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PLANNING COMMISSION

April 2021

Devon Station Multimodal Access Study

Planning Concepts for Safe Pedestrian and Bicycle Mobility

The Delaware Valley Regional Planning Commission

is the federally designated Metropolitan Planning Organization for a diverse nine-county region in two states: Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey.

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Executive Summary

The *Devon Station Mulitmodal Access Study* was conducted by the Delaware Valley Regional Planning Commission (DVRPC) in collaboration with the Southeastern Pennsylvania Transportation Authority (SEPTA), the Chester County Planning Commission (CCPC), and Easttown Township.

Study Area

The study area includes Devon Station and the mix of commercial and residential properties found within the half-mile radius of the station. Devon Station is located on the Paoli/Thorndale Line of the SEPTA Regional Rail network. This service links Easttown Township to Center City Philadelphia and other suburban communities in Chester, Delaware, and Montgomery counties. Many passengers from neighboring Tredyffrin Township also utilize Devon Station. The station is also a key feature of the Devon Center commercial district on Lancaster Avenue (U.S. Route 30), which is notably also home to the Devon Horse Show and new retail destinations.

Project Goals and Background

The project goals were to analyze the station area, develop concepts that improve walking and biking access to the station, and recommend land use strategies that complement the rail facility. According to its Fiscal Year (FY) 2021 Capital Budget, SEPTA intends to improve and restore the Devon Station building and platforms in future years; however, access is currently difficult for pedestrians and bikes, calling for more immediate interventions.[1]

In the larger station area, all travelers face mobility constraints due to the challenging arrangement of parking lots, driveways, and neighboring streets. Furthermore, the existing

Devon Station's inbound platform and historic station building.

character and form of nearby development cater to auto traffic rather than support transit use. Sense of place is also inconsistent while traveling along Route 30 near the station, despite nearby historic and cultural assets and stable residential neighborhoods. Finally, planning efforts are further complicated by a mix of owners, including Amtrak and the Pennsylvania Department of Transportation (PennDOT).

Easttown officials responded to these concerns by setting clear objectives in the 2018 update to the Township's Comprehensive Plan. Among them were improving pedestrian and cyclist mobility, establishing a clear vision for redevelopment in Devon Center, and making Route 30 a Complete Street. The Township followed this up with a request for technical assistance from DVRPC to explore safer routes to Devon Station and to determine other ways to enhance the station area. In undertaking this study as part of its FY2020 Work Program, DVRPC sought to build on Easttown's recommendations and collaborate with municipal, county, and transit partners to advance their shared goals. The study team also solicited input from residents and reviewed ideas from prior and concurrent planning efforts to formulate the concepts and recommendations presented in this document. These concepts can guide future decisions around transportation facilities, land use, and the connections between them as the Township and its partners continue to invest in the Devon Center district.

Figure 1: Devon Station Area with Selected Recommendations

Existing Sidewalk New Sidewalk Bus Stop Enhancement

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Station Area Conditions

Through the course of the project, the study team identified and confirmed many conditions that inhibit safe nonmotorized circulation within the station area. DVRPC's park-and-ride data indicates that about half of the passengers who park at Devon Station actually drive from walkable or bikeable distances. Some of the barriers that limit users' interest or ability to walk or bike include connectivity gaps in the street network, lack of pedestrian facilities or low-stress bikeways surrounding and on the station site, and intersection designs that neglect or endanger pedestrians and cyclists. Creating a hospitable environment for walking and biking to transit can invite more travelers to use the station without adding congestion to local roadways, and without needing to provide more parking. Moreover, the entire Easttown community—even those who do not regularly use transit—can benefit from safer streets. Investments like new or wider sidewalks, trails, traffic calming, street trees, and lighting also help communities stay vibrant, promote healthy lifestyles, and attract more private investment.

Recommendations

In this report, the study team offers many recommendations that respond to challenges present at the station site and on adjacent roadways and properties. They incorporate physical improvements to the rail facility and nearby streets, as well as changes to the mix of land uses and the form of the neighborhood's built environment and sense of place. Some recommendations are shown in Figure 1 on the facing page.

Station Site Improvements

Within the station footprint, there is a general need to reduce driveways, better organize vehicle paths, create safe pedestrian and bicycle paths, and preserve and rehabilitate the historic building. In advance of full design, SEPTA should also evaluate the potential for complementary uses on station land.

Full Americans with Disabilities Act (ADA) compliance at Devon Station necessitates the construction of high-level platforms and modifications to the existing pedestrian tunnel. A comprehensive station upgrade should consider new configurations to the Waterloo Road tunnel that create space for all modes. SEPTA should work with Amtrak to assess the tunnel's historic value and determine how preservation and accessibility goals can work in concert. To assist bicycle commuters, covered bicycle parking should be added to the north side of the station near the outbound platform.

Pedestrian and Bicycle Corridors

In the 2018 Comprehensive Plan, Easttown identified several roads in Devon as priority corridors for pedestrian access and bicycle mobility. To the extent possible, sidewalks should wrap around the entire station property along Waterloo Road and Lancaster Avenue; and signage, pavement markings, and other treatments can be used to safely designate shared or dedicated space for cyclists on streets that approach the station. If sidewalks cannot be constructed on both sides of these priority roadways, crosswalks should be provided to link pedestrians to the segments that do have sidewalks. Coordination with PennDOT to study reduced speed limits on major arterials and collector roads nearest to the station and Devon Center would promote a safer walking and biking environment in highly trafficked areas.

Transit-Supportive Land Use and Development

The local and county vision for Devon is a thriving, mixed-use Suburban Center. A variety of obstacles hinder that vision, including Devon's slow population growth, lack of housing diversity and affordability, and municipal land use regulations that discourage transit-supportive development. Although market conditions indicate that the area may be suitable for new types of housing and businesses, zoning changes and an intentional approach to redevelopment would help transition the station area from a more auto-centric landscape to a walkable residential, retail, and employment district.

A transit-oriented development (TOD) framework that concentrates new development around Devon Station, while also expanding safe multimodal facilities, can enable local residents and workers to drive less and walk, bike, or take mass transit more often. Transit-supportive uses include medium- to high-density residences, offices, civic and educational institutions, retail, and services. Commercial uses should cater to convenience goods; service needs; and leisure preferences of residents, employees, and transit passengers. Retail must serve the surrounding population, be aligned with area incomes, and be visible. Many transit-supportive uses are prohibited by zoning near Devon Station. At the same time, some zoning provisions allow many transit-nonsupportive uses, such as "big box" stores, strip malls, and gas stations. An amendment to the Township Code to incorporate the new Devon Center district would position the properties around the station to better accommodate transit-supportive uses. In general, land use controls near rail stations should encourage mixed-use development at higher densities by right, with lower parking ratios and more affordable housing choices. Chester County recommends building heights of at least 3.5 stories and a minimum of six dwelling units per acre (du/ac) near transit, and a standard of seven to 15 du/ac in Suburban Centers. The intensity of development should be highest

near the station and existing commercial uses, then taper off to create appropriate transitions to the surrounding neighborhoods

Although the Coronavirus disease 2019 (COVID-19) pandemic has slowed real estate transactions and development plans, Devon's location along Lancaster Avenue and proximity to the SEPTA station ensure that the area will remain an attractive place to live, work, and visit. The older and aging population in Easttown suggests potential for compact senior living communities in close proximity to new retail and transit. Townhouses, condos, apartments, and small-lot detached homes could appeal to moderate-income buyers, empty nesters, and young professionals. Low retail vacancies in Devon suggest that the area could absorb more services, such as sellers of specialty foods, pet items, clothing, and gifts, as well as fitness studios, salons, and cafes. More high-quality offices could round out the existing local inventory. Consequently, the adoption of a new vision and updated zoning will allow Easttown to proactively shape Devon's dynamic future.

Placemaking

Placemaking is the process by which public spaces can be reimagined to better support the communities that use them. Improving the sense of place around Devon Station could better distinguish the neighborhood for its focal location, historic value, festive equestrian heritage, and importance as a crossroads of residential life and commercial activity. Seating, vegetation, and lighting are some features that could make the Devon Station Area a more inviting place. Successful places are also well maintained in order to provide a sense of safety and active life—meaning that they are kept clean and have regularly scheduled activities and events. Gateway treatments, roadside signage, and public art are frequently employed to introduce visitors to a recognizable place and attract pedestrian traffic, often with the additional benefit of slowing associated vehicle traffic. New and improved elements that bring thematic consistency and a more inviting environment to the streets and spaces that comprise Devon Center could include decorative lampposts and banners, commemorative art pieces or interactive installations, wayfinding signs or structures, historical markers, additional tree cover, gazebos or other seating areas, and parklets or pocket parks.

Taken together, improvements to the station site, multimodal corridors, land use mix, and sense of place can contribute to greater livability in the Devon Station Area.

Focus Area Improvements

The DVRPC team also pinpointed four focus areas in which to prioritize improvements that target safety and access issues. The focus areas represent strategic locations where the current conditions present conspicuous barriers for pedestrians and cyclists as they travel to Devon Station. The focus areas, shown in Figure 2, are briefly summarized below.

Focus Area 1: Station South

The Station South focus area includes the main parking lot on the south side of the platform and the driveways on Lancaster Avenue and Waterloo Road. The parking lot layout creates conflicts among all travel modes. There are also no formal areas for passenger drop-off and pick-up, along with critical pedestrian gaps. Recommendations include closing the diagonal driveway, realigning the west driveway, expanding parking, adding a crosswalk to Devon Park Court, and using a traffic island to create a new internal circulation pattern.

Focus Area 2: N. Waterloo Road

The N. Waterloo Road focus area extends from the tunnel to just north of Highland Avenue and includes the complex intersection with the station's north driveway and Station Avenue. The intersection alignment and width make turning movements difficult and create vehicle conflicts. Furthermore, there are no sidewalks, crosswalks, or comfortable bicycle routes nearby, and the narrow tunnel precludes pedestrian access. The study team proposes sidewalks on the west side of Waterloo Road and the east side of Station Avenue, new marked crosswalks, bicycle pavement markings, and a fully compatible bike shoulder on the east side of Waterloo Road. In addition, four concepts provide options to reconfigure the intersection and driveway for improved safety, including an extended corner buffer, a channelized exit with access restrictions on Station Avenue, a roundabout, and separated station entrance and exit driveways.

Focus Area 3: Lancaster Avenue

The Lancaster Avenue focus area includes the stretch of Route 30 between Fairfield and Valley Forge roads. Challenges include the corridor's width and multiple business driveways, inconsistent sidewalk network and bus stop amenities, lack of crossings and bikeways, and minimal placemaking elements. Recommended treatments are a road diet, consolidation of business driveways, complete sidewalks on the full length of Route 30 in Devon Center, intersection improvements at Waterloo Road, and ADA-compliant bus stops.

Focus Area 4: Berkley Road

The Berkley Road focus area includes the blocks from just west of Waterloo Road to the Township line at Valley Forge Road. Berkley Road separates Devon Center's commerical properties from the residential

Figure 2: Focus Areas

SEPTA passengers access Devon Station's inbound platform from the parking area near Waterloo Road.

areas to the south. Here, pedestrians encounter sidewalk gaps and no marked crosswalks. Moreover, there is no formal space, signage, or markings to guide bicycle traffic. Proposed improvements are a complete sidewalk network, marked crossings, and a neighborhood greenway that explicitly encourages bicycle use. Additionally, gateway treatments would clearly signal the transition between residential neighborhoods and the commercial district as travelers enter and exit Devon Center.

Implementation

The *Devon Station Multimodal Access Study* is a planning study and offers aspirational guidance to DVRPC's municipal, state, and transit partners for creating a more walkable and bikeable station area in the years ahead. Implementating these recommendations will require ongoing coordination and decision making from all partners, including Easttown Township, SEPTA, and PennDOT.

Ultimately, the concepts and policies that are pursued will depend on stakeholders' capacity and priorities. Some recommendations may be piloted or tested and adapted after iterative feedback from residents and other relevant individuals and agencies. Funding for certain improvements may be secured through annual capital budgeting, while some of the specific interventions that deal with road safety and nonmotorized transportation facilities may be eligible for specialized grants from federal, state, or nonprofit entities, such as the Federal Highway Administration's Highway Safety Improvement Program, the Pennsylvania Transportation Alternatives Set-Aside Program, and People For Bikes Community Grants.

Easttown, SEPTA, and Chester County should continue to collaborate with one another and relevant parties to explore and take on the strategies that are most opportune and of highest priority to ensure that Devon Station users can travel safely, across all modes, and to develop Devon Center into a well-rounded place to live, work, and play.

Chapter 1

Introduction

This chapter introduces the study purpose and provides background information about the project, including the station area boundaries and the composition of the stakeholder advisory committee.

Chapter 1 also describes the four guiding principles that informed the project team's research and recommendations.

Introduction

Devon Station is one of two SEPTA Regional Rail stations in Easttown Township, linking the community to Center City Philadelphia and suburban areas of Chester, Delaware, and Montgomery counties via the Paoli/Thorndale Line. The station is also a key destination in Devon Center, a commercial district that straddles Lancaster Avenue (U.S. Route 30) in the northeastern area of Easttown and stretching into neighboring Tredyffrin Township. In addition to the SEPTA station, the neighborhood is notably home to the Devon Horse Show and Country Fair property, which hosts occasional large equestrian and other events, and the newly redeveloped Devon Yard, a lifestyle center operated by Urban Outfitters. Figure 3 identifies these and other local destinations, as well as the half-mile "station area" boundary, generally considered to be a walkable distance, and nearby bus connections. The inset map shows the location of Devon Station within the larger southeastern Pennsylvania region.

SEPTA plans to improve and restore the Devon Station building and platforms in future years, including full ADA compliance. However, several constraints in the surrounding area restrict access to the station and mobility across all modes, including an inconsistent sidewalk network, challenging intersections and driveways, and a lack of bicycle facilities. The station area also features a few vacant buildings and lots, large surface parking lots, and primarily auto-oriented businesses, which contrast with the nearby historic and cultural assets and stable residential neighborhoods. Generating a cohesive development strategy and sense of place for the station area is further complicated by overlapping property interests. PennDOT owns the two major roadways from which users access the station, Amtrak owns the station property, and private residents and companies own adjacent properties and land.

Improving pedestrian and cyclist mobility and charting a deliberate path to redevelopment in Devon Center were key themes to emerge in Easttown's 2018 Comprehensive Plan update. In 2019, DVRPC agreed to partner with the Township, SEPTA, and Chester County on the *Devon Station Multimodal Access Study*, with funding from the "PennDOT Connects" program.

This study builds on Easttown's Comprehensive Plan recommendations by creating a detailed inventory of mobility, built environment, and market conditions; developing multimodal access and circulation concepts; and identifying transit-supportive land use strategies for the Devon Station Area. Design concepts emerged from discussions with local stakeholders and residents, as well as analysis of prior and concurrent planning efforts, such as the Pedestrian and Bicycle Mobility Map and Devon Center district visioning process. The stakeholder committee included representatives from SEPTA, CCPC, and the Township's Planning and Zoning Department and Board of Supervisors. In addition, the public was invited to an open house to share their opinions about challenges and preferred improvements in the station area. The document is structured as follows:

Chapter 1 describes the study purpose and background, and the guiding principles that informed the research and recommendations.

Chapter 2 summarizes recent planning work at the local and county levels.

Workshop attendees review materials and particpate in feedback exercises, March 2020.

Chapter 3 outlines existing conditions, including transit service; points of interest; multimodal access information; development characteristics; and population, employment, and real estate market trends.

Chapter 4 describes pedestrian and bicycle facilities that are commonly utilized to improve multimodal travel conditions.

Chapter 5 presents recommendations aimed at making the Devon Station Area more friendly to pedestrians and cyclists.

Chapter 6 concludes the report with implementation strategies and resources.

As the Township and its partners continue to invest in Devon Center, it is the hope that this study can guide and inform decisions around the community's transportation facilities, land use, and the connections between them.

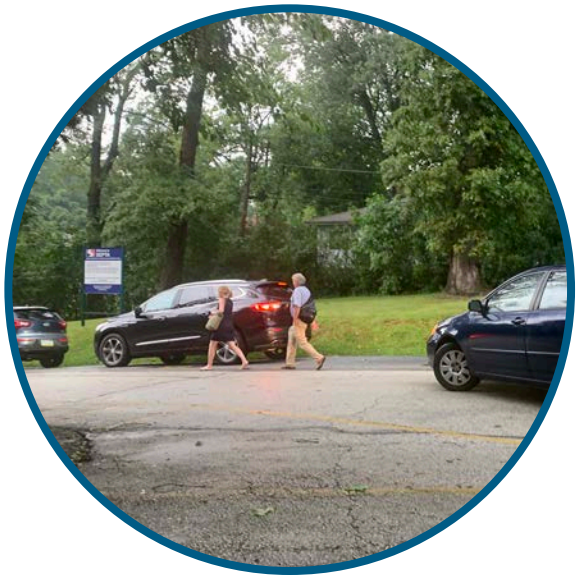
Figure 3: Devon Station Regional Context

Guiding Principles

The following four principles guided the project team's research and recommendations throughout the study process.

Provide Safe Routes to Transit

All travelers encounter safety issues in Devon, and pedestrians and bicycles are particularly vulnerable under the current station area conditions. Safety challenges force Regional Rail riders to drive to the station when many could theoretically walk or bike. They may also inhibit people with mobility restrictions or without regular vehicle access from living in, working in, and visiting Devon. Multimodal interventions can help to create a more predictable and efficient travel experience for all modes—by reducing crashes, calming traffic, dedicating space to different users, and building connections that better serve the community at large.



Make Transit, Walking, and Biking the Modes of Choice

Thoughtful interventions that encourage walking and biking to the station can be relatively easy to implement, promote sustainability and healthy lifestyles, and increase transit ridership. Most area residents, including those that use Regional Rail, make some portion of their daily trips by car. For many, doing so is their only option because they lack pedestrian and bicycle facilities that comfortably connect them to their destinations. A network of multimodal facilities equitably serves people who do not have regular access to a vehicle while also making it easier for vehicle owners to reduce their dependence on traveling by car.

Promote Transit-Supportive Development Patterns

As one of just 10 Regional Rail stations serving Chester County, Devon is home to a significant transit asset. Reinvesting in and around rail infrastructure is an important way for a community to grow sustainably and remain a competitive place to live and work. Concentrating new development around Devon Station can enable residents and workers to drive less while walking, biking, and taking transit more often. Devon Center should host a mix of housing, employment, and services with context-sensitive density and intensity—highest around Route 30 and properly transitioning to the lower-scale residential neighborhoods to the north and south.

Enhance Sense of Place

Devon is a unique and historic place, but the auto-centric development pattern along Route 30 contrasts with the distinct character of its walkable, residential neighborhoods and unique features like the Devon Horse Show. Transit, pedestrian, and bicycle facilities can contribute to sense of place and enrich civic pride, diversify the users and beneficiaries of public space, and support economic growth. In addition to physical upgrades that accommodate multimodal traffic, the Devon Station Area would benefit from placemaking elements that have thematic consistency and foster a uniformly inviting public realm, so that residents and visitors alike feel more welcome to linger and enjoy what the neighborhood can offer beyond the view from their windshields.

A Note on COVID-19

The outbreak of COVID-19 in early 2020 has disrupted many of the traditional aspects of how we live, work, travel, and recreate. Although the long-term effects on transportation remain to be seen, the importance of walking and biking as a form of transportation and a way to maintain a healthy and active lifestyle has only been made more certain. Transportation officials have looked to new, innovative, and flexible street design and management tools to help keep essential workers and goods moving, provide safe access to essential businesses, and ensure that people have adequate spaces to spend time outdoors. The pandemic has also reinforced the notion that communities with a mix of land uses enable residents to take on daily tasks without needing to travel long distances or forgo physical distancing guidelines.

Much of the analysis conducted for this study occurred before the spread of COVID-19 began. However, the recommendations offer the Township and its partners many options to improve the pedestrian and bicycle experience, pursue sustainable growth and development, and enhance the public realm in Devon. For example, modifying the intersection of N. Waterloo Road and Station Avenue (see pp. 64–72) would allow residents who live north of Devon Station to safely walk or bike to Devon Yard; Patient First urgent care; or parks, schools, trails, and other amenities situated south of Route 30.

Experimental "pop-up" or temporary treatments can be useful ways to respond promptly to the various mobility, health, social, and economic challenges that COVID-19 has presented to local residents, employees, businesses, and visitors. Improving nonmotorized travel options, enhancing access to recreational facilities, and supporting local businesses should be key priorities for the Township and its partners to support the community for both the duration of the pandemic and similar health crises that may strike in the future.

There are still planning lessons to learn about COVID-19, and municipalities will need to take heed of its potential long-term implications. Despite this uncertainty, the role of public transportation is already well established and will not go away, even with a pandemic. Stakeholders will need to ensure that future projects can maximize the benefits of supporting transit, nonmotorized travel, and smart growth development while ensuring the health, safety, and well-being of residents.

Chapter 2

Recent Planning Initiatives

Planning work in Easttown Township and the Devon Station Area is ongoing, and this study aims to acknowledge and incorporate relevant recommendations from past and concurrent projects to ensure consistency across future decision making and implementation efforts.

This chapter presents brief summaries of some of the more recent initiatives and related local work. Township plans are presented first, followed by relevant county planning documents.

2018 Easttown Township Comprehensive Plan

The Easttown Comprehensive Plan provides long-range guidance for land use, transportation, economic development, housing, public facilities, and historic and natural resources throughout the Township.[2] Three of the Comprehensive Plan's "Issues and Priorities" relate specifically to the Devon Station Area. They are described below.

Improve Pedestrian and Bicyclist Mobility
The Comprehensive Plan highlights the need to enhance mobility and safety for nonmotorized users. To accomplish this goal, it recommends improving pedestrian and cyclist infrastructure, calming vehicle traffic, and promoting land development that supports multimodal transportation. Buildings in the commercial corridor are encouraged to be oriented toward Lancaster Avenue, with a mix of retail, residential, office, and entertainment uses. Excessive driveways are discouraged and, where feasible, the Plan suggests replacing existing curb cuts with sidewalks and landscaping. New zoning code amendments that require multimodal facilities are discussed. Finally, the Plan includes a Pedestrian and Bicycle Mobility Map that prioritizes connections throughout the Township. The map is shown in Figure 4.

Establish a Vision for Devon Center
The neighborhood surrounding Devon Station is a focus area in the Comprehensive Plan due to the mix of uses, convergence of major transportation routes and facilities, and sense of place. The plan proposes refining the pedestrian network to facilitate safe travel between neighborhoods, the train station, and other key destinations. It also suggests supporting businesses on Route 30 through measures that enhance the infrastructure and streetscapes of Devon Center.

Proposed Devon Center District Map and Boundaries

Image Source: Glackin Thomas Panzak

Make Route 30 a Complete Street
The Comprehensive Plan recommends transforming parts of Route 30 into a Complete Street by considering a road diet. This would reduce the number of travel lanes in order to redistribute space for other users and modes. Narrowing the cartway on Lancaster Avenue would also allow for safer pedestrian crossings, which could be further improved with textured crosswalks. The plan emphasizes the need to further study how a road diet would impact traffic flow.

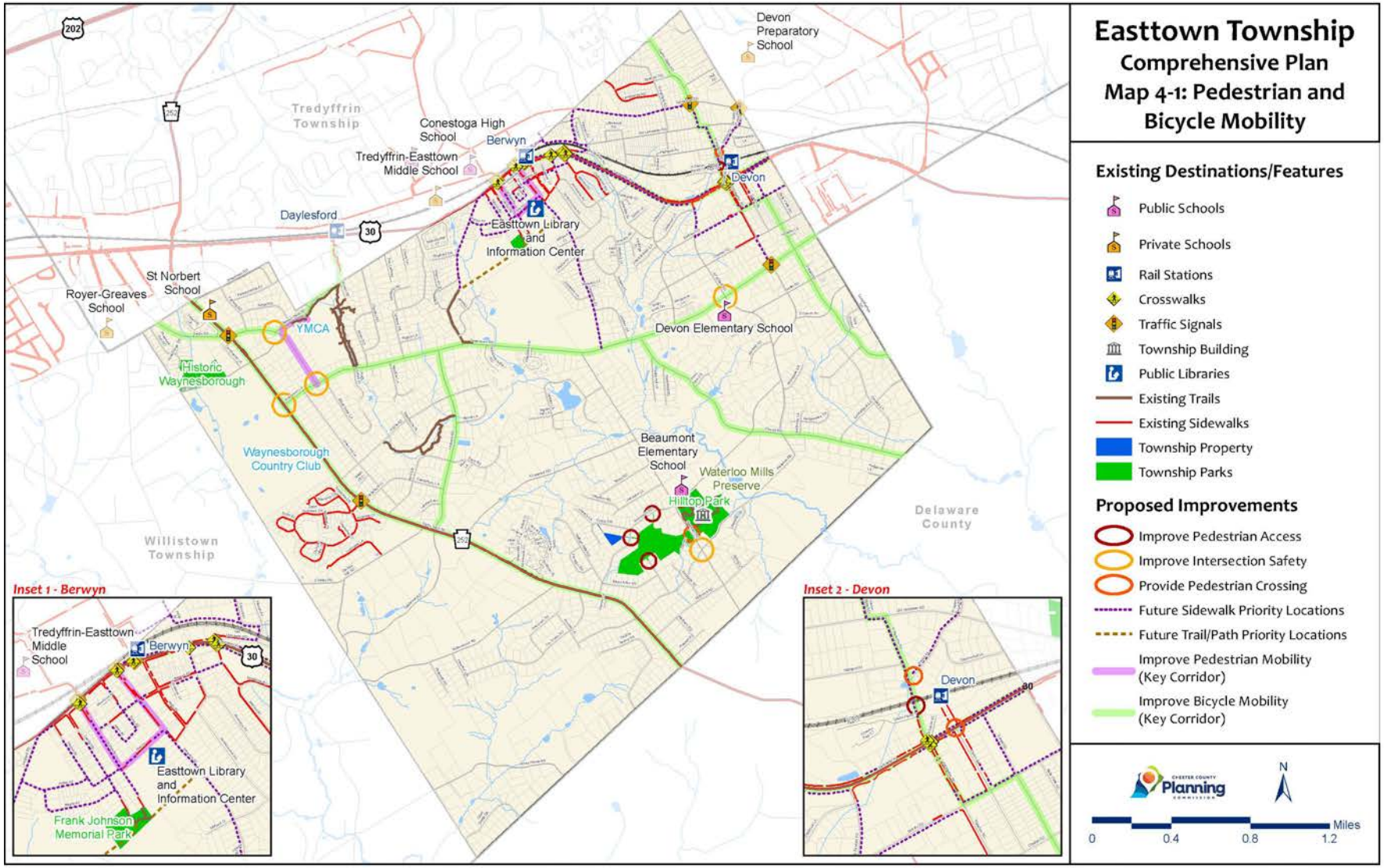
2019–20 Devon Center Project

The Devon Center Visioning and Zoning Amendment Project[3] is a Township planning effort that addresses a recommendation from the Comprehensive Plan—to "proactively direct development in Devon Center through a public process that identifies a clear vision for the area." The project convened a task force to develop updated zoning specifications and design guidelines for Devon Center, a proposed boundary that is shown above. The task force's work was completed in September 2019. An ordinance was drafted with guidance from the Easttown Planning Commission through November 2020, and the Board of Supervisors will consider the zoning amendment in 2021, which could bring changes to the built environment in the station area.

2014 TPD Devon Yard Transportation Impact Study

Before the construction of the Devon Yard development, Traffic Planning and Design, Inc. (TPD) produced a Transportation Impact Study to estimate the expected traffic impacts and recommend related improvements to

Figure 4: Easttown Township Pedestrian and Bicycle Mobility Map



Source: Easttown Township, 2018

optimize multimodal access and amenities. TPD suggested that methods be investigated to improve pedestrian access to the adjacent Devon Station, which was an impetus for DVRPC's study. Efforts to reduce cut-through traffic in adjacent residential areas were also recommended. Many improvements have since been implemented, such as changes to lane configurations and the addition of a high-visibility crosswalk with pedestrian-activated flashing beacon signal at Devon Boulevard, as well as new sidewalks, a bus shelter, and accessible curb ramps.

2009 Devon Train Station Conceptual Design Report

Funded by DVRPC's Transportation and Community Development Initiative program, this report was prepared by TranSystems and DPK&A Architects to examine restoration options for the historic Devon Station building.[4] Two concepts were drafted, both with raised platforms to make the station ADA-compliant. One concept would also raise the building for continued use by SEPTA for ticketing and other passenger needs. The alternative concept calls for the construction of a new ticket office, with reuse of the existing building by other commercial tenants. No consideration was given to additional development on or around the site, but improvements like increased parking, improved paving, landscaping, lighting, curbing, and sidewalks were recommended.

2018 Chester County Comprehensive Plan (Landscapes3)

Landscapes3 was created as an updated guide for future development countywide.[5] The plan characterizes Devon as a Suburban Center, recommending flexible and diverse land uses and greater multimodal connectivity to accommodate substantial future growth.

Land Use Patterns
The county plan suggests that intensified development that mixes land uses is suitable for Suburban Centers. In general, *Landscapes3* recommends TOD near Chester County's few rail stations, including the construction of new housing types, more office and retail options, and other community facilities. Repurposing obsolete structures and sites and encouraging sustainable development are considered critical to the growth of Suburban Centers.

Infrastructure and Transportation
The county also urges the expansion of transportation infrastructure and amenities alongside new development, in order to create an integrated multimodal network that accommodates all users. Additional pedestrian and bicycle facilities would improve connections between uses in Suburban Centers and their surrounding neighborhoods, increasing transportation choices and recreation opportunities. The county suggests designs like buffered sidewalks and clear crosswalks along streets, within parking lots, and between buildings, as well as direct connections to trail networks. *Landscapes3* also recommends the expansion of bus and rail service to accommodate projected growth in population and employment density.

2016 Multi-Modal Circulation Handbook for Chester County

This handbook was prepared by the county Board of Commissioners and Planning Commission and provides guidance for accommodating all transportation modes in the land development process.[6] With respect to its rail stations, the county notes that limits to parking capacity are compounded by the lack of first- and last-mile connections for nonmotorized users. It recommends adding drop-off areas, shuttle/bus parking, a complete network of sidewalks and crosswalks, established cycling routes, bike parking, and bike sharing options at all transit hubs. The authors also endorse an appropriate land use mix and density near train stations to enhance ridership potential, such as convenience retail and higher-density residences.

2014 Chester County Public Transportation Plan

This plan identifies the county's public transportation needs in conjuction with projected growth in population and jobs.[7] The county notes that bicycle and pedestrian facilities should be added in and around rail stations to connect transportation resources with nearby destinations. Developers and local officials are expected to foster transit-supportive facilities and land uses through clear and ambitious ordinances and development proposals. Better bus-to-rail connectivity is encouraged in order to enhance the multimodal transit experience. While expanding station parking may be necessary, shared parking arrangements and maximizing existing parking facilities are recommended.

2005 Chester County Passenger Rail Stations Technical Memorandum

Prepared by CCPC, this document was used to guide the creation of an early version of the Public Transportation Plan.[8] The memo includes a technical analysis of conditions at, and potential improvements, for each of the county's rail stations. As it would in later plans, the county recommended transit-supportive land uses and more pedestrian and bicycle facilities within a two-mile radius of all stations. Key issues identified at Devon Station 15 years ago echo those observed today: buildings in disrepair, parking at capacity, and poor vehicular circulation.

Chapter 3
Existing Conditions

This chapter summarizes and documents existing conditions within the Devon Station Area. This analysis was undertaken by the project team to learn more about the study area and to highlight factors that influence the environment for walking and biking and transit-supportive development. Many of the observations described in this chapter have informed the recommendations that follow in Chapter 5.

Transit Context

SEPTA's Devon Regional Rail Station is located at 1 N. Devon Boulevard in Devon, a commercial center in northeastern Easttown Township, near the border with Tredyffrin Township. Figure 5 provides an aerial view of the station.

The majority of the station site is set back north and east from the intersection of Lancaster Avenue (U.S. Route 30) and Waterloo Road and contains the station building, inbound platform, and a parking area with both daily spaces and monthly permit spaces. The station building was built in 1883 by the Pennsylvania Railroad. The smaller, northern portion of the station, accessible from Waterloo Road, contains the outbound platform and a smaller daily parking area. The two sides of the station are connected via an underground pedestrian tunnel, shown in a photo on the facing page.

SEPTA Bus Route 106 travels by Devon Station on Lancaster Avenue, with stops located at Waterloo Road and Devon Boulevard. Much of the route runs parallel to the Regional Rail line from Paoli Hospital to Ardmore. Its eastern terminus is at the 69th Street Transportation Center in Upper Darby, Delaware County.

Figure 5: Aerial View of Devon Station

Image Source: Google, 2020

Figure 6: SEPTA Paoli/Thorndale Regional Rail Line Stations

Transit Service Overview

Situated approximately 16 track miles and 15 station stops from Philadelphia's Suburban Station, Devon Station is served by SEPTA's Paoli/Thorndale Regional Rail line. The route is depicted in Figure 6. Inbound service reaches destinations in Chester, Delaware, Montgomery, and Philadelphia counties with further connections to Amtrak, Port Authority Transit Corporation (PATCO), and New Jersey Transit services. Outbound service extends westward into Chester County, where passengers can also connect to Amtrak routes serving Lancaster and Harrisburg.

Service begins at Devon Station weekdays just after 5:00 AM to inbound destinations and just after 8:00 AM in the outbound direction. More details about the Paoli/Thorndale Line schedule can be found in Table 1, including frequency and service start and end times for inbound trains. SEPTA began operating reduced Regional Rail schedules during the onset of the COVID-19 pandemic, reflected in the bottom of Table 1.

A weekday train trip from Devon Station to Center City Philadelphia takes about 40 to 45 minutes. On-time performance for the Paoli/Thorndale Line was 84 percent in 2018.[9] By comparison, the approximately 20-mile drive, mostly along I-76, can be as short as just under an hour and as long as 1 hour and 40 minutes during peak commute hours according to cell phone and GPS data collected anonymously in 2019 by INRIX.[10]

According to 2017 estimates, typical weekday ridership is 465 passengers. Daily passenger totals rebounded over recent years after a slow pattern of decline dating back to the 1980s. The station is well used during typical journey-to-work peak times on weekdays, between 6:30 and 9:00 AM for inbound trips and between 5:00 and 7:00 PM for outbound trips.

Commuters access the inbound platform during morning peak hours, September 2019.

An underground tunnel connects the inbound and outbound platforms.

Table 1. Paoli/Thorndale Line Service Information

Inbound Service (March 2020)	Weekdays	Saturday	Sunday
Peak Frequency	20–30 minutes	N/A	N/A
Begin Service	5:13 AM	6:32 AM	6:32 AM
Last Trip	11:40 PM	2:20 AM	11:49 PM
Off-Peak Frequency	30–40 minutes	30–60 minutes*	60 minutes*

**Indicates larger gap of service between 10:30 PM and 12:00 AM*

Inbound Service (August 2020)	Weekdays	Saturdays, Sundays, and Major Holidays
Peak Frequency	30 minutes	N/A
Begin Service	5:13 AM	6:02 AM
Last Trip	10:32 PM	11:02 PM
Off-Peak Frequency	50–60 minutes	60–120 minutes

Source: SEPTA Schedules, March 8, 2020, and August 16, 2020[11]

Station Area

Overview

For the purposes of this study, the Devon Station Area is defined as the area within one half-mile of the station, as shown in Figure 7. This radius around the station, which covers approximately 500 acres, is frequently used as a basis for planning studies because it theoretically encompasses origins, destinations, and neighborhoods that can be reached on foot within a reasonable amount of time. The average person can walk one half-mile in approximately 10 minutes.

The Devon Station Area covers a large part of Devon Center, a retail and office district that is located between the Paoli/Thorndale Line railroad tracks and Berkley Road. This area is part of a larger commercial corridor that extends along Lancaster Avenue through the northern part of Easttown, between the Devon neighborhood and the Village of Berwyn, as well as into neighboring municipalities.

Lancaster Avenue is the main arterial thoroughfare in Devon and the properties along this stretch of the roadway serve as landmarks that help to define the station area. These landmarks include the Devon Horse Show property, Devon Yard complex, Devon Lanes, and the auto dealerships located west of Waterloo Road. These and other points of interest are also identified in Figure 7. Some are also shown in the photos at right.

The Devon Horse Show and Country Fair, located across Lancaster Avenue from the station, between Dorset and Valley Forge roads.

Patient First, located immediately east of the station site. The SEPTA bus shown carries passengers westbound on Bus Route 106, toward Paoli.

The interior of Devon Yard, located directly across Lancaster Avenue from Devon Station.

Devon Lanes, located to the west of the station near Fairfield Road.

Figure 7: Devon Station Area with Points of Interest

Road Network

Lancaster Avenue and Waterloo Road, two major state-owned roads, are the primary routes by which to access Devon Station. Route 30 has a speed limit of 40 miles per hour (mph) and varies in width. Near the station, it has two 10-foot lanes in each direction, with a curb-to-curb width of 50 feet. There are small shoulders of about 4.5 feet on both sides. In the western part of the study area, Lancaster Avenue widens to around 55 feet with narrower shoulders and a 10-foot center turning lane. In 2018, average daily traffic volumes measured around 7,000 westbound vehicles and 7,800 eastbound vehicles (see Table 2).

There are two driveways for Devon Station on Lancaster Avenue. One is at Devon Boulevard, where passengers can access the station's south parking lot and inbound platform, as well as a small office building with private parking. In 2019, a new crosswalk was installed at Devon Boulevard with a pedestrian-activated signal, connecting the station driveway to the new Devon Yard complex. The other station driveway is a one-way diagonal cutting through the site from the northeast corner of Waterloo Road. The diagonal driveway provides vehicular access not only to the station, but also to Devon's post office, Liberty gas station, and the rear entrance of the aforementioned office building.

Adjacent to and north of the station, N. Waterloo Road has two 10- to 11-foot lanes, with shoulders varying in width from 3 to 14 feet, and a speed limit of 35 mph. A total of around 6,900 northbound and southbound vehicles were counted in 2017. Less than a 10th of a mile north of Route 30 is a third driveway to Devon Station's south parking lot and inbound platform, opposite Devon Park Court. Just north of this driveway, Waterloo Road narrows considerably through a tunnel under the railroad tracks, shown in the photo at right. Waterloo Road is one of the few streets in the area that allow passage under the railroad tracks. The next nearest crossings are a half-mile to the east and one mile to the west. Around 200 feet north of this tunnel is a fourth station driveway, the only one used to access the north parking lot and outbound platform. This driveway is at a complex K-shaped intersection, which allows entry and exit for the SEPTA station, as well as for the residential Station Avenue. N. Waterloo Road forms part of an important north-south link to Route 202, Valley Forge, and King of Prussia.

South of Route 30, S. Waterloo Road extends past Devon Yard and other commercial properties and transitions to a residential street south of Berkley Road. Accordingly, traffic volumes were slightly lower here, at around 5,200 vehicles. S. Waterloo Road eventually meets Newtown Road, linking traffic to points south in Delaware County.

Other primary roadways in the area are described below.

- Devon Boulevard provides access to the front of Devon Yard and its primary parking facilities. It is a two-lane bi-directional road south of Route 30 lined with free two-hour parking stalls.
- Dorset Road, southeast of the station, provides access to the Devon Horse Show and associated parking, and extends into residential areas south of Berkley Road.
- Berkley Road runs mostly parallel to Route 30, one block south of the station. Berkley Road separates the mostly commercial properties along Lancaster Avenue from residential communities to the south.

Waterloo Road defines the western boundary of the station property. The outbound platform and a parking lot are accessible from near the location shown. The tunnel that carries motorists beneath the railroad is partly shown.

Table 2. Directional Traffic Counts

Date	Road	Direction	AADT
08/2018	Lancaster Ave	EB	7,781
08/2018	Lancaster Ave	WB	6,995
11/2017	N. Waterloo Rd	Both	6,881
07/2016	S. Waterloo Rd	Both	5,232

Source: DVRPC

SEPTA Passenger Access

In order to make recommendations that improve pedestrian and bicycle accessibility in the future, it is important to understand how passengers currently arrive at and depart from Devon Station.

Park-and-Ride Origins

Roughly 57 percent of weekday passengers drive to the station and park in one of two lots, one to the north and the other to the south of the platforms. In total there are 267 parking spaces, including 166 daily spaces, available on a first-come, first-serve basis, and 101 permit spaces reserved for those permitted by SEPTA with a monthly pass.

The parking lots at Devon Station were surveyed by DVRPC staff three times in the last 10 years (2011, 2017, and 2018) to gather park-and-ride origin data. Collecting and interpreting passenger origins enables planners to determine where changes to the local transportation network can benefit station users, including roads, sidewalks, and bicycle infrastructure. The origin data is displayed in Figure 8 on the next page, showing some of the general locations from which commuters who parked at Devon Station traveled. Data is based on fieldwork completed in September 2018, between 10:00 AM and 2:00 PM.

As the map indicates, many people who drive and park at the station come from areas just to the north. This includes neighborhoods in the northern part of Easttown along N. Valley Forge and N. Waterloo roads. Many park-and-ride passengers also travel from central Tredyffrin. In addition, several people drive from points to the south, especially in the eastern parts of Easttown that are less proximate to Berwyn and Daylesford stations. These origins are primarily from neighborhoods near Sugartown, S. Waterloo, and Newtown roads.

About half of the parking users travel from within a two-mile radius of the station. This is a distance that most people would feel comfortable biking. Approximately 30 percent of park-and-ride origins travel from within just a one-mile radius of the station, which could be considered walking distance.

How do people get to Devon Station?

In general, people travel to Devon Station by doing one of the following: drive and park, get dropped off, take the bus, and walk or bike. The graphic below illustrates the share of Devon Station commuters who used each of these options, according to SEPTA's recent observations. Over half of passengers use SEPTA station parking, using one of the 267 spaces available in one of the two parking lots, which are located adjacent to each platform. All parking spaces at the station are typically in use.

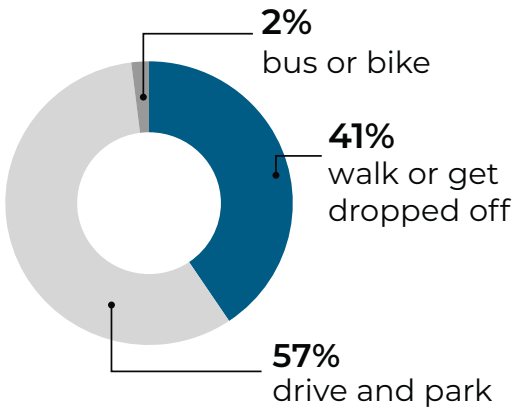
Around four in every 10 passengers are dropped off or walk up to the station from surrounding areas. One percent or fewer rail customers take the bus or bike to the station, shown in dark gray on the chart below.

SEPTA Passenger Access Data, 2015

465
passengers per weekday

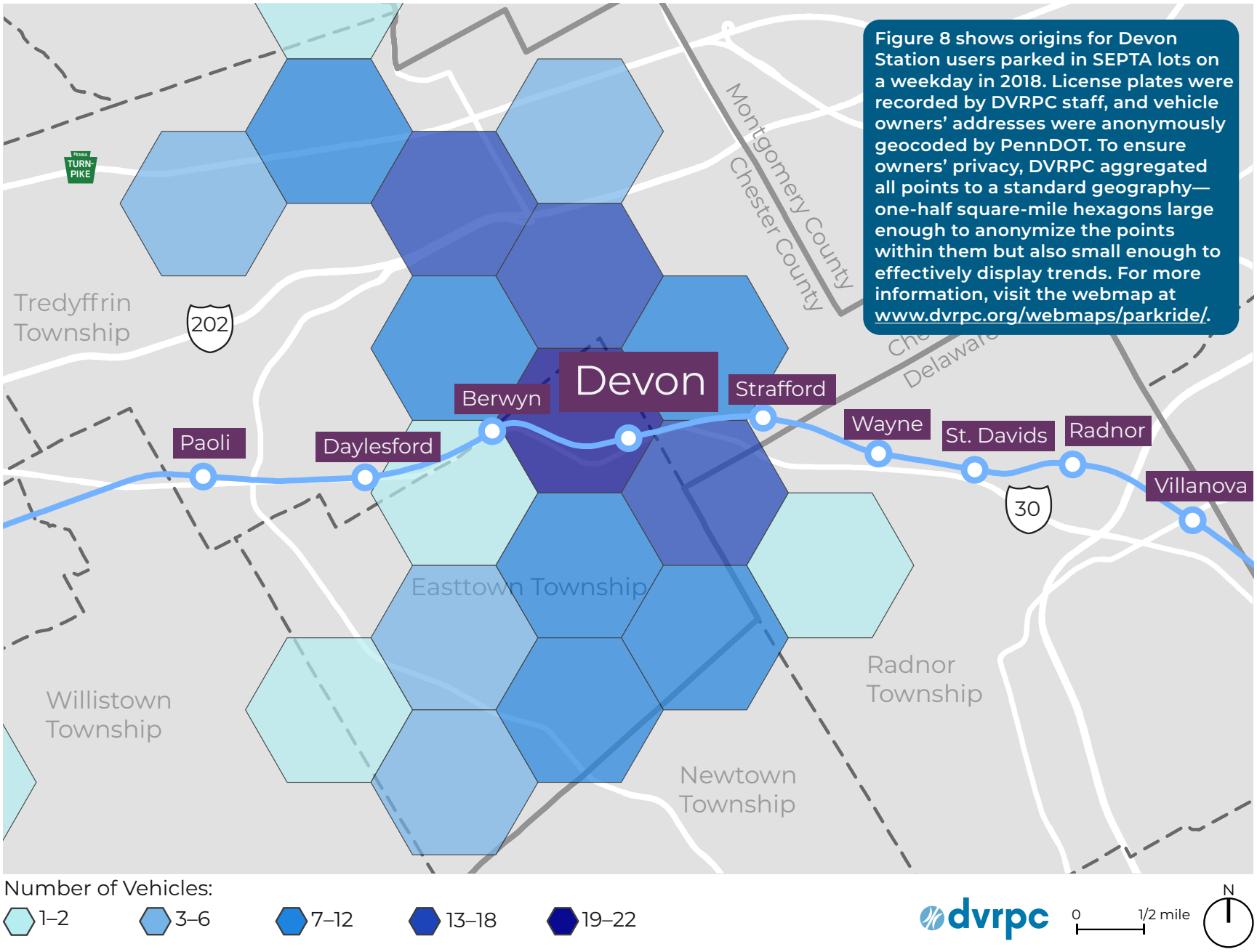
267
total parking spaces

100%
parking utilization



Source: SEPTA

Figure 8: Devon Station Park-and-Ride Passenger Origins (2018)



Walk-Up Access

According to SEPTA observations, 41 percent of passengers access the station by foot. However, only some are truly walking there. Also counted in this group are those getting dropped off by a vehicle. Moreover, some "walk-up" commuters are making just a short walk from two-hour parking spaces located across Lancaster Avenue in Devon Yard, which are informally used as station overflow when SEPTA's daily spaces are full. Although no data about their origins is available, these riders may be driving from walkable or bikeable distances. Multimodal improvements could encourage them to walk or bike instead.

In addition to simply making the pedestrian journey to the station safer, improving walk-up access has the potential to help mitigate other station area issues. First, the lack of a formal drop-off/pick-up area sometimes creates congestion and unsafe conditions in the parking lots when trains arrive and depart. A new parking lot layout could improve safety for all modes. Finally, if more riders opt to walk or bike, this could free up parking capacity and reduce the number of passengers who park off-site, which undercuts SEPTA's revenue and limits short-term parking for local businesses.

Transfers from SEPTA Bus Route 106

SEPTA's Bus Route 106 serves Lancaster Avenue just south of Devon Station. The four stops at Devon Boulevard and Waterloo Road have fewer than five average daily boards per weekday. Due to the proximity to the station, some of these passengers are assumed to be transferring to the Paoli/Thorndale Line, but they account for only around 1 percent of daily riders.

Walking and Biking in Devon

Nonmotorized forms of transportation have great potential to grow in popularity for people traveling to Devon Station and between other destinations in the station area. However, like cars and trains, pedestrians and cyclists need infrastructure that makes walking and biking safe and minimizes conflict with vehicles.

There are few dedicated pedestrian and bicycle facilities around the station, so walking or biking often necessitates sharing the roadway with vehicle traffic, using the shoulder, traversing private properties, or crossing at intersections without pavement markings or stop controls along the way.

With safer connections, more passengers might feel comfortable choosing nonmotorized travel. Creating an environment that supports walking and biking to transit can invite more travelers to use the station without adding congestion to local roadways, and without needing to provide more parking.

Moreover, the entire Easttown community—even those who do not regularly use transit—can benefit from streets on which it is safe to walk or bike. Investments like new or wider sidewalks, trails, traffic calming, street trees, and lighting also help communities stay vibrant, promote healthy lifestyles, and attract more private investment.

This section provides an assessment of the state of nonmotorized infrastructure in the Devon Station Area.

Figure 9: Ten-Minute Walkshed

Pedestrian Walkshed

Walksheds are used in station area planning to illustrate the area where walking may be possible from a specific starting point—in this case, Devon Station. Figure 9 highlights the areas that can be reached within a 10-minute walk of the station by using public streets. The gray highlighted area helps to reveal structural barriers and access limitations found within the station area's unique street grid. These barriers reduce the conventional "half-mile" radius of walkability to a smaller area from which the station can be reached in a reasonable amount of time. Importantly, the walkshed identifies the locations from which transit riders might be most willing to walk to the station.

Nonmotorized Access Assets and Barriers

Figure 10 summarizes the nonmotorized transportation experience in the Devon Station Area by identifying access assets and barriers. Some of these barriers help to clarify why the walkshed, again labeled in gray, is not completely congruent with the half-mile radius.

Access Assets

Access assets are aspects of the built environment that represent a foundation for future nonmotorized access. Described below, these assets contribute positively to walkability, bikeability, and transit use in the station area.

Existing Sidewalks

The location of existing sidewalks is depicted in Figure 10, using a thin green line. In general, sidewalks are more common in commercial parts of the study area, where they have been required as part of recent redevelopment.[12]

Local Bus Stops

SEPTA's Bus Route 106 service provides another valuable alternative to travel by car along Lancaster Avenue. Bus stops at Waterloo Road and Devon Boulevard help connect transit riders to Regional Rail service.

Covered Bike Parking

SEPTA riders have access to covered, secure bicycle parking, which is not time limited, at Devon Station. Four bike racks are available, accommodating a total of eight bicycles.

Flashing Beacons

The recently installed beacons and island have made crossing Lancaster Avenue on foot much easier at Devon Boulevard.

Access Barriers

Access barriers are conditions that preclude or discourage walking or biking and limit the size of the walkshed. Nonmotorized access is constrained throughout the station area by a discontinuous sidewalk network and the lack of any formal bicycle infrastructure. Other specific access barriers are identified below.

1 Railroad Tracks/Tunnel

The Paoli/Thorndale Line tracks and right-of-way divide the station area in half, restricting the options for north-south movement. Waterloo Road, with its narrow railroad bridge, is the only street that connects the northern and southern portions of the station area.

2 Large Asphalt Area

To reach the inbound platform, pedestrians must cross a large expanse of asphalt that also serves as an informal pick-up and drop-off location for passengers.

3 Bus Stop Challenges

Some bus stops in the station area are difficult to access and lack basic amenities, such as paved waiting areas and shelters.

4 Higher Vehicular Speeds

Street conditions along Lancaster Avenue, where vehicles drive relatively fast across four to five lanes, can make walking there uncomfortable.

5 Lack of Crossing Opportunities

The only locations where pedestrians can cross Lancaster Avenue within the study area are at Waterloo Road and Devon Boulevard. The lack of crossing opportunities to the east and west limits pedestrian mobility and may encourage unsafe crossings.

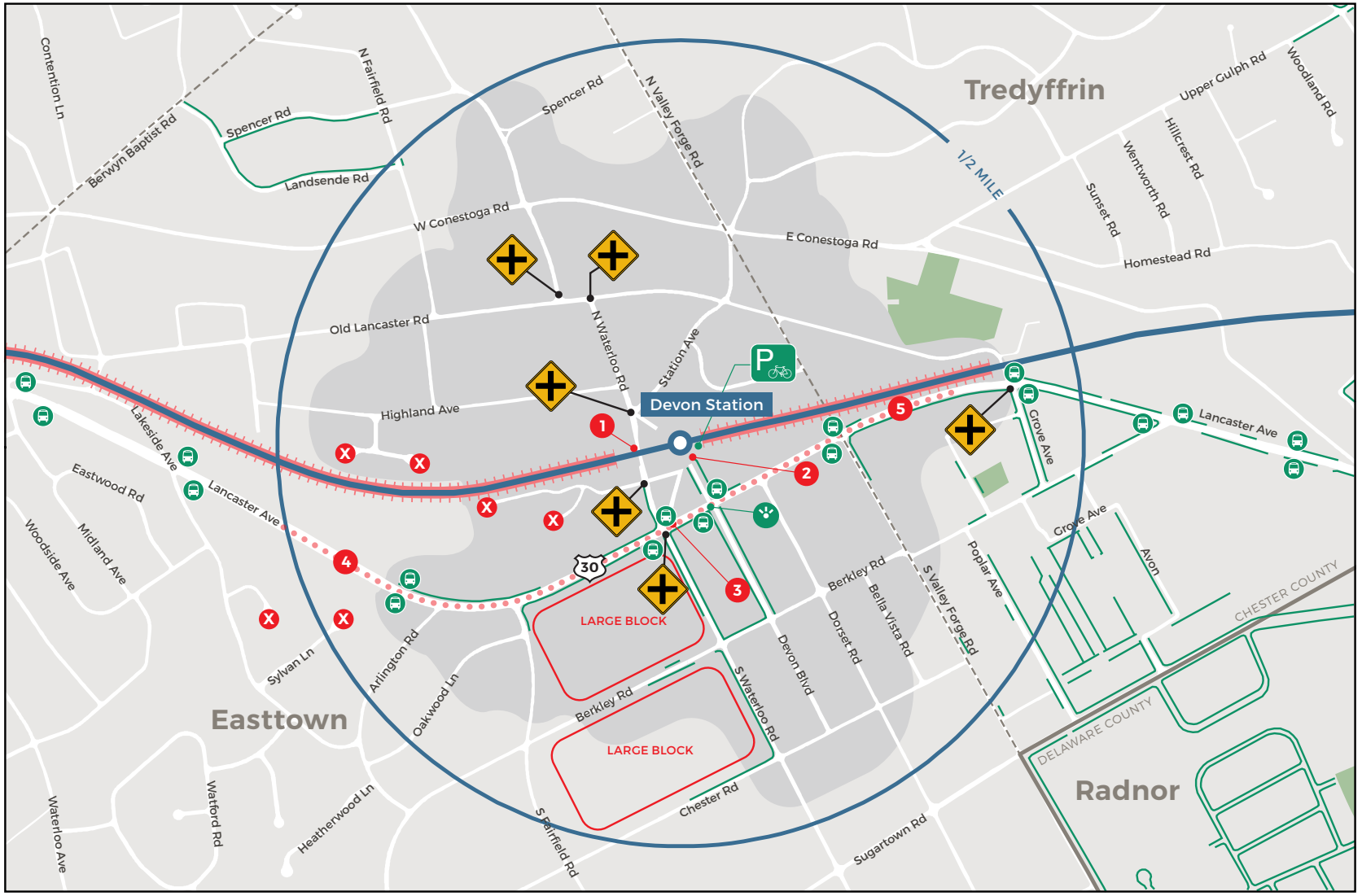
X Connectivity Gaps

Dead-end streets limit the travel network for walkers and bikers.

Challenging Intersections

There are several locations where pedestrian movements are limited or intimidating due to crossing distances, the lack of crosswalks, or other aspects of the intersection. Several of the most challenging locations for pedestrians are located along Waterloo Road, including the intersection of Waterloo Road and Lancaster Avenue.

Figure 10: Station Area Walkshed with Nonmotorized Access Assets and Barriers



Access Barriers

- 10-Minute Walkshed
- Railroad
- Challenging Intersection
- Connectivity Gap
- Higher Vehicular Speeds
- Specific Barrier (see p. 26)

Access Assets

- Existing Sidewalk
- Bus Stop
- Covered Bike Parking
- Flashing Beacon

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Key Nonmotorized Routes

Key nonmotorized transportation routes are those that can connect pedestrians and bicyclists to the station and other important destinations in the surrounding neighborhoods. Chapter 4 of the Township's Comprehensive Plan is dedicated to improving bicycle and pedestrian mobility. In it, Easttown identifies key corridors in need of improvements around Devon Station, illustrated in the Pedestrian and Bicycle Mobility Map shown in Figure 4 (see page 15). In particular, bicycle facilities are suggested on the following roadways, within Township limits:

- Waterloo Road;
- Devon State Road;
- Lancaster Avenue;
- Berkley Road, between Waterloo and Dorset roads; and
- Dorset Road, south of Berkley Road.

The map also highlights pedestrian priorities, including sidewalk gaps and mobility constraints along Lancaster Avenue, Waterloo Road, Devon Boulevard, Dorset Road, Berkley Road, Station Avenue, and Devon State Road. Improved crossings are suggested at Devon Boulevard (since completed) and the K-shaped intersection at the station's north parking lot, Station Avenue, and Waterloo Road. Finally, the map indicates that improvements to pedestrian access are needed on Waterloo Road under the rail tracks.

Bicycle Level of Traffic Stress

Many people might be willing to bike to and around Devon Station if they felt safe and comfortable. Cyclists can be classified into three major categories by using factors like skill, experience, and age (see Figure 11). Understanding these categories can help us design more effective bicycle facilities. According to the Federal Highway Administration, just over half of the population with a stated interest in bicycling expresses safety concerns that limit their tolerance for using high-stress roads. On the other end of the spectrum are a small percentage who are classified as highly confident.

Level of Traffic Stress (LTS) is a road classification technique designed to measure the comfort of a given roadway in accordance with these user profiles. Using a scale from LTS 1 (most comfortable) to LTS 4 (least comfortable), DVRPC maintains a regional LTS assessment based on a variety of road characteristics, including the number of lanes; vehicle speed; and the presence of bicycle facilities, such as bike lanes.

LTS ratings near Devon Station are illustrated in Figure 12. Most residential roads are rated at levels 1 or 2, meaning they are comfortable for nearly all cyclists regardless of their level of confidence and interest. Route 30 is rated at level 4, making it uncomfortable for a rider at nearly any level of interest or experience.

LTS 3 roads are often best to target for cycling infrastructure upgrades. The stretch of Waterloo Road between Berkley Road and Highland Avenue is one of DVRPC's Regional Connection Priorities, which highlight the road segments classified as LTS 3 that would enable the most connections between census blocks if improvements were made to reduce the stress level to a lower rating (LTS 1 or 2). Currently, Waterloo Road is comfortable for confident cyclists only. Therefore, if appropriate bicycle facilities were added, they would have the potential to connect many more comfortable roads to one another and provide a more complete network for cyclists at all levels of confidence.

Figure 11: Bicyclist Design User Profiles[13]

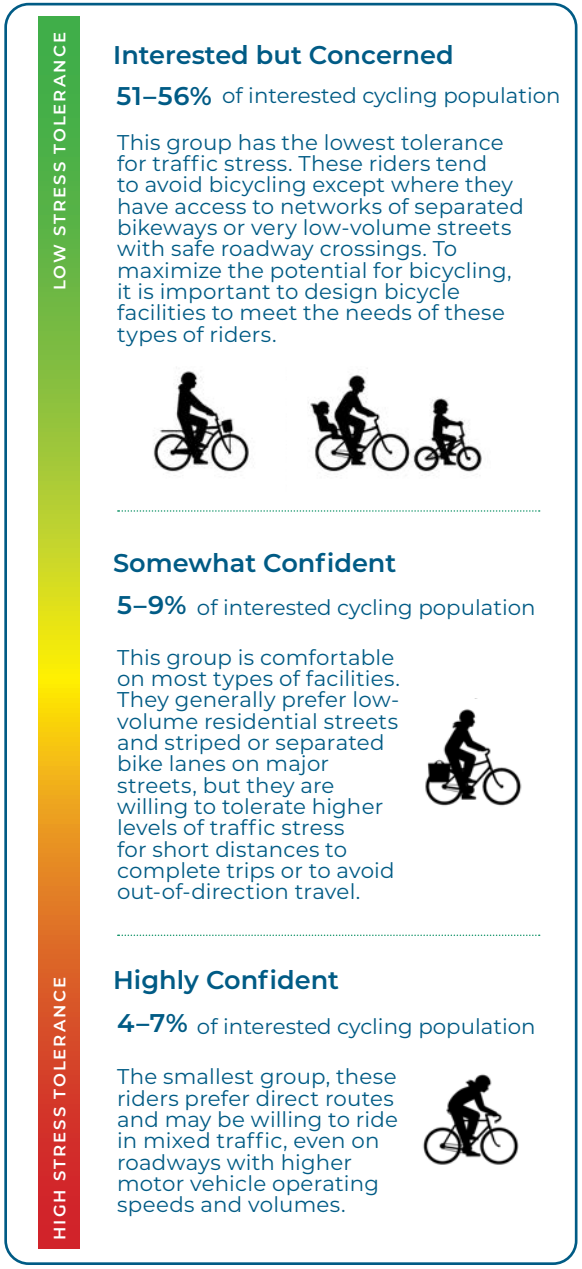
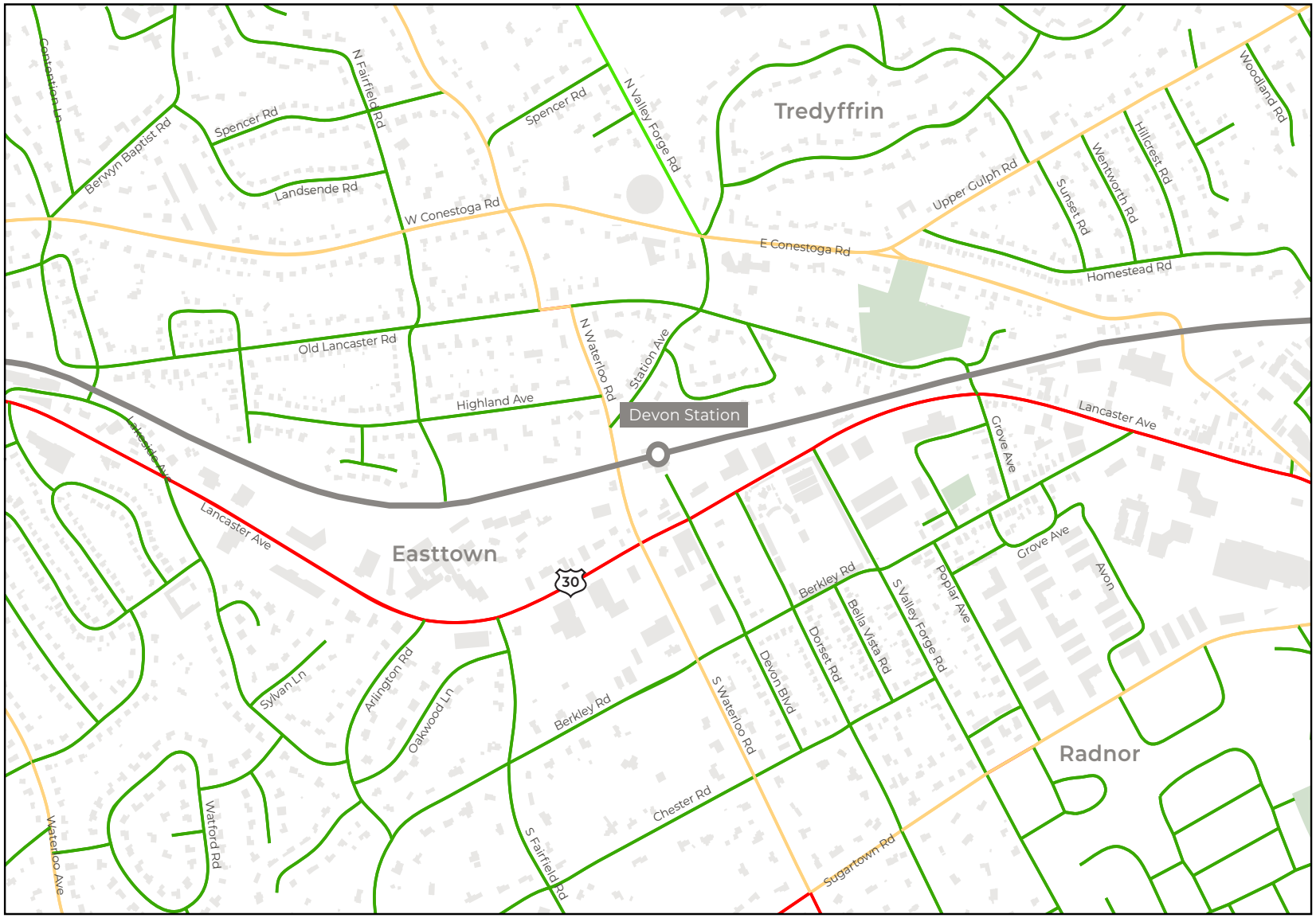


Figure 12: Bicycle Level of Traffic Stress (LTS)



Crashes

Vehicle crashes are a leading cause of death nationally, and they present an even greater risk of serious injury or fatality to vulnerable pedestrians and cyclists. Over the five-year period from 2014 to 2018, crashes in the Devon Station Area were most heavily clustered on Lancaster Avenue, especially at the intersection with Waterloo Road. According to PennDOT data, there were 27 crashes recorded here. Eighteen of these crashes were classified as angle collisions, many of which may be attributable to the diagonal entrance to Devon Station. Other vehicular crashes were clustered along Waterloo Road, Berkley Road, and business driveways on Lancaster Avenue. During this time period, one nonfatal pedestrian-involved crash occurred on Lancaster Avenue near Dorset Road.

Trails

Within two miles of Devon Station, some off-road connections are available for safe travel and recreational walking and biking.

The 2.4-mile Radnor Multipurpose Trail runs from Radnor-Chester Road to Sugartown Road. The trailhead is just south of Lancaster Avenue and nearby to Stafford Station, one inbound stop and less than a mile away from Devon Station on the Paoli/Thorndale Line.

The Chester Valley Trail is a multiuse, rail-to-trail facility that roughly follows U.S. Routes 30 and 202 through central Chester County. An entrance is located less than two miles from Devon Station.

For both trails, users would still need to travel by local streets to reach Devon Station.

Development Characteristics

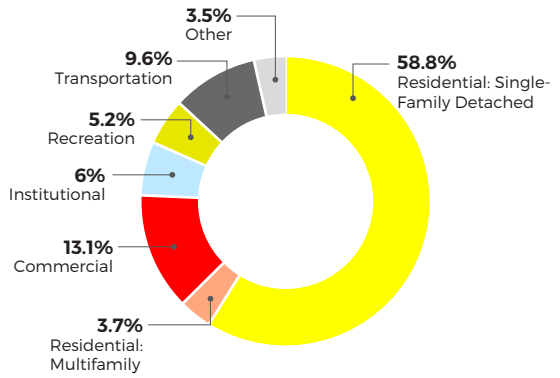
Land Use

The share of existing land uses in the Devon Station Area is depicted in Figure 13 and shown on the map in Figure 14 on the next page. The majority of Easttown is a suburban landscape, primarily consisting of residential neighborhoods with locally oriented commercial uses and community facilities. Nearly 59 percent of the station area is composed of single-family detached homes. In Devon, such residences dominate the area north of the Paoli/Thorndale Line and can also be found south of Berkley Road. Multifamily housing accounts for nearly 4 percent of the study area. Devon Park Apartments, a garden-style complex with 63 units, is located just west of Devon Station.

Much of the station area near the Lancaster Avenue corridor is described by CCPC as a Suburban Center. According to ***Landscapes3***, Suburban Centers are regional economic, population, and transportation hubs that contain varying land uses. The commercial uses found in the study area are clustered along Lancaster Avenue, including many car dealerships, medical offices, and banks. Devon Yard, a shopping area featuring Urban Outfitters branded dining, retail, and event spaces, opened in 2018. The Devon Horse Show and Country Fair—which the Township designates as a recreational use—is located on a nearly 11-acre site along Route 30 and has operated there since 1896.

No formal public facilities, parks, or gathering places exist in the station area, other than the station itself. Easttown's parks and library facilities are concentrated elsewhere in the Township, while Devon Elementary School's playground and athletic facilities are about one mile from Devon Station. Tredyffrin Township offers a small bocce grove and bird sanctuary, each about a half-mile away, while the larger Strafford Park and Radnor Township's Warren Filipone Memorial Park are each about 1.5 miles away.

Figure 13: Devon Station Area Land Use

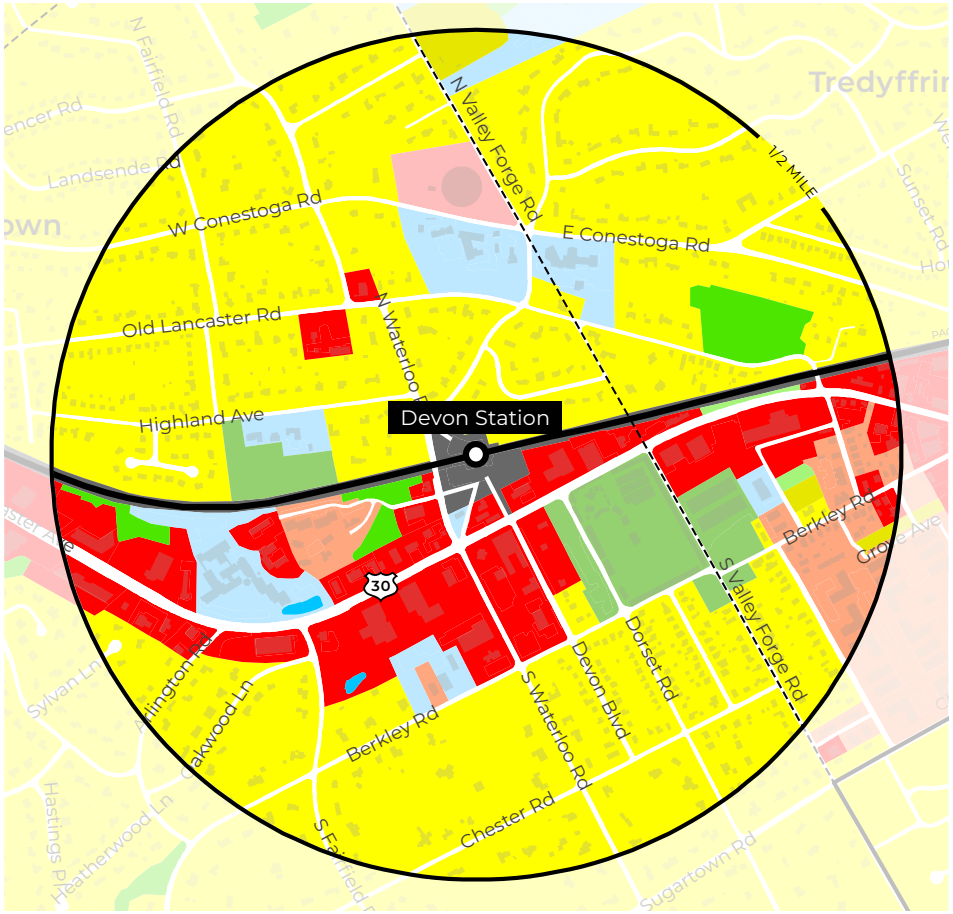


Source: DVRPC, 2015

Zoning

Zoning, subdivision, and land development ordinances are powerful tools that municipalities can use to shape the character of their communities. Zoning also presents an opportunity to reinforce the connections between land use and transportation. For example, zoning can be used to direct development to locations where it best serves the community and away from locations where development may run counter to the principles outlined in a community's Comprehensive Plan. Figure 15 shows Easttown's existing zoning designations within

Figure 14: Devon Station Area Land Use Map

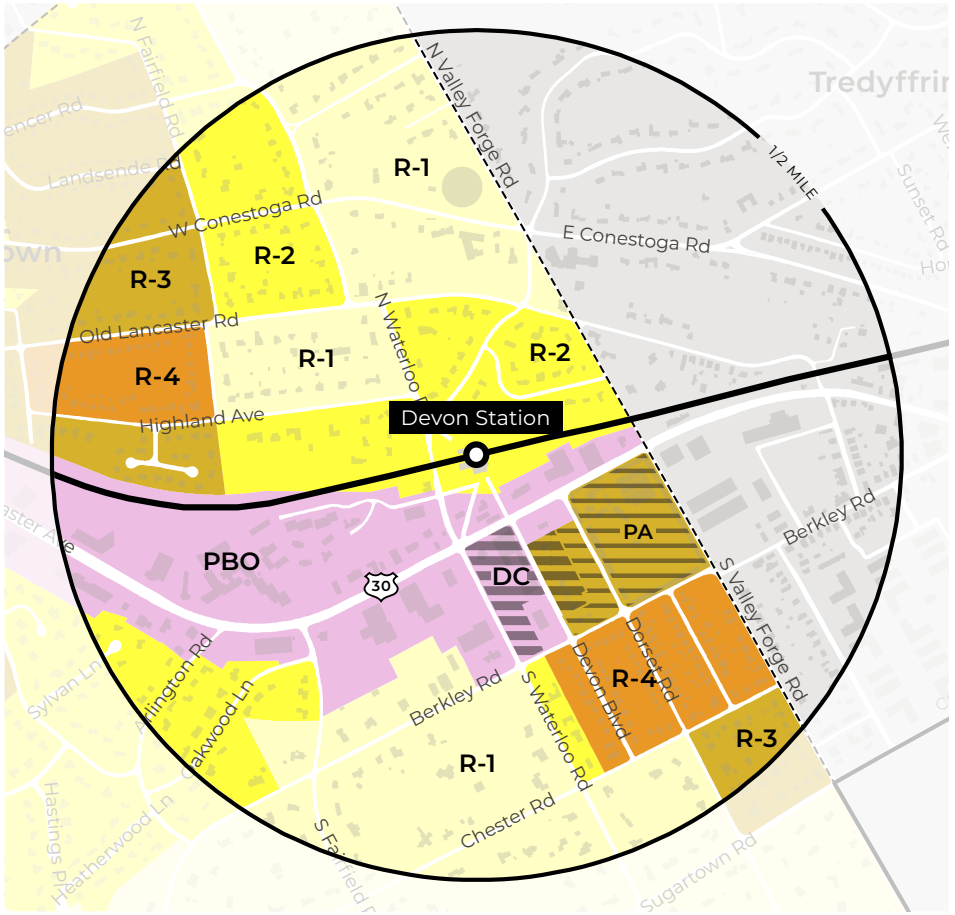


Legend

- Commercial
- Institutional
- Recreation
- Transportation
- Utility
- Wooded
- Residential: Single-Family Detached
- Residential: Multifamiliy

Source: DVRPC, 2015

Figure 15: Devon Station Area Existing Zoning



Legend

- R-1–Residential
- R-2–Residential
- R-3–Residential
- R-4–Residential
- PBO–Professional/Business
- PA–Planned Apartment Overlay
- DC–Devon Center Overlay

Source: Easttown Township

the Devon Station Area.[14] The map does not reflect the rezoning amendment drafted for Devon Center in 2020.

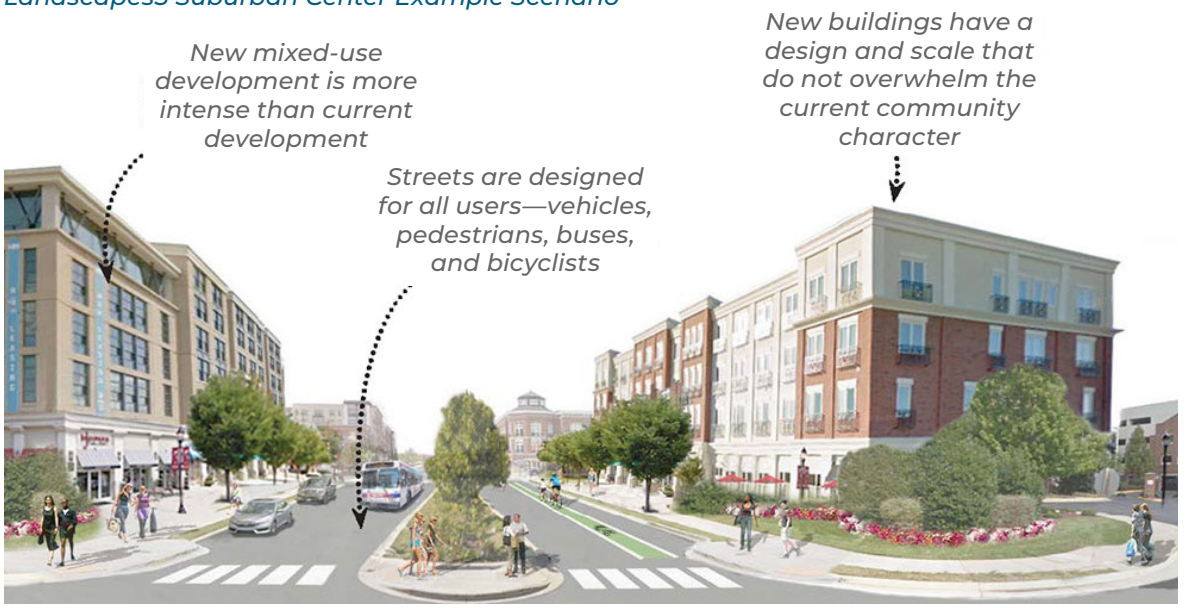
Most of the station area was designated as one of four single-family residential districts: R-1, R-2, R-3, or R-4. An explicit goal for all residential districts is to preserve sensitive natural resources, historic resources, and open space. Each district permits an increasingly dense arrangement of single-family residences, with the R-1 district having the largest minimum lot size and the R-4 district having the smallest. Attached and multiunit dwellings are not permitted in any of these districts.

The current Planned Business Office District (PBO) District allows for the development of typical business, commercial, and office uses, as well as multifamily housing in the Route 30 corridor. Multifamily residences are not to exceed eight dwelling units per acre (du/ac). Some other goals for this zone are access management and parking strategies that maximize safety and traffic flow.

Two overlay districts were also present in the station area. The Devon Center Overlay District (DC) supported unified development proposals and covered the recently constructed Devon Yard. The Devon Horse Show was designated R-3 with a Planned Apartment overlay and density limit of 12 du/ac. As a nonconforming use, alteration of horse show structures can be difficult and requires the owners to seek relief from the Township Code.

In 2021, Devon Center is slated for new zoning and an updated use table and development guidelines.

Landscapes3 Suburban Center Example Scenario



In this scenario, parking lots in a shopping center have been redeveloped with mixed-use buildings and a walkable streetscape. New development in Suburban Centers should incorporate effective vehicular, pedestrian, transit, and bicycle access.
Image Source: CCPC

Future Land Use

Land use in Easttown remained relatively unchanged between the 2001 and 2018 Comprehensive Plans. However, ***Landscapes3*** suggests that Suburban Centers like Devon can be expected to attract substantial future growth. An example scenario for Suburban Center redevelopment is shown above.

Accordingly, the Township's 2018 Plan identified setting a vision for Devon Center as a key goal. This vision should proactively guide station area development in ways that respect the character of adjoining areas. In 2019, the Township followed through on this goal by initiating a visioning process. Over a period of several months, Easttown stakeholders explored potential changes to zoning and land use, building setbacks, design standards, and public spaces. From these conversations, it was determined that redevelopment proposals should create a street presence along Lancaster Avenue, incorporate green space, and provide for multimodal access.

Although the COVID-19 pandemic has slowed real estate transactions and development plans, Devon's location along Lancaster Avenue and proximity to the SEPTA station ensure that the area will remain an attractive place to live, work, and visit. Consequently, the adoption of a community vision and zoning modifications will put Easttown in a strong position to shape Devon's dynamic future.

Demographics and Employment

In order to outline relevant poulation and employment trends, the project team collected and analyzed recent data from the U.S. Census Bureau and Esri for three areas: the 10-minute walkshed around Devon Station (or the "station area"), the larger 19333 Devon ZIP Code area, and Easttown Township as a whole. In some cases, this data is also compared with Chester County as a whole. A summary of key points is provided below, with a particular focus on trends that may relate to pedestrian and bicycle access and future land use implications.

Population Summary

The population near Devon Station has been stable for the last several decades, with very modest growth. According to the 2010 Census, 914 people lived within a 10-minute walk of the station. Projections by Esri place the population at 927 in 2019 and 934 by 2024. New housing development in Devon Center could accelerate growth beyond these estimates, at least in the short term.

The station area, ZIP Code area, and Township all have mostly mature, affluent, and racially homogeneous populations. The age distribution skews toward adults aged 45–54 and 55–64. The 10-minute walkshed, however, has a larger share of young children, young professionals, and elderly residents than the Township as a whole. Relatedly, some people living in the station area may have more limited mobility options based on their age or ability status. These groups would benefit from multimodal improvements that provide safer ways to walk, bike, wheel, or stroll around Devon and onward to other destinations. Estimates from the 2014–18 American Community Survey (ACS) indicate that youth are the largest vulnerable group represented near Devon Station, with over 40 percent of households having residents under 18. Almost a quarter of households have people over 65, while around 16 percent are home to people with one or more disabilities.

ACS data also shows that between one-quarter and one-third of households in the 10-minute walkshed are "nonfamilies"—people living alone, unmarried couples, grandparents and grandchildren without the intervening generation, or unrelated roommates. The range of lifestyles found at the local level may call for more correspondingly diverse transportation and housing options in Devon.

Conversely, racial diversity is minimal, with the population in the walkshed, ZIP Code area, and Township identifying as over 80 percent White in 2019. Asian Americans make up the next largest group, with over 10 percent of people in the 19333 ZIP Code identifying as such.

Esri projects that the 2019 median household income is over $125,000 in the Devon ZIP Code area, nearly $150,000 within a 10 minute walk of Devon Station, and over $200,000 at the Township level. However, around 16 percent of households nearest to the station take in under $50,000 per year. About 4.4 percent of households in the 10-minute walkshed have incomes that fall below poverty level, and 5.4 percent are in poverty in the Devon ZIP Code area. Often those with lower incomes have fewer of the transportation and housing choices available to higher-income households.

A small number of station area households have no vehicles available—about 5 percent, as estimated by the ACS. These households are more likely to rely on public transportation, walking, and biking to get around. Renters in

Station Area Households with Mobility Challenges

Even in wealthier, suburban communities where vehicle ownership is common, some population groups face barriers to safe, reliable transportation. Planning multimodal improvements and a land use mix that suit their needs can be beneficial to all who live, work, and play in Devon.

42% have people under 18

23% have people 65 and over

16% have one or more persons with a disability

4.9% have no regular vehicle access

4.4% have income under the poverty level

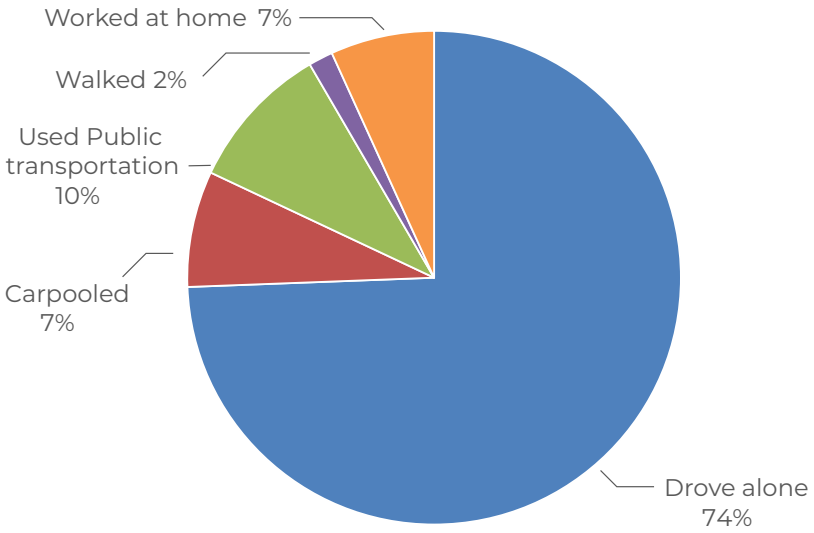
Devon are more likely than homeowners to have limited vehicle access, with 19 percent of renter-occupied households nearest to the station having no vehicle and another 53 percent having just one car available. In the Devon ZIP Code area, about 9 percent of renter households have no vehicle available, compared to under 2 percent of homeowner households. Across the Township, 36 percent of renter households have no vehicle available compared to less than 1 percent of owner households. This suggests that renters in Easttown, and specifically near Devon Station, stand to benefit greatly from an improved multimodal transportation network.

Employment Summary

Given Easttown's location at the northeastern edge of Chester County, many of its residents commute outside of the county. In fact, over half do according to 2018 ACS estimates, compared to the 40 percent who stay in the county for work. Likewise, Devon is on the edge of the Township, so an even greater percentage of workers living in the station area (65 percent) and the ZIP Code area (64 percent) commutes outside of Chester County.

About three-quarters of workers living within a 10-minute walk to Devon Station opt to drive alone to work, as illustrated in Figure 16. Roughly 10 percent use public transportation—nearly all by rail. Very few station area residents bike or walk to work. Multimodal improvements in the station area might compel more people to utilize public transportation to access jobs along the Paoli/Thorndale Line or Bus Route 106. Furthermore, with more inviting sidewalks and cycling facilities, Devon residents who work nearby could walk or bike to their jobs instead of driving alone. Those who work at home might be able to complete fewer daily car trips for other needs if better pedestrian and bicycle infrastructure is made available to them. While many area residents leave Devon to access jobs, others stay in or travel to Devon for work. Multimodal improvements and new development can not only serve those living nearby but also benefit employees who come to Devon from elsewhere in the region. According to Longitudinal Employer-Household Dynamics data, 564 jobs were found within the 10-minute walkshed of Devon Station in 2017. Half of these jobs are in low-wage ($1,250 per month or less) or middle-wage ($1,251–$3,333 per month) tiers. Retail and health care jobs make up about 60 percent of employment in the immediate station area. Since nonmotorized transportation can be a more affordable alternative to owning and driving a car to work, pedestrian and bicycle improvements near Devon Station can make the area even more convenient for workers across all wage levels.

Figure 16: Means of Transportation to Work for Residents of the Devon Station Area



Source: U.S. Census Bureau, 2014–18 ACS

Market and Real Estate Analysis

The study team also examined the area's demographic profiles, retail, office, industrial, and residential market potential to help identify the forms of development that might support Devon's future as a vibrant neighborhood center. Data was collected and analyzed for the 10-minute walking radius (the "station area") and the 19333 Devon ZIP Code area, and compared with Easttown Township and Chester County as a whole.

Tapestry Segmentation

To help stakeholders better understand populations in different spatial contexts, Esri's geographic information systems (GIS) specialists have utilized a market analysis methodology known as Tapestry Segmentation.[15] Esri's system classifies areas using 67 segments based on demographic and socioeconomic characteristics found in census and consumer research databases. The tapestry segments can help make sense of the typical lifestyle choices and preferences of people who live in or are drawn to a certain area and thereby guide policy and business location decisions.

As Table 3 indicates, the predominant segment in the Devon Station Area is "Urban Chic," making up over three-quarters of local households. This is a sophisticated, well-educated, and slightly older professional class. Households in this segment are generally smaller, with about half being married couples (with or without children) and another 30 percent being singles. More than 60 percent of Urban Chic householders live in single-family homes. While most households have two vehicles available, commuting by bicycle is still common. The majority have college and professional degrees, and many work in white-collar occupations. Residents are known to make financial investments, pursue a "green" lifestyle, and be tech savvy. Consumer preferences include organic foods; travel; luxury imported cars; upscale shopping; and activities like skiing, yoga, hiking, and tennis.

Another 17 percent of station area households are in the "Top Tier" segment, Esri's wealthiest market category. Top Tier is the most common segment in the Devon ZIP Code area and in Easttown as a whole. Residents maintain lavish homes and pursue frequent vacations and upscale shopping and cultural opportunities. They are highly educated—more than a third have a post-graduate degree—and they work in high-profile corporate careers or own businesses, earning three times the U.S. median household income. Households generally consist of married couples without children or with older children, so they average slightly larger than those in the Urban Chic category. Single-family homes are dominant. Consumers spend on luxury vehicles, vacation homes, professional help with household chores, exercise clubs, spas and salons, and other high-end retail.

Table 3. Esri Tapestry Segmentation (2019)

Esri Tapestry Segmentation	Characteristics						Devon Station Area	Devon (19333)	Easttown Township	Chester County	United States
Tapestry Segment	*Average Household Size*	*Median Age*	*Racial Diversity Index*	*Med. Household Income*	*Homeowner-ship Rate*	*Med. Home Value/Rent*	*Percentage*	*Percentage*	*Percentage*	*Percentage*	*Percentage*
2A - Urban Chic	2.39	43.3	48.1	$109,400	66.2%	$623,400	77%	14%	20%	4%	1%
1A - Top Tier	2.84	47.3	37.9	$173,200	90.2%	$819,500	17%	41%	69%	9%	2%
3C - Trendsetters	2.12	36.3	76.8	$63,100	24.5%	$1,442/mo.	7%	28%		1%	1%
9B - Golden Years	2.06	52.3	43.8	$71,700	62.7%	$332,100		17%	12%	5%	1%
U.S. Average	**2.61**	**38.2**	**64.0**	**$56,100**	**62.7%**	**$207,300 (value) $1,038/mo. (rent)**	**-**	**-**	**-**	**-**	**-**

Source: Esri

The smallest local segment, at just under 7 percent of station area households, is the "Trendsetters"—educated young singles, who are more racially diverse; primarily renters living alone or with roommates or partners; and often take transit, walk, or bike to work. Trendsetters travel frequently, are environmentally conscious, heavily utilize technology, and maintain good health and nutrition. They also spend on fashion, hobbies, prepared foods, and subcompact cars.

Another dominant tapestry segment is "Golden Years." These residents are end-of-career or retired seniors, living alone or as empty nester couples. Those in the Golden Years are just as likely to live in single-family homes as multiunit condos or apartments. Consumer preferences revolve around media, such as books, newspapers, and television; along with professional services to maintain their homes; simple exercise and casual activities like boating, golf, and fishing; healthy eating and dietary supplements; travel and culture; and managed financial portfolios.

Housing Market

According to Esri's 2019 Census projections, there are an estimated 485 homes within the 10-minute station walkshed. The housing stock increased by 66 units between 2000 and 2010, reflecting an annual growth rate of almost 1.6 percent. But fewer than 10 units have been added to the census estimate since 2010. At the same time, the housing stock in the Devon ZIP Code area and in Easttown Township has grown at similarly slow rates. Meanwhile, Chester County has experienced a relatively strong trend of new housing production, with a 1.8 percent annual growth rate in units from 2000 to 2010 and a 0.7 percent annual growth rate from 2010 to 2019. Countywide housing unit growth is projected to outpace local rates into the future, although new zoning specifications and redevelopment in Devon Center might accelerate growth there in the years ahead.

The 2018 ACS data indicates that 344 units were vacant across the Township, or 8 percent of the housing stock. A total of 189 vacant units were present in the Devon ZIP Code area, representing 6 percent of all units.

Most homes in the Devon Station Area were built between 1950 and 1970, with over 40 percent built in the 1950s. Most housing in the surrounding ZIP Code and Township also dates to the mid-20th century, although a larger share was built after 1970 than in the station's 10-minute walkshed, where homes appear to trend slightly older than in other parts of Easttown. Chester County as a whole has a much newer housing stock, with just over half built since 1980.

Further emphasizing this relatively slow expansion of Easttown's housing stock is the Census Building Permits Survey, which gauges the strength of homebuilding in a given municipality or county by analyzing the number of permits requested there. Since 2000, no more than 30 housing units have been permitted in a single year in Easttown. Housing construction appears to have been consistently slower since the late 2000s recession, with the exception of 2016. The Township averaged 13 building permits per year between 2000 and 2018.

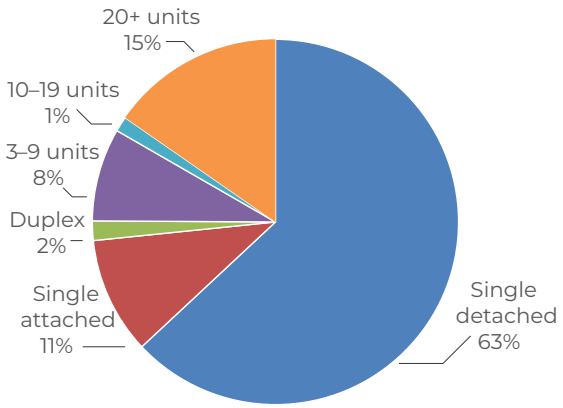
Housing Structure Types

As Figure 17 shows, the ACS estimates that over 60 percent of housing in the station area is detached single-family. Apartments in structures with 20 or more units make up the next largest group, at 15 percent. The Devon Park Apartments have 63 units and are across from Devon Station. By comparison, within the Devon ZIP Code there is a slightly smaller share of detached homes (57 percent) and a noticeably larger share of mid-sized apartments (14 percent).

Over three-quarters of Easttown's housing is detached single-family. Attached single-family homes make up 12 percent, with no other category making up more than 8 percent.

Missing Middle Housing Concept created by Opticos Design, Inc.
Image Source: © Opticos Design, Inc. / For more information, visit www.missingmiddlehousing.com

Figure 17: Housing Units by Number of Units in Structure, Devon Station Area



Source: U.S. Census Bureau, 2014–18 ACS

The data indicates that multiunit homes are more of a regularity in Devon than elsewhere in the Township. Nonetheless, there is a gap in middle-density housing types that are generally suitable near transit facilities. This is common across the nation and is referred to as *Missing Middle Housing*, a concept created by Opticos Design, Inc. They define missing middle housing as "house scale buildings with multiple units in walkable neighborhoods."[16] The term is inclusive of townhouses, duplexes, triplexes, quadplexes, and smaller apartment buildings that may have context-sensitive design characteristics that help them blend into environments where single-family homes are the predominant residential building form. The graphic at left helps to illustrate the kinds of middle-density residential buildings that might provide for broader housing choices beyond the traditional single-family units available throughout Easttown and the few larger apartment communities in Devon. More information can be found at: www.missingmiddlehousing.com.

Housing Tenure

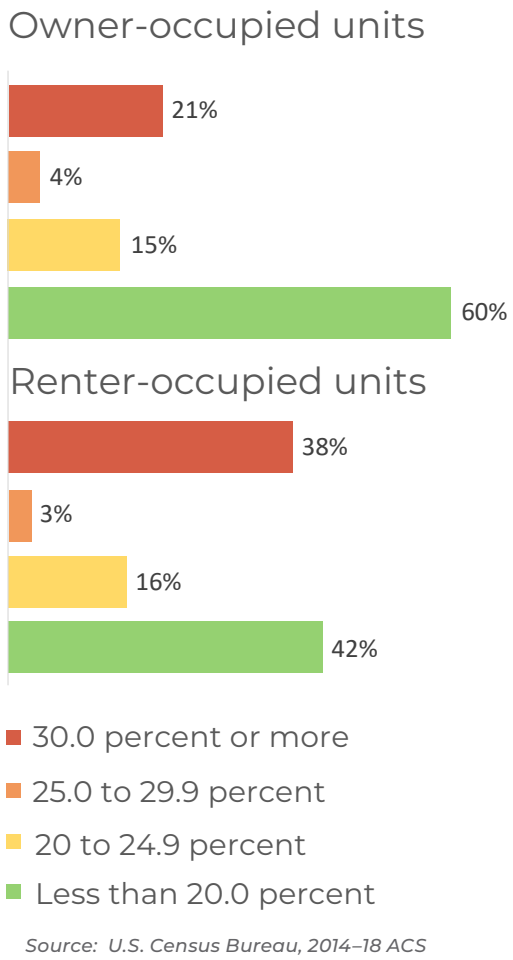
Homeownership is prevalent around Devon. The ACS estimates that Easttown has a homeownership rate of almost 90 percent. However, renters are more common in the station walkshed, with one in five households renting. In the Devon ZIP Code, almost 30 percent of households are renter occupied. A large portion likely resides in the 600+ units at the Stonegate Apartments, just over the Township line in Tredyffrin. Approximately one-quarter of Chester County households are renters.

Housing Value and Costs

Housing is costly in Devon. Figure 18 indicates the level of "cost burden" for homeowners and renters in the 19333 ZIP Code area, according to 2018 ACS estimates. Roughly 21 percent of homeowners and 38 percent of renters are *cost burdened*, meaning they spend more than 30 percent of their income on housing and related expenses. This compares to 27 percent of homeowners and 31 percent of renters who are cost burdened at the Township level. In Pennsylvania and nationally, about a quarter of homeowners and half of renters are cost burdened. An expanded and more diverse housing stock may help existing and future residents achieve more affordable lifestyles.

Esri's projected median home value in the station area is $556,818 in 2019, and even greater at the ZIP Code ($614,252) and Township ($665,264) levels. Rents are also fairly high, although the trend is opposite that of home values: rents are higher in the station area, where the 2019 median is almost $1,700, while in areas that extend farther from the station median rents decline to about $1,500 in the ZIP Code and $1,300 in Easttown at large.

Figure 18: Housing Costs as a Percentage of Household Income, 19333 ZIP Code



Source: U.S. Census Bureau, 2014–18 ACS

Table 4. Business Summary by NAICS Codes (2019)

Business Summary by NAICS Codes	Devon Station Area		Devon (19333)		Easttown Township	
Industry	Count	Pct	Count ZIP	Pct ZIP	Count Twp	Pct Twp
Construction	**10**	**8%**	**24**	**10%**	**34**	**8%**
Manufacturing	**4**	**3%**	**6**	**2%**	**13**	**3%**
Wholesale Trade	**3**	**2%**	**6**	**2%**	**17**	**4%**
Retail Trade	**23**	**18%**	**24**	**10%**	**54**	**12%**
Motor Vehicle & Parts Dealers	7	6%	12	5%	14	3%
Furniture & Home Furnishings Stores	2	2%	2	1%	4	1%
Electronics & Appliance Stores	1	1%	0	0%	2	0%
Bldg Material & Garden Equipment & Supplies Dealers	2	2%	2	1%	4	1%
Food & Beverage Stores	1	1%	1	0%	3	1%
Health & Personal Care Stores	1	1%	0	0%	2	0%
Gasoline Stations	1	1%	1	0%	2	0%
Clothing & Clothing Accessories Stores	0	0%	1	0%	2	0%
Sport Goods, Hobby, Book, & Music Stores	3	2%	1	0%	7	2%
General Merchandise Stores	0	0%	1	0%	0	0%
Miscellaneous Store Retailers	4	3%	3	1%	11	2%
Nonstore Retailers	1	1%	0	0%	3	1%
Transportation & Warehousing	**1**	**1%**	**2**	**1%**	**4**	**1%**
Information	**2**	**2%**	**3**	**1%**	**10**	**2%**
Finance & Insurance	**13**	**10%**	**28**	**11%**	**36**	**8%**
Central Bank/Credit Intermediation & Related Activities	4	3%	10	4%	7	2%
Securities, Commodity Contracts, Investments, Other Related Activities	4	3%	9	4%	17	4%
Insurance Carriers & Activities; Funds, Trusts, Other Financial Vehicles	5	4%	9	4%	12	3%
Real Estate, Rental & Leasing	**7**	**6%**	**15**	**6%**	**15**	**3%**
Professional, Scientific & Tech Services	**12**	**9%**	**24**	**10%**	**61**	**14%**
Legal Services	1	1%	1	0%	9	2%
Management of Companies & Enterprises	**1**	**1%**	**1**	**0%**	**2**	**0%**
Administrative & Support & Waste Management & Remediation Services	**4**	**3%**	**5**	**2%**	**11**	**2%**
Educational Services	**4**	**3%**	**10**	**4%**	**16**	**4%**
Health Care & Social Assistance	**15**	**12%**	**31**	**12%**	**43**	**10%**
Arts, Entertainment & Recreation	**2**	**2%**	**4**	**2%**	**7**	**2%**
Accommodation & Food Services	**8**	**6%**	**11**	**4%**	**31**	**7%**
Accommodation	1	1%	2	1%	2	0%
Food Services & Drinking Places	7	6%	9	4%	29	7%
Other Services (except Public Admin)	**14**	**11%**	**29**	**12%**	**56**	**13%**
Automotive Repair & Maintenance	2	2%	5	2%	5	1%
Public Administration	**0**	**0%**	**4**	**2%**	**4**	**1%**
Unclassified Establishments	**6**	**5%**	**22**	**9%**	**35**	**8%**

Source: 2019 Infogroup, Inc. Data calculated using Esri's data allocation method, which uses census block groups to allocate business summary data to custom areas.

Business Climate Overview

The North American Industry Classification System (NAICS) is a standard used by federal government agencies to categorize business establishments in economic data analyses. Table 4 on the facing page organizes the businesses in the Devon Station Area, ZIP Code area, and Easttown Township according to their NAICS classifications. The table displays the 2019 count and share of businesses at each geographic scale for 18 industry groups and 19 subgroups within specific industries.

As the data indicates, the business mix across all three geographies is fairly similar. Retail is a large component, especially near the station, where 18 percent of employers are retailers. Health Care & Social Assistance and Other Services (except Public Admin)—such as auto repair, laundry services, and religious organizations, among other employers—are also important sectors, with each making up over 10 percent. Businesses dealing with Finance & Insurance or Professional, Scientific, & Technical Services, such as accountants, architects, and consultants, are also fairly common. Construction makes up a sizable share as well, suggesting that overall, local businesses are rather diverse. Industrial, educational, and government employers are among the least well-represented industries locally.

One way to identify industries with a comparative advantage or otherwise outsize local presence is to calculate the location quotient (LQ). The LQ value compares the concentration of an industry within a specific area to that of a larger geography, so it is represented by a ratio. Industries with a higher local concentration have an LQ value over one, while those with a lower local concentration have an LQ value under one. Table 5 lists the location quotients for major industry groups in the station area, ZIP Code area, and Township, all compared against Chester County. Some categories that stand out are automotive sales and parts dealers, managerial and financial entities, insurers, and home furnishing stores. The Township could further enhance the advantages held by these sectors by attracting more businesses from these classifications. Alternatively, it could look to improve the diversity of business offerings by attracting those without a strong local presence. This could include information services, clothing and accessories stores, health and personal care stores, food and beverage outlets, and arts and entertainment venues.

Table 5. Location Quotient by NAICS Codes (2019)

NAICS Industry	Devon Station Area	Devon 19333	Easttown Township
Motor Vehicle & Parts Dealers	4.1	3.6	2.3
Management of Companies & Enterprises	3.9	2.0	2.2
Sport Goods, Hobby, Book, & Music Stores	2.9	0.5	1.9
Central Bank/Credit Intermediation & Related Activities	2.2	2.8	1.1
Nonstore Retailers	2.1	0.0	1.8
Furniture & Home Furnishings Stores	2.1	1.1	1.2
Gasoline Stations	1.9	1.0	1.1
Miscellaneous Store Retailers	1.6	0.6	1.3
Insurance Carriers & Related Activities; Funds, Trusts & Other Financial Vehicles	1.6	1.5	1.1
Accommodation	1.5	1.6	0.9
Securities, Commodity Contracts & Other Financial Investments & Other Related Activities	1.5	1.7	1.8
Electronics & Appliance Stores	1.4	0.0	0.8
Bldg Material & Garden Equipment & Supplies Dealers	1.4	0.7	0.8
Real Estate, Rental & Leasing	1.3	1.4	0.8
Educational Services	1.1	1.5	1.3
Food Services & Drinking Places	1.0	0.7	1.2
Other Services (except Public Administration)	0.9	1.0	1.1
Construction	0.9	1.1	0.8
Arts, Entertainment & Recreation	0.8	0.8	0.8
Manufacturing	0.8	0.6	0.7
Administrative & Support & Waste Management & Remediation Services	0.7	0.5	0.6
Food & Beverage Stores	0.6	0.3	0.5
Information	0.6	0.5	0.9
Health & Personal Care Stores	0.6	0.0	0.4
Wholesale Trade	0.6	0.6	1.0
Automotive Repair & Maintenance	0.6	0.8	0.4
Transportation & Warehousing	0.5	0.6	0.6
Legal Services	0.4	0.2	1.0
Clothing & Clothing Accessories Stores	0.0	0.3	0.4
General Merchandise Stores	0.0	0.7	0.0
Public Administration	0.0	0.7	0.4

Source: 2019 Infogroup, Inc.

Retail Market

The CoStar commercial real estate database shows 31 retail properties within a half-mile of the station, as reported in Table 6. Almost all of them are found on Lancaster Avenue—reflecting the Township's well-defined commercial corridor. Most properties are older, with almost half built between the 1950s and 1970s. Six are auto dealerships and three are banks. Other categories represented are auto repair, convenience store, garden center, restaurant, service station, and veterinarian/kennel. Average rentable building area (RBA) is around 10,000 square feet. According to CoStar, as of Spring 2020 most properties are 100 percent leased and very little retail space is listed for future availability. As a result, market rents gradually rose from a post-recession low of $21.50 per square foot in 2013 to a 10-year high of over $24 per square foot. However, CoStar forecasts show retail rents declining in the near term due to the COVID-19 pandemic.

Retail Leakage and Surplus Analysis

Table 7 displays the retail leakage and surplus analysis data for the Devon Station Area, the 19333 ZIP Code area, and Easttown Township.[17] The leakage/surplus factor compares the dollar amount of retail sales (supply) with the volume of retail potential (demand) produced by household spending on retail goods within the same industry. Esri normalizes the "retail gap" between supply and demand to determine a numerical factor, which is an index value between –100 and +100. A negative value indicates a retail surplus, meaning supply exceeds demand, so retailers attract buyers that reside outside of that geographic area. A surplus is shown in red in Table 7 because further expanding retail offerings may not be met with adequate demand. A positive value indicates a retail leakage, meaning demand exceeds supply and residents leave that geographic area to purchase goods from that category. Industries with larger, positive leakage/surplus factors may be suitable opportunities for business expansion to an underserved area. Thus, the table displays leakages in green.

The analysis for Devon indicates that the station area is oversupplied for retail in relation to the existing demand, so shoppers come from outside of the immediate station area to purchase goods from stores inside of it. This is consistent with Devon Center and Route 30 serving primarily as commercial districts. However, within the larger Devon ZIP Code area, there are leakages and thus untapped demand for retail and dining establishments. A retail gap for food and drink also exists at the Township level.

Table 8 shows surplus and gap data for more specific retail classifications. It is important, however, to consider local context and planning goals when interpreting them. For example, Devon is already well equipped with several luxury car dealerships but lacks stores selling parts and tires, as well as "Other Motor Vehicle Dealers," a category which encompasses recreational camping vehicles, trailers, motorcycles, and boats. These retailers may serve area residents with high incomes, who own premium cars and enjoy vacations and leisure activities, although attracting more vehicle dealerships or parts sellers to Devon might contradict efforts to foster a transit-supportive land use environment near the train station.

Another inconsistency stems from Esri's slightly outdated 2017 industry data, which shows few Lawn and Garden retailers or places to buy shoes, jewelry, and luggage in the Township. In fact, the Devon Yard site—which did not formally open until 2018—includes upscale clothing and furnishings retailers, and a home and garden store. These businesses replaced a gardening center that relocated elsewhere in the county.

General merchandise stores, which include discount, dollar, and variety stores, also have a high leakage factor; however, these retailers may not align with the higher-end consumer preferences found within the tapestry segmentation in and around Devon.

More promising options for new retailers are those with a recognizably limited presence, such as sellers of specialty foods, electronics, appliances, stationery and office supplies, gifts, health and beauty items, sporting goods, toys and games, or other hobby items. On the

Table 6. Retail Property Analytics (April 2020)

Inventory	
Existing Buildings	31
Inventory (SF)	312,376
Under Construction (SF)	0
Average Rentable Building Area (SF)	10,076
12 Mo Net Absorption (SF)	5,000
Market Rent/SF	$23.20
Median Year Built	1962
Average Typical Floor Size (SF)	8,497

Availability	
Vacant SF	3,700
Vacancy Rate	1.3%
Availability Rate	2.3%
Available SF	6,500
Available Asking Rent/SF	$27.00
Occupancy Rate	98.7%
Percent Leased Rate	98.7%

Source: CoStar

other hand, retailers that may already have sufficient local supply include those selling automobiles, building materials and supplies, alcoholic beverages, and books.

When determining which businesses might be most appropriate for future redevelopment scenarios within Devon Center and nearest to the rail station, it is prudent to favor those that are most transit supportive, as the second column of Table 8 indicates. These cater to convenience goods and the service needs of residents, employees, and transit users, and they promote street-level activity. Examples are food and beverage stores, restaurants, general merchandise, and florists, most of which show a leakage in Devon. Recommendations for fostering a transit-oriented retail district are described in more detail in Chapter 5.

In general, developers, property managers, and others engaged in local business activity should also use caution not to duplicate retail services that show leakages in Devon but are readily available in Berwyn Village or other nearby commercial districts, including Wayne, Newtown Square, and King of Prussia.

Office Market

CoStar lists 28 office properties within a half-mile of Devon Station, offering almost 350,000 square feet of space, as reported in Table 9. Office buildings are spread a bit more diffusely in the station area than retail, with more properties located off of Lancaster Avenue than directly facing the commercial corridor. Most office buildings in the Devon area are two stories tall. On average, RBA is around 12,300 square feet, and typical floor size is just over 5,000 square feet.

More than a quarter of Devon's office space is currently vacant, although much of it is found in a single, newly renovated building at 426 W. Lancaster Avenue, known as Devon West, that is already 100 percent leased. Accounting for this coveted new property, only around 32,000 square feet of office space is both vacant and available for lease as of April 2020. This represents under 10 percent of the local inventory. Overall, around 13.5 percent of office space in Devon is available, including some that is currently occupied.

Office buildings are classified according to their quality using the letters A, B, C, or F. Half of Devon's offices are rated Class C, with most of the rest in Class B. Only 11 percent are in Class A, suggesting a gap in higher-quality spaces. According to CoStar, a Class A office space tends to be "built within the last 5–10 years, but if it is older, it has been renovated to maintain its status and provide it many amenities." Given that the median year built for the local office inventory is 1962, the Class B and C categories may be over-represented. Class B offices are described as "utilitarian" and without "special attractions[,] abundant amenities[,] and desirable location." Some deficiencies could include floor plans and overall condition. Class C offices are older and basic, with "below-average maintenance and management" and "a mixed or low tenant prestige." Lower rents are needed to attract tenants to Class B and C offices.[18]

Office rents in the Devon Station Area have followed a similar trajectory to retail rents, rising to a high last year of around $28 per square foot, after hovering near $23 for most of the first half of the decade. As with retail, CoStar forecasts show office rents declining in the near term due to the COVID-19 pandemic. Table 9 shows office property analytics.

Table 7. Devon Station Area Retail Leakage and Surplus (2019)

2017 Industry Summary		Demand (Retail Potential)	Supply (Retail Sales)	Retail Gap	Leakage Surplus Factor	Number of Businesses
Station Area	Total Retail Trade	$21,875,107	$169,467,597	($147,592,490)	–77.1	24
	Total Food & Drink	$2,440,838	$2,813,539	($372,701)	–7.1	6
Devon (19333)	Total Retail Trade	$191,512,061	$171,602,971	$19,909,090	5.5	26
	Total Food & Drink	$21,343,399	$3,402,533	$17,940,866	72.5	8
Easttown Township	Total Retail Trade	$307,678,812	$313,349,657	($5,670,845)	–0.9	54
	Total Food & Drink	$34,000,250	$9,598,658	$24,401,592	56	26

Source: Esri and Infogroup, Esri 2019 Updated Demographics, Esri 2017 Retail MarketPlace

Table 8. Devon Station Area Retail Leakage and Surplus by Industry (2019)

2017 NAICS 4-Digit Industry Groups	Transit-Supportive?	Devon Station Area		19333 ZIP Code Area		Easttown Township	
		L/S Factor	# Businesses	L/S Factor	# Businesses	L/S Factor	# Businesses
Shoe Stores	●	100.0	0	100	0	100.0	0
Department Stores Excluding Leased Depts.	●	100.0	0	100	0	100.0	0
Other General Merchandise Stores	●	100.0	0	100	0	100.0	0
Florists	●	100.0	0	100	0	100.0	0
Other Motor Vehicle Dealers		100.0	0	100	0	100.0	0
Lawn & Garden Equip & Supply Stores		100.0	0	100	0	100.0	0
Vending Machine Operators		100.0	0	100	0	100.0	0
Jewelry, Luggage & Leather Goods Stores	●	100.0	0	93	1	100.0	0
Auto Parts, Accessories & Tire Stores		100.0	0	48.5	1	61.9	1
Clothing Stores	●	100.0	0	97.9	1	38.8	2
Special Food Services		100.0	0	39.9	1	–49.3	6
Sporting Goods/Hobby/Musical Instr Stores	●	25.6	2	66.5	1	49.1	5
Electronics & Appliance Stores	●	21.2	1	35.3	2	35.1	3
Health & Personal Care Stores	●	15.3	1	65.9	1	85.1	1
Specialty Food Stores	●	5.5	1	100	0	79.6	1
Office Supplies, Stationery & Gift Stores	●	3.1	1	64.4	3	79.9	1
Grocery Stores	●	3.1	1	–9.1	2	90.5	1
Restaurants/Other Eating Places	●	–7.5	5	72	7	64.0	19
Drinking Places – Alcoholic Beverages	●	–18.8	1	100	0	70.2	1
Other Miscellaneous Store Retailers	●	–39.4	1	26.6	1	44.9	4
Furniture Stores	●	–41.5	2	100	0	54.7	3
Bldg Material & Supplies Dealers		–55.4	3	35.2	1	40.5	7
Home Furnishings Stores	●	–63.3	1	63	1	6.7	3
Used Merchandise Stores	●	–64.5	1	100	0	10.3	4
Book, Periodical & Music Stores	●	–67.7	1	–70.9	1	20.8	2
Gasoline Stations		–69.9	1	44.8	1	16.9	2
Beer, Wine & Liquor Stores	●	–81.8	1	100	0	–10.8	1
Direct Selling Establishments	●	–85.1	1	–55.9	1	–14.5	1
Electronic Shopping & Mail–Order Houses		–93.3	1	100	0	–68.9	3
Automobile Dealers		–94.5	5	–51.8	8	–61.7	9

Source: Infogroup, Inc. Esri's Data allocation method uses census block groups to allocate business summary data to custom areas

Table 9. Office Property Analytics (April 2020)

Inventory	
Existing Buildings	28
Building Class	Class A: 11% Class B: 39% Class C: 50%
Inventory (SF)	343,925
Under Construction (SF)	0
Average Rentable Building Area (SF)	12,283
12 Mo Net Absorption (SF)	-24,800
Market Rent/SF	$27.43
Median Year Built	1962
Average Typical Floor Size (SF)	5,075
Number of Floors	One-story: 7% Two-story: 68% Three-story: 21% Four-story: 4%

Availability	
Vacant SF	93,995
Vacancy Rate	27.3%
Availability Rate	13.5%
Available SF	43,819
Available Asking Rent/SF	$34.98
Occupancy Rate	72.7%
Percent Leased Rate	88.9%

Source: CoStar

Devon West, a newly renovated Class A office property on Lancaster Avenue near Devon Station.
Image Source: CoStar

An example of Class C office space near Devon Station. This building is on Waterloo Road directly across from the south parking lot.
Image Source: CoStar

Chapter 4

Pedestrian and Bicycle Facility Types

Although many people show an interest in walking or biking as a means of sustainable transportation and healthy recreation, they may not be able to do so in environments that lack the proper facilities. Chester County recommends pedestrian facilities in all "Suburban Center" landscapes and bikeways that are compatible with the size and conditions of local roads. This chapter highlights facilities that could be used to expand and improve Devon's multimodal network. Precedent photos are provided. Many of the facilities seen here are included in recommendations found in Chapter 5.

Pedestrian Facility Types

1 Sidewalks

Sidewalks provide safe and comfortable walking routes between residential areas and neighborhood centers or other destinations. PennDOT recommends widths of at least five feet to accommodate people with accessibility needs and two-way foot traffic. In suburban environments, the *Smart Transportation Guidebook* advises a buffer between the sidewalk and the roadway, with a minimum width of four feet on local streets and five feet on collector and arterial roads. As of 2019, Easttown's municipal code requires sidewalks to be at least four feet wide and include buffers.[19]

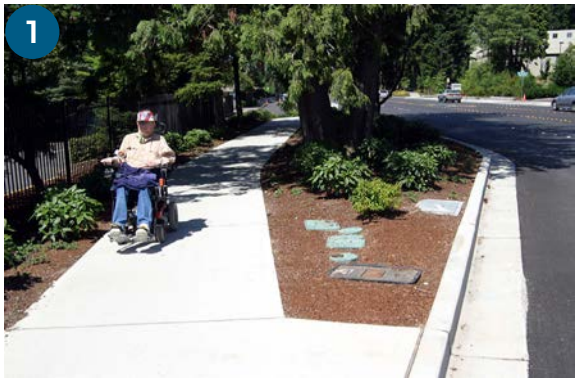


Image Source: Dan Burden, Pedestrian and Bicycle Inormation Center (PBIC)

Image Source: Getty Images

2 Crosswalks

High-visibility crosswalks maximize visual contrast with the roadway surface. The continental striping pattern, with stripes perpendicular to the direction of travel by pedestrians, is the industry standard for creating safe, visible, and long-lasting crossings. Coupled with crossing signals, crosswalks add predictability and visibility to pedestrian crossings. Ideally, crosswalks connect to sidewalk segments on both sides and feature ADA-compliant curb ramps.

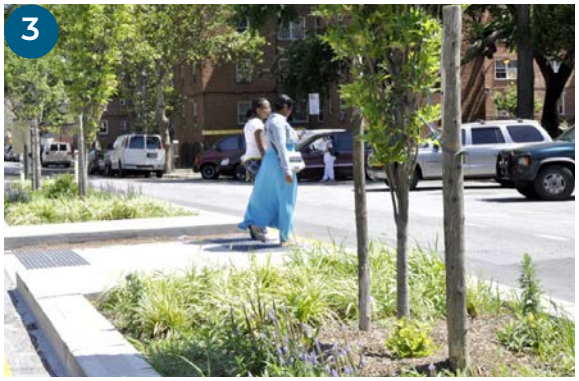


Image Source: National Association of City Transportation Officials (NACTO)

Image Source: DVRPC

3 Crossing Islands

Located between vehicle lanes in the middle of intersections, islands provide safe refuge for pedestrians and break up their crossing distance. They are especially helpful for pedestrians traversing multilane roads.

4 Signage

Signs can be used both to remind motorists of the presence of pedestrians and guide foot traffic to the safest places to walk and cross. Wayfinding signs can also indicate how to access points of interest and important destinations.

Image Source: NACTO

Image Source: Dan Burden, PBIC Images

Image Source: DVRPC

Image Source: New York City Department of Transportation

5 Curb Extensions

Curb extensions reduce crossing distances while slowing turning movements, leading to safer intersections. Also known as bumpouts, they can provide more public space; expand space allocated to bus stops; or be used for planters, landscaping, and other sidewalk amenities that enhance sense of place.

6 Tight Curb Radii

Large radii at intersections can encourage high vehicle turning speeds and reduce space that could better serve pedestrians. Tightening curb radii so they still accommodate large vehicles but extend pedestrian space can calm traffic and make crossings safer.

7 Flashing Beacon Signals

Flashing beacons have yellow lights actuated by pedestrians to warn vehicles approaching a crossing. Signal lights remain dark unless activated. They can benefit all users by providing predictable intersection conditions. One was installed on Route 30 in the study area in 2019. Beacons can be paired with other treatments, like a speed table, as shown at left.

8 Signal Improvements

Signalized intersections can be made safer with countdown timers and leading pedestrian intervals (LPI). LPIs give foot traffic an advanced signal before turning vehicles receive a green light. The few-second head start improves pedestrians' visibility. While countdown timers are already provided at Route 30 and Waterloo Road, LPIs could make the intersection more comfortable to cross.

Bicycle Facility Types

1 Neighborhood Greenways:

Neighborhood greenways go by a number of different names, including bicycle boulevards, neighborhood bikeways, local street bikeways, and bicycle priority streets. The goal of a greenway is to create a shared road using tools that decrease auto traffic volumes and speeds, providing a low-stress environment for bicyclists and pedestrians while still preserving local vehicular access. Examples include signage, pavement markings, speed bumps, and traffic diverters.

Image Source: Russ Roca, PBIC

Image Source: DVRPC

2 Bicycle Lanes

Traditional bicycle lanes use striping, pavement markings, and signs to designate a minimum of five feet of space for cyclists to operate in roadways where typical vehicle volumes and speeds make it difficult for multimodal traffic to mix efficiently and safely. Protected bike lanes use a physical barrier between cyclists and vehicles, typically with a vertical element, such as a curb or series of bollards or posts, to provide the most comfort and safety to cyclists.

Image Source: Dan Burden, PBIC

Image Source: DVRPC

3 Bike Compatible-Shoulders

Where wide shoulders already exist, they can be used as preferential space for bicycles without formally designating them as bike lanes. A four-foot shoulder is suitable for bikes on roads with daily vehicle volumes under 10,000 and speeds under 40 mph, but the shoulder should be well maintained and free from vehicle interference. PennDOT allows bikes to be ridden on the shoulder of the road in the same direction as the flow of traffic.[20]

4 Sharrows

These pavement markings—which typically include a bicycle symbol with directional arrows—alert motorists of potential cyclists and remind all users to share the road. Sharrows can also serve as wayfinding through designated neighborhood greenways.

Image Source: Jay Lawrence, Polara Studio

Image Source: NACTO

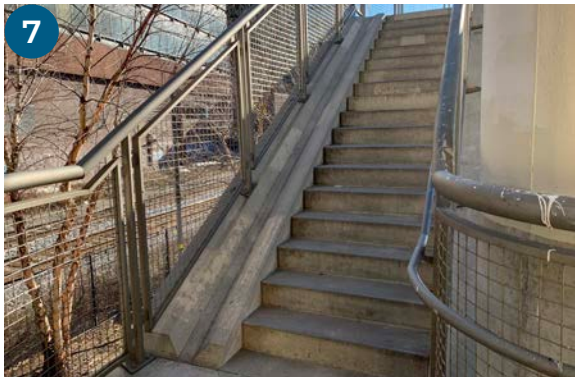


Image Source: DVRPC

Image Source: Brad Crawford, PBIC

5 Intersection Treatments

Pavement markings, such as bike boxes and crossbikes, can clarify intersection behaviors for cyclists and motorists. A bike box is a designated area at the head of a signalized intersection that allows cyclists to safely queue ahead of vehicles during a red signal phase. They help cyclists safely execute left turns or wait in a visible area before they proceed straight or turn right. Crossbikes run parallel to a crosswalk to indicate space for bicycles to cross through an intersection. They improve cyclist visibility, alert motorists to yield to bikes before turning, and ensure different modes of through-traffic remain separated.

6 Bicycle Parking

Bicycle parking, which can include individual racks, lockers, or clusters of racks in "bike corrals," ensures that cyclists have space to lock up and store their bicycles without blocking sidewalks.

7 Stair Access Ramps

This design tool can help cyclists navigate stairs by providing a narrow channel or gutter in which to place bike tires while walking up or down. They can also be used for strollers. ADA-compliant handrailings should be included.

8 Wayfinding Signage

Cyclist wayfinding ensures that those on bikes can easily find their way to safe and comfortable streets, destinations, and amenities, such as bike racks or trails.

Complete Streets

Complete Streets account for the needs of every mode of transportation, accommodating pedestrians, bicyclists, transit riders, and motorists, according to the local context. Treatments aim to make roads safer for all users by adjusting the streets' geometry to maximize throughput of people, not simply cars. An example is shown at right.

By redesigning streets to accommodate all users, a municipality may open up opportunities to walk or bike for people who may not have felt safe doing so before. Complete Streets can also help build a sense of place by welcoming a larger and more diverse mix of users on the road.

Complete Streets are not a new concept in the Route 30 corridor. In addition to being stated as an explicit goal for the Village of Berwyn in Easttown's 2018 Comprehensive Plan, nearby East Whiteland Township also references the strategy in its 2016 plan update.[21] The East Whiteland plan discusses transforming Route 30 with access management strategies, on-road bicycle facilities, sidewalk connections, and bus stop and streetscape enhancements. The Township took another step toward realizing this with the Route 30 Corridor Master Plan, released in 2018.[22]

Furthermore, in 2016, Tredyffrin Township studied multimodal concepts for segments of Lancaster Avenue near the Paoli Station, which offers both SEPTA and Amtrak services.[23] A similar study released the same year developed multimodal concepts for Route 30 in six sponsor municipalities in Chester County: the City of Coatesville and the townships of Caln, Sadsbury, Valley, West Caln, and West Sadsbury.[24]

Complete Street Demonstration Project (Orlando, Florida)

Image Source: Smart Growth America

The 2013 Central Chester County Bicycle and Pedestrian Circulation Plan also lists improvements to Route 30 as its first priority project.[25] These would enable the corridor to function as a Complete Street with bike lanes, sidewalks, bus shelters, signage, crosswalks, and trail access on a five-mile stretch traveling through West Whiteland Township, East Caln Township, and Downingtown Borough.

Finally, Complete Streets were among the goals and recommendations listed in DVRPC's 2011 U.S. 30 Corridor Study developed in partnership with the City of Philadelphia; Delaware and Montgomery counties; the Townships of Radnor, Haverford, and Lower Merion; and the Borough of Narberth.[26]

Together, implementing these projects could make much of Route 30 a safe, Complete Street not only in Easttown but throughout the southeastern Pennsylvania region.

Chapter 5
Recommendations

This chapter presents recommendations that synthesize the information reported thus far and aim to make the Devon Station Area more friendly to pedestrians and cyclists.

The first section proposes recommendations that address comprehensive challenges in the station area.

Latter sections contain more information on specific interventions designed to address mobility challenges in four focus areas.

Comprehensive Station Area Recommendations

Figure 19 identifies recommendations that would broadly improve mutimodal access throughout the station area. The recommendations respond to challenges present at the station site itself and on adjacent roadways and properties. They incorporate physical improvements to the rail facility and priority street segments, as well as high-level changes to the mix of land uses and the form of the neighborhood's built environment and sense of place.

The pedestrian tunnel that links the inbound and outbound platforms is not accessible to people with disabilities. It is also the only safe option to walk from one side of the station to the other since the Waterloo Road tunnel is so narrow.

Covered bicycle parking like that shown on the inbound platform could be installed on the outbound platform so cyclists can park there and use the pedestrian tunnel to access inbound trains.

Station Site Improvements

Because Devon Station is slated for future improvements by SEPTA in collaboration with Amtrak, the study team concentrated more specifically on options for enhancing access from neighboring areas within walkable (one half-mile) or bikeable (two-mile) distances. However, some improvements within the station footprint are pressing enough to briefly address in this report as well. There is a general need to reduce driveways, better organize vehicle paths, and create safe pedestrian and bicycle paths. In advance of full design, SEPTA should also evaluate the potential for complementary uses on station land according to the guidance provided in DVRPC's 2020 ***SEPTA Transit-Oriented Development (TOD)*** document. A few key changes to the site are discussed below, while other aspects are covered in more detail in the sections that follow because of their impact on people who walk or bike to rail.

Historic Station Building

SEPTA's comprehensive station improvements are slated to include the preservation and rehabilitation of the historic station building. Past studies have indicated that, after restoration, the building might be suitable for retail or private offices, or put back into use as a waiting room, restroom, and ticket office. In addition to passenger amenities, improvements should address pedestrian and bicycle needs like lighting, seating, shelter, wayfinding, bike storage, handrails, and stair ramps.

ADA Accessibility

Full ADA compliance necessitates the construction of high-level platforms, with tactile warning strips at the edges, and modifications to the existing pedestrian tunnel shown in the photo above, with either ramps or elevators added to each side. Alternatively, the tunnel could be replaced with a bridge to carry people over the tracks, again via ramps or elevators from each platform. Ramps and accessible curb cuts would also need to connect to the station's parking areas, and building upgrades must include accessible restrooms.

Waterloo Road Tunnel

The Waterloo Road tunnel is both narrow and height restricted, creating visibility issues for all travelers. It currently offers no sidewalks for pedestrians to cross beneath the train tracks, and bicycles must share the narrow travel lanes with vehicles. Trucks are known to get stuck in it or create traffic problems when forced to reroute to another crossing. A comprehensive station upgrade should consider new configurations that create space for all modes to use the tunnel and that limit truck incidents. SEPTA should work with Amtrak to assess the tunnel's historic value and determine how preservation and accessibility goals can work in concert.

Bicycle Amenities and Access

To encourage bicycle commuters, covered parking should be added to the north side of the station near the outbound platform. This would allow cyclists traveling from areas north of the station to avoid using the dangerous Waterloo Road tunnel to reach the station's only bike racks, which are near the inbound platform as shown in the photo above. The expected addition of ADA-compliant ramps or elevators during future station restoration work can also safely accommodate bicycles. SEPTA should also consider installing bicycle access ramps for any new or reconstructed stairways (see page 49).

Figure 19: Comprehensive Station Area Recommendations

Pedestrian and Bicycle Corridors

In 2018, Easttown Township identified Waterloo Road, Lancaster Avenue, and Berkley Road as priority corridors for both pedestrian access and bicycle mobility. To the extent possible, sidewalks should wrap around the entire station property along these roads, and signage, pavement markings, and other treatments can be used to safely designate shared or dedicated space for cyclists on streets that approach the station. If sidewalks cannot be constructed on both sides of these priority roadways, then crosswalks should be provided to link pedestrians to the segments that do have sidewalks.

The Township's other priority locations for new sidewalks are Station Avenue, Devon Boulevard, and Dorset Road. Dorset Road is also a priority bicycle corridor to the south of the study area. Reduced speed limits on segments of major arterials and collector roads nearest to the station and Devon Center would promote a safer environment for pedestrians and cyclists in areas with the highest traffic activity. Coordination with PennDOT would be necessary to study the feasibility of such reductions.

Transit-Supportive Land Uses

TOD patterns, which utilize compact designs that were common before the growth of vehicle ownership, have received renewed attention through the past few decades. This approach can help communities achieve growth in a sustainable manner while they also combat longer auto commutes, strained municipal budgets, increasing levels of congestion, and loss of open space. DVRPC's work regularly addresses TOD; most recently, the Office of Smart Growth developed TOD Policy guidelines that position SEPTA to better support and engage in land use planning and development decision making in Greater Philadelphia.[27] [28]

A TOD framework that concentrates new development around Devon Station, while also expanding safe multimodal facilities, can enable local residents and workers to drive less and walk, bike, or take mass transit more often. The Federal Transit Administration (FTA) indicates that transit-supportive development should be contained within one-quarter to one half-mile of a station and include at least three different land uses.[29] Transit-supportive uses include medium- to high-density residences, offices, and civic and educational institutions, along with appropriate retail, restaurant, and personal services. As specified in Chapter 3, transit-supportive commercial uses cater to convenience goods and service needs of residents, employees, and transit station users. Uses that entertain or create activity on the street throughout the day and night are also transit-supportive, such as sidewalk cafes and arts or entertainment venues. Retail must serve the surrounding population, be aligned with area incomes, and be visible.

Land uses that do not produce many trips or that require large setbacks or expansive tracts of land, such as industrial facilities, are not transit supportive. Although they are not typically considered transit supportive, "big box" retailers, strip malls, and gas stations can be designed or retrofitted using urban design principles like shallow setbacks, pedestrian street frontages, sidewalks, and structured parking. The photos at right show some supportive and nonsupportive uses near local rail stations.

Top: Devon Yard's Anthropologie store and the Liberty gas station on either side of Lancaster Avenue at Devon Boulevard.

Middle and bottom: Transit-supportive land uses with context-sensitive designs can be found near Strafford Station in neighboring Tredyffrin, including a CVS store and the Brightview senior living community.

As of 2020, Easttown's municipal ordinance includes an explicit reference to transit-supportive development only in the Devon Center Overlay District, which allows for unified developments that can include the walkable commercial uses permitted in the underlying zoning districts. This small overlay zone covers only what is now the Devon Yard site (refer to Figure 15 on page 31). The TOD potential in other parts of the station area is constrained by Easttown's zoning regulations. Tables 10 and 11 roughly divide the station area's allowable land uses into two discrete categories: transit-supportive and transit-nonsupportive. The symbols in each table indicate whether each use is allowed by right; as a conditional use; or prohibited under current zoning, as well as in the proposed Devon Center District.

Many transit-supportive uses are prohibited near Devon Station, especially for areas zoned as residential. At the same time, the PBO district allows many transit-nonsupportive uses. An amendment to the Township Code to incorporate the new Devon Center District would position the properties around Devon Station to better accommodate the transit-supportive uses in Table 10. In addition to drafting a new use table, the consultant team for the Devon Center Project also identified sites in the station area with potential for redevelopment in the near term, based on their age and ownership timelines. These properties are displayed in Figure 20 and are primarily on the north side of Lancaster Avenue or adjacent to Devon Yard and the Devon Horse Show. Although they were not identified by the Devon Center Project, the properties located at the corner of Route 30 and N. Waterloo Road also present compelling TOD opportunities.

In general, land use controls near rail stations should encourage mixed-use development at higher densities by right, with lower parking ratios or shared parking arrangements, and more affordable housing choices. Transit facilities are better utilized in areas with higher residential densities. Chester County recommends a minimum of six du/ac near transit. Within its Suburban Centers, the county standard is 7 to 15 du/ac, as specified in PennDOT's TOD toolkit. In a 2014 FTA study of suburban transit-supportive development projects, mean density was 17 du/ac and median density was 11 du/ac.[30] Many developments featured townhouses and detached homes on small lots to achieve higher densities, exemplifying the "missing middle" housing types discussed in Chapter 3. Regulatons and design guidelines for transit-rich areas should also permit multiple uses to operate in one building, allow buildings without setbacks, and require sidewalks. The intensity of development should be highest near the station and existing commercial uses, then taper off to create appropriate transitions to the surrounding neighborhoods. Chester County recommends building heights of 3.5 stories or more for TOD.[31]

Figure 20: Potential Redevelopment Sites in Devon Center

Table 10. Transit-Supportive Land Uses in the Easttown Township Zoning Ordinance, with Selected Zoning Districts

Use	R	PBO	DCD
Accessory Dwelling Unit	✗*	✗	✗
Apartment Accessory to Nonresidential Use	✗	✓	✓
Bank	✗	✓	✓
Bed and Breakfast	✶	✗	✗
Commercial Child Care/Adult Care	✗	✶	✶
Commercial Recreation	✗	✶	✶
Community Center	✗	✶	✶
Continuing Care Retirement Community	✗	✶	✶
Convenience Store	✗	✗	✓
Dwelling, Duplex	✗	✗	✗
Dwelling, Multi-Family	✗	✶	✶
Dwelling, Single-Family	✓	✗	✓
Dwelling, Townhouse	✗	✗	✗
Dwelling, Twin	✗	✗	✓
Educational Use	✗	✗	✶
Grocery Store	✗	✓	✓
Home Occupation	✓	✗	✗
Hospital	✗	✶	✗
Hotel, Motel, or Inn	✗	✶	✶
Laundry/Dry Cleaning	✗	✓	✓
Light Industry/Manufacturing	✗	✓	✗
Outdoor Café	✗	✓	✓
Personal Service	✗	✓	✓
Place of Worship	✶	✶	✶
Professional Office	✗	✓	✓
Public/Government Facility	✓	✓	✓
Restaurant	✗	✶	✓
Restaurant, Fast Food	✗	✗	✓
Retail	✗	✓	✓
Shopping Center	✗	✶	✗
Theater	✗	✗	✓
Veterinary Clinic	✗	✓	✓

✓ = by right ✶ = conditional use ✗ = prohibited

*ADUs are permitted in R-1 only

Table 11. Nontransit-Supportive Land Uses in the Easttown Township Zoning Ordinance, with Selected Zoning Districts

Use	R	PBO	DCD
Auto Car Wash	✗	✓	✗
Auto Gas Service Station	✗	✶	✶
Auto Gas Service Station with Convenience Store	✗	✶	✗
Auto Repair	✗	✶	✗
Auto Sales	✗	✶	✗
Building Materials - Storage and Sale	✗	✶	✗
Drive-Through Service	✗	✶	✗
Funeral Home	✗	✓	✗
Nursery/Landscaping Sales and Service	✗	✶	✗
Parking Lot/Garage	✗	✶	✶
Warehouse	✗	✓	✗
Wireless Communication Facility	✗	✶	✶

✓ = by right ✶ = conditional use ✗ = prohibited

Tables 10 and 11 list most of the land uses specified in Easttown's municipal ordinance, roughly categorizing them as either transit-supportive or transit-nonsupportive. Subsequent columns indicate whether each use is allowed by right, allowed with conditions, or prohibited in the current (R-1, R-2, R-3, R-4, PBO) and proposed (DCD) zoning districts that surround Devon Station. Many potentially transit-supportive uses are currently prohibited in the residential districts. The PBO district allows many transit-supportive uses but also allows most transit-nonsupportive uses. The proposed Devon Center District would allow the vast majority of transit-supportive uses and prohibit nearly all of the transit-nonsupportive uses.

Only some transit-supportive uses might be viable according to the market analysis featured in Chapter 3. The older and aging population in Easttown, for example, may be better suited for compact senior living communities in close proximity to new retail and transit. Townhouses, condos, or small-lot detached homes could appeal to moderate-income buyers or empty nesters in search of fewer home maintenance responsibilities. Smaller, market-rate rentals may attract young professionals who work in nearby offices but have relatively few high-quality, entry-level housing options near Devon. The low retail vacancies in Devon suggest that the area could absorb more services, perhaps filling gaps indicated by the market analysis found in Chapter 3. More "Class A" offices could round out the existing local inventory. As the zoning amendment process nears completion, the Township should work with interested developers and property owners to identify the locations in the station area that are most suitable for these and other transit-supportive uses with the greatest market potential.

The Berwyn Veterans Memorial exemplifies placemaking in Easttown.

Image Source: Tredyffrin Township Democrats

Existing placemaking features are not always visible or prominent, such as the welcome sign at Route 30 and Waterloo Road.

Placemaking

Placemaking is the process by which public spaces can be reimagined and redesigned to better support the communities that use them and to maximize their shared value. Improving the sense of place around Devon Station could better distinguish the neighborhood for its focal location, historic value, festive equestrian heritage, and importance as a crossroads of residential life and commercial activity. Successful places possess some key characteristics. They are visually interesting but at the same time accessible to people of all ages and abilities, with few physical barriers and a high degree of walkability. Seating, vegetation, and lighting are just some of the features that make a space more inviting. They have public spaces that are well maintained to give users the perception of safety—meaning that they are not only kept clean but also have regularly scheduled activities and events, helping users establish and cultivate a relationship with their surroundings.

Gateway treatments and roadside signage are frequently employed to introduce visitors to a recognizable place and attract pedestrian traffic, often with the additional benefit of slowing associated vehicle traffic. Public art, such as sculptures and murals, help places to establish a distinct visual identity and can be used to highlight the neighborhood's historical or cultural attributes. The Veterans Memorial near Berwyn Station is an example of high-quality placemaking.

Devon's existing placemaking features include signage, landscaping, and unique buildings like the historic station, Devon Horse Show, and Devon Yard. A sign welcomes passersby near the station, shown above, but is largely blocked by utility poles and traffic signs. New and improved elements that bring thematic consistency and a more inviting environment to the streets and spaces that comprise Devon Center could include decorative lampposts and banners, commemorative art pieces or interactive installations, wayfinding signs or structures, historical markers, additional tree cover, gazebos or other seating areas, and parklets or pocket parks. The Township could also work with local property and business owners to test experimental placemaking concepts and temporary installations in the station area before pursuing any longer-term efforts.

Focus Area Recommendations

Overview and Framework

After consulting with local stakeholders and making observations at the station site and in the surrounding community, the project team identified four focus areas for targeted nonmotorized transportation improvements. Each is shown in Figure 21. The focus areas represent strategic locations where the current conditions present conspicuous barriers for pedestrians and cyclists as they travel to Devon Station. See Chapter 3, page 26 for more information on these barriers.

The focus areas are:

1. Station South
2. N. Waterloo Road
3. Lancaster Avenue
4. Berkley Road

The sections that follow pinpoint concrete challenges found in each focus area and a series of recommended improvements that might reduce these challenges. The recommendations cover a broad range of treatments that support pedestrian and bicycle access, general traffic safety, or other needs like transit amenities, streetscaping, or placemaking.

Focus Area 1, Station South, includes the paved area near the inbound platform, which is used as an informal pick-up/drop-off space.

Focus Area 2, N. Waterloo Road, includes a complex intersection that presents challenges and safety issues for all modes.

Focus Area 3, Lancaster Avenue, has an inconsistent sidewalk network and is primarily oriented toward auto traffic.

Focus Area 4, Berkley Road, is a transitional area between Devon Center and neighboring residences.

Figure 21: Mobility and Access Focus Areas

Focus Area 1: Station South

The Station South focus area includes the main parking lot on the south side of the platform and the driveways accessible from Lancaster Avenue and Waterloo Road.

Mobility and Access Challenges

Figure 22 shows the focus area and the general locations of the mobility and access challenges listed below.

The view toward the station from the diagonal driveway at Lancaster Avenue and Waterloo Road shows that the parking lot design prioritizes vehicle storage over pedestrian access.

Vehicles idling near the inbound platform create access and safety issues for pedestrians, cyclists, and other motorists.

1 Driver safety and vehicle conflicts

With three distinct driveways and few physical controls for traffic flow and circulation, the parking lot can be difficult and dangerous to enter, exit, and navigate. The existing one-way diagonal entrance creates confusion and reduces safety for motorists traveling through the intersection of Lancaster Avenue and Waterloo Road.

2 No formal "kiss-and-ride" access

Many cars idle awkwardly while awaiting drop-offs and pick-ups in the large paved area near the station building. Some cars block reserved accessible parking spaces while they wait. Pedestrian and bicycle traffic must often weave between idling cars, which makes them less visible.

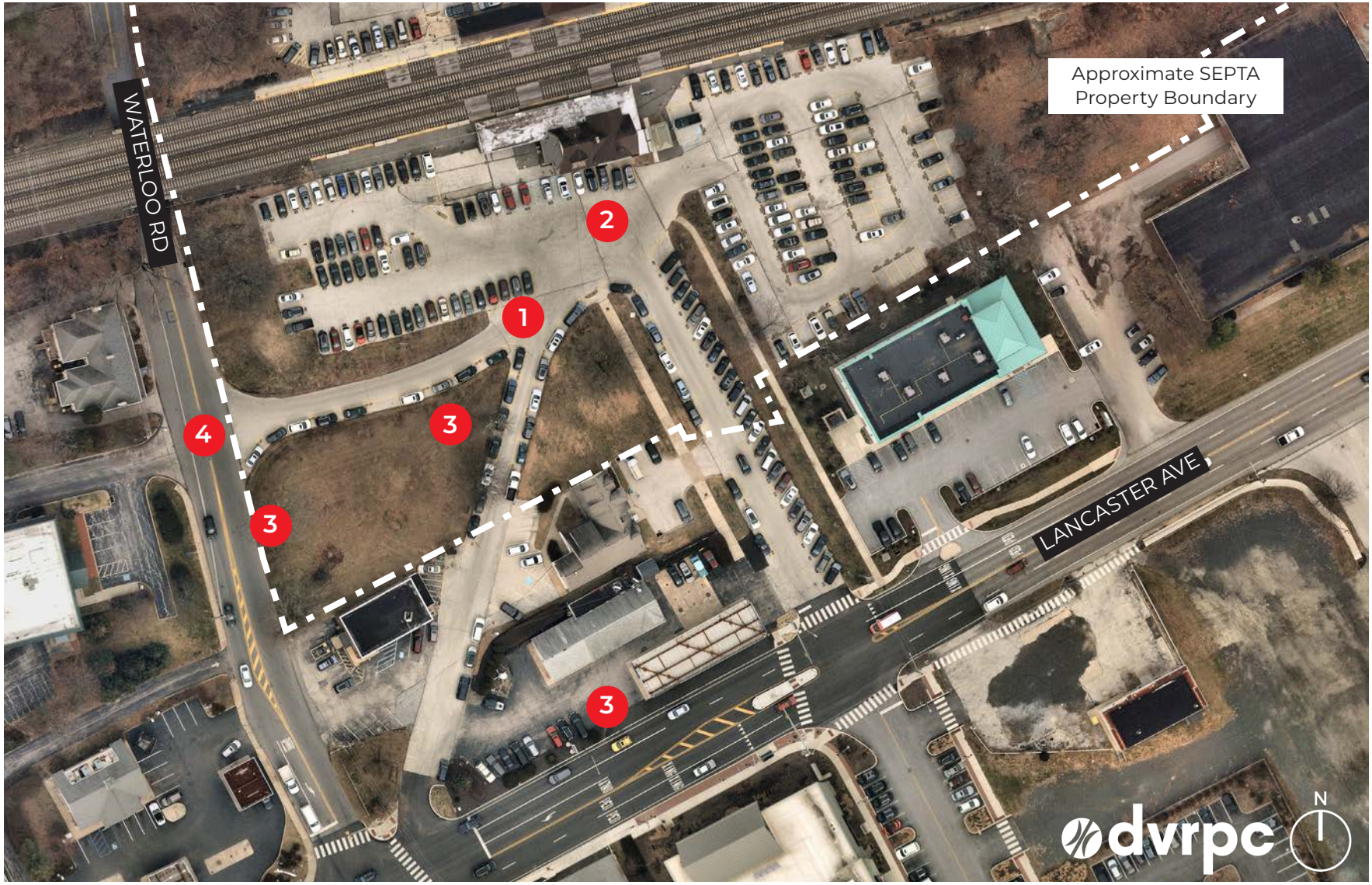
3 Pedestrian safety and access

Only Devon Boulevard has formal pedestrian walkways, and they end several feet before the rail platform. No sidewalks currently exist along the northeast quadrant of the intersection of Lancaster Avenue and Waterloo Road. Pedestrians entering from Waterloo Road or traversing the parking area are forced to mix with vehicle traffic.

4 Lack of crosswalk

Residents of the nearby Devon Park Apartments cross Waterloo Road at the unmarked intersection with Devon Park Court. The nearby office buildings and convenience store would also benefit from a more direct, safe crossing with access to Devon Station.

Figure 22: Station South Mobility and Access Challenges



See p. 60 for description of mobility and access challenges shown.

Imagery Source: Nearmap, 2020

Focus Area 1: Station South

Conceptual Improvements

Figure 23 illustrates concept treatments that can enhance safety and access in the Station South focus area. SEPTA intends to restore the station building and platforms in the future but has yet to develop any plans or designs. The improvements described below are presented to help guide SEPTA's effort. Coordination with PennDOT and private property owners will be necessary.

1 Diagonal entrance closure

The one-way driveway at the intersection of Route 30 and Waterloo Road is closed to vehicle traffic. The diagonal access road remains open to one-way traffic exiting the post office, gas station, and office building properties. Most parallel parking spaces on the diagonal road can be retained. Sidewalks and pavement markings are added to guide pedestrians to the station platform. A now-expanded corner can be repurposed as pedestrian and public space, with an amenitized bus stop (shelter and benches). SEPTA's Real Estate division should review existing easements and assess the potential to fully close or reconfigure the driveway to improve parking lot operations and optimize future uses on this land.

2 Realignment of west driveway with expanded parking

The west driveway at Waterloo Road and Devon Park Court is widened and realigned to improve circulation, with a sidewalk to separate pedestrians from vehicles and bumpouts to narrow the entrance. Parking capacity is increased on the south side of the driveway with angled spaces. A crosswalk allows pedestrians to safely navigate the driveway and access a widened pathway beneath the reconstructed Waterloo Road rail bridge.

3 New crosswalk on Waterloo Road

A crosswalk is added to the south side of the intersection of Waterloo Road and Devon Park Court, with signs and other optional treatments (e.g., high-visibility markings, illumination, curb extensions) to remind motorists to yield to crossing pedestrians. PennDOT approval would be required, and further study may be necessary, given the proximity to the existing crosswalk at Lancaster Avenue.

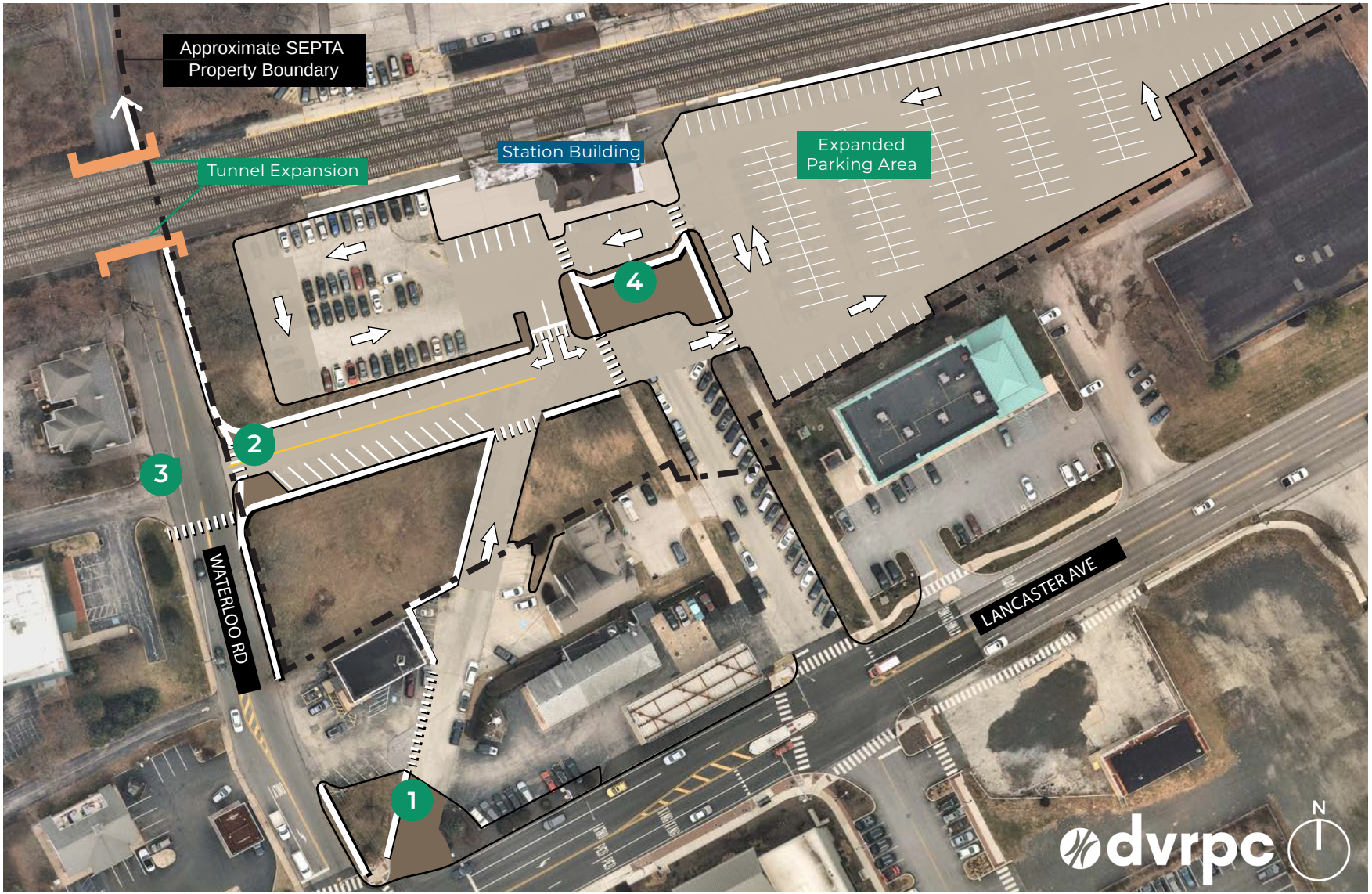
4 Center island, parking expansion, and new circulation pattern

A landscaped traffic island covers what is currently a large paved area nearest to the station building. This helps guide vehicle traffic into a clearer, counterclockwise circulation pattern through all parking areas. New crosswalks and sidewalks extend clear pedestrian paths to the platform. Between the station building and traffic island, a few short-term parking spaces are added to better accommodate vehicles making drop-offs and pick-ups. The parking lot is expanded to the east on Amtrak/SEPTA property. Other changes to striping and painting contribute to a more controlled traffic circulation pattern through the entire property.

Other Considerations

- Draft zoning language limits the property to a maximum of 75 percent impervious surface coverage.
- In order to park on the diagonal access road, station users must travel through private parking lots.
- Motorists making drop-offs and pick-ups may find the new traffic pattern too circuitous.
- If short-term parking space is at capacity, motorists making drop-offs or pick-ups could congest through lanes in the parking lot or block long-term spaces.

Figure 23: Station South Conceptual Improvements



See p. 62 for description of conceptual improvements shown.

Imagery Source: Nearmap, 2020

Focus Area 2: N. Waterloo Road

The N. Waterloo Road focus area extends from the tunnel to just north of Highland Avenue and includes the complex intersection with Devon Station's north driveway and Station Avenue.

Mobility and Access Challenges

Figure 24 shows the focus area and the general locations of the mobility and access challenges listed below.

1 Driver safety and vehicle conflicts

The intersection alignment and expansive pavement make turning movements difficult and create vehicle conflicts, particularly for motorists turning onto Waterloo Road from Station Avenue and the station driveway.

2 Lack of sidewalks

There are no sidewalks on Waterloo Road, Station Avenue, or the station driveway. On Waterloo Road, pedestrians often walk in the shoulder or on the grass. Wetlands preclude sidewalk construction on the west side of Waterloo Road north of Station Avenue.

3 Lack of crosswalks

No crosswalks are available on Waterloo Road. Pedestrians using the station tend to wait for a gap in vehicle traffic to cross Waterloo Road, but they still face the challenge of navigating the poorly controlled traffic exiting from Station Avenue and the station driveway. Vehicle traffic on Waterloo Road is heavier and faster than in Devon's other residential areas.

The intersection is complex, lacks a clear hierarchy, and has no safe pedestrian or bicycle facilities.

During peak hours, the queue of exiting vehicle traffic mixes with motorists turning from Station Avenue and Waterloo Road.

4 Lack of comfortable bicycle routes

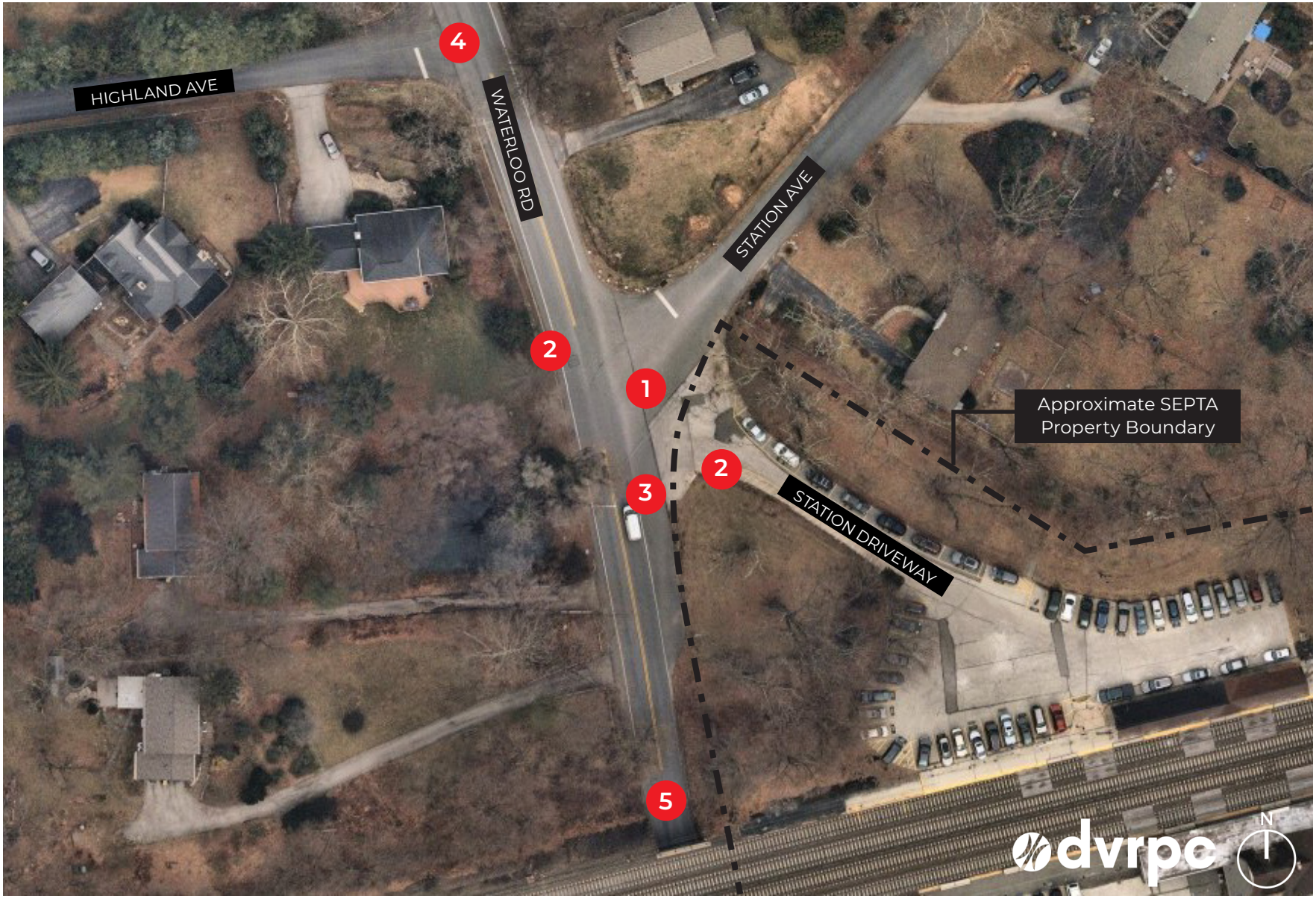
No formal space is allocated to bicycles on Waterloo Road or any nearby intersecting roads. Furthermore, no signage or pavement markings indicate that they may share the road with vehicle traffic.

5 Narrow tunnel

The existing railroad tunnel precludes pedestrian access and limits truck traffic. Trucks are known to get stuck under or crash into the tunnel structure, while some cause traffic to build up if they must turn around to find a route with adequate clearance. The nearest underpasses are within one mile but do not have significantly larger height allowances.

The tunnel on Waterloo Road limits visibility of the intersection and station driveway for northbound motorists.

Figure 24: N. Waterloo Road Mobility and Access Challenges



See p. 64 for description of mobility and access challenges shown.

Imagery Source: Nearmap, 2020

Focus Area 2: N. Waterloo Road

Conceptual Improvements

Given the complexity of the intersection at N. Waterloo Road, the study team developed multiple concepts designed to illustrate a range of reconfiguration options that can better balance the needs of all road users. The four designs are shown together in Figure 25 and in more individual detail in Figures 26 through 29. They have some shared attributes, as discussed below. Changes to the roadway will require coordination with PennDOT.

New sidewalks

New sidewalks provide pedestrian access to the station via the west side of Waterloo Road, the east side of Station Avenue, and the south side of the station driveway. The driveway may need to be widened to accommodate the new sidewalk. Coordination with private property owners may be necessary for some segments.

New crosswalk

An unsignalized crosswalk on the south side of the intersection allows for safe pedestrian navigation, with signs and other optional treatments (e.g., high-visibility markings, illumination, curb extensions) to remind motorists to yield to crossing foot traffic. An engineering study should be performed before installation since this location currently lacks any formal traffic control.

Visibility of the intersection and crosswalk will remain difficult for motorists exiting the tunnel from the south. Further study may justify lowering speed limits from 35 mph to 25 or 30 mph to improve safety.

Bicycle pavement markings

Waterloo Road is a priority bicycle route in Easttown's Comprehensive Plan. On-road pavement markings and signage can be used to better accommodate cycling traffic and remind vehicles that "Bicycles May Use Full Lane" and to "Share the Road," especially in areas where bicycle traffic transitions from lower-stress local streets (Highland Avenue, Old Lancaster Road, Station Avenue) to access the station or the Lancaster Avenue business district. Sharrow markings and wayfinding signage can be used to guide cyclists toward key destinations and encourage shared use of the road. Four-foot bike compatible shoulders are feasible on the northbound side of Waterloo Road (see page 48).

Intersection and driveway reconfiguration

Figure 25 illustrates four options for reconfiguring the intersection and station driveway to promote slower and more predictable turning movements, each with unique benefits and drawbacks. The figure also uses arrows to display possible traffic movements for concepts A, B, and D. The concepts are categorized as follows:

A **Extension**

One intersection corner is extended, and the station driveway is slightly realigned. Although minor, these new controls may positively influence traffic patterns by better separating vehicles, reducing speeds, and clarifying turning movements. More detail is provided in Figure 26.

B **Right-Out**

Traffic islands force motorists exiting the station driveway to make a right turn onto Station Avenue, preventing vehicles from entering Waterloo Road from the intersection. More detail is provided in Figure 27.

C **Roundabout**

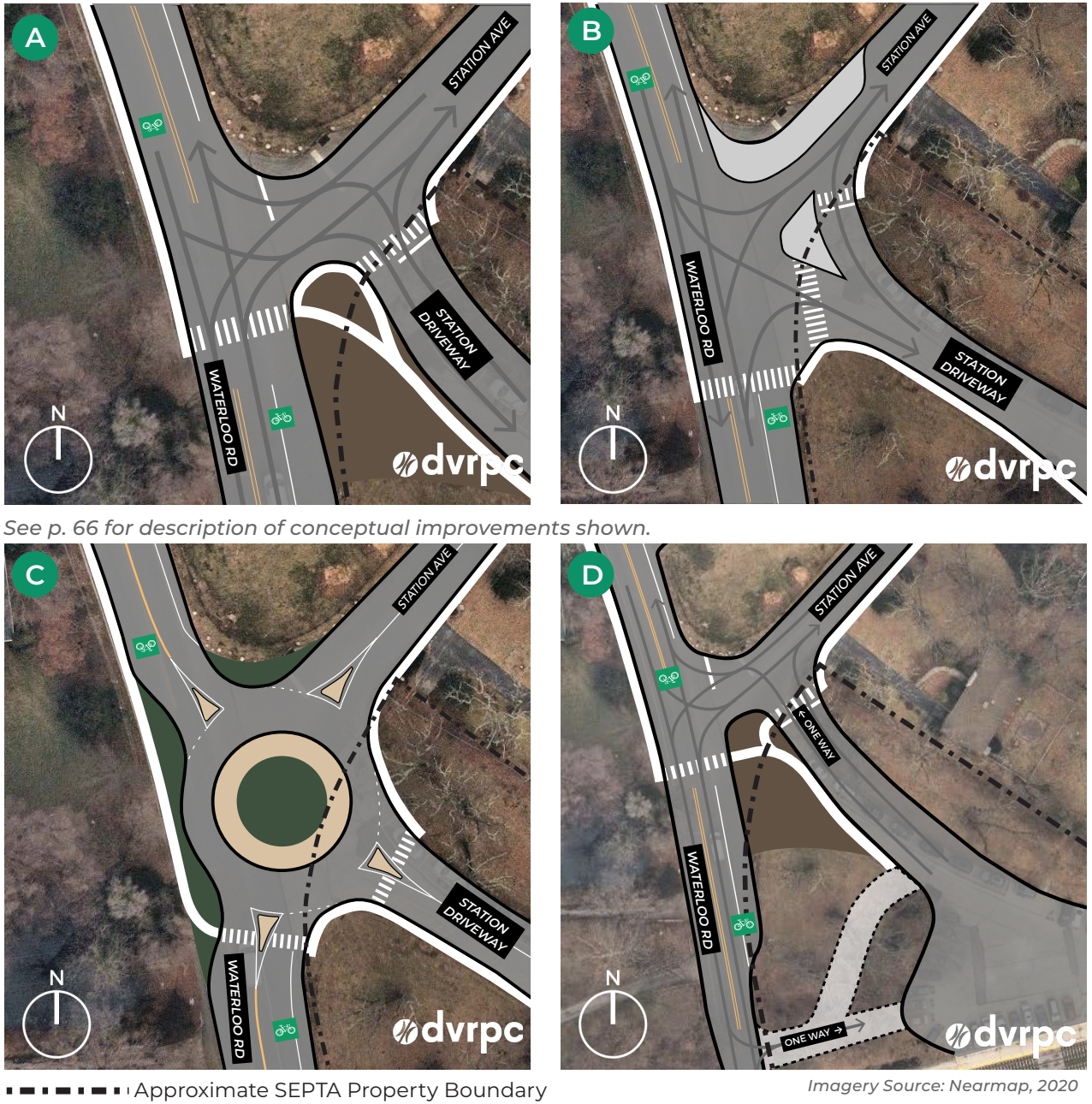
A roundabout forces motorists entering the intersection to yield to traffic in the circle. By simplifying turning movements, a roundabout can reduce vehicle delays while simultaneously slowing traffic, minimizing conflict points, and improving pedestrian and bicycle safety. More detail is provided in Figure 28.

D **Separation**

A new one-way driveway separates vehicles entering the station from traffic on Station Avenue and the existing station driveway. Two potential driveway alignments are shown. The existing driveway is converted to a one-way exit. More detail is provided in Figure 29.

Parking capacity in the outbound lot would remain at or near the existing level for all concepts except D.

Figure 25: N. Waterloo Road Intersection Reconfiguration Concepts



See p. 66 for description of conceptual improvements shown.

Approximate SEPTA Property Boundary

Imagery Source: Nearmap, 2020

Focus Area 2: N. Waterloo Road

A. Extension Concept

Figure 26 illustrates the extended corner concept, which includes:

1 Extended corner bumpout

Pavement width in the current intersection is reduced by installing a painted, landscaped, or otherwise delineated curb extension at the southeast corner, which also incorporates the new pedestrian pathway/sidewalk.

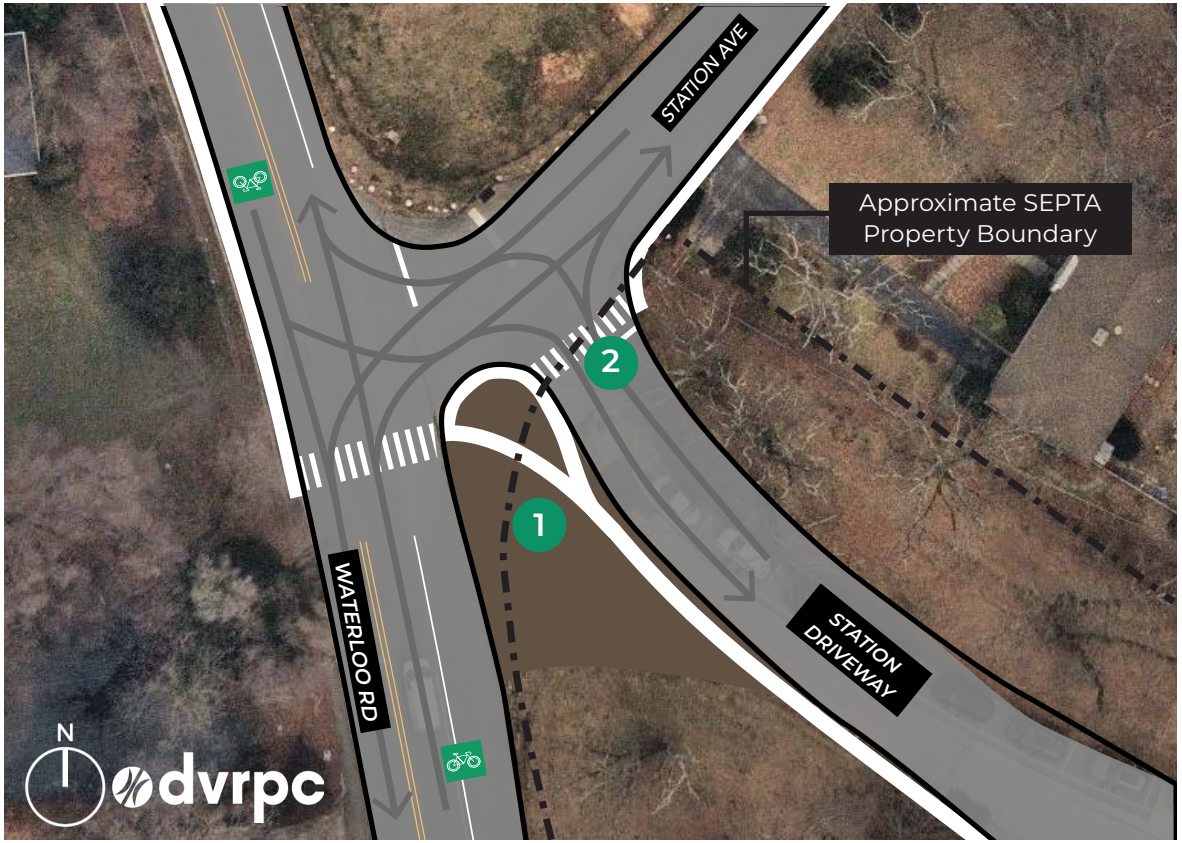
2 Realigned station driveway

The station driveway is realigned so that motorists must enter and exit by using Station Avenue. Instead of traveling directly between the driveway and Waterloo Road, vehicles must now make two complete turns using Station Avenue and the driveway. This series of tighter turns needed to access the parking lot helps to slow the speeds of turning vehicles, reduce conflict points, and produce a clearer traffic hierarchy.

Other Considerations

- During peak station hours, a high volume of vehicles entering and exiting the station may cause queuing on Station Avenue, disrupting traffic.

Figure 26: Extension Concept



Imagery Source: Nearmap, 2020

B. Right-Out Concept

Figure 27 illustrates the right-out concept, which includes:

1 Forced right exit

A new traffic island forces vehicles exiting the station driveway to turn onto Station Avenue. This eliminates the option to exit directly to Waterloo Road from the station driveway.

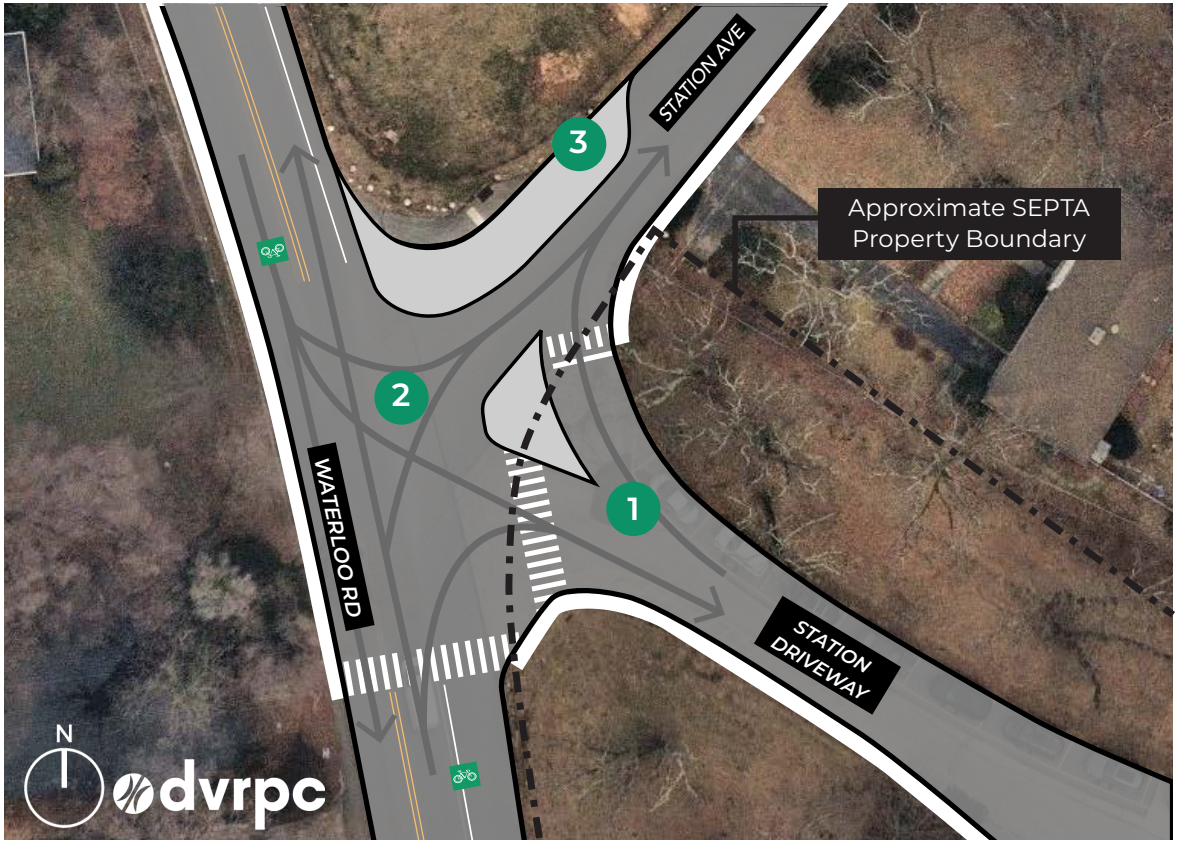
2 Turning movement separation

The traffic island separates vehicles entering Station Avenue from vehicles entering the station driveway.

3 Closure of Station Avenue's outlet to Waterloo Road

The outlet from Station Avenue to Waterloo Road is closed off with a curb extension. Motorists traveling in the direction of Waterloo Road on Station Avenue must turn around and seek alternate routes via connecting streets not shown in Figure 27.

Figure 27: Right-Out Concept



Imagery Source: Nearmap, 2020

Other Considerations

- Motorists traveling on Station Avenue would no longer have direct access to Waterloo Road or the station parking lot. Instead, they must divert to other local roads, which may impact safety or congestion beyond the immediate study area.
- Traffic on Station Avenue may increase during peak station hours due to the forced right-turn exit.
- Closing Station Avenue's outlet to Waterloo Road may cause conflicts between vehicles exiting the station or turning from Waterloo Road with vehicles making the turnaround on Station Avenue.
- The traffic island and channelized right turn may endanger pedestrians walking between the station driveway and Station Avenue since sidewalks are only provided on the west and south sides of the intersection.

Focus Area 2: N. Waterloo Road

C. Roundabout Concept:

Figure 28 illustrates the roundabout concept. More information about roundabouts can be found on the facing page. This concept includes the following:

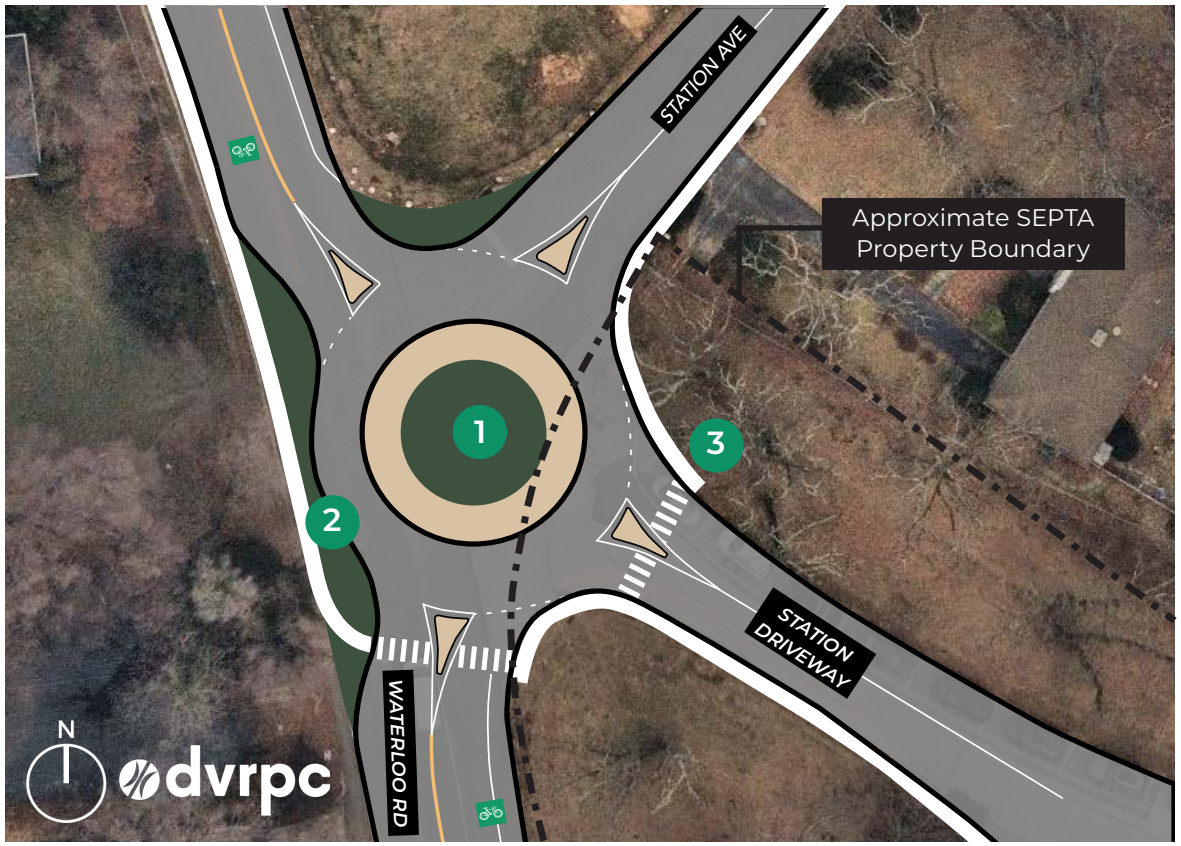
1 Intersection conversion to roundabout

This roundabout allows traffic to flow in a single direction, eliminating cross-traffic between Station Avenue and the station driveway. Motorists entering the intersection must yield to circulating traffic, then travel counterclockwise to exit. Traffic entering from Station Avenue and the station driveway may experience longer delays due to heavier vehicle volumes on Waterloo Road. However, the yielding pattern provides an explicit hierarchy for vehicles approaching from these legs to enter the intersection, which should reduce conflicts generated by the existing layout. The roundabout creates an opportunity for more placemaking in Devon Center through landscaping, signage, or public art.

2 Traffic calming on Waterloo Road

The primary vehicle movements through the intersection are from the north or south on Waterloo Road, where volumes are greatest. The roundabout's curvature would deflect these vehicles into the counterclockwise traffic pattern and thereby slow them down. Atlthough queuing may occur at the roundabout entries on Waterloo Road, it is expected to be infrequent. Only minor delays would occur since far fewer motorists would be entering the roundabout from Station Avenue or the station driveway.

Figure 28: Roundabout Concept



Imagery Source: Nearmap, 2020

3 Additional crosswalk and sidewalk

One major alteration to traffic patterns at the intersection is the channelization of more vehicles toward the station driveway and Station Avenue. To better protect pedestrians, an additional crosswalk is recommended at the station driveway, and an additional sidewalk segment is recommended between the driveway and Station Avenue.

Other Considerations

- Sidewalk construction on the east side of the roundabout may require compliance from private property owners.

Modern and Mini-Roundabouts

The key characteristics of a roundabout are counterclockwise traffic flow, entry yield control, and low speeds. They are typically circular but their shapes can be modified to fit their context. Circulating traffic has the right-of-way.[32]

Roundabouts offer improved safety because they have fewer conflict points and slower speeds, and they offer easier decision making. Certain crash types are less likely to occur because head-on and left-turning traffic is temporarily suspended as vehicles travel through the intersection. Roundabouts reduce the need to judge gaps in fast traffic accurately. Pedestrians are safer because they must only cross a single lane of slow, one-way traffic at a time.

In addition to yielding to traffic circulating within the roundabout, motorists must also yield to pedestrians when entering and exiting. Pedestrians use crosswalks and splitter islands to cross each leg of the roundabout. Bicyclists have the option to travel as a vehicle or as a pedestrian when using a roundabout.

Roundabouts accommodate fire trucks and other large vehicles by providing a mountable apron around the central island. The truck apron is several inches higher than the roadway pavement to discourage cars from using it.

Signs and pavement markings should be carefully placed to make them clear, visible, and unambiguous to all users.

Roundabouts tend not to cause delay to motorists since they enable continuous flow.

A mini-roundabout option allows for a smaller diameter and traversable island. The splitter islands at mini-roundabouts typically do not provide the same degree of refuge as those at other roundabouts, thus typically requiring pedestrians to cross the street in one stage.

Mini-roundabout *Image Source: PBIC*

Modern roundabout *Image Source: Sundstrom, PBIC*

Focus Area 2: N. Waterloo Road

D. Separation Concept

Figure 29 illustrates the separated driveway concept, which includes:

1 Realigned station driveway converted to a one-way exit

The current station driveway is realigned and converted to a one-way exit. As in Concept A, pavement width in the current intersection is reduced with an extended bumpout area at the southeast corner, which also incorporates the new pedestrian pathway/sidewalk. To access Waterloo Road, motorists exiting the station parking lot must first make a complete left turn onto Station Avenue and stop.

2 New one-way station entrance

A one-way station entrance is constructed to the south, on Waterloo Road near the tunnel and tracks. Two options are provided in the illustration: the driveway could channel vehicles straight into the parking area nearer to the platform, which would require removing some existing parking stalls, or it could curve toward the existing driveway to preserve existing parking capacity.

Figure 29: Driveway Separation Concept

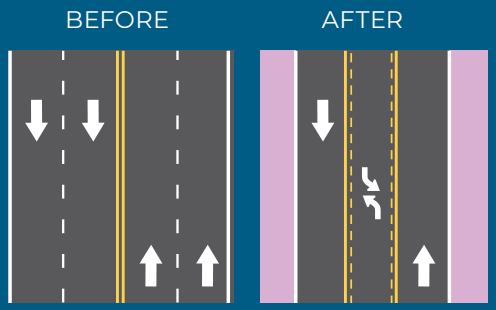
Imagery Source: Nearmap, 2020

Other Considerations

- Vehicles entering the parking lot would have to turn within 100 feet of the tunnel, which limits visibility for northbound motorists. Additional signage and lighting is recommended to prevent crashes.
- Motorists that previously entered the parking lot from the east via Station Avenue must now travel to Waterloo Road to access the new entrance. This may increase traffic and turning volumes on Waterloo Road.

What is a road diet?

A road diet reconfigures a roadway by removing at least one vehicular travel lane to improve safety and better accommodate other users. A road diet will be evaluated for parts of Lancaster Avenue in Berwyn in order to create a Complete Street.



A road diet typically involves converting an existing four-lane, undivided roadway segment to a three-lane segment consisting of two through lanes and a center, two-way left-turn lane. Depending on the context, the space gained can be used for bicycle lanes, expanded sidewalks, or some other purpose.

Road Diet in Atlanta, Georgia

Image Source: Josh Mello, PBIC

Focus Area 3: Lancaster Avenue

The Lancaster Avenue focus area includes the stretch of Route 30 just west of Waterloo Road to the Township's eastern boundary at Valley Forge Road. Other intersecting streets include Fairfield Road, Devon Boulevard, and Dorset Road, as well as several driveways for the commercial properties lining the corridor.

Mobility and Access Challenges

Figure 30 shows the focus area and the general locations of the mobility and access challenges described below.

The sidewalk network on Lancaster Avenue is incomplete, and vacant properties inhibit a sense of place.

Immediately adjacent to the station site is a gas station that lacks any formal sidewalk.

1 Driver safety and vehicle conflicts

Lancaster Avenue has multiple travel lanes in each direction, and many motorists entering and exiting from business driveways, which can result in vehicle conflicts and crashes.

2 Inconsistent sidewalk network

Sidewalks are available only on some parts of Lancaster Avenue, with gaps near the station and other areas of pedestrian activity. Several Route 106 bus stops lack safe and accessible pedestrian paths.

3 Lack of crosswalks

Pedestrian crossing opportunities are limited both east and west of Devon Station, with only Waterloo Road and Devon Boulevard available as formal marked pedestrian crossings.

4 Lack of comfortable bicycle routes

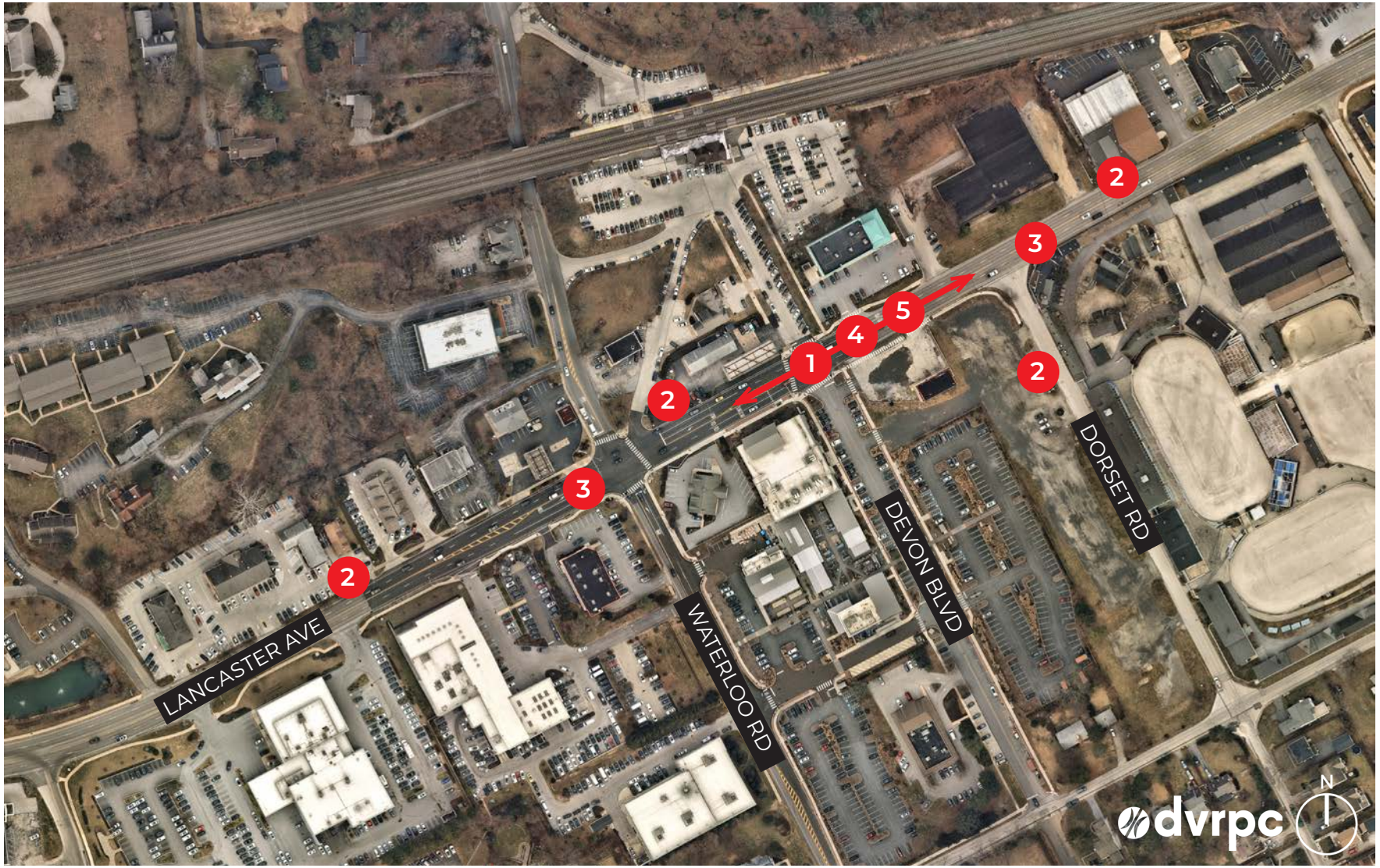
No formal space is allocated to bicycles on Lancaster Avenue or any nearby intersecting roads. Furthermore, no signage or pavement markings indicate that they may share the road with vehicle traffic.

5 Lack of placemaking

Few people walk or bike on Lancaster Avenue, and many drivers may pass through Devon without knowing where they are.

Some Bus Route 106 stops lack amenities like shelters, benches, or even a paved space to wait.

Figure 30: Lancaster Avenue Mobility and Access Challenges



See p. 74 for description of mobility and access challenges shown.

Imagery Source: Nearmap, 2020

Focus Area 3: Lancaster Avenue

Conceptual Improvements

Figure 31 illustrates concept treatments that can enhance safety and access on Lancaster Avenue. They are described below.

1 Road diet with Complete Street treatments

A road diet on Route 30, primarily in the neighboring Village of Berwyn, was listed as one of Easttown's Comprehensive Plan goals. It may be feasible to extend a road diet to Devon by removing lanes on Lancaster Avenue and replacing them with expanded sidewalks, bicycle lanes, or a multiuse sidepath. Different treatments and configurations may be needed based on the existing number of lanes on certain segments of Route 30. Between Fairfield Road and Valley Forge Road, there are four lanes without a center turning lane. Here, at least one travel lane would need to be removed in each direction to accommodate a turning lane and pedestrian and bicycle facilities. To the west of Fairfield Road, there is already a center turning/merge lane that affords the roadway space for improved pedestrian and bicycle facilities. Further study and coordination with PennDOT is recommended. For more information on road diets, see page 73.

2 Access management via driveway consolidation

Properties with multiple driveways could consolidate vehicle entry and exit to a single location, thereby reducing the locations at which turning movements, cross-traffic, and conflicts can occur. Reducing the number of driveway crossings on Lancaster Avenue creates fewer interruptions for pedestrians and cyclists, providing them with a safer and more predictable travel experience.

3 Complete sidewalk network

Several properties fronting Lancaster Avenue in Devon could help to fully integrate the pedestrian network by adding new sidewalks. These include:

- Devon Design Center, 111 Lancaster Avenue;
- Devon Horse Show, 23 Dorset Road;
- 119 W. Lancaster Avenue (former Belar Electronics Laboratory);
- 130 Lancaster Avenue (former Sunoco);
- Devon Liberty, 141 Lancaster Avenue;
- Devon Professional Buildings, 223-29 Lancaster Avenue; and
- Devon Plaza, 300 Lancaster Avenue.

Sidewalk maintenance is the responsibility of the property owner. Township officials should initiate discussions with property owners to determine appropriate timelines and implementation strategies to resolve sidewalk gaps in Devon.

4 Multimodal improvements at Waterloo Road

High-visibility 10-foot-wide crosswalks should be in place at every leg of every intersection that accommodates pedestrian traffic. Currently, the western leg of this focal intersection lacks a north-south crosswalk that would offer a more complete network to station users and other pedestrians in Devon Center. A short LPI may also be appropriate to give crossing foot traffic an advance walk signal before turning vehicle traffic receive a green light.

Painted bike boxes would help cycling traffic safely turn left to access Devon Station from eastbound lanes and Devon Center from westbound lanes. Cross-bike striping can also alert turning vehicles to yield to cyclists traveling straight through the intersection.

5 ADA-compliant bus stops

Curbside bus passenger facilities should have a clear and level loading area, a waiting area, and an accessible pedestrian path to reach the stop. Loading areas and pads should be a minimum of five feet wide along the curb by eight feet deep, which is the ADA standard. In locations where both pedestrian volumes and the number of transit passengers expected to use a stop are relatively low, the waiting area may overlap with the pedestrian paths. Model treatments can be found at the Bus Route 106 eastbound stops at Waterloo Road and Devon Boulevard.[33]

Figure 31: Lancaster Avenue Conceptual Improvements

See p. 76 for description of conceptual improvements shown.

Imagery Source: Nearmap, 2020

Focus Area 4: Berkley Road

The Berkley Road focus area includes the blocks from the Township line at Valley Forge Road to just west of Waterloo Road. Berkley Road is considered the southern boundary of the Devon Center district because it separates the commerical properties along Lancaster Avenue from the residential areas to the south.

Mobility and Access Challenges

Figure 32 shows the focus area and the general locations of the mobility and access challenges described below.

1 Inconsistent sidewalk network

Few sidewalks are available on Berkley Road, which represents a transition area between private homes and businesses. Incomplete pedestrian facilities discourage local traffic from walking to Devon Center and Devon Station, and instead make it likelier that they drive and park to shop or use transit services.

This can generate traffic congestion and parking capacity issues, and make for a less safe walking and biking experience for those that opt for nonmotorized transportation. Furthermore, wide intersection radii encourage faster turns and limit the visibility and space for pedestrians to safely wait for an opportunity to cross.

Beyond the rear driveways of Devon Yard, pictured above, Waterloo Road becomes a narrower, residential street. However, pedestrian facilities become less consistent at the intersection with Berkley Road.

Berkley Road has some sidewalks with curb ramps as shown in the bottom of the frame, although it lacks crosswalks entirely. Furthermore, if a pedestrian crosses in any direction from this corner, they will have to continue their journey in the street.

2 Lack of crosswalks

No formal crosswalks are available on Berkley Road to help pedestrians cross between residential areas and Devon Center. At Devon Boulevard, pedestrians must compete with through-traffic because it is not an all-way stop. Furthermore, even the all-way stop signs at Waterloo Road and Dorset Road lack crosswalks or stop bars; vehicle traffic can freely encroach on the informal space available to pedestrians, putting foot traffic at further risk of crash injury. Even with lower speeds and lower traffic volumes, Berkley Road's design prioritizes vehicles over pedestrians and cyclists.

3 Lack of comfortable bicycle routes

No formal space is allocated to bicycles on Berkley Road. Furthermore, no signage or pavement markings indicate that they may share the road with vehicle traffic. As discussed previously, Lancaster Avenue is a high-stress route for cyclists. Therefore, Berkley Road provides the next nearest east-west route for bicycle traffic, connecting Devon Center to other key destinations like the Devon Square and Devon Village shopping centers in Tredyffrin, the Stonegate Apartments, the Devon Horse Show, and Devon Elementary School.

Figure 32: Berkley Road Mobility and Access Challenges

See p. 78 for description of mobility and access challenges shown.

Imagery Source: Nearmap, 2020

Focus Area 4: Berkley Road

Conceptual Improvements

Figure 33 illustrates concept treatments that can enhance safety and access at Berkley Road. They are described in detail below.

1 Complete sidewalk network

Although concerns have arisen about adding sidewalks to residential properties in Easttown, Berkley Road represents a transition zone between residential neighborhoods and the commercial core of Devon Center. As an important link to the rail station, this street is a good candidate for a complete sidewalk network. This would require some residential property owners, as well as the Devon Horse Show and St. John's Church, to install and maintain sidewalks. These would provide key connections to existing sidewalks. Sidewalks with ADA-compliant curb ramps would provide a dignified and safe experience for those walking or rolling to Devon Center and Devon Station without compromising vehicle traffic flow.

2 Safe crossings at key intersections

The challenge of crossing Berkley Road and its intersecting streets could be resolved by painting high-visibility, perpendicular-striped continental crosswalks. These crossings should connect to ADA-compliant curb ramps, like those already in place on the northeast and southwest corners of Waterloo and Berkley roads. Newly painted stop bars at all intersections can ensure that pedestrians have adequate space to safely cross. Curb radii should be reduced by squaring off the intersections using paint, epoxy material, or landscaping. This shortens the crossing distance and makes pedestrians more visible to motorists at the intersection. Lighting should be evaluated and improved at new crossings to further ensure visibility at night. An all-way stop should be studied at Devon Boulevard.

3 Neighborhood greenway treatments on Berkley and Dorset roads

Berkley and Dorset roads are priority bicycle routes in Easttown's Comprehensive Plan. On-road pavement markings and signage can be used to better accommodate cycling traffic and create a preferred "neighborhood greenway" without significant infrastructure expenses or changes to traffic patterns. Neighborhood greenways are typically designated on low-volume, low-speed residential streets, which are already comfortable for cyclists to use. Additional treatments can improve the cycling experience, such as adding signs reminding vehicles that "Bicycles May Use Full Lane." Sharrows and wayfinding signage can be used to guide cyclists toward key destinations and encourage sharing the road. More information can be found in the box at right. A case study on page 82 shows street conditions in Portland, Oregon, before and after a greenway was implemented.

4 Gateway treatments at key intersections

As a point of entry and exit for Devon Center, Berkley Road would benefit from placemaking elements like signage, public art, and streetscaping. This can help to control traffic speeds and volumes, channel motorists to appropriate areas, and guide travelers using all modes to their destinations. Signs can use strategic language to calm southbound traffic, such as "Thank You For Visiting Devon Center," which would subtly communicate this transition zone to visitors. Wayfinding signage can make nonlocal traffic more aware of where to find sidewalks, parking, public spaces, commercial areas, and transit facilities, and thereby control the flow of multimodal users into residential areas.

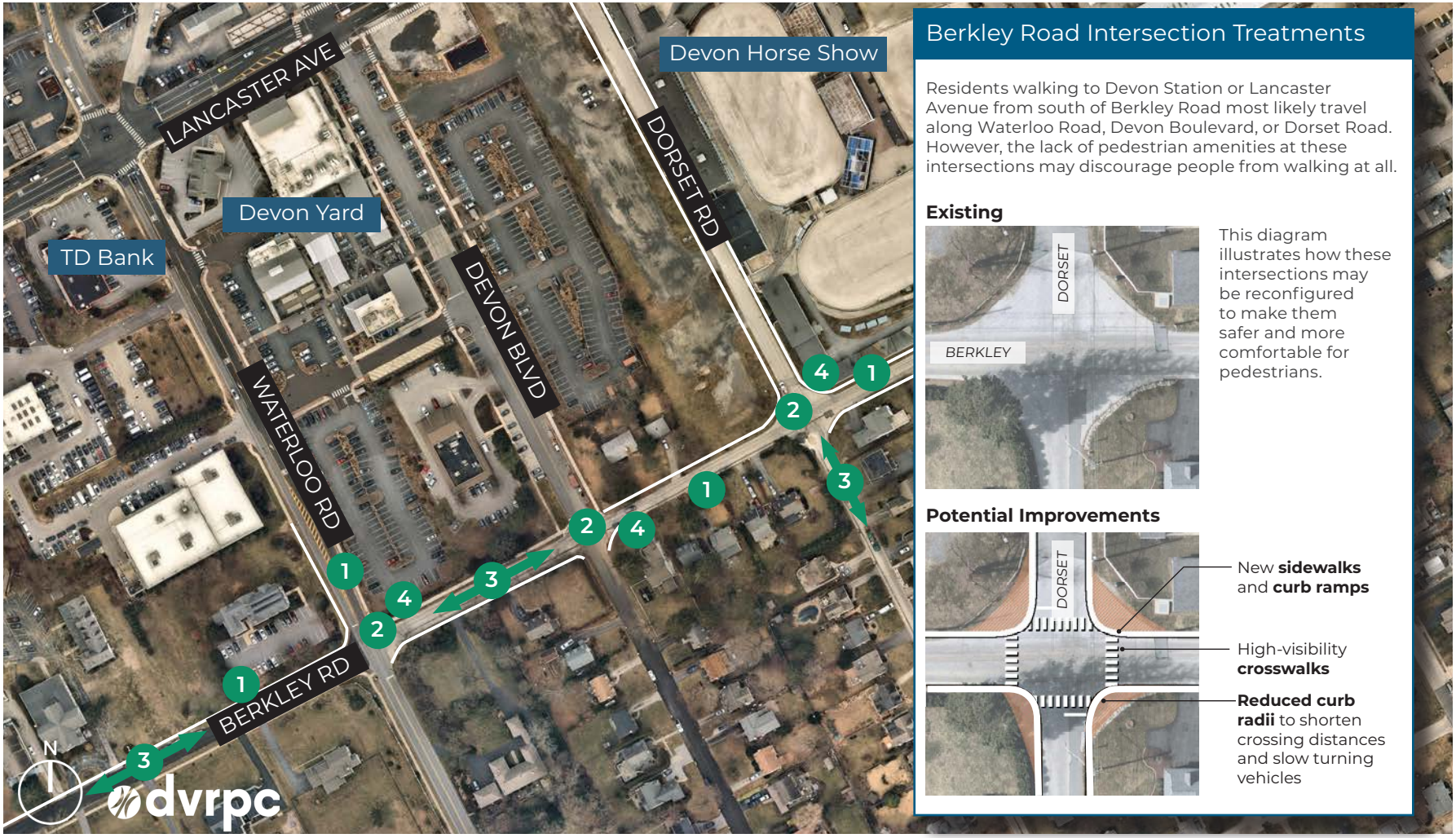
Neighborhood Greenway Treatments

A neighborhood greenway, sometimes called a bicycle boulevard, is a bike facility that can be used to calm traffic and prioritize bicycles along lower-traffic residential streets. Neighborhood greenways are shared roads that use a variety of tools and techniques to slow traffic and provide a low-stress environment for bicyclists.

Treatments may include:

- sharrows or other pavement markings;
- signage;
- removal of the centerline to enable motorists to more easily pass cyclists;
- bicycle-friendly speed bumps; and
- chicanes or other traffic-calming devices.

Figure 33: Berkley Road Conceptual Improvements



See p. 90 for description of conceptual improvements shown.

Imagery Source: Nearmap, 2020

Neighborhood Greenway Case Study: Before and After (Portland, Oregon)

Image Source: Google, 2009

Image Source: Google, 2012

In Portland, Oregon, a neighborhood greenway was implemented on low-volume segments of NE Going Street in 2010. The photos at left show small changes that helped to make Going Street a more bicycle-friendly route. Painted sharrows and speed tables can be found along much of the greenway corridor, indicating to motorists that they must slow down and share the road.

Image Source: Google, 2009

Image Source: Google, 2019

Despite being popular with bicyclists even before neighborhood greenway treatments were pursued, some parts of Going Street were visually transformed to embrace the presence of bicycle traffic. The intersection shown at left became home to colorful street artwork celebrating the bike community.

Image Source: Google, 2009

Image Source: Google,2011

At left, an intersection is shown that limits through traffic on Going Street to bicycles and pedestrians, forcing vehicles to turn onto a higher-volume street. This creates a refuge space for nonmotorized traffic to wait safely as they cross through the intersection. It also ensures that the greenway gives priority to people on bikes and on foot in areas with comparatively heavier vehicle traffic.

Chapter 6
Conclusion

Implementing the recommendations put forth in this report will require careful coordination between SEPTA, Easttown, and PennDOT, with ongoing input from local residents and stakeholders. This chapter includes a preliminary discussion of which partners would be responsibile for undertaking certain study recommendations. The study closes with a list of near-term and long-term strategies that can help bring the guiding principles laid out in Chapter 1 to reality in the Devon Station Area.

Conclusion

The *Devon Station Multimodal Access Study* offers aspirational planning guidance to municipal, state, and transit partners for creating a more walkable and bikeable station area in the years ahead.

The implementation of this report's recommendations will require ongoing coordination and decision making from all partners, including Easttown Township, SEPTA, and PennDOT. The concepts and policies these stakeholders choose to pursue will depend on their capacity and priorities. Some recommendations may be piloted or tested and adapted after iterative feedback from residents and other relevant individuals and agencies.

SEPTA is responsible for undertaking the major station site improvements referred to in the outyears of its recent capital budgets. They could also work with the Township and state to take on short-term interventions ,such as testing intersection and driveway reconfigurations and providing more bicycle amenities on the station property.

Changes to Route 30 and Waterloo Road—including any road diet or new crosswalks or other pavement markings—will require approval and investment from PennDOT.

The Township should pursue improvements to the walking and cycling experience on local roads, such as Berkley Road, Station Avenue, and Dorset Road. Some treatments, like signage and placemaking tools, may be easier and quicker to execute. Larger infrastructure upgrades, like sidewalks, will require Easttown officials to work closely with individual property owners and make the case to cooperatively advance the goals laid out in both this plan and the Comprehensive Plan. Community buy-in will be crucial to improving key multimodal corridors, generating appropriate land uses, and enhancing Devon Center's sense of place.

Funding for certain improvements may be secured through annual capital budgeting, while some of the specific interventions that deal with road safety and nonmotorized transportation facilities may be eligible for specialized grants from federal, state, or nonprofit entities. Some of the most relevant potential construction funding sources for pedestrian and bicycle projects include:

- DVRPC's Congestion Mitigation and Air Quality Improvement Program;
- PennDOT's Multimodal Transportation Fund, Transportation Alternatives Set-Aside, and Municipal Liquid Fuels Program; and
- the Commonwealth Financing Authority/ Pennsylvania Department of Community and Economic Development's Multimodal Transportation Fund.

Nonprofit and advocacy groups often seed small walkability projects with microgrants,

including America Walks Community Change grants, PeopleForBikes Community Grants, and AARP Community Challenge Grants. PBIC also provides examples of nongovernment funding sources.

The remainder of this chapter organizes the project recommendations under the guiding principles that were carried through the study process. Included with each principle are near- and long-term strategies that stakeholders can pursue in the station area, with page numbers for reference. These are roughly organized by their feasibility and time-sensitivity. The table uses icons to indicate municipal, transit, or state responsibility. In many cases, there are shared responsibilities among the three. A green "E" refers to Easttown Township, a red "S" refers to SEPTA, and a blue "P" refers to PennDOT.

Easttown, SEPTA, and Chester County should continue to collaborate with one another and relevant parties to explore and take on the strategies that are most opportune and of highest priority to ensure that Devon Station users can travel safely, across all modes, and to develop Devon Center into a well-rounded place to live, work, and play.

Strategy Table Key (pages 86–89)

- E — **Easttown Township**
- S — **SEPTA**
- P — **PennDOT**

Provide Safe Routes to Transit

Near-Term Strategies	Reference Pages	Responsible
Implement pedestrian and bicycle signage and pavement markings	54, 62, 66, 68, 76, 80	E S P
Work with property owners and PennDOT to resolve critical gaps in the sidewalk network	54, 55, 62, 66, 70, 76, 80, 81	E P
Formalize safe bicycle routes through neighborhood greenways on low-volume residential streets, including Berkley and Dorset roads	80	E
Install covered bicycle racks in the outbound station platform area	52	S
Request speed and engineering studies on Waterloo Road to determine the feasibility of lowering the speed limit to 25 or 30 mph in the station area	54, 66	E P
Work with PennDOT and adjacent property owners to close the diagonal driveway entrance to the station from the corner of Lancaster Avenue and Waterloo Road, and develop or test temporary circulation patterns that ensure ongoing access to existing businesses	62	S P
Tighten curb radii at corners using paint, epoxy material, or landscaping in the right-of-way	68, 72, 80	E P
Use temporary traffic patterns to evaluate alternatives for reconfiguring the intersection of N. Waterloo Road, Station Avenue, and the Devon Station driveway	66–72	E P
Determine feasibility of additional crosswalk(s) on state-owned roads, including Waterloo Road to the immediate north and south of the tunnel, and on the west leg of the intersection of Lancaster Avenue and Waterloo Road	54, 62, 66–72	P
Designate short-term parking areas for drop-offs and pick-ups of SEPTA passengers in order to improve circulation and safety for pedestrians and cyclists in the station parking lots	62	S
Long-Term Strategies		
Use the SEPTA station redesign as an opportunity to build and improve sidewalk and crosswalk connections, particularly along Waterloo Road, as well as improve internal circulation in station parking lots and provide clear separation of travel modes	52, 62	E S P
Consider new configurations to the Waterloo Road tunnel, and the intersection of Waterloo Road with Station Avenue and the station driveway, that create space for all modes of travel	52, 66–72	E S P
Build a complete nonmotorized network with sidewalk facilities, crossings, and bikeways that provide access to Devon Station from all major area origins and destinations	52–54, 66–72, 76, 80	E P
Address access management issues along Route 30 and work with property owners to close nonessential driveways and thereby promote a more predictable and safe experience for pedestrians and motorists on Lancaster Avenue	76	E P
Promote a culture of safety and respect for nonmotorized travelers through education and public messaging		E S P

Make Transit, Walking, and Biking the Modes of Choice

Near-Term Strategies	Reference Pages	Responsible
Continue pursuing sidewalk and crosswalk connectivity projects and make them a routine part of development review and approval	54, 55, 62, 66, 70, 76, 80	E P
Promote walking and biking to transit by educating users about preferred pedestrian and bicycle corridors and available amenities, such as the new Devon Boulevard crossing and the station's covered bicycle parking	54	E
Add covered bicycle parking to the station's outbound platform and work with local business owners to offer on-site bicycle parking	52	E S
Resolve critical accessibility gaps by adding sidewalks and crossings to priority segments, including Lancaster Avenue, Waterloo Road, and Berkley Road	54, 55, 62, 66, 70, 76, 80	E P
Add a shelter, benches, and paved waiting area to SEPTA Bus Route 106's westbound bus stop at Lancaster Avenue and Waterloo Road	62	E S P
Incorporate extensions to Devon in any road diet concepts studied and evaluated for Route 30 in Berwyn	73, 76	E P

Long-Term Strategies		
Implement a Complete Street on Route 30 from Berwyn to Devon, reallocating space for multimodal users in the commercial corridor	76	E P
Coordinate space on the station site for bus loops that can also accommodate drop-offs and corporate shuttles	62	S
Pursue high-quality, dedicated connections to bridge existing and future bicycle and pedestrian facilities with nearby regional trails		E

Promote Transit-Supportive Development Patterns

Near-Term Strategies	Reference Pages	Responsible
Work with owners of vacant or underutilized properties to attract transit-supportive uses—including multiunit, attached, or small-lot housing, as well as employment and services—and to pursue infill development	54–57	E S
Amend existing zoning ordinances that are inhospitable to mixed uses, diverse housing types, and walkable retail and services	55	E
Establish more flexible residential density thresholds and setback and height restrictions	54–56	E
Assess opportunities for shared parking	55, 62	E S
Seek formal input from SEPTA during development review in the station area	56, 66	E S

Long-Term Strategies		
Leverage SEPTA's Devon Station restoration project to evaluate land uses on properties adjacent to the station, and explore whether transit-supportive uses and configurations could be accomplished through the acquisition, transfer, and redevelopment of buildings and land	52	E S
Tailor planning efforts to support appropriate density and land uses for a growing Suburban Center	55	E
Develop and seek out financial and technical assistance programs with a focus on retrofitting Devon Center with a better transit orientation, such as facade and streetscape improvements	54	E
Collaborate with SEPTA to devise municipal regulatory structures that help meet shared land use goals in the station area, such as reduced parking minimums	54–56	E S

Enhance Sense of Place

Near-Term Strategies	Reference Pages	Responsible
Use temporary, pop-up, or tactical exhibits and events to test and demonstrate creative placemaking projects	57	E
Amenitize the public realm with seating, pedestrian-scale lighting, landscaping, public art, and other pieces of visual interest	53, 57, 70, 80	E S
Develop uniform branding that can be used to define the boundaries of Devon Center through gateway treatments, and to highlight focal points within the neighborhood	57, 70, 80	E

Long-Term Strategies	Reference Pages	Responsible
Acquire and develop nearby properties as new parks or public spaces that can be used passively, for informal gatherings, and for official neighborhood events	57, 62	E
Foster partnerships between property owners, businesses, residents, and creators to generate ongoing projects at different scales	57	E
Evaluate and refresh programming and visual identity to reflect the community's evolving values, needs, and composition over time	57	E
Leverage construction projects on local roadways to incorporate placemaking features—such as signage or pavement designs—in the right-of-way	57, 70, 80	E P

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ABSTRACT

The *Devon Station Multimodal Access Study* developed concepts to improve walking and biking access to Devon Station, on SEPTA's Paoli/Thorndale Regional Rail line. It also recommends land use strategies that complement the rail facility. Access to the station and mobility in the larger station area are currently constrained by an inconsistent sidewalk network, challenging intersections and driveways, and a lack of bicycle facilities. Planning improvements will require ongoing coordination between Easttown Township, SEPTA, Chester County, PennDOT, and other partners. Within the station footprint, recommendations include better organization of vehicle paths, safe pedestrian and bicycle paths, and preservation of the historic building. On adjacent land and streets, a TOD framework that concentrates new development around Devon Station, while also expanding safe multimodal facilities, can enable local residents and workers to walk, bike, or take mass transit more often. The DVRPC team also pinpointed four focus areas in which to prioritize improvements that target the most conspicuous safety and access issues: the station's south parking lot, N. Waterloo Road, Lancaster Avenue, and Berkley Road.

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