

DECEMBER 2015

Route 100 to 6

Connecting KOP

The Benefits of SEPTA's
King of Prussia Rail Project



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Contents

- 3** Message from the Economy League
- 4** Toward World Class Infrastructure in Greater Philadelphia
 - 6** About World Class Greater Philadelphia
 - 7** The World Class Agenda
 - 8** Priority Infrastructure Strategies for the Region
 - 10** King of Prussia
- 12** Understanding the Proposed King of Prussia Rail Project
 - 14** An Overview of the King of Prussia Rail Project
 - 16** The Benefits of King of Prussia Rail
 - 20** Impact of Capital Expenditures
 - 22** Travel Time & Cost Savings
 - 26** Safety & Environmental Impacts
 - 28** Strengthening Connections Between Economic Hubs: Perspectives from Other Regions
 - 30** Private Development & Redevelopment
 - 34** Employment & Residential Growth
 - 36** King of Prussia Rail's Long-Term Benefits for the Region
- 39** Acknowledgments & Credits



**Economy
League**

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The Economy League is a civic catalyst that brings together leaders and organizations to address the most challenging issues facing Greater Philadelphia. Built on our foundation of independent, high-quality analysis and practical insight, we spark new ideas, develop strategies, and galvanize action to enhance the region's global competitiveness. Learn more at economyleague.org

Cover and inside cover photos courtesy of SEPTA.



Message from the Economy League

We all can appreciate the enduring legacy of major infrastructure investments. From the construction of the Ben Franklin Bridge in the early part of the 20th century to the completion in the 1980s of the Center City commuter tunnel that wove together our regional rail system, Greater Philadelphia benefits from an extensive endowment of infrastructure investments that has served as the platform for regional economic vitality and quality of life.

It's no secret that much of our existing transportation infrastructure is old and in dire need of investment. However, while we work to address the considerable backlog of deferred maintenance and repair facing many of our roads, bridges, and transit assets, we also have to keep an eye on the future and lay the groundwork for strategic expansion that aligns our transportation system with 21st century needs.

As our region's footprint has evolved over time, strengthening connections between Greater Philadelphia's major centers of commerce and culture remains a critical priority. For a region that perennially grapples with expanding access to economic opportunity, it's notable that we still lack a reliable and direct transit connection between Philadelphia and King of Prussia—the largest job center in the region outside of the city.

Advancing a project of the scale and cost of the proposed King of Prussia Rail extension will require sustained business and civic collaboration and dialogue. At the Economy League, we are committed to helping facilitate this conversation. We believe that a shared

understanding of the project's potential benefits is fundamental to productive dialogue, so we were happy to partner with SEPTA, DVRPC, and Econsult Solutions to conduct the analysis presented in this report. In the following pages, you'll find an assessment of the benefits that King of Prussia Rail is expected to bring to people and businesses in and around King of Prussia as well as the region as a whole.

We haven't been in a position to talk meaningfully about transit expansion in a long time. Today we find ourselves with an opportunity to advance an investment that could provide benefits for generations. As we work together to build the region's transportation network of the future, we must abandon the notion that infrastructure investment is a zero-sum game. Being World Class means finding a way to take the both/and perspective in thinking about how we want to strengthen and grow our transportation system. We hope the analysis presented in this report helps advance a productive conversation about what King of Prussia Rail can mean for Greater Philadelphia, and—more importantly—the people who call it home.



STEVE WRAY

*Executive Director, Economy League
of Greater Philadelphia*



ROBERT J. MCNEILL

*Managing Partner, Greater Philadelphia
Region, Deloitte, LLP*

*Chair, Economy League of Greater
Philadelphia Board of Directors*

Toward World Class Infrastructure in Greater Philadelphia

The World Class Infrastructure agenda lays out priority goals and strategies to make our region's infrastructure more effective and reliable, contribute to a more productive and sustainable regional economy, and enhance quality of life.



About World Class Greater Philadelphia

The Economy League's World Class Greater Philadelphia agenda is a business and civic-led blueprint for regional growth and opportunity in the Philadelphia metropolitan area.

Built with input from more than 1,700 regional business, nonprofit, government, labor, and community leaders, the World Class agenda lays out goals and priority strategies for improving education and talent development outcomes in Greater Philadelphia, boosting business growth and making our infrastructure more effective and reliable. These goals and strategies set the stage for immediate initiatives and campaigns to be taken on by World Class partners and provide a framework for ongoing research, monitoring, and strategy adjustment by the Economy League.



The World Class Agenda

PRIORITIES

EDUCATION & TALENT DEVELOPMENT

VISION: Greater Philadelphia has a talented workforce where every resident has the skills needed to compete in the global economy.

BUSINESS GROWTH

VISION: New and growing businesses fuel a dynamic regional economy that builds on Greater Philadelphia's industry and research strengths and connects to global opportunities.

INFRASTRUCTURE

VISION: Greater Philadelphia has convenient connections to regional, national, and global destinations and efficiently provides the key infrastructure necessary for business success and high quality of life.

FOCUS AREAS

EARLY LEARNING

K-12 EDUCATION

POSTSECONDARY CREDENTIALS

WORKFORCE READINESS

STARTING & GROWING BUSINESSES

INNOVATION

SELLING TO THE WORLD

GLOBAL & NATIONAL CONNECTIONS

REGIONAL MOBILITY

SUSTAINABLE SYSTEMS

DESTINATIONS

All of the region's children are prepared to start school.

All of the region's children graduate from high school college- and work-ready.

Greater Philadelphia is a national leader in postsecondary credential attainment.

The region's workforce skills adapt and match industry needs and support family-sustaining wages.

Greater Philadelphia is a place where entrepreneurs can successfully create and grow businesses to scale.

Greater Philadelphia is a leader in bringing innovative ideas and technologies to the marketplace.

Greater Philadelphia's businesses capitalize on global export and investment opportunities.

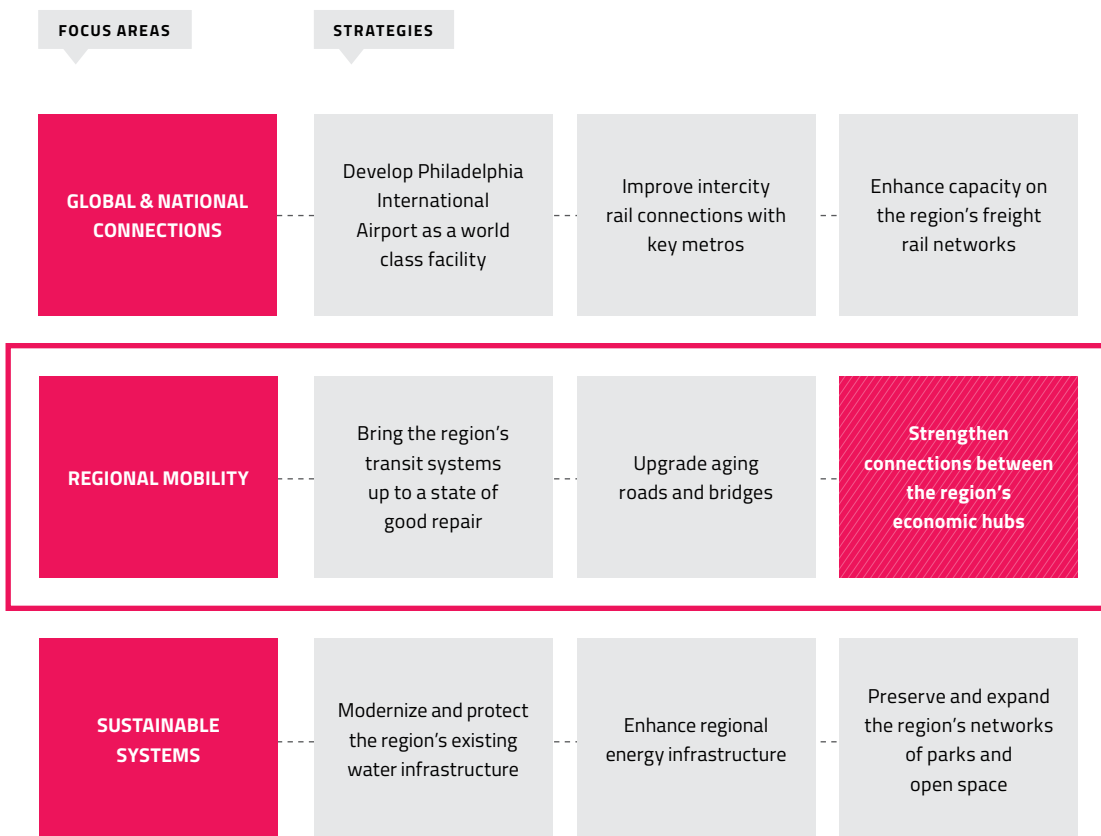
Greater Philadelphia connects with the largest and fastest-growing metropolitan areas in the world.

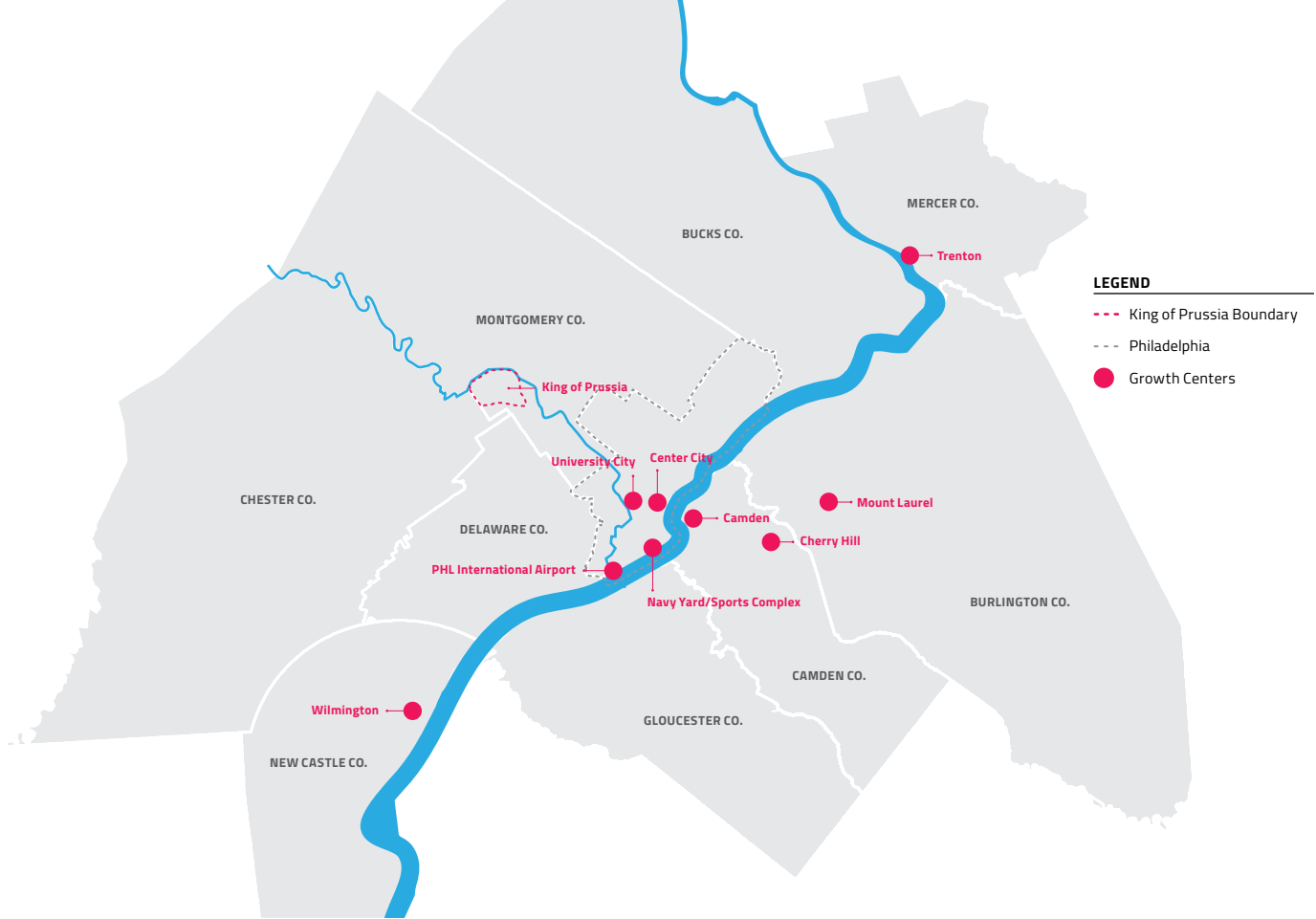
The region's transit and road networks provide convenient and efficient connections to communities and employment centers.

Modernized energy and water systems and open space networks enhance business performance and quality of life.

Priority Infrastructure Strategies for the Region

Greater Philadelphia's infrastructure plays a major role in facilitating commerce and providing access to opportunity. Our region has tremendous infrastructure strengths, including our public transportation and highway networks, rivers, and strategically located land assets. Together we must address the challenge of maintaining existing systems while finding innovative ways to embark on new projects that will make our businesses more competitive and day-to-day life in our region more productive. The World Class Infrastructure agenda lays out priority goals and strategies to make our region's infrastructure more effective and reliable.





King of Prussia is one of several metropolitan centers targeted by DVRPC for future growth and development as part of the Connections 2040 long-range plan for the region.

FOCUS AREA

REGIONAL MOBILITY

A transportation network that allows easy movement between communities and economic centers by integrating public transit, roads, and active modes of transportation is critical to regional growth and competitiveness. Such transportation systems ease congestion, expand access to economic opportunity, and help preserve quality of life. Metropolitan areas that have high-performing multimodal transportation systems have a competitive advantage over regions that do not. Investing in Greater Philadelphia’s transportation infrastructure will enhance the appeal of the region to both businesses and employees, minimize the risk of costly service disruptions, and improve the system’s reliability, security, and safety.

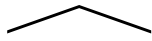
PRIORITY STRATEGY

Strengthen transit connections between Greater Philadelphia’s economic hubs

Greater Philadelphia’s centers of population and employment have evolved over the past several decades, but, in most parts of the region, the passenger rail network has not. The decline in the number of jobs in our region’s core communities coupled with the dispersal of employment across the region have reduced transportation access and limited economic opportunity for people across Greater Philadelphia.

Today, several major hubs of employment and commerce, including King of Prussia, lack multimodal transportation connections to each other and to Center City. These centers are critical drivers of Greater Philadelphia’s economy, but congested highways and limited transportation alternatives challenge accessibility and inhibit future growth.

Strategic investments to strengthen transportation connections between Greater Philadelphia’s economic hubs will enhance regional mobility and, in turn, drive growth and opportunity across the region.



King of Prussia

Home to 4.4 million square feet of retail space, 17 million square feet of office, industrial, and flex space, and approximately 50,000 jobs, King of Prussia is Montgomery County's economic hub and the largest employment center in our region outside of Philadelphia. With a relatively small residential base of 20,000 people, it is one of the most significant net importers of labor in the country—95 percent of workers in King of Prussia commute from elsewhere. While King of Prussia offers employment opportunities across skill and income levels, limited and unreliable transit service make commutes difficult for workers without access to a vehicle.

Today, over 90% of commuters to King of Prussia drive to work, with nearly 60% traveling more than 30 minutes and over 30% traveling for 45 minutes or more.¹ Commuting figures have grown steadily in recent years, with nearly 8,000 more people traveling to King of Prussia for work in 2013 than in 2003.

King of Prussia is also a major destination for shoppers and tourists, with 25 million visits to the King of Prussia Mall, nearly 2 million visits to the Valley Forge National Historical Park, and 1 million visits to the Valley Forge Casino Resort each year. King of Prussia's 2,600 hotel rooms account for nearly one-third of the hotel inventory in Montgomery County.

Growth in King of Prussia

Recent and ongoing developments are evidence of growth in King of Prussia. On the property that was once home to the Valley Forge Golf Course, development is underway on the Village at Valley Forge, a 122-acre retail, office, and residential

project that will include a 390,000 square-foot mixed-use King of Prussia Town Center. The \$150 Million Valley Forge Casino resort opened in 2012 and the King of Prussia Mall is adding 155,000 square feet of retail. In 2014, Upper Merion Township approved new zoning regulations for the King of Prussia Business Park that permit multi-family housing and complementary service retail and include additional architectural and land use guidelines to encourage pedestrian activity. This rezoning, spearheaded by the King of Prussia Business Improvement District, is part of a broader strategy to transform the sprawling Business Park into a dense live-work-play center.

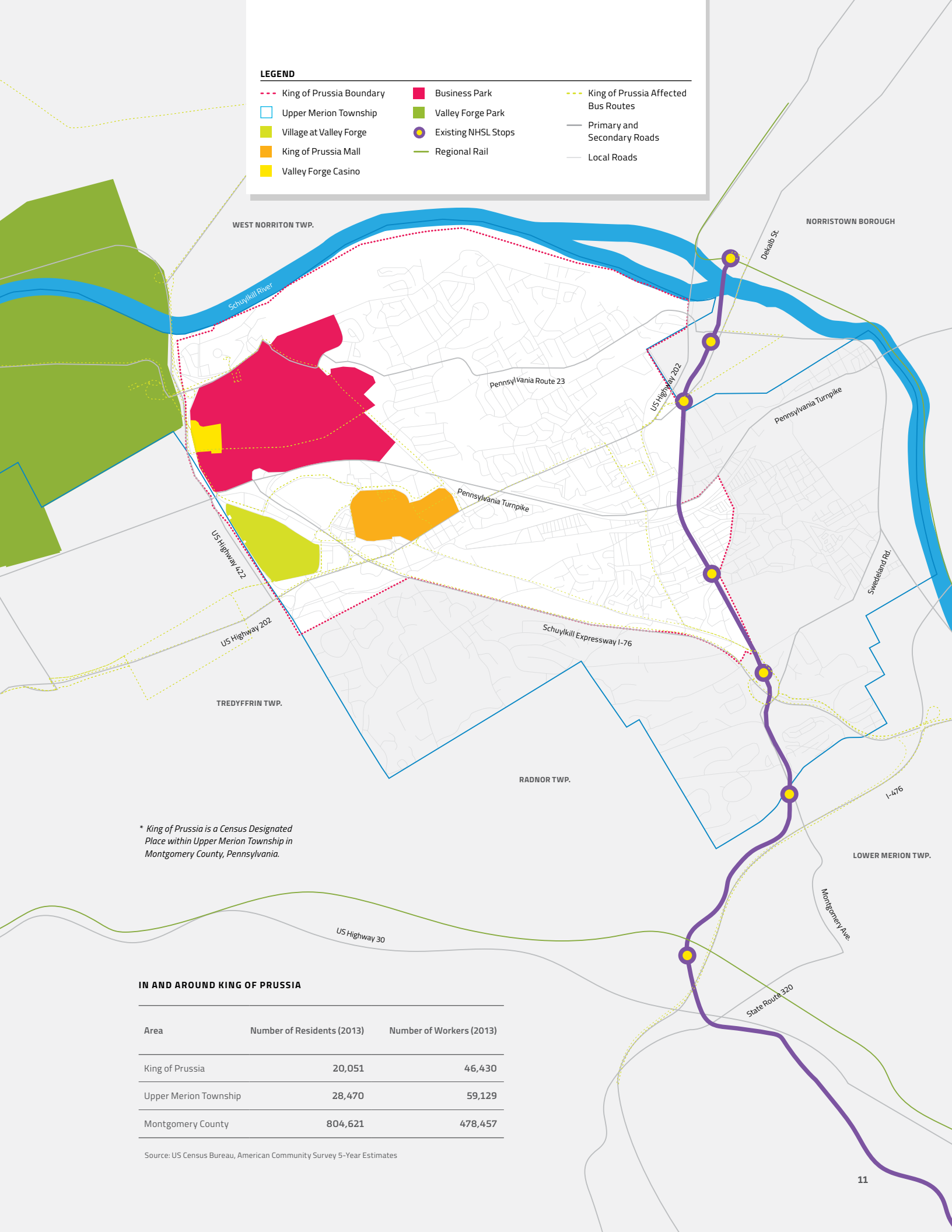
While King of Prussia's many existing assets and strong investment pipeline point to a bright future for the area, vehicular congestion and limited transportation choices present obstacles to sustained growth. Addressing these challenges and accommodating future growth will require strategic, ongoing collaboration from area leaders.

¹US Census Bureau, American Community Survey 2013 Five-Year estimates

Automobile and bus trip times to King of Prussia often depend upon travel conditions along Interstates 76 and 476 and Routes 202 and 422, all of which experience high congestion during peak travel times.

LEGEND

- - - King of Prussia Boundary
- Upper Merion Township
- Village at Valley Forge
- King of Prussia Mall
- Valley Forge Casino
- Business Park
- Valley Forge Park
- Existing NHSL Stops
- Regional Rail
- - - King of Prussia Affected Bus Routes
- Primary and Secondary Roads
- Local Roads



* King of Prussia is a Census Designated Place within Upper Merion Township in Montgomery County, Pennsylvania.

IN AND AROUND KING OF PRUSSIA

Area	Number of Residents (2013)	Number of Workers (2013)
King of Prussia	20,051	46,430
Upper Merion Township	28,470	59,129
Montgomery County	804,621	478,457

Source: US Census Bureau, American Community Survey 5-Year Estimates

UNDERSTANDING THE PROPOSED

King of Prussia Rail Project

By offering a new transit option for commuters and other travelers, the proposed King of Prussia Rail Project is intended to boost mobility, reduce congestion, and increase connectivity in the region.

An Overview of the King of Prussia Rail Project

The proposed extension of SEPTA's Norristown High Speed Line, known as the King of Prussia Rail Project, is intended to improve mobility and accessibility for travelers throughout the region by increasing transit options. By providing a "one-seat ride" to King of Prussia from either the 69th Street Transportation Center in Upper Darby or the Norristown Transportation Center, the project promises to create a critical transit link between King of Prussia and Philadelphia as well as Norristown and other destinations in Montgomery and Delaware Counties.

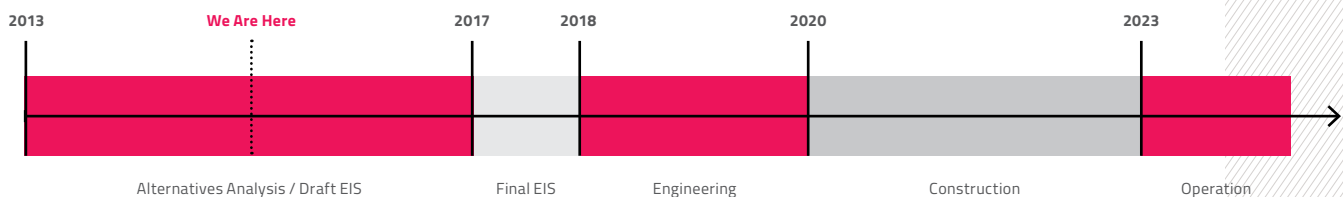
Project Overview

The King of Prussia Rail project proposes adding a new elevated branch to the Norristown High Speed Line running approximately four miles to King of Prussia from a junction with the existing line between the Hughes Park and Dekalb Street stations. SEPTA is currently evaluating five

alternative alignments for this extension. These alignments were selected from more than 30 alternatives during a rigorous screening process. Public input along with engineering and planning studies will help SEPTA ultimately identify a Locally Preferred Alternative.

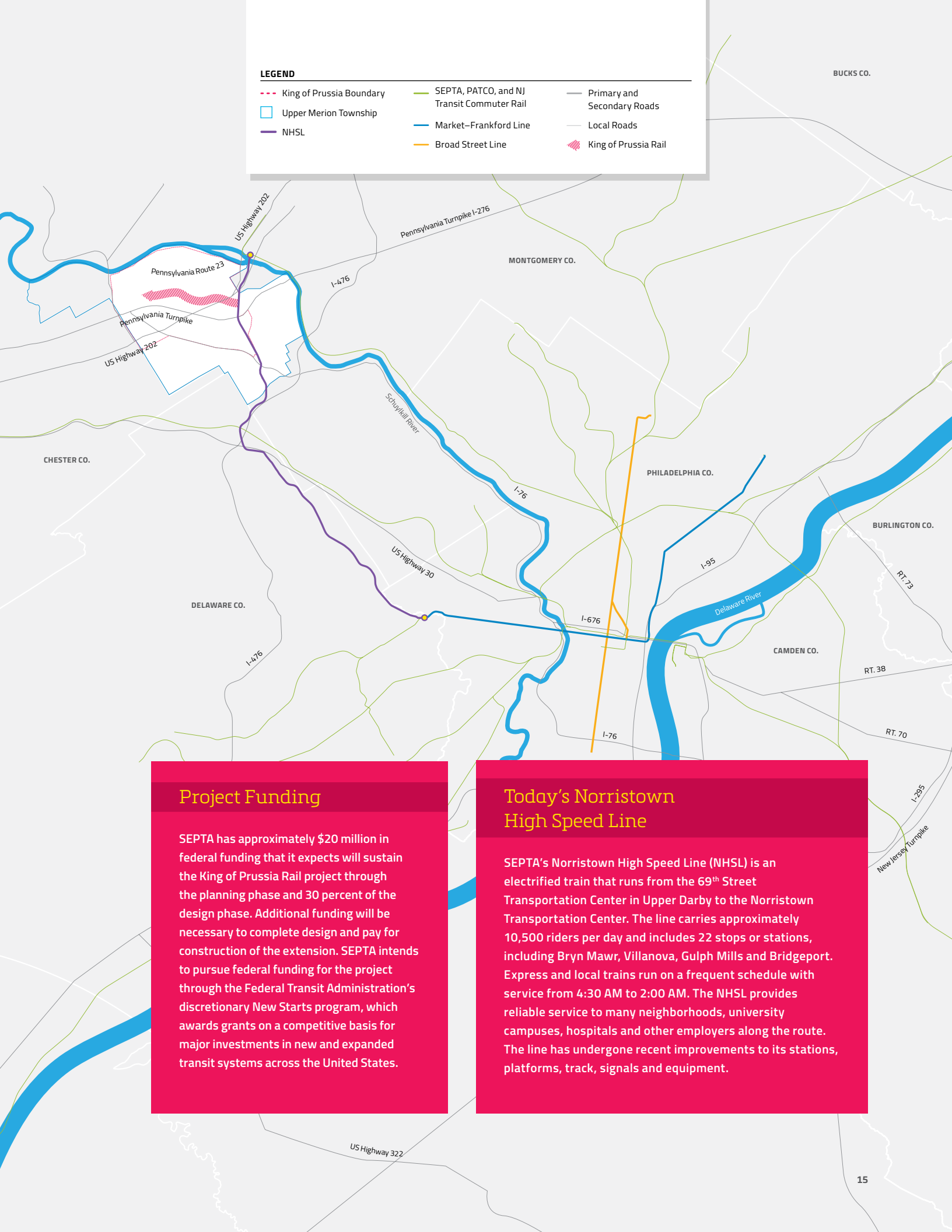
Project Schedule

Before the King of Prussia Rail Project can be constructed, the proposal must undergo rigorous planning and design review.



LEGEND

- King of Prussia Boundary
- Upper Merion Township
- NHSL
- SEPTA, PATCO, and NJ Transit Commuter Rail
- Market–Frankford Line
- Broad Street Line
- Primary and Secondary Roads
- Local Roads
- ▨ King of Prussia Rail

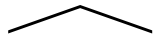


Project Funding

SEPTA has approximately \$20 million in federal funding that it expects will sustain the King of Prussia Rail project through the planning phase and 30 percent of the design phase. Additional funding will be necessary to complete design and pay for construction of the extension. SEPTA intends to pursue federal funding for the project through the Federal Transit Administration's discretionary New Starts program, which awards grants on a competitive basis for major investments in new and expanded transit systems across the United States.

Today's Norristown High Speed Line

SEPTA's Norristown High Speed Line (NHSL) is an electrified train that runs from the 69th Street Transportation Center in Upper Darby to the Norristown Transportation Center. The line carries approximately 10,500 riders per day and includes 22 stops or stations, including Bryn Mawr, Villanova, Gulph Mills and Bridgeport. Express and local trains run on a frequent schedule with service from 4:30 AM to 2:00 AM. The NHSL provides reliable service to many neighborhoods, university campuses, hospitals and other employers along the route. The line has undergone recent improvements to its stations, platforms, track, signals and equipment.



The Benefits of the King of Prussia Rail Project

Public transportation is about more than connecting people to destinations.

Transit investment can also shape land use and development patterns, generate jobs and enable economic growth, and provide environmental benefits.

The purpose of the King of Prussia Rail Project is to provide faster, more reliable transit service and improve transit connections between major destinations in the area. The need for the project came about due to lengthening travel times to King of Prussia, delays due to congestion, and areas underserved by public transit. A direct transit link between King of Prussia, Philadelphia, Norristown, and Greater Philadelphia's Main Line communities would create significant travel time and cost savings for employees, residents, and retail customers.

Benefits of Increased Transit Connectivity:



Construction spending that spurs economic activity and supports jobs



Travel time savings for drivers and transit users in the region



Reduced congestion and pollution



Increased development and property values due to additional connectivity



Job growth due to employees working in new office and retail space



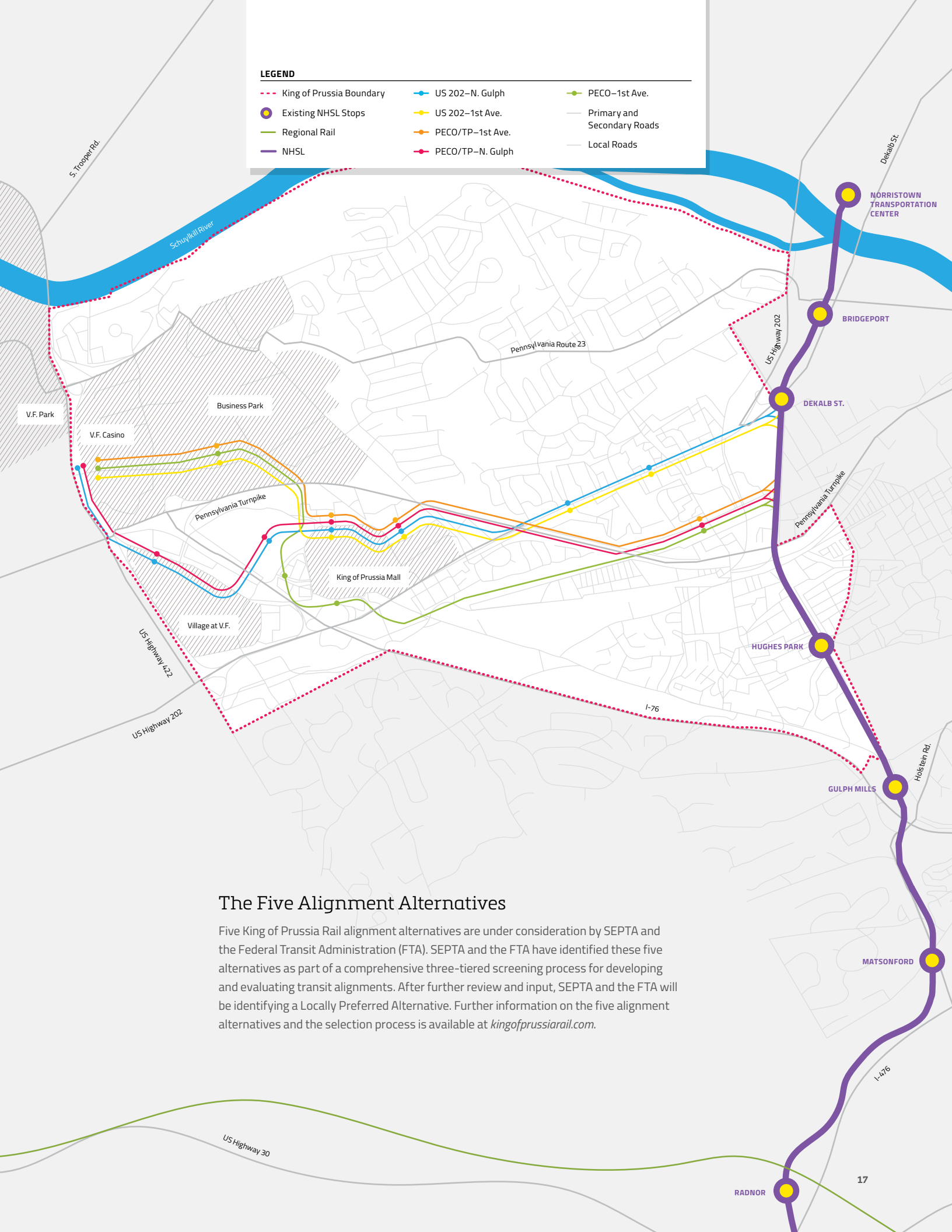
New residents attracted by the convenience of location

LEARN MORE

The content of this report draws from the December 2015 "Understanding the Economic Impacts of SEPTA's Proposed King of Prussia Rail Project" economic impact study, available online at economyleague.org and kingofprussiarail.com. The economic impact study was produced by the Economy League of Greater Philadelphia and Econsult Solutions, Inc. on behalf of SEPTA. In addition to complete findings, the study also includes an explanation of methodology.

LEGEND

- King of Prussia Boundary
- Existing NHSL Stops
- Regional Rail
- NHSL
- US 202-N. Gulph
- US 202-1st Ave.
- PECO/TP-1st Ave.
- PECO/TP-N. Gulph
- PECO-1st Ave.
- Primary and Secondary Roads
- Local Roads



The Five Alignment Alternatives

Five King of Prussia Rail alignment alternatives are under consideration by SEPTA and the Federal Transit Administration (FTA). SEPTA and the FTA have identified these five alternatives as part of a comprehensive three-tiered screening process for developing and evaluating transit alignments. After further review and input, SEPTA and the FTA will be identifying a Locally Preferred Alternative. Further information on the five alignment alternatives and the selection process is available at kingofprussiarail.com.

The Benefits of the King of Prussia Rail Project

Projected Ridership

The Norristown High Speed Line and the six SEPTA buses that serve King of Prussia accommodate an estimated 5.8 million trips every year.

The addition of King of Prussia Rail service is expected to increase ridership on the NHSL by 66% to 81%. Combined ridership on the extended NHSL and buses serving King of Prussia is expected to total between 7.3 million and 8.0 million trips each year—an increase of between 25% and 37% over total transit ridership. This projected increase reflects the expected shift of existing drivers to transit due to the time savings and additional connectivity provided by the King of Prussia Rail Project.

Estimating Impact

Projected King of Prussia Rail impacts include cost-savings due to reduced travel times and distances as a result of shifts in the traffic

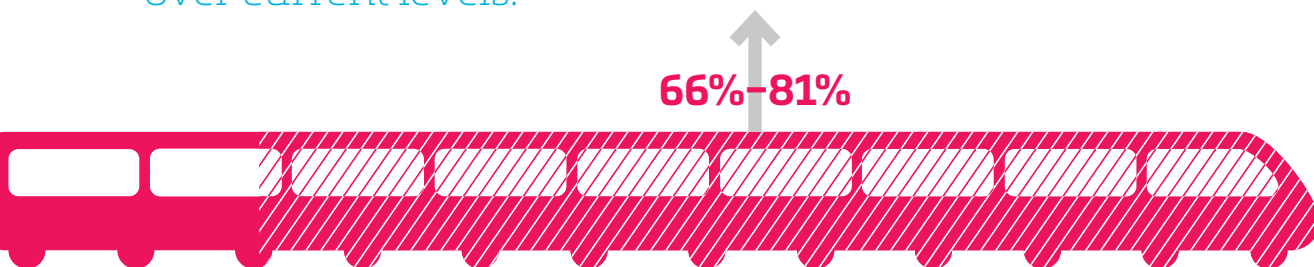
patterns and speed along the reconfigured transportation system, local spending generated by the capital construction phase of the project, and commercial and residential development in adjacent and nearby communities.

Interpreting Estimates of Economic Impact

The economic benefits presented in this report are meant to serve as estimates, not exact values. While approximate, these projections are based on defensible estimation methods. Because the estimates in this report represent different types of values—including wealth generation via earnings, additional tax revenues, and avoided costs—they cannot be summed to produce a single number representing the aggregate economic benefit associated with the King of Prussia Rail Project.

²Calculations of future ridership are based on current population estimates. Ridership projections were modeled by DVRPC and do not account for additional demand associated with development projected to occur as a result of King of Prussia Rail.

With the addition of King of Prussia Rail service, NHSL ridership is expected to increase between 66% and 81% over current levels.



Key Findings:

Benefits of the King of Prussia Rail Project

- 1** **The estimated total project cost** of \$1.0 billion to \$1.2 billion is anticipated to generate between \$1.1 and \$1.3 billion in local economic activity.³
 - 2** **Transit travel time savings** to King of Prussia are projected at 30+ minutes from Center City, 20+ minutes from Norristown, and 10+ minutes from Upper Darby.
 - 3** **Drivers switching to transit** as a result of the King of Prussia Rail Project would result in an annual reduction of up to 18 million vehicle miles traveled.
 - 4** **King of Prussia Rail is projected to stimulate** an average of approximately 310,000 square feet of new real estate development in King of Prussia per year.
 - 5** **New office space and residential development** spurred by the rail extension would accommodate an additional 1,200 employees and 400 new residents per year.
-

³ In this analysis, local labor and spending refers to the five-county region of southeastern Pennsylvania.

Impact of Capital Expenditures

The construction phase of the King of Prussia Rail Project is expected to support local spending as materials are acquired and temporary construction jobs are created to build the new railway.

Construction is estimated to cost between \$1.0 billion and \$1.2 billion in 2015 dollars and last three years. Both elevated and at-grade design options were considered as part of SEPTA's planning process, but constraints to ground-level construction and operation—severe impacts to local roadways, residents, and businesses—led to the decision to utilize elevated structures with at-grade operation only in areas that would have minimal impact to the community.

KING OF PRUSSIA RAIL CONSTRUCTION IMPACTS IN SOUTHEASTERN PENNSYLVANIA

Total Construction Employment*	5,400–6,300 jobs
Direct Jobs	700–800 jobs
Indirect Jobs	2,700–3,100 jobs
Induced Jobs	2,100–2,400 jobs

Total Construction Earnings	\$514.7–\$601.8 million
Direct	\$113.7–\$133.1 million
Indirect	\$287.8–\$336.4 million
Induced	\$113.2–\$132.3 million

Total Construction Spending Output**	\$1,122.8–\$1,311.6 million
Direct	\$246.4–\$297.6 million
Indirect	\$570.9–\$665.9 million
Induced	\$305.6–\$357.2 million

*Total employment for temporary construction jobs is presented in job years.

**Total spending output includes total labor income.


Dollar estimates are presented as 2015 values.

FISCAL IMPACTS OF KING OF PRUSSIA RAIL CONSTRUCTION SPENDING

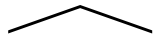
	Estimated Revenues
Income Taxes	\$9.3–\$10.8 million
Sales Taxes	\$8.4–\$9.4 million
Business Taxes	\$2.0–\$2.3 million
Total Tax Revenues	\$19.7–\$22.1 million

Understanding Direct, Indirect, and Induced Economic Activity

This section presents estimates of direct spending and employment as a result of construction as well as the multiplier effects of this spending in terms of indirect and induced impacts. **Direct impacts** include labor directly employed on site and within the local construction industry. **Indirect impacts** include spending on materials, equipment, and professional services. **Induced impacts** include spending supported by labor income paid to workers directly and indirectly employed as a result of the project. This spending is directed to a variety of industries including food, entertainment, housing, retail, and transportation.



Construction would sustain an estimated 5,400–6,300 direct, indirect, and induced jobs in southeastern Pennsylvania, supporting \$515 million–\$602 million in worker earnings.



Travel Time & Cost Savings

King of Prussia Rail service would considerably shorten the duration of the average transit trip to King of Prussia from locations across the region. Reducing commute times and congestion makes travel more reliable and cost effective.

Travel Time

Introducing a faster and more convenient option for getting to work can lower commute costs for workers and help employers attract employees. In addition to reducing travel times and costs, public transportation can make for higher-value commutes by allowing passengers to use travel time for business or other productive or enjoyable activities.



TIME SAVINGS FOR TRANSIT RIDERS

The addition of King of Prussia Rail service is expected to reduce travel time for existing transit riders by an estimated **104,000 to 217,000 hours per year, valued at \$2.6 million–\$4.7 million.***



TIME SAVINGS FOR DRIVERS

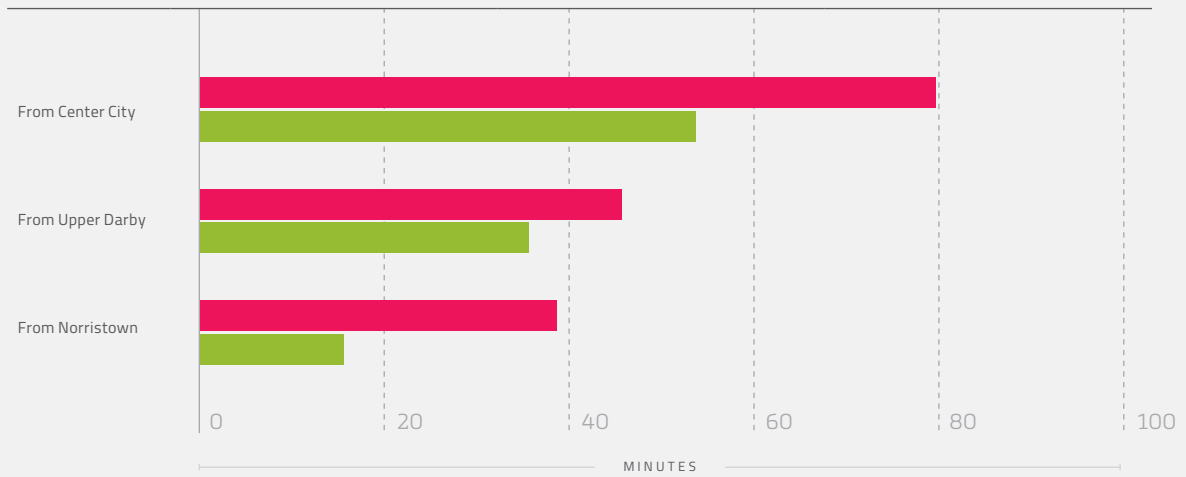
Less-congested routes as a result of the introduction of a rail transit option to King of Prussia will save drivers travel time as well. Time savings for drivers are estimated at between **1.7 million–2.1 million hours per year, valued at \$36.4 to \$44.5 million.***

*Time savings are calculated using US Department of Transportation guidelines and are based on a percentage of median hourly salary for the region. Business travel is valued at a higher rate than personal travel.

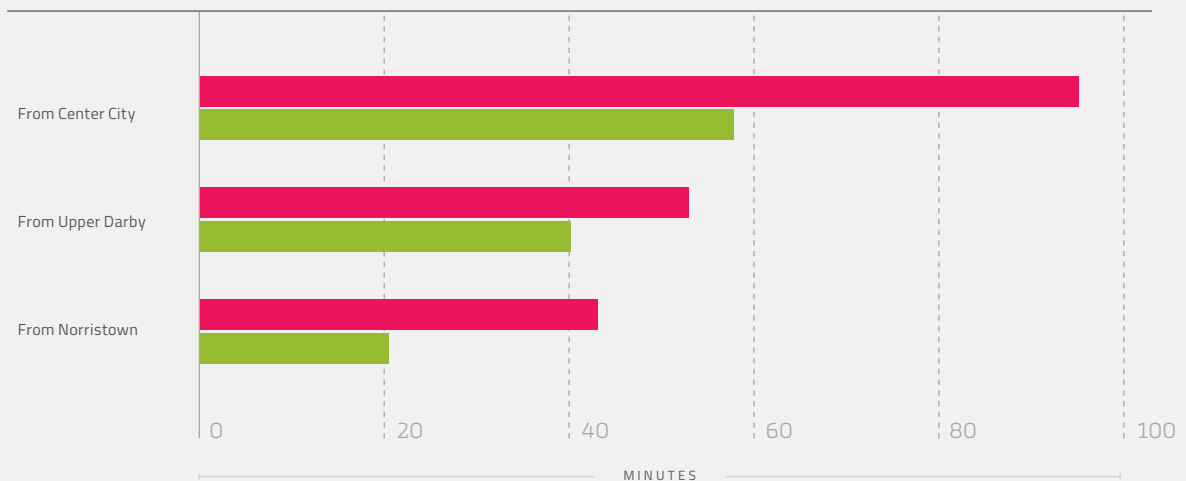
Travel Time Savings

King of Prussia Rail service would considerably shorten the duration of the average transit trip to King of Prussia from locations across the region.

TO KING OF PRUSSIA MALL



TO KING OF PRUSSIA BUSINESS PARK



 Current Transit Trip Time  Estimated Transit Trip Time with KOP Rail

Travel Time & Cost Savings

Vehicle Miles Traveled

Some of the most congested roadways in the region converge in or near King of Prussia, including Interstate 76, Interstate 476, US Route 202, and US Route 422. By offering a congestion-free alternative for travel to King of Prussia, the King of Prussia Rail Project is anticipated to prompt travelers to choose public transit over driving for some trips.

The addition of King of Prussia Rail service is **expected to reduce automobile use in the region by 14.6 million–18.4 million miles** traveled each year.

This reduction in vehicle miles traveled will lead to cost savings for fuel, car maintenance, and road and pavement maintenance.



COST SAVINGS FOR FUEL:

**\$2.6–\$3.2
MILLION**

PER YEAR



COST SAVINGS FOR
CAR MAINTENANCE:

**\$900,000–
\$1.1 MILLION**

PER YEAR



COST SAVINGS FOR
ROAD AND PAVEMENT
MAINTENANCE:

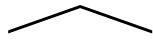
**\$350,000–
\$430,000**

PER YEAR

KOP

KING OF PRUSSIA

A direct transit link between King of Prussia, Philadelphia, Norristown, and Greater Philadelphia's Main Line communities would create significant travel time and cost savings for employees, residents, and shoppers.



Safety & Environmental Impacts

By encouraging drivers to switch to transit, the King of Prussia Rail Project would relieve congestion and reduce vehicle miles traveled. Reduced vehicle travel translates into safety benefits for drivers by way of fewer accidents and results in environmental benefits for all by cutting air pollution levels.

Safety Benefits

As vehicle counts approach roadway capacity, average travel speeds slow and reliability falls. Overcrowded conditions yield high crash rates and wide variations in day-to-day travel time. Expansion of transit can enhance travel safety by alleviating overcrowded road conditions, reducing collisions and associated insurance costs, personal losses, and emergency response costs.



Accident Rates of Cars, Bus Transit, & Rail Transit

A reduction in vehicle miles traveled decreases accidents and makes roadways safer. In the United States, car travel leads to approximately 1.14 deaths and 80 nonfatal injuries per 100 million annual vehicle miles traveled, and bus transit leads to another 0.65 deaths and 53.2 nonfatal injuries per 100 million annual vehicle miles traveled.⁴

Rail transit fatalities occur at a much lower rate of about 0.03 deaths and 33 nonfatal injuries per 100 million annual passenger miles traveled.⁵ By reducing miles traveled by personal vehicles and increasing the number of rail transit passenger miles traveled, King of Prussia Rail would reduce the number of annual deaths and injuries due to road accidents in the region.

⁴ US Department of Transportation, Large Truck and Bus Crash Facts 2012
⁵ 2013 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance," US Department of Transportation.

Expansion of transit can enhance travel safety by alleviating overcrowded road conditions, reducing collisions and associated insurance costs, personal losses, and emergency response costs.

Environmental Benefits

Fewer miles driven and reduced engine idling time translates into lower levels of air pollution from mono-nitrogen oxides, volatile organic compounds, greenhouse gases, and particulate matter emitted in vehicle exhaust. The estimated total value of air pollution reduction associated with King of Prussia Rail ranges from approximately \$1.5 million to \$1.9 million annually.* This value of reduced pollution represents avoided costs associated with mitigation of environmental damage caused by vehicular emissions.

*Pollution reduction monetized in accordance with Department of Transportation guidelines where applicable.

AIR POLLUTION ANNUAL REDUCTION DUE TO DECREASED VEHICLE MILES (TONS)

Vehicle Emissions Reductions	
CO2	5,200–5,800
SO2	0.29–0.36
CO	175–213
NOX	14.9–17.2
VOC	18.8–23.7
PM10	1.9–2.4

The value of air pollution reduction as a result of King of Prussia Rail is estimated to be \$1.5–\$1.9 million per year.



Above: SEPTA bus providing service to Center City Philadelphia, Valley Forge, and King of Prussia. Photo courtesy of SEPTA.

Strengthening Connections Between Economic Hubs: Perspectives from Other Regions

SPOTLIGHT

WMATA Silver Line (Washington, DC)

The \$2.9 billion Phase 1 of the Washington Metropolitan Area Transit Authority's (WMATA) new Silver Line opened in 2014 after five years of construction, marking the first addition to Washington DC's commuter rail system in 23 years.

The project added 11.7 miles of track and five stations between West Falls Church and Reston, Virginia. Four of the new stations are clustered around Tysons, a major suburban commercial hub. Anchored by the Tysons Corner Center and Tysons Galleria shopping malls and home to approximately 105,000 daytime workers, Tysons is the 12th largest employment center in the US and the largest business district in the country outside of a major city. Thanks to the Silver Line and numerous development projects, Tysons is undergoing a transformation into a mixed-use, transit-oriented hub.

Silver Line and Tysons:

- > **Reducing Congestion:** Within the first year of Silver Line service, a decline in traffic in Tysons was found along Route 123, a major artery cutting through Fairfax County, with some intersections seeing 15% fewer cars during peak hours.⁶
- > **Catalyzing Development:** More than 105 million square feet of new development are in the construction pipeline within a half-mile of a Silver Line Metrorail station, including 20 development projects that have broken ground.⁷
- > **Attracting Businesses:** Major firms including Intelsat, Cvent, and EY have cited proximity to the Silver Line as a determining factor in their decisions to open or retain operations in and around Tysons.

⁶ Luz Lazo, "Year-old Silver Line is celebrated as a catalyst for change in Tysons Corner," *The Washington Post*, July 27, 2015.

⁷ "Metro Celebrates First Year of Silver Line Service," Washington Metropolitan Area Transit Authority, July 27, 2015.



Above: Tysons, Virginia. Photo courtesy of Bechtel, via Flickr user Fairfax County.

Right: Metro Blue Line in Minneapolis. Photo by Meet Minneapolis, via Flickr.

In recent years, metros around the US have invested in enhancements to existing rail infrastructure to strengthen connections between commercial centers and improve the efficiency of regional transportation systems. The outcomes of the WMATA Silver Line in the Washington, DC metro area and the METRO Blue Line in Minneapolis–St. Paul provide unique insights into how the King of Prussia Rail Project can help spur investment and bolster Greater Philadelphia’s transportation network.



SPOTLIGHT

METRO Blue Line (Minneapolis)

The METRO Blue Line, Minnesota’s first light-rail line, opened in 2004. The \$713 million project added 12 miles of track and 19 stations connecting downtown Minneapolis, Minneapolis–St. Paul International Airport, and Bloomington, Minnesota.

Bloomington is home to the Mall of America—one of the largest indoor shopping malls in the US with more than 400 stores and 35–40 million yearly visits. In 2014, the Blue Line accommodated 9.5 million trips, averaging nearly 28,000 rides every weekday.⁸ Since the completion of the Blue Line, Metro Transit has added a second light-rail line—the Green Line—that shares more than one mile of track with the Blue Line and connects the city centers of Minneapolis and St. Paul.⁹

Blue Line and Minneapolis–St. Paul:

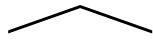
- > **Exceeding Ridership Expectations:** 7.8 million riders used the Blue Line during its first year of operation, exceeding pre-construction estimates by 58%.
- > **Converting Drivers:** A study found that more than half of Blue Line riders were new to public transit.¹⁰ According to a 2014 Metro Transit customer survey, 78% of METRO Blue Line riders had a car available to them that they chose not to use for their trip.¹¹
- > **Catalyzing Development:** Around the Blue Line’s Bloomington Central Station, development is underway on a \$730 million, 43-acre mixed-use urban district including 1,100 new housing units, 2 million square feet of office space, a 300-room hotel, 75,000 square feet of retail, and a 1.6-acre park.

⁸ “Metro Transit 2014 ridership is highest in more than three decades,” Metro Transit, January 28, 2015.

⁹ “METRO Green Line Fact Sheet,” Metro Transit.

¹⁰ “Facts About the METRO Blue Line,” Metro Transit.

¹¹ “METRO Blue Line Facts,” Metro Transit.



Private Development & Redevelopment

The enhanced connectivity provided by King of Prussia Rail is likely to catalyze redevelopment and new development around proposed stations. This section estimates the amount and value of projected development expected to occur as a result of the rail extension. It projects expected development activity for the 20-year period following the introduction of rail service to King of Prussia.

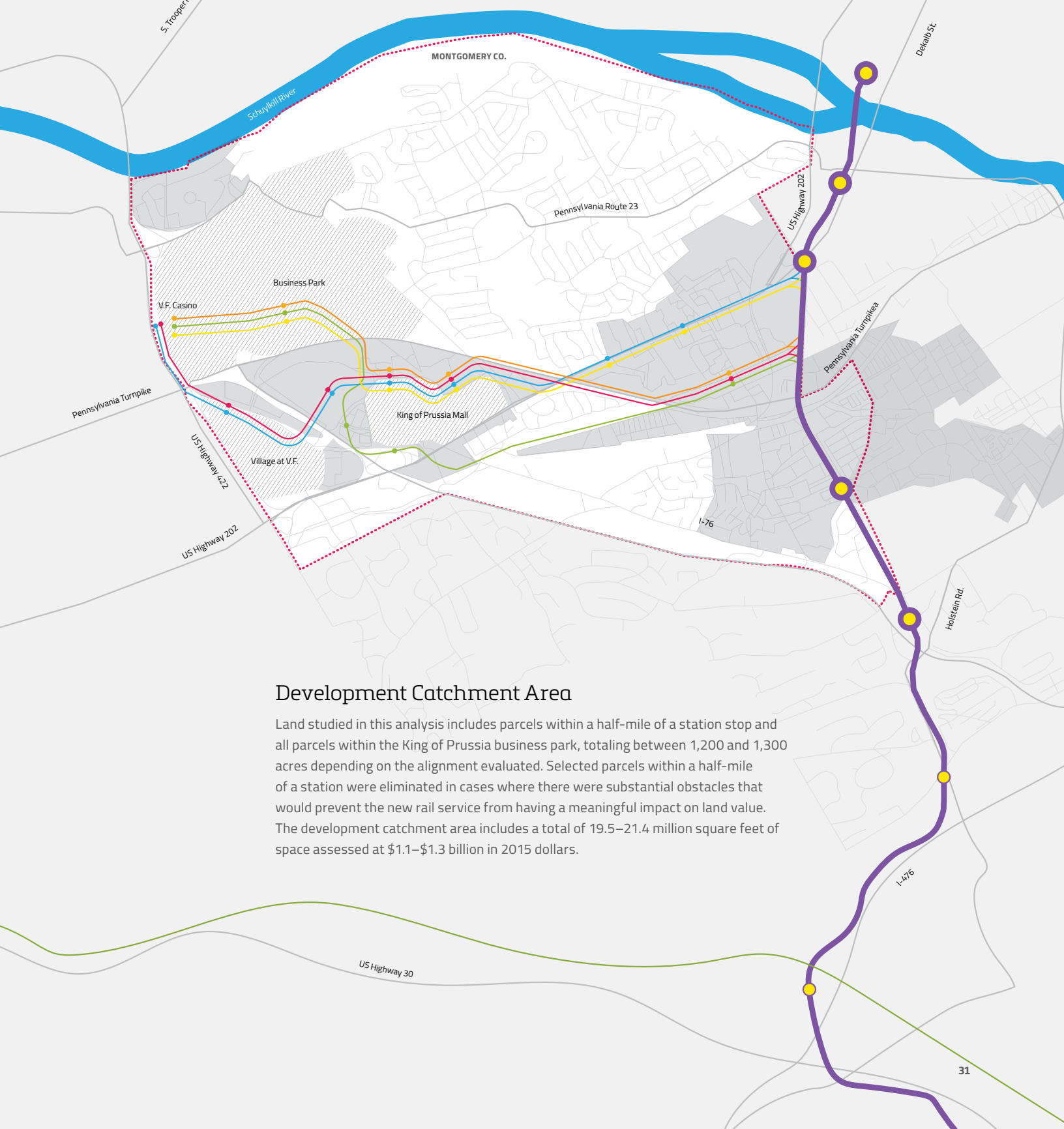
The analysis assumes that areas surrounding proposed King of Prussia Rail stations will develop over time according to the maximum allowable density permitted under existing zoning regulations. By year 20 of the study period, parcels within a quarter-mile of a station are assumed to achieve 80% of maximum density, parcels between one-quarter and a half-mile achieve 60% of maximum density, and parcels farther than one-half mile from a station achieve 50% of maximum density.

To provide a sense of King of Prussia Rail's full potential to catalyze development, the analysis also estimates the amount and value of additional development expected to occur if transit oriented development (TOD) zoning regulations were put in place to encourage greater density around proposed stations. Parcels within one-half mile of King of Prussia rail stations in this scenario are assumed to develop to 20% beyond moderate projections.

The area evaluated for development potential includes a total of 19.5 million–21.4 million square feet of existing space at a current assessed value of \$1.1 billion–\$1.3 billion.

LEGEND

- - - King of Prussia Boundary
- US 202–N. Gulph
- PECO–1st Ave.
- Existing NHSL Stops
- US 202–1st Ave.
- Primary and Secondary Roads
- Regional Rail
- PECO/TP–1st Ave.
- Local Roads
- NHSL
- PECO/TP–N. Gulph
- Catchment Area



Development Catchment Area

Land studied in this analysis includes parcels within a half-mile of a station stop and all parcels within the King of Prussia business park, totaling between 1,200 and 1,300 acres depending on the alignment evaluated. Selected parcels within a half-mile of a station were eliminated in cases where there were substantial obstacles that would prevent the new rail service from having a meaningful impact on land value. The development catchment area includes a total of 19.5–21.4 million square feet of space assessed at \$1.1–\$1.3 billion in 2015 dollars.

Private Development & Redevelopment

Development Projections

Development stimulated by the introduction of King of Prussia Rail is expected add \$540 million–\$946 million to the assessed value of King of Prussia real estate over 20 years. During this time period, it is estimated that the rail extension could spur 4.3 million–8.0 million square feet of new development in King of Prussia at an estimated value of \$450 million–\$840 million. The redevelopment of existing properties is estimated to add \$89 million–\$108 million in value to King of Prussia real estate.

ESTIMATED VALUE OF ADDITIONAL DEVELOPMENT CATALYZED BY KING OF PRUSSIA RAIL OVER 20 YEARS:

\$540M–\$946M



4.3M–8.0M SQUARE FEET OF NEW DEVELOPMENT



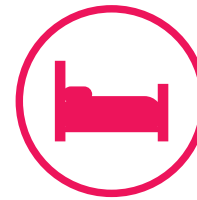
2.6M–4.8M FT.²

OFFICE



0.5M–0.8M FT.²

RETAIL



3,300–4,600

UNITS

1.3M–2.4M FT² RESIDENTIAL

If Transit Oriented Development (TOD) Zoning were put in place for parcels within ½ mile of King of Prussia Rail stations, it is estimated that an additional 115,000–170,000 square feet of new development would occur annually. Over 20 years, this would add up to an additional 2 million–4 million square feet of development at an estimated assessed value of \$216–\$357 million.



Above: SEPTA Norristown High Speed Line train arriving at Bridgeport Station. Photo courtesy of SEPTA.

Impacts of Development Construction

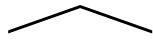
Development activity expected to result from the rail line extension under moderate projections would generate between \$136.8 million and \$193.7 million in annual construction spending over 20 years and support 560–790 jobs earning \$42.6 million–\$60.3 million in wages.

AVERAGE ANNUAL CONSTRUCTION SPENDING

	Office	Residential	Retail	Total
Development Construction Spending	\$82–\$116 million	\$41–\$58 million	\$13–19 million	\$136–194 million

Property Tax Revenues

Development activity catalyzed by King of Prussia Rail has the potential to generate significant revenue for Upper Merion Township, Montgomery County, and the Upper Merion School District. New development under the moderate scenario is estimated to generate between \$0.6 million and \$1.1 million in new property tax revenues each year. By year 20 of the development timeline, new annual property taxes revenues would total between \$12.8 million and \$22.4 million annually.



Employment & Residential Growth

Additional commercial and retail square footage would attract new businesses and allow existing businesses to expand, increasing the number of employees working in King of Prussia. It is expected that much of the employment growth catalyzed by King of Prussia Rail would occur within the business park, as zoning allows properties there to redevelop to a greater density than in surrounding areas.

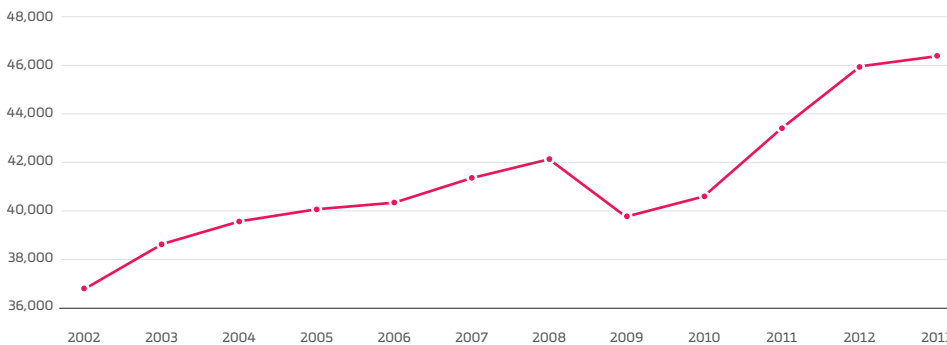
Employment

King of Prussia has seen an average job growth rate of about 900 new jobs per year over the past decade. It is expected that the addition of King of Prussia Rail service would increase the rate of job growth.

Moderate projections estimate that King of Prussia Rail will bring an additional 900–1,500

jobs to King of Prussia every year. Over 20 years, this annual average translates to 17,000–29,000 new employees in King of Prussia. These jobs would support an estimated \$79.1 million–\$132.6 million in earnings each year, totaling \$1.6 billion–\$2.7 billion in labor income over 20 years. It is estimated that 6,000–10,000 of these jobs would be net-new to southeastern Pennsylvania.

King of Prussia Job Growth 2002–2013



Source: US Census Bureau, On the Map

The introduction of King of Prussia Rail is expected to result in the addition of 17,000–29,000 new jobs in King of Prussia over 20 years.

Residences

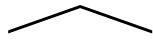
The convenience and development brought by the King of Prussia Rail Project is estimated to attract an additional 330 to 470 new residents to King of Prussia every year. Twenty years after the rail line opens, it is estimated that 6,700–9,400 residents will have located in King of Prussia as a result of the rail service. This represents an increase of 33%–47% over King of Prussia's residential population today.



Above: King of Prussia Rail gives travelers access to many amenities in the area, including Valley Forge Park. Photo by G. Widman for Visit Philadelphia™.

Projected Growth and Transit Ridership

The increase in jobs and residents in King of Prussia would result in additional transit ridership that is not captured in current ridership projections. Employees and residents who locate in King of Prussia as a result of the new rail service are expected to generate 13,000–18,000 transit trips per year. As employment and residences in King of Prussia continue to grow in response to development over time, ridership numbers are projected to increase.



King of Prussia Rail's Long-Term Benefits for the Region

The region's largest employment center outside of Philadelphia, King of Prussia is a critical part of Greater Philadelphia's economy. As King of Prussia grows and more people commute there for work, travel times and distances increase. King of Prussia's continued growth as a productive and innovative cluster is limited by the capacity of its existing transportation network. By providing a congestion-free transit connection to Philadelphia, Norristown, and other destinations in Montgomery and Delaware Counties, King of Prussia Rail would help unlock the economic potential of King of Prussia and, in turn, drive growth and opportunity for the region as a whole.

In addition to the local economic impacts discussed in the preceding chapters, several long-term benefits are likely to accrue to Greater Philadelphia as a result of the King of Prussia Rail project.



Expanded Market Access

Strategic transit investment can expand labor market access and provide businesses with a larger base of customers. In King of Prussia, the availability of convenient and reliable transit service to Norristown, Upper Darby, Philadelphia, and other communities may increase worker flexibility and willingness to commute longer distances. This would translate into a larger labor market from which firms can draw, making it easier for employers to fill specialized business needs with workers who have the appropriate skills and training. Enhanced transit access also broadens the area from which customers are able to conveniently access local businesses. Consumer-oriented firms near the extended transit line would benefit from this expanded customer base.

Expanded market access made possible by King of Prussia Rail would help leverage significant recent investments to enhance the King of Prussia Mall, the Valley Forge Casino Resort, and other major hospitality and retail facilities in the area.



Enhanced Productivity

By providing a direct and reliable transportation option to one of the region's largest commercial centers, King of Prussia Rail would help enhance economic productivity for Greater Philadelphia firms. The combination of transit investment and mixed-use zoning in the King of Prussia business park is likely to encourage the clustering of residents and businesses around King of Prussia Rail stations. Concentration of people and economic activity—otherwise known as agglomeration—can yield a variety of benefits for firms and workers, including lower production costs, greater opportunity for knowledge-sharing and innovation, and higher wages. Together, these benefits translate into enhanced productivity for firms and the region at large: research has shown that doubling a county's employment density increases average labor productivity by six percent.¹² Further analysis of US metro areas has found that a 10% expansion in transit service produces a wage increase of between \$53 and \$194 per worker per year.¹³

¹² Antonio Ciccone and Robert E. Hall, "Productivity and the Density of Economic Activity," *The American Economic Review* 86 (1996): 54–70.

¹³ Daniel G. Chatham and Robert B. Noland, "Transit Service, Physical Agglomeration and Productivity in US Metropolitan Areas," *Urban Studies* 51 (2014): 917–937.

Concentration of people and economic activity—otherwise known as agglomeration—can yield a variety of benefits for firms and workers, including lower production costs, greater opportunity for knowledge-sharing and innovation, and higher wages.



Livable Communities

By strengthening connections to a major regional hub, the King of Prussia Rail Project will also help advance long-term plans to focus regional investment in compact, mixed-use, livable communities within and around established centers. *Connections 2040*, the Delaware Valley Regional Planning Commission's long-range regional land-use plan, places an emphasis on investing in centers as a way to preserve open space, reduce strain on natural resources, and create thriving, pedestrian-friendly communities that offer an improved quality of life for all residents. Bringing reliable and convenient transit service to King of Prussia and facilitating increased density there will help move DVRPC's long-term agenda forward and mitigate the costly effects of suburban sprawl.

King of Prussia Rail's Long-Term Benefits for the Region



A More Equitable Transportation System

As the literal link between people and jobs, transportation plays a critical role in enabling access to opportunity. Over the last several decades, access to transportation options that connect to the region's employment centers has become markedly uneven. The distance between many Greater Philadelphia workers and jobs in growing industries has increased, and the average commuting time for a typical resident has risen significantly. While the growth of the suburban employment base in Greater Philadelphia has helped offset declines in core communities, it has also created real challenges for workers and job-seekers who do not have access to a vehicle.

King of Prussia offers employment opportunities across skill and income levels, but limited transit service makes driving the only reliable transportation option. This makes the prospect of working in King of Prussia difficult for many people of limited means in Philadelphia and other communities, in turn narrowing opportunities for them to advance economically. By providing a critical transit link between King of Prussia and Philadelphia as well as Norristown and other destinations in Montgomery and Delaware Counties, King of Prussia Rail would increase transportation access for workers of limited means and, in turn, expand economic opportunity within the region.

King of Prussia Rail & Norristown

Home to 34,000 people, 20,000 jobs, and the Montgomery County seat, Norristown lies to the northeast of King of Prussia just across the Schuylkill River. Norristown is endowed with extensive transit infrastructure, including the Manayunk/Norristown Regional Rail Line, the terminus for the Norristown High Speed Line, and numerous bus routes serving a variety of regional destinations. However, despite its proximity to King of Prussia, Norristown lacks a rail connection to its neighbor across the river.

The creation of this linkage through King of Prussia Rail would likely generate a variety of benefits for Norristown, including enhanced access to jobs and a rise in commercial property values due to the improved connectivity provided by the new rail service. The short trip to King of Prussia could also boost Norristown's residential real estate market, with King of Prussia workers looking for an urban, walkable community and an easy commute driving increased demand.



Above: Patrons explore the Norristown Arts Festival. Photo by Montgomery County Planning Commission, via Flickr.

Acknowledgments & Credits

The economic impact findings presented in this report are summarized from content in the December 2015 “Understanding the Economic Impacts of SEPTA’s Proposed King of Prussia Rail Project” report prepared for SEPTA by the Economy League of Greater Philadelphia and Econsult Solutions, Inc. and available online at economyleague.org and kingofprussiarail.com.

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Econsult Solutions, Inc.

Editorial Team

Rachel Aland, Nick Frontino, Joseph Lee, and Steve Wray of the Economy League of Greater Philadelphia
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UNTUCK



The Economy League's World Class Greater Philadelphia agenda focuses on improving education and talent development outcomes in our region, boosting business growth and making our infrastructure more effective and reliable. The World Class agenda was developed with input from more than 1,700 regional business, nonprofit, government, labor, and community leaders from across Greater Philadelphia.

economyleague.org

info@economyleague.org

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