

AMAZON'S HQ2: AN UPDATE ON ITS IMPACT ON THE WASHINGTON COMMERCIAL REAL ESTATE MARKET

AMAZON HAS ARRIVED

More than seven months after announcing its decision to locate one half of its "HQ2" in National Landing, Amazon's plans for its new campus are coming into focus. Amazon has signed leases at four buildings in National Landing totaling approximately 585,000 square feet. Amazon has moved into 47,512 square feet at 2345 Crystal Drive as it quickly begins its hiring process for HQ2, and will occupy 88,000 square feet at 241 18th Street South, 191,000 square feet at 1800 South Bell Street and 258,000 square feet at 1770 Crystal Drive as renovations at each location finish. Working with JBG Smith, the largest property owner in National Landing and Amazon's development partner, property manager and retail leasing agent, Amazon has begun to build out its workforce. Amazon is investing upwards of \$95 million in tenant renovations. Notably, 1770 Crystal Drive, where it will occupy the entirety of the 258,000 square foot building, will make up a majority of the renovations, accounting for \$80 million of the total amount.

Amazon also has agreed to purchase two development sites in Pentagon City from JBG Smith and will construct office towers for its own long-term occupancy. Metropolitan Park and PenPlace, formerly planned for mixed-use projects, have development potential of up to 4.1 million square feet. Plans for a first phase of two million square feet in two office buildings have been submitted for the Metropolitan Park development site and await the approval process. In all, the sites will be purchased from JBG Smith for \$294 million, or \$72 per square foot, and JBG Smith will invest the proceeds of the land sale into its multifamily projects in the area.

JBG Smith owns 6.2 million square feet of existing office, 2,850 multifamily units, and controls 7.4 million square feet of additional development opportunities in National Landing, excluding Amazon's proposed land purchase.

CURRENT NATIONAL LANDING OFFICE MARKET CONDITIONS AND THE SHORT-TERM IMPLICATIONS OF AMAZON'S PRESENCE

The Crystal City/Pentagon City office submarket hosts 12.3 million square feet of standing inventory. The vacancy rate currently stands at 15.8%, which is down 90 basis points since the second quarter of last year, and down from 25.0% in 2014. Absorption in second-quarter 2019 was negative 19,308 square feet, but with an expected 537,000 square feet of occupancy from Amazon over the next two years, absorption soon should turn positive. Asking rents in the submarket have seen significant acceleration over the past 12 months; rents averaged \$38.12 per square foot as of mid-2019, a 3.0% increase during that period. This compares to a 2.2% increase regionally. Properties directly adjacent to Amazon's future home have seen more substantial increases, as much as \$8.00 per square foot. Amazon's forthcoming occupancy alone would lower the vacancy rate in the Crystal City/Pentagon City submarket to approximately 11.0%. The Metropolitan Park and Pen Place developments likely will act as a magnet for further office occupancy nearby from Amazon contractors and partners.

In addition to an expected tightening of Northern Virginia's office market, the evolution of the National Landing area is likely to accelerate the redevelopment of obsolete office assets. We also anticipate Amazon's arrival will have wide-ranging implications for the multifamily, retail, and hospitality markets in the Washington area, as discussed in this report.

PROJECT'S PUBLIC COST AND INCENTIVES

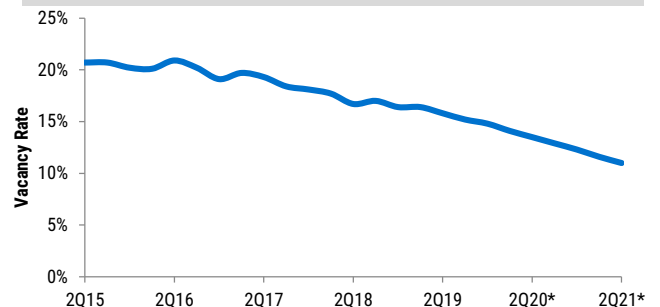
- Amazon will receive \$550 million in workforce cash grants from the Commonwealth of Virginia for the creation of 25,000 new jobs. Additionally, Amazon can receive up to \$200 million in grants if it delivers on an additional 12,850 jobs beyond the initial requirement.
- Amazon will receive a cash grant of \$23 million from Arlington County for the incremental growth of an existing local Transient Occupancy Tax over the next 15 years.
- The Commonwealth of Virginia has pledged \$250 million towards Virginia Tech's \$1 billion investment in a new campus proximate to Amazon's new headquarters, which will offer degrees in software engineering and computer science.
- The Commonwealth of Virginia will be investing \$195 million into infrastructure projects in the National Landing area, including improvements to roadways, transit and pedestrian corridors.

CRYSTAL CITY/PENTAGON CITY OFFICE SUMMARY

	2Q19	1Q19	2Q18	24-Month Forecast
Total Inventory	12.3 MSF	12.5 MSF	12.4 MSF	↑
Vacancy Rate	15.8%	16.4%	16.7%	↓
Quarterly Net Absorption (SF)	-19,308	-4,489	114,250	↑
Average Asking Rent (Per SF, Full Service)	\$38.12	\$38.07	\$37.01	↑

CRYSTAL CITY / PENTAGON CITY OFFICE MARKET ANALYSIS

Historical and Projected Vacancy Rates



*Projected vacancy rate includes 537,000 square feet to be absorbed by Amazon

Source: NKF Research

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INCENTIVE PACKAGE

The financial incentive package provided to Amazon by the Commonwealth of Virginia was significantly smaller than some offered by competing jurisdictions. The Commonwealth formally approved a package in February which includes \$550 million in tax incentives in return for 25,000 jobs with an average wage of at least \$150,000. Up to \$200 million would be provided for 12,850 additional jobs beyond the initial requirement. Additionally, in March, Arlington County approved a supplementary \$23 million package over 15 years tied to office space occupancy requirements. Funding for the incentive will come from the County's hotel tax. Importantly, all incentives are performance-based, dependent on job projections being met.

INFRASTRUCTURE IMPROVEMENTS

As part of the incentive package offered by the Commonwealth of Virginia, investments in major infrastructure and transportation improvements were promised. Projects include additional Metro station entrances at the Crystal City and under construction Potomac Yard stations, which will assist with expanding ridership. A local bus system, Metroway, will be extended to the Pentagon City Metro station as well. Additionally, a pedestrian bridge, known locally as CC2DCA, will connect Crystal City to Reagan National Airport by foot. A recent analysis shows that the proposed walkway would put 3,600 hotel rooms, 11 million square feet of office space, and 5,700 homes within a 15-minute walk of the airport. Finally, there are plans to convert Route 1 (Richmond Highway), a main thoroughfare through Crystal City, from an elevated highway into an urban boulevard. This process would bring the roadway to sidewalk level with direct building access. It also would create almost two million square feet of new buildable density by removing on- and off-ramps. Virginia officials have approved \$195 million to be spent on the projects, which is in addition to the \$570 million the state already planned to invest in the area to ease traffic congestion.

WHAT HAPPENED TO HQ2 IN NEW YORK?

Originally picked as the second half of a split HQ2, Long Island City in Queens was envisioned with a similar design as National Landing. The site would have hosted 25,000 or more jobs and a multi-billion dollar investment. After public backlash related to a \$3 billion incentive package, Amazon pulled out of its agreement with the state and city. Some Long Island City residents were concerned about infrastructure, housing and equity challenges. The proposed site is adjacent to a large public housing project, and there was concern that Amazon's presence would exacerbate socioeconomic disparities in the area.

Backlash was due in large part to a lack of sufficient communication between Amazon, elected officials and local residents as well as a lack of organization within the state and local governments. Additionally, there was a misunderstanding by some residents of what the offered incentive package entailed. The package included approximately \$1.7 billion from the state and \$1.3 billion from New York City.

Amazon has said it will shift the jobs planned for Long Island City to other facilities, and though no firm plans have been announced, it is very likely that at least some of those functions will move to National Landing. Under existing plans, the annual average of 2,366 jobs Amazon will create over the next 15 years amounts to 5.8% of the region's long-term average annual job growth, meaning the Washington region is large enough to absorb additional positions. Further, co-location and clustering of firms near Amazon likely will enhance job creation, as it did in Seattle. Moreover, a multiplier effect from indirect and induced job growth, potentially in the tens of thousands, could produce billions of dollars of further economic impact over the long term.

AMAZON JOB COMMITMENTS

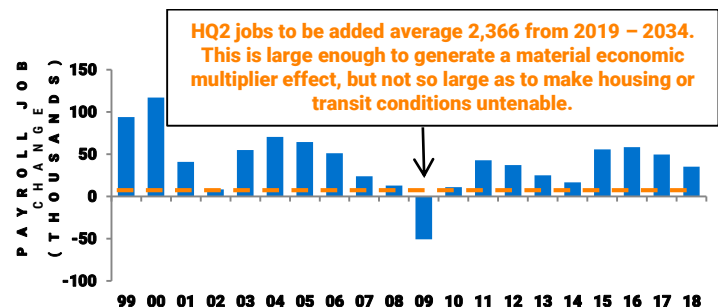
At full build-out, Amazon plans to add a minimum of 25,000 jobs at HQ2 by 2030, with the potential for 12,850 more by 2034, for a total of 37,850. Additionally, ancillary job growth in the leisure and hospitality, healthcare and education, retail and construction sectors will be a catalyst for growth in the region.

YEAR	PHASE 1 JOBS	PHASE 2 JOBS
2019	400	
2020	1,180	
2021	1,964	
2022	1,439	
2023	2,665	
2024	2,352	
2025	1,643	
2026	2,207	
2027	3,000	
2028	3,000	
2029	2,305	
2030	2,845	750
2031		2,100
2032		3,900
2033		3,100
2034		3,000
TOTAL	25,000	12,850

Source: NKF Research, VEDP

REGION'S ABILITY TO ABSORB NEW WORKERS

Washington Metro Area Job Change Compared to Amazon's Projected Job Growth



Source: NKF Research, Stephen S. Fuller Institute, US Bureau of Labor and Statistics

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EDUCATIONAL PROGRAMS TO ENHANCE TECH TALENT PIPELINE, CREATING A VIRTUOUS CYCLE OF ENTREPRENEURIAL ACTIVITY

One reason Amazon decided to locate a portion of HQ2 in Northern Virginia was the area's formal commitment to expanding its higher education programs in the digital sciences. Virginia Tech's \$1 billion investment in a new Innovation Campus—whose location was recently announced as being on the northern edge of Alexandria's portion of Potomac Yard—will be supported in part by funds from the Commonwealth of Virginia. The campus will benefit not only Amazon but also the region's workforce and other employers in the long term. Additionally, George Mason University is committing \$250 million to a new digital innovation program that will assist in the creation of a talent pipeline for the next generation. As part of their commitment, a recently announced partnership with Amazon Web Services will provide a degree program in cloud computing. Other nearby universities, including the University of Maryland and the University of Virginia, also may establish or expand their digital sciences offerings.

The Commonwealth's increased investment in tech-based education also will impact K-12 education in the state. Schools will receive new resources related to computer science, including ongoing professional development for current and future teachers, high-quality curriculum resources, summer and after-school programming for students and meaningful career exposure and work-based learning opportunities in high-demand fields.

New bachelor's and graduate programs in the computer sciences offered by local universities will create a sophisticated talent pipeline to grow with the burgeoning tech environment in the region. Virginia Tech's Innovation Campus and George Mason's new commitment to digital sciences programs will spur further growth in the tech industry, perhaps similar to what occurred in the San Francisco Bay Area with Stanford and the University of California at Berkeley, in Pittsburgh with Carnegie Mellon, and in Boston with Harvard and MIT. Each of these institutions generates job-ready talent that has attracted tech companies; a comparable process could unfold in this region, driving by public investment in education and partnerships with the private sector.

The Washington metro area has a longstanding need for more digital sciences talent due to the presence of cybersecurity companies along the Baltimore-Washington Corridor. Similarly, cloud computing and advanced defense contracts have become commonplace around the Pentagon and along the Dulles Corridor, while the reputation of Data Center Alley in Northern Virginia's Loudoun County has continued to grow. New graduates from these programs will not be hired only by Amazon; some will be hired by companies who lose workers to Amazon, and others will be hired by the federal government for mission-critical functions such as cybersecurity. Still others will be hired by government contractors, while some will start their own entrepreneurial ventures. This will, in turn, generate a virtuous cycle of long-term job creation within high-wage fields, with a strong economic multiplier effect for the region's retail market due to increased discretionary spending.

WHAT IS NEXT FOR THE WASHINGTON METRO AREA ECONOMY AND ITS COMMERCIAL REAL ESTATE MARKETS?

Washington has long been known as a government town; as recently as 2010, federal spending accounted for nearly 40% of regional economic activity. By 2017, however, this figure was down to approximately 31%. Many large firms, especially tech companies, are finding it increasingly valuable to establish bases near Capitol Hill for lobbying purposes due to the potential for government regulation.

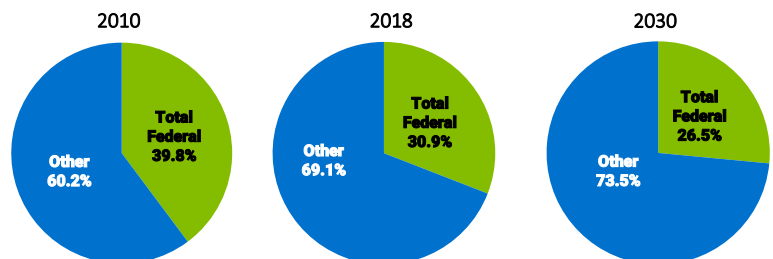
The local economy has been diversifying rapidly in part because large companies such as Nestle, Hilton, Northrop Grumman and Volkswagen all have moved major operations to the area in a search for access to a highly educated workforce. Additional relocations to the region from the private sector could provide a buffer against any future federal budget austerity measures—a major issue for an area so reliant on the federal government for so long.

Amazon's presence is likely to attract other like-minded companies, further activating the region's multifamily and retail sectors. It also may accelerate the redevelopment of obsolete office assets.

Due to the national and public nature of Amazon's search, and the early declaration by many that the region—Crystal City in particular—was a frontrunner for the massive project, there has been an enormous amount of free publicity for the region. Crystal City, and now National Landing, has been highlighted in the national media for its proximity to the nation's capital, its accessibility via road and transit, and its supply of office space. This positive press benefits the entire Washington region, and has a chance to resonate beyond Amazon's decision. If Amazon is able to find a suitable workforce and culture in the Washington region—undoubtedly hiring some of its workers from the District of Columbia and Maryland as well as Virginia—so can other tech firms and large companies in talent-starved industries. The symbolism of a successful Amazon headquarters in the Washington area may create economic and branding value for the region that far exceeds the value of either the direct job creation by Amazon or the cost of the incentives used to lure the firm.

REGIONAL ECONOMY IS DIVERSIFYING

Federal Share Of The Regional Economy: 2010 vs. 2018 vs. 2030



Source: Stephen S. Fuller Institute

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HOW THE REGION IS ADDRESSING AFFORDABLE HOUSING CONCERNS

An area of concern for the Washington metro area even before Amazon's HQ2 decision was a dearth of affordable housing inventory. Worries over the issue have been exacerbated by problems that have arisen in Seattle over the past decade as Amazon, and the tech industry's presence more broadly, has grown. Housing costs in Seattle have skyrocketed and homelessness has become a more prevalent issue. Beyond that, Amazon's response to a growing housing crisis there has been viewed as insufficient by many residents.

Some residents of the Washington metro area, especially those who live close to National Landing, fear rising rents or displacement is a possibility with Amazon and its high-wage jobs on the horizon. In Arlington and Alexandria, the two jurisdictions likely to be impacted most, affordable housing inventory has dropped more than 85% since 2000. There are several organizations and programs such as Housing Arlington, Arlington Community Foundation, Arlington Partnership for Affordable Housing, the Alexandria Redevelopment and Housing Authority and the DC Affordable Housing Alliance that are working to improve the landscape of housing inventory across income spectrums.

Amazon recently announced an investment of \$3 million aimed at retaining or constructing affordable housing in the area surrounding National Landing. JBG Smith has plans to construct 5,000 apartment units in National Landing, and in May announced its Washington Housing Initiative fund secured a total commitment of \$78 million, with the goal to preserve or construct 2,000 to 3,000 units of affordable workforce housing in the region. With an expected increase in lower-wage jobs in the retail and service industry sectors, building new market rate apartment units at a pace commensurate with demand will help to address—though likely not eliminate—local concerns about affordability.

IMPLICATIONS OF AMAZON'S ARRIVAL FOR THE LOCAL HOTEL MARKET

Within National Landing, there are currently 18 hotels operating, totaling 6,316 rooms. Fifteen of the hotels exist in Crystal City and three are in Pentagon City. The North Potomac Yard portion of National Landing has two additional hotels planned among its 7.5 million square feet of planned development. Areas comprising National Landing make up the second-largest hotel district in the region outside of downtown Washington, DC, currently generating more than two million room-nights per year. A full 83% of the properties offer a service level of upscale or higher, with the Ritz-Carlton Pentagon City standing as the lone luxury option. The average age of the existing hotels is 34 years, with four properties recently undergoing renovation, including the Crystal Gateway Marriott, which is the largest hotel property in National Landing, with 701 rooms. Kimco Realty has plans to construct a 200-room hotel at its Pentagon Centre development. Additionally, Reagan National Airport may see a new hotel as part of a planned \$1 billion, multi-year capital improvement project.

Occupancy within the market fluctuates between 50% during off-peak times up to 75% during the peak season. With the addition of Amazon to the submarket, these numbers likely will increase, and seasonal differences may not be as pronounced. Amazon was responsible for approximately 330,000 room-nights in the Seattle metro area in 2017.

NATIONAL LANDING MAP



*Image courtesy of JBG Smith

CRYSTAL CITY / PENTAGON CITY HOTEL MARKET CONDITIONS

	2Q 2019
Total Inventory (Rooms)	6,316
Room-Nights (2018)	1,750,000
Amazon-Driven Seattle Room-Nights (in 2017, for comparison)	330,000
Pipeline (Rooms)	670

Source: Arlington Economic Development, Crystal City BID, NKF Research, STR, Washington Business Journal

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CURRENT AND FORTHCOMING DEVELOPMENT PROJECTS AT OR NEAR NATIONAL LANDING

Notwithstanding the new supply on the way, the area's multifamily and retail markets are likely to see rents rise over the next few years as demand for apartment units increases and more retailers are attracted to the market. Office development also is planned for the area. The list below reflects a sampling of current and forthcoming projects.

Crystal Square

JBG Smith has approvals to redevelop a 15-acre area called Crystal Square. The project will include 100,000 square feet of retail including an Alamo Drafthouse and a yet to be announced small format grocery store. The project also will include a two-story freestanding retail building.

Metro Market Square

1750/1770 Crystal Drive is undergoing renovations and a 22,000-square-foot expansion of the existing 250,000-square-foot office building. The project began during first quarter 2019. Amazon is planning on occupying the entire building upon its completion.

Pentagon Centre

Kimco Realty is adding to the existing Pentagon Centre with 440 apartment units and 7,000 square feet of retail above the Pentagon City Metro station in phase one, which is set to deliver in the third quarter of 2019. Phase two includes 253 units of multifamily and 25,000 square feet of retail.

Potomac Yard (Arlington)

One million square feet of office space and 41,325 square feet of retail space are approved for development on land owned by Lidl and Meridian Group. Praedium Group is constructing a 342-unit apartment building, while Erkelitian Development Co. is constructing a 360-unit apartment building.

Potomac Yard Center (Alexandria) Redevelopment

This site hosts a big-box shopping center that is slated to be redeveloped into 7.5 million square feet of mixed-use space. Phasing is under review.

TSA Headquarters Redevelopment

Brookfield plans a 1.5 million square foot redevelopment of the TSA campus in Pentagon City. Plans include a 14-story office building and three buildings ranging from 20 to 26 stories for residential or hotel uses.

1900 Crystal Drive

JBG Smith plans to start construction at 1900 Crystal Drive in 2019. The two-building multifamily project will total 750 units.

Altaire Phase II

LCOR recently purchased almost an acre of land adjacent to its recently completed Altaire project. Phase two will include 280 multifamily units at a lower price point than the 451-unit phase one building. LCOR plans to break ground in early 2020.

Metropolitan Park and Pen Place

Amazon will construct office towers on these sites. The first two planned towers at Metropolitan Park include two million square feet, with the first tower delivering in 2022 and the second in 2023. No plans have been submitted for Pen Place, although the timeline anticipates a 2025 delivery.

CRYSTAL CITY / PENTAGON CITY MULTIFAMILY MARKET CONDITIONS

	2Q 2019
Total Inventory (Units)	11,331
Occupancy Rate	96.1%
12-Month Effective Rent Change	2.8%
Pipeline (Units)	1,879

Source: Axiometrics, NKF Research

CRYSTAL CITY / PENTAGON CITY RETAIL MARKET CONDITIONS

	2Q 2019
Total Inventory (SF)	2.8 million
Vacancy Rate	0.7%
Quarterly Net Absorption (SF)	13,026
Pipeline (SF)	353,000

Source: CoStar, Crystal City BID, NKF Research

ALEXANDER (SANDY) PAUL, CRE, LAI

Senior Managing Director
202.312.5783
apaul@ngkf.com

NICK SCHLANGER

Senior Research Analyst
202.312.5757
nick.schlanger@ngkf.com

KEVIN SWEENEY

Senior Research Analyst
202.312.5763
kevin.sweeney@ngkf.com

BETHANY SCHNEIDER

Director, Research
202.664.5898
bschneider@ngkf.com

JORDAN SCHOTT

Senior Research Analyst
202.664.5902
jordan.schott@ngkf.com

RYAN GREENBERG

Research Intern
202.664.5916
ryan.greenberg@ngkf.com

Sources: Newmark Knight Frank Research, AHRA, Axiometrics, Bisnow, CoStar, Crystal City BID, JBG Smith, Real Capital Analytics, Stephen S. Fuller Institute, STR, VEDP, Virginia Chamber, Washington Business Journal; July 2019

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