a toolbox

for transit-oriented communities in southwestern pennsylvania

March 2006

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Prepared for

Southwestern Pennsylvania Commission

The Heinz Endowments

Regional Transit Operators:

>>> Port Authority of Allegheny County

>>> Beaver County Transit Authority

>>> Butler Township City Joint Municipal Transit Authority

>>> Fayette Area Coordinated Transit

>>> Indiana County Transit Authority

>>> Mid-County Transit Authority

>>> Mid-Mon Valley Transit Authority

>>> New Castle Area Transit Authority

>>> City of Washington (GG&C Bus Co, Inc)

>>> Westmoreland County Transit Authority

City of Pittsburgh

Steel Industry Heritage Corporation

Port of Pittsburgh Commission

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March 2006

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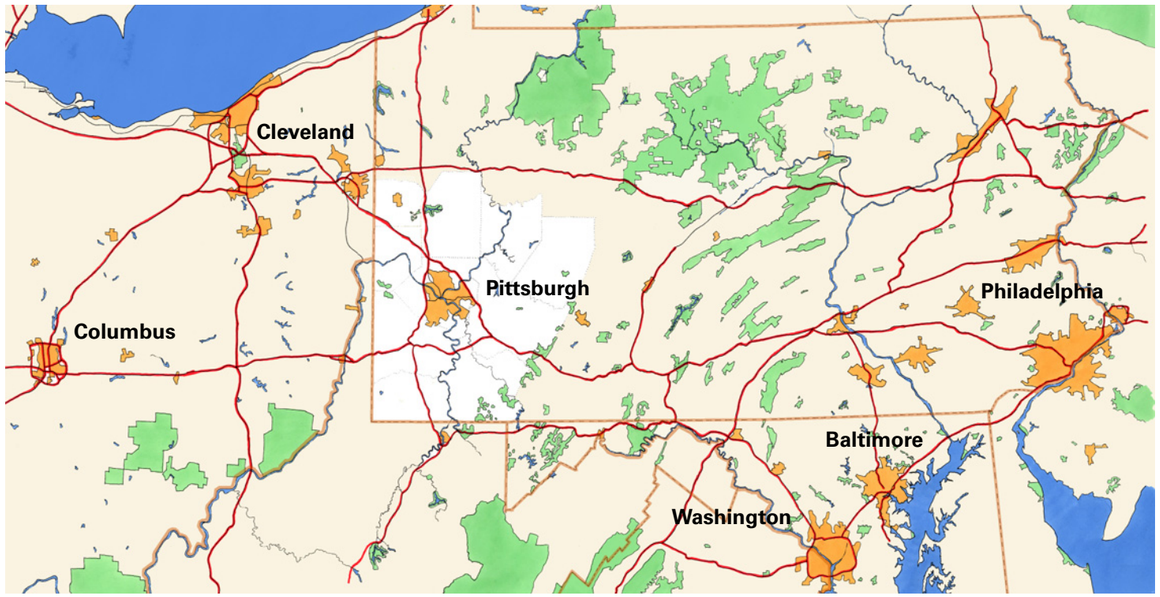
The Purpose of this Toolbox

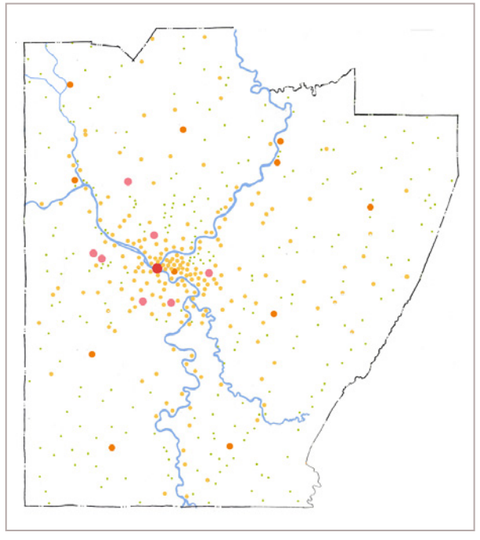
The *Regional Strategic Transit Visioning Study* was conducted by the Southwestern Pennsylvania Commission and Port Authority of Allegheny County, in cooperation with transit operators in Armstrong, Beaver, Butler, Fayette, Greene, Indiana, Lawrence, Washington and Westmoreland counties. The study, also known as the *20/20 Transit Vision Study*, outlines an aggressive, but attainable, public transportation vision for the coming decades. Based on three years of community input and research, the Transit Vision proposes a mixture of transit services and amenities to connect residents to recreational, educational, and employment centers throughout Southwestern Pennsylvania.

In addition, the *20/20 Transit Vision Study* presents a Transit Vision for the region that is predicated on a significant shift in how our region views regional growth and development – to one that promotes compact, pedestrian- and transit-friendly development patterns consistent with a balanced transportation system and preservation of our natural open space. Furthermore, the study suggests that investments in public transportation must be linked to land use decisions. Public transportation in conjunction with compact and coordinated development patterns can not only improve mobility and access to serve our region's citizens and businesses, it can save substantial dollars in the costs of public infrastructure such as sewer, water, local roads and schools.

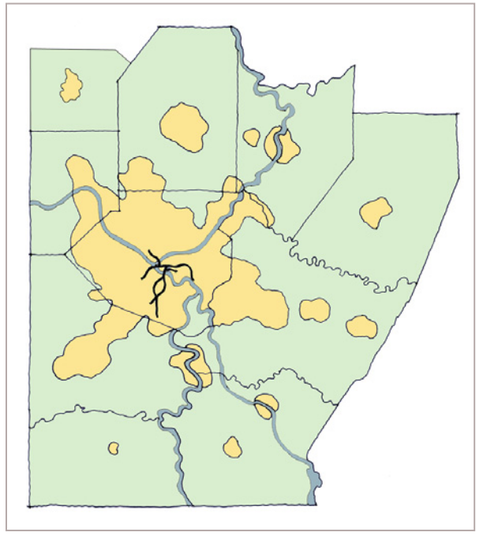
A critical element for successfully implementing the Transit Vision will be the development of transit-oriented communities in the region. Transit-oriented communities are compact and walkable areas that offer a mixture of land uses and housing options within proximity of a transit stop or station. Transit-oriented communities offer numerous



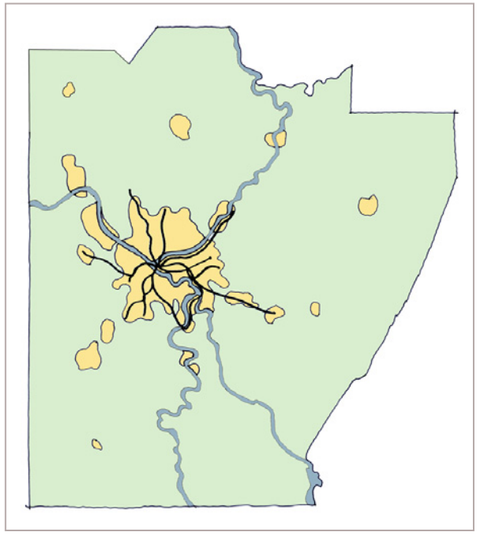
NEIGHBORING REGIONS: Metropolitan regions are the primary economic unit of competition. Southwestern Pennsylvania is in competition for goods, ideas, and capital with other regions nearby and abroad.



SOUTHWESTERN PENNSYLVANIA: Our region is a constellation of communities.



TREND-BASED GROWTH: Low-density development will lead to a contracted public transportation system

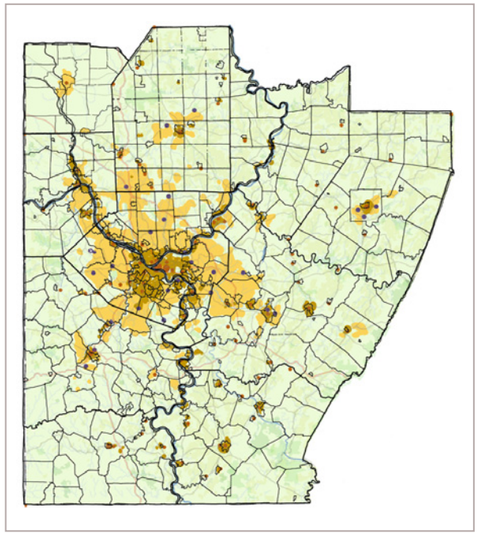


FOCUSED GROWTH: Higher-density development will support an expanded public transportation system

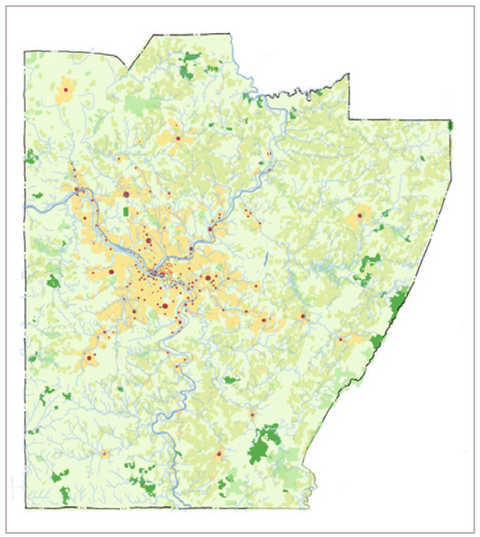
benefits including the opportunity to live, work, and play in one's own community. Transit-friendly design is not a new idea in southwestern Pennsylvania. In fact, many concepts for transit-oriented design mirror characteristics already found in numerous neighborhoods and communities throughout the region that developed around transit routes and railroad stations in the late 1800s and early 1900s. Furthermore, these concepts have been re-applied in new developments in the region.

As a result of demographic and lifestyle changes occurring in southwestern Pennsylvania and in many other areas of the country, there is renewed interest in compact, walkable communities that can be readily served by public transportation. This is evident in the transit- and pedestrian-oriented development projects that are occurring in many locations throughout the region. Nevertheless, it is also true that in the last 50 years, the design of communities has to a great extent focused on accommodating the automobile, sometimes at the expense of public transportation, pedestrian access, and regional connectivity.

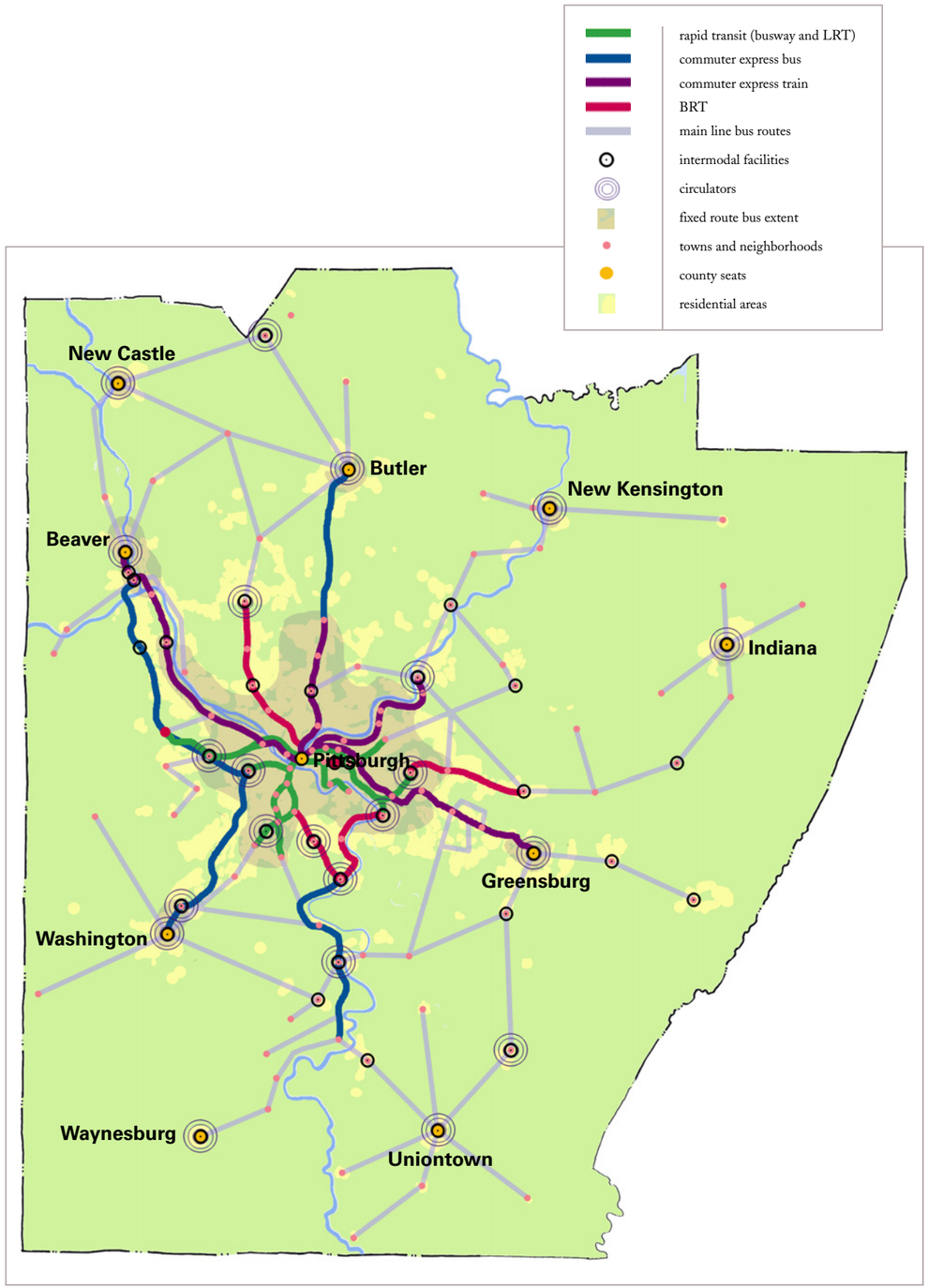
To address this issue and to promote the creation of environments that are friendly to transit and pedestrians, this report, *A Toolbox for Transit-Oriented Communities in Southwestern Pennsylvania* was written. As it is named a 'toolbox,' the report is intended to be a resource for communities to participate in the Transit Vision – communities that want to realize the benefits of public transportation and facilitate economic development. The toolbox describes the advantages of integrating transit and land use decisions and illustrates how such investments can be leveraged and achieved in a community.



COMPLEX REGION: Regional coordination is imperative; however with over 500 boroughs, townships, and cities, regional coordination is a significant undertaking.



ONE REGION: Characterized by a complex pattern of diverse communities interwoven with a landscape of hills. valleys, and rivers, our region offers an authentic sense of place.



THE TRANSIT VISION FOR SOUTHWESTERN PENNSYLVANIA

This toolbox is intended to provide municipalities and others who have an impact on land use with an introduction to planning tools available to help put this vision of positive growth into action. The following pages will aid stakeholder groups, from elected officials to entrepreneurs to citizens, to make coordinated development decisions that ultimately support aggressive investments in public transportation. By working together, as parts of a larger and more diverse whole, land use and transit decisions will connect places together and weave the tapestry of southwestern Pennsylvania into a competitive metropolitan region.

The toolbox contains four sections. The first section, *Introduction*, links the Toolbox back to its parent study *A Regional Strategic Vision for Public Transportation Serving Southwestern Pennsylvania* by introducing the importance of Transit-Oriented Communities to both the region and to public transportation. The second section, *Regional Places and Transit*, describes the various types of communities across Southwestern Pennsylvania, their role in the regional transportation system, and their role in helping to foster a focused growth pattern across the region. The third section, *Assembly Kit for Transit-Oriented Communities*, introduces techniques to design transit-oriented communities; and the fourth section is on *Procedural Tools*.

Regional Connections

Connecting the region is important because Metropolitan regions have emerged as the primary unit of competition in the global economy. Southwestern Pennsylvania is in competition for goods, services, ideas and capital with regions around the United States and the world.

The factors that determine regional competitiveness have changed greatly over the past twenty years. While access to natural resources and financial capital was once primary to the success of the region, these factors are no longer sufficient in today's highly competitive, global economy. Our ongoing success rests on intangible factors in addition to local resources – most notably a high quality of life – the greatest determinants of regional competitiveness.

Our region is much larger than our individual locales. We all live a regional life. That is to say, most of us live in one community, work in another, and perhaps shop, worship, and play in many others.

Our daily patterns of life require us to constantly cross municipal and political boundaries. The operations of every store, office, factory, and institution we visit rely on a network of vendors, resources, and capital located throughout the region. Access to, not competition for, these networks is absolutely critical for economic development. And attraction of resources for future success is a collective and regional responsibility.

Public transportation can play a vital role in improving the region's networks and connectivity, and therefore in increasing our competitiveness. Public transportation connects people to jobs, opportunities, and ultimately a high quality of life. By connecting our communities with public transportation, social and financial disparities can be minimized, open space can be preserved, cherished places can be saved, there can be greater choices of places to live, and traditional towns can be revitalized.

Land Use and Transportation

Integrating land use and transportation decisions and actions at all levels is the key to maximizing transportation investments. Transit requires compact and coordinated development patterns in order for it to operate most effectively and efficiently. Over the past twenty years, our region has declined slightly in population (8%), yet we have developed more land, contributing to suburban growth. Should this 'trend-based' growth continue, our development as a region will be uncoordinated and our resources and investments will not be connected as well as they could be. There is another alternative for growth, however. If we choose to 'focus' further growth by investing in brownfields, existing urban and suburban neighborhoods, and traditional towns, public transportation investments can be justified and a world-class public transportation system can be nourished.

Working Together for Healthy Communities

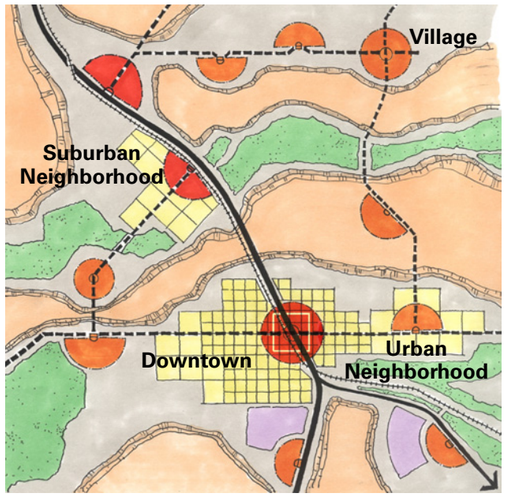
Southwestern Pennsylvania is a region comprised of a wide range of municipalities varying greatly in shape, size, and governance. This rich tapestry of places is both a blessing and a challenge. Variety makes our region unique, offers authenticity and creates a sense of place. However, the boundaries that define the communities with which we identify can also lead to divisions when attempting to coordinate the regional life that we share. With so many differing jurisdictions, the rich tapestry of places that is our region could dissolve into disparate entities and uncoordinated decisions when it comes to regional form and future investments in public transportation.

Transit-Oriented Communities

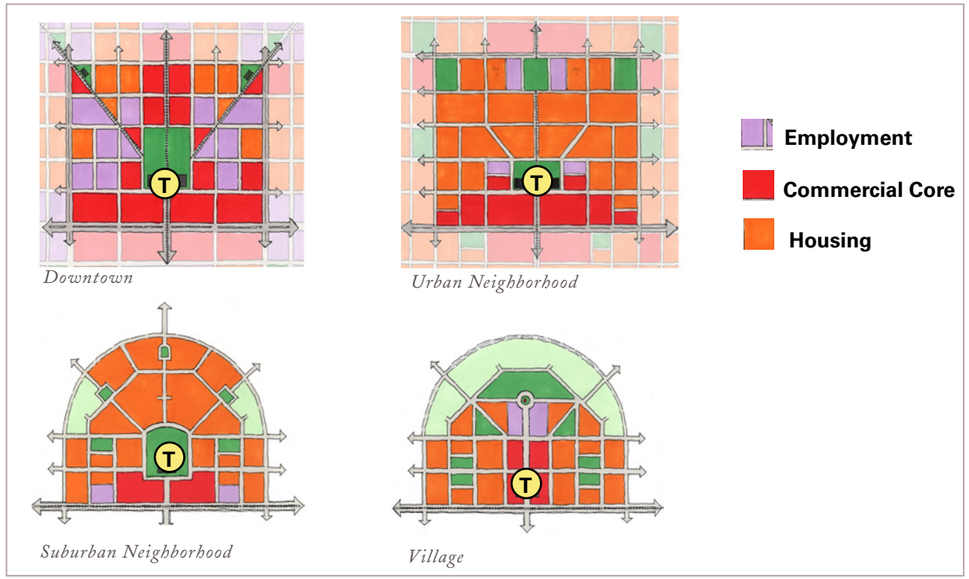
Transit-Oriented Communities (TOCs) are the basic building blocks of a transit-oriented region. Transit-oriented communities are places with a wide range of development activities designed to encourage the use of public transportation through the enhancement and creation of suitably dense areas as markets for transit service. In their simplest form, TOCs can be the addition of a passenger shelter and other amenities to a busy transit stop. In a more comprehensive form, transit friendly development may consist of a cluster of mixed uses planned around a transit facility. In many areas of the United States, entire neighborhoods are being founded and revitalized based upon access to and promotion of multiple alternatives to the automobile. These neighborhoods feature a mix of land uses within a quarter-mile to a half-mile walking distance of a central transit stop or station.

Where TOCs could be in Southwestern Pennsylvania

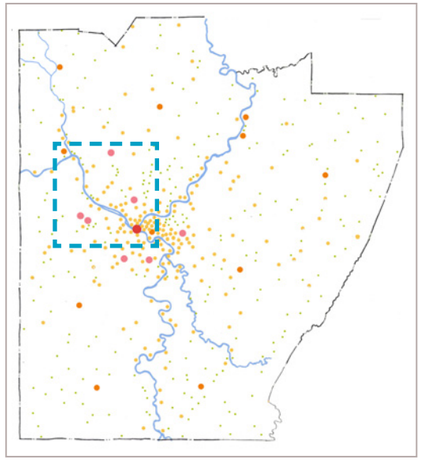
There is tremendous potential to create transit-oriented communities throughout the region. Many of the region's communities have all the 'bones' in place to create communities centered on transit. Most of our communities were built prior to the widespread use of the automobile. Therefore, by necessity, walking and transit were the primary modes of travel. Those communities still exist. Their infrastructure of streets and buildings are still intact. What they lack are regional transit connections. These communities and towns, if supported with a regional growth policy that supports infill development and local policies that maintain their compact urban form, and enhanced by programs to encourage pedestrian connectedness in existing communities, can become transit-oriented communities connected with a regional transit system.

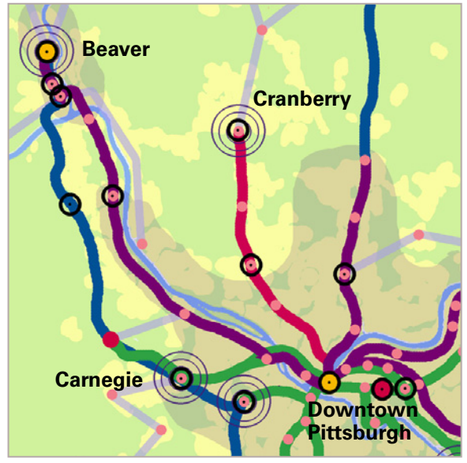


A NETWORK OF TRANSIT-ORIENTED COMMUNITIES: The region's unique pattern of compact neighborhoods, communities, and towns can be strengthened with transit connections and improved pedestrian links.



TYPES OF TRANSIT-ORIENTED COMMUNITIES: The regional transit vision relies on communities of all scales to incorporate transit friendly development patterns into their municipal plans and codes. TOCs provide access to most daily necessities within a five to ten minute walk of its core.





CREATING TRANSIT NETWORKS IN SOUTHWESTERN PENNSYLVANIA: Our settlement pattern of compact communities settled along natural corridors is conducive to creating a strong regional transit system. However, communities must work together in order to realize this system. Those communities and corridors that create development patterns supportive of transit will have the best chance for transit investments.

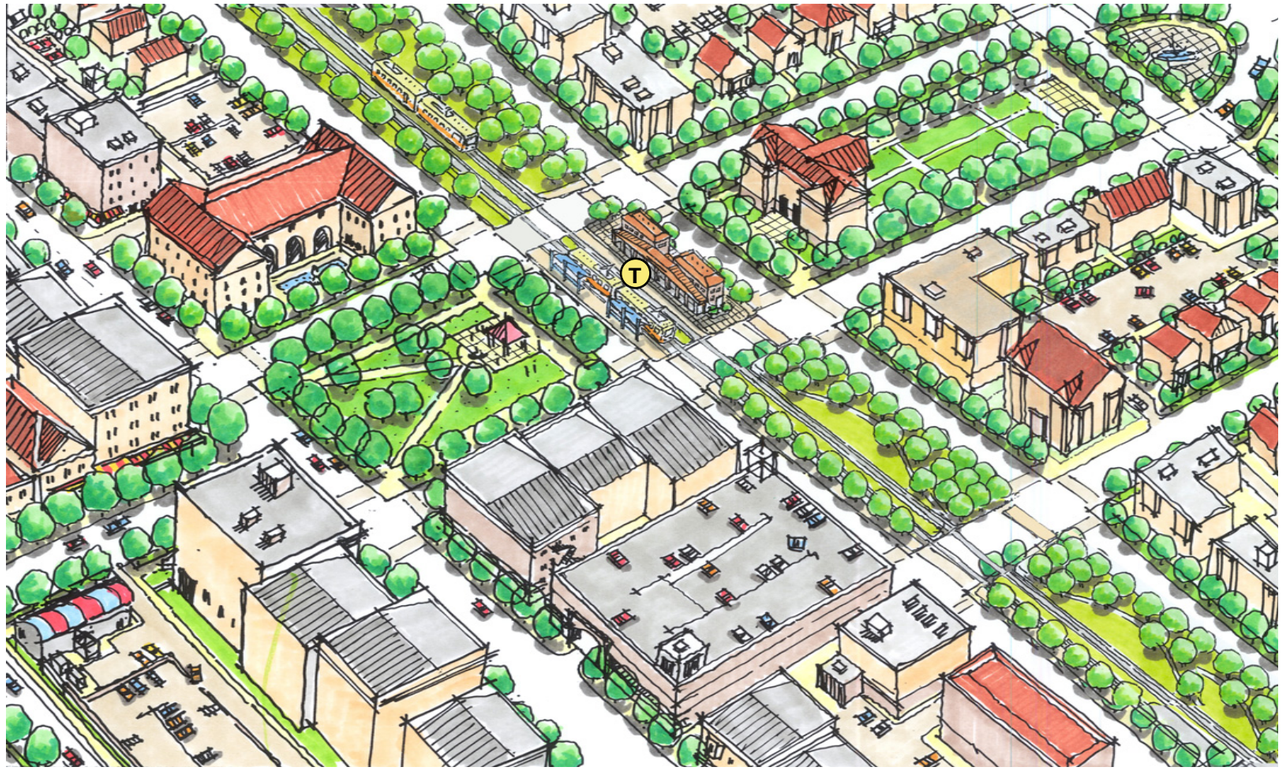
The Benefits of Transit-Oriented Community Development

Local governments profit from increased sales tax and property tax revenues, as well as a more efficient use of public services and infrastructure.

Developments near transit investments often experience an increase in property values, building rents, and building occupancies of property near public transportation. These developments take advantage of the increasing market demand for TOCs. Transit passengers as well as entire communities gain from increased access to region-wide destinations, improved air quality due to less reliance on automobiles for daily needs, and reduced transportation costs.

The region will benefit from revitalized traditional towns thereby preserving investments in a community's public infrastructure, historic assets, community institutions, and social networks. Open space, critical habitats, and valuable environmental resources are preserved because development is focused to places that are most effectively served by transit. The strategic locations of Transit-Oriented Communities and their compact forms use infrastructure efficiently, saving money for developers, residents, and governments.

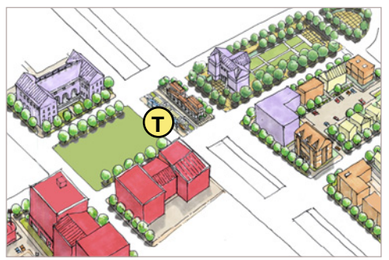
A major reason for designing transit-friendly environments, however, is to create more livable and integrated communities. These places are designed to serve all interests in a community from the private business owner to the public sector to the enhancement of the lives of each and every citizen.



A Transit-Oriented Community

TRANSIT-ORIENTED COMMUNITIES CONTAIN:

pedestrian-friendly public spaces, sidewalks, streets, and parks



a complementary mix of uses that support transit and pedestrian activity

transit at the core of the community's public space in the form of a public plaza or landmark.

PRINCIPLES OF TRANSIT-ORIENTED COMMUNITIES: Transit-oriented communities of all scales share three basic qualities. These qualities should be individually interpreted and applied by all communities eager to realize the substantial benefits of public transportation.

Transit-Oriented Communities are:

- *Walkable:* pedestrian friendly streets and sites make it easy to walk from one place to another;
- *Mixed-use:* a variety of daily needs are located within proximity to each other;
- *Appropriately dense*: as compact centers integrated with transit, they create a critical mass able to support retail needs and transit;
- *Pedestrian scaled:* design of buildings, streets and blocks are based on the scale of an individual not automobiles;
- *Multimodal:* provisions for bicycles, pedestrians, transit and automobiles will increase access and connectivity;
- *Coordinated:* the uses within one community compliment the uses in another community;
- *Diverse:* a variety of housing options allows a community to accommodate all its residents throughout their various life stages; and
- *Encouraging of transit use:* developments within communities are designed to facilitate access to existing or future transit service.

Creating Transit-Oriented Communities

Encourage development and transit investments in our region's traditional neighborhoods, towns, and villages.

Many of our region's neighborhoods have the infrastructure in place to become a transit-oriented community. That is, they have a dense street network, main street buildings, town centers, and a density of housing stock that can support moderate levels of transit service. Furthermore, many are nodal in form, can be served by a single point (or a few) of transit and are located along natural trunk lines. Instead of, or perhaps in addition to, creating new transit-oriented communities on greenfields, the region should prioritize the revitalization of our oldest towns and communities.

Encourage land uses that generate pedestrian activity and transit ridership.

Some land uses are more appropriate than others in areas designated for transit investments. Some land uses are inherently transit supportive because they encourage pedestrian activity and less reliance on automobiles. Some land uses which are otherwise not transit supportive can become transit supportive through appropriate site design. A listing of transit supportive land uses can be found in the last section of this toolbox.

Concentrate employment and housing within a half mile of transit stops.

A major reason for the region's growth in vehicle miles traveled is the geographic separation of housing and employment. The average commute time and distance is increasing because the choice to live proximate to one's place of employment can be difficult to undertake. Transit-oriented communities that balance jobs and housing can capture commuting trips internally, thereby reducing the burden on the regional roadways.

Increase the mix of complementary land uses that support transit and pedestrian activity.

Transit-Oriented Communities must be mixed use. They should contain complementary uses, not competing uses. Complementary uses are those uses that one can combine on any single trip. For example, the daily pattern of dropping a child at day care, purchasing the newspaper and a cup of coffee, going to work, eating lunch, exercising at the gym, and picking up food for dinner demonstrates seven complementary uses.

Located at a nexus of several bus lines, Squirrel Hill (left) has all of the basic necessities of daily life within walking distance of its center. Extending the East Busway to Wilkinsburg, Edgewood, Swissvale ,and Rankin (right) is an example of providing transit investments to areas with all the qualities of transit-oriented communities. Each of these areas has the elements of a Transit-Oriented Community.

MT. LEBANON: Anchored by Light Rail Transit that supports both commerce on main street and the commuting residents, Mt. Lebanon is an example of a community that encourages transit use through planning and design.

Design streets for multimodal use.

The streets in a Transit-Oriented Community must be multimodal. The design of the streets should consider the needs of pedestrians, bicycles, automobiles, and transit.

Encourage efficient use of parking resources.

Parking in a Transit-Oriented Community should be accessible but not excessive. A community should encourage shared parking arrangements, on-street parking, and alternative means of access such as bicycling, walking, carpooling and transit. Parking facilities should also have first floor retail incorporated with them, and if possible be connected to a transit stop.

Create well designed pedestrian-oriented streets, sidewalks, public spaces and properties.

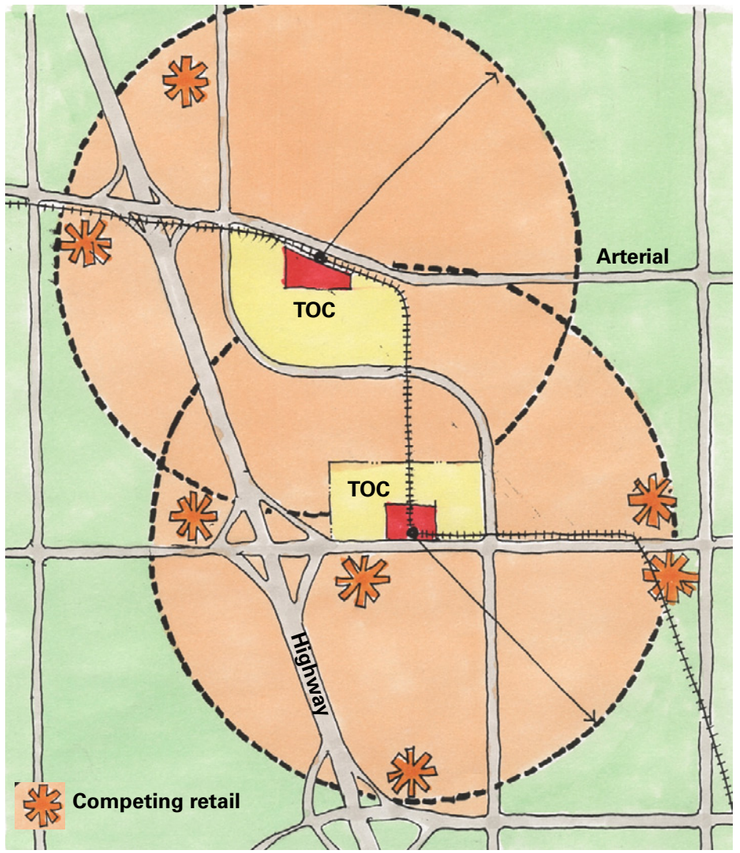
Transit is accessed by foot. Therefore, the pedestrian environment must be well designed, comfortable, safe, and pleasant.

Focus new development along new or existing transit corridors and multimodal streets.

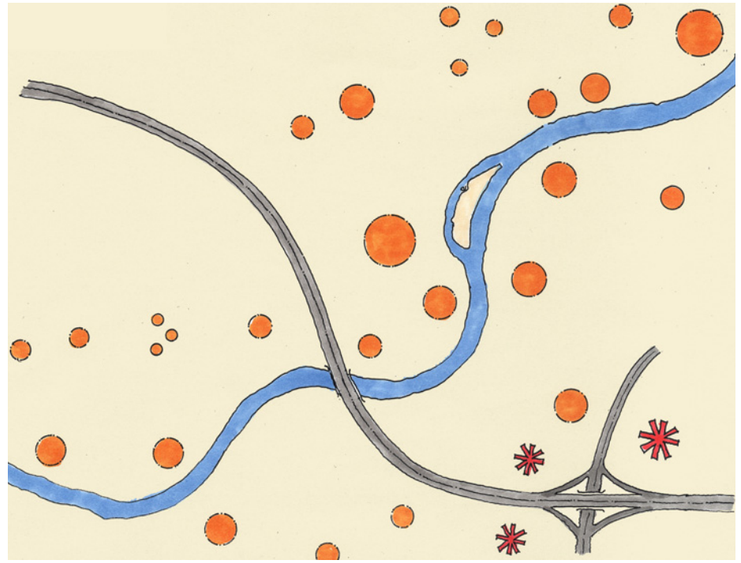
Investments in transit can be bolstered if communities focus their most dense development along transit corridors. Doing so will reduce traffic congestion in a community.

Design communities with an array of transportation options, including, but not limited to streets, transit, bikeways, and trails.

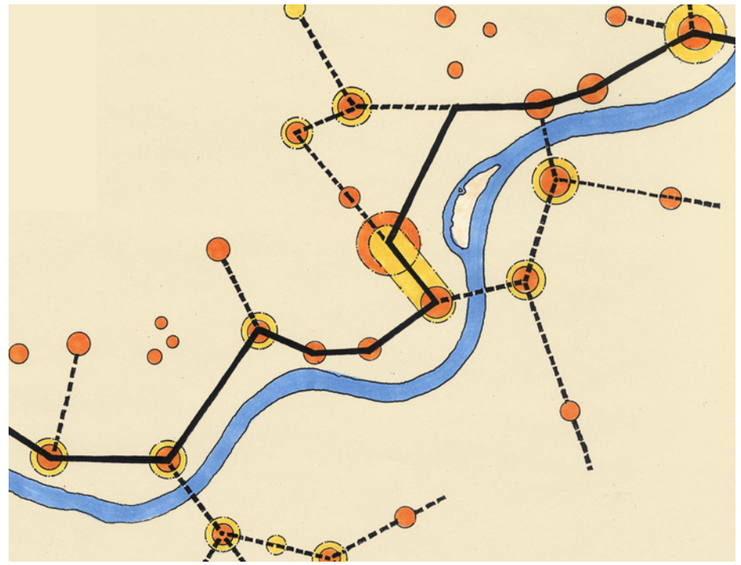
Places that allow residents to be less reliant on cars may reduce the need for additional lanes of roadway and other transportation capital investments. When walking, bicycling, and transit are seen as viable transportation options, the result is fewer vehicle trips, less traffic congestion, and improved air quality.



DISTRIBUTION OF TRANSIT-ORIENTED COMMUNITIES: Unlike suburban commercial developments that cluster and compete, Transit-Oriented Communities are appropriately spaced and compliment each other.



Communities by-passed by highways that build roadway capacity and encourage vehicular travel



Communities linked with roads and transit that increase connectivity and access

TRANSPORTATION INVESTMENTS: Highways (top) facilitate the through-movement of goods and people while also encouraging low density developments not supportable with transit. Transit investments (bottom) connect communities and increase access and connectivity to important regional places.

regional places and transit

regional places and transit

The physical form of the region plays a central role linking land use decisions to transit decisions. The report *A Regional Strategic Vision for Public Transportation Serving Southwestern Pennsylvania* analyzes development patterns of the region to describe the myriad types of places by their physical forms, potential effects, and contributions to the region. This section describes the building blocks of regional form. Illustrations and photographs are used to demonstrate the variety of different places throughout the region and the role they play in creating and enhancing strong transit-oriented communities.

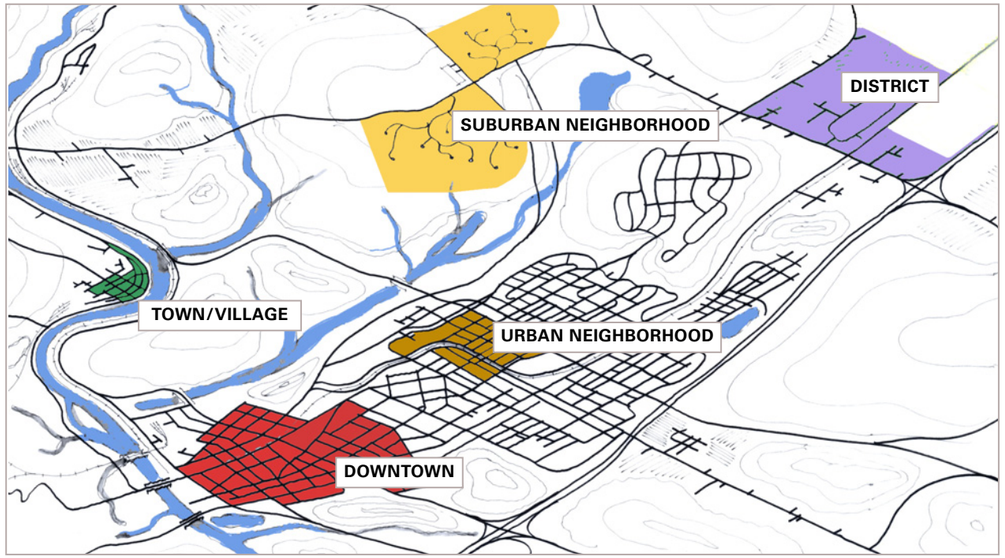
The Building Blocks

Regional form is described through 'building blocks.' There are six basic building blocks to regional form:

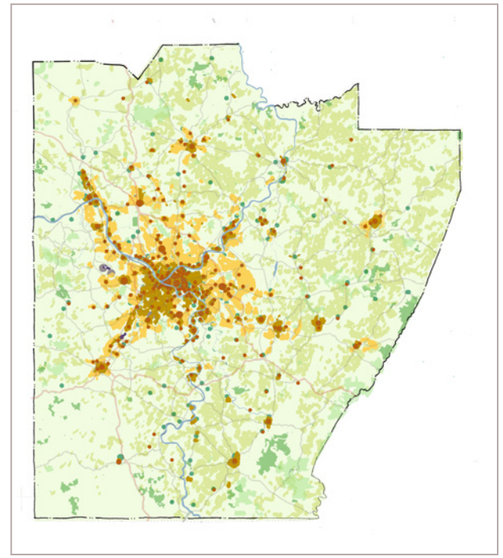
- DOWNTOWNS
- URBAN NEIGHBORHOODS
- TOWNS & VILLAGES
- SUBURBAN NEIGHBORHOODS
- SINGLE-USE DISTRICTS/REGIONAL CENTERS
- PRESERVES AND OPEN SPACE

Each building block describes both a type of place and a potential transit market and a transit opportunity. Some of the building blocks present stronger transit markets than others, and these places will invariably have frequent service and many stops. By joining regional form and public transportation decisions, choice is made for all communities to have a degree of transit service appropriate to location and overall density.

Southwestern Pennsylvania is a diverse region of places to live, work, worship, shop, and spend free time. By introducing public transportation resources to serve and link these areas, the region as a whole increases its competitiveness and attractiveness to those who reside and visit here.



A region of places



Downtowns: Butler

Towns and Villages: Clairton

Single-Use Districts/Regional Centers: Monroeville shopping district

Urban Neighborhoods: Dormont

Suburban Neighborhoods: Cranberry

Open Space: Farmland in Washington County

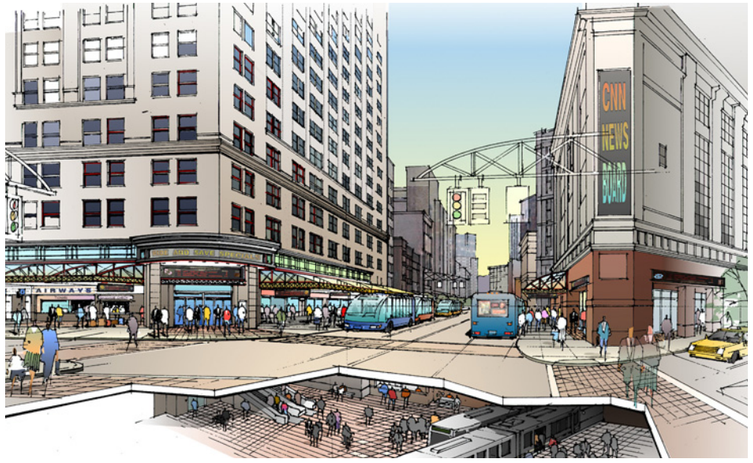
Downtowns

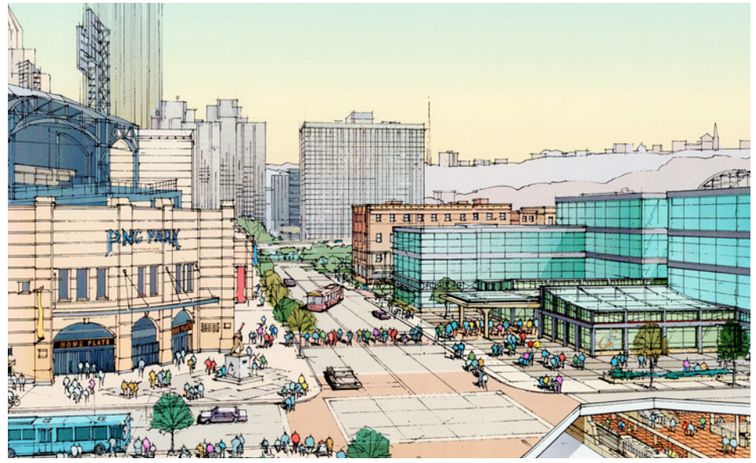
Downtowns are the region's largest pedestrian-scaled concentrations of multiple types of uses and developments. Our downtowns serve as the hubs of commerce, government, and culture for their respective areas. Downtowns provide businesses access to large market areas. While Downtown Pittsburgh is our largest downtown, many communities in the region have well-defined downtowns. The presence of multiple downtowns in our region is one of our defining and most unique qualities.

The region's downtowns should be our strongest transit markets because they have the greatest potential to 1) mix complementary and compact uses, 2) create pedestrian friendly streets, and 3) locate transit directly in the core of the community.

Downtowns are dominated by commercial, civic, cultural and offices uses, and bolstered by residences and entertainment uses. By incorporating downtown living options, cities become both origins and destinations of transit. In addition to downtown housing, most appropriate in the form of apartment buildings and flats above storefronts, these core areas of all scales have neighborhoods directly related to them. These adjacent neighborhoods help bolster a transit market in downtown by providing yet more households within walking distance of a transit facility.

Downtowns become strong transit markets by combining compact and complementary uses within walking distance of each other. Because they are compact and pedestrian-friendly, downtowns become the hub of their area by creating several multimodal transit centers. Several multimodal stations networked together will increase a downtown's accessibility and development capacity.





DOWNTOWN PITTSBURGH: With the multiple modes of travel converging on downtown Pittsburgh, the entire downtown operates as a transfer facility. Light Rail Transit operates below grade, thereby allowing for immediate transfers to buses located on the street level. Intermodal facilities are integrated with private development and major public venues such as the stadiums. The extension of the North Shore Connector and other improvements allow downtown to meet the growth demands of the next 25 years by extending the definition of downtown beyond the Golden Triangle to include the North Shore, lower Hill District, Station Square, and the western portion of the Strip District.

Higher transit frequencies can be sustained in larger downtowns because the intensity and mix of uses generate both peak and off-peak demands, as well as origins and destinations for people. Transit should be given priority in downtowns by way of exclusive lanes, signal priority, or dedicated right of way.

The ten-county Southwestern Pennsylvania region is unique in that it consists of several places with dense urban fabric serving as transit-supportive environments. Downtown Pittsburgh is the dominant downtown of the region; however the surrounding county seats of Washington, Beaver, Butler, Kittanning, Indiana, Uniontown, Greensburg, New Castle, and Waynesburg are also regionally significant downtowns. Ambridge, Connellsville, Latrobe, Slippery Rock, Ford City, Jeannette, and Houston are other examples of regional downtowns. The report *A Regional Strategic Vision for Public Transportation Serving Southwestern Pennsylvania* calls for each of the county seats to be strengthened as centers of commerce, culture, employment, government and entertainment for their respective areas of the region. When such uses are combined within a dense pattern of streets and blocks, transit markets will be strengthened and transit service can then be improved.

COUNTY SEATS: Washington and Kittanning are rooted by a dense downtown at the core that supports its surrounding residential fabric. Though much smaller than Pittsburgh, Washington has the density of infrastructure to support several modes of transit.

Urban Neighborhoods

Urban neighborhoods are walkable, dense, mixed-use areas with a combination of housing, civic, entertainment and employment uses. Urban neighborhoods provide local shopping, employment, cultural and recreational opportunities for a local market area between 10,000 and 50,000 people within a two- to three-mile radius.

Urban neighborhoods tend to be part of a larger urbanized area. Cities such as Pittsburgh, Butler, Uniontown, New Castle, and Greensburg have several urban neighborhoods within them. Many of the region's smaller boroughs such as West View, Homestead, Houston, Dormont, Irwin, Crafton, Rochester, Ford City, Slippery Rock, and Etna can be considered urban neighborhoods because they share many of the characteristics described above. Unlike towns and villages, urban neighborhoods do not stand alone, nor are they self sufficient. They tend to be located along main corridors and within a larger network of neighborhoods.

Urban neighborhoods tend to create strong transit markets because they contain a dense concentration of both households and jobs. Connectivity and mobility options in urban neighborhoods are very high because these neighborhoods often feature a grid pattern of streets that is inherently conducive to pedestrian connections and transit. Urban neighborhoods are typically located along important arterials that either are or can become multimodal transit corridors.

Urban neighborhoods that are well-served by transit foster independence for youths, senior citizens, persons with disabilities, and those who cannot or choose not to drive a car. Not only does transit provide freedom of travel, but it removes a burden from friends and family members who do drive.

MOUNT LEBANON: One of Pittsburgh's first streetcar suburbs, it maintains a strong core area and many uses due to its density and walkable character. For these reasons, as well as being situated as a destination along a transit corridor, Mount Lebanon can support a high level of public transportation.

SOUTH SIDE, PITTSBURGH: Carson Street anchors a dense, mixed-use area, very accessible to the varied adjacent neighborhoods by cross streets perpendicular to its main street. Carson Street, beyond providing varied residential accommodations such as apartments above retail, as shown, acts as the public transportation spine for both businesses and residences.

EAST LIBERTY, PITTSBURGH: Located on the East Busway, both its downtown and its neighborhoods are within walking distance of premium regional transit. New developments as well as re-developments are occurring in the area.

BEECHVIEW, PITTSBURGH: In Beechview, the LRT shares the road with cars. The LRT is a vital part of the community as it connects the surrounding neighborhoods to the commercial core. Beechview's streets are pedestrian friendly, connected and supportive of transit.

Urban neighborhoods always contain a range of housing options. Housing types range from single family houses to mid-rise apartment buildings. On average, an urban neighborhood will have a housing density of about 7 to 10 units per acre.

Living in an urban neighborhood will likely save on transportation expenses. A study of 28 metropolitan areas in the United States found that households in the most sprawling cities spend 20 percent, or an average of $1,300 per year, more on transportation expenses than the households in regions with the fewest sprawling characteristics. The places where transportation expenses are the highest have the fewest transportation options (measured by the ratio of transit to roads). Transportation costs also vary widely within a region. In outlying areas with low-density development and few transportation options, households may spend more than two times the amount spent on transportation by residents of pedestrian and transit-friendly neighborhoods.

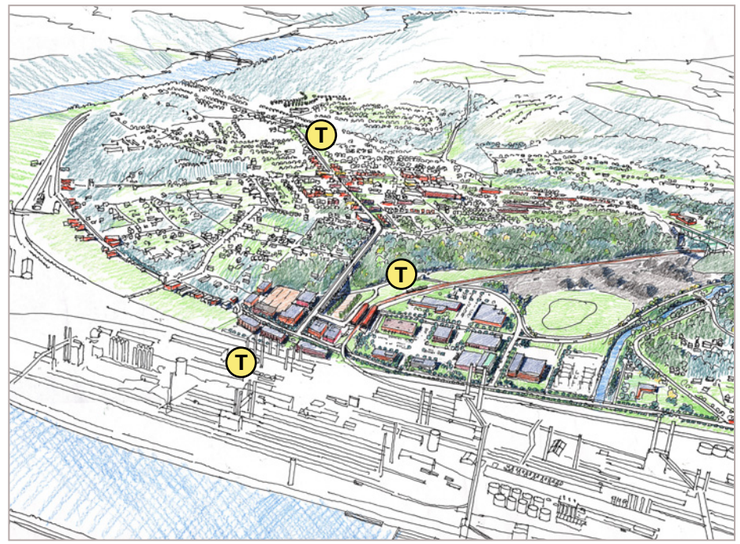
The same study suggests that if communities implemented coordinated transportation and growth policies, households may be able to spend less on transportation and direct their savings to investments such as homeownership. In fact, in some cities, including Pittsburgh, home buyers can benefit from purchasing homes in a 'location efficient neighborhood' (one where jobs, goods, and services are either nearby or easily accessible by transit) due to the new Smart Commute mortgage. This mortgage allows home buyers to borrow more money because they will spend less on transportation.

Towns & Villages

Villages and Towns are self-contained, small, dense settlements outside the general urbanized areas of the region's downtowns. Towns and Villages typically contain everyday goods and services such as a supermarket, pharmacy and post office serving an area of approximately 1.5-mile radius and up to 10,000 residences. Towns and villages often contain a Main Street and/or village square. Buildings are rarely larger than two or three stories. Towns and Villages are always surrounded by open space and connected to the region by major highways, trails and natural corridors. Examples of towns and villages are Zelienople, Saxonburg, Apollo, Saltsburg, Brownsville, Mount Pleasant, Ligonier, Evans City, McDonald, and New Wilmington.

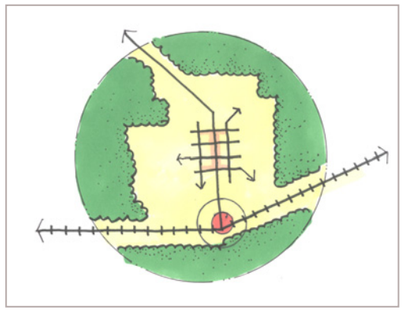
Central to the identity of a town and village is the rural separation between it and other urbanized areas. The open space (forest, agricultural, steep slopes, etc) around towns and villages does as much to define it as the uses themselves.

Many villages and towns in our region are located along the rivers, nestled in valleys, or along important crossroads. The traditional "isolation" of these towns and villages has in most cases created a strong individual identity through its own unique mix of commercial, retail, cultural and recreational opportunities. The resulting authenticity is important to protect.



CLAIRTON: Located on the Mon River and surrounded by hillsides, Clairton is a traditional industrial town with potential to become a transit-oriented community. The blocks are small, the housing stock is sufficiently dense, and there is a walkable main street. Public transportation can help to revitalize its brownfields by providing better connections to the region. A hub of public transportation systems can be created at the base of Peters Creek, connecting Clairton's downtown to the new development, and in turn to the region.

BAXTER, SOUTH CAROLINA: Rural areas throughout the region can be designed, prior to their development, to accommodate transit-oriented communities. Baxter, South Carolina is a new community that has adopted all the principles of transit-oriented communities. The core of the community is mixed-use and pedestrian friendly. Housing adjacent to the core is sufficiently dense to support transit. Beyond 1/4 mile from the core, the housing is typical of an urban neighborhood. The street and sidewalk connections between the core and the lower density housing are clear and simple, thereby further boosting the strength of Baxter's transit market.

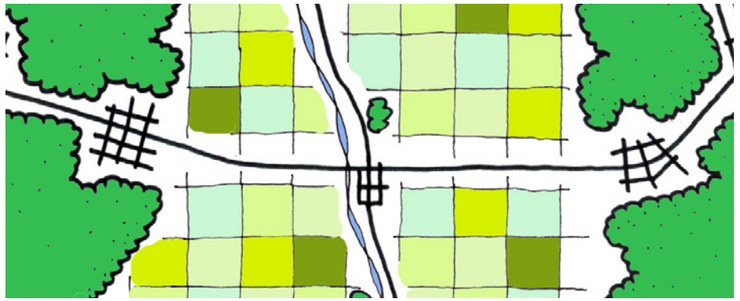


VILLAGES AND TOWNS: Rely on their surrounding open space to create their unique identity. Preservation of these surrounding areas allows the villages to maintain their compact quality.

Villages and towns create strong transit markets. However, due to separation and relative isolation, serving towns and villages with transit requires good transit service design. Serving any one town and village with high levels of transit is dependent on its surrounding community. As nodes along a corridor, towns and villages together can create a strong transit market if they are developed at moderate densities and they maintain their well defined edges of development. They can be well served by either a single point of transit or a few centralized points of transit at the core of the community. This location could be where the community connects to commuter rail or express bus along a transit corridor shared by a string of nearby communities.

Villages and towns must create a strong mix of jobs and housing in order to retain their unique identities and remain viable. With a healthy mix of jobs and housing, most trips will remain local. If a village or town grows outward so as to lose its rural separation and becomes subsumed and physically connected to another urbanized area, it is likely to lose its unique identity and its strength as a transit market.

The core of the community should contain several small scale everyday goods and services such as day care, a hardware store, a convenience store and a post office. Transit centers at the core of a community can also become trailheads to surrounding trail systems. Housing densities should be highest at the core of the village and town. Densities should gradually diminish beyond a half mile from the core.



existing: villages separated by open space

preferred: growth is directed to existing towns

discouraged: growth scattered throughout open space

VILLAGES AND OPEN SPACE: The essence of a village is its intimate scale, identifiable center, and clearly defined edges (top). A Village therefore relies on transportation, managed growth and open space conservation policies in order to remain intact (middle). Transportation policies that encourage the spread of development will erode the village and increase infrastructure costs (bottom).

Suburban Neighborhoods

A product of residential expansion due to the need for low cost readily available housing after the Second World War, Suburban Neighborhoods are typically low-density, primarily residential areas. Small pockets of higher density housing or commercial uses may occur in suburban neighborhoods, but such cases are the exception. Most suburban neighborhoods are not well connected or pedestrian friendly because of the curvilinear street patterns and large blocks, and the general absence of sidewalks. Suburban residential neighborhoods tend to be auto-oriented and separated from commercial areas and daily conveniences. Transit markets in these areas tend to be weak because they lack a concentration of origins (households) or destinations (jobs).

Most suburban neighborhoods are established and healthy, though many lack good pedestrian and transit connections. They represent a majority of the region's households and therefore a majority of the region's 'origins.' They are important potential transit markets,

Most suburban neighborhoods can implement several 'small fixes' in order to strengthen their community as a transit market. Pedestrian paths connecting through large blocks, sidewalks and transit shelters at subdivision entrances and other similar small changes can help retrofit a suburban community not originally designed for transit.

Suburban communities can also do more. A thoughtful look at the community's land use pattern can reveal opportunities to create areas of higher density mixed uses that are easy to serve with regional transit and perhaps a local circulator. Most suburban communities have a need for mixed-use areas. Many have recognized the need to diversify both their housing and retail options at higher densities. Transit helps foster both of these markets.

CRANBERRY TOWNSHIP is a relatively new suburban neighborhood, and one of the fastest growing in the state. Cranberry is characterized by low-density monofunctional subdivisions of houses. Though many people live in the township, its transit service is adversely affected by a building pattern unfriendly to a high level of transit service.

BETHEL PARK located in the South Hills is a suburban community with regional public transportation connections. The LRT vehicles run in the road directly in front of low density housing. LRT has helped maintain the viability of Bethel Park's small downtown.

Single-Use Districts/Regional Centers

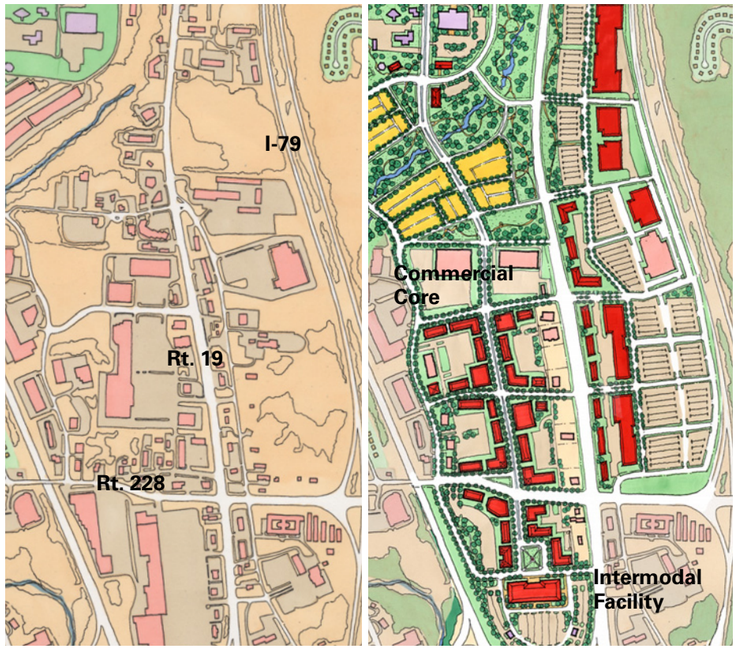
Districts are special-use areas dominated by a single use. Examples of districts include office parks, industrial parks, shopping malls, airports, large university campuses, and regional distribution centers. These uses are critical to the economic livelihood of a region. They tend to be of such a scale that they are separated from neighborhoods and centers. In fact, contemporary zoning in many communities encourages this separation of uses. Districts tend to be regional attractions and significant trip generators. However, because they are separated from neighborhoods and centers, and generally of such a scale that they are not walkable, often districts are not strong transit markets. Other factors that typically discourage walking and transit use are the wide streets, fast traffic, large parking lots, buildings set back far from the major arterials, lack of trees for shade, and

RT 22 IN MONROEVILLE is a typical linear single-use district. Despite being one of the region's largest employment centers, transit service and usage is relatively low.

lack of sidewalks. Examples of districts are the Pittsburgh International Airport, Robinson Town Center, Thorn Hill Industrial Park, and South Pointe.

Regional Centers are the suburban centers of commerce serving a market of several communities. Regional Centers tend to have significant growth capacity because of their location on high capacity arterials and their proximity to regional roadways. Growth of Regional Centers, however, depends on increasing their density, diversifying uses, and providing high quality transit. Examples of potential Regional Centers are Cranberry, South Hills Village, Monroeville, and the Century III Mall area.

SOUTH HILLS VILLAGE IS A SINGLE USE DISTRICT with high quality transit service. The mall anchors the end of the South Hills LRT. South Hills Village is in the process of becoming a mixed-use district as new higher density housing developments are being considered proximate to the transit stop.



CRANBERRY/RT. 19: Commercial development in Cranberry is low density and not pedestrian friendly (left). The area, however, can transform itself from a single-use district to a mixed-use transit-oriented community. Rt. 19 would remain a through route, however a new parallel spine street and several perpendicular streets would create pedestrian scaled blocks within which medium density development would occur. Two transit nodes would be created, one on the north and one on the south of the spine street. A circulator or shuttle would operate along this spine.

Preserves and Open Space

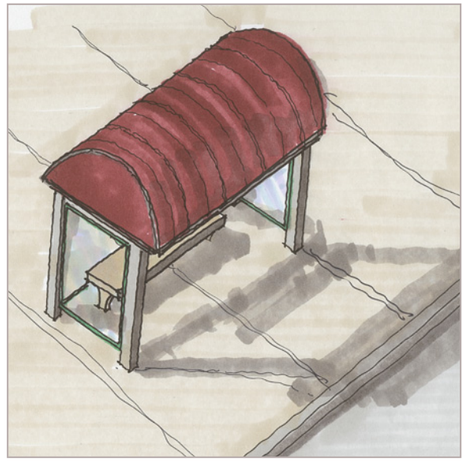
Open space consists of undeveloped areas. They may include parks, farmland, woodlands, meadows, wetlands, steep slopes, lakes, and other natural areas. They accommodate activities such as farming, recreation, and tourism as well as provide habitat for plants and animals. Preserves are areas that have been designated to be open space in the future.

REGIONAL OPEN SPACE: Open space in the form of woodlands, steep slopes, wetlands or agriculture create important buffers around towns and villages. When linked, these open spaces become critical ecological corridors that contribute to the region's quality of life.

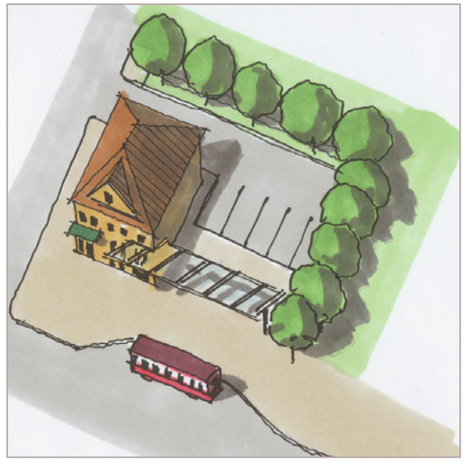
Transit Facilities and Customer Amenities

Passenger convenience and comfort is critical to the success of transit stops, and more importantly, to the success of a transit system. Investments in such facilities are often much less expensive than investments in vehicles and the purchase of property for exclusive right of way yet are very effective. Comfortable waiting areas of all types should be designed to provide the appropriate amenities for each stop type. The design of stops should either reflect the 'brand' and image of the Transit Authority, or should relate to the architecture and history of the community. All stations should be accessible from adjacent developments by barrier free paved walks.

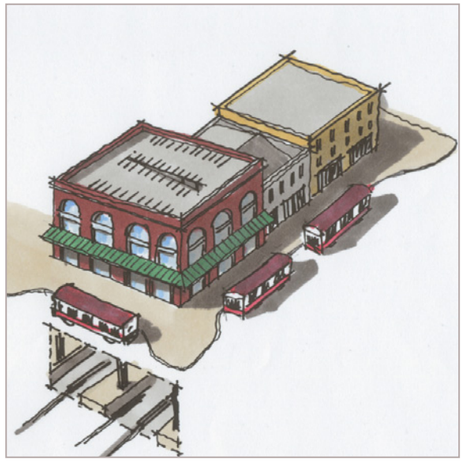
LOCAL STOP: Local stops are the most simple of transit facilities. They should be located in residential areas where there are space constraints or where service levels are low. A local stop should contain the basics of route information and, if possible, amenities such as a bench, landscaping, and bicycle storage.



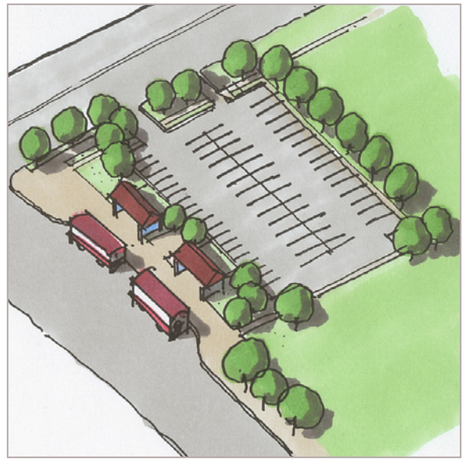
PRIMARY STOP: Located along more frequented routes, a Primary Stop should provide basic shelter from the weather and elements. Primary Stops require wider sidewalks and typically have basic amenities such as schedule information and a newspaper stand.



SUPER STOP: Located where routes typically converge. A Super Stop can become a focal point for a Main Street. Super Stops provide indoor waiting areas, small convenience retail vendors and minimal parking.



INTERMODAL: Located where routes and modes converge and time transfers can occur, Intermodal facilities can become significant contributors to downtown areas. They can accommodate several buses for a layover, incorporate structured parking, and retail uses at the base.



PARK-AND-RIDE: Facilities tend to be land consumptive and not optimal for ancillary development unless structured parking is utilized. As a result they are often the most appropriate facility for outlying areas where land is less costly.

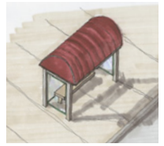
CUSTOMER AMENITIES AND TRANSIT FACILITIES

	Local Stop	Primary Stop	Super Stop	Inter-Modal	Park and Ride
Transit Amenities					
transit sign	■	■	■	■	■
specialty paving	■	■	■	■	■
passenger shelter	■	■	■	■	■
system map / fare info	■	■	■	■	■
route map / schedule	■	■	■	■	■
benches	■	■	■	■	■
trash receptacle	■	■	■	■	■
newspaper stand	■	■	■	■	■
landscaping	■	■	■	■	■
public telephone		■	■	■	■
courtesy telephone			■	■	
lighting	■	■	■	■	■
bicycle storage	■	■	■	■	■
information kiosk			■	■	■
bus bays	■	■	■	■	■
reader board			■	■	■
computer bulletin				■	■
bathrooms			■	■	
auto parking			■	■	
Vendor Amenities					
cash machine		■	■	■	
post office vending			■	■	
retail kiosk			■	■	
day care center				■	
joint development				■	
on site management				■	
taxi stand			■	■	

Public Transportation Facilities

Transit systems evaluate a number of factors to determine what amenities to place at a stop. The evaluation factors often include the stop's ridership levels, service frequency and route operating characteristics, traffic patterns, terrain, and proximity to major and important destinations. Generally, stations, transfer centers, and park-and-ride lots typically have the highest level of amenities while stops on residential streets have the fewest.

The determination of what amenities to place at a stop should be a collaborative decision by the community, developers, and the transit system. Many communities and developers prefer to have transit stops that match the character of the area or development.

Building Blocks of the Region	Transit Facilities Local Stop	Primary Stop	Super Stop	Intermodal Facility	Park-and-Ride
					
Downtowns	- in residential areas of downtown - where space is limited - where boardings are minimal - in easily accessible, safe, public locations	- at entrances of larger buildings - incorporated into buildings - in front of large employment centers - near public and civic facilities - at crossroads of major streets - where wider sidewalk permits - as public art		- layover on-street or in base of a garage - includes access to underground garage - integrated as part of a larger building with commercial uses and structured parking - can include interface with intercity bus and intercity rail	
Urban Neighborhoods	- at intersections at least every 1/4 mile.	- at schools - in the commercial core as part of a public space, a 'transit plaza'	- between towns and centers where just a few services are needed	- in commercial core - can be combined with a Park and Ride facility along a main street	- in a parking structure - shared parking with a commercial district
Suburban Neighborhoods	- at entrances to subdivisions	- along arterials and collectors - at entrances to subdivisions			- in a surface lot as an interim use on available land
Towns and Villages	- in residential areas, every 1/4 mile along primary streets	- outside public and civic building - in the commercial core as part of a public space, a 'transit plaza'	- along main street or in commercial core - At trailheads	- at trail heads - as a part of rail or bus service	
Single-Use Districts/ Regional Centers	- at building entrances, used by circulators and local buses	- at building entrances, used by circulators and local buses		- at the end of a transit line - at a one-of-a-kind regional activity hub, such as an airport	- as a shared parking reservoir for commercial uses and commuters

an assembly kit for transit-oriented communities

an assembly kit for transit-oriented communities

The design of our neighborhoods is the most valuable tool in creating Transit-Oriented Communities. Many of our region's older neighborhoods and communities were designed to be transit-friendly. Many were built in a short period of time yet in a remarkably systematic way. These neighborhoods consist of a series of elements, each under control of different entities, but coordinated by the way they are put together. This section describes how to coordinate these fundamental elements of Transit-Oriented Communities by describing them as an *Assembly Kit* that can be applied to strengthen the fabric of existing neighborhoods or to aid in the creation of new ones. Understanding the separate parts of the neighborhood enables one to both design it and implement it. Through analysis of the individual elements, we gain a full appreciation of the interrelationships among the parts as well as a foundation for addressing the specified development goals in appropriate, achievable ways based on the needs and concerns of the different implementers and interests.

The Assembly Kit

The following is an overview of the elements comprising the Assembly Kit:

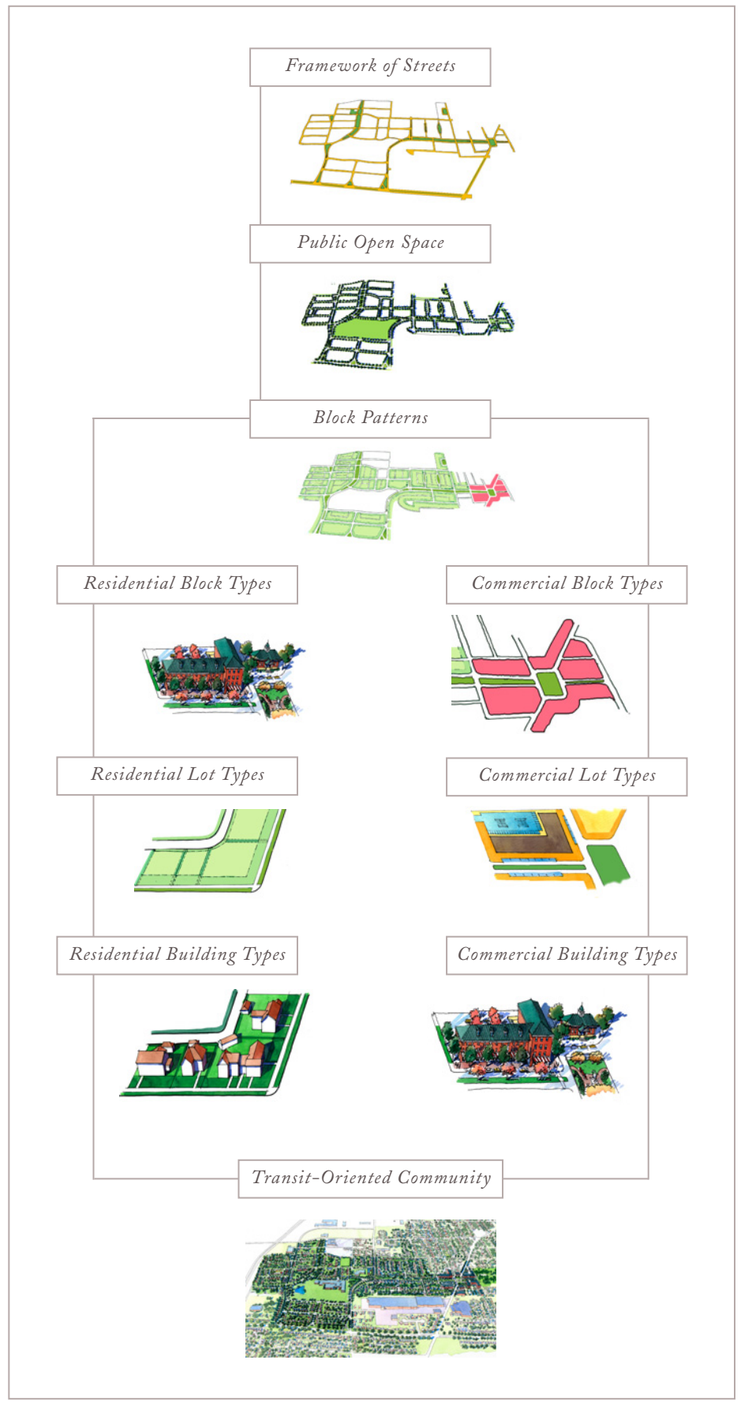
>>> The most general element of the kit is the framework of streets and public open spaces. The overall hierarchy of streets and parks can be seen clearly when illustrated in the form of a diagrammatic perspective drawing. Institutions and civic buildings find their place in the public open spaces.

>>> Within this overall framework, individual streets as well as blocks of housing are placed. A hierarchy exists from block to neighborhood and, correspondingly, house to street. While the character, shape, and size of these parts vary with local conditions and respond to local traditions, the elements themselves have standard functional sizes. It is this balance of standard form and local function, the commonality of generic form and function that makes the Assembly Kit a valuable tool for community building.

THE ELEMENTS OF A COMMUNITY ASSEMBLY KIT
- Framework of Streets
- Public Open Space and Civic Buildings
- Block Patterns: Residential and Commercial

>>> The diagram at the right of this page illustrates how this relatively simple set of parts is assembled. The result of this additive process is an environment as complex and rich as the traditional neighborhoods from which it gains its inspiration. Because of its traditional structure and form, this environment has the capacity to accommodate a variety of transit modes.

ASSEMBLY KIT: When a relatively simple set of parts is assembled, the result is an environment that is as complex and rich as the historic neighborhoods of Southwestern Pennsylvania from which the region would gain its inspiration. These parts come together to form a Transit-Oriented Community.



Framework of Streets

A critical aspect of transit-friendly design concerns the balance of vehicle access to a neighborhood or core as well as the creation of a compact, pedestrian-friendly environment easily served by transit. Some important principles in achieving this balance and an overall plan for a transit-friendly neighborhood are:

>>> Create a network of interconnected streets;

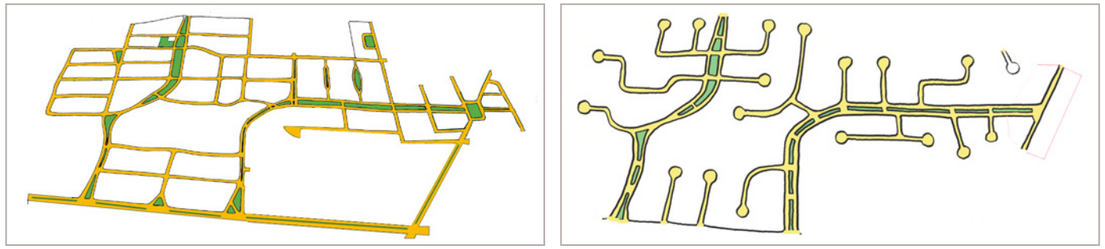
>>> Configure streets to allow for efficient through-movement of all vehicles, including on-street public transportation vehicles; and

>>> Design important streets for intermodal use.

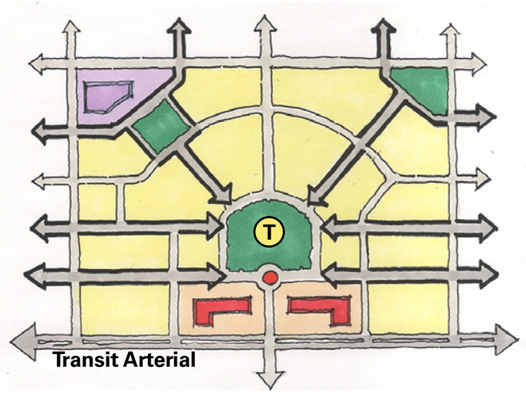
Contemporary subdivision street design typically uses a hierarchy of streets that channel traffic from low capacity facilities such as local and collector streets to high capacity facilities such as arterials. Unfortunately, this limited and ubiquitous set of street standards do not often respond to the myriad transportation functions of a place. Forcing all vehicles onto arterials creates traffic congestion while the lack of interconnective streets makes local automobile trips, as well as walking and biking, difficult.

Transit-friendly street design calls for a system of interconnected roads and sidewalks that distribute vehicles throughout a neighborhood and make walking and biking safe alternatives to driving. Also, Transit-Oriented Communities incorporate appropriate transit modes into the network, as well as a standard introduction of bikeways and pathways or sidewalks. TOCs have a hierarchy of streets, with arterial streets designed to carry more traffic than the others. The interconnective streets provide many types of addresses for development and multiple route choices for cars, bikes, and pedestrians. This results in more direct paths for pedestrians and disperses traffic throughout the area in different ways, thus reducing congestion.

The street network in a transit-friendly neighborhood is typically based on a grid or modified-grid layout. The street pattern can and should accommodate community facilities, parks, and other features to provide interest and aid in traffic calming. Traffic calming can take on many forms, some of which are street trees, 'bulb-outs,' on-street parking, shallow setbacks to building faces, and a mix of pedestrian-friendly activities that generate foot traffic and attention. Drivers will slow down in interesting environments.

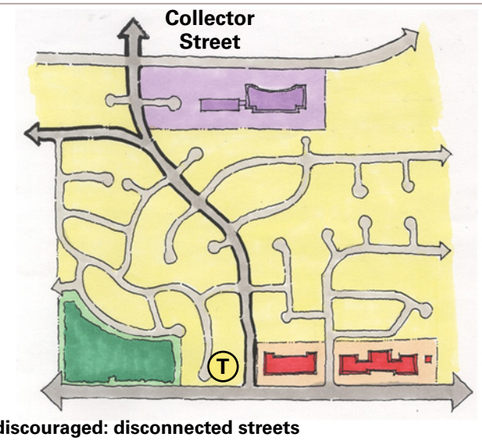


THE FRAMEWORK OF STREETS in a transit-friendly neighborhood (left) should be an interconnected network of streets that distributes traffic among many roadways, giving motorists and transit providers a wide choice of routes. A network of streets provides better connections to transit stops, commercial centers, institutions and parks. Conventional suburban development (right) concentrates traffic on arterial roads which are often inadequate to serve the effects of concentrating all traffic in one location.



encouraged: connected streets

A COMMUNITY OF CONNECTED STREETS and sidewalks will facilitate access to a single point of transit service.

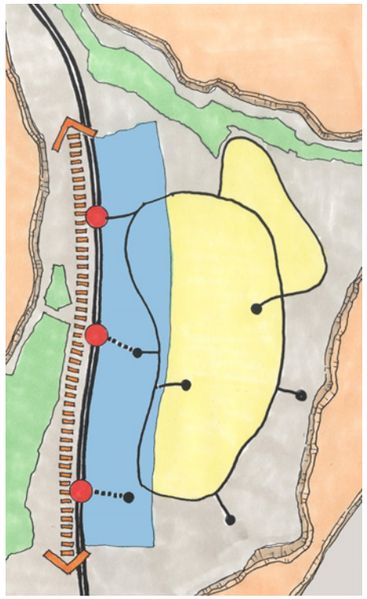


discouraged: disconnected streets

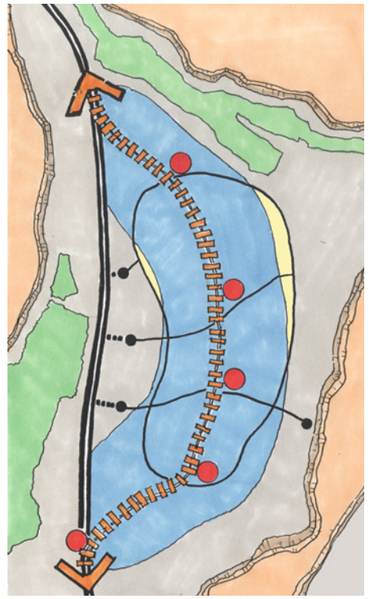
COMMUNITIES WITH DISCONNECTED STREETS force all traffic onto a single collector street which becomes congested as growth occurs.

Beechview

Cranberry



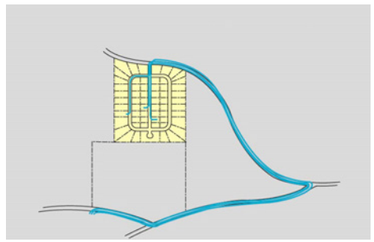
direct but peripheral routing: low operating cost, small service area and low ridership



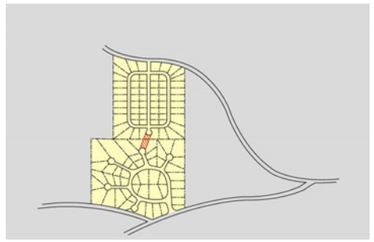
direct and central routing: low operating cost, large service area, high ridership

SERVING SUBURBAN COMMUNITIES WITH TRANSIT: Typical suburban street layouts are often difficult to serve with transit because they have only few connections to the main arterials. Routes that run on only the arterials serve only a portion of a community (left). In order to fully serve these communities the service routes must penetrate the neighborhood (right) using arterial streets.

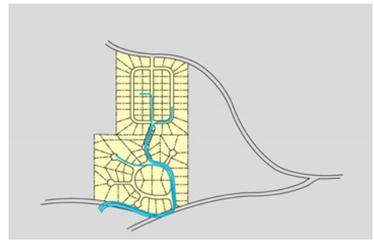
Typical Suburban Traffic Problem



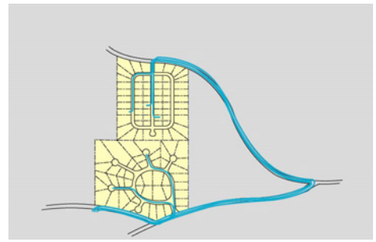
All traffic is forced onto arterials.



A second, non-connected subdivision is built.

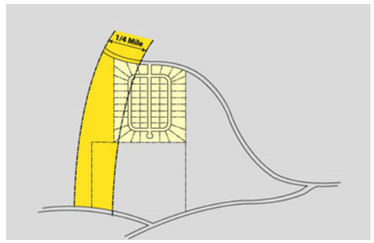


Planned but unacceptable traffic flow.

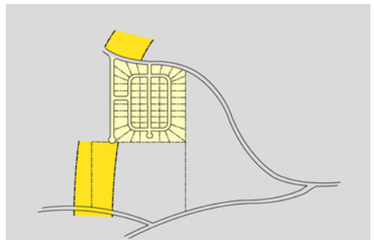


Traffic from each subdivision forced onto the arterial.

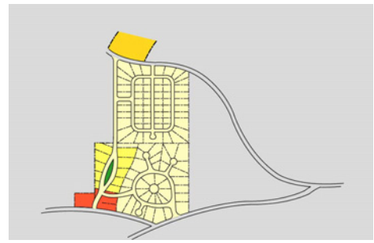
Potential Solution



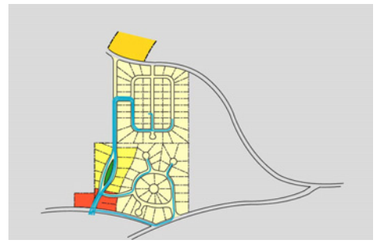
Design a connector road corridor.



First project builds but isolates their connector road segment.



Second subdivision builds and properly integrates connector segment.



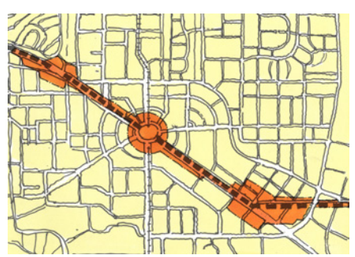
60–70% of all traffic is removed from arterials resulting in less congestion of arterials.

TYPICAL SUBURBAN TRAFFIC PROBLEM: Suburban street patterns overburden the local arterials because connector streets are not planned and implemented. Fast growing suburbs can minimize congestion problems by creating a system of connector corridors.

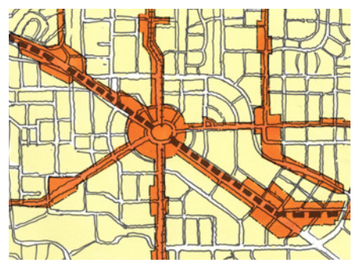
Discouraged: Cul de sacs that limit pedestrian connectivity

Encouraged: Pedestrian connections increase access to a transit stop, as well as provide walking paths for functional and recreational use

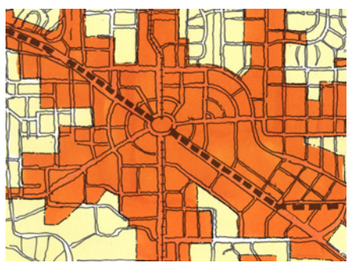
PEDESTRIAN CONNECTIVITY is critical to creating neighborhoods conducive to transit. Cul De Sac communities can be connected with pedestrian paths.



Rapid transit only



Rapid transit and feeder bus



Rapid transit, feeder bus, walking and biking

THE TRAVEL SHED OF A TRANSIT SYSTEM can be significantly increased if bicycle and pedestrian connections are integrated with feeder buses and rapid transit.

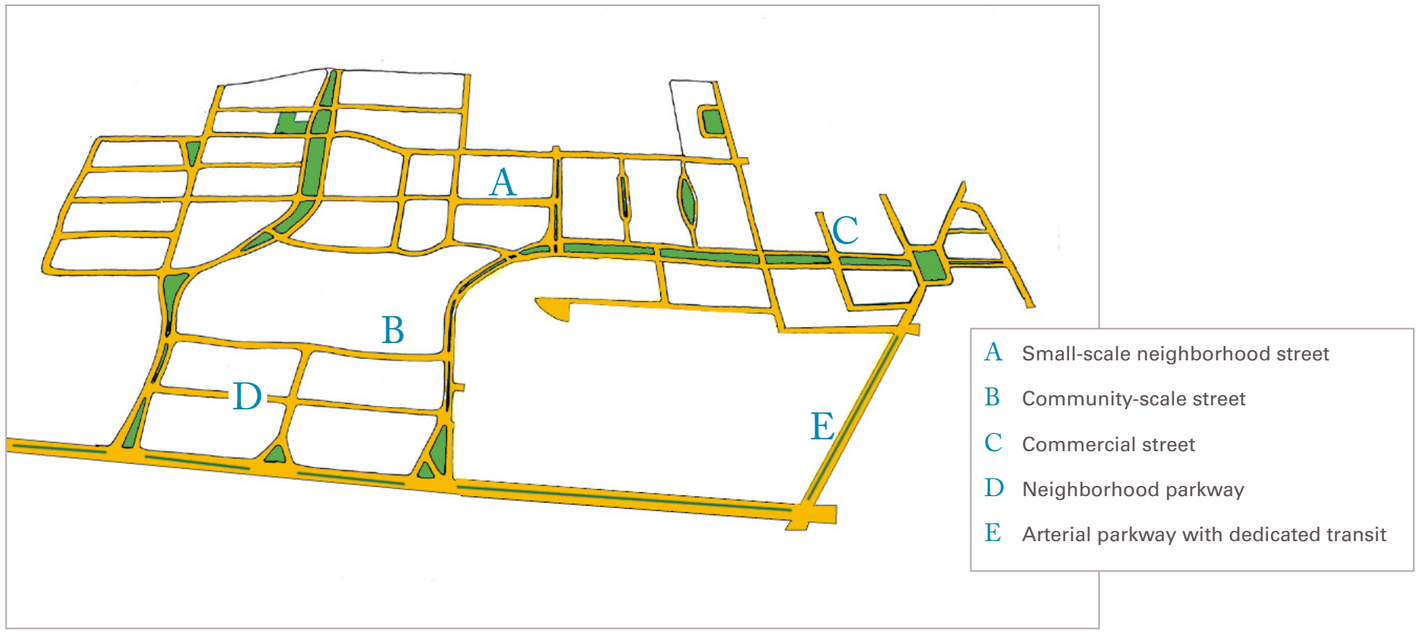
Types of Streets

A full inventory of public space can be achieved with a few different cross sections thoughtfully carried out in concert with traditions of Southwestern Pennsylvania. Therefore, any proposals for new streets should be based on research of local models and then described by a set of standards ranging from small-scale neighborhood streets to arterial parkways. By basing street design on local precedents, it becomes easier to have street prototypes approved. Using existing streets as models for new streets removes the focus from cartway widths and encourages a more balanced approach that considers the importance of sidewalks and landscaping.

The following are descriptions of the character of streets that comprise transit-friendly street networks.

A SMALL-SCALE NEIGHBORHOOD STREETS serve low volumes of traffic. The streets are kept narrow but are designed to accommodate on-street parking, small public transportation vehicles, and emergency and service vehicles.

B COMMUNITY-SCALED STREETS are slightly wider cartways with larger public rights-of-way. These streets, flanked by lanes of parking, are the main streets of a neighborhood where denser residential development occurs and they may also organize some mixed-use buildings.

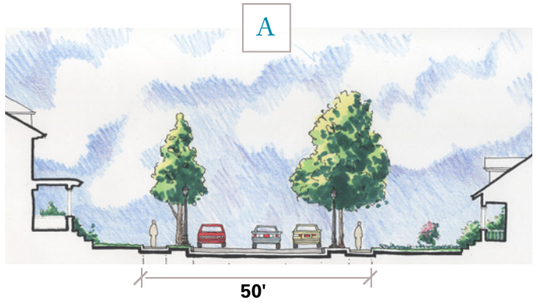


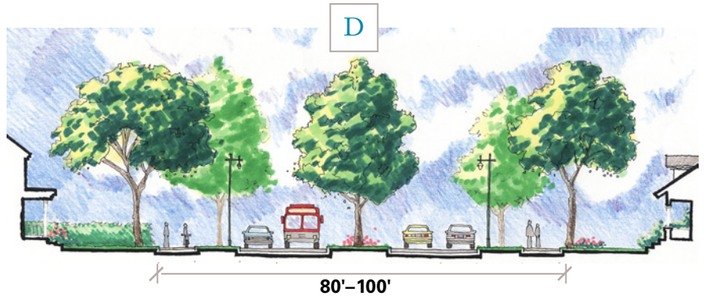
A VARIETY OF STREET TYPES: Streets should be considered as places where people live, shop, work, and play – not just places to move traffic. Streets create the image and the environment of a community. All streets should therefore balance the needs of its multiple users: pedestrians, bicyclists, transit, and automobiles.

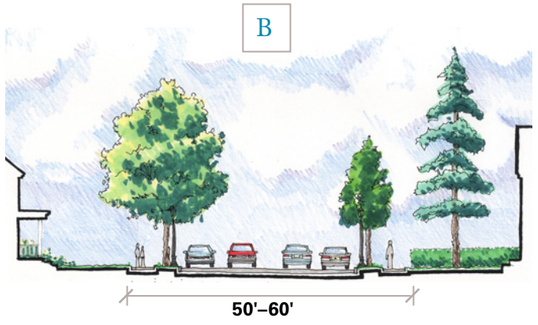
C COMMERCIAL STREETS are located in a transit-friendly neighborhood's retail core. These streets provide two lanes of traffic and allow on-street parking on both sides, vital to main street businesses. Commercial streets are lined with a pedestrian-friendly mix of retail and commercial uses. Buildings themselves may also have more than one use, such as apartments over storefronts. These will accommodate standard sized public transit vehicles (typically buses).

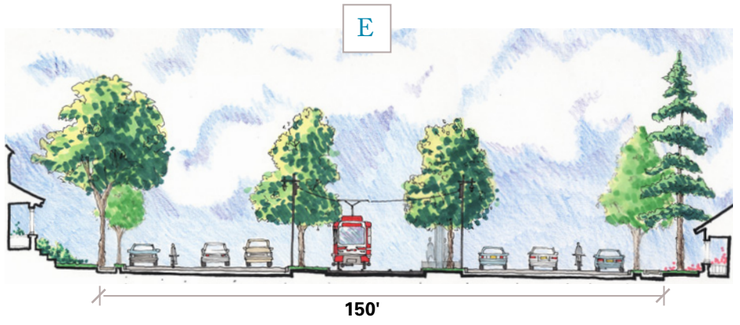
D NEIGHBORHOOD PARKWAYS often provide higher capacity connections within the transit-friendly community. These streets allow residents in the parts of the neighborhood farthest from the core to access retail uses, schools, and other public facilities without having to use an arterial, or any street carrying traffic on trips longer than the needed distances. Neighborhood parkways encourage a range of modes by incorporating them into the cross section. On-street parking should be allowed on the street and these streets should accommodate buses, bicycle lanes and sidewalks connecting to larger pedestrian or trail systems.

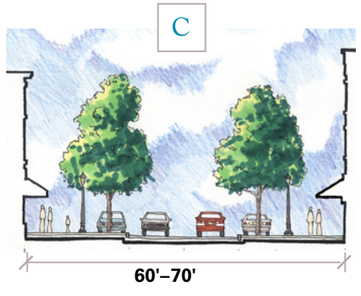
E ARTERIAL PARKWAYS are typically four-lane roads meant to carry larger volumes of through-traffic. Though the term arterial often brings to mind streets preventing pedestrian activity in their design, arterial parkways can be designed to incorporate multiple modes of travel. Arterial parkways can have a dedicated transit right-of-way in their center and run at the edges of TOCs. These streets can accommodate higher volumes while remaining useful through-routes by adding traffic calming elements such as trees, plantings, grassy medians, and most importantly, dedicated bus or rail transit lanes or other transit priority for connection of neighborhoods to greater community and regional transportation and trail systems.







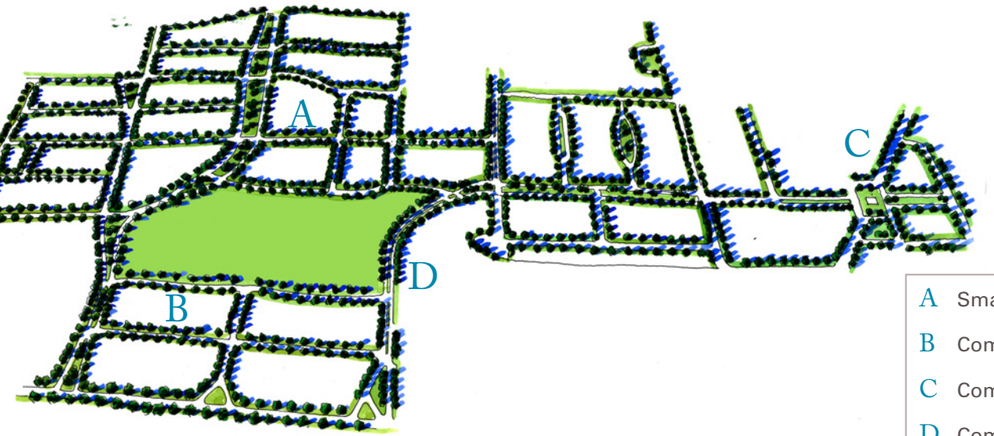




Public Open Space and Pedestrian Connections

In a transit-oriented community, public spaces are punctuated by the presence of transit stops. Public transportation facilities are located at the center or core of well-planned neighborhoods, and are meant to both anchor and connect public amenities and spaces. The way one develops public connections around neighborhoods and beyond influences the perception of safety, walkability, and usability of any TOC.

Just as streets range in type and treatment in relation to their types of uses and locations in a neighborhood, so do sidewalks, the main connections from place to place for pedestrians. Additionally, the design of pedestrian circulation reflects the types of transit applications found there. All sidewalks or unpaved paths, whichever is most appropriate for a neighborhood, should measure at least 5 feet in width to allow for people to pass unobstructed. At transit stops, sidewalk width should reflect the number of pedestrians expected to gather at a stop. Decisions as to the design treatment of transit stops should be a joint venture between municipalities and their transit provider. Sidewalk design should reflect both community character and standards as well as being scaled to handle peak levels of transit passengers.

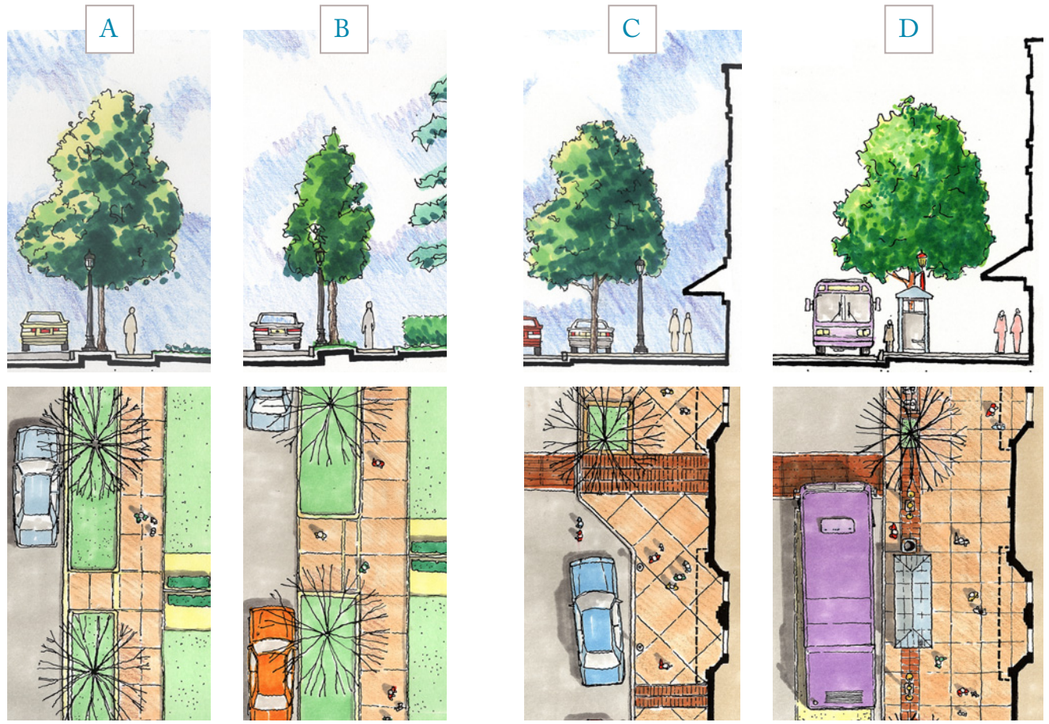


A Small-scale neighborhood street space
B Community-scale street space
C Commercial street space
D Commercial street space with transit

PUBLIC OPEN SPACE, PARKS, PLAYING FIELDS, AND GREENS provide dignified settings for civic buildings such as schools, churches, and other institutions in a community. An interconnected network of streets and public open space establishes the character and scale of the neighborhood. When efforts are taken to connect individual public resources, the community is strengthened as a whole.

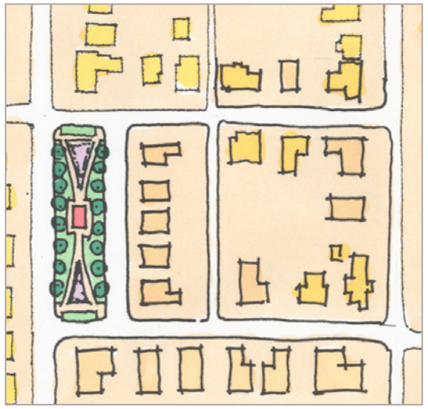
At a larger scale, public parks and open spaces should be provided as important features of transit-friendly communities. Public parks and plazas are to be located on land central to the mixed-use core. Parks scaled appropriately for residential parts of the neighborhood, often termed 'pocket parks' also add to the variety and texture of neighborhood spaces, as well as provide vital human activity to the neighborhood and increased safety in public places due to more 'eyes on the street.' The design features of public spaces depend upon the anticipated uses and intensity of use, as well as the character of the surrounding areas.

Transit functions best in well-defined public spaces, and small parks to large-scaled civic squares provide this level of exposure. When parks of a range of suitable shapes and sizes are planned throughout a neighborhood, shared spaces allow members of the community to gather and interact. Further, if large parks and institutions are linked together as a system of public uses connected by sidewalks, bikeways can also be developed to provide access to public amenities without the need for a car. Public transportation should connect people to places that offer not only jobs, but also places of education, shopping and entertainment.

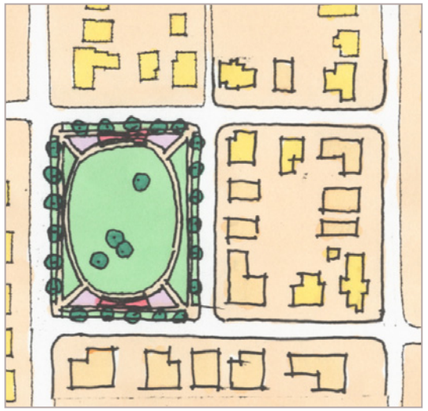


on street parking
planting strip and street trees
generous sidewalk

on street parking in bays
trees in grates
broad sidewalks
transit facility
multiple entries to retail
building articulation
textured croswalks

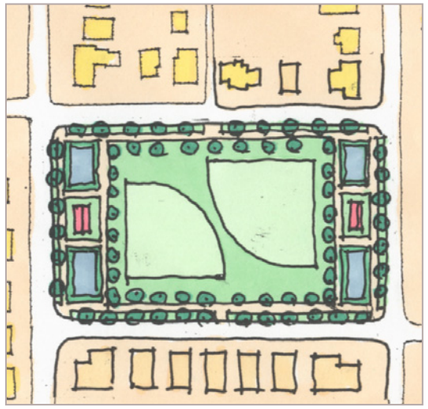


GARDENS, MEDIANS & GREENS: Typically linear, gardens, medians and greens are not less than one-half acre in size with a width of 20–40 feet. These parks can provide a new image and be address makers for the neighborhood. Generally passive in nature, these spaces are primarily made up of landscape features such as gardens, benches, fountains and even monuments.

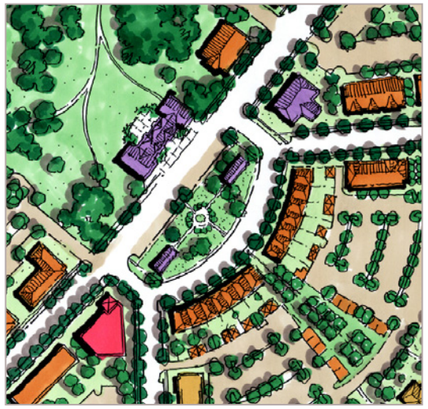


MINI PARKS: Mini Parks are centrally located to serve a population within a 1/4-mile walking radius and are one-half acre to one acre in size, with a minimum width of 80 feet. Mini parks can be place makers for the community with amenities similar to Medians, Green and Gardens, but with more diverse uses such as playgrounds, pavilions and small open lawn areas for informal play.

Wilkinsburg

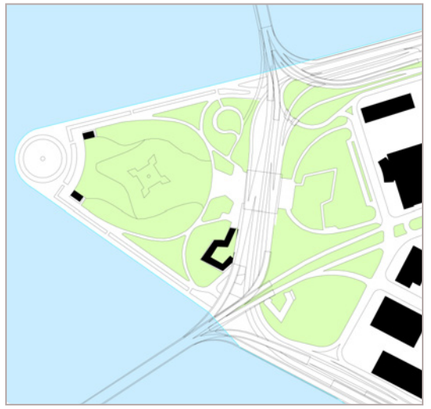


NEIGHBORHOOD PARKS: These parks should be centrally located to a wider population within a 1/2-mile walking radius and can be from one acre to five acres in size. The uses can be the most diverse, from gardens, informal sitting areas, pavilions, and playgrounds, to larger greens for informal play and family oriented games. As the parks get larger, beyond two acres, more organized and active recreational uses are appropriate.



COMMUNITY SQUARES, GREENS, AND PLAZAS: Located at the commercial or civic core of a community, these parks are the center of public life. They are typically well defined and bound on all sides by higher density mixed use buildings. Community squares are ideal places to integrate transit.

Fallowfield/Beechview



REGIONAL/CITY WIDE PARKS: The region's most valuable open space is contained in large municipal parks and the regional park system. These parks are typically at least 20 acres and contain a variety of recreational activities, including both active and passive recreation.

regional park

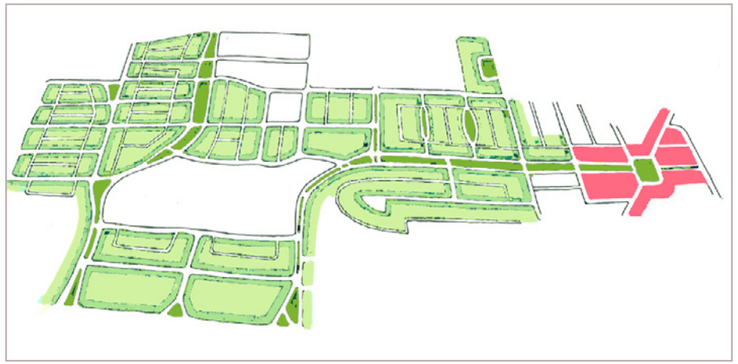
TYPES OF PUBLIC SPACES AND PARK: Neighborhoods need a range of different types of open space in order to fulfill the needs of its residents. Inclusion of all is important to creating transit-oriented communities because they encourage a strong sense of community, safety and comfort in a neighborhood. Public uses such as schools, libraries, and community centers should be located in or adjacent to public open spaces. Transit facilities should be provided in or adjacent to all public spaces.

Block Patterns: Residential

The fundamental principles of neighborhood planning used to create lasting communities of character and tradition are often based upon city and town building practices of the late nineteenth and early twentieth centuries. At that time, cities and towns were conceived of as mixed-use places, where one could both live and work. Public transportation, walking, and biking were the most common modes of travel, and coupling these modes with the dense patterns of residential settlement, places were made naturally transit-friendly by both necessity and design.

Some of these simple principles are used today to create diverse places accommodating the many ways people choose to work and play. A major factor in one's quality of life is the ability to live in safe, walkable neighborhoods and to improve access to those activities we enjoy.

A transit-oriented neighborhood is, most importantly, well-defined. Both blocks and individual lots are composed of public, semi-public, semi-private and private zones. The zone from the street to the inner edge of the sidewalk is a public zone, often defined by fences, hedgerows, or building faces themselves, in the most urban settings. The semi-public zone is the front yard to the porch, including alcoves and other multi-user entrances. The dwelling unit itself, as well as its backyard comprises the private zone – space meant for the individual owner. Then, residences can be serviced by alleys which are useful in creating dense and safe neighborhoods since eliminating driveways allows houses to be planned closer together, and precludes blank garage doors and driveways from dominating the streetscape.



BLOCK PATTERNS: A framework of streets and open space establishes the addresses for development sites. Streets define blocks for development; and then blocks are targeted for particular types of development – such as residential or commercial. Within those general categories, other distinctions exist: for example, some blocks may have alleys, others may be serviced from the street. Additionally, appropriate dimensions must be identified for blocks, with each block having its own specific criteria within the greater framework

RESIDENTIAL BLOCKS: By incorporating a variety of housing types and densities at appropriate locations, this kit of simple elements has the power and flexibility to produce a rich and complex environment. The potential for different combinations is practically limitless. Varied architectural expression begins to show the breadth of possibilities within design parameters responding to local conditions and building traditions.

LOT TYPES: Each block type may have six or seven different lot types. Each lot type might have any number of setback or massing provisions. These provide for variety while preserving the overall aesthetic integrity of the block and neighborhood. Each lot type can accommodate any one of several building types. Due to this flexibility, a variety of building types and densities may be deployed on a single block to help facilitate a mixed-income character to the neighborhood like the diversity of most established neighborhoods.

Lawrenceville

Crawford Square

Indiana

Canonsburg

Furthermore, in a TOC, residences of all types and densities must face the street. Locating entrances in the public realm creates active areas where neighbors can get to know each other. In addition, security is enhanced when residents can observe street activity. Porches and balconies provide defined outdoor space yet also add street life. In order to create these comfortable places, the setback of buildings should be appropriately minimized, based upon type.

Transit-friendly neighborhoods also provide a range of housing options to meet the needs of diverse household types and incomes. Higher density housing located closest to transit stops appeals to students, entry level workers, and senior citizens who often rely on transit the most. TOCs also attract households that prefer to limit the use of their car and view transportation options as important in maintaining their quality of life. A wide variety of housing types allows people to remain in the same community as their lifestyles change – from apartment to single-family dwelling to empty nest house. The diversity of housing in a neighborhood increases the number of people remaining home throughout the day, thus increasing community security.

Density affects transit service. Transit researchers have developed general guidelines for transit-supportive densities, which include a density of at least 7 units per acre to support bus services at a frequency of 25–30 minutes (lower density can support infrequent bus service and park-and-ride service). At about 10 to 15 units per acre, transit service every 10 minutes becomes possible. This frequency of service is achievable in a TOC since community design decisions have been responsive to density and a variety of spaces – two necessities for a coordinated transit system. By working together, a strong transit market has been created and a variety of travel alternatives provide a diverse and higher quality of life for residents.

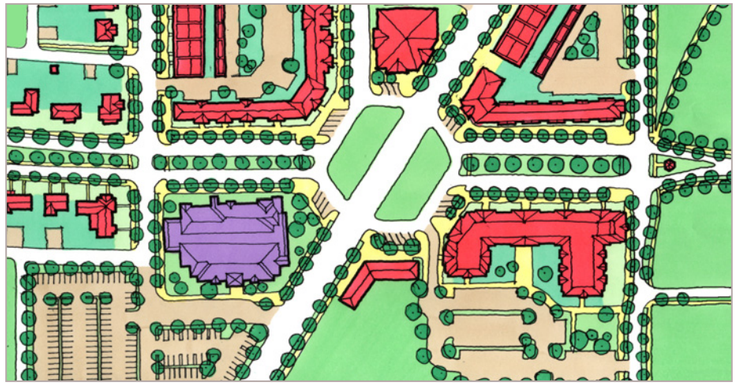
MINIMUM RESIDENTIAL DENSITIES are required to sustain transit service in a neighborhood. Residential densities should be accomplished with a variety of housing types, ranging from single family houses to apartments. Average minimum densities of 2 units/acre are required to sustain local bus service. Greater densities are required to support higher frequency buses, circulators, or 'premium' transit such as light rail transit or bus rapid transit. Residential densities less than 3 units/acre can support primarily park and ride service.

Block Patterns: Commercial

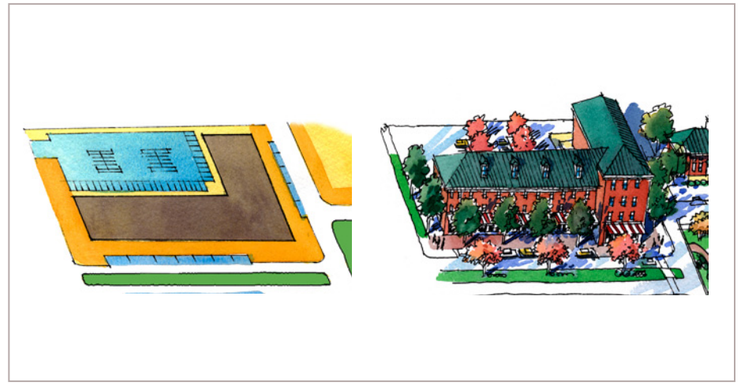
Some fundamental principles can be considered when planning for retail and commercial development in transit-oriented communities. As in the design of residential areas, a level of spatial definition aids both customers and merchants alike in the planning of shops and larger stores. Additionally, this level of attention and design must include the environment around the buildings as well. Often, the area around stores, especially the treatment of parking areas, is the most important element for creating both a profitable business as well as a transit-friendly, pedestrian-oriented place.

First, it is important to orient retail buildings to the street to achieve development parcels easily accessible and served by different modes of transportation. Though a seemingly simple directive, accommodating both pedestrians and automobiles takes a high degree of rigor since these modes present various needs for the siting of retail buildings. However, to properly integrate transit into the commercial environment, one must orient buildings to the street in order to minimize distances a person has to walk to access stores. Thus, buildings should be located at the edge of the sidewalk with parking lots behind or at least on the side of the building.

Access by foot is vital to retail. The final leg of a trip to a store includes walking. This fact, however, often stands in opposition to the desire for visible and accessible parking. Multiple modes can be accommodated, however, in an environment logically planned for all. With stores fronting streets, transit stops and shelters can be placed, making buses or light rail accessible to transit riders and other pedestrians alike. Additionally, a dense



COMMERCIAL BLOCKS tend to be larger blocks than those designed for residential development. This dimensional provision serves to accommodate the larger footprints of buildings and to provide adequate service and parking behind the buildings. In successful traditional urbanism, which is rooted in our country's great city planning of the early twentieth century, parking is available both in front, on the street, and larger lots at the rear of buildings.



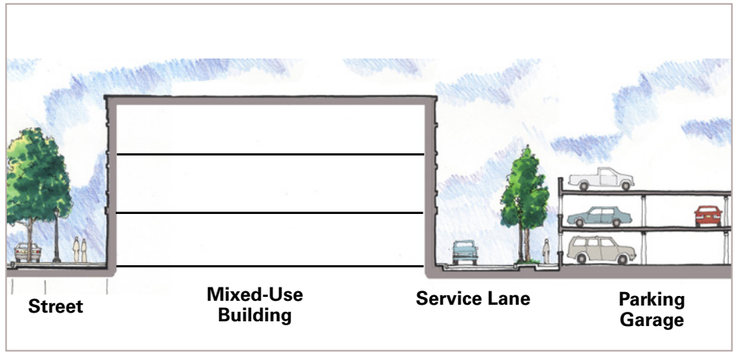
COMMERCIAL LOTS AND BUILDINGS require careful design in order to assure a pedestrian friendly environment. Commercial lots contain zones for the building and zones for the parking. Commercial buildings should have multiple entries, and large windows located directly on the sidewalk.

COMMERCIAL CORE: A transit-oriented community has a commercial core of mixed uses that is served directly by transit. Uses should include convenience retail, daily services, restaurants, and offices. Larger cores can include a grocery store, entertainment and cultural uses as well as more dense employment opportunities.

place is created that is attractive to those on foot. Well-designed signage should be introduced to direct drivers to parking lots behind businesses, and well-lit passages should be created to provide a safe walk from parking to storefronts. If an area is densely developed, like many main streets and other commercial streets are, parking garages should be considered to accommodate drivers, and to additionally serve as urban park and ride facilities. By stacking parking, in a sense, more land is given over to development that will use and support that level of infrastructure investment. Parking garages should have ground level retail and other activities to enhance compatibility with the existing development and to maintain an attractive pedestrian environment.

A transit-oriented retail core is also critical to increase access to jobs as well as shopping. Retail and office employers will find that the pool of potential employees and customers is enlarged when there is convenient access for transit passengers. There must be direct access to the building from the transit stop, and distances should be minimized. Businesses located near transit stops and stations not only benefit from the business of transit passengers, and accessibility to employees, but also from an increased visibility in the community that results from creating places for retail, not just nodes or environments for the driver only.

As in residential development, there are thresholds for the feasible introduction of transit. The threshold density for employee-based local bus service is approximately 50 to 60 employees per acre when the total employment base is 10,000 or more. Also, floor-to-area ratios (FAR) should exceed 0.5 to justify frequent service.



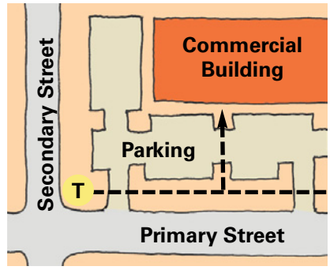
STRUCTURED PARKING: Parking should not dominate the pubic streetscape. Wherever possible, parking should be located at the rear of commercial buildings. Structured parking should be used by employees and long term parking. On-street parking should be short term with quick turn over.

Mount Lebanon – Washington Road

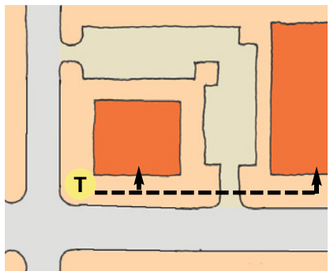
Shadyside – Walnut Street

Dormont – Potomac Avenue

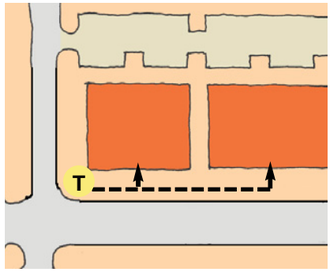
Squirrel Hill – Murray Avenue



discouraged: parking in front

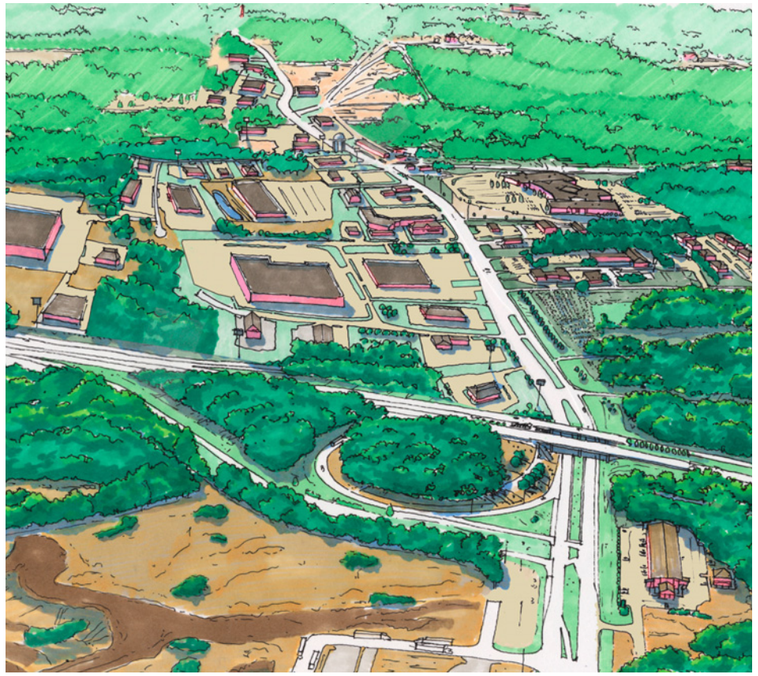


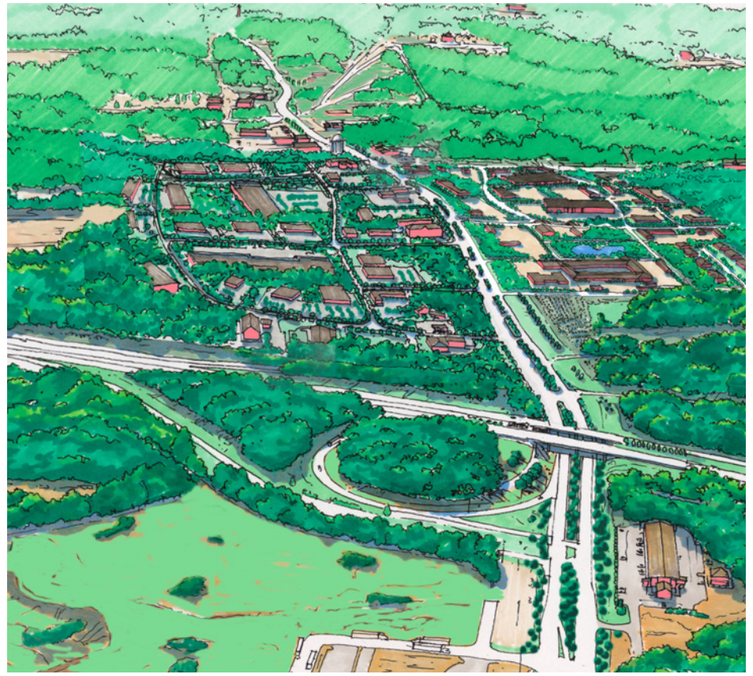
acceptable: parking in back and beside

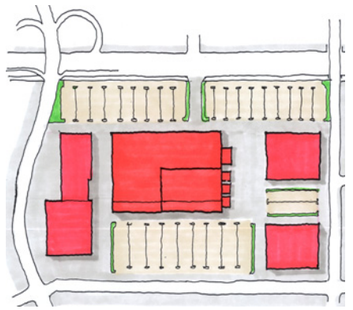


preferred: parking in back

COMMERCIAL PARKING: Off-street parking in front of the building creates a poor pedestrian experience and ultimately a poor retail experience. Parking at the rear or side of the building encourages pedestrian activity and helps create a vibrant commercial core. Curb-side parking can be beneficial by providing access to adjacent businesses and providing a buffer between pedestrians and moving traffic.

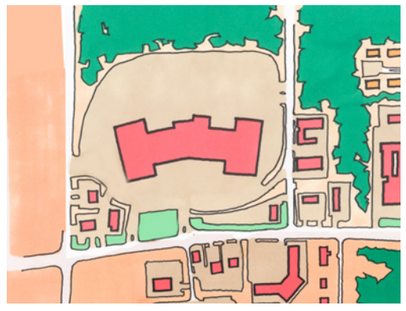






Discouraged: Commercial superblock

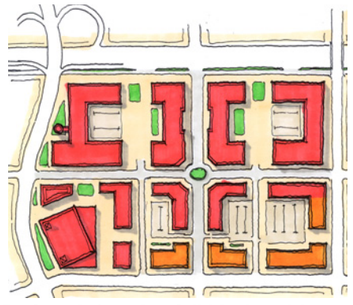
Acceptable: Creating a center, but weak edges



Discouraged: Internal mall surrounded by parking

LIKE MANY SUBURBAN AREAS AROUND OUR REGION, La grange, georgia has a rapidly growing commercial area without an adequate framework of streets (above left). The district was redesigned with new streets and blocks that organized the incremental redevelopment of properties (above right). In order to redevelop the region's underperforming and underutilized regional mall, a new grid of streets was cut through the property creating small blocks and a new main street. The once fashionable interior mall format was replaced with a 'shopping street' network (right)

Preferred: Small blocks defined by streets



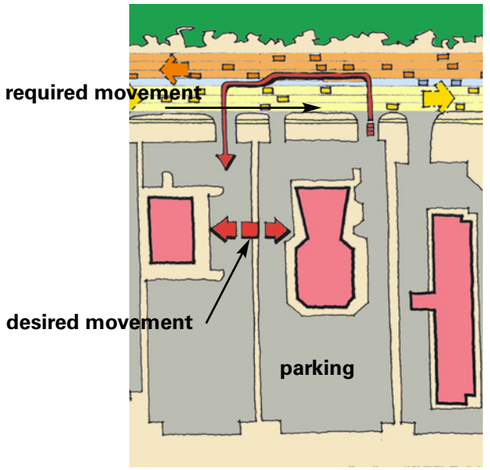
Preferred: Creating full blocks with a center and well defined edges

Discouraged: Corridor as a 'divider'

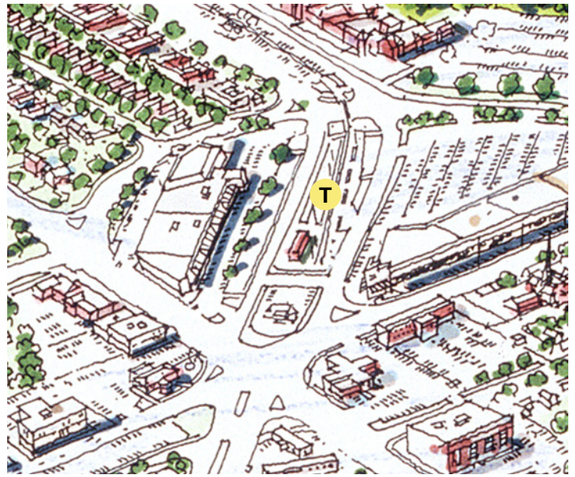
CORRIDORS AS SEAMS AND DIVIDERS: Most of our region has developed along linear arterials. Our commercial areas tend to be linear not nodal. Therefore our corridors must be designed as 'seams' not as 'dividers.' By coordinating land uses and creating frequent connections between the areas behind the corridor and the corridor itself an otherwise pedestrian-hostile, auto-dominated environment can become a community amenity.

Encouraged: Corridor as 'seam'

ELIMINATING SUPERBLOCKS: Large commercial superblocks (over 1800 feet in perimeter) are not pedestrian friendly. Over time, they can be broken down and stitched together with streets and lanes. The end result will be smaller blocks but more commercial frontage.



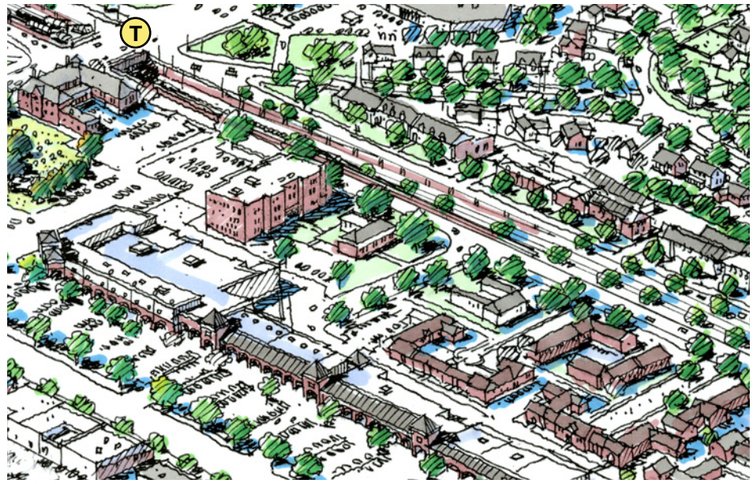
THROUGH TRAFFIC AND LOCAL ACCESS: Strip commercial corridors typically do not facilitate pedestrian movement. Roads that should function as high capacity arterials often become local access roads with numerous curb cuts and no sidewalks. As a result, what should be a short walk between two buildings, becomes a treacherous drive.



Existing

Proposed Mixed-Use Development

SHAKER HEIGHTS, OHIO: Light Rail Transit investments in Shaker Heights have created a series of strong urban neighborhoods along a single corridor. The transit vehicles are located in boulevards and medians. They penetrate commercial areas and become the focal point for commercial redevelopment. Strip centers will be redeveloped over time with new mixed-use buildings to create an urban center. Parking will be contained mid-block.

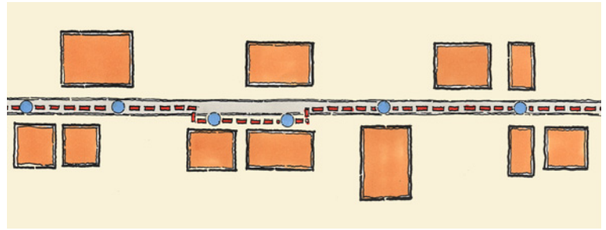


Existing

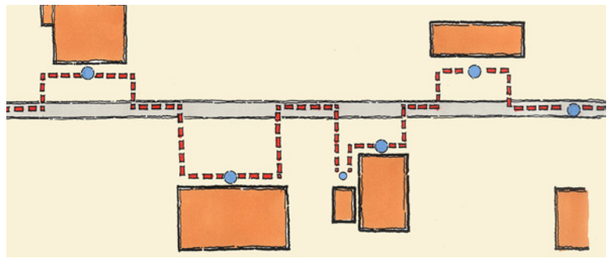
Proposed Mixed-Use Development

A STRIP CENTER IS LOCATED NEAR A TRANSIT STOP but the retail and restaurants are difficult to walk to from the stop and adjacent neighborhoods.

THE REDEVELOPMENT PROPOSAL breaks the strip center into smaller blocks at key locations with new streets and creates opportunities for new apartment buildings.

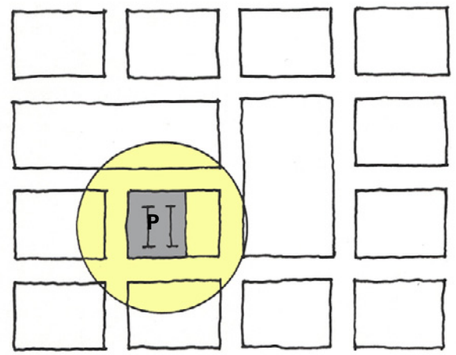


Preferred: Buildings along a corridor

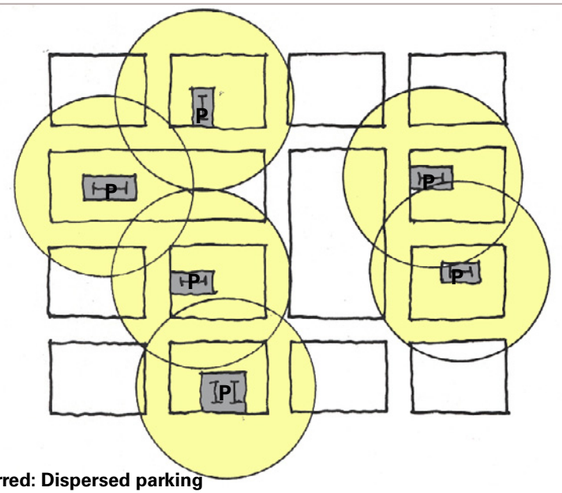


Discouraged: Buildings set back from a street

COMMERCIAL CORRIDORS: If buildings are set back from the street, routing transit vehicles is inefficient. If the buildings are located close to the street, a single route can provide access to the entire corridor effectively and efficiently.



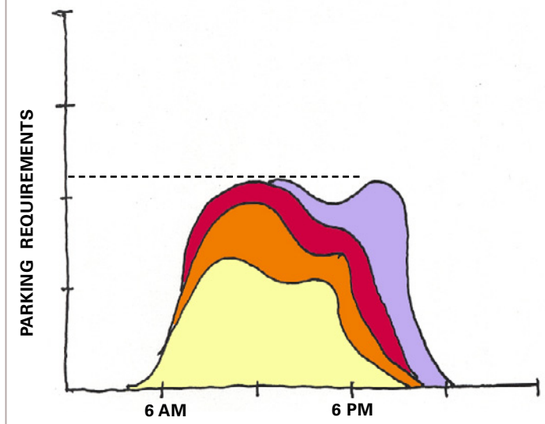
Discouraged: Centralized parking



Preferred: Dispersed parking

DISTRIBUTION OF PARKING: Parking resources should be managed by a district, not on a lot by lot basis. However, centralized parking or too much parking in any one location can be problematic. Instead, smaller parking areas should be distributed throughout a downtown or business district, providing more proximate parking spaces to more establishments.

Discouraged: Individual parking requirements



Preferred: Shared parking

SHARED PARKING STRATEGY: Parking in commercial areas should be a coordinated effort, not a property by property endeavor. In downtown areas with a wealth of complementary uses, parking can be shared, thereby lowering the overall amount of parking required in the downtown. Entertainment venues that are typically used on evenings and weekends should share parking with daytime office users with minimal conflict.

procedural tools

procedural tools

The challenge for today's public officials and the development community is to create a sustainable, more economically viable, livable community. In order to be successful, this new and revised community must contain a balanced transportation system where walking, biking and transit are as valued as the automobile in providing viable forms of transportation.

Most local jurisdictions throughout southwestern Pennsylvania have adopted land use goals, objectives and policies in comprehensive plans (or master plans) to guide future growth and new development. Information contained in this report will assist local governments in creating an urban form that will foster community identity and conserve natural resources. This urban form, which calls for the continued development of activity centers and compact urban form, can be well served by a balanced transportation system.

The realization of the above goals will not take shape until the communities have had the opportunity to establish effective implementation tools. Effective implementation of local goals, objectives and policies, calling for more compact, mixed-use development patterns to enhance walkability and transit use, requires southwestern Pennsylvania communities to fully integrate land use planning with transportation planning. This integration will be accomplished through revisions to the numerous comprehensive plans, zoning ordinances and land development regulations within the region.

The following paragraphs outline several land use/transportation implementation tools available to local governments, including municipal planning codes, comprehensive plans, zoning, and development standards and design guidelines. A description of the public charrette process is also outlined in this section of the report. This section on procedural tools concludes with a summary of the various funding sources available to promote transit-friendly development practices. The successful integration of mobility friendly principles into land development activity will require a balance between regulations and incentives. This balance can only be accomplished through partnerships between local governments, transit agencies and the development community.

Municipal Planning Code

In Pennsylvania, the Municipal Planning Code (MPC) grants local governments the power to regulate land uses and development at the local level. Although not a requirement of the MPC, many communities enact a zoning ordinance to coordinate and guide development as well as provide standards for development. In a zoning ordinance, the municipality is divided into districts and regulations are created that apply to the entire community as well as the individual districts. The zoning ordinance typically regulates the following items: land uses, lot size, building height, parking, signage, density, street width, and front, side, and rear setbacks, among others. Many communities also create subdivision and land development ordinances to regulate land that is subdivided into new lots and public and private improvements that are made to land. The subdivision and development regulations ensure the proper placement and construction of infrastructure and also address traffic, parking, and site access issues.

RELATIONSHIP OF PLANNING ACTIVITIES

Plan	Required by	Purpose	Informed and updated by	Implemented through
Long Range Regional plan	Federal law to access federal funding	to organize regional investments by establishing -primary growth areas (centers) -primary development corridors -critical open space, preserves and environments	-public outreach -aspiration based planning -sector planning -visioning efforts	-functional plans such as transportation and mobility plans, economic development plans etc.
Corridor and Sector Planning	Regional Plans to access federal funding	-to establish sub regional partnerships -to determine boundaries of critical preserves -to determine capacities of growth area and locations of mixed use centers and districts	-public outreach -regional and municipal plans -municipal partnership -visioning efforts	-regional investments and municipal plans
Municipal Comprehensive Plans		-to determine local growth patterns -to establish neighborhood and district densities -to prioritize specific infrastructure needs -to establish site-specific guidelines	-public outreach -independent local and neighborhood planning efforts -station area master plans -visioning efforts	-zoning codes -design guidelines -capital improvement plans -regional investments -joint developments -incentives

REPRESENTATIVE CHARACTERISTICS OF TRANSIT-ORIENTED CENTERS

	Villages Centers	Town Centers	Regional Centers	Downtowns
Percent of land dedicated to residential development	80% to 90%	70% to 90%	30% to 60%	10% to 40%
Net density of housing	6 to 8 units/acre	8 to 11 units/acre	10 to 15 units/acre	greater than 15 units/acre
Percent of land dedicated to commercial uses	10% to 15%	10% to 30%	40% to 70%	70% to 90%
Total square feet of commercial	50,000 sq.ft. to 100,000 sq.ft.	250,000 sq.ft. to 500,000 sq.ft.	750,000 sq.ft. to 2,000,000 sq.ft.	greater than 2,000,000 sq.ft.
Minimum Net Floor Area Ratio of Commercial	0.5	0.5	0.4	0.8
Density of Employees	30 employees/acre	30 employees/acre	50 employees/acre	100 employees/acre
Net parking ratio	3 pkg.spc/1000 sq.ft	3 pkg.spc/1000 sq.ft	3.5 pkg.spc/1000 sq.ft	2.5 pkg.spc/1000 sq.ft

GUIDELINES FOR TRANSIT-ORIENTED COMMUNITIES: Transit-oriented communities must be of a minimum density and size in order to support transit. The guidelines above offer recommendations and benchmarks for communities interested in creating development that can support transit.

Municipal Comprehensive Plans

Pennsylvania's Municipal Code governs how communities periodically prepare and update their Comprehensive Plan. This planning process allows communities to direct and control growth by designating land use controls and recommending infrastructure improvements. The Comprehensive Plan process is an opportunity to engage the public in a design process to build consensus around shared visions for the future of their community. Recent legislation encourages adjacent municipalities to coordinate planning efforts so that the form and character of a region is more logically conceived as an inter-related series of communities, rather than independent and isolated jurisdictions. The design process is also an ideal opportunity to engage regional authorities such as transit providers to coordinate local efforts with more regional strategies. The Transit Vision and this toolbox can assist municipalities in the Comprehensive Plan effort by encouraging focused growth strategies that increase transit usage and, while providing adequate street capacity, reduce reliance on expensive road and utility infrastructure that encourage low density development. The Comprehensive Plan provides the vision and design framework for developing regulatory tools such as zoning, development standards and infrastructure investments. These tools should evolve from a comprehensive vision rather than market forces of the moment.

Comprehensive Plans identify likely areas for change in the future; such areas are candidates for transit-friendly developments:

1 Underutilized land in urban areas which may include old industrial land, edge areas that are poorly defined and old commercial properties
2 Areas currently being redeveloped
3 Areas that are adjacent or near existing or future transit corridors and stations
4 Areas that build on or strengthen transit-friendly, walkable neighborhoods
5 Unique opportunities of regional significance where major public or private investments are planned such as sports and recreation venues, cultural and civic centers, business centers, etc.
6 Opportunity sites in regional and municipal plans

The following items are additional tools and incentives that can be used as a part of a community's land use regulations or in conjunction with the land use planning process in order to facilitate transit-friendly development

Transit-Friendly Zoning

Transit systems and developers often face difficulty implementing transit-friendly projects because local land use regulations often do not permit development that follows the characteristics of transit-friendly design. For example, some regulations do not allow a mix of uses within a zoning district. Many zoning codes prescribe minimum lot sizes that preclude transit-friendly densities.

In response to increasing demand for compact, walkable, transit-oriented communities, it is sometimes necessary to amend local land use and development regulations. The transit system can work closely with the local government to develop transit-compatible regulations and design criteria.

As important as amending the local regulations is addressing the needs of transit in the subdivision and development review process. Including transit-sensitive considerations during the site review process ensures that transit will be able to provide effective service to the site. The transit system can provide a checklist of transit-based requirements which the municipality can adopt as part of the site review process. The checklist should also be given to developers to aid in site design preparation. If the local government does not have a staff person with the background to conduct the transit portion of the subdivision review, a transit system staff person could review and offer comments on development proposals.

Zoning should be based on a community plan, developed in a public process, and easily communicated to the public with drawings and visual materials. In this way, citizens can understand the form of the physical environment they wish to create, and words in zoning can have meaning that citizens understand and endorse.

1 Reduce Restrictions

Often, zoning can discourage the private sector from redeveloping land because the restrictions limit economic return. A basic strategy for encouraging development is to allow sufficient development intensity and an appropriate mix of uses so that planned developments will have sufficient economic return to be attractive. Transit-friendly development encourages density, focused development, mixed uses within a walkable area, and pedestrian friendly growth to generate ridership. Existing zoning should be evaluated to determine if unnecessary restrictions discourage development where it is most desired.

2 Zoning District Changes

Current zoning may not allow transit-friendly districts because it may restrict uses, densities and sufficient design standards. Changes or amendments to existing zoning district language may be sufficient to accommodate the TOD strategy. There may be a sufficient number of special transit-oriented districts to warrant the creation of a new zone district classification, or the modification of existing mixed use district classifications. In some cases, the zoning map may need to be changed to create the desired zoning classification for a strategic area in the community identified for transit-friendly design.

3 Mixed Use Zoning

Mixed use districts are transit-friendly districts. With a variety of uses including street oriented retail, offices and a broad mix of homes to accommodate a variety of lifestyles and ages, residents can work and shop in the same neighborhood. Transit can provide mobility within these typically dense areas and, because of their concentrations of people, connect to other regional centers. Zoning can insure an appropriate mix of uses by establishing limits on any one use so that it does not dominate the district.

4 Bonus Zoning

Bonus zoning provides increased development rights to a developer, typically through higher densities or intensity of development, in exchange for the provision of amenities or features determined to be in the public interest. Developers often receive bonuses for providing parks, landscaping, streetscape improvements, access improvements (including transit facilities such as waiting areas), and affordable housing, among others. Additionally, some communities use bonus zoning to lower development costs (e.g., by reducing parking or setback requirements) in exchange for the amenity.

TRANSIT SUPPORTIVENESS OF SELECTED LAND USES

Transit supportive uses: The table above can be used to evaluate the degree to which any given commercial or public use supports transit. Some uses are inherently transit supportive. Others can be transit supportive if their site plans follow design guidelines for transit-oriented development. Others are not transit supportive and should not be prevalent in areas where transit markets can be strengthened.

The provision of bonuses must be included in the municipality's zoning ordinance. The zoning ordinance must specify the required improvement(s) with the corresponding bonus. Bonus zoning is also often included in the provision of overlay districts.

5 Transit Overlay District

The concept of overlay zoning involves applying regulations to an area that are in addition to and supercede the requirements of the underlying zoning district. The purpose of an overlay district is to address issues in an area that require special attention (e.g., preserve character of a neighborhood or protect a feature of the area). A transit overlay district is one type of overlay zoning that applies special regulations to an area that promote a transit-friendly character of development. Transit overlay districts can be delineated around new or existing transit facilities and along transit corridors. The overlay provisions set forth design principles and specific regulations to induce development that is appropriate for transit, transit passengers, and pedestrians.

6 Special Districts

If a town has a large number of historic buildings, creating a Landmark Designation or Historic District will encourage preservation and provide investment incentives.

Brownfield redevelopment presents many opportunities for community revitalization and economic development. Brownfield redevelopment helps preserve farmland and open space by focusing development to areas where infrastructure is already in place. When brownfields are redeveloped in a mixed-use manner, the community's residents benefit from increased job opportunities, access to nearby shops and services, and affordable housing options. Because brownfields are typically located nearer to or within the urban core of a region, they can be served by transit if transit does not already serve the area. The developers and the transit system should work together to ensure that new development is designed with transit in mind. In the Pittsburgh region, two former brownfield sites have been converted to two stations and park-and-ride lots for the East Busway. Southside Works, located on the former LTV site, is a pedestrian- and transit-friendly development.

7 Planned Residential Development

Planned Residential Development (PRD) is a land use tool that allows a flexible design and mixture of land uses within the same development parcel. The Pennsylvania Municipal Planning Code allows municipalities to include PRD as a part of its zoning ordinance. A municipality's PRD regulations establish standards for minimum site size, overall density, water supply, sewage, and open space. The developer is given design flexibility within the defined criteria. Both residential and non-residential uses may be allowed in a PRD as well as a mixture of housing types. The developer is typically allowed to build at higher densities in return for the dedication of a proportion of the total land area for common open space. The open space may be owned and maintained by a homeowners' association or part or all of the open space may be deeded to the municipality. By arranging development in an efficient manner, the developer's costs for providing infrastructure are reduced while the area that a municipality must service and maintain is also reduced.

8 Station Area Plans

In order to ensure the success of a new or existing transit station, transit systems often collaborate with the local community to create a station area plan. Most station area plans set priorities for development at and near transit stations. In addition, the plan details the regulatory frameworks (e.g., zoning changes) and funding strategy necessary to carry out the plan. By working closely with the local community, the transit system ensures that the station area develops according to local priorities and reflects the character of the community and thus becomes a vital part of the transit network.

9 Transferable Development Rights

Transferable Development Rights (TDR) is a tool that allows both conservation and development to occur within a municipality. When land is under pressure for development, the landowner may sell the property's development rights. These development rights are transferred to another parcel or location in the community where growth is planned for and can be accommodated. The property owner retains the title to the land which can be used for farming, open space, or a related use; however, the property owner cannot develop the land for any other purposes. The developer that purchases the development rights is then allowed to develop another parcel at a higher density than would typically be allowed. The community must designate sending areas such as farmland, preservation areas, and areas of historic importance as well as receiving areas such as planned growth areas.

In a similar arrangement, a municipality may directly purchase development rights from a landowner. A municipality can pass a bond issue to purchase the development rights that can be sold at a later time. The bonds are paid off as developers purchase the development rights from the municipality.

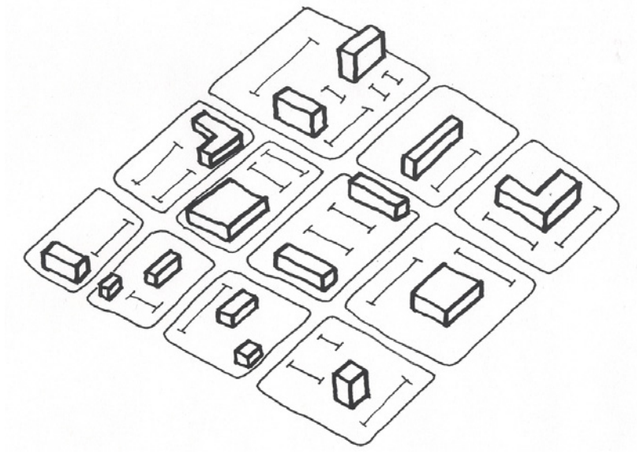
Transferable development rights are not permitted beyond the municipality boundary where it originates unless two or more municipalities are participating in a joint municipal zoning ordinance. TDR programs can be difficult for a municipality to establish because TDR requires a thorough understanding of the community's real estate and development market. The compensation to the landowners must be attractive enough to persuade them not to develop their land. Similarly, the permitted densities on the receiving land must be set so that the developer receives a greater return for purchasing development rights than accepting the base density of the sending area.

Development Standards and Design Guidelines

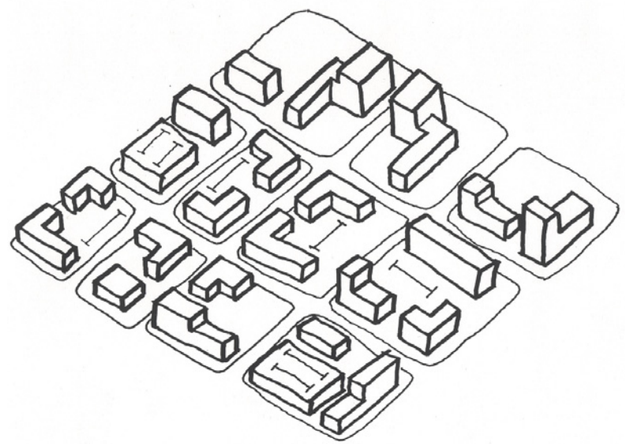
Communities can develop design standards and guidelines, illustrated in this toolbox, which help establish the quality of development. These tools can be integrated into zoning legislation.

1 Rethink parking strategies

Excessive minimum parking requirements will force large areas of land to be used for parking lots which are often underutilized, unsightly and unfriendly to pedestrians. Structured parking, due to its cost, is typically a longer-term measure. Parking strategies for transit-friendly districts usually require a finer level of planning than simple parking space/floor area ratios can provide. Strategies such as shared parking, on street parking, transit as a parking shuttle and strategic parking placement are needed to encourage a pleasant and functional district. Including these concepts in zoning legislation and managing parking as a communal resource will encourage land development patterns of sufficient density for transit-friendly development.



Discouraged: Low FAR, high parking ratios



Encouraged: High FAR, low parking ratios

FLOOR AREA RATIOS AND PARKING STANDARDS: Urban forms can be regulated by balancing Floor Area Ratios (FAR) with Parking requirements. Low FAR and high parking requirements (above) will result in low density development that is neither pedestrian friendly nor supportive of transit. Higher FAR and lower parking ratios (below) will intensify the use of land and create higher densities required to support transit.

2 Floor Area Ratio (FAR) and building envelope limits

FAR is the ratio of area of all the floors of a building to the area of the lot used by the development. It is indicative of the height of a building compared to its footprint. FAR limits building form and size and is important to develop in a planning process where the impact of the restrictions can be visualized. FAR is also important for controlling development intensity and the urban form of the buildings and public spaces they create.

3 Pattern Books and design standards

Pattern books and other visual forms of design guidelines are important tools for designing transit-friendly neighborhoods. Pattern books are enjoying a resurgence in this country because they are highly visual documents that illustrate a development with plans and perspectives in a way that everyone can understand. They are superior to conventional zoning which attempts to use words and numbers to direct urban form. Pattern books are useful as regulatory tools because they control building placement, massing and architectural detailing to the degree appropriate for a given situation and with illustrations that are easy to interpret. They also illustrate the character of public space and can provide design standards for landscaping and infrastructure. Pattern books are marketing tools, regulatory documents that have been adopted by municipalities, and design guidelines for designers and builders.

4 Subdivision and street standards

These regulations can assist in the planning and design of good transit-friendly and user friendly street frameworks. They can help assure street connectivity, well designed street cross sections, maximum block and lot sizes, and accommodation of a variety of lot sizes. Existing subdivision regulations should be reviewed to see if they encourage the desired den-

sity of development. Because there are often a myriad of issues at a number of levels, subdivision and street standards should be developed by qualified architects, town planners or landscape architects.

5 Public infrastructure

Public infrastructure is the framework for growth and investment. Development of rural landscape in Southwestern Pennsylvania over the last 40 years is facilitated by investments in utilities and roads for very low density growth patterns. An alternative is to concentrate infrastructure and improve what we already have to increase efficiency and reduce costs.

6 Utilities

Form follows sewers. The decisions made about utility extensions and improvements will influence property values and growth. By focusing on improving utility services in existing settlement patterns, municipalities can encourage reinvestment and save taxpayer dollars in the long run. Municipalities are often responsible for major regional systems into which developers connect. Decisions about utilities may solve long standing problems such as inadequate storm drainage.

7 Streets

The design and construction of road networks has a profound effect on mobility for all users. As illustrated in this toolbox, the design of street networks, street cross sections and mobility will influence the success of a development as a livable transit-friendly neighborhood. Streets are not just for cars. Municipal street standards must accommodate pedestrians, bicycles, transit vehicles and landscaping suitable for each condition.

8 Parks and open space

One of Southwestern Pennsylvania's greatest challenges is finding sufficient land well situated for public use. Communities seem always to be in search of more park space for athletics, passive recreation and community functions. Some of our finest neighborhoods are known for continuous trails and open space systems that link to parks, civic institutions and neighborhoods. Preserving adequate space for public amenities is an essential component of urban design and planning at the municipal and regional level.

Charrette presentation

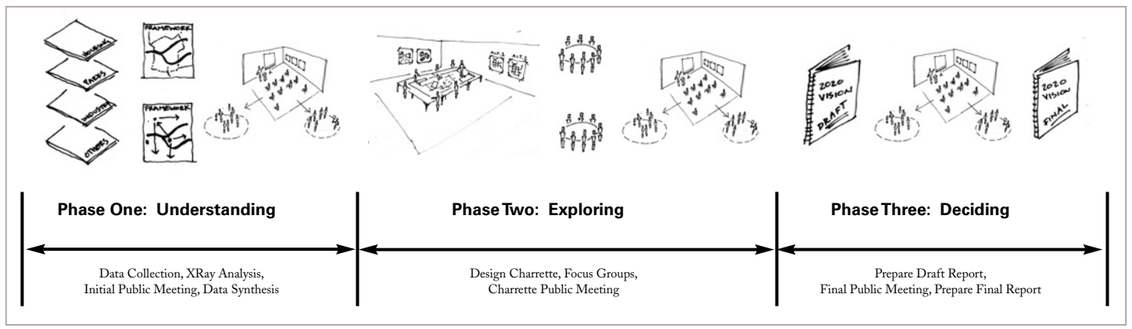
Focus group meetings

Public Participation and Charrette Process

Public participation is an essential component of creating transit-friendly environments. Effective public participation ensures that the project will meet the needs of the surrounding community and reflect the character of the area. In order for a project to be successful, the local residents and property owners must be involved from preliminary planning through construction and implementation. Citizens can provide valuable insight and problem-solving solutions about project location, site design, facility design, and access issues, among others.

The level and type of public participation will differ depending on the scope of the proposed project. For example, a new transit station development will require a higher level of participation than a project to add amenities to a transit stop. Public participation programs typically employ a wide variety of techniques for gathering public input. In the preliminary planning stage of a project, planners may engage citizens in visioning, brainstorming, focus groups, and citizen surveys to generate ideas about the desired components and characteristics of the proposed project. Planners often conduct visual preference surveys, hands-on modeling, and design charrettes to elicit input on site and facility designs. Throughout project development and construction, project sponsors use many other techniques to gather input including: advisory committees, task forces, public meetings, and media programs.

A design charrette is an effective and efficient way for a municipality to design transit-oriented communities and to solve design problems confronting a community. A design charrette is a workshop conducted by an interdisciplinary team of urban designers and technicians. A charrette will last several days with the eventual goal of developing a design solution that has community consensus. The purpose of a design charrette is to visually explore design ideas for a given site. Charrettes are conducted in an open forum. Ideas are rapidly tested and discussed. In order to assure success and community consensus, the process must include and engage decision makers, stakeholders, residents, investors, and community leadership in both the input and decision making process.



PUBLIC CHARRETTE PROCESSES are an effective tool for aspiration based planning. A charrette gathers input from stakeholders, professionals, municipal officials and the interested public in order to develop visions and designs for a community. Charrette results are then translated into legal documents (such as Comprehensive Plans and Zoning Codes) for adoption by a municipality.

Funding Sources and Incentives

Each participant in a transit-friendly development project will bring to the project a variety of potential sources of funding and financing. As a transit system and the local community develop a project concept, the agencies should begin to evaluate which local, state, or federal resources may be available to support the project. For large projects, the project sponsors should invite the local development community to participate in order to leverage additional sources of funding. The local sponsors should develop strategies and incentives for encouraging private investment in transit projects. The following section provides a description of many of the programs and techniques that are available to support transit-friendly developments.

Transit-Oriented Development and Joint Development

It is becoming increasingly common for transit systems to participate in joint development arrangements with private developers to improve existing station areas and create new transit-friendly environments. In joint development arrangements, the transit system typically sells or leases the land and/or air rights in the vicinity of a transit facility to a developer or business owner to provide transit-related amenities. At transit stations, the transit system may lease space to businesses such as drycleaners, daycare centers, and convenience shops, among others. Developers may offer to pay for transit improvements such as a connection between a transit station and nearby development. On a larger scale, transit systems and developers are working together to create new mixed-use neighborhoods around transit stations. The benefits of joint development include increased ridership and lease revenue for the transit system, an enlarged pool of customers and employees for a development's businesses, increased tax revenue for the municipality, and improved services for transit passengers, among others.

As a part of its Livable Communities Initiative, the Federal Transit Administration (FTA) strongly supports joint development projects that enhance transit service and the quality of life in the community. Transit systems can draw on many federal transit funding programs for planning, designing, and building transit-oriented projects. FTA authorizes joint development projects that:

1. Enhance the effectiveness of mass transportation projects to which they are physically or functionally related; and
2. Provide non-vehicular, capital improvements which increase transit ridership in fixed guideway corridors.

The joint development process is initiated in two primary ways. First, a developer may approach the transit system about buying or leasing land owned by the transit system. The developer submits a preliminary proposal detailing the proposed development, the price that is being offered for the land, and other financial information. The second way to initiate a joint development project is through a solicitation of proposals. The transit system can issue a request for proposals from developers for a project or property that is targeted for development. Regardless of how a project is initiated, the proposal(s) will be evaluated by a transit system review committee that should include a municipal representative. If the review committee selects a proposal, the transit agency will enter into negotiations with the developer. If successful, the negotiations will result in a Memorandum of Understanding (MOU). The MOU typically includes, but is not limited to:

1. A description of the roles, responsibilities, and requirements for each party;
2. An annotated schedule and plan for completion of the project;
3. A financing plan for the project (which may include arrangements such as revenues to be paid to the transit agency, use of proceeds, land acquisitions, and the extent of federal participation, among others); and
4. Project details, specifically the variety of information that must be provided and the approvals that must be received prior to determining if proceeding with the project is in the public's best interest.

Before a contract is issued, the MOU must receive several approvals, including approvals from the transit system's Board of Directors and the FTA. The developer is typically responsible for acquiring all permits from the local government. Due to the lengthy duration of many review processes, the developer participates at his/her own expense and risk. When all the approvals have been received, the MOU will become the basis for a development agreement. The final development agreement also requires approval by the transit system's Board of Directors and the FTA.

In order to build interest and encourage private sector participation in transit development opportunities, many transit systems and municipalities offer incentives to developers. An important tool that transit systems can use to facilitate development is land assembly and site preparation for the proposed project. Packaging land for a project reduces costs and uncertainties for the developer and ensures that the development is sufficiently large to be viable for development. Site preparation can include site

clearance, environmental remediation, installation of utilities and infrastructure, construction of public facilities, and creation of open space, among others. These types of improvements signal to developers that the transit system and the municipality are committed to development.

Development projects can be complex undertakings. Transit-oriented projects are not an exception, and obtaining financing can be a challenge. A local government or transit system may be able to assist the developer in obtaining financing through such mechanisms as tax exempt bonds, loan guarantees, and letters of credit. A few transit systems have underwritten land costs by accepting below market rents on land leased to a developer in exchange for a percentage of project revenues over a period of time. Another financial tool to attract developers is to relieve the tax burden of a new development by phasing in the value of new construction. The properties can be assessed at progressively increasing fractions of values so that the property owner does not bear the full tax burden for a number of years. The savings can be passed on to tenants who may influence their decision to locate in the development.

Business Improvement Districts

A business improvement district (BID) is a legal entity that is formed to carry out a business improvement plan in a defined business district. BIDs are typically formed by commercial business owners that agree to pay additional taxes to cover the expenses of the improvements. Many of the typical improvements implemented by a BID can aid in making the business district a more transit-friendly environment. For example, streetscape improvements, facade improvement programs, parking and transportation management programs, security plans, and maintenance programs can create several of the transit-friendly characteristics described in this Toolbox. Other common improvement activities include: capital improvements, consumer marketing, social services, and strategic planning, among others. The Oakland Business Improvement District in Pittsburgh was formed in 1999. A BID is in place under the auspices of the Pittsburgh Downtown Partnership.

Housing and Community Development Programs

There are several state and federal housing and community development programs that may fund components of a transit-friendly development. Programs through the U.S. Department of Housing and Urban Development (HUD), the Pennsylvania Department of Community and Economic Development (DCED), and the Pennsylvania Housing Finance Agency (PHFA) look to reduce or eliminate local, state, or federal taxes to stimulate job creation, housing opportunities, and community renewal. For example, the Community Development Block Group program, funded by HUD and administered by DCED, provides funding to revitalize neighborhoods, expand affordable housing and economic opportunities, and improve community facilities and services. Many of the programs require that projects must serve low-income persons or residents of economically distressed neighborhoods. The agencies' websites provide information about their programs: www.hud.gov, www.dced.state.pa.us, and www.phfa.org. County entities, such as Allegheny County Housing Authority (www.achsng.com), can also provide financial and other assistance.

The Smart Commute Mortgage

Fannie Mae, the home mortgage finance agency, now offers the Smart Commute Mortgage in a few U.S. cities including Pittsburgh. This innovative, new mortgage product is designed to meet the homeownership needs of people who would like to purchase a home in an urban neighborhood and who would be willing to rely on public transportation and use locally available services and amenities rather than own a personal vehicle.

With a Smart Commute Mortgage, lenders are allowed to recognize the savings made by a household whose primary means of transportation is public transit rather than the private automobile. Thus lenders can "stretch" their standard debt-to-income ratio, ensuring that more low- and moderate-income families, first time homeowners, and dedicated transit users can obtain mortgages, or larger mortgages, than they otherwise would qualify for.

Participating lenders, in evaluating applicants, take into consideration how close the dwelling is located to public transportation. Typically, this is a half-mile from rail or busway transportation and a quarter-mile from a bus route. If the applicant can live without a car, or a working couple can get by with just one, the estimate of disposable income is increased and, commensurately, the size of the mortgage for which they qualify. An amount equal to the cost of an annual transit pass is placed into escrow and disbursed to the local transit agency, which also usually offers some initial discount on the transit pass. Through the program in Chicago, for example, an individual was able to afford $38,909, or 29 percent, more mortgage with a Smart Commute mortgage by purchasing a home in a neighborhood that is well served by transit and has a variety of retail and cultural amenities within a close walk of home.

Historic Preservation Tax Credits

When transit improvements are located in older communities, there may be opportunities to renovate historic buildings through state and federal tax credits for historic preservation. Renovating and re-using older buildings preserves and enhances the neighborhood fabric.

Main Street Program

The Main Street Program, initiated by the National Trust for Historic Preservation in the 1980s, seeks to revitalize communities' traditional or historic downtown areas through public-private partnerships. Local communities develop a comprehensive strategy for revitalization based on four points:

>>> Organization: Forming a local organization dedicated to downtown revitalization.

>>> Design: Improving downtown appearance through rehabilitating historic buildings, supporting new construction, and developing and implementing design guidelines.

>>> Promotion: Creating a marketing program to attract new businesses, investors, and visitors.

>>> Economic Restructuring: Developing a plan to strengthen the existing economic base so that the district can meet new opportunities.

The Main Street program's goals fit well with the concepts of transit-friendly development. The program's efforts to improve the design and appearance of the downtown district benefit transit, transit passengers, and pedestrians. Building facade improvements and streetscape enhancements improve the environment for pedestrians and people waiting for transit. Most Main Street programs also develop plans for managing parking and traffic which can help transit operate more effectively in the area.

In Pennsylvania, the Department of Community and Economic Development provides funding to support Main Street projects. The five-year grant program requires recipients to establish a downtown revitalization organization and hire a full-time downtown coordinator to manage the revitalization. In addition, recipients must create a strategic plan, conduct a market analysis, and develop downtown design guidelines. The Pennsylvania Downtown Center provides training and technical assistance to Main Street programs.

In Pittsburgh, the South Side Local Development Company manages a Main Street Program on East Carson Street. The East Carson Street program recruits and assists new businesses, facilitates storefront renovations, markets commercial loan programs, provides matching sign grant funds, and promotes the business district. The program received the Great American Main Street Award in 1996.

Transportation Development Districts

In Pennsylvania, the Transportation Partnership Act of 1985 enables municipalities, acting separately or in cooperation with other municipalities, and the private sector to provide transportation funding where facilities and the level of services are inadequate or have not kept pace with the development of the surrounding area. The Act permits the financing of an extensive array of new transportation facility projects, both capital and service, but does not include the maintenance or repair of existing facilities. A governing body of a municipality, or municipal authority acting with the approval of its municipal government, may designate an area as a transportation development district for the purpose of developing transportation facilities or providing services to support the area's economic growth. These districts allow for the levying of funds to support their activity through the following methods:

1 The imposition of an assessment on properties located within the district in accordance with the procedures and requirements of the Pennsylvania Business Improvement District Act of 1967.

2 The imposition of an assessment on each property within the district using a formula adopted by the municipality based upon actual or projected usage of the facilities or services by each property with the district; e.g., a trip generation plan.

3 The imposition of taxes ordinarily permitted by law, but restricting the tax base to the district and the receipts of the tax to transportation projects.

In transportation infrastructure projects of a major scope, the levying of a substantial additional assessment beyond normal tax levels is not conducive to development. In this case, the imposition of a new assessment is often used in conjunction with tax abatement on the increased value of rehabilitated or renovated properties and new construction. The new levy is then introduced in an amount less than or equal to the abated taxes, thus allowing the generation of a significant amount of financing without the addition of a new levy beyond the prevailing level of taxation.

Other requirements include the undertaking of a comprehensive study consistent with applicable standards for transportation planning and programming to determine the program of projects to be financed, including a cost/benefit analysis. Based upon this study, the municipality or municipal authority will develop a multi-year transportation improvement program and financial plan. Depending upon the level of implementation, county, regional or statewide approval may be necessary in conjunction with programming the improvements on the region's Transportation Improvement Program and Long Range Transportation Plan.

Tax Increment Financing

Tax increment financing, also known as TIF, is a key tool for funding improvements that are components of transit-oriented development projects (e.g., site preparation, demolition, land acquisition, and parking facilities, etc.). TIF is an alternative financing program that allows for the diversion of all or a part of the new taxes, or the tax increment, generated by a development project to be used to assist in the financing of that project or cover related public costs. The program, adopted in Pennsylvania as the Tax Increment Financing Act of 1990, requires the creation of a TIF District and a related plan that details the use of the proceeds of the TIF financing, as well as the development that is expected to occur as a result of the expenditures and that is required to generate the new taxes. Creation of a TIF District currently requires that a determination of blight be made prior to the establishment of the district. The program not only allows for the diversion of new real estate taxes, but also of other taxes such as sales tax and business privilege taxes. The tax increment can be used to cover the costs of a note or, as is more common, the debt service related to a taxable or tax-exempt bond issue. The program term is normally limited to 20 years in order to coincide with the term to maturity of the bond issue. In Pittsburgh, the new light rail transit station at First Avenue was funded, in part, with TIF.

Transportation Management Association (TMA)

A TMA is a non-profit organization of private corporations, citizens, public interest groups, and public agencies dedicated to achieving reductions in traffic congestion, improving mobility and air quality, and educating employers and their employees about transportation alternatives. TMAs advocate for public transportation, and can assist with transit and development issues that arise in particular areas of the region. There are three TMAs in the region: Airport Corridor Transportation Association, Oakland Transportation Management Association, and the TMA at Pittsburgh Downtown Partnership.

Transportation Enhancements

A portion of federal highway funding coming to states is available for pedestrian, bicycle, and transportation-related historic preservation projects that might be included as part of a Transit-Oriented Communities project. These funds can be pursued through a competitive application process put forth by PennDOT and SPC.

Hometown Streets and Safe Routes to School Program

Pennsylvania has established this program using federal transportation funds. Similar to Transportation Enhancements, this program will create projects to enhance local business districts and improve access to schools.

Transit Revitalization Investment Districts (TRID)

Signed into law in December 2004, Pennsylvania House Bill 994 established the Transit Revitalization Investment District Act. The legislation allows public transportation agencies to partner with local municipalities to create TRIDs within an area around a rail or transit stations in order to foster Transit-Oriented Developments, economic development, real estate development or redevelopment within the community and region, as well as promote public transportation improvements.