots and bus maintenance facilities are sometimes necessary to support bus operations and enhance access to transit. Requirements for these primary uses related to bus services can be incorporated into municipal zoning ordinances.

Other Transit-Supportive Tools and Policies

Municipalities may employ several other tools to advance public transportation goals in their communities. Each of these may be used in conjunction with zoning and SALDO to incorporate transit friendly concepts into other aspects of municipal business.

Transit-Supportive Development Overlay District

Implementing a transit overlay district within a municipal zoning ordinance is a good tool for municipalities that seek to guide the design and character of specific areas of their community, particularly transit. Developing a transit-supportive development zoning overlay to include a mix of uses, arranged in such a way to encourage public transit, also supports a sustainable growth pattern by concentrating development and minimizing sprawl patterns. A transit-supportive overlay district will typically include provisions to encourage a mix of land uses and pedestrian friendly environment close to transit.

A transit facility, such as a bus station/hub or train station, is typically at the heart of a transit-oriented development to ensure citizens can walk to public transportation. A transit overlay district could also be developed based on a linear bus route or bus stops, depending upon the type and frequency of service. The boundary of a transit overlay district should be based on a walking distance from existing transit routes, stops, or stations.

An overlay district could include density bonuses or incentives for developments that are located within walking distance of a public transportation service or facility. Additionally, it could include reduced off-street parking requirements given the anticipated use of public transportation.



Transit Revitalization Investment District (TRID)

Within Pennsylvania, the enactment of the Transit Revitalization Investment District Act or TRID, helps municipalities implement transit-oriented development. By creating a TRID, municipalities partner with transit agencies, community and economic development officials, and developers to finance a program of investments for transit-supportive development. Within a specified TRID area, the transit partnership can be leveraged to share incremental tax revenues to implement capital projects that support both transit infrastructure and community facilities. Creating a TRID may be appropriate for stops or stations along a bus corridor with very frequent transit service.

Traditional Neighborhood Development (TND)

The MPC includes provisions for establishing a Traditional Neighborhood Development (TND), which encourages the mix of compact residential and commercial development oriented toward pedestrian activity. The interconnected streets and pedestrian focus of a TND creates better transit connections, making ‘public transit a viable alternative to the automobile’.

Complete Streets Policy

Complete Streets are streets that are designed, operated, and maintained to provide safe access for all users. Complete Streets policies are documents that identify procedural approaches to designing and maintaining roadways that serve the needs of all users, regardless of age, ability, or mode of

transportation. Complete Streets policies de-emphasize automobiles over all other transportation modes. They benefit public transit users in particular by ensuring safe bicycle and pedestrian routes to and from stops, and improving efficiency of public transit service. Municipalities can identify the parties responsible for ensuring that Complete Streets principles are considered in the design process for all transportation projects within a municipal jurisdiction.

Access Management Policy

Access management includes a number of strategies to provide vehicular access to land in a way that preserves the safety and efficiency of the roadway. In addition to the benefits for vehicular safety and operations, access management strategies can improve the safety of pedestrians and transit riders, as well as reduce conflicts between buses and other vehicles. [PennDOT PUB 574: Access Management Handbook](#) provides an overview of various access management strategies and includes a model municipal ordinance for access management. In addition to considering an access management ordinance, municipalities can identify ways to provide adequate driveway spacing and opportunities for joint access as part of the review and approval process for new land developments.

Transportation Impact Study (TIS)

A TIS is sometimes required by a municipality as part of the process for obtaining land development approval. Additionally, when a proposed development meets certain thresholds, PennDOT

Ten Elements of a Complete Streets Policy

1. Vision and intent
2. Diverse users
3. Commitment in all projects and phases
4. Clear, accountable expectations
5. Jurisdiction
6. Design
7. Land use an context sensitivity
8. Performance measures
9. Project selection criteria
10. Implementation steps

Smart Growth America

This transportation system shall be designed and operated in ways that, to the greatest extent possible, ensure the safety, security, comfort, and convenience of pedestrians, bicyclists, public transit/paratransit users, assistive mobility device users, skateboarders, motorists, emergency responders, freight providers, and users of other common modes of transportation.

City of Reading Complete Streets Initiative



requires preparation of a TIS in order to obtain a Highway Occupancy Permit. Generally, TIS requirements focus on how a proposed land development will impact vehicular traffic, and specifically evaluating and mitigating traffic capacity. However, municipalities can require all modes of transportation be evaluated as part of the TIS, including public transportation.

[PennDOT PUB 282—Appendix A: Policies and Procedures for Transportation Impact Studies](#) provides detailed requirements for preparing a TIS related to obtaining a Highway Occupancy Permit and access to a state roadway. PUB 282 includes the following requirements related to public transportation as part of the TIS process.

- Applicants shall identify any existing transit facility that could be affected by the proposed development. At a minimum, this shall include any bus routes within a quarter mile of the development and any rail centers within a half mile of the development.
- Applicants are responsible for notifying local transit authorities of the status of the HOP application as well as inviting them to PennDOT meetings and ensuring they are copied on any correspondence to PennDOT. This includes inviting transit authorities to the scoping meeting.
- Applicants may account for transit access to the site by following ITE’s Trip Generation Handbook as part of the future conditions analysis, depending upon the community context and

proposed development.

- Applicants may develop an Alternative Transportation Plan to mitigate potential traffic impacts. As part of developing an Alternative Transportation Plan, the applicant can evaluate potential increased demand for bus service, the need for modifications to existing or new bus routes, and/or improvements to transit stops.

Municipalities can incorporate similar requirements into existing or new ordinances to promote coordination with public transit providers and consider public transportation as part of a TIS for municipal land development approval.

Coordination with Transit Agencies

Transit agencies and authorities are responsible for planning and evaluating transit services within their service area. Service planning and longer range transit planning processes are opportunities for communities to provide input regarding the local vision and needs for transit.

Service Planning

Many transit agencies complete transit service planning on an annual or semi-annual basis. The purpose of a service planning process is to review, evaluate, gather input, and adjust selected bus routes or schedules to better meet current and future needs and improve performance and reliability. Bus routes are typically selected for review based on performance measures or requests



from counties, municipalities, other governmental entities, or the public. As part of the service planning process, transit agencies typically evaluate the impact on existing ridership, bus operational costs, and projected new ridership associated with the proposed changes to ensure that limited resources are utilized as efficiently and effectively as possible. Additionally, before implementing route or schedule changes, the transit agency may solicit input from the public. The service planning process is an opportunity for municipalities and other partners to suggest and review proposed changes to bus service in their community.

Transit Development Plans

In addition to regular and routine service planning, some transit agencies prepare Transit Development Plans (TDPs), typically every five years. A TDP involves a comprehensive evaluation of the bus network (and other transit services) in order to better serve existing riders, improve overall efficiency, and attract more riders. Development of a TDP often includes surveying riders, conducting focus group meetings, and facilitating public meetings to gather input. Typically, each bus route in the transit agency's system is evaluated, along with analysis of demographic trends and potential growth. There may be an opportunity for comprehensive plans or other local government plans to be considered and reviewed as part of the process.

In addition to transit service recommendations, the TDP can include recommendations related to capital

improvements, fares, and other policies or service enhancements. With a five to ten year planning horizon, TDP recommendations may require identification of funding or other resources for implementation over time.

Land Development Plan Review

Some transit agencies are actively engaged in the review of land development plans for projects near existing bus routes. Transit agency staff review land development plans and coordinate with counties, municipalities, and developers regarding transit related impacts or improvements. Involving transit agencies in the land development review process can lead to implementation of bus stop improvements as part of a private development. Three successful partnerships between transit agencies and municipalities engaged in the local planning and land development review process are highlighted on the following pages.



Success Stories from Transit Agency Partnerships

West Chester Pike Coalition

West Chester Pike is a transit corridor through ten communities in Delaware and Chester counties. After collaborating and completing several feasibility studies to enhance bus service along the West Chester Pike corridor, the coalition was formed in 2016. The coalition, which is facilitated by staff from Delaware and Chester counties, includes representatives from the corridor municipalities, SEPTA, PennDOT, TMAs, and the MPO. The group meets three times a year to collaborate on improving transportation opportunities, operations, and safety along the corridor. As a result of the coalition and the coordination, several municipalities along the corridor have updated ordinances to incorporate bus stop and shelter requirements. Additionally, bus stop improvements have been constructed in conjunction with adjacent land development projects and through partnerships with non-profit organizations.

Source: *SEPTA Bus Stop Design Guidelines, 2019*



West Chester Pike Coalition Meeting

Image Credit: Chester County Planning Commission



Rendering of an enhanced bus stop on West Chester Pike developed by DVRPC

Image Credit: DVRPC's Boosting the Bus: Better Transit Integration Along West Chester Pike, July 2011



Success Stories from Transit Agency Partnerships (continued)

CATA and Centre Regional Planning Agency

The Centre Area Transportation Authority (CATA) and Centre Regional Planning Agency have been working collaboratively on transit planning in the State College area for over 20 years. The two entities share and support a transit planner position. Working with other staff, the transit planner is responsible for reviewing and providing comments on land development plans to incorporate transit.

The partnership between CATA and the Centre Regional Planning Agency has been successful, resulting in construction of good pedestrian access and transit supportive infrastructure as part of numerous private developments. Based on both big and small successes, the partnership has created a transit-supportive culture in the region. Municipalities, planners, and designers that work on land development projects understand why transit is important and beneficial.

In addition to the shared and dedicated staff position, lessons learned and key factors for this successful partnership include:

- Cultivating relationships, especially with municipal elected officials and staff through regular coordination.
- Building credibility by asking for transit related improvements that are reasonable, feasible, and what is truly needed.
- Basing requests for transit related improvements on current and future ridership and what has worked in the past.



Bus stop infrastructure and pedestrian connections implemented as part of the land development process due to coordination with CATA.

Image Credit: Hugh Mose

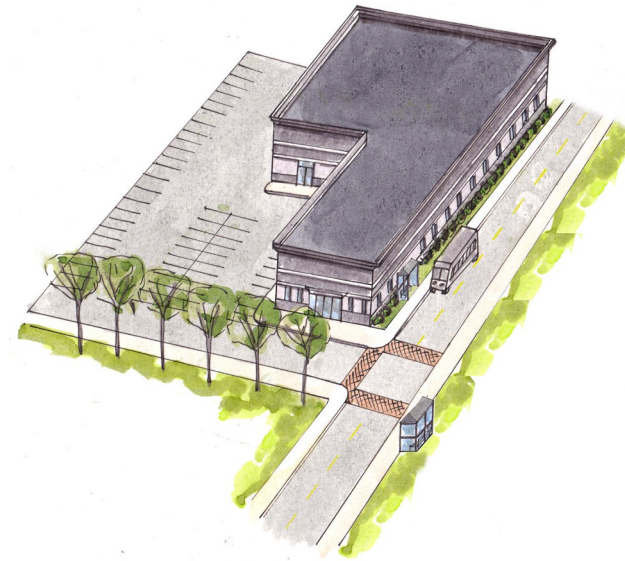


Success Stories from Transit Agency Partnerships (continued)

LANTA and LVPC

Lehigh and Northampton Transportation Authority (LANTA) and the Lehigh Valley Planning Commission (LVPC) entered into a Memorandum of Understanding (MOU) in 2009 whereby LVPC forwards and shares municipal plans, as well as subdivision and land development plans, with LANTA for their review. The two entities work together to “achieve urban design configurations that recognize and accommodate the needs of public transit operations.”

Transit Supportive Land Use for the Lehigh Valley is a document prepared by LANTA that serves as a guide for regional entities, municipalities, and developers to help facilitate the provision and use of transit. Additionally, LANTA has a staff member dedicated to coordinating with LVPC, municipalities, engineers, and developers to ensure transit and pedestrian amenities are considered during the design of land development and improvement projects. LANTA has found success by coordinating early with developers and their design teams to incorporate bus stop improvements into land developments that would directly affect existing and future bus routes and bus stop locations. LANTA has arranged and encouraged developers to incorporate shelters into their own design vision of their projects to directly benefit the users of their facilities.



Renderings of transit supportive site plans for industrial/office and commercial buildings. The renderings depict sidewalks, crosswalks, and overall site design to provide a safe and convenient connections for transit riders.

Image Credit: LANTA Transit Supportive Land Use for the Lehigh Valley, September 2013



Bus stop infrastructure and pedestrian connections implemented as part of the land development process due to coordination with LANTA.

Image Credit: LANTA



Implementation Resources

Implementation of bus stop improvements is not the sole responsibility of one entity. Rather, enhancements to the built environment, including those that support public transportation, are made over time through public and private investment in the community. Improvements can be implemented as part of a related project in the vicinity of the bus stop, such as a transportation improvement project or land development project. Or a transit agency, local government, non-profit organization, or other partner can implement improvements as a stand alone project. Additionally, improvements can be implemented in a phased approach over time, depending upon available resources and other constraints. For example, if an ADA loading pad and connecting sidewalk are constructed, a bench or shelter can be installed at a later date. Whether identifying funding or completing design, partnerships are key to implementing bus stop improvements.

Transit agencies play a key role in the planning and design of all bus stops. Any partners interested in providing a new bus stop or enhancing an existing stop should coordinate with the transit agency in their community at the outset of the planning or design process.

A Plan Review Checklist is provided in Appendix B and can be used as a resource to evaluate whether a design plan includes appropriate bus stop infrastructure.

Transportation Improvement Projects

Transportation improvement projects are completed to address a broad range of transportation needs. There are a variety of improvement types, including intersection improvements, bridge rehabilitations or replacements, roadway reconstruction, streetscape enhancements, and bicycle or pedestrian infrastructure. Transportation improvement projects can be led by PennDOT, counties, municipalities, or a partnership between various governmental entities. If a bus stop is located within the limits of a transportation improvement project, bus stop improvements can be incorporated into the design and construction of the project. Often, the bus stop infrastructure can be designed and constructed in a cost effective manner when it is part of a broader transportation improvement project.

It is beneficial to identify existing or planned bus stops during the conceptual design or preliminary engineering phase of a project and initiate early coordination between PennDOT, the municipality, and transit agency regarding the potential need and scope of bus stop improvements.

Land Development Projects

Bus stop improvements can be implemented as part of private land development or redevelopment projects. A private developer can design and construct the bus stop improvements as part of the adjacent land development project in accordance with municipal and PennDOT requirements.

PennDOT Connects

PennDOT Connects promotes collaboration between PennDOT and MPOs, RPOs, and local governments prior to developing scopes and cost estimates for transportation improvement projects. Early in the project development process, PennDOT considers community needs in an effort to make planning processes more efficient and cost-effective. PennDOT Connects meetings are held at the beginning of a project with local government officials and other partners. The meetings include discussion of incorporating all transportation modes, including transit, into transportation improvement projects. PennDOT Connects meetings are a great opportunity to discuss potential bus stop improvements as part of a broader transportation improvement project.



Incorporating bus stop requirements into zoning ordinances and SALDOs is one of the most effective ways to facilitate implementation of bus stop improvements as part of the land development process because it clearly outlines the municipality's expectations and vision. Additionally, the design of bus stop improvements should be developed through close coordination between the developer, municipality, transit agency, and PennDOT (for improvements within state-owned right-of-way). Also, there may be opportunities for the developer and transit agency to partner for installation or maintenance of improvements. For example, a private developer could install and maintain an ADA loading pad, foundation for a shelter, and connecting sidewalk and the transit agency could provide the shelter. As another option, the private developer could construct all of the improvements, but the transit agency could assume responsibility for long term maintenance of shelters or benches.

In some situations, bus stop infrastructure may not be necessary given current conditions, but could be needed in the future. Municipalities can work with developers and transit agencies to plan for future bus stops during the land development review and approval process. This could include the dedication of an easement to reserve space for a future bus stop or the collection of a fee-in-lieu of providing bus stop infrastructure or connecting sidewalks. Additionally, the official map is a tool that municipalities can use to identify area needed for future bus stops and connecting sidewalks.

Public-Private Partnerships

Some transit agencies and municipalities have agreements with vendors or concessionaires to provide bus stop infrastructure through public-private partnerships. The most common type of agreement is with an advertising company for the provision of bus shelters. For example, the advertising company will install and maintain bus shelters using revenue generated by controlled advertisements within the shelters. This type of agreement can also generate revenue for the transit agency. Key considerations for this type of agreement include ensuring that advertisements comply with local ordinances, ensuring necessary agreements are in place for shelter installation within the public right-of-way, and providing shelters in locations with lower traffic and ridership.

Potential Funding Sources

Identifying funding is a critical step for implementing bus stop improvements, particularly those that cannot be completed as part of another project or through a public-private partnership. Transit agencies, counties, or municipalities can identify and allocate funding in their annual budgets. However, these organizations have limited resources and may not have funding available through typical funding streams, such as general tax revenues or Federal Transit Administration (FTA) formula grants. Competitive grant funding programs can be a resource to fund bus stop improvement projects.



Example of bus stop infrastructure designed and constructed as part of an adjacent land development project in Phoenixville Borough, Chester County.



Example of a bus shelter donated and installed by the Broomall Chapter of Rotary International and maintained by Marple Township, Delaware County.

Source: DVRPC Enhanced Bus Service on West Chester Pike, February 2016



Federal

- FTA Grants for Buses and Bus Facilities Program
- Community Development Block Grant (CDBG)
- Transportation Alternatives Set-Aside Program

State

- PennDOT Multimodal Transportation Fund (MTF) Competitive Grant Program
- DCED Multimodal Transportation Fund (MTF) Competitive Grant Program

Private or Foundation Funding

Foundation resources have been used to fund bus stop improvements. For example, AARP's Community Challenge Grant program has provided funding to local governments, transit agencies, and non-profits to install bus stop improvements in various communities across the country.

Additionally, there may be opportunities to work with local non-profit organizations to identify funding and implement creative design solutions. For example, a bench or bus shelter could be a public art installation developed in collaboration with a non-profit organization or local artist.

