

PHILADELPHIA DELIVERS

Response to the
Amazon HQ2 RFP

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CITY OF PHILADELPHIA

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JAMES F. KENNEY
Mayor

October 16, 2017

Jeff Bezos
Founder and CEO
Amazon
2121 7th Avenue
Seattle, WA 98121

Dear Mr. Bezos:

Thank you for the opportunity to present Philadelphia's credentials in response to the Amazon HQ2 RFP. Your solicitation generated a tremendous outpouring of support and excitement from our diverse community of stakeholders across the city, truly making me proud. Philadelphia offers you unparalleled sites in a major city that still has plenty of room to grow, a personality that complements Amazon's, and a lifestyle that is delightfully frugal.

More than 160 CEOs signed a letter of support from the corporate community, spearheaded by the Greater Philadelphia Chamber of Commerce. Members of the tech and startup community submitted 96 testimonials to express how being located in Philadelphia has benefited their companies. Our small business and community organizations joined weekly phone calls to share their thoughts and ensure that Philadelphia's proposal took the needs of local businesses into account. Over 65 college and university presidents produced their own letter to tout the strengths of Philadelphia's education institutions, and nearly 70% of students surveyed by Campus Philly said that they would want to intern with Amazon if the company was located here. At the University of Pennsylvania's Wharton School, students took it upon themselves to organize not one, but two competitions to showcase their big ideas on how Philadelphia could best pitch your company. Just one week after your RFP was released, Philadelphia City Council signed a resolution encouraging Amazon to choose our city; and our local State Representatives have been advocating in Harrisburg for a comprehensive partnership with the Commonwealth of Pennsylvania on incentives.



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JAMES F. KENNEY
Mayor

Together, as a city, we followed Amazon's lead in focusing on you and your employees as our customers. Through this short, but intense process, we studied and read all that we could about the culture, values and working preferences of Amazon. We traveled to see your impressive HQ1 campus and how it fits into the landscape of Seattle. We started all of our team meetings with a reading period before diving into the strategy debate of the day.

We applied what we learned about working backwards and formatted our bid response in the style of a press release, 6-pager, FAQ, and appendix. Throughout these documents, we shaped the proposal from the vantage point and voice of Amazon as we could imagine it. And as much as we share your love for reading, we opted to complement our written submission with a website and video because we wanted you to see the dynamism and personality of our city; hear the commitment of our business leaders, entrepreneurs, and community members; and experience the grit and passion that make Philadelphia so unique.

Perhaps this quote from one of the Wharton student finalists best captures the promise of our city:

"If Amazon is looking for thinkers, doers, and revolutionaries; if Amazon is looking to change the status quo, to push the boundaries; if Amazon is looking for a testament to the past and a plan for the future, its next stop should be Philly."

We hope that you will agree and ultimately make Philadelphia the home of HQ2.

Sincerely,

A handwritten signature in black ink that reads "James F. Kenney".

James F. Kenney
Mayor

PRESS RELEASE

AMAZON SELECTS PHILADELPHIA FOR ITS SECOND HEADQUARTERS

Philadelphia delivers optimal mix of talent, location, livability, and capacity for growth

SEATTLE--(BUSINESS WIRE)--July 5, 2018--(NASDAQ: AMZN)— Amazon announced today that it has selected Philadelphia, Pennsylvania as the site of its second headquarters (HQ2). The initial 500,000 square foot HQ2 Philadelphia office will open in 2019.

"Philadelphia is in the Goldilocks zone for Amazon – it possesses all of the key ingredients we looked for to support our long-term growth," said Jeff Bezos. "The location is central on the Northeast Corridor, the talent pool is vast, and Philadelphia has all of the amenities our employees want, at a lower cost than other big cities."

The following decision drivers are the core reasons the company chose to locate the new headquarters in Philadelphia.

Talent:

- **Highly educated workforce:** The Philadelphia region has a workforce of 3 million people, and more than 10 million people living within 150 miles of the city hold a bachelor's degree or higher.
- **Abundant top-ranked universities:** The region's colleges and universities graduate 90,000 students per year and rank sixth in the U.S. in STEM degrees awarded. Philadelphia leads the nation in its concentration of top-100 universities within a 150-mile radius.
- **Dynamic technology sector:** The Philadelphia region has the fastest-growing tech sector in proportion to total job growth of any major region outside of the Bay Area.
- **Access to technical talent:** Philadelphia ranks in the top 10 metro areas by number of technology jobs, including software and web development positions. Companies fill engineering jobs faster in Philadelphia than in any other major U.S. metro area.
- **Destination for millennials:** Philadelphia has the fastest growing millennial population share of any major city and has been ranked highest among U.S. cities for the amenities most desirable to millennials.

Location:

- **Strategically located:** Philadelphia is 75 minutes from New York and 100 minutes from Washington, D.C. by train, and sits within 150 miles of a quarter of the Fortune 1000.
- **Global accessibility:** The city is a major gateway with 500 daily flights and is the transatlantic hub for the world's largest carrier, offering closer proximity to expanding markets in Europe, the Middle East and Africa.
- **Extensive regional connectivity:** Philadelphia offers motorists and public transit commuters the second shortest commute times of any city on the East Coast. The regional transit system has an average weekday ridership of approximately 1.1 million, and the city is ranked among the top five in the country for walkability and bikeability.

Livability:

- **History of diversity and inclusion:** A majority-minority city that was designated as the first World Heritage City in the U.S., Philadelphia draws immigrants from around the world and receives top marks for LGBTQ equality.
- **Recreation, culture and dining:** The Philadelphia region is within an hour's drive of beaches, lakes, mountains and countryside. There are more restaurants by 2017 James Beard Award winners in Philadelphia than any other city, as well as one of the largest public art collections and urban park systems in the country.
- **Affordability:** Philadelphia's overall cost of living, including housing, transportation, and healthcare costs, is 18% lower than Seattle's.

Capacity:

- **Desirable office locations:** Philadelphia offers three urban site options that are ready to accommodate Amazon's full development program immediately. The sites are situated in two neighborhoods, both of which are located within 15 minutes of the Philadelphia International Airport.
 1. **University City:** A world-class innovation district, adjacent to downtown, surrounded by top-ranked universities and anchored by the third-busiest train station nationwide.
 2. **Navy Yard:** A thriving riverfront neighborhood minutes from Center City. It is widely considered the most successful redevelopment of a former military facility in the country, and has plenty of room left to grow.
- **Committed state and local government partners:** The combined incentive package from the Commonwealth of Pennsylvania and the City of Philadelphia represents an impressive commitment and partnership over the next 25 years.

"During our selection process, we discovered that Philadelphia draws an incredibly diverse group of doers and thinkers," said Beth Galetti, Senior Vice President of Human Resources. "They understand strategy, execute on delivery, and collaborate to uncover practical solutions to hard problems. That's who succeeds at Amazon."

Bezos concluded, "Philadelphia delivers what we need to attract and inspire our next 50,000 Amazon employees, who will be inventing the future for our customers."

About Amazon

Amazon is guided by four principles: customer obsession rather than competitor focus, passion for invention, commitment to operational excellence, and long-term thinking. Customer reviews, 1-Click shopping, personalized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Fire tablets, Fire TV, Amazon Echo, and Alexa are some of the products and services pioneered by Amazon. For more information, visit www.amazon.com/about and follow @AmazonNews.

###

INTRODUCTION

Scientists search for planets in the Goldilocks zone – those places with the precise characteristics to support the flourishing of life. At Amazon, we have reached the successful conclusion of a similar search of our own.

We have identified Philadelphia as the city in which we will locate our second headquarters. It is a place with the ideal characteristics to support the next phase of our growth – combining a vast talent pool, premier location, supreme livability, and capacity for growth.

Philadelphia is the second largest city on the East Coast and sits at the center of a corridor where highly educated, diverse, top talent is in abundance. It offers all the amenities our employees could want at a much lower cost than comparable cities, making it a supremely easy place to live. Philadelphia's universities educate more than half a million students per year¹, creating a robust and continuous pipeline of future talent for Amazon.

Philadelphia offers three shovel-ready sites, each of which has the development capacity to meet Amazon's immediate requirements, and the growth potential to meet our long-term real estate needs. The sites are located within two of the city's most vibrant neighborhoods and are near regional public transit, major highways, and the international airport. Extensive housing options are within an easy commute of both neighborhoods.

Philadelphia combines a large, stable, and growing regional economy with a cost of doing business that is substantially lower than other cities on the East Coast, allowing us to pass savings on to our customers and maintain our commitment to offering them the lowest prices. In addition, the City of Philadelphia and Commonwealth of Pennsylvania demonstrated their commitment to partnering with Amazon through a comprehensive incentives package projected to total approximately \$5.7 billion over a 25-year period.

Since the founding of our nation, Philadelphia has had disruption and revolution in its DNA. Today, Philadelphia's ecosystem of innovation brings together top academic institutions with major corporate players, all energized by a diverse community of founders. Philadelphia offers Amazon the unique opportunity to act on our next big ideas.

ANALYSIS AND RATIONALE FOR SELECTING PHILADELPHIA FOR HQ2

Shovel-ready sites in vibrant urban neighborhoods

Philadelphia offered sites in two neighborhoods that have the immediate ability to meet our needs and planned growth. These sites are located right on the doorstep of the Northeast Corridor train line, Interstate 95, and Philadelphia International Airport.² The proposed sites are controlled by experienced, well-capitalized developers with whom we can partner to deliver the state-of-the-art workplace our employees need. Move-in ready options for our first 500,000 square feet of space are available for a 2019 delivery date in each of the three sites within these two neighborhoods. These options ensure that Amazon will have control and flexibility over the pace and scale of development to best manage costs and maximize value over time.

UNIVERSITY CITY is located along the Schuylkill River adjacent to Center City and is at the heart of the region's public transportation network.³ This culturally rich neighborhood is home to the University of Pennsylvania and Penn Medicine, Children's Hospital of Philadelphia, and Drexel University – combined, they employ over 60,000 people. At the University City Science Center and campuses throughout University City, academic, corporate, and startup partners are advancing a wide range of high-impact industries, from precision medicine and smart textiles to autonomous robotics.

Not only will the neighborhood's innovation culture feel like home, but University City will act as a "living lab" for new product development. Home to more than 53,000 people, 56% of University City residents aged 25 and older have a bachelor's degree or higher. There are approximately 44,000 students enrolled in the four colleges and universities located in this neighborhood. More than 70% of residents walk, bike, or take public transit to work.⁴

University City is more accessible by transit than any of its peer innovation hubs including Cambridge, San Francisco, and Seattle, measured by the share of regional population within a 30-minute commute.⁵ Amtrak 30th Street Station provides access to local and regional transit, while also serving as a hub for Northeast Corridor travel used by more than 4 million people annually.⁶

Two development-ready sites, Schuylkill Yards and uCity Square, are currently zoned for a total of 17 million square feet, and each provides the required capacity for Amazon's immediate and long-term real estate needs. In addition, Amtrak's rail yards next to 30th Street Station offer even more potential for future growth.

The **NAVY YARD** is widely considered the most successful redevelopment of a former military facility in the country.⁷ A thriving riverfront neighborhood, the Navy Yard currently features more than 7.5 million square feet of developed buildings housing 13,000 employees working at 150 companies. These include Urban Outfitters (headquarters), GlaxoSmithKline (headquarters), technology startups, manufacturers, corporate R&D, and a graduate engineering and research campus for Penn State University. Home to historic structures and new high-performance and LEED-certified developments, the Navy Yard offers diverse, flexible building choices with different heights, vintages, and floorplates, all powered by a nationally-recognized micro grid and oriented around iconic parks. Future growth can accommodate more than 10 million additional square feet of commercial and residential development. The Navy Yard offers Amazon the option of an urban campus environment minutes away from downtown Philadelphia, with cutting-edge sustainability technology, including Pennsylvania's first community solar project.

The Navy Yard sits beside Interstate 95, directly between Philadelphia's port and its international airport. The neighborhood features an extensive network of buses with departures every 10 minutes during peak hours that link it directly to Center City and major transit hubs that connect to regional transit options. There are also plans for a future direct subway extension. The Navy Yard is a growing neighborhood that offers a wide range of amenities including restaurants and cafes, food trucks, green space, active parks, riverfront trails, and extensive health and wellness programming.

Highly competitive cost structure combined with a stable business environment

Of all the East Coast locations that we considered, Philadelphia offered the optimal combination of scale and capacity for growth at the right cost. Based on labor, taxes, and facilities, the cost of doing business in East Coast peer cities is 33% more than in Philadelphia: New York is 59% more expensive, Boston is 26% more expensive, and D.C. is 14% more expensive.⁸ The average Class A office space in Philadelphia leases for \$31 per square foot (PSF), compared with \$80 PSF in New York, \$68 PSF in D.C., and \$61 PSF in Boston. Rents in Philadelphia for Class A space also compare favorably to Amazon's current location in Seattle at \$46 PSF.⁹ The average business saves 16% on employee salaries in Philadelphia relative to its East Coast peer cities and saves 11% over Seattle.¹⁰

The Philadelphia region's economy is robust and diversified across a wide range of industry sectors.¹¹ The gross metropolitan product has grown consistently over the past 10 years at an annual rate of 2.5%.¹² AmerisourceBergen, Comcast, Vanguard, Aramark, QVC, Campbell Soup, SAP, Saint-Gobain, and TE Connectivity are among the more than 40 Fortune 1000 and large international and private companies headquartered in the region.¹³ Steven H. Collis, Chairman and CEO of AmerisourceBergen said, "Our talent and recruitment teams have enjoyed being situated in an energetic community of job seekers, both from the region's world-class colleges and universities as well as in a competitive business environment which is home to numerous global and national corporations. Philadelphia and its surrounding communities are enticing to professionals and their families - benefiting from an energetic art and culture scene and world-class institutions, museums, restaurants and more."¹⁴

Philadelphia also has an extensive and collaborative ecosystem for innovation, successfully connecting entrepreneurs with capital, talent, corporate partners, and innovation hubs. The region has 65 incubators and more than 700 tech companies.¹⁵ Philadelphia ranked second among large cities on the 2016 Digital Cities list, recognizing its leadership in using technology to improve services, boost efficiencies, and increase citizen engagement. In 2017, the 20 Philadelphia startups ranked "most exciting" by *Technical.ly* represented sectors ranging from health IT and fintech to robotics and artificial intelligence. Five of the companies were founded by women and five by immigrants, and many were incubated at Philadelphia institutions including the University of Pennsylvania, Children's Hospital of Philadelphia, Drexel University, and Temple University.¹⁶

Philadelphia offers Amazon long-term resiliency, strong connectivity, and a shared commitment to sustainability. The city's inland location, which is protected from hurricanes and far from known fault lines, gives us confidence in the geographic resiliency of our HQ2 location. Philadelphia has one of the highest levels of cellular and fiber connectivity in the nation, with 22 different fiber cable providers.¹⁷ Amazon and Philadelphia have shared commitments to reducing our carbon footprints, including by making the transition to renewable energy.

The City's sustainability plan has helped Philadelphia triple the residential recycling rate, reduce municipal gas emissions by 17%, add 100 new farmers' markets, gardens and farms, plant more than 120,000 new trees, add 100 miles of bike infrastructure, and launch an equity-focused bike share program. Philadelphia has pledged to honor the Paris Climate Accord. The City has created a climate adaptation plan and set a goal to reduce carbon emissions by 80% by 2050 and generate or purchase 100% renewable energy for all City-owned facilities by 2030. We will be able to take advantage of Philadelphia's progressive program to incentivize LEED Gold and Platinum construction which offers a floor area ratio bonus of up to 200% for LEED Gold and up to 400% for LEED Platinum.

To maintain its recent job growth across a wide range of industry sectors, the City of Philadelphia is committed to continuing to reduce its business and wage taxes. Between 1995 and 2017, the City reduced the wage tax by 22%. Philadelphia and Pennsylvania both recently moved to single-factor apportionment based on sales to calculate tax on business net income, which greatly reduces the tax burden on Philadelphia-based firms who sell most of their goods out of state. In 2016, the City implemented an exemption of the first \$100,000 in gross receipts, meaning that more than 60,000 startups and established businesses no longer owe any business income tax. Of importance to Amazon's employees, Philadelphia and Pennsylvania have no sales tax on food, clothing, or shelter. In addition to aligning on recent tax reforms, the Mayor and City Council recently partnered with the business community to create a Regulatory Reform Committee to streamline regulations, legislation, and business processes.

Comprehensive city and state incentive package projected up to \$5.7 billion.

The City of Philadelphia and Commonwealth of Pennsylvania recognize the true partnership with Amazon that will emerge as we open HQ2 and have responded with an incentive package that will maximize our shared value. The combined package is projected to provide up to \$5.7 billion in value to Amazon over a period of 25 years. As detailed in Section 2, the Commonwealth of Pennsylvania proposes up to \$4.6 billion in funding for the Amazon HQ2 at a Pennsylvania location, which includes up to \$4.5 billion through a new, performance-based personal income tax grant program and \$100 million for potential state highway infrastructure needs related to the project. The City of Philadelphia will create a 20-year tax increment financing district, valued at up to \$1.1 billion in additional value to Amazon.¹⁸

The Commonwealth of Pennsylvania will commit a team of economic development professionals to work directly with Amazon for the duration of the project. Additionally, the City will dedicate a full-time team of experienced staff to act as our customer-service managers in all dealings with government, regulatory agencies, utilities, labor organizations, and other parties as needed. Harold T. Epps, City of Philadelphia Director of Commerce, will lead the team on behalf of the City.

Vast regional talent pool with serious growth potential

Philadelphia sits at the center of one of the most populated, highly educated, and diverse corridors of the U.S. from which we will be able to attract top technical and business talent. Within a 150-mile radius of Philadelphia there are 8.5 million people working in management, business, science and the arts; 6 million bachelor's degree holders; 4.5 million graduate degree holders; and 8.5 million foreign-born residents.¹⁹ This corridor also leads the nation in the number of top-100 universities.²⁰ The Philadelphia Metro area, with its quality of life and affordability, attracted more than 140,000 New Yorkers to relocate over the last five years.²¹

The Philadelphia region is among the largest labor markets in the country, with more than 3 million workers.²² The market is well equipped to meet our hiring needs, with over 400,000 existing management, accounting, software, and legal jobs.²³ The regional population is highly educated, with 35% of those over the age of 25 holding a bachelor's degree or higher, compared to the national average of 30%.²⁴ The region has 100 colleges and universities graduating 90,000 students per year, including the sixth greatest number of students graduating with STEM degrees in the country.²⁵

Since 2002, the Philadelphia region has grown its technology sector as a proportion of total job growth more than any major region outside the Bay Area. A quarter of all jobs created in the Philadelphia region since 2002 have been tech jobs, led by software-application developers and computer-systems analysts.²⁶ While only 5% of Philadelphia's metro workforce is in tech, that represents 135,000 jobs, which is more than in Denver, Austin, or Phoenix.²⁷

The Philadelphia region ranks fourth in the nation for the number of higher education institutions and sixth for the number of bachelor's and professional degrees awarded.²⁸ Top institutions in the region include the University of Pennsylvania and the Wharton School, Princeton University, Drexel University, Temple University, Swarthmore College, Haverford College, University of Delaware, Villanova University, and two local campuses of Penn State University. We are familiar with the quality of this local talent: Amazon was the third largest recruiter for Wharton MBAs²⁹ last year, and Drexel University has placed more than 50 cooperative education students with Amazon.

Philadelphia has some of the nation's top engineering, computer science, and business programs. Annually, over 17,000 computer science, engineering, and business bachelor's and associate degrees and an additional 8,000 advanced degrees are awarded. The Philadelphia metro ranks third nationally in degrees awarded in neuroscience, cognitive science, and other AI-related subjects.

Today, more than half of the graduates of universities in Philadelphia who are not native to the Philadelphia region choose to stay, an increase of 76% in the past decade.³⁰ But when it comes to tech and engineering jobs, Philadelphia is still a net exporter of talent, as measured by the number of engineering, computer science, and math degrees awarded annually for each existing tech job.³¹ The emerging talent is already in the Philadelphia region and ready to stay in greater numbers when we open HQ2.³²

Philadelphia's colleges and universities not only produce graduates, they are also active partners with the private sector – propelling innovation to higher levels by commercializing technologies, developing talent, and fostering cross-sector collaboration. Both the University of Pennsylvania and Temple University recently ranked in the Brookings Institute's top 10 universities nationally based on their commercial impact and ability to drive innovation.³³ At the University of Pennsylvania's Pennovation Center, faculty and students partner with Comcast to invent and create innovative solutions for the Internet of Things on the machineQ™ platform. Students and faculty from Thomas Jefferson University partner with companies like QVC, Toys "R" Us, and DuPont on a range of subjects, including product and service design, packaging design across the value chain, and prototype design and development. Drexel University is home to a national research institute in partnership with MIT around fabrics engineered to see, hear, sense, and communicate; serving an array of industries including aerospace, apparel, architecture, and health. Additionally, Philadelphia is a home to the world's largest college hackathon.³⁴ More than 65 presidents of the Philadelphia region's colleges and universities signed on to a joint letter of support for Amazon, and will work with Amazon to develop opportunities for creative partnerships with these diverse institutions and their students.

School districts, the community college network, and local universities are investing in K-14 STEM education, which will ensure that homegrown talent in the Philadelphia region can meet the future demands of Amazon. The Bucks County STEM Design Challenge has reached 100,000 students and 10,000 teachers since 2011. Parkway Middle College, the state's first middle college, confers certificate degrees in computer programming and software development. A new high school focused on aviation, global logistics, and supply is in development. Additionally, there are over 200 out-of-school STEM programs targeting K-12 students.³⁵ Currently, organizations including Code.org and CS for Philly are working at the local and state level to enhance computer science education in public schools. In order to upskill the existing workforce, the Commonwealth of Pennsylvania recently approved an innovative income-sharing model, in which students of accredited coding boot camps don't pay any tuition until they obtain a job paying \$40,000 a year.³⁶

Unparalleled mobility on the Northeast Corridor, throughout the U.S. and globally

Philadelphia's central location on the Northeast Corridor complements HQ1 to reach more of Amazon's customers, partners, and future employees. The city of Philadelphia has 15 access points to Interstate 95, the country's most-traveled interstate, with one-quarter of the U.S. population reachable within a five-hour drive.³⁷ Eastern Pennsylvania is one of the country's top logistics hubs, with one of the highest rates for new warehouse construction.³⁸ HQ2 will bring Amazon headquarters and fulfillment center employees closer, optimizing the logistics to improve customer experience. Approximately 30 million square feet of Amazon's fulfillment centers are located within a five-hour drive of Philadelphia, with Pennsylvania as a top five logistics hub for the company.³⁹

Philadelphia's international airport, and the close proximity by train of two additional international airports, enables Amazon to quickly reach key domestic and global markets. Philadelphia International Airport (PHL), located 15 minutes from Philadelphia's downtown and both of the proposed HQ2 neighborhoods, is the largest transatlantic hub for American Airlines and the East Coast hub for United Parcel Service. Approximately 500 passenger planes depart PHL daily, including nonstop flights to destinations across Europe, Canada, and the Middle East. PHL also offers direct flights to key domestic destinations: Seattle (35 per week), San Francisco (49), New York (42), Washington, D.C. (69) and Boston (199).⁴⁰ Additionally, Newark Liberty and Baltimore-Washington International airports are within 75 minutes by train.

From 30th Street Station, the third busiest rail station in the country, Amazon employees can travel to and from New York and Washington, D.C. in 75 and 100 minutes, respectively. By 2021, Amtrak will increase service capacity by 40% and decrease the average travel time to New York to 62 minutes, thanks to new higher-speed trains and by doubling the frequency of Acela departures to every half-hour during peak travel times.⁴¹ We compared the average cost of attending a business meeting in D.C. from Philadelphia versus other markets (Atlanta, Denver, and Chicago) and determined that we will save more than \$300 per employee trip by locating in Philadelphia.⁴²

The Philadelphia region's employees enjoy the second-fastest average commute by public transportation of the top ten major cities, as well as the fastest peak commute times by car.⁴³ Mobility within the region is enabled by an existing mass-transit rail network spanning 447 miles⁴⁴, one of the largest systems in the country and nearly four times the 116-mile rail system that Seattle will have completed by 2041.⁴⁵ The transit system, including regional rail, subway and bus service, supports 1.1 million trips on an average weekday. By 2030, the Southeastern Pennsylvania Transit Authority (SEPTA) plans to increase capacity by an additional 69,600 daily riders.⁴⁶

Unique opportunities in advanced logistics and healthcare to drive Amazon's growth

In Philadelphia, founders, companies, institutions, researchers, entrepreneurs, and students across a wide range of disciplines work collaboratively to produce life-changing results. We see this as a unique opportunity for Amazon to join a community of people in designing the future together, particularly in two major fields: advanced logistics and healthcare.



The Philadelphia HQ2 also grants us the unique opportunity to launch transformative technology-enabled healthcare services and products through partnerships with industry leaders. 80% of U.S. pharmaceutical and biotech companies have a presence within two hours of the city, as do 126 hospitals, meaning Philadelphia has expertise along every step of the healthcare value chain. The density of the city's universities, research institutions, and hospital systems creates a nurturing ecosystem that accelerates the pace of medical innovation and has enabled many "impossible" medical firsts. Philadelphia's 100+ digital health companies are employing technologies that reach closer to its customers, challenging the traditional value chain.⁴⁸ Philadelphia is where we will pioneer the future of healthcare.

Supreme livability in a diverse, world-class city

Philadelphia combines some of the same attributes that Amazonians enjoy about Seattle, with the addition of its own unique edge. Like Seattle, Philadelphia offers residents abundant outdoor recreational opportunities, with beaches, mountains, lakes and countryside within an hour's drive. The city has a vibrant indie coffee roaster community, led by La Colombe, inventor of the draft latte. From the Sound of Philadelphia to the Seattle sound, both cities keep reinventing themselves on the music scene.

In Philadelphia, we found a city in which Amazon does not have to make a choice between frugality and our employees' quality of life. The HQ2 employee earning the average salary of \$100,000 in Philadelphia would need to earn \$192,236 in New York, \$125,738 in D.C., \$124,810 in Boston, and \$122,278 in Seattle to enjoy the same standard of living.⁴⁹ The current median price of a single-family home in the Philadelphia region is \$242,000, compared to \$472,000 in Seattle, \$446,000 in Boston, \$423,000 in D.C., and \$412,000 in New York.⁵⁰

Designated as the first World Heritage City in the U.S., Philadelphia was ranked #3 on *The New York Times* "52 Places to Go in 2015" list and selected as #1 on the "Best in the U.S. 2016" list by *Lonely Planet*. The city drew 42 million visitors in 2016. It hosted the papal visit and World Meeting of Families in 2015, the Democratic National Convention in 2016, the NFL Draft in 2017, and has hosted Jay-Z's Made in America music festival annually since 2012. By 2018, the total hotel inventory in Philadelphia is expected to grow by 20% including a new luxury Four Seasons and dual-branded W and Element Hotels. It features one of the largest municipal park systems in the world, the #1 children's museum of any major U.S. city, 431 sidewalk cafes, and the country's oldest zoo. Amazon's employees can enjoy more restaurants by 2017 James Beard Award winners in Philadelphia than in any other city.⁵¹

Philadelphia's 17th-century street grid comes together with 21st-century mixed-use developments to create the largest residential downtown in the nation, outside of Manhattan.⁵² Within the downtown, 40% of commuters arrive to their jobs on foot. Philadelphia has consistently ranked in the top 5 in the U.S. for most walkable and bikeable cities.⁵³

Founded on Quaker principles of inclusion, Philadelphia will also provide a good cultural fit for Amazon's employees and strengthen our ability to attract diverse talent. Philadelphia today is a majority-minority city (42% black, 37% white, 12% Hispanic, 6% Asian, 3% other) with recent population growth driven in large part by immigrants and millennials.⁵⁴ There are 8.5 million foreign-born residents who live within 150 miles of Philadelphia.⁵⁵ The city has also scored a perfect 100 on the Human Rights Campaign's Municipal Equality Index Scorecard for LGBTQ communities.

The Philadelphia region is ideal for many of our employees' young families with a variety of educational options and a strong track record of improvements in public safety.⁵⁶ The region has two of the top three public school districts in the country and more top-20 public school districts than any other region.⁵⁷ It is home to eight of the top 100 private K-12 schools in the country.⁵⁸ In addition, the Philadelphia School District's Julia R. Masterman Magnet School is ranked as the second best public middle school in the U.S.⁵⁹

Finally, beneath the surface of the historic, hip, and proud region lies its charming peculiarity and inimitability. There's the country's largest pizza memorabilia collection (Pizza Brain), the death cast of the original "Siamese Twins" (Mutter Museum), the stuffed pet raven that inspired Edgar Allan Poe (Free Library of Philadelphia), America's first axe throwing club (Urban Axes), a century-old giant wooden slide (Smith Playground), and Bram Stoker's handwritten notes for *Dracula* (Rosenbach Museum).

Our 50,000 Amazonians will fit right in to the City of Brotherly Love and Sisterly Affection.

FREQUENTLY ASKED QUESTIONS (FAQs)

Why did Amazon decide to put HQ2 on the East Coast?

The East Coast provides Amazon with everything we need to launch the next phase of our growth. It is one of the most populated, highly educated, and diverse corridors of the U.S., where top talent is in abundance. It puts us closer to more of our key fulfillment centers, existing customer base, and expanding markets in Europe, the Middle East and Africa. Additionally, as a complement to our existing HQ1, situated on the opposite coast, inland and far from known fault lines, the East Coast offers Amazon long-term resiliency.

If you're going to be on the East Coast, why not choose New York City, D.C., or Boston?

Only 75 minutes from New York City and 100 minutes from Washington, D.C., by train, Philadelphia provides us easy accessibility to both cities at a cost of living 48% lower than New York and 21% lower than D.C. Philadelphia's proximity to other major East Coast cities also provides us with an expanded talent pool from which to hire. While Boston has a more established reputation as a tech hub, Philadelphia has the fastest-growing tech sector in proportion to total job growth of any major region outside of the Bay Area. Companies fill engineering jobs faster in Philadelphia than any other major U.S. city. Philadelphia may not have the reputation for being a tech hub yet, but it will, and choosing Philadelphia gives us the chance to get in on the ground floor.

Philadelphia is the poorest of the country's 10 largest cities. Was that a concern?

Poverty is a deep-rooted issue that requires both immediate action and long-term planning. The City of Philadelphia recognizes that and has dedicated substantial resources toward addressing the issue – including free, quality pre-K, community schools, and increased access to career-and-technical education. One particularly innovative solution is their Rebuild program, a \$500 million investment in the City's parks, recreation centers, and libraries. Improvements to these community sites, selected through a data-driven evaluation process, have been shown to significantly reduce crime, improve health, and increase educational outcomes.

How will Amazon and Philadelphia work together to address concerns about livability and affordability as Amazon HQ2 grows?

One of the reasons that we chose Philadelphia is because it is already on the forefront of implementing housing and utilities relief programs to avoid displacement in gentrifying areas, to manage rising property taxes, and to limit foreclosure. Despite its recent renaissance, Philadelphia has successfully avoided the dramatically accelerated increases in cost of living and urban stresses that many other Northeast cities have already experienced. Our growth will take place over two decades, and we intend to manage that growth carefully.

Philadelphia has room for us to grow, with more than double the number of households as Seattle. Analysis by the Philadelphia Planning Department estimated that HQ2 would result in approximately 2,300 new households in the city and 4,600 new households in the region per year over 15 years, comprising less than 0.4% of existing city households and less than 0.3% of households in the region each year. Moreover, the City of Philadelphia has issued building permits for an average of 3,200 new residential units per year since 2012.⁶⁰ At that rate, direct and indirect "Amazon households" would comprise less than half of the city's expected growth. Amazon is committed to working with Philadelphia to ensure long-term equitable and balanced growth.

Where will Amazon employees send their kids to school?

The Philadelphia region has two of the top three public school districts in the country and many top-performing and innovative public schools within Philadelphia, such as Julia R. Masterman, Independence Charter School, and Science Leadership Academy. It is also home to eight of the top 100 private K-12 schools in the country at competitive tuition levels. Facing many of the same challenges as other urban school districts, the Mayor, Superintendent, and the District's governing body have worked in close partnership to make notable progress. Between 2016-2017, PSSA scores showed gains in reading scores at every grade level from third to seventh grade and improvements in Algebra, Biology, and Literature in high schools. The District also funded new computers and technology in all high school classrooms and labs, and has partnered with the Department of Commerce to connect students with STEM professionals for mentoring and learning opportunities.

Why will Amazon's employees be excited to call Philadelphia home?

Imagine a place where Amazon's employees see their hard-earned wages stretch 20% to 30% further; enjoy a 15 minute walk, train, or subway ride to work; leave their desks and arrive 75-100 minutes later at the doorstep of key corporate and government partners in New York and D.C., after working productively on the way; stay closely connected – physically and culturally – to Amazon's diverse domestic and global customer base; drive five hours to reach 30 million square feet of Amazon's fulfillment centers; dine in affordable restaurants run by the country's top-rated chefs and restaurateurs; and recruit their teams from some of the best universities in the country located just blocks away. We can't wait for day one in our new Philadelphia home.

01 Sites

“We have the land, we have the resources, and we have the wherewithal to catapult the city, and it needs a catalyst. Philadelphia’s ready, and I think Philadelphia will be one of the great cities in the world for the next 200 years”

—

Brian Roberts, CEO of Comcast

FIGURE 1.1:

Philadelphia is well connected to the major economic and population centers of the East Coast. New York City and Washington, D.C. are easily accessible by train.



FIGURE 1.2:

Philadelphia's public transportation system is the 6th largest in the country by ridership – its robust system provides easy access to downtown, the suburbs, and neighboring states.

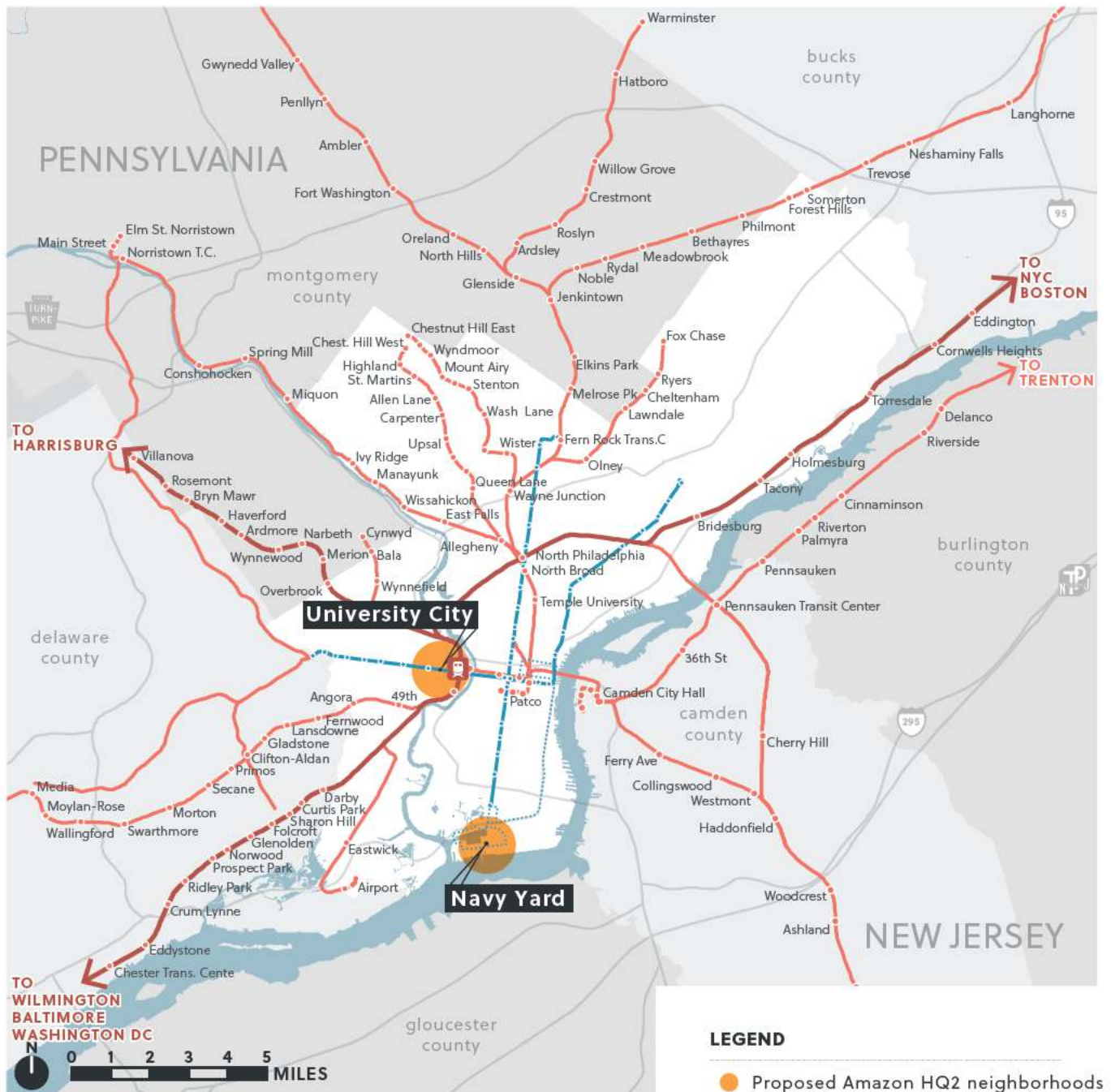
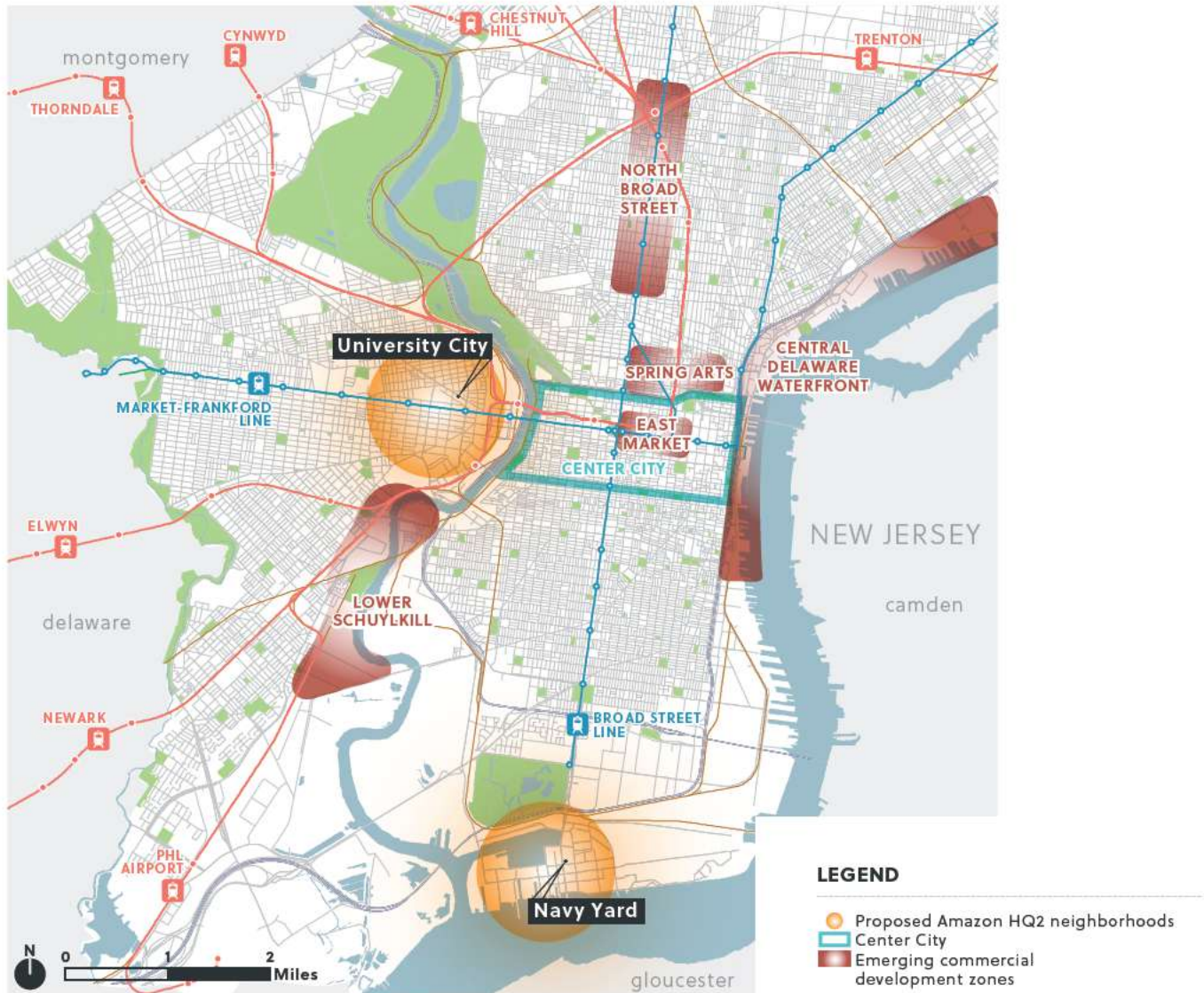


FIGURE 1.3:

Philadelphia offers two extraordinary neighborhoods for Amazon's HQ2. Both neighborhoods can accommodate all of Amazon's future growth and are adjacent to Philadelphia's development renaissance.



University City is a bustling neighborhood located adjacent to downtown and along the Schuylkill River in the heart of West Philadelphia.

The Navy Yard is a thriving riverfront neighborhood located along the Delaware River in South Philadelphia.

NEIGHBORHOOD: UNIVERSITY CITY



credit: Ryan Collard

DIVERSE NEIGHBORHOOD + A HOTSPOT FOR MILLENNIALS

53,605

residents with a median age
between 22-24

19%

of residents are foreign-born
in University City

43,908

students enrolled across 4 colleges
and universities

56%

of residents aged 25 or older with
a bachelor's degree or higher

A CENTER FOR INNOVATION + RESEARCH

442

start-ups incubated over the past
50 years creating over 40,000 jobs

\$900M

in R&D and 175 patents issued in 2016

>40%

of Pennsylvania's National Institute
of Health funding sourced through
University City institutions

VIBRANT BUSINESS DISTRICT

>76,000

jobs throughout University City

71%

of residents walk, bicycle,
or ride public transit to work

152

retailers

268

restaurants & bars –
an increase of 24% since 2009

FIGURE 1.4:

University City, located at the heart of the region's public transportation network, is home to world class academic and research institutions.



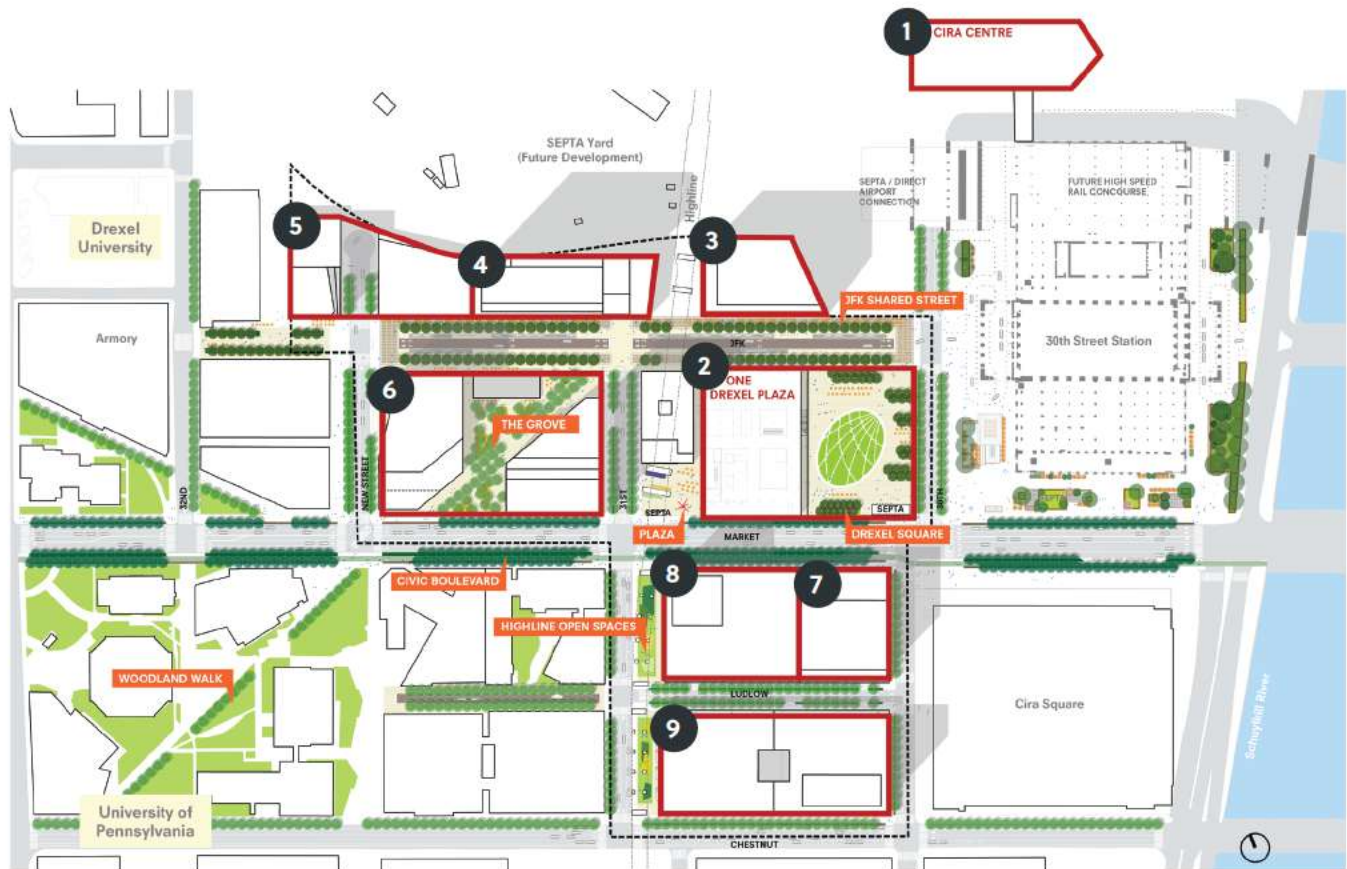
SCHUYLKILL YARDS



Situated along the Schuylkill River and adjacent to Amtrak 30th Street Station, Schuylkill Yards provides tremendous access to all of Philadelphia.

SCHUYLKILL YARDS IS A 14-ACRE NEXT-GENERATION INNOVATION COMMUNITY, INTENTIONALLY DESIGNED AND HOLISTICALLY CREATED FROM THE GROUND UP.

Schuylkill Yards' location, adjacent to 30th Street Station in Philadelphia's University City, is unmatched due to its connection to transit and the city's economic and education centers, providing tenants with critical opportunities for brand exposure, collaboration, technology transfer, and millennial workforce development. With a dynamic mix of office space, residential, retail, and greenspace planned, Schuylkill Yards provides incredible value.



The Schuylkill Yards site is organized by a series of public gathering spaces tying directly to local institutions and the waterfront.

PARCEL NUMBER	ADDRESS	BUILDABLE SQUARE FOOTAGE
1	2929 Arch Street, Cira Centre (existing building)	788,107 (proposed for initial 2019 requirement)
2	3001 and 3025-53 Market Street	3,474,100 (proposed for initial 2019 requirement)
3	3001 - 3003 John F. Kennedy Blvd.	996,884
4	3025 John F. Kennedy Blvd.	1,209,152
5	3051 John F. Kennedy Blvd.	375,510
6	3101 and 3051 Market Street; 3101-57 Rear Market Street	711,070
7	3000-18 Market Street	187,275
8	3020-52 Market Street	357,915
9	3001 Chestnut Street	463,295
Total		8,563,308



Amazon's HQ2 site at Schuylkill Yards offers world class transit and mobility.



REQUESTED INFORMATION	
Key site specifications	
Ownership	Drexel University and Brandywine Realty Trust, with Brandywine Realty Trust serving as master developer and building owner via long-term master ground lease
Site control	Owned by Drexel University and Brandywine Realty Trust; Brandywine Realty Trust will be a fee simple owner of select parcels and will master lease the balance from Drexel University
Zoning	Existing zoning is a combination of CMX-5 and I-2
Initial requirement (2019)	500,000 square feet of existing office space will be available in 2019, accommodated between Cira Centre and One Drexel Plaza
Full buildout (2027)	The current zoning on the site will accommodate 8.56 million square feet (7.78 million of development and 788,107 in an existing building). Once adopted, the zoning changes recommended by the Planning Commission in its Southwest University City Plan would allow for a total of 17.4 million square feet of development
Transit	
Proximity to population center	1.1 miles to City Hall
Proximity to airport	~15 minutes via rail or car
Proximity to major highways / arterial roads	Schuylkill Yards has multiple on/off access ramps to both I-76 and I-676 directly adjacent to the site (connections within minutes to I-95)
Bus	9 bus routes currently available on site (#9, 21, 30, 31, 42, 44, 62, 124 and 125); most popular two routes (#21, 42) average service every ~10 minutes
Subway / street trolley	Market-Frankford Subway line stop on site with service every ~10 minutes; 5 trolley routes serve the site, connecting various neighborhoods in Center City, Southwest, and West Philadelphia (#10, 11, 13, 34, 36) with service ~10-12 minutes
Commuter rail	Immediately adjacent to Amtrak 30th Street Station
Sidewalks	Every proposed Schuylkill Yards site is bounded by completed, ADA-accessible sidewalks
Bike lanes	Bike lanes available within and surrounding the site along Walnut Street, Chestnut Street, 30th Street, and JFK Boulevard / 32nd Street. Bike racks and shower facilities are available at all existing and proposed Schuylkill Yards building sites
Parking	~2,901 parking spaces within three blocks of the site
Site connectivity	Dense urban campus and employees can easily walk, bus, bike, or drive between buildings; drop-off and pickup private watercraft commuter access is available via a dock at Walnut Street. Heliport access could also be added
Permitting / Infrastructure	
Utility infrastructure	The site is served by dual electrical feeds from two separate PECO substations, providing total and complete redundancy. A significant component of the design phase will be to explore a variety of energy options and generation sources that are highly reliable, effective, and environmentally responsible
Fiber and cellular connectivity	Site includes both existing metro and long-haul network fiber connectivity. 3G and LTE coverage available across all 4 major carriers
Permitting process	Amazon's initial 500,000 square foot requirement can be accommodated in existing office space. The process to fit out this initial space would take approximately 4-8 months, and would be ready in 2019. New construction for additional space beyond the initial requirement would entail a 24-month process that would include design, permitting, and construction

UCITY SQUARE



Wrapped around a central square, Amazon's HQ2 site at uCity Square would be part of a vibrant live-work-play neighborhood.

LOCATED IN PHILADELPHIA'S INNOVATION DISTRICT, UCITY SQUARE IS AN URBAN MIXED-USE COMMUNITY CONSISTING OF OFFICE, RESIDENTIAL, RETAIL AND OUTDOOR SPACES.

The project is designed to support high-growth companies who seek to recruit, retain and engage a talented workforce. Home to over 9,000 employees and 90+ companies in technology, energy, medicine, and life sciences, uCity Square is driving Philadelphia's economy through collaboration between the private sector and top-tier research institutions such as the University of Pennsylvania and Drexel University.

Building on a 54-year legacy, uCity Square has embarked on the next phase of expansion that includes 14 additional shovel-ready acres, the capacity for an additional 8.4 million square feet of new office space, and a new central square.



uCity Square is accessible by public transit, offering easy access to city and neighborhood amenities.

PARCEL NUMBER	ADDRESS	BUILDABLE SQUARE FOOTAGE
1	3700 Lancaster Avenue	728,730
2	225 North 38th Street	1,665,825
3	115 North 38th Street	344,062
4	3701 Filbert Street	389,018
5	3800- 3840 Market Street	923,640
6	3737 Market Street	314,508
7	3711 Market Street	1,025,160
8	3701 Market Street	288,000
9	3675 Market Street	462,912
10	3401 Market Street	412,920
11	3400 Market Street	319,944
12	3440 Market Street	425,052
13	3600 Market Street	401,940
14	3624 Market Street	677,304
Total		8,379,015



Connecting the University of Pennsylvania and Drexel University campuses, uCity Square offers premiere access to local talent and the bustling West Philadelphia neighborhood.



REQUESTED INFORMATION	
Key site specifications	
Ownership	Wexford Science & Technology, LLC (Wexford) with joint venture partners, Ventas (NYSE: VTR) and the University City Science Center (UCSC)
Site control	Site is owned by joint venture and consists of a mix of fee simple and 99-year prepaid ground leases
Zoning	Existing zoning is CMX-4 with an overlay to allow additional density
Initial requirement (2019)	500,000 square feet of existing office space is available for Amazon to lease in 2019
Full buildout (2027)	The current zoning on the site will accommodate 8.4 million square feet of development. Once adopted, the zoning changes recommended by the Planning Commission in its Southwest University City Plan would allow for a total of 11.9 million square feet of development
Transit	
Proximity to population center	1.4 miles to City Hall
Proximity to airport	15 minutes via car
Proximity to major highways / arterial roads	Served by 5 on/off access ramps to I-76 and I-676, all within 1.2 miles of the site with 4 major and minor arterial roadways, uCity Square is well-connected via multiple access points
Bus	4 bus routes (#21 every 8-10 minutes; #30 every 30 minutes; #40 every 15 minutes; #42 every 6-8 minutes) as well as free neighborhood shuttles that run every 5-15 minutes
Subway / street trolley	Market Frankford Subway Line is on site – trips every 6 minutes; trolley lines on site with service every 5-10 minutes; additional trolley lines (#34, 13, 11, 36) within one block, each with trips every 3-10 minutes
Commuter rail	10-minute walk to Amtrak 30th Street Station (or one subway stop for a direct connection)
Sidewalks	Designed with a specific focus on the pedestrian experience, the area has a plethora of existing 14'-22' sidewalks
Bike lanes	uCity Square has numerous bike lanes and routes. Bike parking is plentiful, and new buildings are being developed with indoor bike storage and showers
Parking	~3,000 parking spaces on site
Site connectivity	Dense urban community - employees can easily walk, bus, bike, or drive
Permitting / Infrastructure	
Utility infrastructure	uCity Square is served by PECO, which can provide dual service from multiple grids. Procurement of power from renewable sources is available. Developer will consider CHP, co-gen micro-grid, and sustainable power solutions to meet tenant objectives
Fiber and cellular connectivity	Site includes both existing metro and long-haul network fiber connectivity. 3G and LTE coverage available across all 4 major cellular carriers
Permitting process	The initial 500,000 square foot requirement can be accommodated in existing office space. The process to fit out this initial space would take approximately 4-12 months, and the space would be ready in 2019. New construction for additional space beyond the initial requirement would entail a 33-month process that would include design, permitting and construction



In addition to being a major regional and Northeast Corridor transportation hub, Amtrak 30th Street Station also offers sites for additional growth in University City with up to 280,000 square feet of existing office space in the station and future development sites over the existing railroad tracks and parking garage.

SITE	ZONING	BUILDABLE SQUARE FOOTAGE
30th Street Station Office Towers: 280,000 square feet of existing office space accessible from inside the station available for redevelopment	I-2 (Office use is a legal use)	280,000 square feet
Parcel 1: A ~32,500 square foot tract of land and associated air-rights located at the northwest corner of 30th Street and JFK Blvd, immediately west of 30th Street Station (requires construction over tracks)	CMX-5, Center City / University City FAR Overlay	520,000 square feet base zoning, up to 910,000 square feet with bonuses
Arch Street Surface Parking Lot: North of the Station, ~60,000 square feet of single floor open-air surface parking lot built over rail tracks, which is accessible to vehicles from Arch Street to the south	CMX-5, Center City / University City FAR Overlay	960,000 square feet base zoning, up to 1,680,000 square feet with bonuses
Amtrak Parking Garage: A 57,500 square foot lot with a nine-story, 1,525 car parking garage totaling 520,000 square feet; additional 400,000-1,000,000 square feet of FAR available for expansion or redevelopment	CMX-5, Center City / University City FAR Overlay	912,000 square feet base zoning, up to 1,596,000 square feet with bonuses

NEIGHBORHOOD: NAVY YARD



OPEN SPACE + ACCESS TO NATURE

1,200

acre riverfront neighborhood

20

acres of green space, including a 5-acre park designed by renowned landscape architect James Corner of High-Line fame

6.3 miles

of riverfront, with a 1-mile waterfront walking/biking path

THRIVING CORPORATE COMMUNITY

>150

companies including Urban Outfitters' global headquarters and GlaxoSmithKline's North American headquarters

>13,000

employees

7.5 million

square feet of occupied and in-development real estate

SMART CITY

1,500

Navy Yard bus rides to Navy Yard from Center City per day

1st

Community solar project in Pennsylvania

280,000

square feet for one of the largest cell therapy manufacturing facilities in the USA (WuXi AppTec)

FIGURE 1.5:

The Navy Yard, a thriving riverfront neighborhood, is considered the most successful redevelopment of a former military facility in the country.



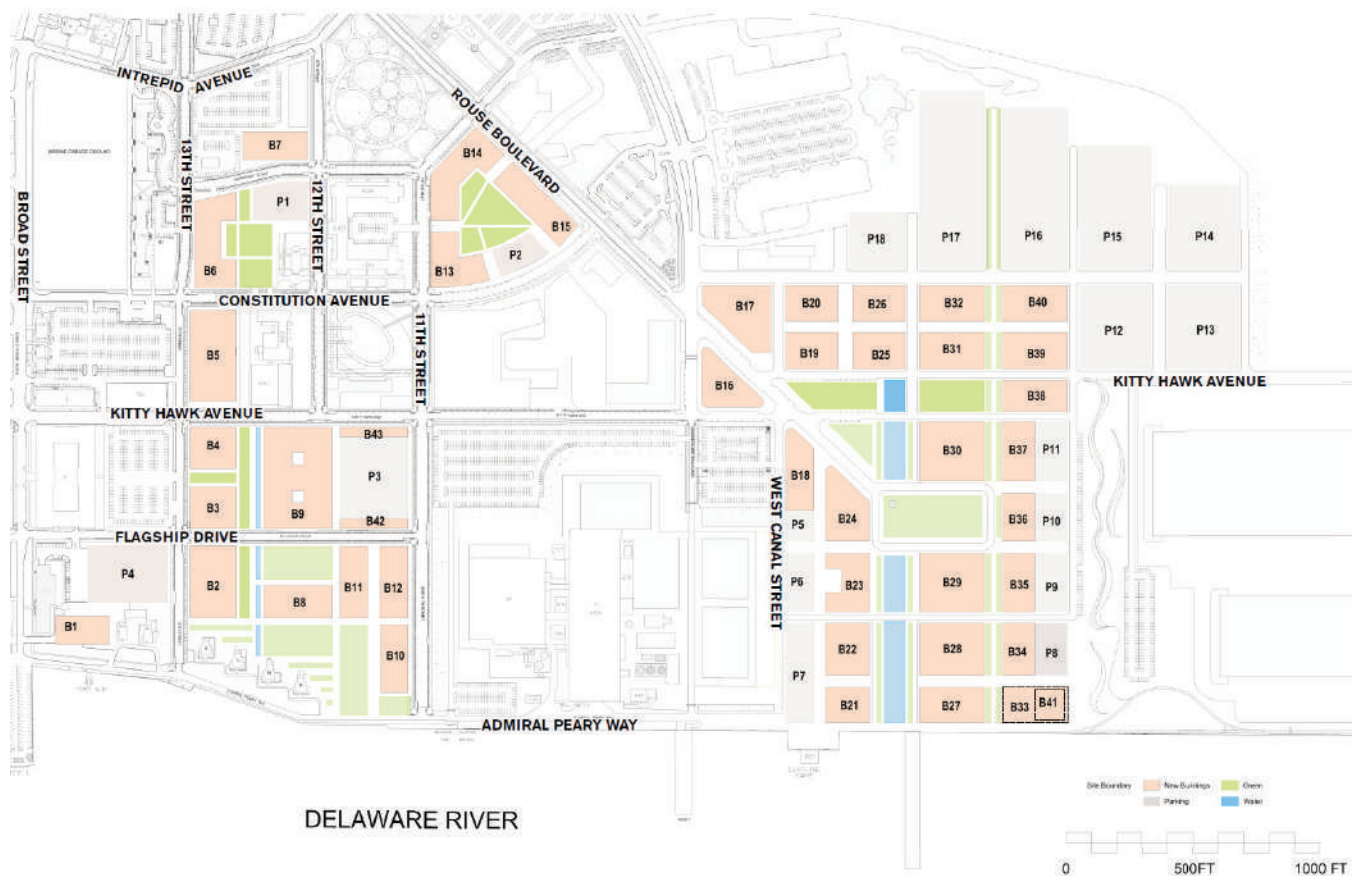
NAVY YARD



Minutes from Center City Philadelphia, an international airport, and the region's highway and mass transit network, the Navy Yard is a thriving riverfront neighborhood with capacity for another 10 million square feet of additional mixed-use development.

THE NAVY YARD IS CONSIDERED THE MOST SUCCESSFUL REDEVELOPMENT OF A FORMER MILITARY FACILITY IN THE COUNTRY.

A thriving riverfront neighborhood, the Navy Yard currently features more than 7.5 million square feet of buildings housing 13,000 employees working at 150 companies, ranging from headquarters for Urban Outfitters and GSK to technology startups, manufacturers, corporate R&D, and a graduate engineering and research satellite for Penn State University. Home to historic structures and new high-performance and LEED-certified development, the Navy Yard offers diverse, flexible building choices with varying heights, vintages, and floorplates, all powered by a nationally-recognized micro grid and oriented around miles of riverfront access and world-class open space. Future growth will include more than 10 million square feet of commercial and residential development.



The Navy Yard is directly adjacent to I-95 and proximally located to Philadelphia's sports complex and the AT&T Station/Navy Yard multimodal hub.

PARCEL NUMBER	BUILDABLE SQUARE FOOTAGE	PARCEL NUMBER	BUILDABLE SQUARE FOOTAGE	PARCEL NUMBER	BUILDABLE SQUARE FOOTAGE	PARCEL NUMBER	BUILDABLE SQUARE FOOTAGE
B1	118,233	B12	161,336	B21	81,768	B32	208,864
B2	236,155	B13	177,727	B22	157,664	B33	277,496
B3	261,168	B14	430,089	B23	147,407	B34	176,973
B4	261,168	B15	239,043	B24	182,052	B35	176,973
B5	660,842	B42	60,135	B25	243,778	B36	87,647
B6	660,842	B43	60,135	B26	105,404	B37	240,690
B7	99,504	B16	140,828	B27	171,601	B38	269,132
B8	127,731	B17	361,750	B28	224,500	B39	308,231
B9	899,560	B18	305,012	B29	470,414	B40	463,285
B10	143,728	B19	227,433	B30	473,528	B41	281,088
B11	161,336	B20	247,472	B31	308,231	Total	11,097,953



REQUESTED INFORMATION	
Key site specifications	
Ownership	Philadelphia Authority for Industrial Development (PAID), a public entity managed by the Philadelphia Industrial Development Corporation (PIDC)
Site control	The property is owned by PAID and under a long-term, exclusive development agreement with Liberty Property Trust (NYSE: LPT) and Synterra Partners
Zoning	Existing zoning for the office campus is CMX-3
Initial requirement (2019)	1.3 million square feet of office space is available within two vacant historic buildings. The 500,000 square feet requirement could fit in either of these buildings and will be available in 2019
Full buildout (2027)	The current zoning on the site will accommodate more than 10 million square feet of additional development. Currently, the Navy Yard has 7.5 million square feet of occupied space
Transit	
Proximity to population center	3.5 miles to City Hall
Proximity to airport	7 minutes via car
Proximity to major highways / arterial roads	Immediately adjacent to I-95 and I-76 and is directly served by an onramp and an offramp to the Navy Yard, from both highways
Bus	Private employer-funded "Express" bus connects the Navy Yard to Center City Philadelphia. At rush hour, it is a 10-minute ride and the bus currently departs every 10 minutes. By 2019, departures will be every five minutes
Subway / street trolley	The SEPTA Broad Street subway line is 0.5 miles from the Navy Yard entrance. The Navy Yard employer-funded "loop" bus connects to the subway and Center City Philadelphia (in planning stages of extension of Broad Street line)
Commuter rail	12 minutes from Amtrak 30th Street Station. Private mass transit bus system that runs every 10 minutes to regional rail lines located in Center City
Sidewalks	Every block of the Navy Yard either currently has sidewalks or will have sidewalks when developed. The Navy Yard also has a riverfront trail and a running track
Bike lanes	The Navy Yard has an extensive bike network and bike parking facilities. No street is ever built or repaved without giving consideration to all modes that will use it, including bicycles. All buildings have showers, encouraging this commuting method
Parking	The Navy Yard currently has ample free parking for each development site based on the specific requirements of each tenant. Additionally, there are 20,000 parking spaces at the Multimodal transportation hub in the stadium district which connects to the Navy Yard via mass transit
Site connectivity	The Navy Yard is contiguous and employees can comfortably walk, bike, or take a circulator bus between buildings
Permitting / Infrastructure	
Utility infrastructure	PAID owns and operates its own unregulated electric grid at the Navy Yard. This grid has two distinct substations that are fed in total by seven lines from two distinct external substations operated by PECO-An Exelon Company (third substation under development). The Navy Yard has also commenced construction of a micro-grid that will feature onsite generation, solar, and batteries to provide additional resiliency
Fiber and cellular connectivity	The site includes existing metro network fiber connectivity. 3G and LTE coverage is available across all 4 major carriers. Infrastructure is in place to support several major data centers and to significantly expand capacity
Permitting process	The time to develop at the Navy Yard is a streamlined process as a result of several critical factors (i.e., by-right zoning, exclusive development agreement between land owner and developers, shorter-time to design and permit given mid-rise zoning); The initial 500,000 square feet requirement can be accommodated in existing historic buildings. The process to fit out this initial space would take approximately 18 months, and would be ready in 2019. New construction for additional space beyond the initial requirement entails an 18-24 month process that would include design, permitting and construction

02

Business Environment + Incentives

"As a technology company, we were not bound to any particular geography, and in fact our largest customer base was in NY, and there were advocates of us choosing that locale. We chose Philadelphia because it was the best choice for our workforce. The company not only received lots of support and incentive from the city and local businesses to move downtown, but when we considered the growing technology landscape, the concentration of healthcare excellence (our industry), the cost of living, the talent pool, the easy commute, and the very large millennial population and all the energy that brings, there wasn't a better choice to be found."

—

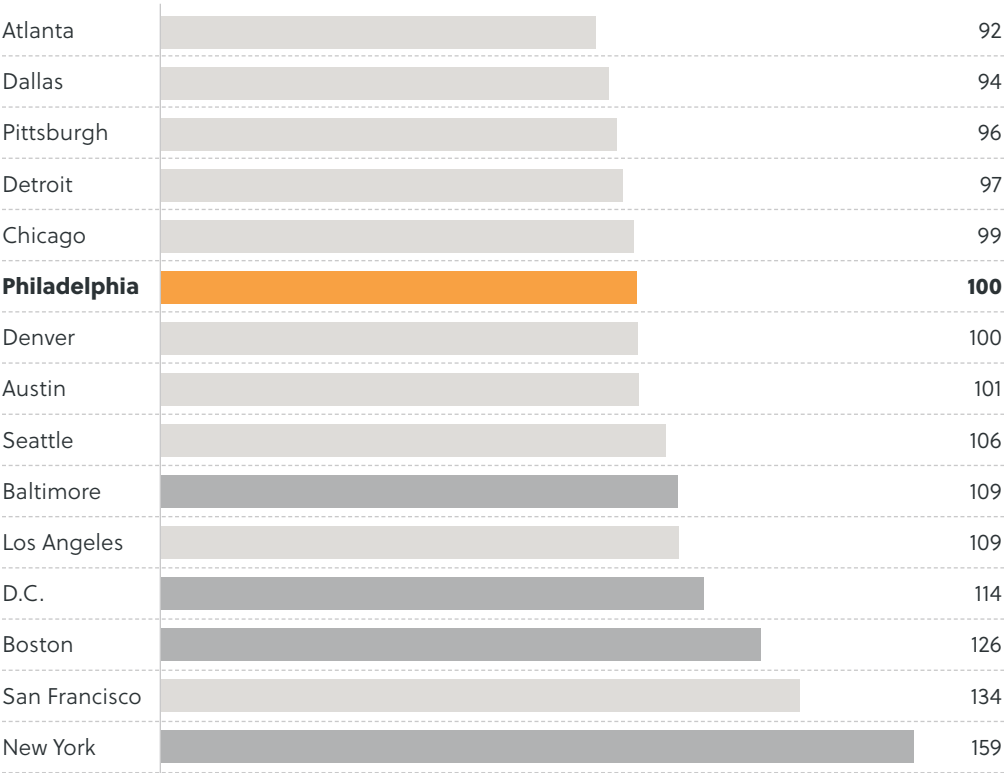
LeRoy Jones, President & CEO, GSI Health

FIGURE 2.1:

When factoring in the cost of labor, taxes, and facilities, Philadelphia is the most affordable city to do business in the Northeast Corridor.

COST OF DOING BUSINESS

Indexed to Philadelphia = 100



(Note: Dark gray bar represent cities on the Northeast Corridor)

SOURCE: Moody's Analytics

"I was so energized by Philadelphia's unique potential to grow my creative technology agency that I moved my business here. And it has paid off even bigger than I hoped. The City has been an incredible partner, with meaningful assistance and attention, all the way to the Mayor."

— Tim Reeves, Principal, Allen & Gerritsen

FIGURE 2.2:

Philadelphia's commercial real estate market is significantly more affordable than other major cities.

AVERAGE COST FOR CLASS A CENTRAL BUSINESS DISTRICT COMMERCIAL PROPERTY

Cost measured in \$/square foot

NYC	\$79.76
San Francisco	\$75.82
DC	\$68.24
Boston	\$60.85
Austin	\$56.92
Chicago	\$46.54
Seattle	\$45.62
LA	\$43.12
Denver	\$39.98
Dallas	\$31.82
Philadelphia	\$31.29
Atlanta	\$31.13
Pittsburgh	\$29.61
Baltimore	\$27.43
Detroit	\$22.70

SOURCE: Jones Lang LaSalle Real Estate Research

COMMERCIAL PROPERTY VACANCY (CENTRAL BUSINESS DISTRICT AND SUBURBAN MARKETS)

% of total available property currently vacant, 2017

Detroit	19.5%
Dallas	19.4%
Atlanta	17.5%
Pittsburgh	16.6%
Chicago	15.0%
LA	14.9%
Denver	14.3%
Baltimore	13.6%
Boston	13.3%
Philadelphia	12.6%
DC	11.8%
Austin	11.6%
NYC	10.6%
San Francisco	8.6%
Seattle	8.5%

SOURCE: Jones Lang LaSalle Real Estate Research

"After moving here from SF to start SocialLadder, I was blown away by everything Philadelphia has to offer a startup. Philadelphia is the 6th largest city in the US and 20th for cost of living which has made a BIG difference for us as a startup. We have become a globally recognized company & attracted world class talent to join our team, but we haven't had to fundraise just to pay the rent."

— Alana Bly, Co-Founder, SocialLadder

FIGURE 2.3:

Given Philadelphia's affordable cost of living, wages in the relevant job categories for Amazon are lower than in peer cities.

AVERAGE WAGE OVERALL, AND BY RELEVANT OCCUPATION, BY METRO REGION

Average 3-year annual salary (average 3-year growth rate), 2014-2016

	Average wage, '000s	Average wage for relevant jobs, '000s	Management Jobs, '000s	Accounting Jobs, '000s	Software Jobs, '000s	Legal Jobs, '000s
San Francisco	67 (2.1%)	122 (2.3%)	146 (1.8%)	94 (1.6%)	109 (2.4%)	138 (3.3%)
D.C.	66 (1.6%)	117 (1.6%)	139 (1.8%)	91 (1.0%)	102 (1.5%)	137 (2.1%)
Boston	62 (1.9%)	109 (1.2%)	132 (1.5%)	85 (1.0%)	97 (0.8%)	123 (1.4%)
New York	60 (1.5%)	119 (1.6%)	154 (2.0%)	92 (1.8%)	98 (1.3%)	134 (1.2%)
Seattle	59 (2.2%)	104 (1.7%)	127 (2.2%)	80 (0.8%)	107 (1.7%)	104 (2.0%)
Denver	54 (1.8%)	103 (2.0%)	132 (2.5%)	78 (1.0%)	93 (2.3%)	107 (2.0%)
Los Angeles	54 (1.6%)	106 (0.8%)	126 (1.1%)	80 (1.1%)	91 (1.1%)	127 (0.0%)
Baltimore	54 (1.5%)	94 (0.2%)	123 (0.8%)	76 (0.0%)	96 (0.2%)	83 (-0.3%)
Philadelphia	9th 53 (1.1%)	6th 102 (1.0%)	4th 135 (0.9%)	8th 78 (1.0%)	10th 87 (1.9%)	6th 109 (0.2%)
Chicago	52 (1.9%)	94 (1.8%)	114 (1.2%)	75 (0.5%)	83 (2.5%)	105 (3.0%)
Detroit	50 (1.4%)	90 (0.7%)	117 (2.1%)	72 (2.0%)	79 (1.4%)	92 (-2.6%)
Atlanta	50 (1.3%)	96 (1.4%)	120 (1.6%)	74 (0.0%)	85 (2.1%)	107 (1.9%)
Austin	50 (1.8%)	94 (1.9%)	118 (2.3%)	73 (2.2%)	84 (2.3%)	100 (0.8%)
Dallas	49 (1.8%)	99 (2.8%)	126 (2.4%)	77 (1.6%)	87 (2.6%)	107 (4.4%)
Pittsburgh	46 (1.4%)	90 (1.7%)	118 (1.3%)	68 (1.8%)	74 (2.6%)	102 (1.3%)

SOURCE: Bureau of Labor Statistics

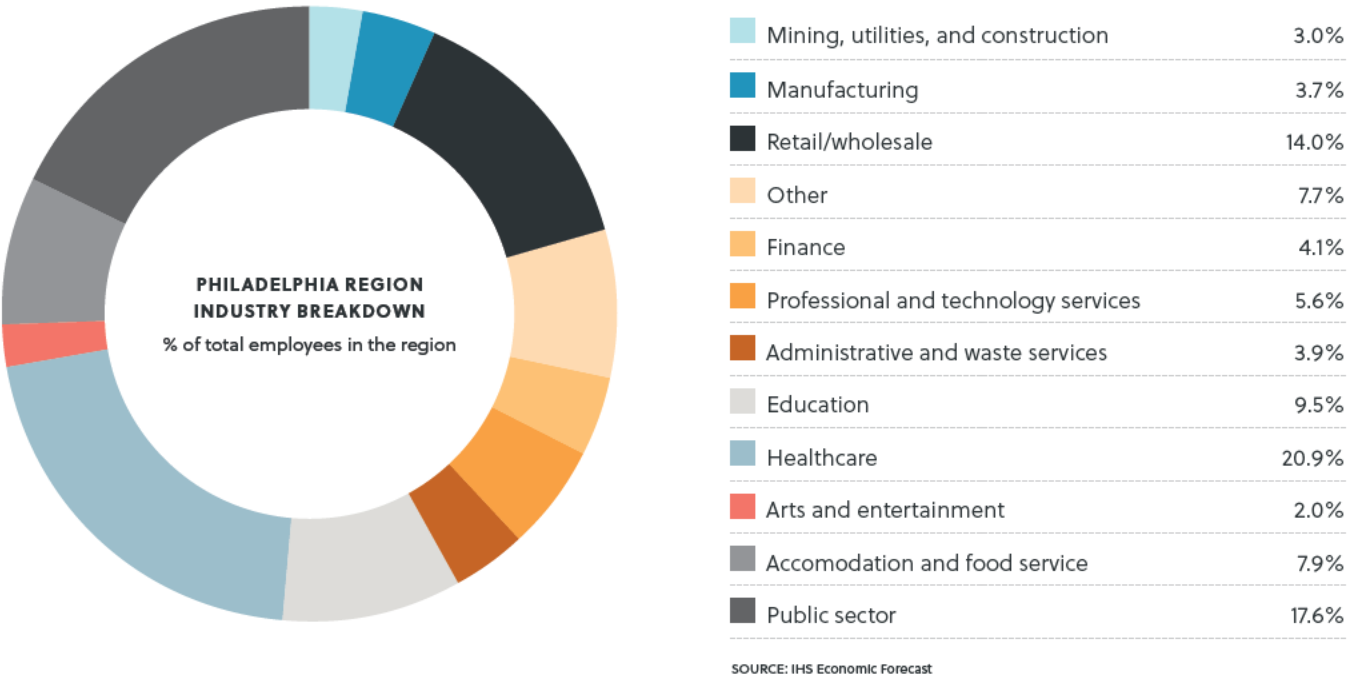
Note: Philadelphia rank by column category

Philadelphia has 16% lower wages across East Coast peer cities.

Philadelphia has 11% lower wages than Seattle.

FIGURE 2.4:

Philadelphia has a truly diversified set of industries which enriches the talent ecosystem and stabilizes the local economy.



“We grew organically through talent acquisition of ready-made professionals who brought to us vast experience working with other multinational organizations in the region. The establishment of successful businesses in the region makes cross-pollination of talents possible, a clear win-win for all players in this ecosystem.”

— Greg Bentley, CEO, Bentley Systems

FIGURE 2.5:

There are 40+ Fortune 1000 and large international or private companies headquartered in the region.

COMPANY NAME	2016 REVENUE (MILLION)	CITY/STATE
Ace Insurance	\$31,469	Philadelphia, PA
Airgas	\$5,313	Radnor, PA
American Water Works Company	\$3,302	Voorhees, NJ
Amerisourcebergen Corporation	\$146,849	Chesterbrook, PA
Ametek	\$3,840	Berwyn, PA
Aramark	\$14,415	Philadelphia, PA
Arkema	\$8,902	King Of Prussia, PA
Burlington Stores	\$5,590	Burlington, NJ
Campbell Soup Company	\$7,890	Camden, NJ
Carpenter Technology Corporation	\$1,813	Wyomissing, PA
Comcast Corporation	\$80,403	Philadelphia, PA
Crown Holdings	\$8,284	Philadelphia, PA
E. I. Du Pont De Nemours and Company	\$24,594	Wilmington, DE
Endo International	\$4,010	Malvern, PA
FMC Corporation	\$3,282	Philadelphia, PA
Genesis Healthcare	\$5,732	Kennett Square, PA
GlaxoSmithKline	\$36,813	Philadelphia, PA
Grupo Bimbo	\$13,363	Horsham, PA
IKEA	\$41,610	Conshohocken, PA
Lincoln National Corporation	\$13,300	Radnor, PA
Navient Corporation	\$4,965	Wilmington, DE
QVC	\$8,682	West Chester, PA
Ricoh	\$18,057	Malvern, PA
SAP SE	\$26,065	Newtown Square, PA
Saint-Gobain	\$46,186	Malvern, PA
Siemens AG	\$94,095	Malvern, PA
Subaru Corporation	\$29,601	Cherry Hill, NJ
TD Bank	\$27,452	Wilmington, DE
TE Connectivity	\$12,238	Berwyn, PA

Teleflex Inc	\$1,868	Wayne, PA
Teva Pharmaceuticals Industries	\$21,903	North Wales, PA
The Chemours Company	\$5,400	Wilmington, DE
The Penn Mutual Life Insurance	\$1,848	Horsham, PA
Toll Brothers	\$5,169	Horsham, PA
Triumph Group	\$3,532	Berwyn, PA
UGI Corporation	\$5,685	King Of Prussia, PA
UNISYS Corporation	\$2,820	Blue Bell, PA
Universal Health Services	\$9,766	King Of Prussia, PA
Urban Outfitters	\$3,545	Philadelphia, PA
Vanguard	\$6,782	Malvern, PA
Vishay Intertechnology	\$2,323	Malvern, PA
VWR Corporation	\$4,514	Radnor, PA

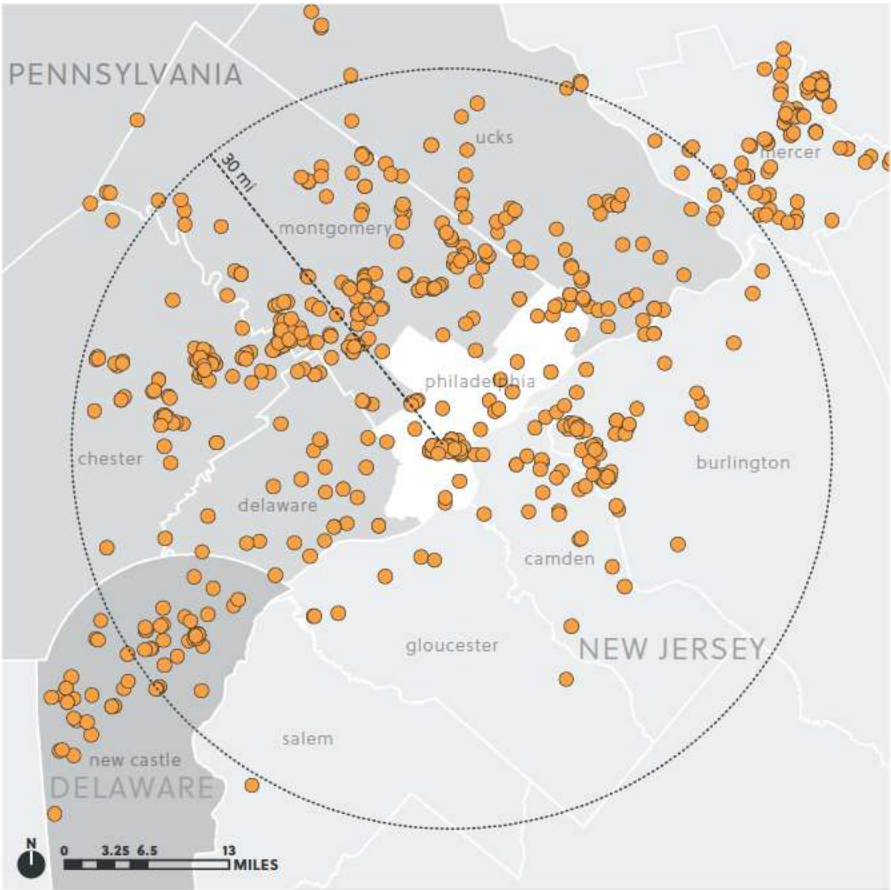
SOURCE: Hoovers

“Our talent and recruitment teams have enjoyed being situated in an energetic community of job seekers, both from the region’s world-class colleges and universities as well as in a competitive business environment which is home to numerous global and national corporations. Philadelphia and its surrounding communities are enticing to professionals and their families - benefiting from an energetic art and culture scene and world-class institutions, museums, restaurants and more.”

**— Steven H. Collis, Chairman,
President and Chief Executive Officer, AmerisourceBergen**

FIGURE 2.6:

Major technology firms are headquartered in Philadelphia and have drawn early-tenure and executive talent into the region. Philadelphia is an innovation hub in its own right, with 65 incubators and some of the most innovative tech firms across software, retail, e-commerce, and healthcare.



LEGEND

● Technology company

"Philadelphians are not great at simply copying what others have done, or accepting someone else's prescription for success. An un-scratchable itch of Independence drives our spirit of innovation; In our startups, our universities, our private companies and our public institutions. Yet in curious complement to our Independence, the sense of community and partnership are no less than an equal component of our spirit."

— RoseAnn Rosenthal, President and CEO, Ben Franklin Technology Partners

"So many innovative tech and ecommerce companies trace their roots back to Philly — from the "dot com" pioneers like CDNow (which Amazon acquired) and Half.com to a big name like Urban Outfitters to young companies like Warby Parker and Kynetic."

— Josh Kopelman, Partner, First Round Capital

"Philadelphia has provided Stitch with an ample supply of world-class team members at a competitive regional cost. Philly boasts a large network of renowned universities, a low regional cost of living, and a massive metropolitan population size. These have given us access to a seemingly limitless talent network at an affordable price, something our peers in other cities seem to perpetually struggle to find."

— Robert Moore, Chairman, Stitch Data

FIGURE 2.7:

Philadelphia has strong cellular coverage across all major carriers.



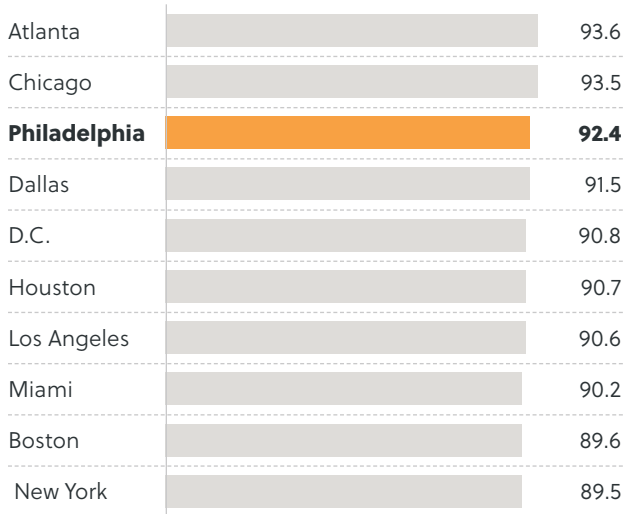
LEGEND

Source: Rootmetrics, Best Technology Found, 2017

- Proposed Amazon HQ2 neighborhoods
- 2G/3G
- 3G+
- LTE

FIGURE 2.8:

Philadelphia ranks third in cellular network speed among the top 10 largest U.S. cities.

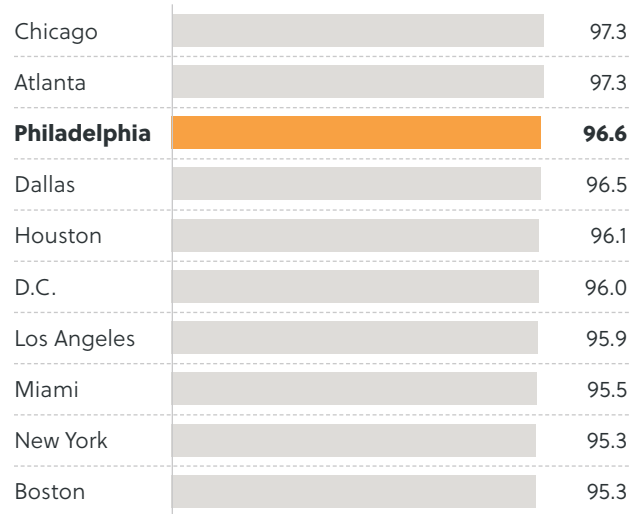


SOURCE: RootMetrics

Ranks estimated speeds for daily smartphone consumer use activities, such as checking email, browsing webpages, using apps, making calls, and sending texts

FIGURE 2.9:

Philadelphia ranks third in cellular data performance among the top 10 largest U.S. cities.

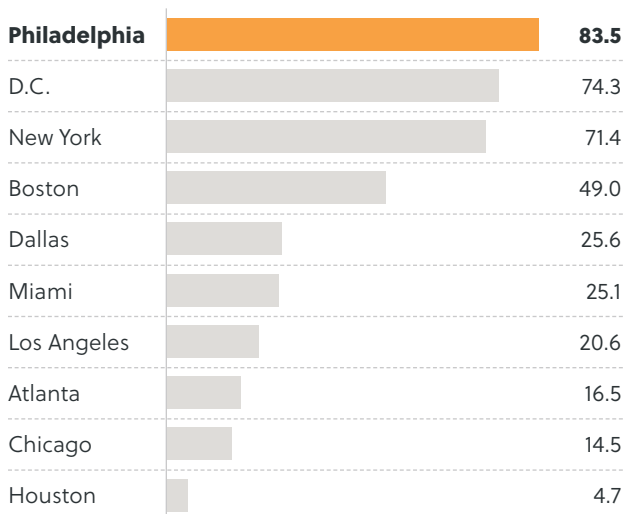


SOURCE: RootMetrics

Ranks the reliability and speed during uploads and downloads, such as downloading email, downloading files, loading typical webpages and apps

FIGURE 2.10:

Philadelphia leads the top 10 largest U.S. cities in fiber accessibility.

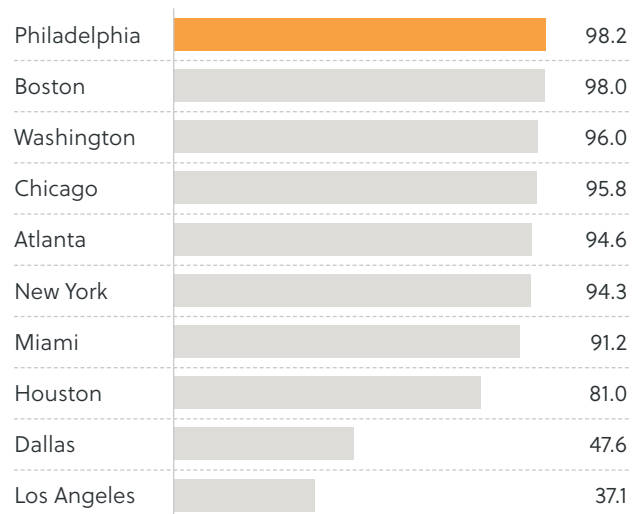


SOURCE: National Broadband Map, Federal Communications Commission

Percentages reflect population with access to fiber technology

FIGURE 2.11:

Philadelphia has the fastest download speeds among the 10 largest U.S. cities.



SOURCE: National Broadband Map, Federal Communications Commission

Percentages reflect population with access to download speeds over 100 mbps

SUMMARY: COMMONWEALTH OF PENNSYLVANIA AND CITY OF PHILADELPHIA INCENTIVE PROPOSALS

The Commonwealth of Pennsylvania and the City of Philadelphia are committed to providing a comprehensive incentives package to support Amazon’s investment in a Philadelphia-based HQ2. This incentives package is projected to total up to \$5.7 billion in value to Amazon over a 25-year period.

As detailed in the following pages, the Commonwealth of Pennsylvania proposes up to **\$4.6 billion** in funding for the Amazon HQ2 at a Pennsylvania location, which includes up to **\$4.5 billion** through a new performance-based personal income tax grant program and **\$100 million** for potential state transportation infrastructure needs related to the project.

The City of Philadelphia is also committed to investing with Amazon and the Commonwealth to support Amazon’s HQ2. The City will use its existing legal authority to create a 20-year Tax Increment Financing (TIF) District for the Philadelphia HQ2 site(s) Amazon selects. As described below, the City estimates the value of the proposed TIF District to be **\$1.1 billion** over 20 years for Real Property and Use & Occupancy Taxes, with additional value to be quantified following discussion with Amazon.

The following sections outline the state and local proposals in detail. The Commonwealth of Pennsylvania and the City of Philadelphia look forward to engaging with Amazon on these proposals.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT

Amazon
Office of Economic Development
c/o Site Manager Golden
2121 7th Avenue
Seattle, WA 98121

To Whom It May Concern:

On behalf of Governor Tom Wolf, and in partnership with the Pennsylvania General Assembly and the Metropolitan Statistical Areas (MSAs) submitting location information, I am pleased to present the Commonwealth of Pennsylvania's state-level proposal in response to Amazon's RFP for the HQ2 project. This information will accompany the proposals submitted by Pennsylvania communities that have elected to submit a proposal to Amazon. We are committed to working with you seamlessly as a unified force on both state and local levels to implement this project successfully.

Amazon already has a strong presence throughout Pennsylvania, with significant investments in fulfillment centers, warehouse facilities, and numerous other assets. Our shared values, which prioritize sound financials, STEM education, diversity, and inclusiveness, make Pennsylvania an excellent match for your HQ2 project — as well as a welcoming environment where employees can innovate and thrive.

To meet the needs of Amazon's HQ2, the Commonwealth of Pennsylvania proposes up to \$4.6 billion in financial assistance, including up to \$4.5 billion through a new performance-based grant program and \$100 million to support state transportation improvements.

The concept of this new incentive program is straightforward: a grant award will be made available on an annual basis for up to 25 years, and will be based on the amount of personal income tax collected annually from Amazon employees. We believe you will immediately recognize the flexibility and predictable incentive potential of this new program, and we are recommending immediate legislative action to create it. Governor Wolf and the leadership of the Pennsylvania General Assembly are committed to effectively engaging with Amazon to ensure this project's success.

Our talent pipeline is preparing the next generation of leaders and thinkers for the careers that HQ2 will provide. Our workforce — both current and future — is ready for Amazon. Our higher education institutions are among the best in the nation, and are world-renowned for business, computer engineering, and finance. Governor Wolf is a champion for STEM education, and has set a goal of increasing enrollment in STEM majors at state universities by 10,000 before 2020. Each year, he proudly hosts the Governor's PA STEM Competition to highlight STEM education throughout Pennsylvania, and during his term, Governor Wolf has increased K-12 education funding by over \$840 million.

However, all of the assets mentioned above burn most brightly because of our strong inclusivity and diversity. Pennsylvania was founded centuries ago on the principle that all are welcome, and can practice their faith and culture as they see fit. That spirit is still very much alive today, and we strive to uphold its legacy, so that when people are choosing where to go to school, begin their professional lives, start a company, or raise their family, they know that Pennsylvania is open to them.

As you leaf through our accompanying "Work Smart. Live Happy." declaration, we're confident that you'll see Amazon's core values reflected in who we are as a state. Thank you for the opportunity to share our plan of action to assist Amazon in this exciting venture. We look forward to meeting with you soon to engage in what we are confident will be a fruitful partnership.

Sincerely,



Dennis M. Davin
Secretary

Office of the Secretary

400 North Street, 4th Floor | Commonwealth Keystone Building | Harrisburg, PA 17120-0225 | 717.787.3003 | Fax 717.787.6866 | dced.pa.gov



Commonwealth of Pennsylvania

October 13, 2017

Mr. Jeffrey P. Bezos
Founder and Chief Executive Officer
Amazon.com, Inc.
410 Terry Ave. North
Seattle, WA 98109-5210

Dear Mr. Bezos:

Please accept this joint leadership letter from the Commonwealth of Pennsylvania as an expression of our full support and invitation to Amazon to select a location in the Keystone State for Amazon HQ2. We are thrilled with the opportunity to become a partner with you and your company on this incredible and unique endeavor to create a second company headquarters in North America.

We are confident that Pennsylvania has the perfect metropolitan area with the features most important to Amazon, including a robust and highly talented workforce. Pennsylvania's education system produces the workforce that drives our economy. From pre-K through college and graduate programs, some of the strongest schools in the country can be found in the Keystone State. In addition to being a national leader in science, technology, engineering, and mathematics (STEM) education, Pennsylvania has some of the top graduate programs for business and computer engineering.

It is our understanding this second headquarters project may require as many as 50,000 new full-time employees over ten to fifteen years and could result in an investment of over \$5 billion. As unique as this opportunity is, we appreciate Amazon's acknowledgment that the stature of such a project creates the opportunity for bold state-level economic development action. Pennsylvania is doing just that.

We support the creation of a new performance-based program which would be formulated on revenue collected from Personal Income Tax and for a period of up to 25 years. This new program would be available to a qualified business anywhere in Pennsylvania. For Amazon, it is estimated that several billion dollars could be generated to support your HQ2 project.

We understand that Amazon intends to select and announce the final site in 2018, but regardless of which Pennsylvania location Amazon ultimately chooses, we are committed to pressing forward with legislation to create a new economic development program to attract impactful, job creating projects like HQ2. Additionally, we welcome Amazon to contribute ideas and suggestions as we craft new legislation for a WIN-WIN partnership between Pennsylvania and Amazon.

Sincerely,


TOM WOLF
Governor


JOE SCARNATI
President Pro Tempore
Senate of Pennsylvania


MIKE TURZAI
Speaker
Pennsylvania House of Representatives

Mr. Jeffrey P. Bezos
October 13, 2017
Page Two



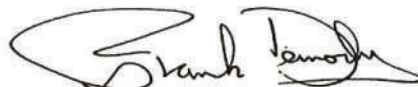
JAKE CORMAN
Majority Leader
Senate of Pennsylvania



DAVE REED
Majority Leader
Pennsylvania House of Representatives



JAY COSTA
Democratic Leader
Senate of Pennsylvania



FRANK DERMODY
Democratic Leader
Pennsylvania House of Representatives

PROJECT MANAGEMENT – GOVERNOR’S ACTION TEAM

The Commonwealth of Pennsylvania will commit a team of economic development professionals to work directly with Amazon for the duration of the Project. The Governor’s Action Team (“GAT”) has extensive experience working with capital-intensive and sophisticated projects. GAT facilitates and coordinates state government’s engagement and support for the Project. Additionally, GAT works directly with local and regional economic development service providers and organizations, as well as local and federal government officials to provide an easy and seamless experience for companies locating or expanding in Pennsylvania.

A recent example of GAT’s collaborative work was Royal Dutch Shell’s new petrochemical facility in Beaver County, Pennsylvania, a project for which GAT acted as project coordinator. For nearly five years, GAT worked on an almost daily basis with countless members of project teams from various companies to deliver concierge-level services. Their tireless efforts led to a successful \$6 billion final investment decision, as well as the creation of a new ethane industry from the second-largest natural gas field in the world. GAT coordinated services for 17 federal, state, and local offices to bring this project to fruition. This proven experience, drive, and know-how is ready to assist Amazon HQ2.

PENNSYLVANIA INCENTIVES

Governor Wolf is committed to making Pennsylvania an economic leader by investing in the growth of businesses like Amazon. To meet the needs of Amazon’s HQ2, the Commonwealth of Pennsylvania proposes up to **\$4.6 billion** in financial assistance, including up to \$4.5 billion through a new performance-based grant program and \$100 million to support state transportation improvements.

In addition to financial assistance, the Governor’s Action Team will provide Amazon with any assistance that may be required – including site selection, permitting, and application processes – and be the single point of contact to coordinate the involvement of other state agencies as needed.

Performance-Based Grant Program – New Program Requiring Legislation

Amount:	\$4.5 billion projected
Uses:	Site acquisition, development and construction costs, utility and transportation infrastructure, apprenticeships and cooperative education initiatives, and student education debt
Administered by:	Commonwealth of PA/Department of Community & Economic Development (DCED)

Terms/Conditions: To be determined

Based on the information made available in your RFP and through economic impact modeling, it is estimated that Amazon’s HQ2 project (“Project”) may yield approximately \$4.5 billion in program incentives based directly on the collection of Personal Income Tax (“PIT”) from 50,000 new direct Amazon employees at HQ2. The Performance-Based Grant Program (“Program”) benefits will be influenced directly by Amazon’s decisions, including Project time frame, actual wages paid, build-out, and hiring schedules and inflationary factors.

The Commonwealth proposes that an amount equal to no more than 100% of PIT collected by the Commonwealth from direct, full-time Amazon HQ2 employees be offered to Amazon as an annual grant each year for a period not to exceed 25 consecutive years from the date of satisfaction of Program entrance requirements. The grant may be used by Amazon for costs including site acquisition, construction, utility and transportation infrastructure, apprenticeship programs, cooperative education programs, and student education debt of new employees. Since the Program does not yet exist, the description provided in this proposal is intended to offer the general framework of the Program and an outline of the legislative process in Pennsylvania.

The Program is a performance-based, discretionary incentive program that provides cash grants directly to new and expanding companies to help offset the cost of locating or expanding a facility in the Commonwealth. The amount of the grant is based on **a percentage of the personal income tax withholdings** associated with new, direct full-time jobs created in Pennsylvania.

The criteria for discretionary benefits include:

- Number of direct full-time jobs to be created, payroll, new capital investment;
- The overall quality, including: wages, benefits, growth potential of the company, multiplier effect of the industry;
- The financial stability and creditworthiness of the company;
- The level of economic stress in the Project area;
- The competitiveness of alternative locations;
- The amount of local incentives committed to the Project; and
- Targeted growth industries

Program funding is not made available until the company meets a new job creation threshold and satisfies base compensation and capital investment requirements. Grant funds are disbursed annually, for a term up to 25 years, to approved companies following the satisfaction of performance criteria set forth in grant agreements.

Applicable to the Project and to Amazon, the proposed Program will specifically have a provision that companies creating 50,000 jobs with an average annual compensation of \$100,000 and investing \$5 billion will be eligible for a grant of up to 100% of personal income tax withholdings for 25 years. Under no circumstances can the grant award exceed the new annual PIT remitted to the Commonwealth.

Program Legislative Process

The Governor will work with legislative leadership to draft, introduce and pass legislation into law to establish the Program. By way of example, the below steps outline how a bill would move through the legislative process to ultimately become a law in Pennsylvania.

BILL INTRODUCTION

The first step will be to have a bill introduced in either the Senate or House of Representatives to implement the program. For example, a Senator could introduce a bill by filing it with the Secretary of the Senate. The title is then read by a clerk during legislative session and the bill is referred to an appropriate standing committee by the Senate President Pro Tempore.

SENATE COMMITTEE

Once referred, the bill may then be considered by the committee. Specifically, the committee would take a vote to report the bill to the Senate floor, either as committed (which means without change) or as amended (with changes).

THE FULL SENATE

The measure then goes to the full Senate for the first of three days of consideration. No debate or amendments are permitted from the floor at this stage. On second consideration, Senators may propose amendments if they are deemed relevant to the subject of the bill. Debate is permitted at this stage. Once agreed to by the Senate for a second time, the bill is reprinted to include any amendments.

SENATE APPROPRIATIONS

Typically, after receiving first or second consideration, the Senate will re-refer a bill to its Appropriations Committee to determine its fiscal impact and vote the bill back to the full Senate Floor for further consideration.

FULL SENATE VOTE

On third consideration, the bill may again be amended or debated in its current form and then voted. After debate, a roll call is held. If a constitutional majority — usually 26 Senators — vote in its favor, the bill passes the Senate.

HOUSE COMMITTEE

After the bill has passed the Senate, it is sent to the House of Representatives, where the Speaker refers it to the appropriate standing committee in the House.

THE FULL HOUSE

If the bill is reported from committee, it follows a course similar to that in the Senate — except on first consideration. After first consideration in the House, the bill is not automatically moved on to second consideration, but is laid on the table. It may be removed from the table by a motion of the Majority Leader, or a designee. When the bill is so removed from the table, it is placed on the legislative calendar for the next day. The House steps relating to the Appropriations Committee, as well as second and third consideration, are similar to the Senate process. 102 votes are generally the constitutional majority needed for final passage in the House.

THE GOVERNOR

Once the bill has passed both the House and the Senate in the same form, it comes to the Governor for consideration. The Governor can either sign, veto, or take no action on the legislation. The official certified copy of the bill approved by the Governor is placed in the custody of the Secretary of the Commonwealth, given an act number, and filed. It is then an "Act of the General Assembly." If the Governor does not act on the bill within a prescribed time, it becomes law without his signature.

The Governor is committed to advancing the bill and will be working closely with the legislature through the legislative process.

PennDOT Capital Improvement Grant

Amount: \$100 million

Uses: State Road and Bridge Improvements

Administered by: Pennsylvania Department of Transportation (PENNDOT)

Terms/Conditions: Total of up to \$100 million, spread over 10 years from the Project start date with no more than up to \$10 million annually.

PennDOT works closely with the Governor's Action Team to accelerate priority transportation projects, spur economic development, and assist with state surface transportation needs. We understand that additional road improvements may be necessary for the Project. As part of the development process, applicants typically must identify the impacts of a project on the transportation system and identify mitigations to offset that impact. Should the Project require new and additional traffic improvements, the Commonwealth is proposing that PennDOT assist with the funding and prioritization of necessary improvements. The improvements must be to state-owned roads and right-of-ways necessary to accommodate the Project.

DEP Environmental Permitting

The Governor's Action Team will also assist in securing any necessary environmental permits through the Pennsylvania Department of Environmental Protection ("DEP").

DEP is a leader in assisting, educating, and encouraging Pennsylvanians to conserve and efficiently use the Commonwealth's diverse energy resources, resulting in a healthier environment and greater energy security for our future generations. DEP's mission is to protect Pennsylvania's air, land, and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. DEP Secretary Patrick McDonnell brings a broad perspective to the agency's regulatory and policy development processes and is committed to working in partnership with Amazon to accomplish our parallel missions in advancing environmental stewardship.

STEM EDUCATION IN PENNSYLVANIA

By 2018, there will be approximately 300,000 Pennsylvania jobs that require STEM skills or content knowledge and over the next 10 years, 71% of new jobs will require computer science skills. The U.S. Department of Labor estimates that by 2024, an additional 426,900 software development and programming jobs will be available, all of which will require at least a bachelor's degree. Our workforce is ready to fill these jobs. In 2015, more than 11,000 students completed their education in 105 technology-related programs throughout the Commonwealth. The majority of these graduates were from Pennsylvania, and chose to remain here after they received their degree, adding to the network of talented workforce available.

Governor Wolf is a champion for STEM education in Pennsylvania. The Administration aims to increase enrollment in STEM-specific majors by 10,000 at state-supported post-secondary institutions before 2020. In Pennsylvania, a talented workforce is developing as the Pennsylvania State System of Higher Education shifts its curriculum focus to meet changing workforce needs.

Under Governor Wolf's leadership, Pennsylvania also has made early and important progress in delivering more resources to schools and classrooms, as well as fostering collaborative, cross-sector dialogue to support STEM education, work-based learning, career pathways, and college access and completion. Governor Wolf also hosts the Governor's PA STEM Competition each year to highlight the importance of STEM education. The annual themed competition is open to students in grades 9-12 in public, nonpublic, and private schools, and gives the opportunity to showcase their skills and expertise in science, technology, engineering, and mathematics.

In 2016, the United States Chief Technology Officer commended Pennsylvania STEM programs and efforts by the Wolf Administration to increase access to resources and education in the sciences for all students. Recently, the STEM Funders Network recognized Pennsylvania as a national leader in STEM education for its five regional STEM ecosystems and their collaborative efforts. STEM ecosystems encompass schools, businesses, and community settings (including after-school and summer programs, science centers, libraries, museums, and other environments) that constitute a rich array of learning opportunities.

Pennsylvania is home to many talent-rich communities, which are home to both established and developing tech professionals, making them capable providing not only a reliable source of employees for immediate workforce needs, but also a robust advancement pipeline for future skilled workers. While enrollment has increased in STEM fields, that alone is not enough to meet the diverse needs of tech-based companies, especially Amazon. Understanding this, Governor Wolf has not limited the focus to just STEM career opportunities, but has made all education initiatives one of his top priorities.

This new Program will assist Amazon both directly and indirectly, as it provides opportunities to increase financial support for education programs (including STEM programs), apprenticeship programs, and STEM scholarship programs — bolstering workforce development. We also welcome Amazon's ideas for using aspects this new resource to further attract the right talent pool for HQ2 through a student loan debt payment initiative.

INVITATION TO PARTNER

Pennsylvania shares Amazon's vision for HQ2, and recognizes that it fulfills mutual goals of progressive entrepreneurship, STEM education development, tech advancement, visionary leadership and ingenuity, and good business.

We recognize that this project's transformative impact will be groundbreaking for its immediate location, and also that a positive effect will be magnified across the entire state. Pennsylvania is eager to work creatively and collaboratively on both state and local levels with Amazon in bringing not only economic benefits to our cities, communities, and businesses, but also in providing an ideal location for Amazon to do business for the long term.

Pennsylvania is already at the table. We invite Amazon to work with us on shaping and creating our new incentive program, reviewing real estate opportunities, and examining cost structure to reach a solution that makes sense and is truly a mutually beneficial public-private partnership.

Read more about Pennsylvania's business environment here:

dced.pa.gov/wp-content/uploads/2017/10/PA.WorkSmart.LiveHappy.Declaration.pdf

CITY OF PHILADELPHIA INCENTIVES

The City of Philadelphia is excited to partner with the Commonwealth in supporting the development of HQ2 in Philadelphia. The City will use its existing legal authority to create a 20-year Tax Increment Financing (TIF) District for the Philadelphia HQ2 site(s) Amazon selects. The City estimates the value of the proposed TIF District to be more than \$1.1 billion over the 20-year TIF term.

As evidenced in the attached joint letter, Mayor Jim Kenney and City Council President Darrell Clarke are committed to introducing and seeking approval of legislation to establish the TIF District as soon as Amazon makes its decision regarding sites. In addition, Joyce Wilkerson, Chairperson of the School Reform Commission, has also pledged to support its approval by that body. The City anticipates that the complete legislative process will require 60-90 days for final approval.

The City is prepared to welcome Amazon to Philadelphia by dedicating a full-time team of experienced planning and economic development professionals to facilitate the permitting and approval process for Amazon. Harold T. Epps, Director of Commerce, will lead this customer service team to ensure a fast and frictionless experience for Amazon as it establishes HQ2 in Philadelphia.

In a next phase of engagement, the City of Philadelphia and its partners will work with Amazon to shape the total incentives package to best meet the company's needs, including the potential for workforce development and job training support, utility-related incentives, and reductions in permitting and fees for development.



CITY OF PHILADELPHIA

OFFICE OF THE MAYOR
215 City Hall
Philadelphia, PA 19107
(215) 686-2181
FAX (215) 686-2180

JAMES F. KENNEY
Mayor

October 11, 2017

Jeff Bezos
Amazon.com
2121 7th Avenue
Seattle, WA 98121

RE: Philadelphia Incentives - Amazon HQ2 RFP

Dear Mr. Bezos:

We are excited to have the opportunity to present Philadelphia's credentials to Amazon for consideration as you determine the location of HQ2. We feel confident that Philadelphia's unique blend of a high quality of life, deep and diverse talent pool, regional mobility, capacity to support growth, and affordability are an ideal match for Amazon's culture and needs.

As part of that unique match, the City of Philadelphia is prepared to partner with Amazon by investing aggressively in your growth here. Over the last several decades our local government has had a strong track record of investing in broad-based tax-reduction to spur investment and growth. Over the last 20 years alone, the City has invested over \$200 million in Tax Increment Financing Districts to support innovation, new company formation and investment all across the city. We back that investment up with a pledge to provide unmatched customer service for businesses, investors and developers as they do business here. In support of HQ2, we will take that a step further and dedicate a team of our best planning and economic development professionals to be your customer service representatives to expedite a frictionless permitting and approval process.

As detailed in our response, the City's proposed investment in support of HQ2 will provide Amazon with a 20-year tax incentive zone for any site you select in Philadelphia. Depending upon how Amazon chooses to structure the programs, all new City-based Real Estate, Use & Occupancy, Sales and Business taxes will be returned to Amazon for its use to support investment and growth in Philadelphia through a Tax Increment Financing (TIF) District. These local benefits will be used in addition to, and in combination with, the state tax benefits proposed by the Commonwealth.



CITY OF PHILADELPHIA

OFFICE OF THE MAYOR
215 City Hall
Philadelphia, PA 19107
(215) 686-2181
FAX (215) 686-2180

JAMES F. KENNEY
Mayor

We pledge to introduce and seek passage of the necessary local legislation to create the 20-year TIF District for City taxes once you have finalized your site selection. We anticipate that process will require 60-90 days to final approval.

As leaders of Philadelphia's executive and legislative branches, we have a long, stable and successful track-record of partnership in creating a business-friendly environment by supporting smart, strategic investments in the city, and systematically lowering business taxes when prudent. Since first introducing the Tax Increment Financing program in 1995, Philadelphia's Mayor, City Council, and School Reform Commission have successfully cooperated to introduce and approve more than 30 Tax Increment Financing Districts, never losing a vote. This innovative tool has been used to grow employment and tax ratables in diverse projects that range from the largest, most productive private shipyard in the country, to new commercial offices and hotels, to community-based services in the City's poorest neighborhoods.

As carefully detailed in our response to your RFP, Philadelphia offers Amazon unparalleled location, a deep reservoir of talent, extensive transportation infrastructure, extraordinary quality of life, a desire and capacity for growth and an affordable and business-friendly environment.

We would be thrilled to have the opportunity to host you and your team for an in-person visit to share all that Philadelphia has to offer.

Sincerely,

Handwritten signature of James F. Kenney in cursive.

James F. Kenney
Mayor

Handwritten signature of Darrell L. Clarke in cursive.

Darrell L. Clarke
Council President

**THE SCHOOL DISTRICT OF PHILADELPHIA
SCHOOL REFORM COMMISSION**

EDUCATION CENTER

440 N. BROAD STREET, SUITE 101

PHILADELPHIA, PENNSYLVANIA 19130-4015

TELEPHONE (215) 400-4010

FAX (215) 400-4011

October 16, 2017

Jeff Bezos
Amazon.com
2121 7th Avenue
Seattle, WA 98121

RE: Philadelphia Incentives - Amazon HQ2 RFP

Dear Mr. Bezos:


On behalf of the School Reform Commission, I want to express our excitement over the prospect of welcoming Amazon's HQ2 to Philadelphia. The vitality of Philadelphia's School District and that of the City are critically linked. To ensure the prosperity of both, the School Reform Commission (SRC), as the governing body for the Philadelphia public school system, partners closely with the City to support strategic business investment and economic growth initiatives. Indeed, the School Reform Commission has agreed to participate in every TIF that has been presented by the City over the 20+ year history of the program.

The School Reform Commission is prepared to support the growth of Amazon's second headquarters here in Philadelphia. I understand the City has proposed investment in support of HQ2 to provide Amazon with a 20-year tax incentive zone for eligible sites in Philadelphia. Depending upon how Amazon chooses to structure the program, all new City and School-based Real Estate, Use & Occupancy, Sales and Business taxes will be returned to Amazon to support its investment and growth in Philadelphia through a Tax Increment Financing (TIF) District.

The School Reform Commission's role in TIF approvals is integrated into the City's approval process and requires a Resolution of the School Reform Commission prior to the City's final approval. Upon introduction of TIF legislation at City Council, I pledge to introduce and seek passage of the necessary Resolution by the School Reform Commission to create the 20-year TIF District for School District taxes. SRC meetings take place monthly and resolutions can be introduced and passed at the same meeting. We would of course aim for expedience in passing any necessary resolutions.

We look forward to hosting you and your team and to share all that our School District has to offer in person.

Sincerely,


Joyce Wilkerson
Chair

City of Philadelphia Incentives Proposal – Tax Increment Financing District

Amount: \$1.1 billion projected for quantified taxes, with additional value to be quantified following discussion with Amazon

Uses: Proceeds from the TIF can be invested in a variety of infrastructure, development, and operations in the District

The City is committed to using its existing legal authority to create a 20-year Tax Increment Financing (TIF) District for the Philadelphia HQ2 site(s) Amazon selects. After Amazon finalizes its site selection, the City will establish the boundaries for the TIF District to include any new development or redevelopment projects planned for Amazon’s use and will introduce and seek passage of the legislative approvals necessary to enact the TIF District.

Within the TIF District, the following incremental City-based tax revenues (over and above the existing base revenue paid in the District prior to Amazon’s development) will be collected and returned to Amazon to support its HQ2 investment for a period of 20 years from start of construction of the first project: Real Property, Use & Occupancy, Business Income & Receipts (BIRT), and local Sales taxes (1%) from operations in the District. Based upon Amazon’s growth projections contained in the RFP, the City estimates that the combined value of the Real Property and Use & Occupancy rebates is up to \$1.1 billion over 20 years.

Additionally, rebates of the BIRT and Sales taxes also offer significant value, but require further discussion with Amazon on the structure of its business and the services planned within the sites to adequately project. TIF benefits will be available to Amazon in addition to, and in combination with, the state benefits proposed by the Commonwealth.

Below, Amazon will find detailed information on the incentives package proposed by the City of Philadelphia, including a fact sheet on the proposed TIF District and a description of the key assumptions driving the estimated value of the state and local proposals.

Fact Sheet: Tax Increment Financing District

Authority & description:	<p>The Pennsylvania Tax Increment Financing Act, or TIF Act (53 P.S. § 6930.1 et seq.) authorizes the City and School District to create a TIF District wherein certain increases in tax revenues may be used to finance improvements or fund activities in the District.</p> <p>In a TIF District, the property owner and TIF District occupant continue to pay taxes as usual; however, the City and School District agree to pay the new, or “incremental” tax revenues above the existing, established “base” value resulting from new investment or operating activity of the taxpayer for its direct use or to repay a TIF Note if used to finance improvements.</p>
Eligibility requirements:	The TIF Act requires a series of findings, which will be confirmed by the City when Amazon selects its preferred site and included in the authorizing legislation.
Eligible local taxes:	<ul style="list-style-type: none"> • Real Property Tax • Use & Occupancy Tax • City Sales Tax (1%) • Business Income & Receipts Tax
Total projected value:	<p>The City estimates the Real Estate and Use & Occupancy taxes at up to \$1.1 billion over a 20-year term, based on an assumed build-out schedule of 9 years, and will work with Amazon to develop projections of additional TIF revenue opportunities generated from City Sales and Business Income and Receipt Taxes.</p> <p>For detailed assumptions, please see Exhibit 1.</p> <p>Amounts described are estimates only and ultimate value is subject to Amazon’s investment and business activity over the TIF term.</p>
Term:	20 years (maximum allowed under the TIF Act).
Beginning effective date:	To be determined by Amazon. Typically a start date is established prior to any construction in the District.
Clawbacks or recapture provisions:	Not applicable
Administrative & legislative approval process & timing:	<p>City Council approves a TIF District by both a Resolution and an Ordinance, and the School Reform Commission approves by Resolution. The approval process is as follows:</p> <ul style="list-style-type: none"> • Upon introduction of the Ordinance, City Council will schedule a public hearing with 30-days prior notice • The School Reform Commission and City Council will each approve a Resolution agreeing to participate in the TIF District during the 30-day period, prior to the public hearing • Final passage of the Ordinance must wait a minimum of 3 weeks following the public hearing before approval • The total legislative process typically takes 60-90 days to complete
Level of uncertainty:	<p>More than 30 TIF Districts have been proposed, all of which have been approved by the School Reform Commission and City Council.</p> <p>See attached letters of support from Mayor Jim Kenney & Philadelphia City Council President Darrell Clarke and School Reform Commission Chair Joyce Wilkerson.</p>
For credits – whether refundable, transferable, or may be carried forward:	TIF proceeds may be securitized and used to repay debt or used on a current, annual “pay-as-you-go” basis at Amazon’s election.
Attachments & links:	<ul style="list-style-type: none"> • Support letter from Mayor Kenney & City Council President Clarke • Support letter from School Reform Commission Chair Wilkerson • Pennsylvania Tax Increment Financing Act

Key Assumptions

In order to estimate the value of the incentive programs, the City of Philadelphia used the following assumptions regarding buildout and employment ramp-up:

- An initial building size of 500,000 square feet in Year 1
- A total building size of 8,000,000 square feet upon completion
- Three phases of buildout over 9 years, with an incremental 500,000 square feet built in Years 1-3 (totaling 1,500,000 square feet over the first phase), an incremental 1,833,333 square feet built in years 4-6 (totaling 5,500,000 square feet over the second phase) and 333,333 square feet built in years 7-9 (totaling 1,000,000 square feet over the third phase)
- Investment of \$600 per square foot for construction

The estimate assumes the following about operations of the HQ2 buildings:

- Initial direct Amazon employment of 2,500 in Year 1
- 50,000 direct Amazon employees upon completion of the project, increasing relative to construction at the rate of one job per 160 square feet built
- Total compensation (including benefits) of ~\$142,000, of which ~\$120,000 are wages
- Wage inflation of 2% per year

Detailed assumptions for TIF-eligible taxes

REAL PROPERTY TAX	
Calculation:	Value = Sum [years of TIF District] * [Assessed value / square foot] * [% value not excluded as base value] * [square feet per year] * [Real Property Tax rate] * [% annual growth in assessed value]
Assumptions:	<ul style="list-style-type: none"> TIF District in effect for 20 years (commencing with construction in Phase I) Assessed value / square foot: \$280 Assessment value after excluding base value: 90% Real Property Tax rate: 1.3998% Annual growth rate in assessed value: 3%
USE & OCCUPANCY TAX	
Calculation:	Value = Sum [years of TIF District] * [Assessed value / square foot] * [% value not excluded as base value] * [square feet per year] * [% occupancy factor] * [Use & Occupancy Tax rate] * [% annual growth in assessed value]
Assumptions:	<ul style="list-style-type: none"> TIF District in effect for 20 years (commencing with construction) Assessed value / square foot: \$280 Assessment value after excluding base value: 90% Occupancy factor: 100% Use & Occupancy Tax rate: 1.21% Annual growth rate in assessed value: 3%
SALES TAX	
Calculation:	Requires further information from Amazon to value on projected retail and other sales within TIF District
Assumptions:	N/A
BUSINESS INCOME & RECEIPTS TAX	
Calculation:	Requires further information from Amazon to value on anticipated structure of organization and nature of services performed at HQ2
Assumptions:	N/A

03 Talent

“When you bring the smartest people together with the best possible resources, you get new ideas. You get discovery, you get day one innovation. That’s the kind of approach that has made Amazon great and that’s what I feel across Philadelphia. This city forged the nation’s future. If you want to catch a glimpse of how things will look in the years to come, this is the place to be.”

—

Dr. Amy Gutmann, President, University of Pennsylvania

FIGURE 3.1:

Over 40 million people live within 150 miles of Philadelphia across a range of skillsets relevant to Amazon’s growing needs.



LEGEND

- No population
- 100 or less people
- 101 to 1,000 people
- 1,001 to 10,000 people
- 10,001 to 25,000 people
- 25,001 to 100,000 people

8.5M

people working in
management, business,
science and the arts

6M

bachelor's degree holders

4.5M

graduate degree holders

8.5M

foreign-born residents

“There is no more exciting city in the country right now. This is a long time in the making and those of us who live here have known it for some time, but now the rest of the country is beginning to take notice. Being in Philly at the moment feels like somehow hitching yourself to a rocket ship that has already taken off.”

— Luke Butler, Director of Strategy and Operations, Curalate

FIGURE 3.2:

Philadelphia leads the nation in the number of top 100 universities within 150 miles.

NAME	RANK
Princeton University	#1 in National Universities
Columbia University	#5 in National Universities (tie)
University of Pennsylvania	#8 in National Universities
Johns Hopkins University	#11 in National Universities (tie)
Georgetown University	#20 in National Universities
New York University	#30 in National Universities (tie)
Villanova University	#46 in National Universities (tie)
Lehigh University	#46 in National Universities (tie)
Pennsylvania State University*	#52 in National Universities (tie)
George Washington University	#56 in National Universities (tie)
Fordham University	#61 in National Universities (tie)
University of Maryland—College Park	#61 in National Universities (tie)
Rutgers University—New Brunswick	#69 in National Universities (tie)
Stevens Institute of Technology	#69 in National Universities (tie)
American University	#69 in National Universities (tie)
University of Delaware	#81 in National Universities (tie)
Drexel University	#94 in National Universities (tie)
Yeshiva University	#94 in National Universities (tie)
Stony Brook University—SUNY	#97 in National Universities (tie)

SOURCE: U.S. News & World Report (2017)

*Abington, Brandywine, Great Valley (including Navy Yard) campuses

“It’s hard to imagine we could have built FS Investments into a \$20 billion alternative asset manager with more than 325 employees in less than a decade were it not for our being headquartered in Philadelphia. Thanks to Philadelphia’s world-class universities, we tap into a strong talent pool of highly educated recent graduates. We’ve built a robust co-op program with Drexel University and an impactful financial literacy program with the University of Pennsylvania’s Wharton School of Business, demonstrating another facet of our universities’ positive impact on our communities.”

— Michael Forman, CEO of FS Investments

FIGURE 3.3:

Philadelphia's metro area is the seventh largest in the U.S. with over 3 million workers in the region.

TOP 20 US METRO AREAS, BY POPULATION

2016 (million)

New York	20.15
Los Angeles	13.31
Chicago	9.51
Dallas	7.23
Houston	6.77
D.C.	6.13
Philadelphia	6.07
Miami	6.06
Atlanta	5.78
Boston	4.79
San Francisco	4.68
Phoenix	4.66
San Bernardino	4.53
Detroit	4.30
Seattle	3.80
Minneapolis	3.55
San Diego	3.32
Tampa	3.03
Denver	2.85
St. Louis	2.81

SOURCE: U.S. Census Bureau, IHS Economic Forecast, Bureau of Labor Statistics, 2016

TOP 20 US METRO AREAS, BY WORKFORCE

2016 (million)

New York	10.10
Los Angeles	6.70
Chicago	5.00
Dallas	3.70
D.C.	3.40
Houston	3.30
Philadelphia	3.10
Miami	3.10
Atlanta	3.00
Boston	2.70
San Francisco	2.60
Phoenix	2.20
Detroit	2.10
Seattle	2.00
San Bernardino	1.98
Minneapolis	2.00
San Diego	1.58
Denver	1.60
St. Louis	1.50
Tampa	1.48

SOURCE: U.S. Census Bureau, IHS Economic Forecast, Bureau of Labor Statistics, 2016

"Through the years, we credit much of our success to what the City of Brotherly love offers. The region's infrastructure and transit networks facilitate easy connections with customers, and we're strategically nestled between New York and D.C. Our area's stellar higher education network is churning out bright minds in STEM fields. And just as importantly, these graduates are choosing to stay in Philadelphia to work, buy homes, raise families and visit our world-class restaurants, historical sites and cultural destinations."

— Chris Gheysens, President & CEO, Wawa, Inc.

FIGURE 3.4:

The city of Philadelphia is the sixth largest in the U.S., with close to 1 million workers.

TOP 20 US CITIES, BY POPULATION

2016 (million)

New York	8.54
Los Angeles	3.97
Chicago	2.70
Houston	2.30
Phoenix	1.62
Philadelphia	1.57
San Antonio	1.49
San Diego	1.41
Dallas	1.32
San Jose	1.03
Austin	0.95
Jacksonville	0.88
San Francisco	0.87
Columbus	0.86
Indianapolis	0.86
Fort Worth	0.85
Charlotte	0.84
Seattle	0.70
Denver	0.69
El Paso	0.68

SOURCE: U.S. Census Bureau, IHS Economic Forecast, 2016

TOP 20 US CITIES, BY WORKFORCE

2016 (million)

New York	5.43
Los Angeles	2.63
Chicago	1.79
Houston	1.57
Phoenix	1.06
San Antonio	0.95
Philadelphia	0.94
San Diego	0.91
Dallas	0.89
Austin	0.69
San Jose	0.69
Charlotte	0.61
San Francisco	0.60
Columbus	0.60
Indianapolis	0.58
Fort Worth	0.57
Jacksonville	0.57
Seattle	0.51
Denver	0.49
El Paso	0.40

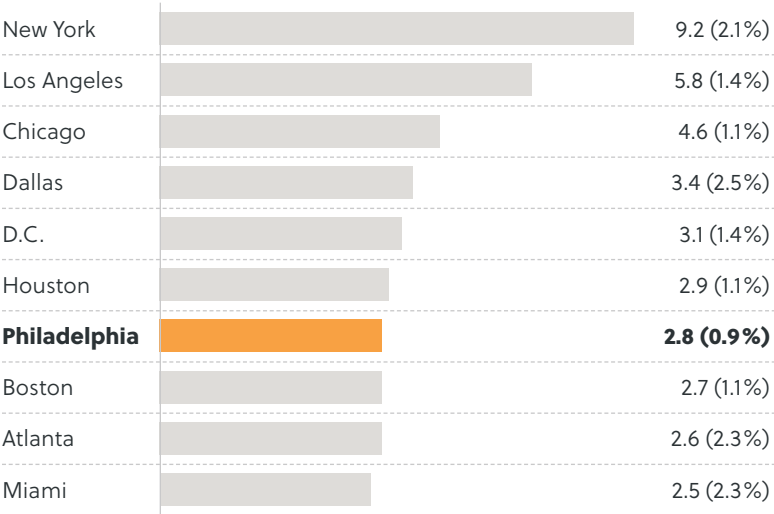
SOURCE: U.S. Census Bureau, IHS Economic Forecast, 2016

FIGURE 3.5:

The Philadelphia metro is the seventh largest job market in the U.S.

AVERAGE NUMBER OF JOBS OVERALL, BY METRO REGION

Average 3-year # of jobs, millions (average 3-year growth rate, 2014-2016)



SOURCE: Bureau of Labor Statistics, 2016

“Philadelphia is built on bootstrap principles. This has never been a metropolis where ‘It’s not my job’ has been an acceptable response. The idea of all of us, from administrative support to CEO, all rowing in the same direction, toward the same goals, is so deeply ingrained in the business culture here it’s almost part of the ether. As the leader of the largest woman-owned executive search firm in the world whose mission is to find the best and brightest talent, I have seen the talent pool here expand and deepen to levels I have always imagined it would.”












































































— Judith von Seldeneck, Chairman, DiversifiedSearch

FIGURE 3.6:

Philadelphia has a growing pool of talent across all relevant skills and occupations.

**AVERAGE NUMBER OF RELEVANT JOBS OVERALL,
AND BY RELEVANT OCCUPATION, BY METRO REGION**

Average 3-year # of jobs
2014-2016, (average 3-year growth rate)

		# Relevant Jobs, '000s		Management Jobs, '000		Accounting Jobs, '000s		Software Jobs, '000s		Legal Jobs, '000s
New York		1,427 (2.7%)		494 (2.2%)		549 (2.9%)		277 (3.5%)		107 (1.8%)
Los Angeles		864 (2.0%)		328 (0.6%)		335 (2.7%)		151 (4.0%)		51 (0.6%)
D.C.		812 (1.1%)		227 (1.9%)		296 (1.1%)		221 (0.8%)		68 (-0.2%)
Chicago		745 (3.4%)		310 (5.3%)		251 (2.7%)		144 (2.1%)		39 (-2.0%)
Boston		532 (2.1%)		209 (4.1%)		170 (-0.5%)		129 (1.8%)		24 (5.8%)
Dallas		489 (0.6%)		141 (-0.6%)		185 (0.9%)		138 (1.5%)		25 (0.7%)
San Francisco		473 (3.7%)		158 (2.1%)		166 (4.1%)		126 (5.3%)		23 (3.2%)
Atlanta		449 (3.4%)		158 (3.8%)		163 (2.0%)		106 (5.4%)		22 (1.0%)
Philadelphia		9th 413 (1.4%)		9th 122 (1.6%)		7th 169 (0.5%)		10th 92 (2.6%)		5th 31 (1.8%)
Seattle		363 (3.7%)		97 (4.7%)		131 (4.1%)		121 (2.7%)		14 (1.1%)
Detroit		274 (0.8%)		96 (-1.0%)		99 (1.9%)		62 (1.8%)		16 (1.0%)
Denver		254 (1.9%)		65 (1.9%)		110 (2.0%)		64 (2.8%)		15 (-1.8%)
Baltimore		229 (1.8%)		71 (2.8%)		84 (-0.1%)		59 (3.1%)		14 (2.3%)
Austin		166 (2.5%)		42 (-1.7%)		57 (3.4%)		57 (5.0%)		10 (2.8%)
Pittsburgh		146 (1.4%)		45 (1.6%)		58 (0.5%)		34 (2.6%)		9 (1.8%)

SOURCE: Bureau of Labor Statistics, 2016

Note: Philadelphia rank by column category, figures may not sum due to rounding

"The ability to tap into some of the best minds in the world, young, innovative, creative minds, has been tremendously important to us. Not just to us, but to our employees, who have families who wants to see a future for their children in Philadelphia."

— Osagie Imasogie, Chairman, Iroko Pharmaceuticals

FIGURE 3.7:

Philadelphia is one the top sources for university talent in the country producing over 90,000 graduates annually – placing it in the top 10 among other large U.S. cities.

UNIVERSITY AND DEGREE DENSITY BY METRO REGION

	Universities # (national rank)	Avg 3 year annual graduates, total # (national rank)	STEM graduates, total # 2015-2016 academic year (national rank)
New York	252 (1)	244,517 (1)	39,924 (1)
Los Angeles	193 (2)	181,186 (2)	32,481 (2)
Chicago	133 (3)	121,843 (3)	22,086 (3)
Philadelphia	100 (4)	92,050 (6)	15,800 (6)
Boston	85 (6)	95,123 (5)	19,892 (4)
Dallas	76 (7)	66,225 (9)	10,848 (9)
San Francisco	72 (8)	49,496 (12)	9,975 (11)
D.C.	67 (9)	91,089 (7)	17,948 (5)
Atlanta	63 (13)	42,815 (14)	10,831 (10)
Pittsburgh	53 (17)	33,848 (20)	9,155 (12)
Denver	50 (18)	30,419 (21)	5,163 (20)
Seattle	49 (19)	41,212 (15)	8,778 (13)
Detroit	35 (26)	29,303 (23)	4,709 (36)
Baltimore	34 (27)	36,602 (19)	8,275 (18)
Austin	27 (36)	28,809 (25)	6,500 (21)

SOURCE: NCES IPEDS 2015-16 preliminary release

“Millennials represent the city’s future – and take great pride in honoring its past. They are die-hard fans of local sports, fine dining, bike riding, marathon running, outdoor festivals, museums and other cultural highlights that make Philadelphia special. And most importantly, they are loyal to our city and believe in the power of hard work, commitment, and giving back.”

— Susan Jacobson, President, Jacobson Strategic Communications

FIGURE 3.8:

The Philadelphia region has approximately 100 universities and has some of the nation's top engineering, computer science and business programs.

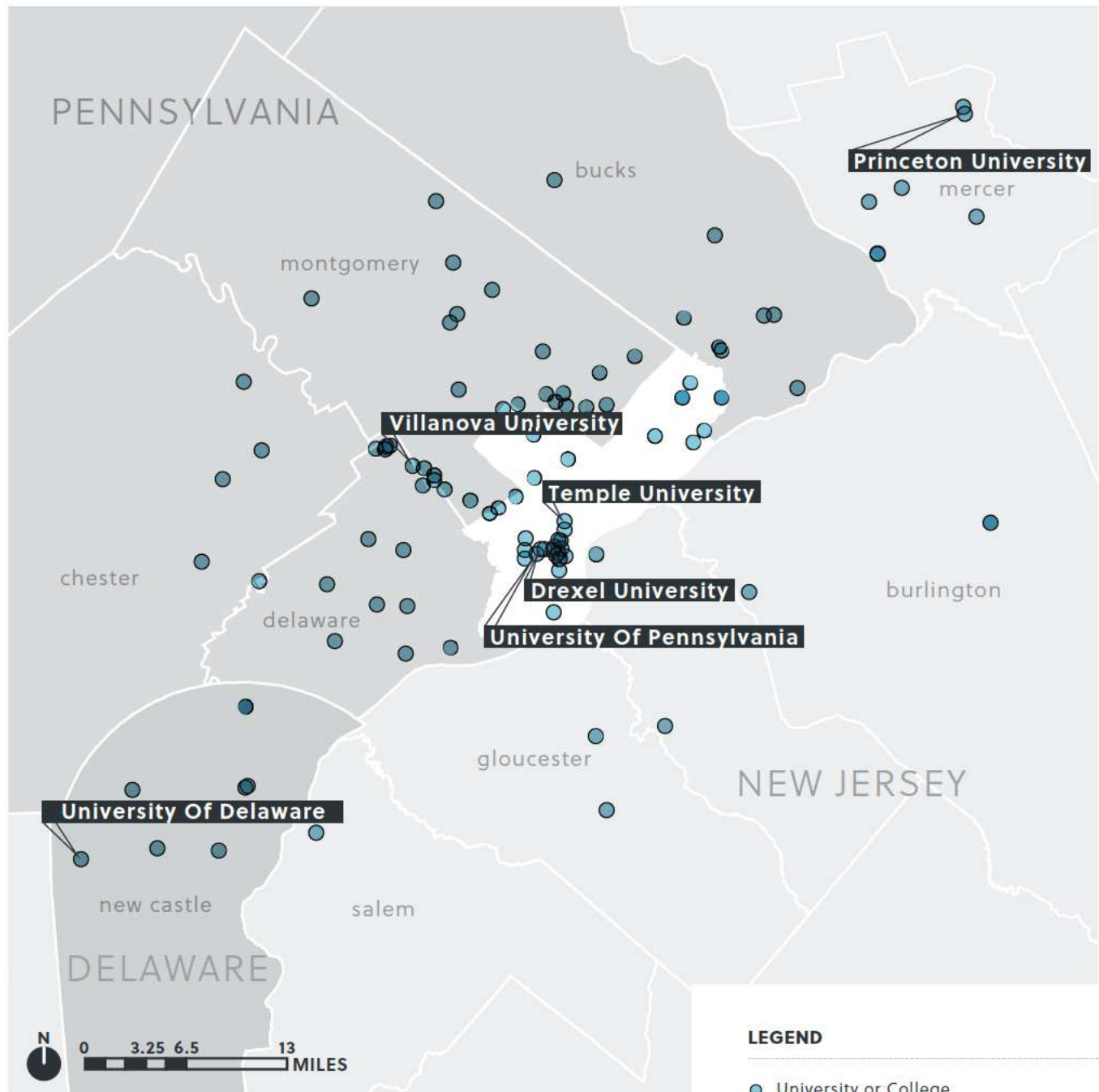


FIGURE 3.9:

Total degrees awarded at degree-granting institutions in the Philadelphia region for the 2014, 2015, and 2016 academic years.

	Total 2014-2016	Annual 3-Year Average of Relevant* Degrees	
	Total Relevant* Degrees Awarded 2014-2016	Bachelor and Associates Degrees	Advanced Degrees
Grand Total	76,134	25,378	8,362
University of Delaware	6,942	2,314	965
Temple University	4,726	1,575	311
University of Pennsylvania	6,842	2,281	1,376
Drexel University	5,987	1,996	692
Villanova University	3,922	1,307	476
Talmudical Yeshiva of Philadelphia	2,101	700	144
Rowan University	1,899	633	108
Wilmington University	3,088	1,029	583
West Chester University of Pennsylvania	1,477	492	37
Thomas Jefferson University	1,739	580	137
DeVry University-Pennsylvania	2,837	946	389
Thomas Edison State University	1,285	428	62
Saint Joseph's University	2,348	783	288
Rowan College at Gloucester County	978	326	26
Widener University-Main Campus	1,485	495	205
Princeton University	1,092	364	139
The College of New Jersey	942	314	3
Community College of Philadelphia	696	232	—
Rutgers University-Camden	908	303	75
Valley Forge Military College	1,677	559	246
La Salle University	1,100	367	150
Theological Seminary of the Reformed Episcopal Church	647	216	28
Camden County College	337	112	—
Delaware County Community College	837	279	—
Rider University	1,111	370	113
Montgomery County Community College	536	179	—
Saint Charles Borromeo Seminary-Overbrook	1,191	397	157
Rowan College at Burlington County	85	28	—
The Art Institute of Philadelphia	545	182	—
Princeton Theological Seminary	525	175	92
Philadelphia College of Osteopathic Medicine	372	124	54
Eastern University	773	258	132
Arcadia University	286	95	39
Philadelphia University	744	248	96
Cheyney University of Pennsylvania	392	131	—
Cairn University-Langhorne	185	62	10

* Degrees in computer science, engineering, and business

	Total 2014-2016	Annual 3-Year Average of Relevant* Degrees	
	Total Relevant* Degrees Awarded 2014-2016	Bachelor and Associates Degrees	Advanced Degrees
Gwynedd Mercy University	442	147	38
Immaculata University	339	113	7
Mercer County Community College	458	153	—
Bryn Mawr College	216	72	—
University of the Sciences	17	6	2
Bucks County Community College	539	180	—
Kaplan Career Institute-Philadelphia	467	156	72
Widener University	352	117	27
Pennsylvania State University-Penn State Abington	478	159	—
Holy Family University	282	94	36
Rosemont College	365	122	37
Goldey-Beacom College	1,068	356	270
Neumann University	228	76	21
Reconstructionist Rabbinical College	509	170	43
Delaware College of Art and Design	300	100	—
Metropolitan Career Center Computer Technology Institute	294	98	—
Haverford College	202	67	31
Chestnut Hill College	162	54	—
Cabrini University	199	66	15
Bucks County School of Beauty Culture Inc	57	19	—
Delaware Valley University	577	192	77
Strayer University-Pennsylvania	690	230	76
Antonelli Institute	115	38	25
Widener University-Delaware Campus	271	90	18
Harcum College	34	11	—
Gratz College	245	82	12
Manor College	246	82	—
Hussian School of Art	146	49	2
Pennsylvania State University-Penn State Great Valley	340	113	113
Swarthmore College	125	42	—
University of Phoenix-Pennsylvania	122	41	6
Ursinus College	26	9	—
Burlington County College	103	34	10
The Restaurant School at Walnut Hill College	62	21	—
Lincoln University	159	53	15
Pennsylvania Institute of Technology	221	74	—
University of Valley Forge	26	9	1
Salem Community College	53	18	—
Peirce College	401	134	9
Strayer University-New Jersey	575	192	82
National Massage Therapy Institute	112	37	15
Pennsylvania State University-Penn State Brandywine	311	104	57
Bryn Athyn College of the New Church	5	2	—
Westminster Theological Seminary	2	1	—

* Degrees in computer science, engineering, and business

	Total 2014-2016	Annual 3-Year Average of Relevant* Degrees	
	Total Relevant* Degrees Awarded 2014-2016	Bachelor and Associates Degrees	Advanced Degrees
Delaware Technical Community College-Stanton/Wilmington	129	43	22
Cabrini College	26	9	3
Orleans Technical Institute	235	78	—
Lutheran Theological Seminary at Philadelphia	27	9	—
Pennsylvania Academy of the Fine Arts	38	13	—
ITT Technical Institute-Philadelphia	202	67	—
Strayer University-Delaware	191	64	30
American College of Financial Services	112	37	37
Brightwood Career Institute-Philadelphia Mills	45	15	—
ITT Technical Institute-Marlton	162	54	—
Lansdale School of Business	80	27	—
ITT Technical Institute-Levittown	115	38	—
The Lincoln University	27	9	—
Kaplan Career Institute-Broomall	24	8	—
ITT Technical Institute-Plymouth Meeting	52	17	—
All-State Career School-Allied Health Campus	50	17	17
Sanford-Brown Institute-Trevese	31	10	3
The Workforce Institute's City College	10	3	—

* Degrees in computer science, engineering, and business

SOURCE: NCES IPEDS 2015-2016 Preliminary release

Real estate website Trulia ranked Philadelphia as the #1 best place to be a millennial: "Millennials who were 28 to 32 during 2015 and living in Philadelphia were 43.0% more likely to have a college degree than their older peers. This may help explain why they earned 78.8 cents for every dollar earned by those 33 to 55, which is a higher amount than in any of the other largest metros". (Trulia, April 2017)

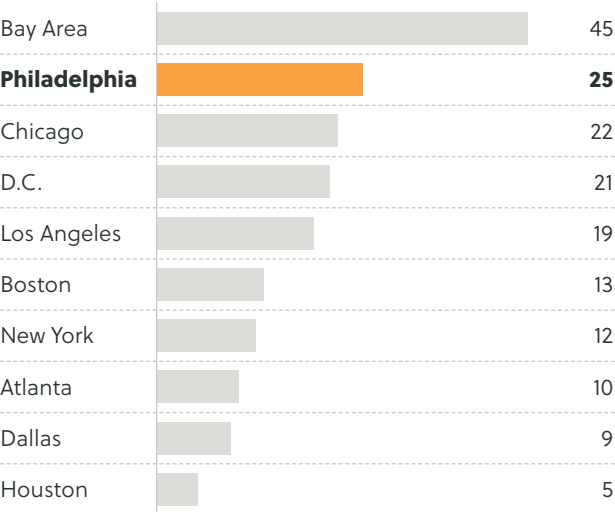
Millennial-run apartment search site Abodo set out to determine what their generational-peers look for in a city to call home by surveying 2,000 people born between 1982 and 1998...It turns out, the top three qualities Millennials want in a city are economic in nature: a thriving job market, affordable rent and affordable home prices. The company judged Philadelphia as the best city for Millennials. (Forbes, 2016)

FIGURE 3.10:

Philadelphia is one of the top cities in the U.S. for technology talent.

**NET NEW TECH JOBS AS % OF ALL NET NEW JOBS
ACROSS TOP METRO AREAS**

% (2002-2015)

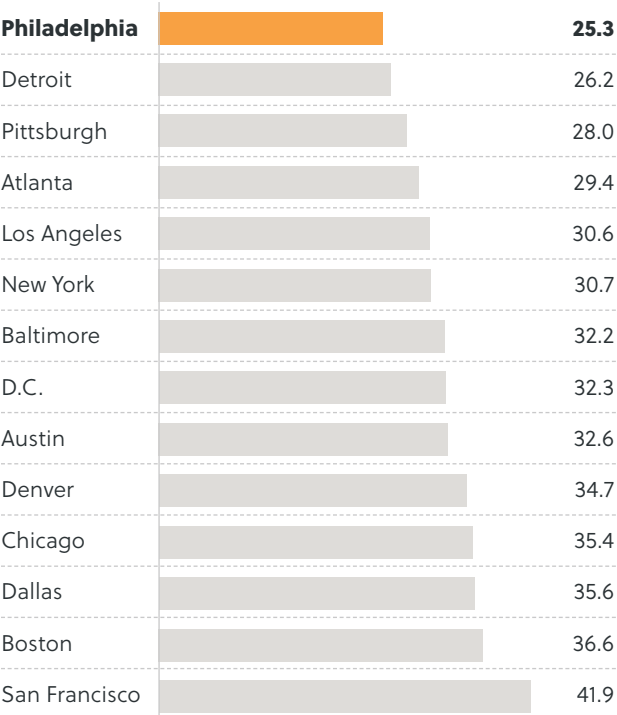


**The Philadelphia region
has experienced a 34% growth
in tech jobs since 2002.**

SOURCE: Economy League, Driving Tech Talent Growth in Philadelphia, 2017

**DAYS REQUIRED TO FILL ENGINEERING JOBS AMONG
COMPARABLE CITIES**

days to fill engineering jobs, 2017



SOURCE: Textio, 2017

“We built a company that is rooted in artificial intelligence, neural networks, deep learning, machine learning, and we’re able to draw talent of that caliber right here in Philadelphia. Most importantly, we’re able to retain them. We still have software engineers on our team that have been here for more than four years. In the Silicon Valley, in the tech ecosystem, that’s a near impossibility.”

— Apu Gupta, CEO and Co-Founder, Curalate

FIGURE 3.11:

Philadelphia has best in-class university programs and partnerships in place to nurture a rich pipeline of relevant talent.

UNIVERSITY PARTNERSHIPS	DESCRIPTION
Penn Center for Innovation (Pennovation)	Pennovation is an innovation hub, business incubator, and laboratory at UPenn that stimulates entrepreneurial activity and promotes the commercialization of research discoveries. Employers partner with Pennovation startups to commercialize cutting edge talent, including an innovative partnership with Comcast for its machineQ IoT technology.
Drexel Co-op Program	Over 5,000 students annually work full-time at companies as part of their undergraduate credits. Students are placed in companies across 32 states and 51 countries including 54 students placed at Amazon. Students can earn positions with major corporations such as Amazon, Google, NBC Universal, Lockheed Martin, JP Morgan, and Johnson & Johnson.
CCP Corporate College	The Community College of Philadelphia (CCP) was recently named one of the 12 most innovative community colleges nationwide. In partnership with large employers, such as UPS, CCP offers tailored college-level courses to upskill existing employees. CCP partners with employers to ensure their employees are dynamic to the company's needs.
PennApps	PennApps is the world's first and largest college hackathon. Twice a year PennApps hosts over 2,000 college students hailing from over 10 countries.
Drexel @MCCC	Montgomery County Community College (MCCC) and Drexel University (Drexel) have entered into a bold and innovative partnership that will build a pipeline of qualified graduates for high demand jobs in the region, especially in the areas of STEM (science, technology, engineering, and mathematics) and health sciences.
Temple + Ben Franklin Technology Partners	Temple Ventures features three main components: (1) a joint Temple/Ben Franklin seed fund for prototype and startup funding; (2) new-business-launch resources to support the formation of new Temple-created technology ventures; and (3) incubation services including workspace, professional resources, management, and commercialization guidance.
Bryn Mawr Women's Sister Hackathon	Bryn Mawr hosts an annual hackathon with students from six all-female colleges.
Wharton Customer Analytics Initiative	Wharton partners with corporations on targeted research projects. The initiative has launched 23 research opportunities, across 19 industries and 20 million individual customer transactions.
Lehigh Rossin College of Engineering and TE Connectivity	TE Connectivity and Lehigh's Rossin College have shared a 30+ year relationship as academic/corporate partners. TE engages with professors and students on research responding to the needs of the marketplace. Students gain unparalleled access to a global company with all the challenges and realities facing the global marketplace.
Drexel's Advanced Functional Fabrics of America	The U.S. Department of Defense has tapped Drexel University as a key leader in the creation of a \$75 million national research institute that will support American textile manufacturers in bringing sophisticated new materials and textiles to the marketplace. The institute, called Advanced Functional Fabrics of America, will be a national manufacturing resource center for the industry and government to draw on academic expertise in new fibers and textiles. The result will be fabrics engineered to see, hear, sense and communicate; serving an array of industries including aerospace, apparel, architecture and health.
Drexel + University City Science Center	Drexel and the University City Science Center partnered to open ic@3401, which houses the largest group of early-stage funded companies in Philadelphia.
Jefferson Nexus Innovation Partnerships	Students and faculty from Thomas Jefferson University and Philadelphia University work with an industry partner on a range of subjects including product and service design, packaging design across the value chain, materials exploration, and prototype design and development. Recent partners include QVC, Toys 'R' Us and DuPont.
UPenn + Sanofi Partnership	UPenn was one of seven universities that French drug maker, Sanofi, partners with to strengthen its R&D pipeline.
Princeton + Exxon Mobil	Princeton University researchers working in collaboration with scientists at ExxonMobil's research arm will be conducting innovative research on batteries and solar cells, as well as Arctic sea ice, ocean absorption of carbon dioxide, and low energy plasmas.

FIGURE 3.12:

Philadelphia's local and state governments are finding creative ways to bring STEM into public K-12 curricula.

K-12 STEM CURRICULUM PROGRAMS	DESCRIPTION
Parkway Middle College	In four years of high school, students are able to earn up to 61 college credits in partnership with Community College of Philadelphia, which is the equivalent of two years of college. Each graduate will have the opportunity to earn certificate degrees in subjects including computer science, as well as an associate's degree in liberal arts.
Bucks County STEM Design Challenge	Annual competition in which participating schools are invited to solve a given STEM-related problem. Over 80% of PA Intermediate Units participated in the 2017 challenge. The Design Challenge has reached 100,000 students and 10,000 teachers since its inception in 2011.
School of Aviation, Supply and Global Logistics	Over the next five years, the School District will be opening the high school to align with the region's high priority occupations including those in aviation and global logistics.
Philadelphia School District STEM Expo	The Expo, organized by the District and the Mayor's Office US2020 STEM Initiative, exposes seventh- and eighth-graders to Career and Technical Education (CTE) programs offered by the School District and careers in the culinary arts, healthcare and STEM (science, technology, engineering and math) fields.
Community College of Philadelphia Urban Technology Project	The Urban Technology Project (UTP) empowers Philadelphia youth and their communities through meaningful technological experiences that link youth leadership, education and community development. UTP programs involve a continuum of service-learning and school-to-work experiences that provide long-term, holistic support for urban youth. These programs begin in middle school, continue through high school and extend into post-secondary opportunities.
Drexel University STEM Education	Drexel's graduate engineering students work alongside teachers in Philadelphia high schools to introduce and integrate engineering into the curriculum through the National Science Foundation GK-12 program.
Arcadia University	Arcadia University offers the Graduate Certificate in Science, Technology, Engineering and Mathematics (STEM), which is a 15-credit program which provides qualified teachers with specialized knowledge of the application of STEM.
University City Science Center - FirstHand Teacher's Institute	The FirstHand Teachers Institute focuses on understanding the 21st-century career and workplace skills that today's students need to be successful. This three day, experiential program gives teachers an opportunity to implement skill-based STEM learning into their classrooms.
Downington STEM Academy	A nationally-ranked, bronze metal high school, the magnet school provides focused STEM education to a diverse student body and boasts a 99% graduation rate
Science Leadership Academy	Created around the core values of core values of inquiry, research, collaboration, presentation and reflection, students schedules are flexible to allow opportunities for dual enrollment programs with area universities and career development internships.

FIGURE 3.13:

In addition, beyond the school curriculum, the Philadelphia region's more than 200 robust K-12 STEM programs will help develop the next generation of workers.

Academy of Natural Sciences	Founded in 1812, the Academy of Natural Sciences is America's oldest natural history museum and is a world leader in biodiversity and environmental research.
Activities for Community Education in Science (ACES)	Focused on designing experiments to show local kids that science can be fun.
American Association of Blacks in Energy (AABE)	The Philadelphia Chapter is a group of professionals who encourages youth to succeed in STEM and energy related studies and careers.
Association of Women in Forensic Science (AWIFS)	Provides networking opportunities and programs for female forensic professionals, teenagers, and college students through mentoring and outreach programming.
Bartram's Garden	Thousands visit yearly for tours, educational programs, special events, recreation and as a community cultural center.
Chemical Heritage Foundation	A free museum, located in the heart of Philadelphia. We preserve, study, and interpret the history of chemistry, chemical engineering, and the life sciences.
Character Lab	Philadelphia-based, non-profit organization that aims to advance the science and practice of character development so that all kids can reach their fullest potential.
Citywide Math and Science Institute	Committed to advancing STEM across Philadelphia and provides an extensive list of STEM resources, including programs and opportunities across the city.
Click 2 Science	An interactive, professional development site for trainers, coaches, site directors and frontline staff/volunteers working in out-of-school time STEM programs, serving children and youth.
Cobbs Creek Community Environmental Education Center	The Cobbs Creek Community Environmental Education Center, Inc. (CCCEEC) operates a premier urban environmental education center that embraces and educates people of diverse backgrounds to understand and appreciate the important role the environment plays in our lives.
Coded by: Kids	Committed to providing free tech education, tech industry exposure and career mentorship to children who lack access to these opportunities. Our programs are designed to help our students achieve success by providing them with a combination of real world tech skills and access to a support system of mentors with experience in the tech industry.
Curiosity Machine	A community of scientists, engineers and children creating together. Through this online learning platform children are inspired and equipped to create their own inventions with the support of trained and qualified mentors.
Discover Engineering In Greater Philadelphia	The preeminent site for those aspiring or studying to be engineers in the greater Philadelphia area. The website includes engineering opportunities, internships, scholarships, and more for school-age as well as college students.
Franklin Institute Science Museum	In the spirit of inquiry and discovery embodied by Benjamin Franklin, the mission of The Franklin Institute is to inspire a passion for learning about science and technology.
George Washington Carver Science Fair	The George Washington Carver Science Fair encourages urban youth to pursue academic achievement and careers in science. The Carver Fair is jointly sponsored by Temple University, The Academy of Natural Sciences, The School District of Philadelphia, and The Archdiocese of Philadelphia.
Girls SOAR	A free program for girls between the ages 12-14 at the University of Pennsylvania. They aim to encourage girls to explore science and math, develop confidence in their mathematical and scientific abilities, and give girls a new image of who can be a scientist and what a scientist can do.

GritPHL	A program that teaches young girls about the tech space through hands-on learning, collaboration with like-minded peers, and encouragement from successful women in the industry. Its mission is to empower elementary and middle school girls to boldly pursue the study of STEM subjects and create a vision of who they can be in these industries through teaching, storytelling, mentoring, and character development.
iPraxis	iPraxis creates and fosters opportunities that engage underrepresented communities in science and technology through education and entrepreneurship.
John Heinz National Wildlife Refuge at Tinicum	Since its establishment in 1972, the refuge has worked with area educators to provide educational opportunities for their students. Our programs focus on providing teachers with the information, skills, and resources to incorporate the environment into their curriculum and to utilize the refuge as an outdoor classroom.
LEAP into Science	Sponsored by the partnership between the Franklin Institute and the Free Library of Philadelphia, is a program designed to engage children and families in science and literacy by integrating hands-on science activities with children's literature.
The Math Forum@Drexel	A leading online resource for improving math learning, teaching, and communication. They offer a wealth of problems and puzzles; online mentoring; research; team problem solving; collaborations; and professional development.
Math Science Upward Bound	Aims to prepare Philadelphia Public and Charter High School students for admission to institutions for higher learning and success in the collegiate environment through intense academic enrichment, a summer college immersion experience, enhanced cognitive and critical thinking, and extensive interpersonal development through positive social interactions.
Mathematics, Engineering, and Science Achievement (MESA) Pennsylvania	Aims to engage students who are underrepresented in STEM fields, and motivate them to persist in these lucrative, high demand careers.
NextFab	A network of membership-based makerspaces that provide access to tools, technology, education, events, and services for makers of any skill level.
Partnerships for Achieving Careers in Technology and Science (PACTS)	Designed to involve students as an integral part of The Franklin Institute. It combines science enrichment, career development, mentoring, and leadership opportunities for a diverse group of rising 6th graders and rising 8th graders.
PennApps	This biannual hackathon involves teams of up to four college students who spend the weekend at the University of Pennsylvania working on innovative software and hardware solutions to real-world problems.
Philadelphia Department of Commerce	Launched StartupPHL's Call for Ideas, a grant program to fund innovative proposals to support Philadelphia's entrepreneurial ecosystem.
PennGEMS (Girls in Engineering, Math and Science Camp)	A week-long day camp at the University of Pennsylvania targeting middle school girls in 7th, 8th, and 9th grade that focuses on bioengineering, nanotechnology, materials science, graphics and computing.
People's Emergency Center: Digital Inclusion and Technology Program	Offers free access to computers for general use and training throughout the year to students of all ages to develop the technology skills necessary for success in 21st century careers and education.
Philadelphia Education Fund's STEM Initiatives	Supports STEM learning in Philadelphia through a variety of services including grants, student tutoring, and professional development.
PHENND (Philadelphia Higher Education Network for Neighborhood Development)	PHENND is a consortium of over 30 colleges and universities in the greater Philadelphia area that works to develop mutually beneficial, sustained, and democratic community-based service-learning partnerships. It actively seeks to revitalize local communities and schools and foster civic responsibility among the region's colleges and universities.
Philadelphia Regional Noyce Partnership	Aims to build lasting synergies among the Noyce programs in the greater Philadelphia region that will strengthen all aspects of the STEM teacher pipeline: recruitment, pre-service preparation, induction, and ongoing development and growth throughout a teacher's career, in ways that no individual institution would be able to achieve alone.

Philadelphia Science Festival	The Philadelphia Science Festival is a ten-day, community-wide celebration of science that takes place annually in April, featuring lectures, debates, hands-on activities, special exhibitions and a variety of other informal science education experiences for Philadelphians of all ages.
Philadelphia Zoo	The Philadelphia Zoo's 42-acre Victorian garden is home to more than 1,300 animals, many of them rare and endangered. The Zoo, fulfilling its mission of conservation, science, education and recreation, supports and engages in conservation efforts to protect endangered species around the world.
Philly Coder Dojo	An open source, volunteer led free computer programming club for young people to learn how to code, develop websites, apps, programs, games and more.
STEMCityPhl	A civic campaign to build collective public will for excellent STEM education and opportunities, ensuring that all Philadelphians can participate in the economy of today and tomorrow.
Steppingstone Scholars, Inc.	A not-for-profit educational organization that identifies fourth-graders from Philadelphia public schools and prepares them to enter and succeed in the area's top college-preparatory schools.
TechGirlz	A nonprofit organization dedicated to reducing the gender gap in technology occupations, by focusing on girls at the crucial middle school age. They offer free workshops to get girls interested in different kinds of technology, show them varied career options, and connect them with professionals in technology fields.
Tech Impact	Tech Impact (formerly NPower PA) provides hands-on technology support to nonprofits via implementation and support of an organization's entire technology infrastructure, either in the cloud or on-premise. They are the nonprofit behind npCloud.org and ITWorks, which is a 16-week training program to help young urban adults (18-24) move into an IT career.
Transportation YOU	A hands-on, interactive, mentoring program that offers young girls ages 13-18 an introduction to a wide variety of transportation careers.
The University of the Arts Professional Institute for Educators	UArts provides courses for educators to learn about STEM topics to implement in their own classrooms.
Women in Natural Sciences (WIN)	A free after-school and summer science enrichment program at the Academy of Natural Sciences. Since its founding in 1982, WINS has introduced hundreds of high school girls to future careers in science and other professions by providing hands-on science workshops, career and college exploration, and positive youth development.
Youth Engineering and Science	A nonprofit organization that aims to promote an understanding and an interest in science and engineering for traditionally underserved and under-represented youth by engaging children in innovative project-based STEM programs in their own communities.

04

Logistics

"The mid-Atlantic is one of the most productive and densely populated corridors on the planet, and Philadelphia is an ideal, centrally located, transited, major, urban hub therein. It has the infrastructure and scale for being one of the country's largest cities with the additional benefit of being within this major innovation region."

—

Christopher Wink, CEO, Technically Media

FIGURE 4.1:

Amazon already has a strong existing distribution footprint around Philadelphia.



WITHIN 300 MILES
OF THE CITY,
AMAZON HAS:

67

existing and under-construction
fulfillment and distribution
centers

WITH OVER

30M

square feet in the region

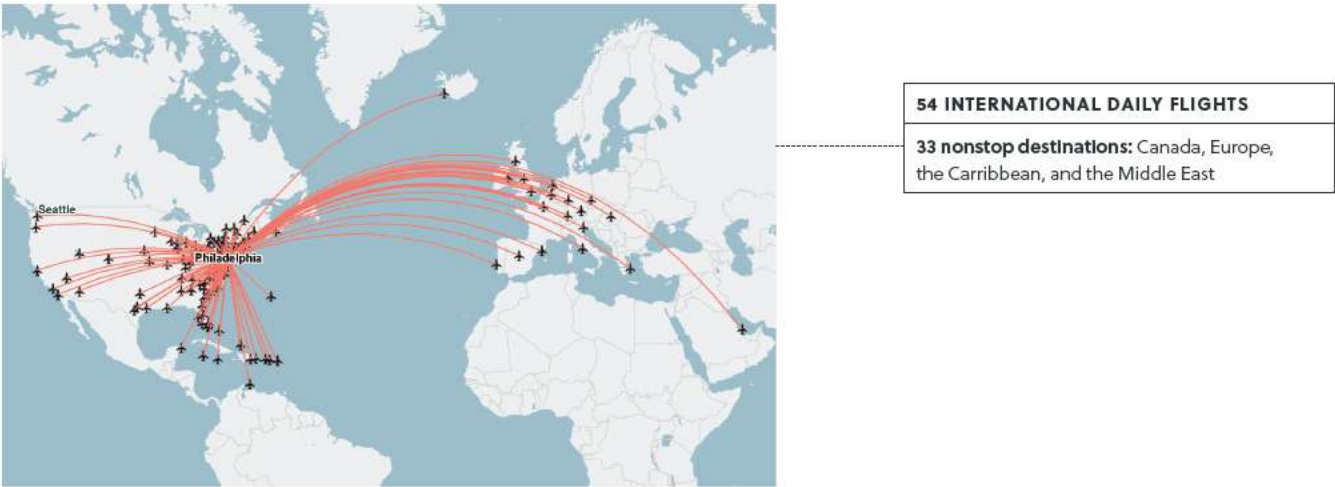
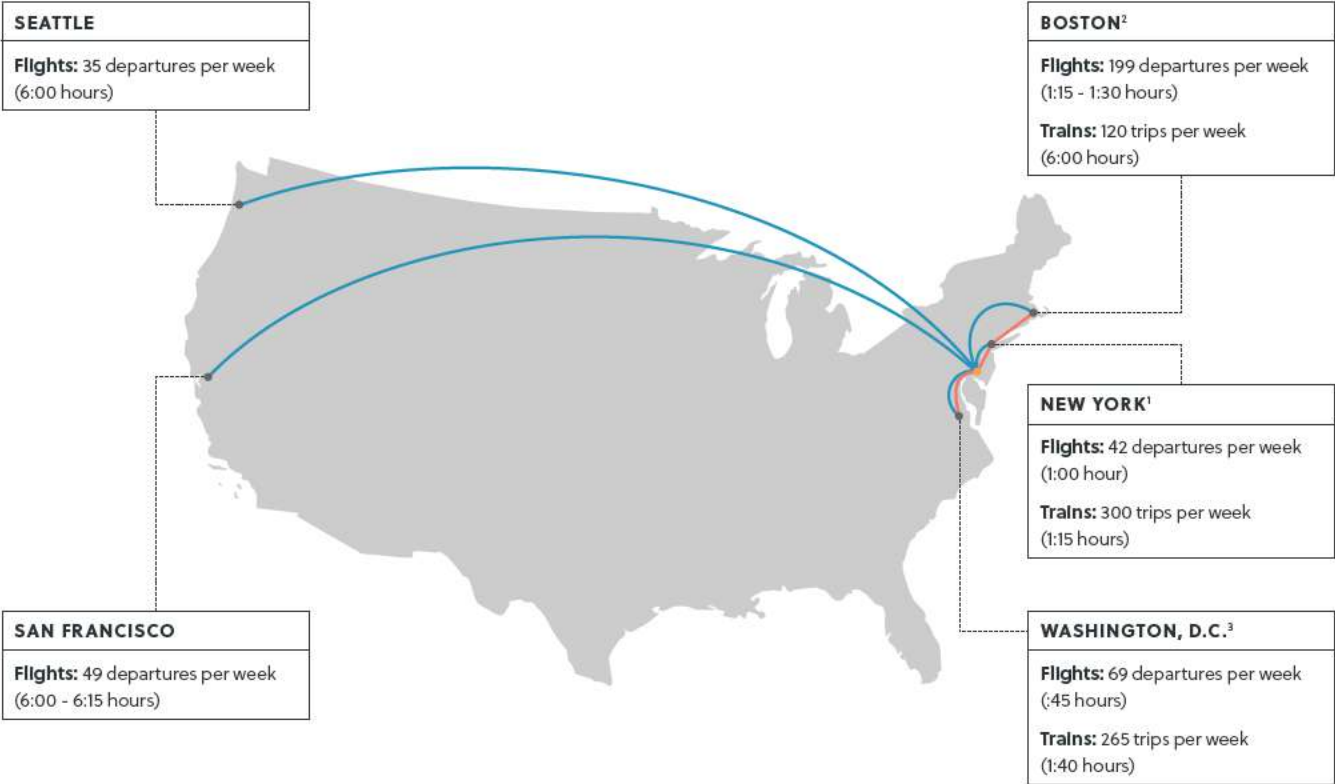
REPRESENTING

22%

of Amazon's fulfillment
and distribution footprint
in the U.S.

FIGURE 4.2:

Philadelphia International Airport provides connectivity to major domestic and international destinations with ~500 daily departures.



¹ JFK, EWR, LGA ² BOS, MHT, PVD ³ IAD, DCA
SOURCE: Amtrak, Philadelphia Department of Commerce, Philadelphia International Airport

FIGURE 4.3:

At 30th Street Station, Amtrak provides convenient access throughout the Northeast Corridor and recently completed a plan to improve the passenger experience at one of the nation's most important transit hubs.

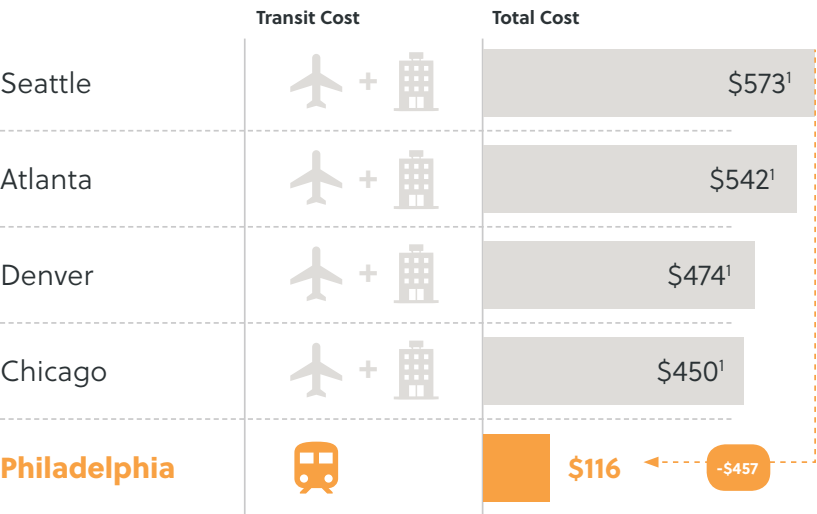


SOURCE: <http://fortune.com/2016/09/03/amtrak-high-speed-trains-2021/>
https://www.washingtonpost.com/local/trafficandcommuting/with-a-245-billion-federal-loan-amtrak-set-for-upgraded-trains-stations/2016/09/10/3b6fc19a-715e-11e6-8533-6b0b0ded0253_story.html?utm_term=.e4dca42340ea
<http://blog.amtrak.com/2016/08/amtraks-next-generation-high-speed-trains/>

FIGURE 4.4:

With its strong rail network and strategic position, Philadelphia is ideally positioned for rapid, economical access to Washington, D.C.

COST TO TRAVEL FROM MAJOR U.S. CITIES TO WASHINGTON, D.C.



¹Includes necessary overnight hotel

“Philadelphia is physically in a great location to build a company that services other markets, with NYC, Boston, DC, Baltimore and Wilmington all in close reach. As a location-based data company, FixList is excited to be expanding to other markets while calling Philly home – where the cost of living is respectable, arts, culture, and science are all at your fingertips, and there’s room to contribute to the tremendous growth and change as we evolve as a city.”

— Stacey Mosley,
Founder & CEO, FixList

“We could go back and forth to New York within a day, we do it all the time. We find that our companies who are located in Philadelphia are within an hour or two train ride of almost all of their customers from Boston down to Washington, D.C. And you can go there, have a productive day of meetings and be back home in the same day.”

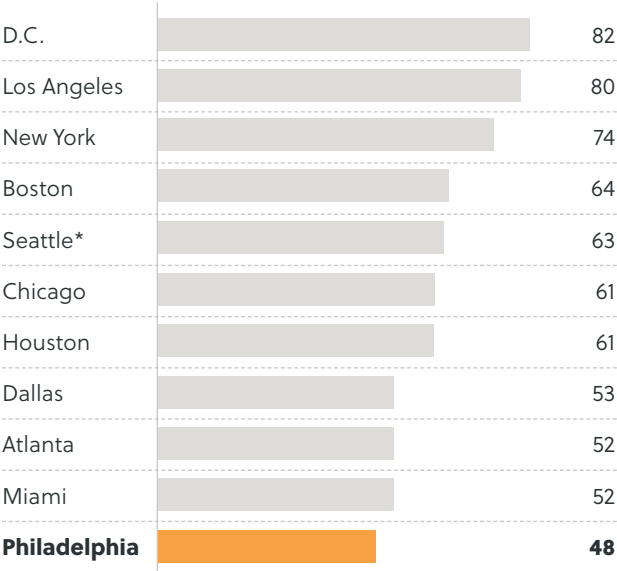
— Josh Kopelman,
Partner, First Round Capital

FIGURE 4.5:

Philadelphians spend the least amount of time in traffic compared to major U.S. cities.

PEAK TRAVEL TIME CONGESTION
OF TOP 10 U.S. METRO AREAS

Yearly delay per auto commuter (hours)¹



¹ Yearly Delay per Auto Commuter—Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area

*Seattle is included for reference

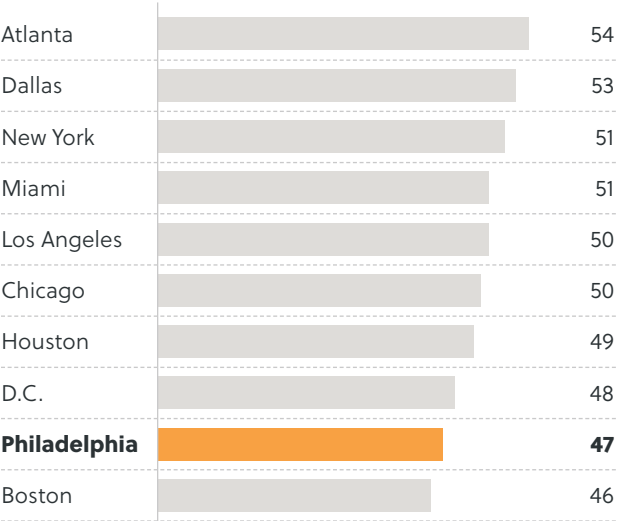
SOURCE: Texas A&M Transportation Institute (2015)

FIGURE 4.6:

Philadelphia has the second shortest commute time using public transportation among major U.S. cities.

AVERAGE COMMUTE TIME FOR
PUBLIC TRANSPORTATION TO WORK

Minutes of commute time



SOURCE: Texas A&M Transportation Institute (2015)

FIGURE 4.7:

As the sixth largest transit system in the country, SEPTA provides great local and regional access across Philadelphia and the surrounding metro area.



SOURCE: Southeastern Pennsylvania Transportation Authority (SEPTA)

05

Big Ideas

“When you’re considering a game-changing investment like HQ2, a partnership fit goes well beyond the tangible assets on paper; the cultural osmosis taking place between HQ2 and its new home will be equally imperative. In addition to Philly’s incredible institutions and intellectual capital, what differentiates us from our urban peers is our collaborative culture – a diverse, yet unified network that thinks big and creates change.”

—

Nick Bayer, Founder and CEO, Saxbys

AMAZON HEALTHCARE HUB

A Philadelphia HQ2 grants us the unique opportunity to partner with a comprehensive suite of industry leaders across the healthcare value-chain, whether they be manufacturers, distributors, payors, or providers, to launch transformative, technology-enabled healthcare services and product offerings that will serve our customers—faster, more efficiently, and with better outcomes.

The region has great depth in key innovation-driven areas – 80% of U.S. pharmaceutical and biotech companies have a presence within two hours of the city.⁶¹ Underlying this is a world-class pipeline of talent and leading institutions that make the area a national leader in clinical trials and “impossible” medical firsts. Philadelphia is the place for us to be in pioneering the future of healthcare.

We are particularly excited about the following:

- **Established global leaders for potential partnerships across the healthcare value-chain:** Philadelphia has strong regional healthcare assets—hospitals, pharmaceutical companies, life sciences suppliers, distributors, home health services, and digital health startup—with which to partner, test, and launch new customer offerings in healthcare. Within the pharmaceutical space alone, Greater Philadelphia is home to major wholesaler/distributors (AmerisourceBergen), manufacturers (GlaxoSmithKline, Teva Pharmaceuticals), and more. The region has one of the highest concentrations of medical technology companies, with over 2,000 companies involved in medical devices design, development, and manufacturing.⁶² The region is also home to BAYADA Home Health Care, a top-10 national home health provider leading in pediatric and elderly care. We see Philadelphia as the ideal place for us to learn from the best and grow our healthcare offerings through industry-leading partnerships that will accelerate our disruption of the healthcare market—whether by creating Alexa-enabled healthcare devices, innovating the purchasing experience for medical supplies, or revolutionizing pharmacy care.
- **Deep talent pool coupled with a relentless focus on innovation:** Philadelphia has a globally recognized concentration of talent—with 126 hospitals, 7 medical schools, 5 children’s hospitals, 4 National Cancer Center-designated research centers, 29 nursing schools, 3 schools of pharmacy, 2 dental schools, 1 school of veterinary medicine, and 1 school of optometry—enabling it to turn ideas into real services and product offerings for customers faster.⁶³ Philadelphia is a place with incredible medical feats: the June Lab at Penn Medicine developed a technique to re-engineer a patient’s own cells to combat cancer, the Children’s Hospital of Philadelphia performed the world’s first pediatric double hand transplant, and the Thomas Jefferson Health Design Lab utilizes 3D printing and virtual reality technology to rapidly prototype personalized solutions directly with patients. Within this fast-paced climate, the region’s healthcare leaders recognize the crucial importance of collaboration, as shown by the Chamber of Commerce’s Health Care Innovation Collaborative, which brings together healthcare CEOs to create opportunities to expedite market breakthroughs. ⁶⁴ With this passion for innovation within its cultural DNA, Philadelphia will continue to be on the leading edge of healthcare.
- **Surging digital health innovation and consumer-centric solutions:** From HQ2, we can experiment, test, and deploy customer solutions with a large range of innovative healthcare companies. Over 100+ digital health companies are in the Philadelphia region, with more than half focused on improving efficiency and effectiveness of care. ⁶⁵ The Philadelphia healthcare community understands the importance of iterating directly with customers and patients—which is why DreamIt Health, a nationally-renowned digital health incubator, partners with Penn Medicine and Independence Blue Cross to test the products and services developed by each DreamIt startup class. ⁶⁶ Similarly, Spark Therapeutics – a gene therapy firm worth \$3 billion – was spun directly out of ground-breaking research at the Children’s Hospital of Philadelphia. Philadelphia has strong startups in the areas of key interest to us, including precision medicine (Oncora Medical, Blackfynn) and patient-as-consumer (Accolade, Picwell). We will join this customer-obsessed community of partners to redesign the experience of healthcare.

Delivering on our customers’ most desired healthcare products or services will not be quick or easy given the complex and highly regulated landscape of our country’s healthcare system. However, we plan for the long-term, and we are excited to join this community, where medical impossibilities are routinely surmounted, to shape the future of healthcare together.

FIGURE 5.3:

Philadelphia is located amid a number of notable, potential healthcare partners.

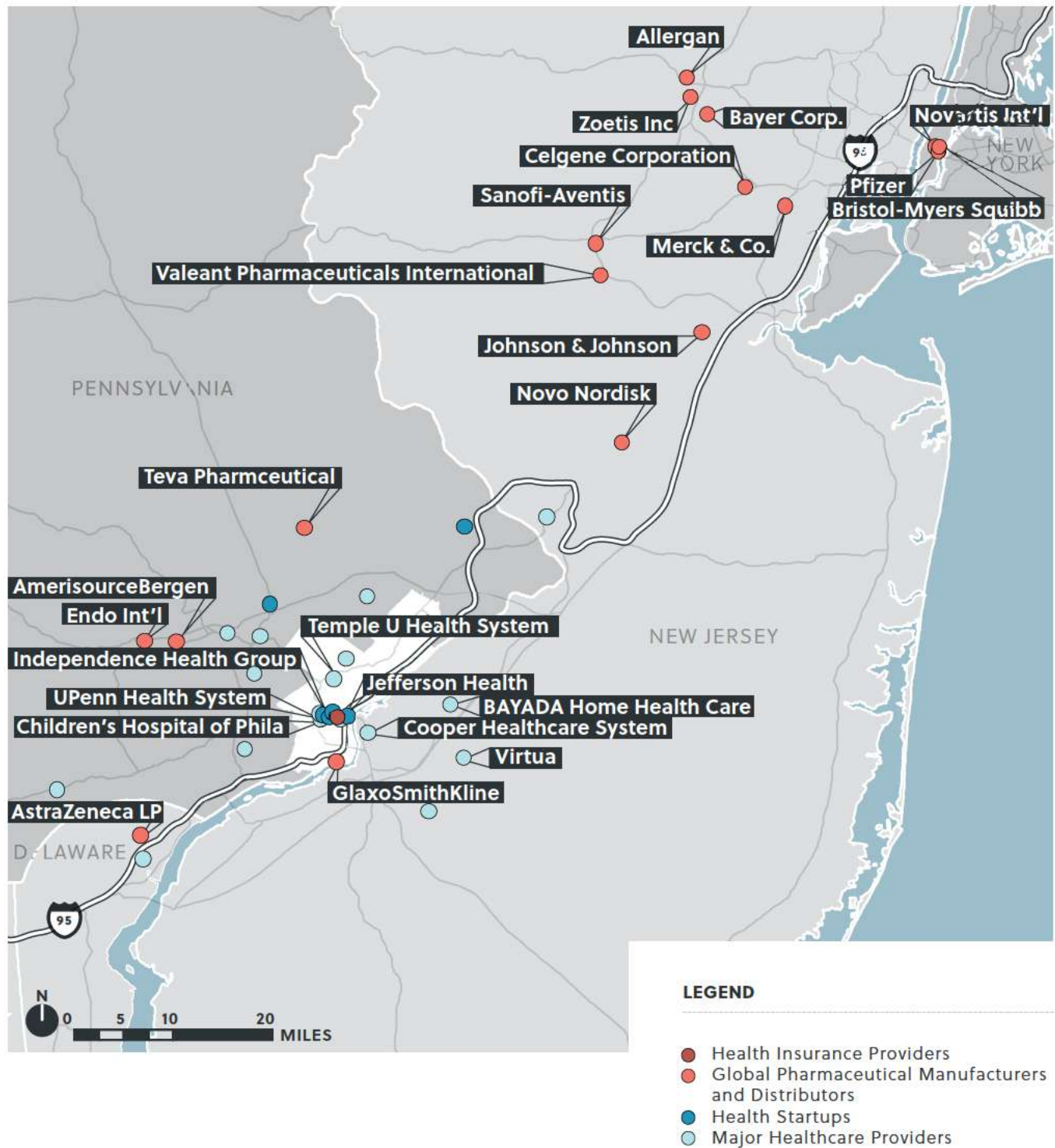


FIGURE 5.4:

Many leading pharmaceutical and biotech companies have their global or US headquarters within 150 miles of Philadelphia.

NAME	HQ ADDRESS	CITY	STATE	ZIP
Allergan	400 Interpace Pkwy Bldg D	Parsippany	NJ	07054
AmerisourceBergen	1300 Morris Drive	Chesterbrook	PA	19087
AstraZeneca LP	1800 Concord Pike	Wilmington	DE	19850
Bayer Corporation	100 Bayer Blvd	Whippany	NJ	07981
Bristol-Myers Squibb	345 Park Avenue	New York	NY	10154
Celgene Corporation	86 Morris Ave	Summit	NJ	07901
Endo International	1400 Atwater Dr	Malvern	PA	19355
GlaxoSmithKline	5 Crescent Drive	Philadelphia	PA	19112
Johnson & Johnson	One Johnson & Johnson Plaza	New Brunswick	NJ	08933
Merck & Co	2000 Galloping Hill Road	Kenilworth	NJ	07033
Novartis International AG	608 5th Avenue	New York	NY	10020
Novo Nordisk	800 Scudders Mill Road	Plainsboro	NJ	08536
Pfizer	235 East 42nd Street	New York	NY	10017
Sanofi	55 Corporate Drive	Bridgewater	NJ	08807
Teva Pharmaceuticals Industries Ltd	1090 Horsham Rd	North Wales	PA	19454
Valeant Pharmaceuticals International	400 Somerset Corporate Blvd	Bridgewater	NJ	08807
Zoetis Inc	10 Sylvan Way	Parsippany	NJ	07054

06

Livability

"I've seen it all, from Philly all the way to California; and I can absolutely say that our value-add is our diversity. We are a majority-minority city. So, that means every sector of the city, every neighborhood, every person, every ethnicity, every experience, every journey, adds to the value that we have as a city."

—

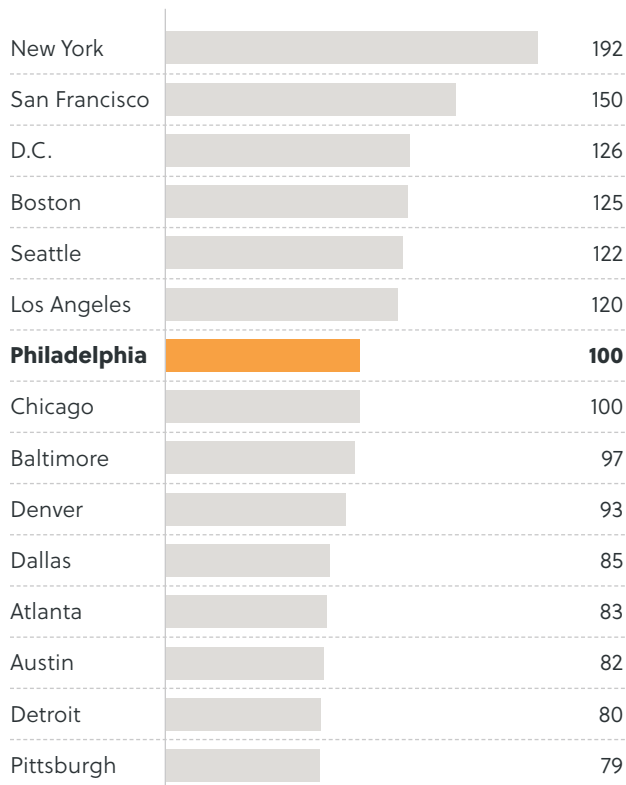
Brigitte Daniel, Executive Vice President, Wilco Electronics Systems, Inc.

FIGURE 6.1:

Philadelphia is one of the most affordable major cities in the U.S. Amazon's employees will see their money go further in Philadelphia than other metropolitan areas due to its low cost of living.

COST OF LIVING INDEX

2016, Philadelphia Indexed to 100



SOURCE: Council for Community and Economic Research (C2ER) Cost of Living Index (COLI)

**\$100,000 in Philadelphia
is equivalent to...**

\$122,278 in Seattle, WA

\$124,810 in Boston, MA

\$125,738 in Washington, D.C.

\$192,236 in New York, NY

**When we compare
Philadelphia to Seattle...**

Housing is 25.11% less

Transportation is 17.36% less

Healthcare will cost 17.02% less

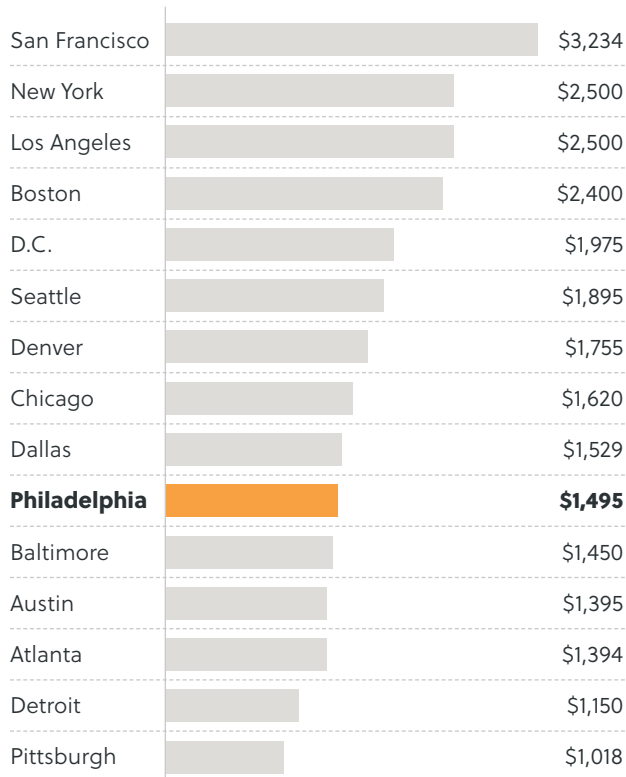
Groceries will cost 7.67% less

FIGURE 6.2:

Philadelphia has one of the most affordable housing markets among major U.S. metro areas.

**MEDIAN RENTAL PRICE FOR
2-BEDROOM APARTMENT**

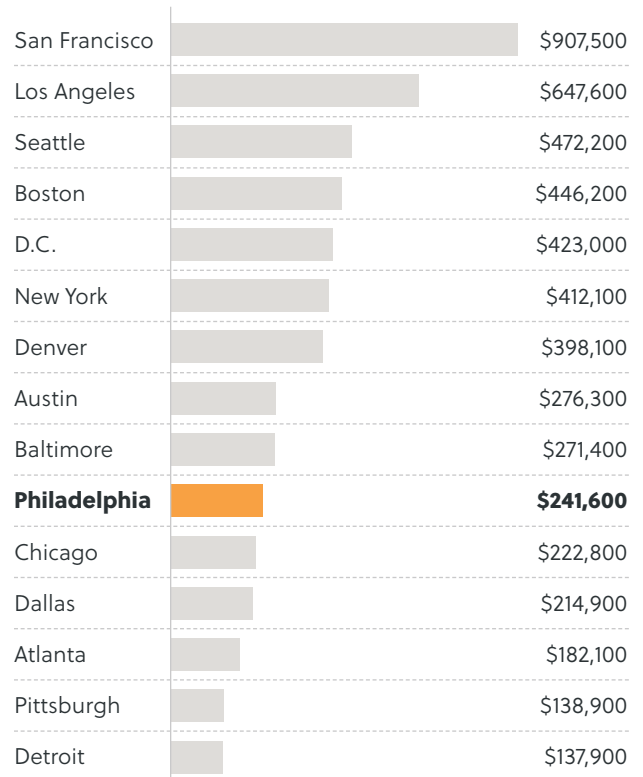
2017



SOURCE: Zillow Market Data

**MEDIAN SALES PRICE FOR
SINGLE FAMILY HOME**

2017



SOURCE: Zillow Market Data

FIGURE 6.3:

Plenty of diverse, low-cost housing options are available within 10 miles of the University City and Navy Yard neighborhoods.

WITHIN 10 MILES	UNIVERSITY CITY	NAVY YARD
Total housing units	777,058	555,991
Occupied housing units	87.3%	86.1%
% of People living in owned homes	57.3%	54.3%
% of House prices under \$200k	61.6%	63.9%
Median house prices	\$203,780	\$190,570
Median rent value	\$981	\$969

SOURCE: U.S. Census American Community Survey 2015

“Your proposal smartly expressed a desire for the trinity of great urbanism: density, walkability, diversity. Of all the metropolises on the Northeast Corridor, none offers a better version of that mix, at a more affordable price, than Philadelphia. Where else can you have all the fruits of density and still live in a single-family home? Any home buyers you bring in from Seattle are going to have reverse sticker shock.”

— Inga Saffron, Architecture Critic, Inquirer

FIGURE 6.4:

Philadelphia has been internationally recognized as a cultural powerhouse.

PHILADELPHIA HAS BEEN DESIGNATED...

1st

World Heritage City in the U.S.

#1

on Lonely Planet’s Best of the U.S. (2016)

#2

on U.S. News & World Report’s Best Places to Visit in the U.S. (2017)

#2

on U.S. News & World Report’s Best Historic Destinations in the U.S. (2017)

#3

on New York Times’ 52 Places to Visit (2015)

PHILADELPHIA IS HOME TO...

35+

restaurants of 2017 James Beard Award-winning chefs & restaurateurs

ONE OF THE LARGEST

urban park systems in the country, Fairmount Park

ONE OF THE LARGEST

public art programs in the country

TOP SITES IN PHILADELPHIA

- Independence National Historical Park
- Liberty Bell
- Independence Hall
- Philadelphia Museum of Art
- Rodin Museum
- Barnes Foundation
- Society Hill Historic District
- Franklin Institute
- Fairmount Park

RECENT MAJOR EVENTS

- Papal Visit and Meeting of Families (2015)
- Democratic National Convention (2016)
- NFL Draft (2017)

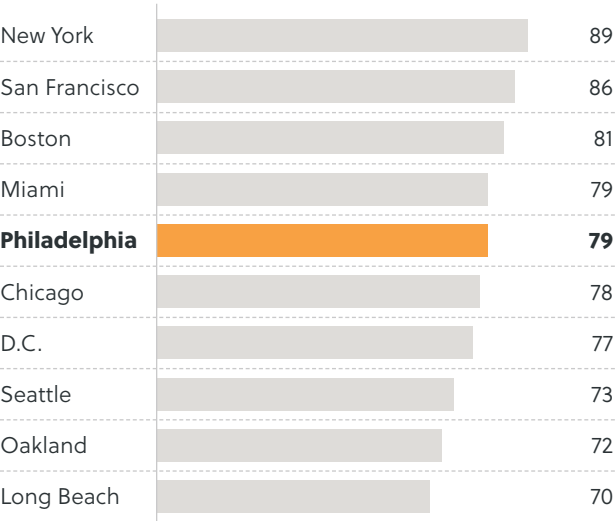
SOURCE: UNESCO, Lonely Planet, U.S. News & World Report, New York Times, Philadelphia Parks & Recreation, James Beard Foundation, VisitPhilly.com

FIGURE 6.5:

Philadelphia’s emphasis on pedestrian access and connectivity has made it the fifth most walkable large city in the U.S., with an increasing proportion of employees walking to work.

WALKABILITY SCORE

Top 10 most walkable cities, 2017



SOURCE: Walk Score, Philadelphia City Center District State of Center City Report

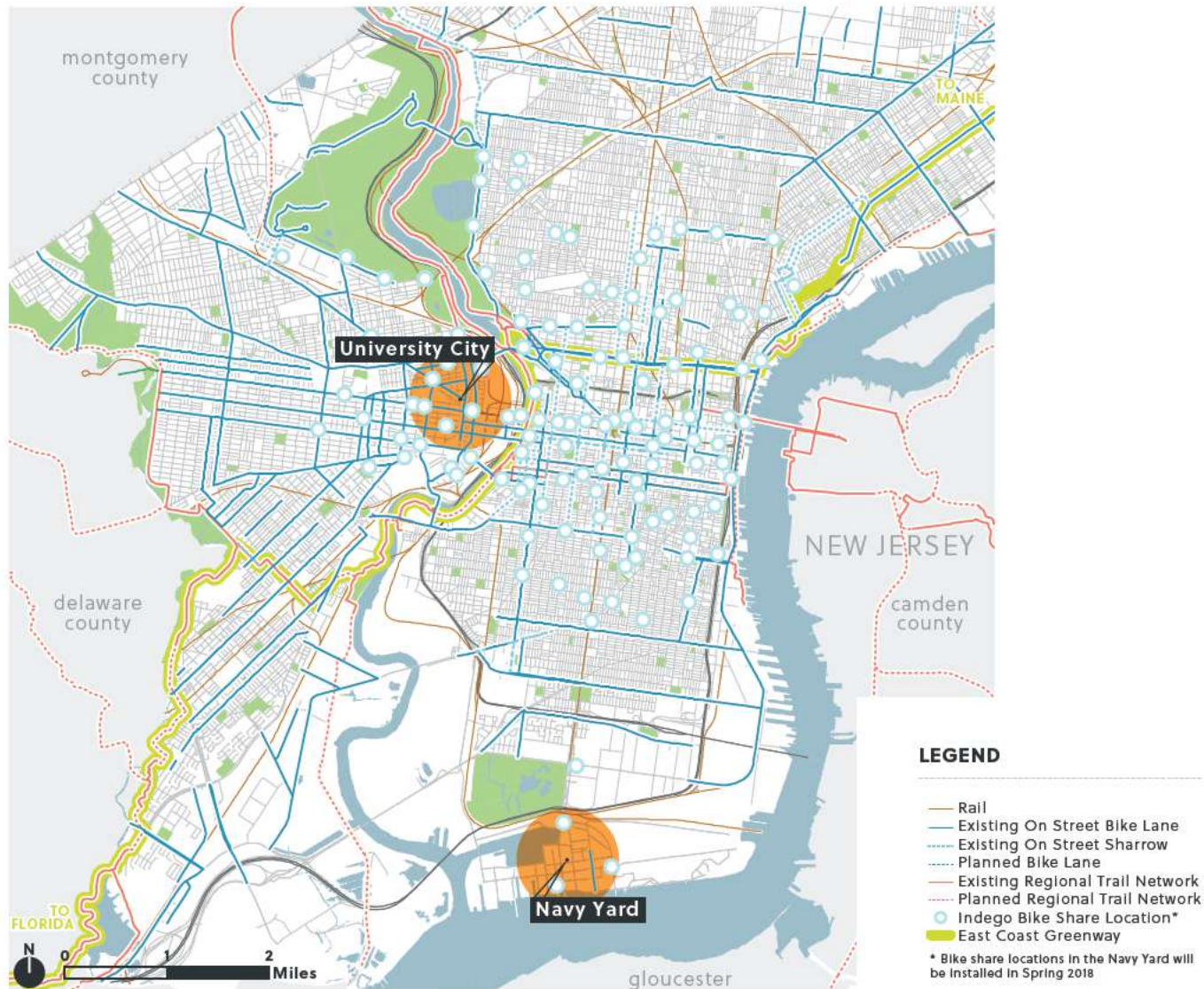
Over 40% of Center City residents commute to work on foot.

“Philly is a city that’s really easy to get around. Our employees drive to work, they bike to work, they train to work, and they walk to work.”

— Josh Kopelman, Partner, First Round Capital

FIGURE 6.6:

Philadelphia has over 400 miles of bike lanes and ranks in the top 5 most bikeable cities.



430

miles of bike lanes with ~30 protected bike lanes, and building out 750-mile regional trail system

1,200

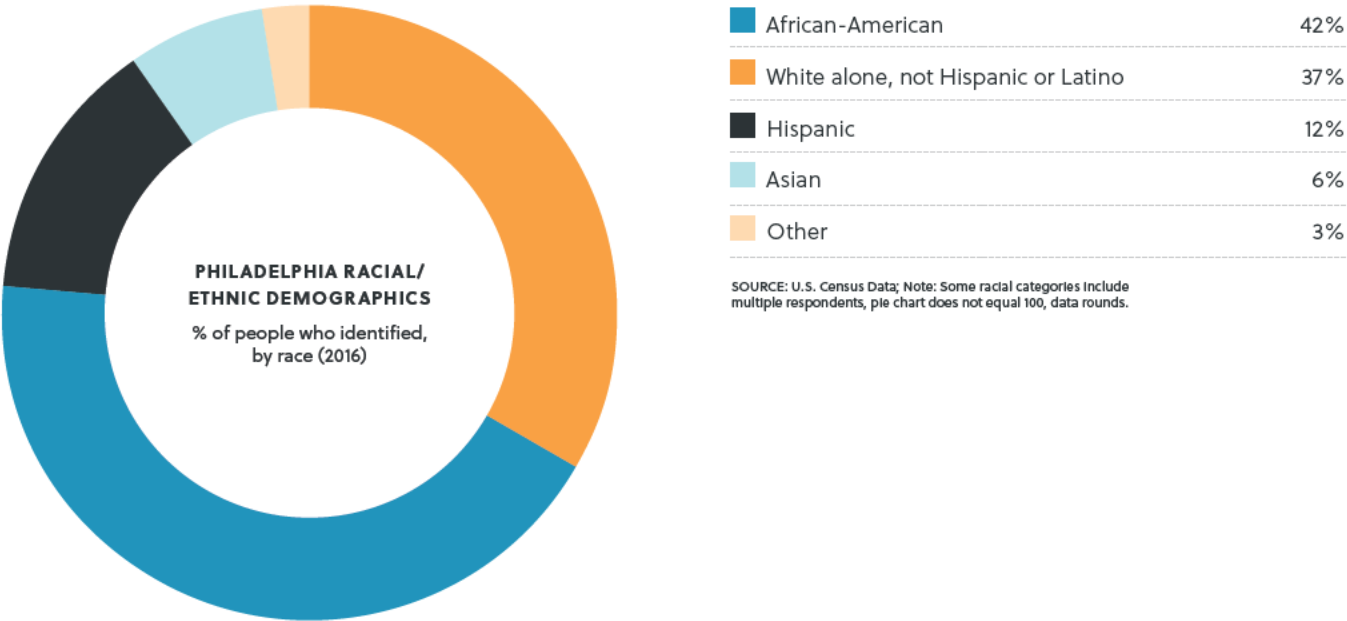
Indego bike share launched in 2015 and has expanded from 600 to 1,200 bicycles and now has 117 stations, including corporate pass and cash payment options

79%

Since 2010, bicycle commuting into Center City during rush hour has increased 79%

FIGURE 6.7:

Philadelphia is a majority-minority city.



“Philadelphia, we say it’s the City of Brotherly Love, and when we say brothers, we mean all types of brothers. That’s the type of city where you can find a home, no matter what you look like or how you worship or how you practice your private life. This is a city that welcomes everybody.”

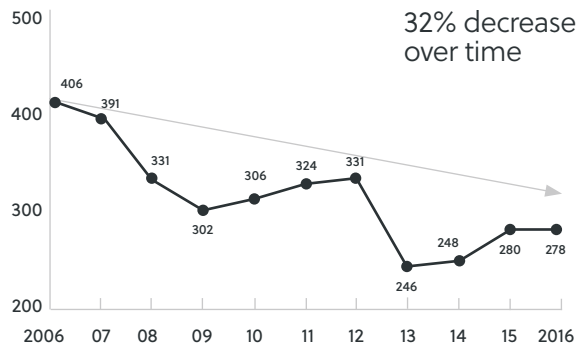
— Todd Carmichael, CEO and Co-founder, La Colombe

FIGURE 6.8:

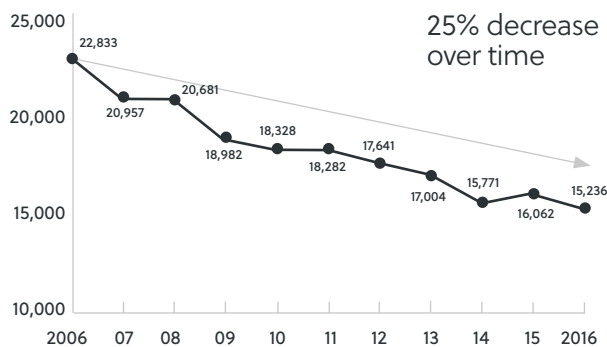
Philadelphia has made significant strides in decreasing crime; the city's crime rate is comparable to other major U.S. cities.

HOMICIDES IN PHILADELPHIA

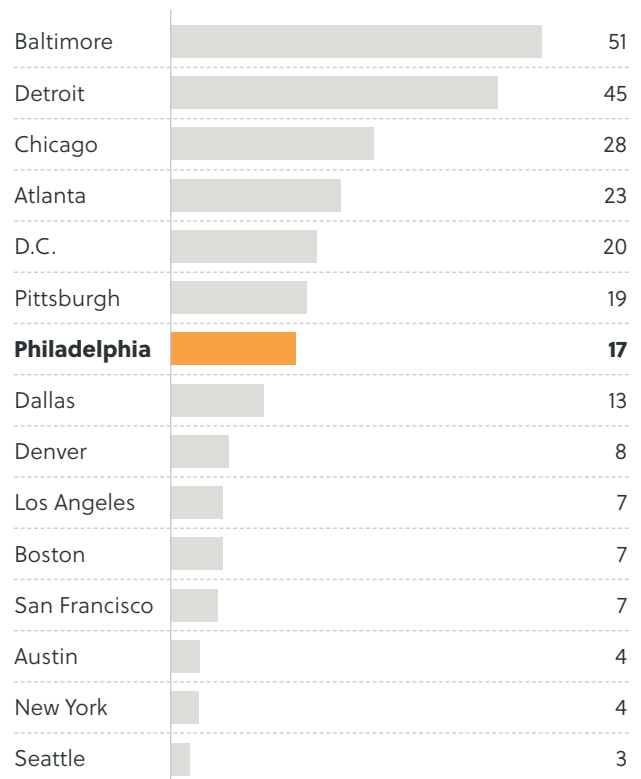
Total number of people, 2016

**MAJOR CRIME IN PHILADELPHIA, 2016**

Total number of people, 2016

**HOMICIDE RATE**

Homicides per 100,000 residents, 2016



SOURCE: Federal Bureau of Investigation Uniform Crime Reporting, City of Philadelphia

FIGURE 6.9:

The Philadelphia region is home to superior public education, with two of the top three and fifteen of the top two hundred public school districts in the U.S.

2018 BEST SCHOOL DISTRICTS IN AMERICA

2	Tredyffrin-Easttown School District	Wayne, PA
3	Radnor Township School District	Wayne, PA
16	Lower Merion School District	Ardmore, PA
30	Unionville-Chadds Ford School District	Kennett Square, PA
107	Great Valley School District	Malvern, PA
114	Colonial School District	Plymouth Meeting, PA
116	North Penn School District	Landsdale, PA
118	Central Bucks School District	Doylestown, PA
126	Wissahickon School District	Ambler, PA
150	School District of Haverford Township	Havertown, PA
162	Council Rock School District	Newtown, PA
173	Lower Moreland Township School District	Huntingdon Valley, PA
174	Wallingford-Swarthmore School District	Wallingford, PA
189	Spring-Ford Area School District	Royersford, PA
195	Moorestown Township Public School District	Moorestown, NJ

SOURCE: Niche 2018 Best School Districts in America Report

Glossary of Terms + Citations

GLOSSARY OF TERMS

150-Mile Radius

The 150-mile radius measures 150 miles from Philadelphia City Hall. This radius captures the broader region, which includes Washington, D.C. and New York City. All locations within this radius are reachable within 2 hours of ground transportation.

Philadelphia Region

Philadelphia Region refers to the five counties in Southeastern Pennsylvania (Bucks, Chester, Delaware, Montgomery, and Philadelphia), five counties in Southern New Jersey (Burlington, Camden, Gloucester, Mercer, and Salem), and New Castle County, DE.

Philadelphia MSA or Metro

Philadelphia MSA or Metro refers to five counties in Southeastern Pennsylvania (Bucks, Chester, Delaware, Montgomery, and Philadelphia), four counties in Southern NJ (Burlington, Camden, Gloucester, and Salem), New Castle County, DE, and Cecil County, MD.

The city of Philadelphia

The city of Philadelphia is co-terminus with Philadelphia County.

Peer set of cities

The peer city comparison set represents relevant major metropolitan areas comparable across the data requested in the RFP.

- Philadelphia
- New York
- Boston
- D.C.
- Chicago
- Atlanta
- Austin
- Denver
- Pittsburgh
- Seattle
- San Francisco
- Los Angeles
- Detroit
- Dallas
- Baltimore

CITATIONS

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- 3 See Figure 1.4
- 4 University City District, State of University City 2017
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- 6 Amtrak, 2016, <https://nec.amtrak.com/content/stations-and-ridership>
- 7 See Figure 1.5
- 8 See Figure 2.1
- 9 See Figure 2.2
- 10 See Figure 2.3
- 11 See Figure 2.4
- 12 IHS Economics – U.S. Regional Service June 2016 Forecast
- 13 See Figure 2.5
- 14 Steven H. Collis, Chairman and CEO of AmerisourceBergen, 2017
- 15 See Figure 2.6
- 16 Technical.ly, 2017, <https://technical.ly/philly/2017/01/30/hottest-startups-philadelphia/>
- 17 See Figures 2.7 – 2.11
- 18 See Section 2
- 19 See Figure 3.1
- 20 See Figure 3.2
- 21 U.S. Census, Top 20 Sending MSAs for Migration to Philadelphia Metropolitan Area (2011-2015)
- 22 See Figures 3.3 – 3.5
- 23 See Figure 3.6
- 24 U.S. Census, American Community Survey 2015
- 25 See Figures 3.7 – 3.9
- 26 See Figure 3.10
- 27 Bureau of Labor Statistics, 2016
- 28 See Figure 3.7
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- 30 Campus Philly, 2015, <http://campusphilly.org/wp-content/uploads/2015/03/RetainingCollegeTalent2015.pdf>
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- 32 Campus Philly Survey Data, 2017
- 33 The Brookings Institute, *Hidden in plain sight: The oversized impact of downtown universities*, 2017. <https://www.brookings.edu/research/hidden-in-plain-sight-the-oversized-impact-of-downtown-universities/>
- 34 See Figure 3.11
- 35 See Figure 3.12 and 3.13
- 36 Philadelphia Business Journal, 2017, <https://www.bizjournals.com/philadelphia/news/2017/10/03/you-dont-pay-back-coding-bootcamp-tuition-until.html>
- 37 U.S. Census, American Community Survey 2015, accessed through <http://mcdc.missouri.edu/websas/caps10acsb.html>. Based on 300 mile radial analysis from Philadelphia City Hall.
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- 39 See Figure 4.1
- 40 See Figure 4.2
- 41 See Figure 4.3
- 42 See Figure 4.4
- 43 See Figures 4.5 and 4.6
- 44 Southeastern Pennsylvania Transportation Authority (SEPTA), 2017
- 45 Ibid.
- 46 See Figure 4.7
- 47 See Section 5
- 48 See Section 5
- 49 See Figure 6.1
- 50 See Figures 6.2 and 6.3
- 51 See Figure 6.4
- 52 Center City District, State of Center City, 2017. <https://www.centercityphila.org/research-reports/socc>
- 53 See Figures 6.5 and 6.6
- 54 See Figure 6.7
- 55 U.S. Census, American Community Survey 2015, accessed through <http://mcdc.missouri.edu/websas/caps10acsb.html>. Based on 300 mile radial analysis from Philadelphia City Hall.
- 56 See Figure 6.8
- 57 See Figure 6.9
- 58 Niche, 2018 Best Private K-12 Schools, 2017 <https://www.niche.com/k12/search/best-private-k12-schools/?page=4>
- 59 Niche, 2018 Best Public Middle Schools, 2017 <https://www.niche.com/k12/search/best-public-middle-schools/>
- 60 Philadelphia Planning Department, 2017
- 61 Select Philadelphia, <http://selectgreaterphl.com/life-sciences-and-healthcare/>
- 62 Ibid.
- 63 Ibid.
- 64 <http://www.ceocouncilforgrowth.com/the-power-of-nine/>
- 65 <http://chamberphl.com/download/publicphiladelphia-digital-health-investment-report-vf.pdf>
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